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Genetic associations between genes in the renin-angiotensin-aldosterone system and renal disease: a systematic review and meta-analysis

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Manuscripts

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3 **1 Genetic associations between genes in the renin-angiotensin-aldosterone system and renal**
4 **2 disease: a systematic review and meta-analysis**

5
6 3 Laura J. Smyth^{1*}, Marisa Cañadas-Garre¹, Ruaidhri C. Cappa¹, Alexander P. Maxwell^{1,2}, Amy Jayne
7 4 McKnight¹

8
9 5 ¹ Epidemiology and Public Health Research Group, Centre for Public Health, Queen's University
10 6 Belfast, Belfast, United Kingdom

11 7 ² Regional Nephrology Unit, Belfast City Hospital, Belfast, United Kingdom

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13 8 *Corresponding author email: lsmyth42@qub.ac.uk
14
15 9

16
17 **10 SHORT TITLE**

18
19 11 A meta-analysis of RAAS gene variants and CKD
20
21 12

22 **13 WORD COUNT** (excluding Abstract, Key words, References, Figures, Tables, Statements and
23 14 Contributions)

24
25 15 3,016
26
27 16

28
29 **17 ABSTRACT**

30
31 *18 Background*

32 19 Chronic kidney disease (CKD) is defined by abnormalities in kidney structure and/or function present
33 20 for more than three months. Worldwide, both the incidence and prevalence rates of CKD are
34 21 increasing. The renin-angiotensin-aldosterone system (RAAS) regulates fluid and electrolyte balance
35 22 through the kidney. RAAS activation is associated with hypertension, which is directly implicated in
36 23 causation and progression of CKD. RAAS blockade, using drugs targeting individual RAAS mediators
37 24 and receptors, has proven to be reno-protective.

38
39 25 *Objectives*

40
41 26 To assess genomic variants present within RAAS genes; *ACE*, *ACE2*, *AGT*, *AGTR1*, *AGTR2* and *REN*, for
42 27 their association with CKD.
43

44 28 *Design and Data Sources*

45
46 29 A systematic review and meta-analysis of observational research was performed to evaluate the
47 30 RAAS gene polymorphisms in CKD using both PubMed and Web of Science databases. Eligible
48 31 articles included case-control studies of a defined kidney disease and included genotype counts.
49

50 32 *Eligibility Criteria*

51 33 Any paper was removed from the analysis if it was not written in English or Spanish, was a non-
52 34 human study, was a paediatric study, was not a case-control study, did not have a renal disease
53 35 phenotype, did not include data for the gene of interest, was a gene expression based study or had a
54 36 pharmaceutical drug focus.
55
56
57
58
59
60

37 *Results*

38 A total of 3,286 studies were identified, 108 of which met the inclusion criteria. Genetic variants
39 which had been reported in at least three independent publications for populations with the same
40 ethnicity were then determined and quantitative analyses subsequently performed.

41 Three variants returned significant results in populations with different ethnicities at $P < 0.05$; *ACE*
42 insertion, *AGT* rs699-T allele, and *AGTR1* rs5186-A allele; all had small effect sizes and each variant
43 was associated with a reduced risk of CKD development.

44 *Conclusions*

45 Further biological pathway and functional analyses of the RAAS gene polymorphisms will help define
46 how variation in components of the RAAS pathway contribute to CKD.

48 **Key words**

49 CKD, kidney, meta-analysis, RAAS, renin-angiotensin-aldosterone system

51 **ARTICLE SUMMARY**

52 **Strengths and limitations of the study**

- 53 • Strength: Individuals with microalbuminuria were excluded from both the case and control
54 definitions to improve the discrimination between individuals with and without renal
55 disease as microalbuminuria may regress, remain stable or progress to macroalbuminuria.
- 56 • Strength: Due to previously reported heterogeneity between different ethnic groups, we
57 included this as a risk factor and performed each analysis per ethnicity.
- 58 • Limitation: Some studies in our search could not be included in quantitative analysis as they
59 lacked information relating to genotype counts and had an unclear measure and definition
60 of albuminuria for both cases and controls.

61 **Hypothesis statement**

- 62 • We hypothesise that there will be an association between genetic variants within RAAS
63 genes and CKD.

64 **INTRODUCTION**

65 Chronic kidney disease (CKD) is defined as a progressive loss of renal function measured as a
66 reduction in glomerular filtration rate (GFR) to $< 60 \text{ mL/min/1.73m}^2$, or the presence of persistent
67 urinary abnormalities including albuminuria and/or structural alterations which have been present
68 for at least three months(1). CKD is an increasing public health issue given its associated morbidities,
69 premature mortality and management of advanced CKD is a significant burden on health care
70 budgets worldwide(2,3). There is substantial evidence that inherited genetic variants(4), the
71 presence of diabetes(5) or hypertension(6) and an individual's ethnicity(7,8) directly influence the
72 development of various CKD phenotypes.

73 The renin-angiotensin-aldosterone system (RAAS) is a homeostatic endocrine system which is of
74 critical importance to the regulation of blood pressure and maintenance of fluid and electrolyte
75 balance(9,10). Renin, secreted from the juxtaglomerular apparatus in response to reduced renal

76 perfusion pressure, catalyses the conversion of angiotensinogen to angiotensin I(11). Subsequently,
 77 angiotensin I converting enzyme (*ACE*) cleaves angiotensin I to generate angiotensin II, which
 78 regulates heart and kidney function by binding to and activating angiotensin II receptors (type I and
 79 type II)(11,12). The angiotensin II type I receptors are responsible for multiple biologic actions of
 80 RAAS including vasoconstriction and sodium reabsorption(11–14).

81 Increased RAAS activation is linked to progression of CKD of different aetiologies, especially diabetic
 82 nephropathy (DN)(11,15–18), and is mediated by hypertensive injury(15,17) and accelerated renal
 83 fibrosis(19). The physiological relevance of this pathway in the progression of CKD has focused
 84 attention on RAAS components including *ACE*, angiotensin I converting enzyme 2 (*ACE2*),
 85 angiotensinogen (*AGT*), angiotensin II receptor type 1 (*AGTR1*), angiotensin II receptor type 2
 86 (*AGTR2*) and renin (*REN*), as candidate genes for various CKD-related phenotypes. Multiple studies
 87 have implicated RAAS gene variants in the progression of CKD(20–26).

88 This manuscript describes a systematic review and meta-analysis to examine published data
 89 reporting genetic variants present within six of the RAAS candidate genes: *ACE*, *ACE2*, *AGT*, *AGTR1*,
 90 *AGTR2* and *REN*, for a range of CKD phenotypes and ethnicities, to help define their putative roles as
 91 risk factors for CKD.

92

93 METHODS

94 Search Strategy: A systematic search was undertaken following recognised methods, the Meta-
 95 analysis of Observational Studies in Epidemiology (MOOSE) guidelines(27), by two investigators.
 96 PubMed and Web of Science online databases were searched for studies between the inception of
 97 each database and 31st December 2016. All search terms are detailed in Supplementary Table S1.
 98 Reference lists from included publications were also manually searched. Two authors (LJS and MCG)
 99 independently conducted the literature search, screened the articles and extracted the data. In the
 100 case of any disagreement, a third author (RCC) considered the articles. A range of CKD phenotypes
 101 were included in this analysis, the case and control definitions are included in Table 1.

102 **Table 1: Phenotypic comparisons included in this analysis**

Case Group	Control Group
Autosomal dominant polycystic kidney disease	Healthy controls
Atherosclerotic renal artery stenosis	Healthy controls
Balkan endemic nephropathy	Healthy controls
Chronic glomerulonephritis	Healthy controls
Chronic kidney disease	Healthy controls
Diabetic nephropathy*	Diabetes mellitus
Diabetic nephropathy*	Healthy controls
End-stage renal disease	Healthy controls
End-stage renal disease	Type 1 diabetes mellitus
Focal segmental glomerulosclerosis	Healthy controls
Glomerulonephritis	Healthy controls
Hypertension-related renal disease	Healthy controls with hypertension
Hypertension-related renal disease	Healthy controls
IgA Nephropathy	Healthy controls
Interstitial nephritis	Healthy controls
Lupus nephritis	Systemic lupus erythematosus

Lupus nephritis	Healthy controls
Minimal change nephrotic syndrome	Healthy controls
Non-Balkan endemic nephropathy	Healthy controls
Nephroangiosclerosis	Healthy controls
Polycystic kidney disease	Healthy controls
Primary membranous glomerulonephritis	Healthy controls
Primary membranous glomerulonephritis	Organ donors
Renal transplant recipients	Healthy controls
Renal transplant recipients	Kidney Donors
Type 1 diabetic nephropathy*	Type 1 diabetes mellitus
Type 1 diabetic nephropathy linked to end-stage renal disease	Healthy controls
Type 1 diabetic nephropathy linked to end-stage renal disease	Type 1 diabetes mellitus
Type 2 diabetic nephropathy*	Type 2 diabetes mellitus
Type 2 diabetic nephropathy linked to end-stage renal disease	Healthy controls
Type 2 diabetic nephropathy linked to end-stage renal disease	Type 2 diabetes mellitus

103 * In the studies including diabetic nephropathy as cases, only individuals with reported
104 macroalbuminuria or proteinuria were included. Individuals with microalbuminuria were excluded.

105 Inclusion/Exclusion Criteria: Inclusion criteria were judged against a standardised list of agreed
106 criteria (LJS, MCG and AJM), whereby the English or Spanish language publication described an adult,
107 human case-control study, of a defined kidney disease. In the rare instances when suspected
108 duplicate data was identified within two or more included articles, only the article either published
109 first, or that with the larger number of participants was included.

110 Articles were excluded if they included paediatric subjects, were a pharmacological based study
111 reporting clinical trials of medications, did not contain genotypic data for the correct gene or were
112 non-human studies.

113 Data extraction: Where available, the size of each study, case group disease definition and number
114 of individuals, control group definition and number of individuals, ethnicity, genetic variant,
115 genotype in the format of allele one–heterozygote–allele two and allele counts were recorded and
116 calculated in spreadsheets by two authors (LJS and MCG). Articles were re-assessed where any
117 disagreement occurred and a third reviewer was employed. Ethnicities were recorded from the
118 articles and re-coded following the International Genome Sample Resources' online guidance(28).
119 Where any population did not align to a listed population code, a new one was created for the
120 purposes of this study. All ethnicity codes are available in Supplementary Table S2. The data
121 collected was divided into disease phenotype groups to ensure a high level of homogeneity.

122 Statistical Analysis: Each genetic variant which had been investigated and reported in at least three
123 independent publications for the same ethnicity and phenotype was included in quantitative
124 statistical analyses. Review Manager (RevMan) 5.3 (The Cochrane Collaboration, The Nordic
125 Cochrane Centre, Copenhagen, Denmark) was employed to facilitate the analysis of allele
126 frequencies. For each SNP, the total number of alleles were recorded per case and control group.
127 Hardy Weinberg was calculated for all included studies. Statistical analyses were performed using
128 the random effects model as heterogeneity was expected. For each SNP, this analysis provided the P
129 value, odds ratio (OR) and 95% confidence intervals (CI). It also facilitated the assessment of the
130 heterogeneity level using the I^2 statistic(29). Forest plots and funnel plots were generated
131 automatically to assess publication bias and the significance value was set at $P < 0.05$ (LJS and RCC).

132 The quality of the studies was assessed by all available quality control measures including reported
133 genotype completion rate, phenotype description, microalbuminuria exclusion and Hardy Weinberg

134 equilibrium. No sensitivity analysis was performed. All study methodology conformed to the MOOSE
 135 criteria(27). No published protocol is available for this review. The workflow followed a consistent
 136 pattern for each gene. A summary of this is included in Figure 1.

137 **Figure 1:** Workflow pattern

138

139 RESULTS

140 The database searches returned 3,286 results, 138 of which remained following the application of
 141 inclusion and exclusion criteria and the removal of any SNP which was not reported on at least three
 142 occasions. Several articles included data for more than one gene, signifying that they have emerged
 143 multiple times throughout the database searches; the total number of individual articles was
 144 therefore 108. The search strategies are included as Supplementary Figures S1a-f. All excluded
 145 studies are listed in Supplementary Tables S3a-f

146 The total number of subjects analysed within these studies (n=108) was 17,782 individuals with renal
 147 disease and 21,199 individuals acting as controls. For SNPs in three of the RAAS genes, *ACE2*, *AGTR2*
 148 and *REN*, there were less than three independent populations studied. A summary table detailing
 149 the main results is included as Table 2.

150 **Table 2: Summary of most significant result for each selected gene**

Gene	Articles returned (n)	Articles analysed (n)	Max. individuals in analysis (n)	Most significant result	P Value	OR (95% CL)	I ² (%)
<i>ACE</i>	366	91	32,666	I/D (EAS)	0.008	0.80 (0.67, 0.94)	68
<i>ACE2</i>	1413	0	NA		NA	NA	NA
<i>AGT</i>	656	31	11,210	rs699 (EUR)	0.002	0.84 (0.76, 0.94)	0
<i>AGTR1</i>	191	16	6917	rs5186 (SAS)	0.001	0.71 (0.58, 0.87)	37
<i>AGTR2</i>	28	0	NA		NA	NA	NA
<i>REN</i>	632	0	NA		NA	NA	NA

151 Abbreviations: EAS, East Asian; EUR, European; NA, Not Applicable; SAS, South Asian.

152

153 *ACE*

154 A total of 14 quantitative analyses were completed for the insertion / deletion (I/D) polymorphism
 155 located within *ACE* in eight phenotypes, details of which are included in Supplementary Table S4.
 156 Three quantitative analyses returned a significant result. The first analysis comprised 11
 157 publications, each studying an East Asian population with T2DN (type 2 diabetes and nephropathy)
 158 and compared with T2DM (type 2 diabetes mellitus without nephropathy). Figure 2a displays these
 159 results, P= 0.009; OR= 0.74; 95% CI= 0.59, 0.93, I²= 55%, showing that the presence of the insertion
 160 variant at this *ACE* locus was significantly associated with this phenotype. The insertion provides a
 161 lower risk of developing T2DN in an East Asian population.

162 **Figure 2a:** *ACE* I/D investigation, individuals with type 2 diabetic nephropathy compared to
 163 individuals with type 2 diabetes mellitus in an East Asian Population (*ACE* insertion variant compared
 164 to deletion variant).

1
2
3 165 The *ACE* insertion variant was similarly significantly associated with a lower risk of T2DN compared
4 166 with T2DM in a South Asian population, despite the presence of a high level of heterogeneity ($P=$
5 167 0.01 ; $OR= 0.57$; $95\% CI= 0.37, 0.87$; $I^2= 89\%$). The comparison of East Asian individuals with end-stage
6 168 renal disease (ESRD) compared to a healthy population with no evidence of renal disease also
7 169 showed a significant association with moderate levels of heterogeneity ($P= 0.008$; $OR= 0.8$; $95\% CI=$
8 170 $0.67, 0.94$; $I^2= 68\%$). These results are included as Figures 2b and 2c respectively.

9
10 171 **Figure 2b:** *ACE* I/D investigation, individuals with type 2 diabetic nephropathy compared to
11 172 individuals with type 2 diabetes mellitus in a South Asian Population (insertion compared to
12 173 deletion).

13
14 174 **Figure 2c:** *ACE* I/D investigation, individuals with end-stage renal disease compared to healthy
15 175 controls in an East Asian Population (insertion compared to deletion).

16
17 176 In each analysis (T2DN vs. T2DM; ESRD vs. normal), the presence of the *ACE* insertion was associated
18 177 with a lower risk of developing the CKD phenotype in the respective populations. The non-significant
19 178 results are included in Supplementary Figures S2a-S2k.

20 21 22 179 **AGT**

23 180 Seven quantitative analyses were completed for rs699, where the T allele was compared to the C
24 181 allele. Details of each of these comparisons are included in Supplementary Table S5. One significant
25 182 result was identified - the comparison of ESRD with healthy controls in a European population. The
26 183 results were ($P=0.002$; $OR= 0.84$; $95\% CI= 0.76, 0.94$; $I^2= 0\%$) and are shown in Figure 2d. These
27 184 results indicate that the presence of the T allele is associated with a lower risk of developing ESRD in
28 185 this population. The non-significant results are included in Supplementary Figures S2l-S2q.

29
30 186 **Figure 2d:** *AGT* rs699 investigation, individuals with end-stage renal disease compared to healthy
31 187 controls in a European Population (*AGT* rs699 T allele compared to C allele).

32 33 34 188 **AGTR1**

35 189 Four quantitative analyses were performed for *AGTR1* rs5186, comparing the A allele with the C.
36 190 Details of these comparisons are included within Supplementary Table S6. One of the four studies
37 191 returned a significant result for association, the comparison of T2DN with T2DM in a South Asian
38 192 population ($P= 0.001$; $OR= 0.71$; $95\% CI= 0.58, 0.87$; $I^2= 37\%$). This result is shown in Figure 2e. These
39 193 results indicate that the presence of the A allele is associated with a lower risk of developing T2DN in
40 194 this population. The non-significant results are included in Supplementary Figures S2r-S2t.

41
42 195 **Figure 2e:** *AGTR1* rs5186 investigation, individuals with type 2 diabetic nephropathy compared to
43 196 individuals with type 2 diabetes mellitus in a South Asian Population (*AGTR1* rs5186 A allele
44 197 compared to C allele).

45
46 198 All funnel plots for these analyses are included in Supplementary Figure S3. Only the plots for *ACE*
47 199 I/D CKD in a South Asian population and *ACE* I/D T2DN in a European population showed a tendency
48 200 for publication bias.

49
50 201 Studies not complying with Hardy Weinberg equilibrium are shown in Supplementary Table S7.

51
52 202

DISCUSSION

Investigations into RAAS genetic variants previously reported to have been associated with a range of CKD phenotypes were undertaken. A total of 3,286 studies were identified, 108 of which met the inclusion criteria. Subsequently, 25 quantitative analyses were completed for three RAAS genes where there were at least three independent population studies of the RAAS gene variants. Five significant results within three genes were obtained at the significance level $p < 0.05$, each revealing an association with CKD.

ACE is encoded by *DCP1* and is a key component of the RAAS. It catalyses the modification of angiotensin I to II, which is more biologically active(30). *ACE* is the most frequently studied gene of the RAAS(31). First sequenced in 1992(32), this 287 bp ALU repetitive element at intron 16(32) is located on chromosome 17 and is represented by four individual SNPs, rs4646994, rs1799752, rs4340 and rs13447447. Further understanding of its genetic architecture and disease associations may enable patient groups to benefit from targeted therapies with ACE inhibitors(33).

Since 1994, the association of *ACE* and DN has been rigorously investigated(33,34), with studies returning conflicting results. A meta-analysis undertaken in 2005 by Ng and colleagues(35) reported a statistically significant result wherein the *ACE* insertion was associated with protection from development of diabetic nephropathy in Asians and Caucasians. A second meta-analysis undertaken in 2012 also identified an association between the *ACE* I/D polymorphism and the development of diabetic nephropathy to ESRD, in that the presence of the deletion was associated with ESRD susceptibility(36). Despite having differences in the inclusion criteria to our meta-analysis, in that these investigations did not include any article published since 2011(35,36) and included individuals with microalbuminuria as cases(35), we returned similar results to the 2005 previous meta-analysis. Including individuals with microalbuminuria in the control population may cause challenges with phenotype definition as microalbuminuria may regress, remain stable, or progress to macroalbuminuria(37–39) over time. Individuals with microalbuminuria were therefore excluded from both case and control definitions to clarify the phenotypes in our review.

In our meta-analysis of *ACE*, which comprised 14,509 individuals with CKD and 18,157 individuals as controls from 94 population groups, we identified three significant associations of the *ACE* I/D polymorphism with CKD. Due to previously reported heterogeneity between different ethnic groups(35), we included this as a risk factor and performed each analysis per ethnicity (Table S2).

Firstly, comparisons between T2DN and T2DM in East Asian and South Asian populations returned significant results highlighting a protective effect of the *ACE* insertion in the development of diabetic nephropathy ($P=0.009$ and $P=0.01$ respectively). This result was mimicked in the comparison of individuals with ESRD, which was not caused by diabetic nephropathy, and healthy control individuals in an East Asian population ($P=0.008$). The *ACE* I/D polymorphism remains a well characterised genetic locus associated with the progression of diabetic nephropathy.

AGT encodes the AGT glycoprotein, which is created in the liver and facilitates the creation of angiotensin I(11,40). It is located on chromosome 1. Several investigations have been conducted into the *AGT* gene variants and their association with risk of CKD(40–43). Among these, Zhou and colleagues undertook a meta-analysis investigation into *AGT* rs699 and its association with ESRD(40). The results of this study are agreement with ours in relation to the European ethnicity. Our meta-analysis encompassing 5,076 individuals with renal disease and 6,134 individuals without; the T allele provided a protective effect in ESRD development ($P=0.002$) within this European population.

1
2
3 246 The *AGTR1* gene has been shown to be involved in the regulation of blood pressure, fluid and
4 247 electrolyte balance(11). It may also have a role in inflammation and vasoconstriction(44). SNP
5 248 rs5186, an AC nucleotide substitution at position 1166 in the 3' untranslated region of chromosome
6 249 3, is reportedly able to be recognised by microRNA-155. When the A allele is present at this locus,
7 250 microRNA-155 is able to undergo complementary base-pairing with *AGTR1* messenger RNA to
8 251 suppress translation. However this is not possible when the alternative C allele is present, resulting
9 252 in increased *AGTR1* protein levels(45). This interplay may affect blood pressure regulation and
10 253 warrants further investigation(45).

11
12 254 Previous studies have identified associations between rs5186 in *AGTR1* and diseases including
13 255 coronary artery disease(46), systemic lupus erythematosus(47) and cancer(48). Several smaller
14 256 studies had also been undertaken to assess links between this gene and renal disease(25,49–54). We
15 257 conducted this study to provide a clearer understanding of the effect of this SNP on CKD.

16
17 258 This meta-analysis of *AGTR1* variants included 3,197 individuals with renal disease and 3,720
18 259 controls investigating rs5186. One significant result was identified; that the presence of an A allele at
19 260 this locus provided a lower risk of developing T2DN in a South Asian population ($P=0.001$).

20
21 261 One meta-analysis published in 2014(55) assessed *AGTR1* in individuals with CKD, ESRD, IgA
22 262 nephropathy or vesicoureteral reflux. This meta-analysis identified that rs5186 was not associated
23 263 with any of these diseases, which corresponds to the results from our investigation.

24
25 264 The three remaining RAAS genes included in this meta-analysis, *ACE2*, *AGTR2* and *REN*, have not
26 265 been researched as extensively as the *ACE*, *AGT* and *AGTR1* for associations with renal disease. Very
27 266 few articles were identified describing genetic association studies for these genes at the data
28 267 extraction stage of the analysis, and those that were, were removed prior to the quantitative
29 268 analysis stage, mainly due to the inclusion of paediatric individuals or non-human approaches, as
30 269 outlined in Figures S1b, S1e and S1f. Further research into the *ACE2*, *AGTR2* and *REN* genes and their
31 270 polymorphisms should be undertaken to elucidate their role in CKD and ESRD.

32
33 271 Some studies in our search could not be included in quantitative analysis as they lacked information
34 272 relating to genotype counts and had an unclear measure and definition of albuminuria for both cases
35 273 and controls, which could constitute a limitation. Publication bias was reported in two of our
36 274 quantitative analyses, but was not found in the analyses which provided our significant results. Lack
37 275 of clarity in phenotype definitions, along with unclear descriptions of ethnicities, inherently
38 276 challenge the use of meta-analyses of different populations as a valid instrument to uncover robust
39 277 associations. CKD itself has a range of causes including glomerular damage and declining eGFR
40 278 without albuminuria. Other confounding factors such as hypertension and cardiovascular disease,
41 279 and a lack of prospective follow up of included individuals, which would ensure phenotypes are
42 280 robust and stable, may also cause conflicting results.

43 281

44 282

45 283 **CONCLUSION**

46 284

47 285 This meta-analysis of the RAAS pathway genes and their association with renal disease has provided
48 286 evidence for five significant associations with individually small effect sizes that may cumulatively
49 287 contribute to dysfunction of the RAAS pathway leading to kidney disease. The insertion in *ACE I/D*
50 288 polymorphism was a protection factor for the development of diabetic nephropathy in individuals
51 289 with type 2 diabetes mellitus from both East and South Asian origin, and for ESRD in an East Asian
52 290 population. In Europeans, the T allele of the *AGT* rs699 conferred a lower risk of ESRD development

291 in healthy population. The A allele in *AGTR1* rs5186 acted as a protection factor for renal disease
292 development in South Asian population.

293 Further study into the specific ethnicities and investigations into a broader range of RAAS linked
294 genes, or a deeper analysis of them including investigations of more variants, may pinpoint the
295 molecular basis underlying the role of pathway in kidney disease. Network analysis and functional
296 studies enlightening the mechanisms involved ultimately will be required to complete the picture of
297 RAAS variation in renal traits.

298

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300

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306 None of the funding bodies had a role in the study design or analysis.

307

308 **Statement of competing interests**

309 The authors declare that they have no competing interests.

310

311 **Availability of data and material**

312 The datasets generated and/or analysed during the current study are available from the
313 corresponding author on reasonable request.

314

315 **Author contributions**

316 LJS formulated the research plan, conducted the analysis, interpreted the data, drafted the
317 manuscript and revised the manuscript.

318 MCG conducted the analysis, interpreted the data and revised the manuscript.

319 RCC conducted the analysis, interpreted the data and revised the manuscript.

320 APM acquired the funding, managed the project, interpreted the data and revised the manuscript.

321 AJM acquired the funding, formulated the research plan, interpreted the data, managed the project
322 and revised the manuscript.

323 All authors read and approved the final manuscript.

324

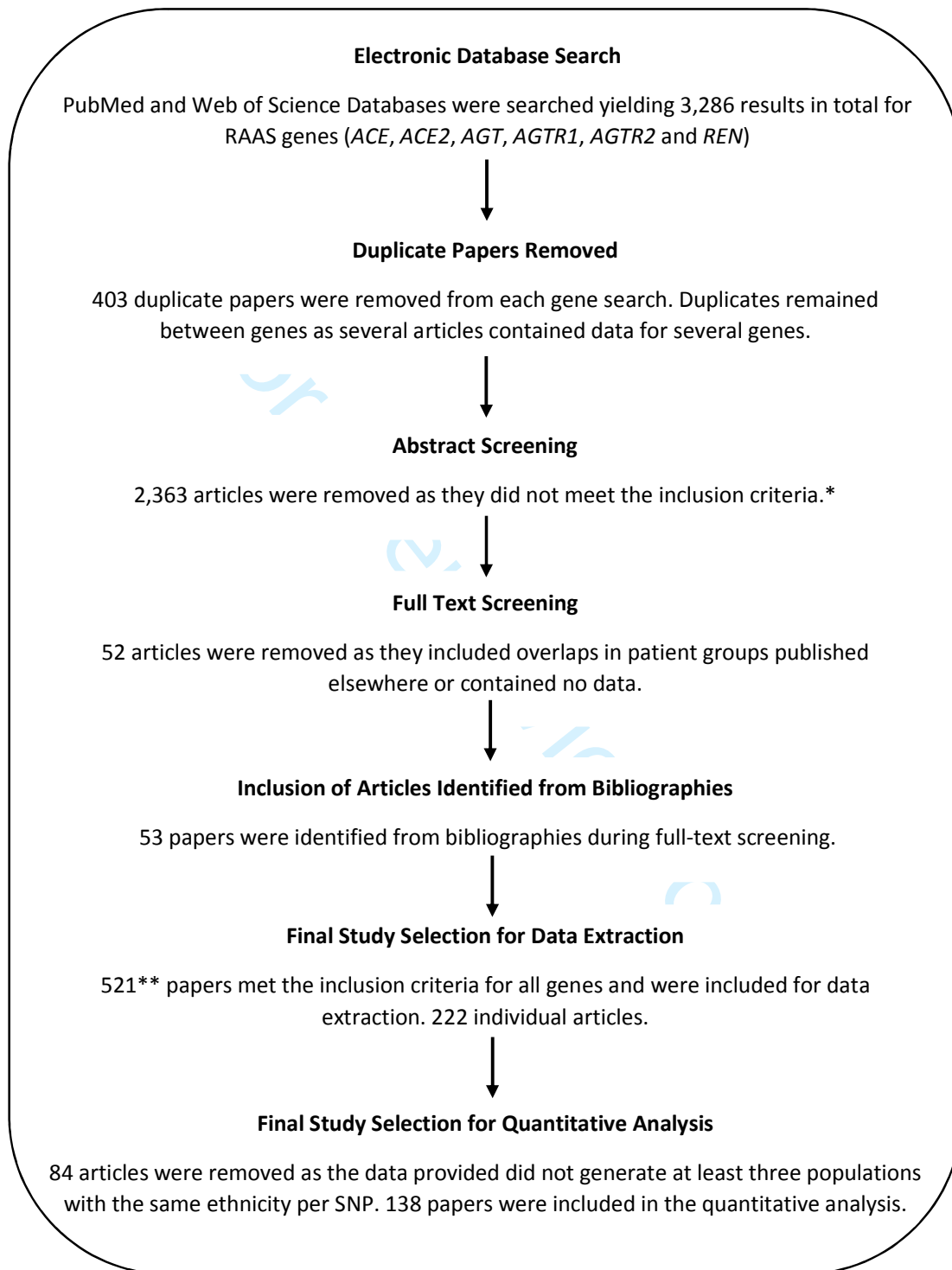
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Figure 1: Workflow pattern

*Inclusion criteria: Any paper was removed from the analysis if it was not written in English or Spanish, was a non-human study, was a paediatric study, was not a case-control study, did not have a renal disease phenotype, did not include data for the gene of interest, was a gene expression based study or had a pharmaceutical drug focus.

**Final selection: Several papers provided data for > 1 gene, so this figure includes duplicates.

Figure 2a: ACE I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian Population (insertion compared to deletion)

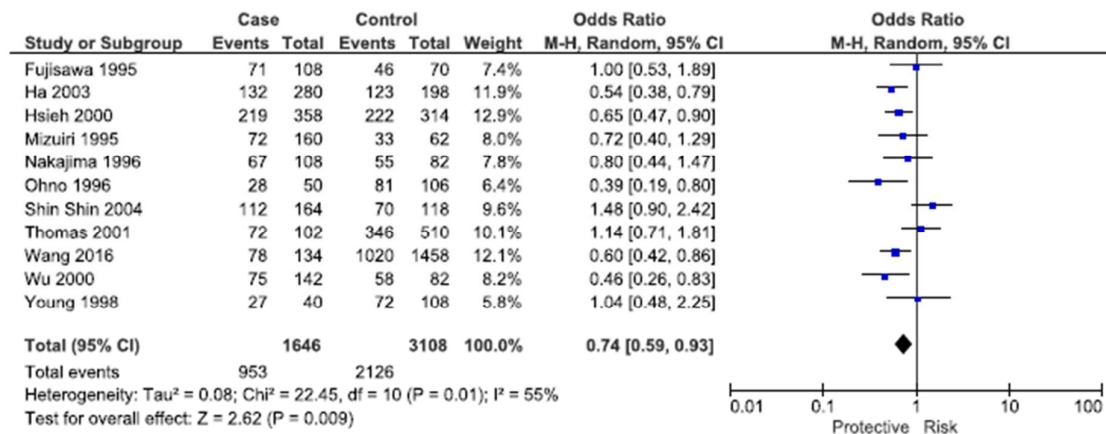


Figure 2b: ACE I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a South Asian Population (insertion compared to deletion)

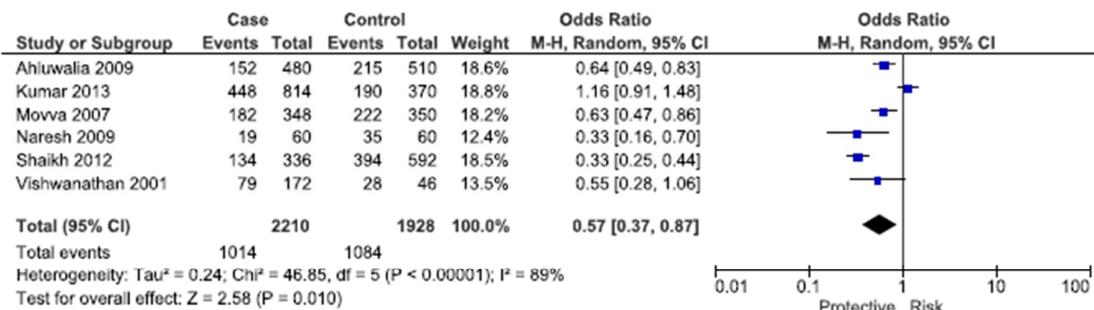


Figure 2c: ACE I/D investigation, individuals with end-stage renal disease compared to healthy controls in an East Asian Population (insertion compared to deletion)

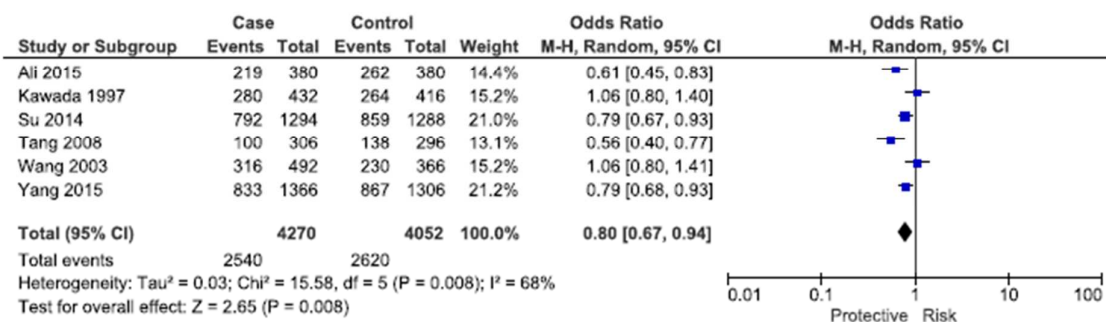


Figure 2d: *AGT* rs699 investigation, individuals with end-stage renal disease compared to healthy controls in a European Population (T allele compared to C)

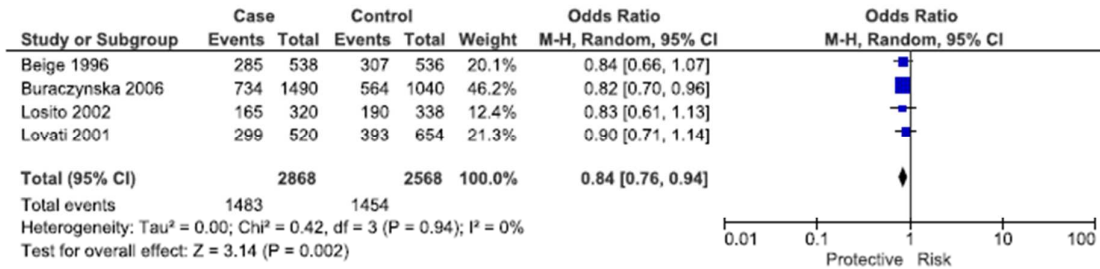
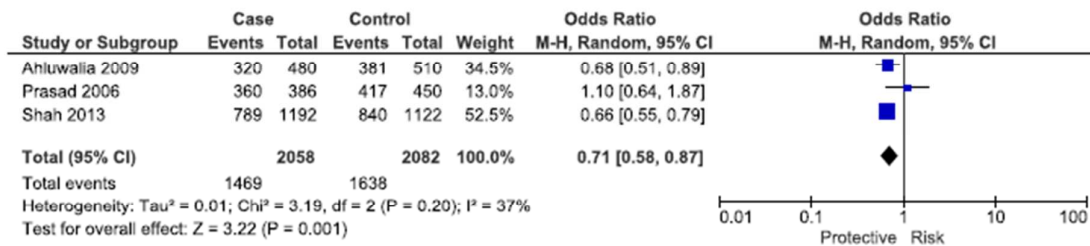
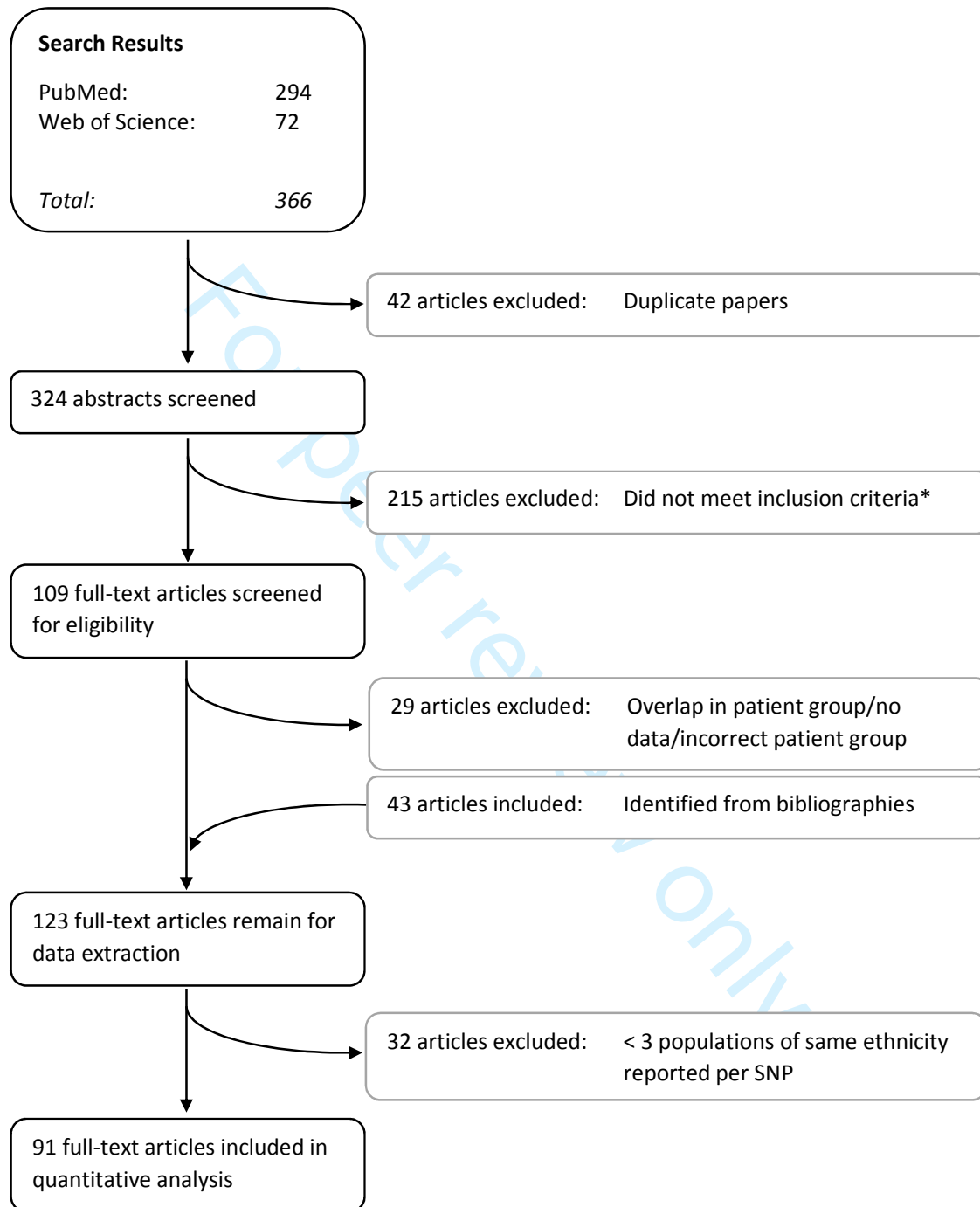


Figure 2e: *AGTR1* rs5186 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a South Asian Population (A allele compared to C allele)

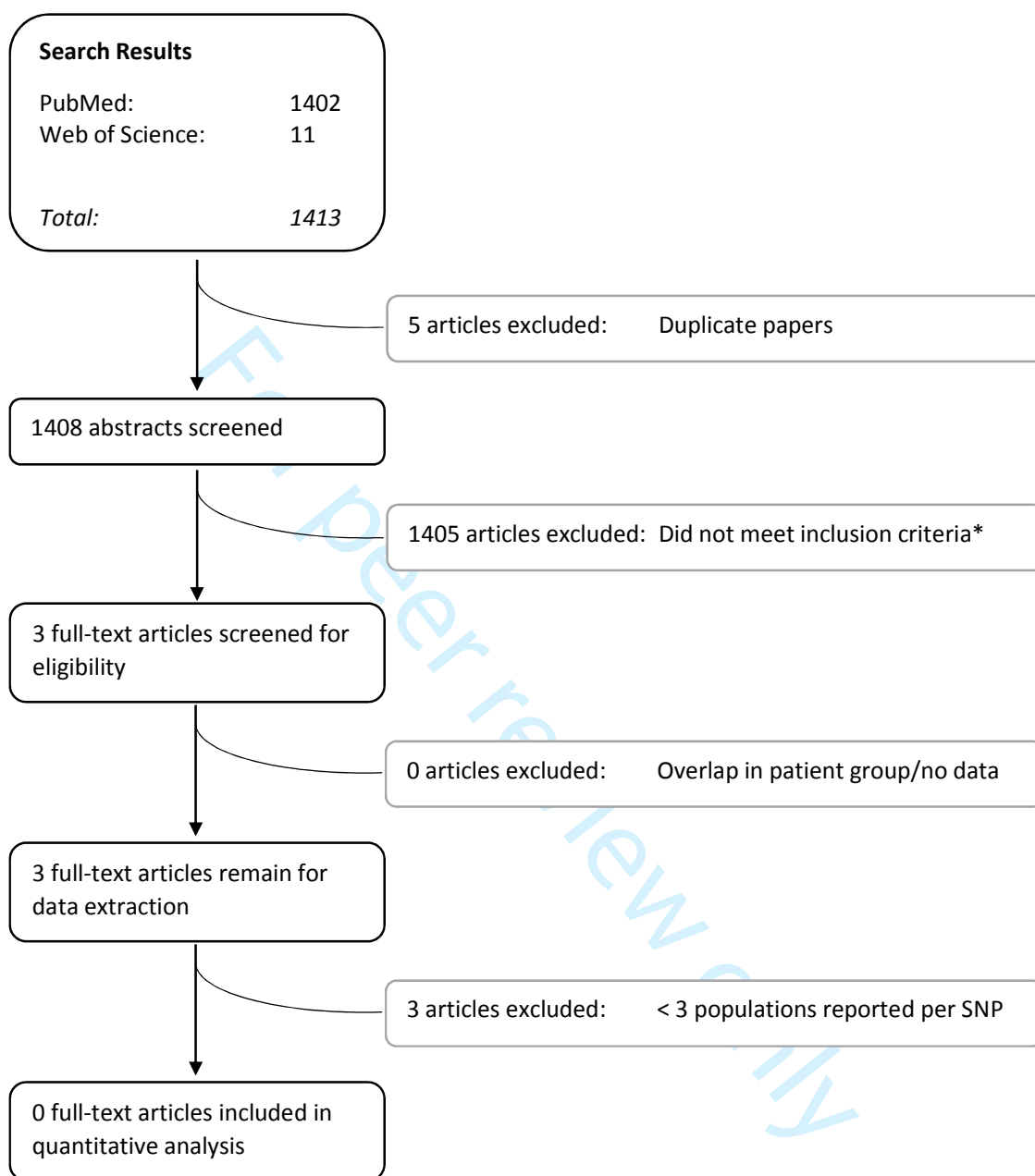


Supplementary Figure S1a: ACE Study Flow Diagram



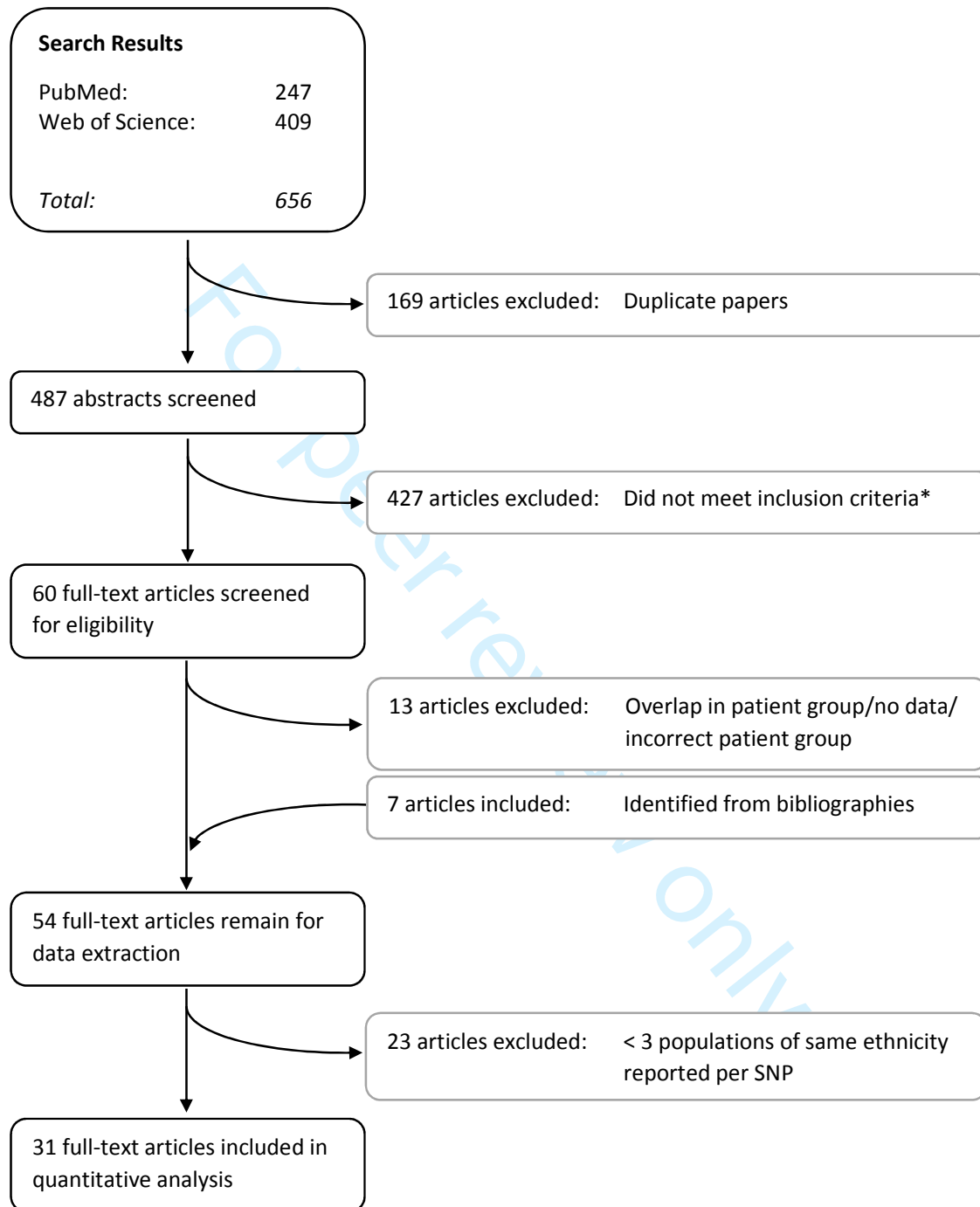
*Inclusion criteria: Any paper was removed from the analysis if it was not written in English or Spanish (n=20), was a non-human study (n=5), was a paediatric study (n=48), was not a case-control study (n=34), did not have a renal disease phenotype (n=86), did not include data for ACE (n=13) or had a pharmaceutical drug focus (n=9)

Supplementary Figure S1b: ACE2 Study Flow Diagram

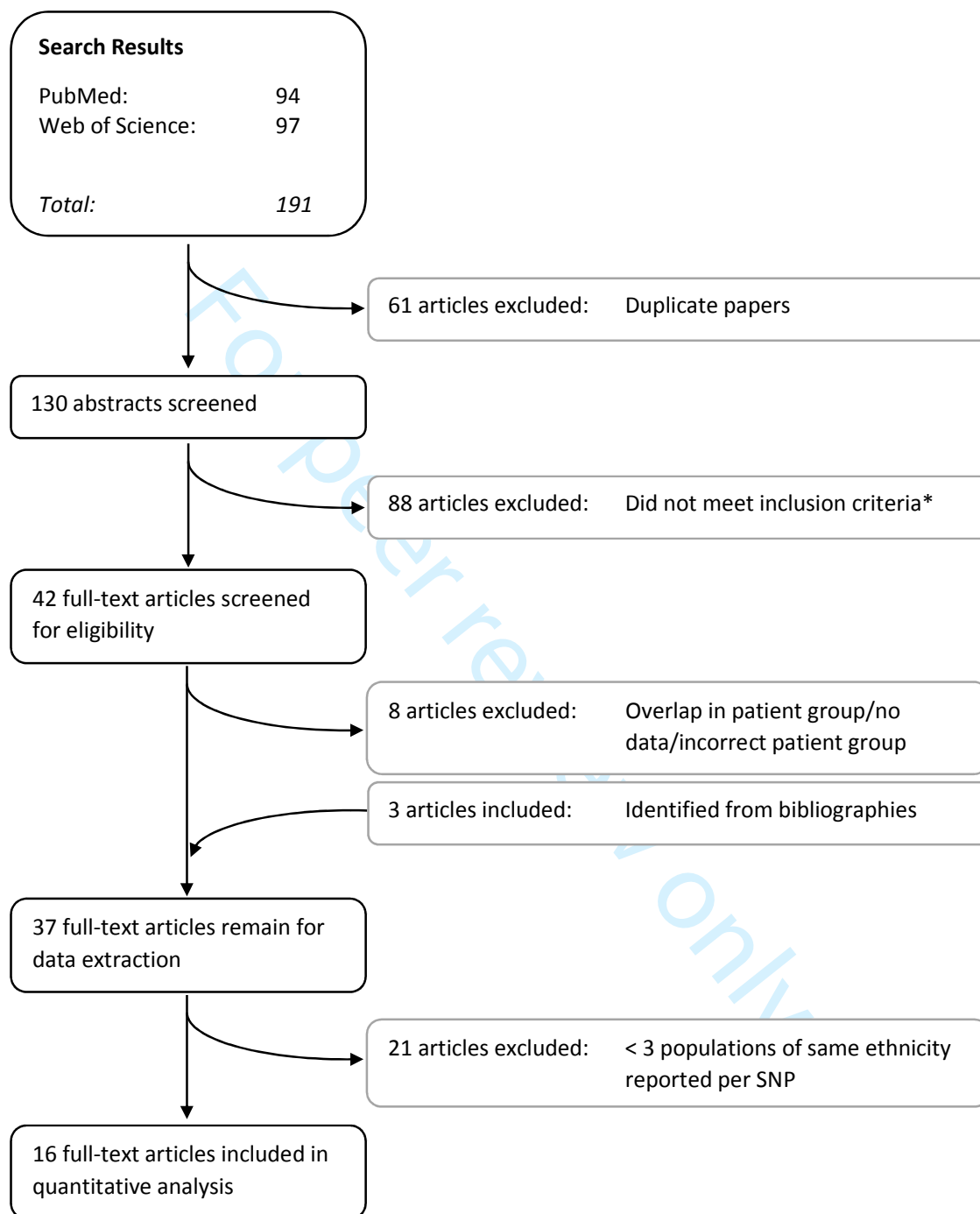


*Inclusion criteria: Any paper was removed from the analysis if it was not written in English or Spanish (n=52), was a non-human study (n=96), was a paediatric study (n=135), was not a case-control study (n=33), did not have a renal disease phenotype (n=630), did not include data for ACE2 (n=415) or had a pharmaceutical drug focus (n=44)

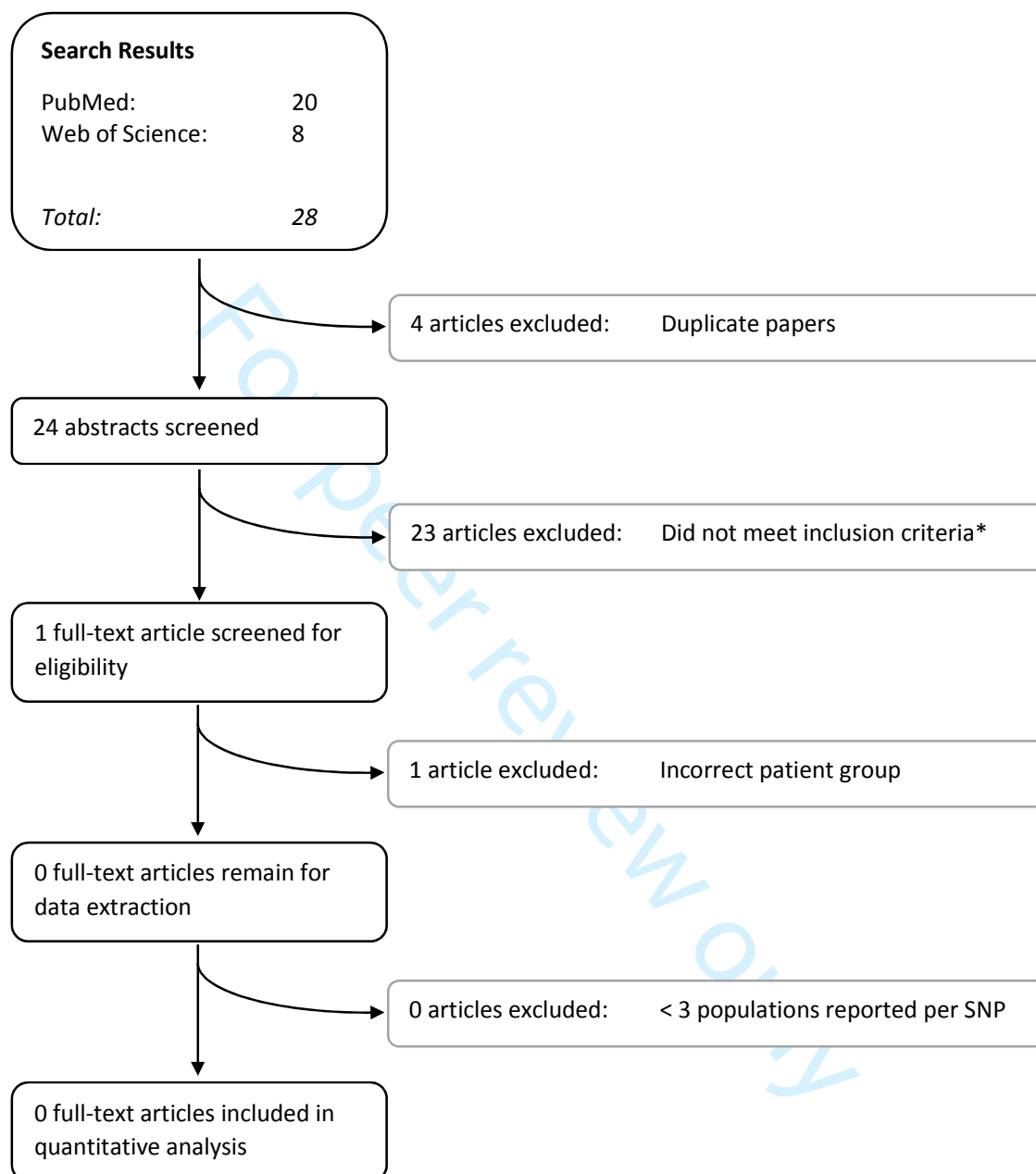
Supplementary Figure S1c: AGT Study Flow Diagram



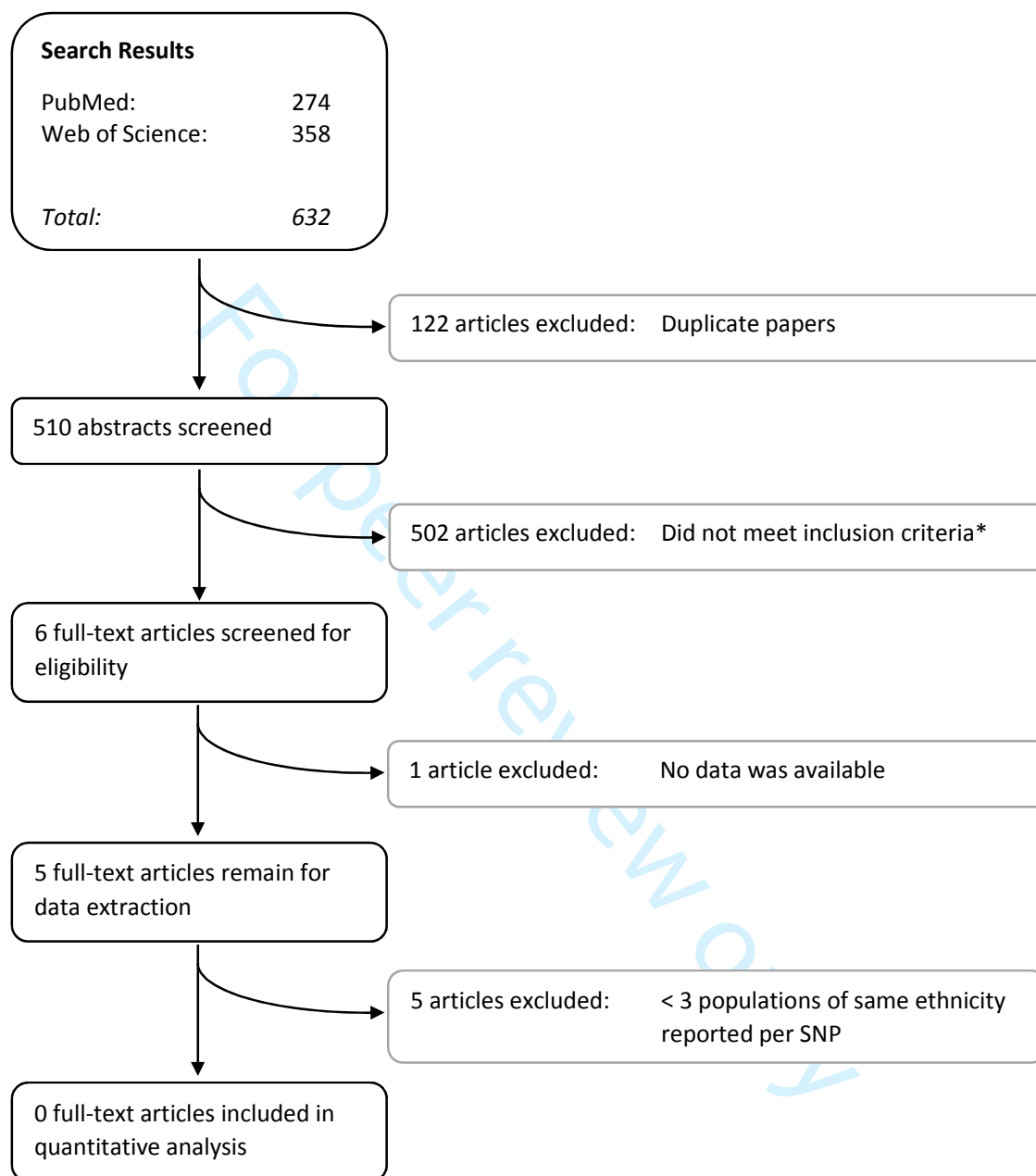
*Inclusion criteria: Any paper was removed from the analysis if it was not written in English or Spanish (n=16), was a non-human study (n=112), was a paediatric study (n=37), was not a case-control study (n=49), did not have a renal disease phenotype (n=127), did not include data for AGT (n=69), was a gene expression based study (n=1) or had a pharmaceutical drug focus (n=16)

Supplementary Figure S1d: *AGTR1* Study Flow Diagram

*Inclusion criteria: Any paper was removed from the analysis if it was not written in English or Spanish (n=8), was a non-human study (n=10), was a paediatric study (n=19), was not a case-control study (n=14), did not have a renal disease phenotype (n=25), did not include data for *AGTR1* (n=2), was a gene expression based study (n=1) or had a pharmaceutical drug focus (n=9)

Supplementary Figure S1e: *AGTR2* Study Flow Diagram

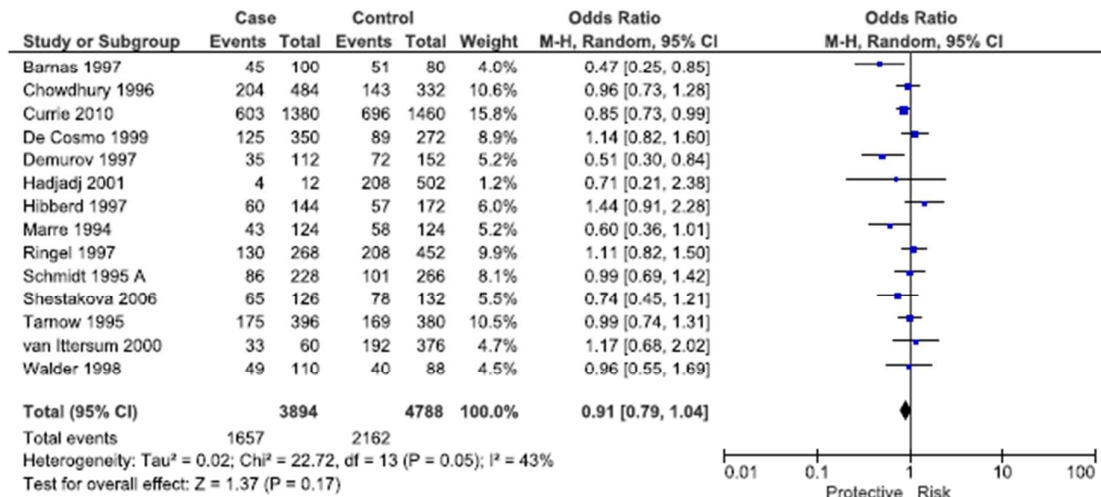
*Inclusion criteria: Any paper was removed from the analysis if it was not written in English or Spanish (n=1), was a non-human study (n=1), was a paediatric study (n=6), was not a case-control study (n=4), did not have a renal disease phenotype (n=5) or did not include data for *AGTR2* (n=6)

Supplementary Figure S1f: *REN* Study Flow Diagram

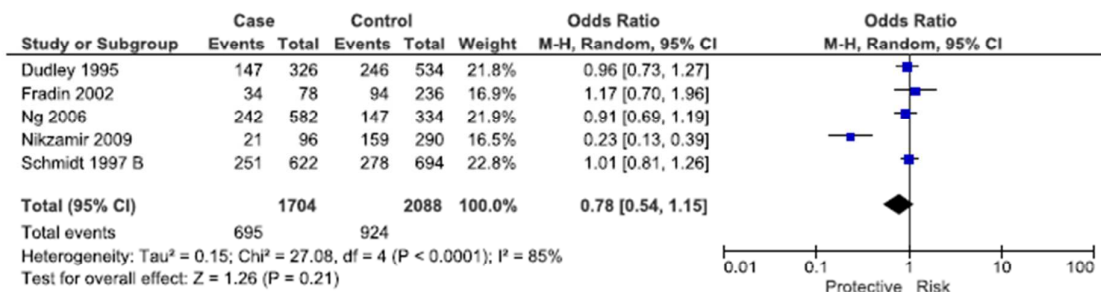
*Inclusion criteria: Any paper was removed from the analysis if it was not written in English or Spanish (n=17), was a non-human study (n=69), was a paediatric study (n=45), was not a case-control study (n=64), did not have a renal disease phenotype (n=166), did not include data for *REN* (n=124), was a gene expression based study (n=3) or had a pharmaceutical drug focus (n=14)

ACE

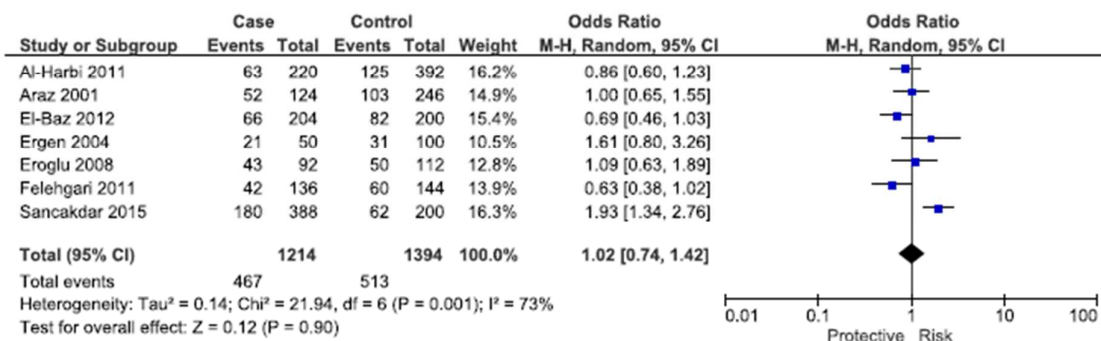
Supplementary Figure S2a: ACE I/D investigation, individuals with type 1 diabetic nephropathy compared to individuals with type 1 diabetes mellitus in a European Population (insertion compared to deletion)



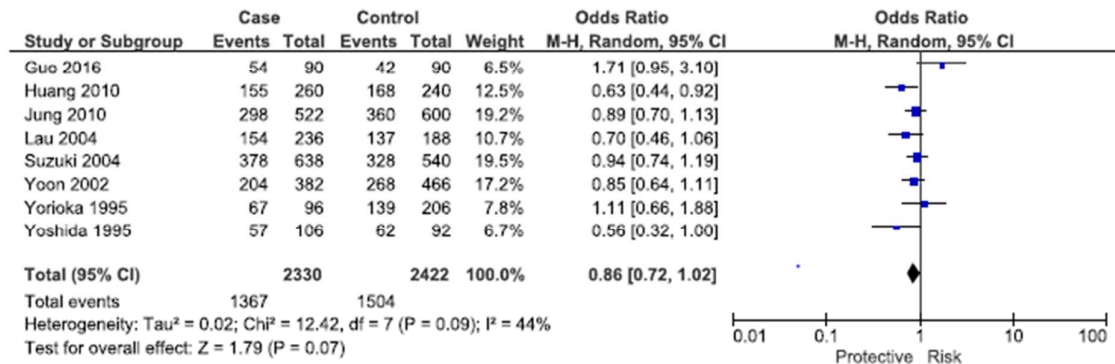
Supplementary Figure S2b: ACE I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European Population (insertion compared to deletion)



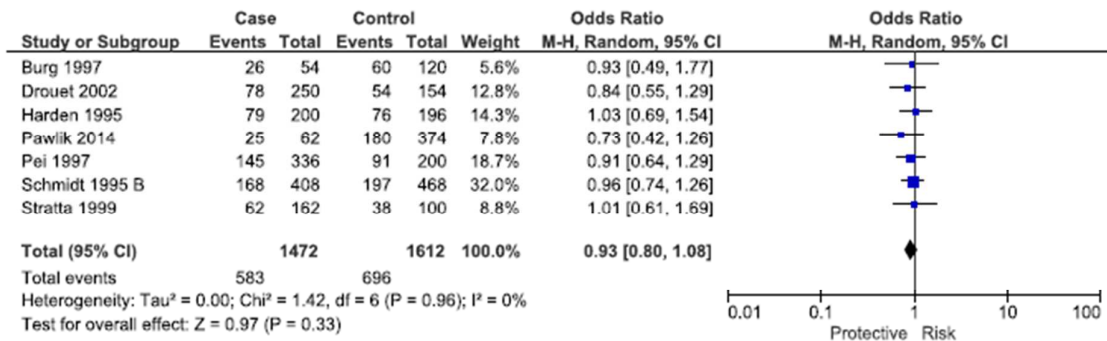
Supplementary Figure S2c: ACE I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a Middle Eastern Population (insertion compared to deletion)



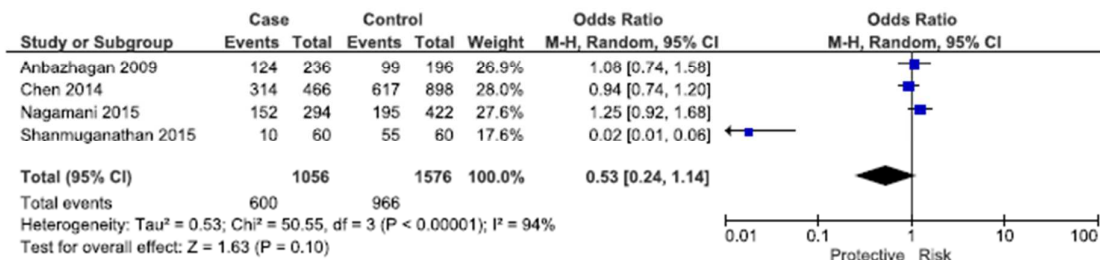
Supplementary Figure S2d: ACE I/D investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian Population (insertion compared to deletion)



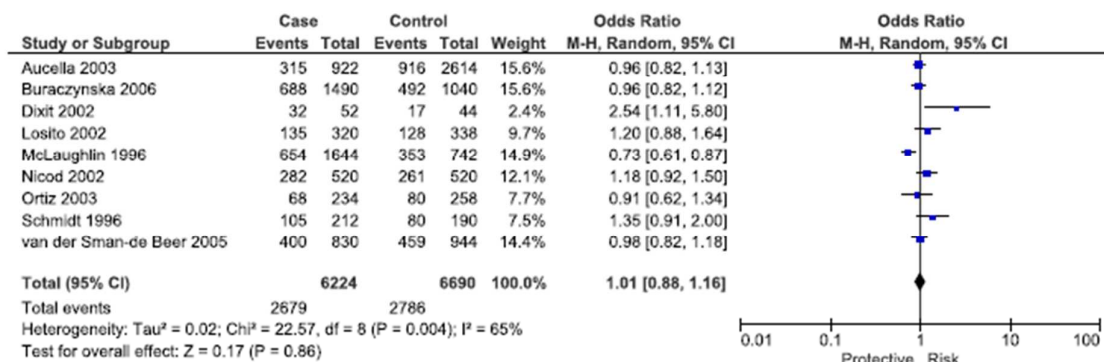
Supplementary Figure S2e: ACE I/D investigation, individuals with IgA nephropathy compared to healthy controls in a European Population (insertion compared to deletion)



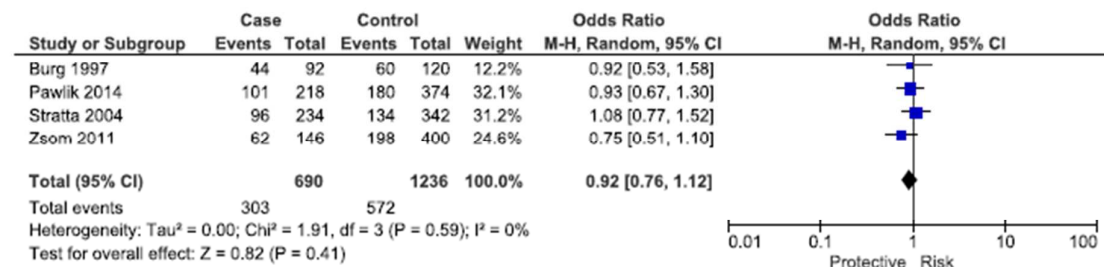
Supplementary Figure S2f: ACE I/D investigation, individuals with chronic kidney disease compared to healthy controls in a South Asian Population (insertion compared to deletion)



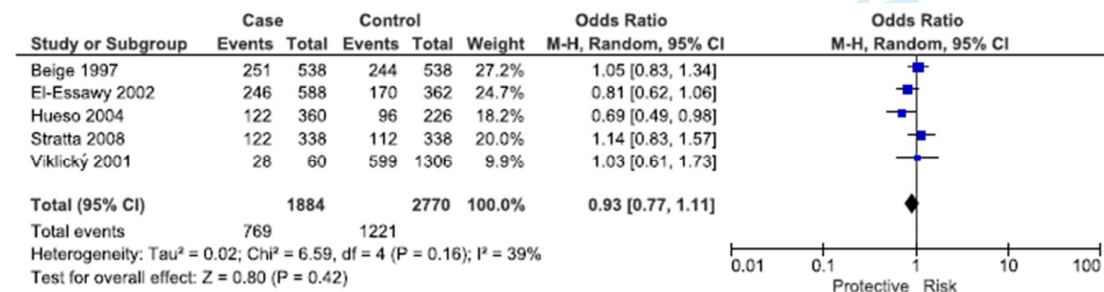
Supplementary Figure S2g: ACE I/D investigation, individuals with end-stage renal disease compared to healthy controls in a European Population (insertion compared to deletion)



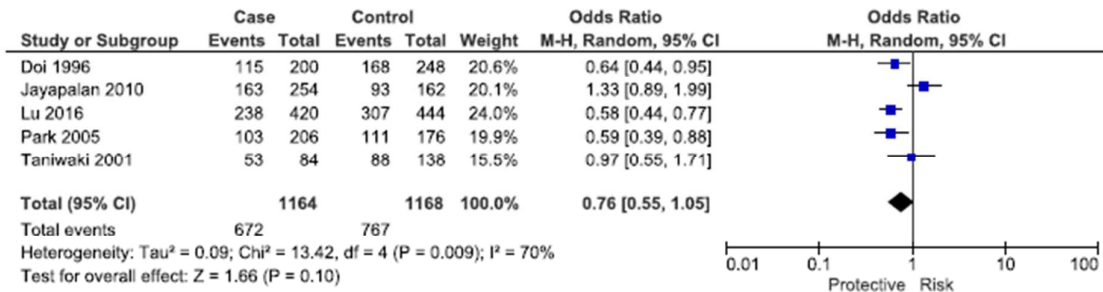
Supplementary Figure S2h: ACE I/D investigation, individuals with primary glomerulonephritis compared to healthy controls in a European Population (insertion compared to deletion)



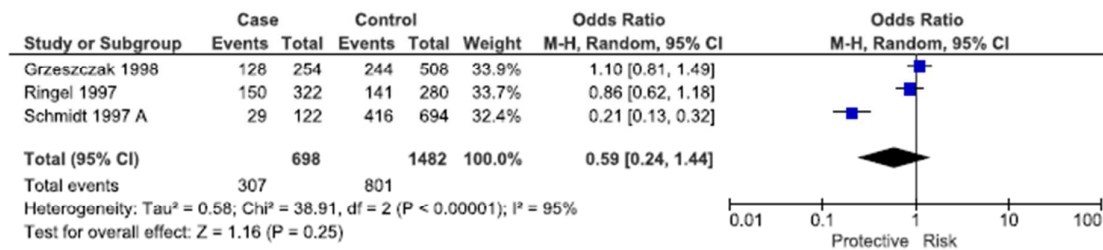
Supplementary Figure S2i: ACE I/D investigation, individuals who have had renal transplants compared to healthy controls in a European Population (insertion compared to deletion)



Supplementary Figure S2j: ACE I/D investigation, individuals with end-stage renal disease linked to type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian Population (insertion compared to deletion)

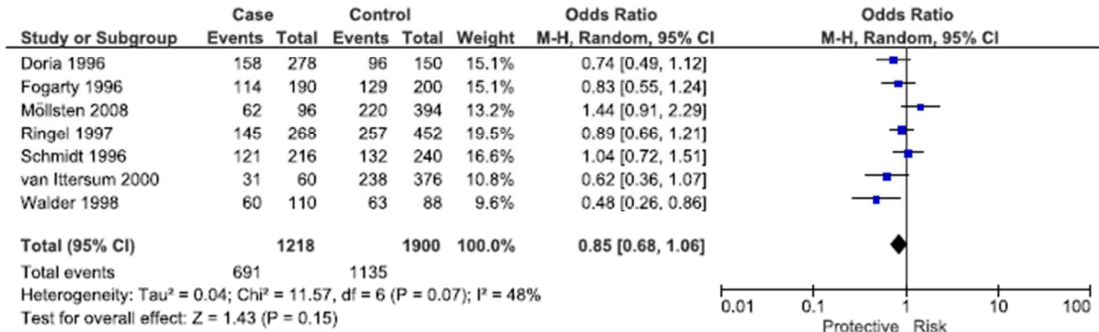


Supplementary Figure S2k: ACE I/D investigation, individuals with end-stage renal disease linked to type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European Population (insertion compared to deletion)

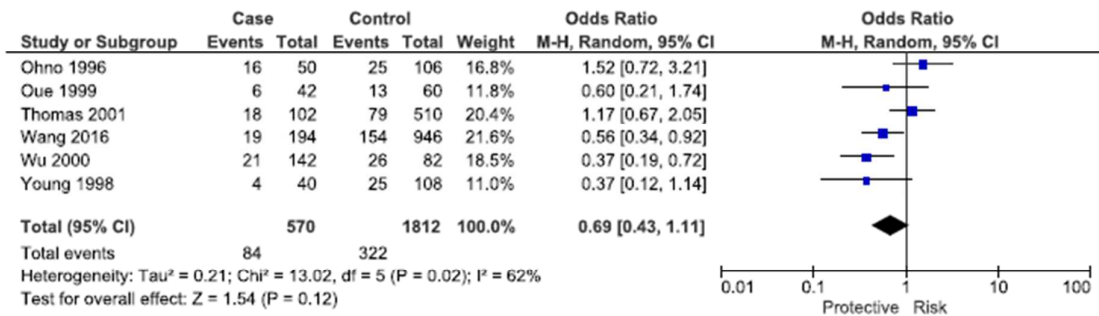


AGT

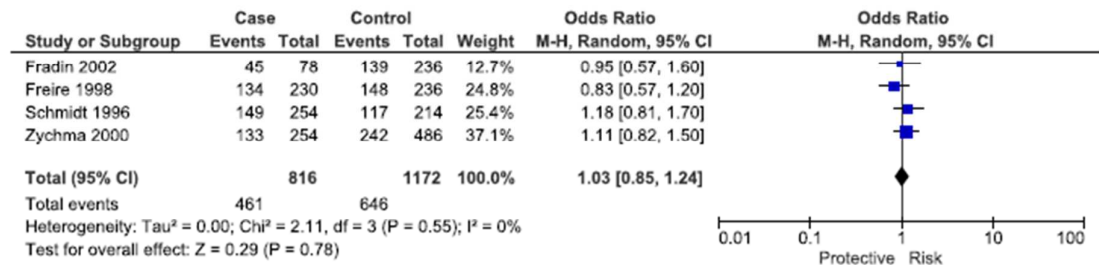
Supplementary Figure S2l: AGT rs699 investigation, individuals with type 1 diabetic nephropathy compared to individuals with type 1 diabetes mellitus in a European Population (T allele compared to C)



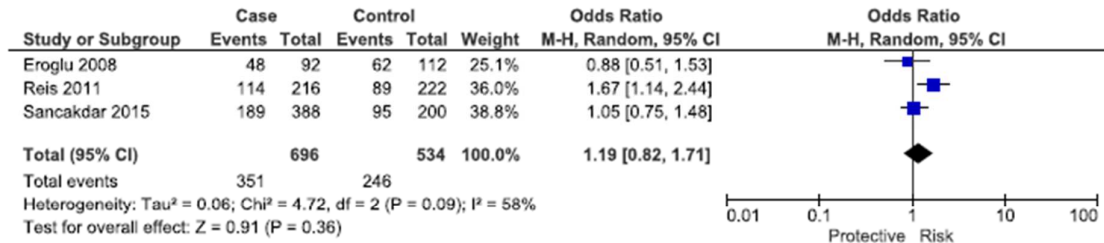
Supplementary Figure S2m: AGT rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian Population (T allele compared to C)



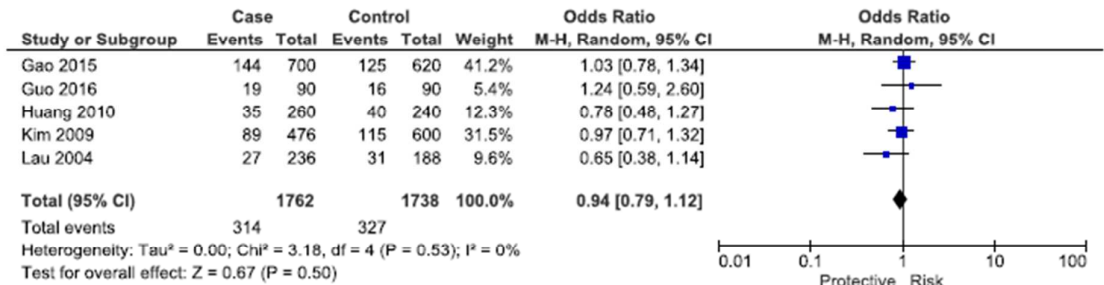
Supplementary Figure S2n: AGT rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European Population (T allele compared to C)



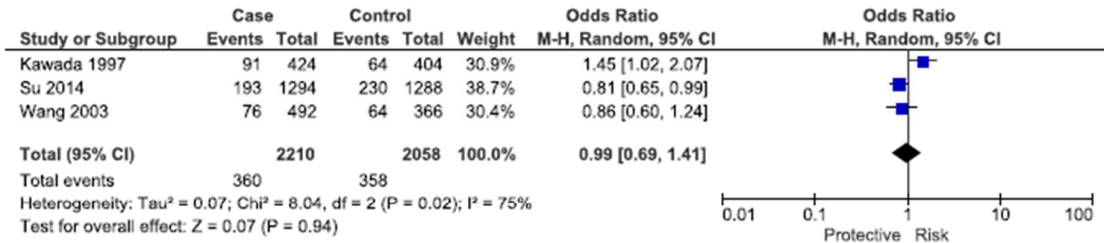
Supplementary Figure S2o: *AGT* rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a Middle Eastern Population (T allele compared to C)



Supplementary Figure S2p: *AGT* rs699 investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian Population (T allele compared to C)

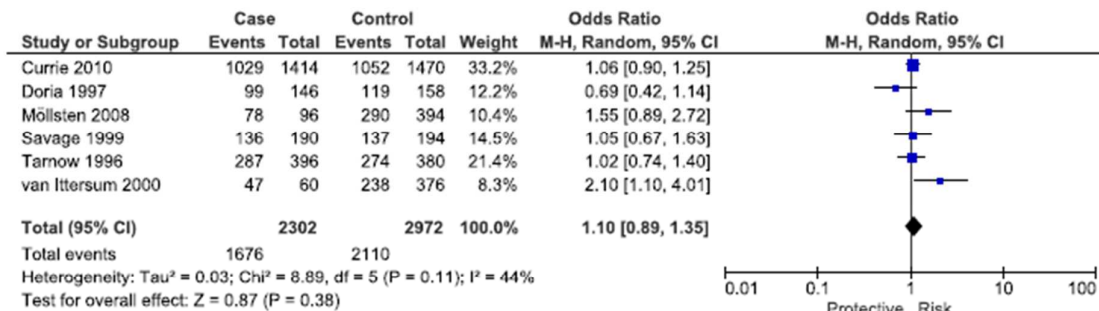


Supplementary Figure S2q: *AGT* rs699 investigation, individuals with end-stage renal disease compared to healthy controls in an East Asian Population (T allele compared to C)

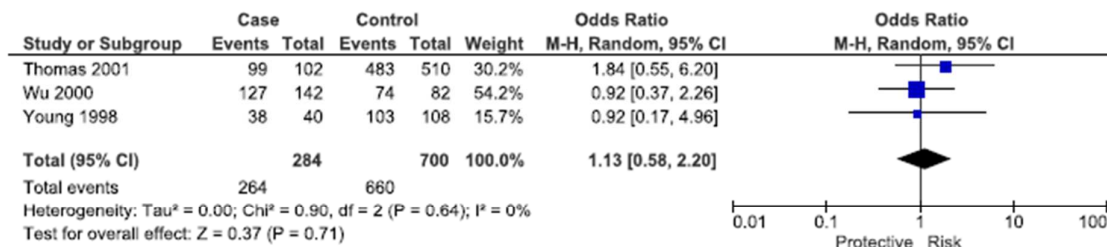


AGTR1

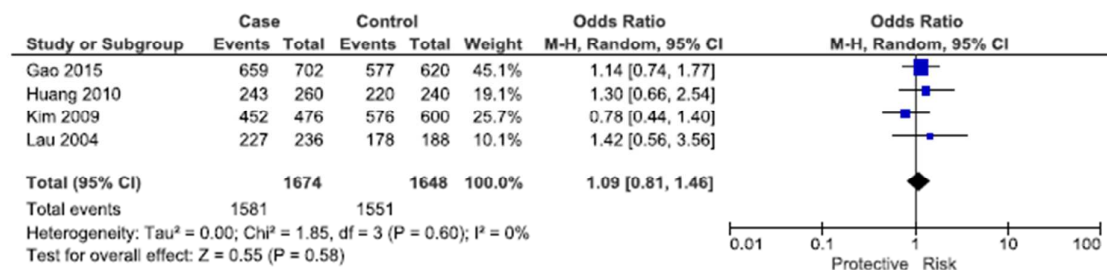
Supplementary Figure S2r: AGTR1 rs5186 investigation, individuals with type 1 diabetic nephropathy compared to individuals with type 1 diabetes mellitus in a European Population (A allele compared to C allele)



Supplementary Figure S2s: AGTR1 rs5186 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian Population (A allele compared to C allele)

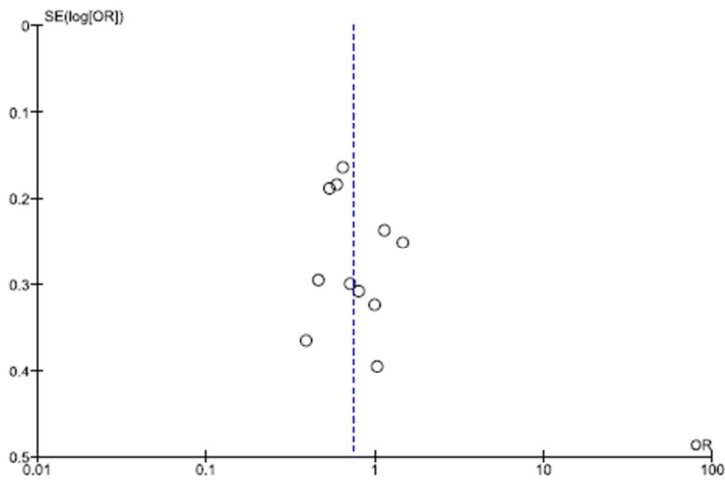


Supplementary Figure S2t: AGTR1 rs5186 investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian Population (A allele compared to C allele)

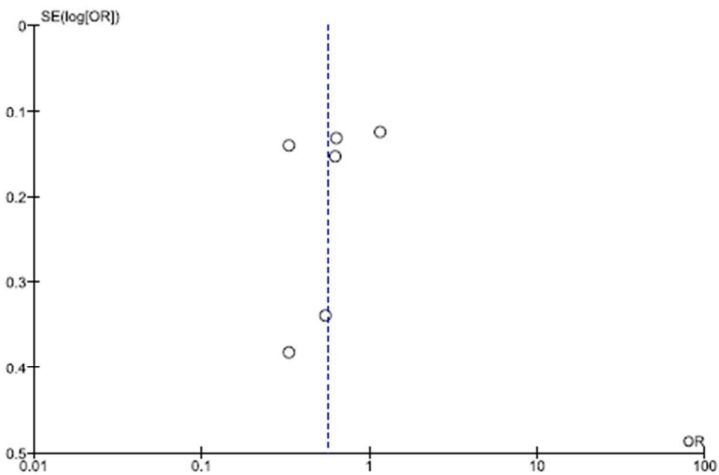


Supplementary Figure S3: Funnel Plots

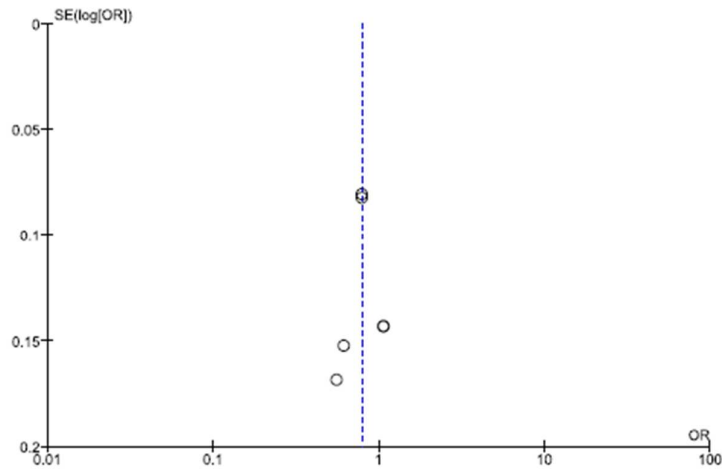
ACE I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian Population (insertion compared to deletion)



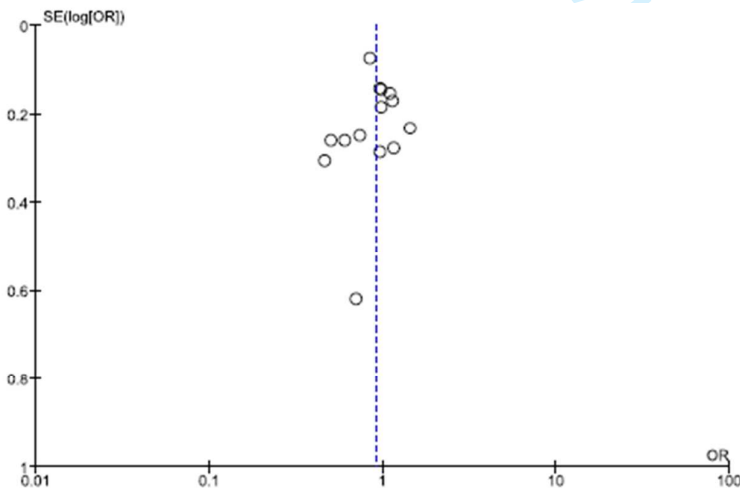
ACE I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a South Asian Population (insertion compared to deletion)



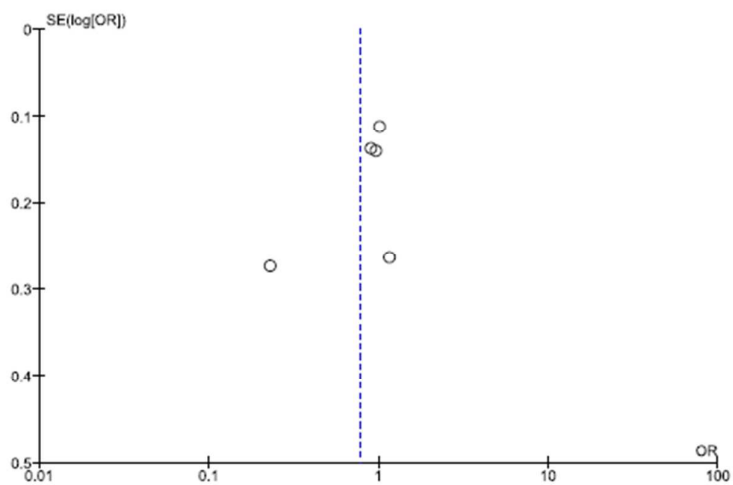
ACE I/D investigation, individuals with end-stage renal disease compared to healthy controls in an East Asian Population (insertion compared to deletion)



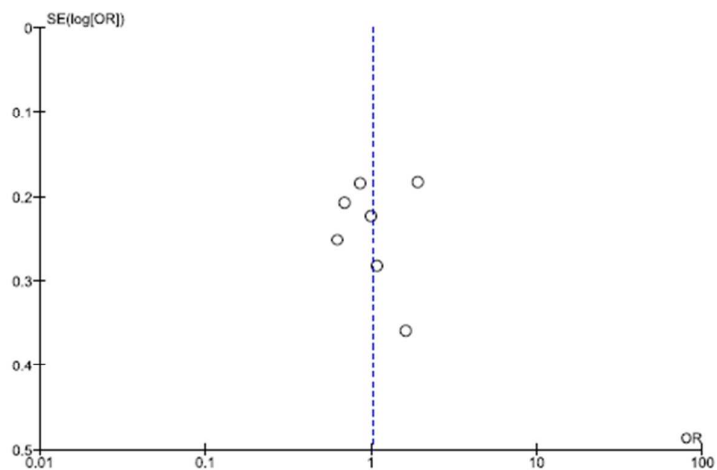
ACE I/D investigation, individuals with type 1 diabetic nephropathy compared to individuals with type 1 diabetes mellitus in a European Population (insertion compared to deletion)



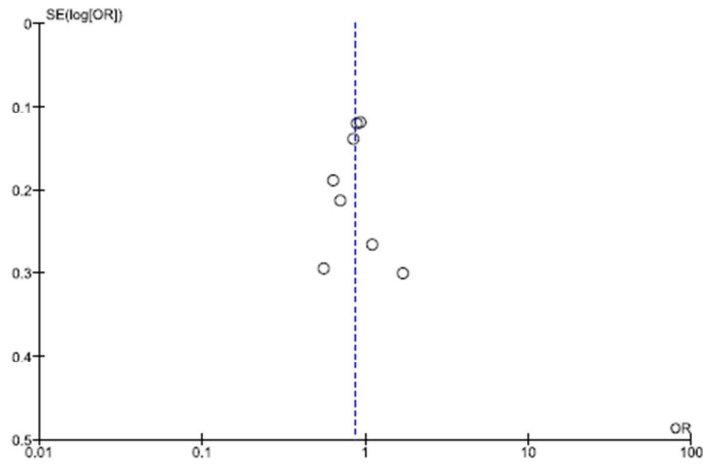
ACE I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European Population (insertion compared to deletion)



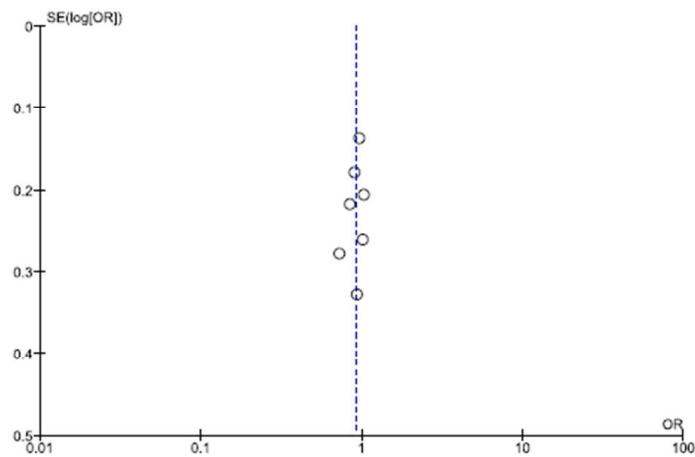
ACE I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a Middle Eastern Population (insertion compared to deletion)



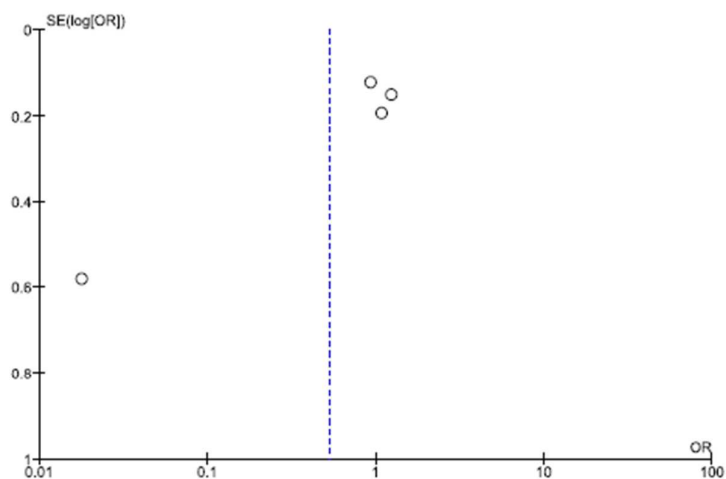
ACE I/D investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian Population (insertion compared to deletion)



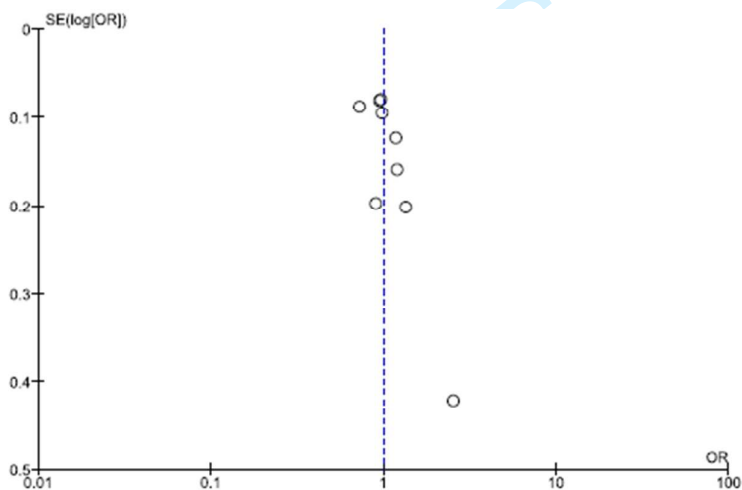
ACE I/D investigation, individuals with IgA nephropathy compared to healthy controls in a European Population (insertion compared to deletion)



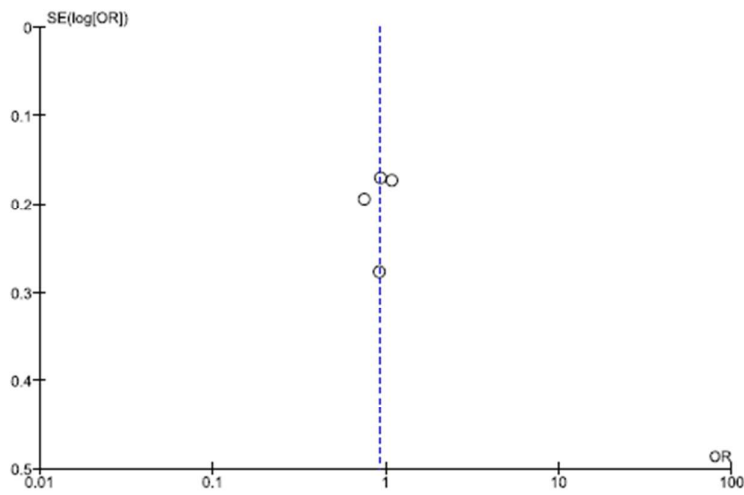
ACE I/D investigation, individuals with chronic kidney disease compared to healthy controls in a South Asian Population (insertion compared to deletion)



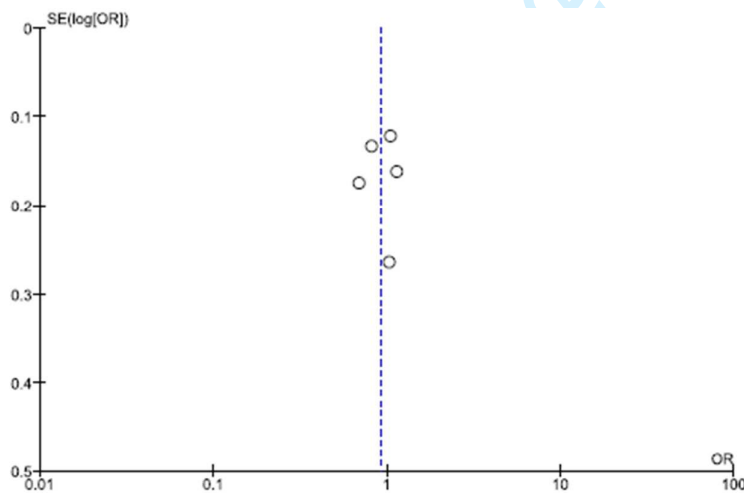
ACE I/D investigation, individuals with end-stage renal disease compared to healthy controls in a European Population (insertion compared to deletion)



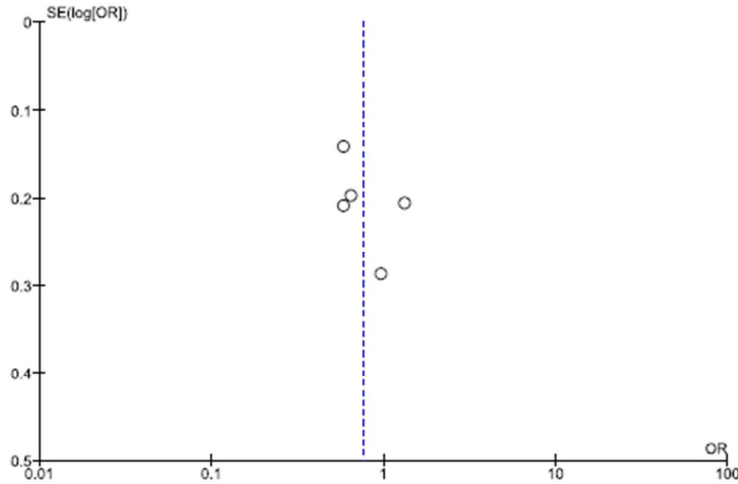
ACE I/D investigation, individuals with primary glomerulonephritis compared to healthy controls in a European Population (insertion compared to deletion)



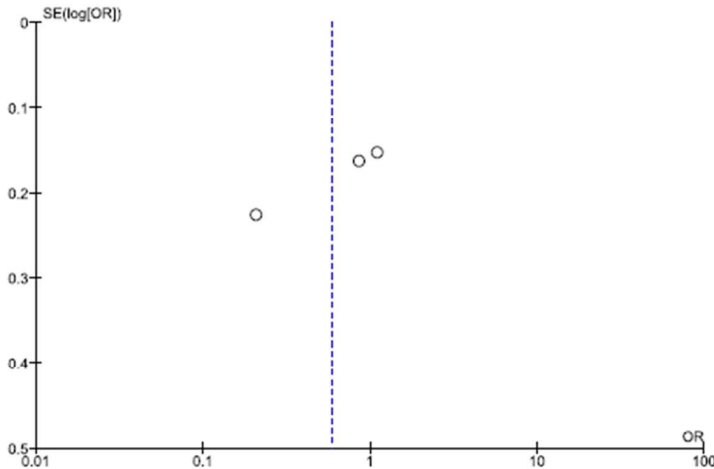
ACE I/D investigation, individuals who have had renal transplants compared to healthy controls in a European Population (insertion compared to deletion)



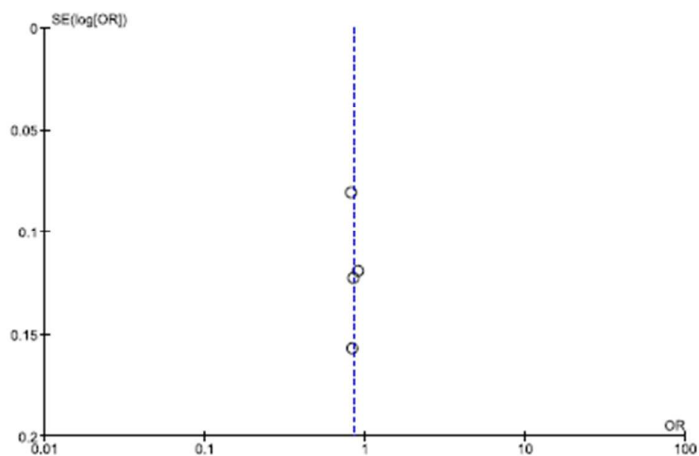
ACE I/D investigation, individuals with end-stage renal disease linked to type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian Population (insertion compared to deletion)



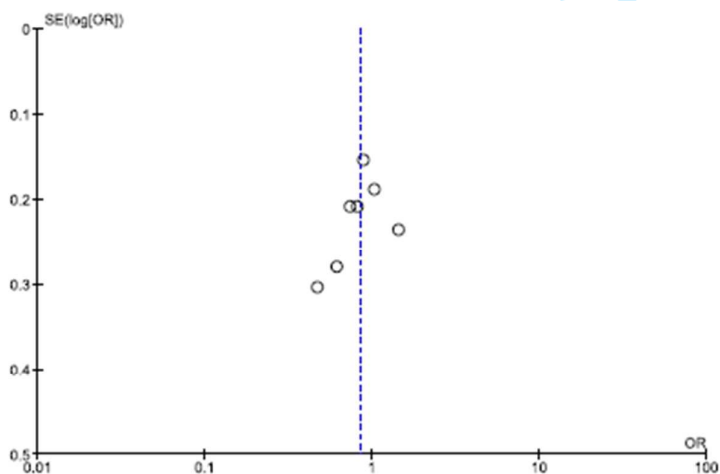
ACE I/D investigation, individuals with end-stage renal disease linked to type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European Population (insertion compared to deletion)



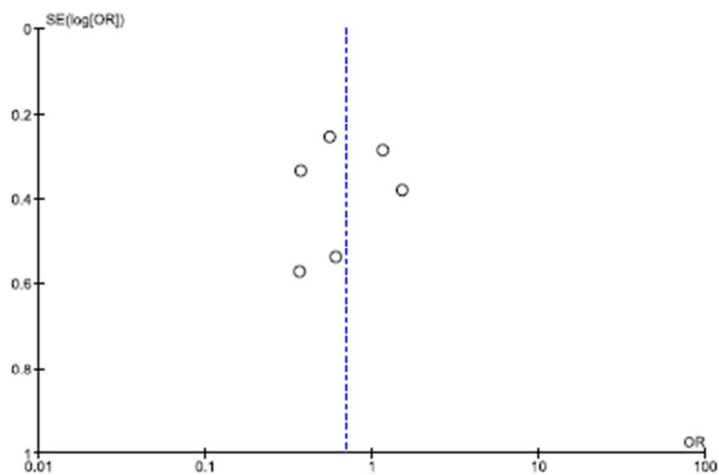
AGT rs699 investigation, individuals with end-stage renal disease compared to healthy controls in a European Population (T allele compared to C)



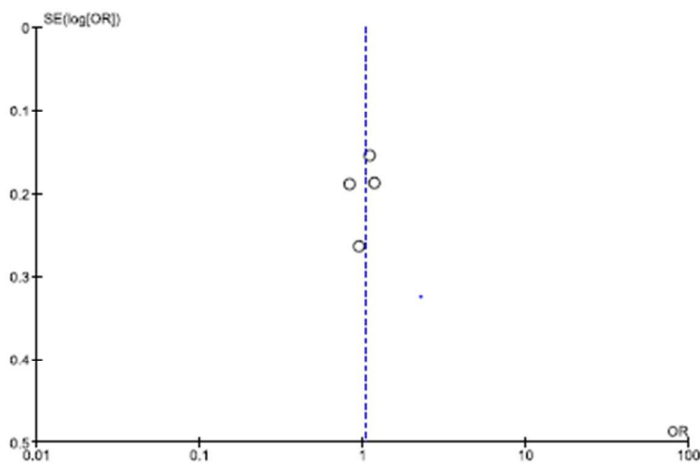
AGT rs699 investigation, individuals with type 1 diabetic nephropathy compared to individuals with type 1 diabetes mellitus in a European Population (T allele compared to C)



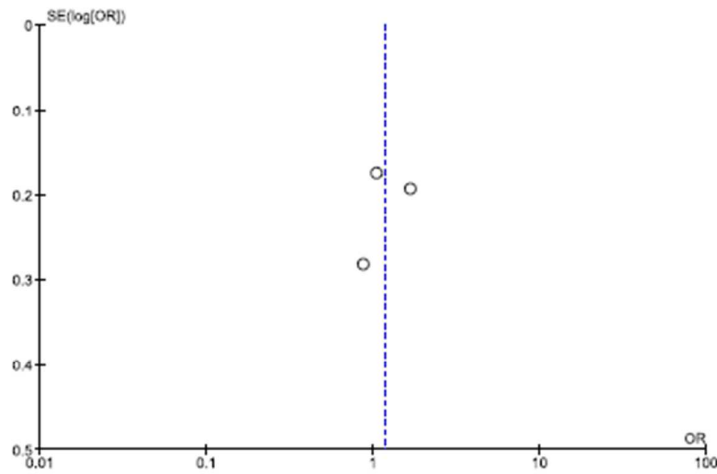
AGT rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian Population (T allele compared to C)



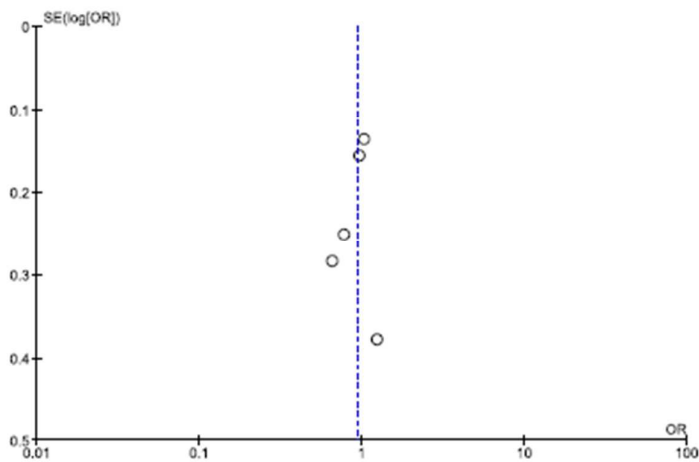
AGT rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European Population (T allele compared to C)



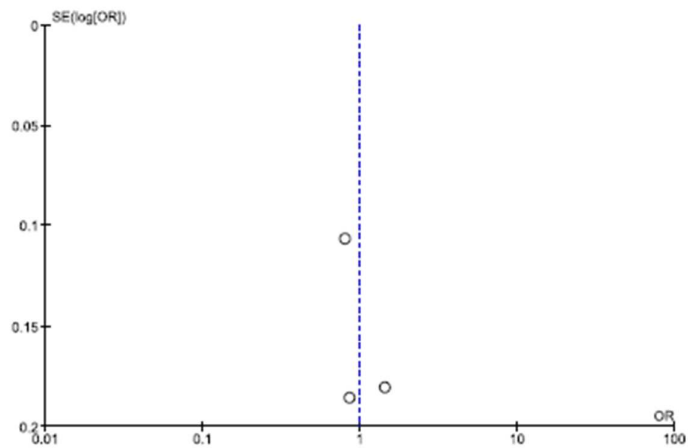
AGT rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a Middle Eastern Population (T allele compared to C)



AGT rs699 investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian Population (T allele compared to C)

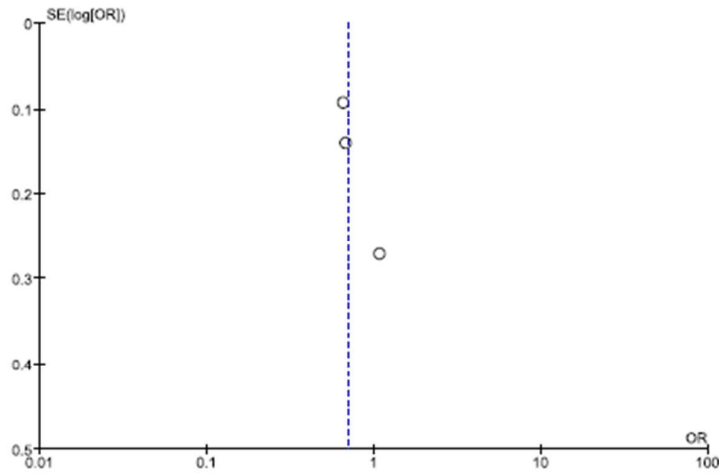


AGT rs699 investigation, individuals with end-stage renal disease compared to healthy controls in an East Asian Population (T allele compared to C)

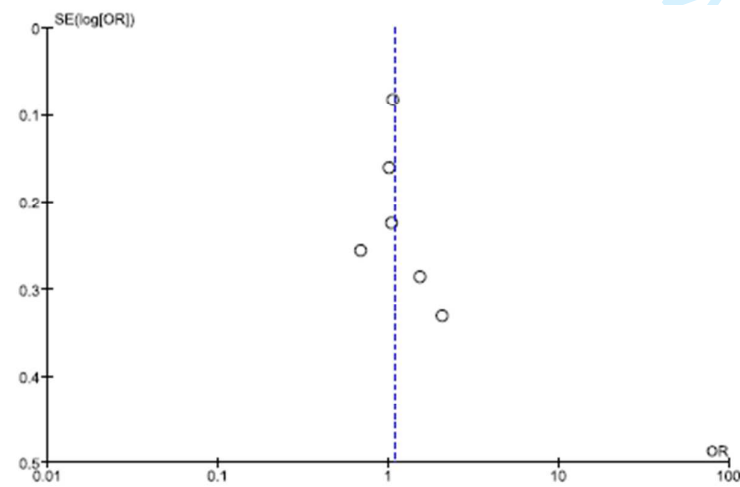


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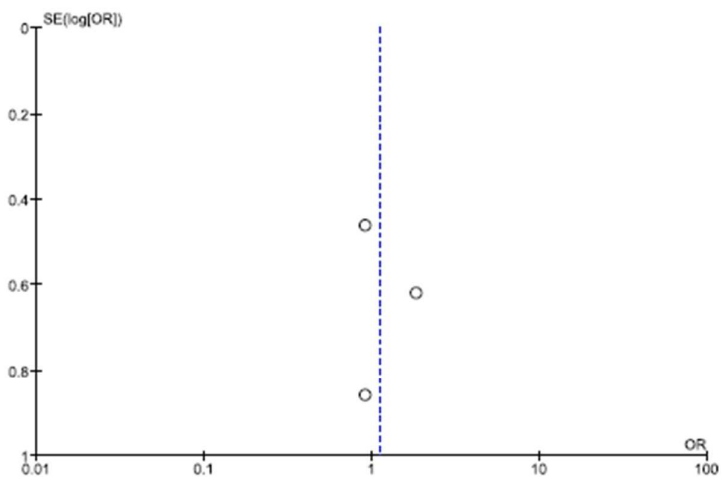
AGTR1 rs5186 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a South Asian Population (A allele compared to C allele)



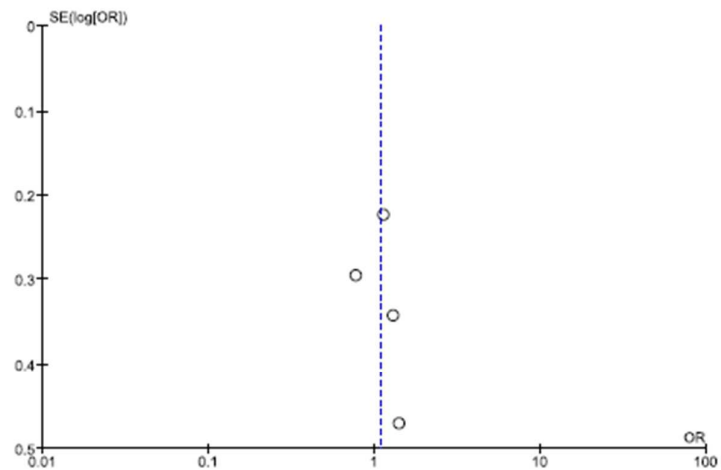
AGTR1 rs5186 investigation, individuals with type 1 diabetic nephropathy compared to individuals with type 1 diabetes mellitus in a European Population (A allele compared to C allele)



AGTR1 rs5186 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian Population (A allele compared to C allele)



AGTR1 rs5186 investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian Population (A allele compared to C allele)



Supplementary Table S1: Search Terms

Gene	Search Terms
<i>ACE</i>	Angiotensin I Converting Enzyme Angiotensin I Converting Enzyme (Peptidyl-Dipeptidase A) 1 Dipeptidyl Carboxypeptidase I CD143 Antigen Kininase II DCP1 DCP Angiotensin I Converting Enzyme Peptidyl-Dipeptidase A 1 Transcript Angiotensin Converting Enzyme, Somatic Isoform Peptidyl-Dipeptidase A Carboxycathepsin Testicular ECA Peptidase P EC 3.4.15.1 EC 3.2.1.- CD143 MVCD3 ACE1 ACE ICH <u>AND</u> Kidney Nephrology Nephropathy Renal <u>AND</u> SNP Polymorphism Variant Allele Genotype
<i>ACE2</i>	Angiotensin I Converting Enzyme 2 Angiotensin I Converting Enzyme (Peptidyl-Dipeptidase A) 2 Angiotensin-Converting Enzyme Homolog ACE-Related Carboxypeptidase Metalloprotease MPROT15 Peptidyl-Dipeptidase A ACEH EC 3.4.17.23 EC 3.4.17 ACE2 <u>AND</u>

	Kidney Nephrology Nephropathy Renal <u>AND</u> SNP Polymorphism Variant Allele Genotype
<i>AGT</i>	Angiotensinogen Angiotensinogen (Serpine Peptidase Inhibitor, Clade A, Member 8) Serpin Peptidase Inhibitor, Clade A, Member 8 Serpin A8 SERPINA8 Serine (Or Cysteine) Proteinase Inhibitor Alpha-1 Antitrypsin, Antitrypsin Alpha-1 Antitrypsin Pre-Angiotensinogen Angiotensin II Angiotensin I Antitrypsin ANHU AGT <u>AND</u> Kidney Nephrology Nephropathy Renal <u>AND</u> SNP Polymorphism Variant Allele Genotype
<i>AGTR1</i>	Angiotensin II Receptor Type 1 Angiotensin II Receptor, Type 1 AGTR1B AT1AR AT1BR AT2R1 AT1 Type-1B Angiotensin II Receptor Angiotensin II Type-1 Receptor Angiotensin Receptor 1B

	<p>AGTR1A AT2R1B HAT1R AG2S AT1B AT1R AGTR1 AT2R1A</p> <p><u>AND</u></p> <p>Kidney Nephrology Nephropathy Renal</p> <p><u>AND</u></p> <p>SNP Polymorphism Variant Allele Genotype</p>
<i>AGTR2</i>	<p>Angiotensin II Receptor Type 2 Angiotensin II Receptor, Type 2 Angiotensin II Type-2 Receptor AT2 Angiotensin Receptor 2 ATGR2 MRX88</p> <p><u>AND</u></p> <p>Kidney Nephrology Nephropathy Renal</p> <p><u>AND</u></p> <p>SNP Polymorphism Variant Allele Genotype</p>
<i>REN</i>	<p>Renin Angiotensinogenase EC 3.4.23.15 Angiotensin-Forming Enzyme Renin Precursor, Renal EC 3.4.23</p>

	HNFJ2 REN <u>AND</u> Kidney Nephrology Nephropathy Renal <u>AND</u> SNP Polymorphism Variant Allele Genotype
<i>Additional filters added to database searches</i>	English / Spanish language Human studies Case / Control studies Not clinical trials Not review articles Not a case report Not a meta-analysis

Supplementary Table S2: Ethnicity Codes

Population	Population Code
Ad Mixed American (Southern USA and Central America)	AMR
African American	AFR
East Asian	EAS
European	EUR
Middle Eastern	ME
Mix of ethnicities	MIX
North African	NA
South Asian	SAS

Supplementary Table S3a: Excluded studies from the ACE search

Included in accompanying MS Excel Workbook

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1a)

Supplementary Table S3b: Excluded studies from the ACE2 search

Included in accompanying MS Excel Workbook

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1b)

Supplementary Table S3c: Excluded studies from the AGT search

Included in accompanying MS Excel Workbook

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1c)

Supplementary Table S3d: Excluded studies from the AGTR1 search

Included in accompanying MS Excel Workbook

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1d)

Supplementary Table S3e: Excluded studies from the AGTR2 search

Included in accompanying MS Excel Workbook

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1e)

Supplementary Table S3f: Excluded studies from the REN search

Included in accompanying MS Excel Workbook

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1f)

Supplementary Table S4: Data included in quantitative analysis for ACE

Author	Year	Ethnicity	SNP	Cases				Controls			
				Definition	N	I Frequency	D Frequency	Definition	N	I Frequency	D Frequency
Anbazhagan K et al.(55)	2009	SAS	Ins/Del	CKD	118	124	112	Healthy	98	99	97
Chen WJ et al.(56)	2014	SAS	Ins/Del	CKD	233	314	152	Healthy	449	617	281
Nagamani S et al.(57)	2015	SAS	Ins/Del	CKD	147	152	142	Healthy	221	195	227
Shanmuganathan R et al.(58)	2015	SAS	Ins/Del	CKD	30	10	50	Healthy	30	55	5
Ali A et al.(59)	2015	EAS	Ins/Del	ESRD	190	219	161	Healthy	190	262	118
Kawada N et al.(22)	1997	EAS	Ins/Del	ESRD	216	280	152	Healthy	208	264	152
Su SL et al.(60)	2014	EAS	Ins/Del	ESRD	647	792	502	Healthy	644	859	429
Tang FY et al.(61)	2008	EAS	Ins/Del	ESRD	153	100	206	Healthy	148	138	158
Wang AY et al.(62)	2003	EAS	Ins/Del	ESRD	246	316	176	Healthy	183	230	136
Yang HY et al.(63)	2015	EAS	Ins/Del	ESRD	683	833	533	Healthy	653	867	439
Buraczynska M et al.(64)	2006	EUR	Ins/Del	ESRD	745	688	802	Healthy	520	492	548
Dixit M et al.(65)	2002	EUR	Ins/Del	ESRD	26	32	20	Healthy	22	17	27
Losito A et al.(66)	2002	EUR	Ins/Del	ESRD	160	135	185	Healthy	169	128	210
McLaughlin KJ et al.(67)	1996	EUR	Ins/Del	ESRD	460	654	990	Healthy	371	353	389
Nicod J et al.(68)	2002	EUR	Ins/Del	ESRD	260	282	238	Healthy	260	261	259
Ortiz MA et al.(69)	2003	EUR	Ins/Del	ESRD	117	68	166	Healthy	129	80	178
Schmidt A et al.(70)	1996	EUR	Ins/Del	ESRD	106	105	107	Healthy	95	80	110
van der Sman-de Beer F et al.(71)	2005	EUR	Ins/Del	ESRD	415	400	430	Healthy	472	459	485
Aucella F et al.(72)	2003	EUR	Ins/Del	ESRD	461	315	607	Healthy	1307	916	1698
Guo Y et al.(73)	2016	EAS	Ins/Del	IgAN	45	54	36	Healthy	45	42	48
Huang HD et al.(50)	2010	EAS	Ins/Del	IgAN	130	155	105	Healthy	120	168	72
Jung ES et al.(74)	2010	EAS	Ins/Del	IgAN	261	298	224	Healthy	300	360	240
Lau YK et al.(25)	2004	EAS	Ins/Del	IgAN	118	154	82	Healthy	94	137	51
Suzuki H et al.(75)	2004	EAS	Ins/Del	IgAN	319	378	260	Healthy	270	328	212
Yoon HJ et al.(76)	2002	EAS	Ins/Del	IgAN	191	204	178	Healthy	233	268	198

1												
2												
3												
4												
5	Yorioka T et al.(77)	1995	EAS	Ins/Del	IgAN	48	67	29	Healthy	104	139	67
6	Yoshida H et al.(78)	1995	EAS	Ins/Del	IgAN	53	57	49	Healthy	46	62	30
7	Burg M et al. *(79)	1997	EUR	Ins/Del	IgAN	70	26	28	Healthy	60	60	60
8	Drouet M et al.(80)	2002	EUR	Ins/Del	IgAN	125	78	172	Healthy	83	54	100
9	Harden PN et al.(81)	1995	EUR	Ins/Del	IgAN	100	79	121	Healthy	98	76	120
10	Pawlik M et al. *(82)	2014	EUR	Ins/Del	IgAN	31	25	37	Healthy	187	180	194
11	Pei Y et al.(83)	1997	EUR	Ins/Del	IgAN	168	145	191	Healthy	100	91	109
12	Schmidt S et al. (B)(84)	1995	EUR	Ins/Del	IgAN	204	168	240	Healthy	234	197	271
13	Stratta P et al.(85)	1999	EUR	Ins/Del	IgAN	81	62	100	Healthy	50	38	62
14	Burg M et al. *(79)	1997	EUR	Ins/Del	Primary GN	46	44	48	Healthy	60	60	60
15	Pawlik M et al. *(82)	2014	EUR	Ins/Del	Primary GN	109	101	117	Healthy	187	180	194
16												
17									Organ			
18	Stratta P et al.(86)	2004	EUR	Ins/Del	Primary GN	117	96	138	donors	171	134	208
19	Zsom M et al.(87)	2011	EUR	Ins/Del	Primary GN	73	62	84	Healthy	200	198	202
20												
21	Beige J et al.(88)	1997	EUR	Ins/Del	RTx recipients	269	251	287	Kidney Donor	269	244	294
22												
23	El-Essawy AB et al.(89)	2002	EUR	Ins/Del	RTx recipients	294	246	342	Healthy	181	170	192
24												
25									Healthy &			
26	Hueso M et al.(90)	2004	EUR	Ins/Del	RTx recipients	180			cadaveric	113		
27									renal			
28									allograft			
29									donors		96	130
30												
31	Stratta P et al. (91)	2008	EUR	Ins/Del	RTx recipients	169	122	216	Healthy	169	112	226
32												
33	Viklický O et al.(92)	2001	EUR	Ins/Del	RTx recipients	30	28	32	Healthy	653	599	707
34	Barnas U et al.(93)	1997	EUR	Ins/Del	T1DN	63	45	55	T1DM	59	51	29
35	Chowdhury TA et al.(94)	1996	EUR	Ins/Del	T1DN	242	204	280	T1DM	166	143	189
36	Currie D et al.(95)	2010	EUR	Ins/Del	T1DN	718	603	777	T1DM	749	696	764
37	De Cosmo S et al.(96)	1999	EUR	Ins/Del	T1DN	175	125	225	T1DM	136	89	183
38	Demurov LM et al.(97)	1997	EUR	Ins/Del	T1DN	56	35	77	T1DM	76	72	80
39												
40												
41												
42												
43												
44												
45												
46												
47												

Hadjadj S et al.(98)	2001	EUR	Ins/Del	T1DN	6	4	8	T1DM	251	208	294
Hibberd ML et al.(99)	1997	EUR	Ins/Del	T1DN	72	60	84	T1DM	86	57	115
Marre M et al.(34)	1994	EUR	Ins/Del	T1DN	62	43	81	T1DM	62	58	66
Ringel J et al. *(100)	1997	EUR	Ins/Del	T1DN	134	130	138	T1DM	226	208	244
Schmidt S et al. (A)(101)	1995	EUR	Ins/Del	T1DN	114	86	142	T1DM	133	101	165
Shestakova MV et al.(102)	2006	EUR	Ins/Del	T1DN	63	65	61	T1DM	66	78	54
Tarnow L et al.(103)	1995	EUR	Ins/Del	T1DN	198	175	221	T1DM	190	169	211
van Ittersum FJ et al.(53)	2000	EUR	Ins/Del	T1DN	30	33	27	T1DM	188	192	184
Walder B et al.(104)	1998	EUR	Ins/Del	T1DN	55	49	61	T1DM	44	40	48
Fujisawa T et al.(105)	1995	EAS	Ins/Del	T2DN	54	71	37	T2DM	35	46	24
Ha SK et al.(106)	2003	EAS	Ins/Del	T2DN	140	132	148	T2DM	99	123	75
Hsieh MC et al.(107)	2000	EAS	Ins/Del	T2DN	179	219	139	T2DM	157	222	92
Mizuiru S et al.(108)	1995	EAS	Ins/Del	T2DN	80	72	88	T2DM	31	33	29
Nakajima S et al.(109)	1996	EAS	Ins/Del	T2DN	54	67	41	T2DM	41	55	27
Ohno T et al.(110)	1996	EAS	Ins/Del	T2DN	25	28	22	T2DM	53	81	25
Shin Y et al.(111)	2004	EAS	Ins/Del	T2DN	82	112	52	T2DM	59	70	48
Thomas GN et al.(112)	2001	EAS	Ins/Del	T2DN	51	72	30	T2DM	255	346	164
Wang M et al.(113)	2016	EAS	Ins/Del	T2DN	106	78	56	T2DM	741	1020	438
Wu SH et al.(114)	2000	EAS	Ins/Del	T2DN	71	75	67	T2DM	41	58	24
Young RP et al.(115)	1998	EAS	Ins/Del	T2DN	20	27	13	T2DM	54	72	36
Dudley CR et al.(116)	1995	EUR	Ins/Del	T2DN	163	246	288	T2DM	267	246	288
Fradin S et al.(117)	2002	EUR	Ins/Del	T2DN	39	94	142	T2DM	118	94	142
Ng DPK et al.(118)	2006	EUR	Ins/Del	T2DN	291	147	187	T2DM	167	147	187
Nikzamir A et al.(119)	2009	EUR	Ins/Del	T2DN	48	159	131	T2DM	145	159	131
Schmidt S et al. (B)(120)	1997	EUR	Ins/Del	T2DN	311	278	416	T2DM	347	278	416
Al-Harbi EM et al.(121)	2011	ME	Ins/Del	T2DN	110	63	157	T2DM	196	125	267
Araz M et al.(122)	2001	ME	Ins/Del	T2DN	62	52	72	T2DM	123	103	143
El-Baz R et al.(123)	2012	ME	Ins/Del	T2DN	102	66	138	T2DM	100	82	118
Ergen HA et al.(124)	2004	ME	Ins/Del	T2DN	25	21	29	T2DM	50	31	69
Eroglu Z et al.(125)	2008	ME	Ins/Del	T2DN	46	43	49	T2DM	56	50	62
Felehgari V et al.(126)	2011	ME	Ins/Del	T2DN	68	42	94	T2DM	72	60	84
Sancakdar E et al.(127)	2015	ME	Ins/Del	T2DN	194	180	208	T2DM	100	62	138

Ahluwalia TS et al.(128)	2009	SAS	Ins/Del	T2DN	240	152	328	T2DM	200	215	
Kumar R et al.(129)	2013	SAS	Ins/Del	T2DN	407	448	366	T2DM	185	190	
Movva S et al.(130)	2007	SAS	Ins/Del	T2DN	174	182	166	T2DM	175	222	
Naresh VV et al.(131)	2009	SAS	Ins/Del	T2DN	30	19	41	T2DM	30	35	
Shaikh R et al.(132)	2012	SAS	Ins/Del	T2DN	168	134	202	T2DM	296	394	
Vishwanathan V et al.(133)	2001	SAS	Ins/Del	T2DN	86	79	93	T2DM	23	28	
Doi Y et al.(134)	1996	EAS	Ins/Del	T2DN-ESRD	100	115	85	T2DM	124	168	
Jayapalan JJ et al.(135)	2010	EAS	Ins/Del	T2DN-ESRD	127	163	91	T2DM	81	93	
Lu M et al.(136)	2016	EAS	Ins/Del	T2DN-ESRD	210	238	182	T2DM	222	307	
Park HC et al.(137)	2005	EAS	Ins/Del	T2DN-ESRD	103	103	103	T2DM	88	111	
Taniwaki H et al.(138)	2001	EAS	Ins/Del	T2DN-ESRD	42	53	31	T2DM	69	88	
Grzeszczak W et al.(139)	1998	EUR	Ins/Del	T2DN-ESRD	127	128	126	T2DM	254	244	
Ringel J et al. *(100)	1997	EUR	Ins/Del	T2DN-ESRD	161	150	172	T2DM	140	141	
Schmidt S et al. (A)(140)	1997	EUR	Ins/Del	T2DN-ESRD	61	29	93	T2DM	347	416	

*Burg M et al., Pawlik M et al., and Ringel J et al., are included twice as these articles contained two phenotypic comparisons

Abbreviations: EAS, East Asian; EUR, European; ME, Middle Eastern; SAS, South Asian; CKD, Chronic Kidney Disease; ESRD, End-Stage Renal Disease; IgAN, IgA Nephropathy; GN, Glomerulonephritis; RTx, Renal Transplant; T1DM, Type 1 Diabetes Mellitus; T1DN, Type 1 Diabetic Nephropathy; T2DM, Type 2 Diabetes Mellitus; T2DN, Type 2 Diabetic Nephropathy.

Supplementary Table S5: Data included in quantitative analysis for AGT

Author	Year	Ethnicity	SNP	Definition	Cases			Controls			
					N	T Allele Frequency	C Allele Frequency	Definition	N	T Allele Frequency	C Allele Frequency
Beige J et al. (141)	1996	EUR	rs699	ESRD	269	285	253	Healthy	269	307	229
Buraczynska M et al.(64)	2006	EUR	rs699	ESRD	745	734	756	Healthy	520	564	476
Losito A et al.(66)	2002	EUR	rs699	ESRD	160	165	155	Healthy	169	190	148
Lovati E et al.(142)	2001	EUR	rs699	ESRD	260	299	221	Healthy	327	393	261
Doria A et al.(143)	1996	EUR	rs699	T1DN	139	158	120	T1DM	75	96	54
Fogarty DG et al.(144)	1996	EUR	rs699	T1DN	95	114	76	T1DM	100	129	71
Möllsten A et al.(145)	2008	EUR	rs699	T1DN	73	62	34	T1DM	197	220	174
Ringel J et al.(100)	1997	EUR	rs699	T1DN	134	145	123	T1DM	226	257	195
Schmidt S et al.*(146)	1996	EUR	rs699	T1DN	108	121	95	T1DM	120	132	108
van Ittersum FJ et al.(53)	2000	EUR	rs699	T1DN	30	31	29	T1DM	188	238	138
Walder B et al.(104)	1998	EUR	rs699	T1DN	55	60	50	T1DM	44	63	25
Ohno T et al.(110)	1996	EAS	rs699	T2DN	25	16	34	T2DM	53	25	81
Oue T et al.(147)	1999	EAS	rs699	T2DN	27	6	36	T2DM	40	13	47
Thomas GN et al.(112)	2001	EAS	rs699	T2DN	51	18	84	T2DM	255	79	431
Wang M et al.(113)	2016	EAS	rs699	T2DN	189	19	175	T2DM	473	154	792
Wu SH et al.(114)	2000	EAS	rs699	T2DN	71	21	121	T2DM	41	26	56
Young RP et al.(115)	1998	EAS	rs699	T2DN	20	4	36	T2DM	54	25	83
Fradin S et al.(117)	2002	EUR	rs699	T2DN	39	45	33	T2DM	118	139	97
Freire MB et al.(148)	1998	EUR	rs699	T2DN	117	134	96	T2DM	125	148	88
Schmidt S et al.*(146)	1996	EUR	rs699	T2DN	127	149	105	T2DM	107	117	97
Zychma MJ et al.(149)	2000	EUR	rs699	T2DN	127	133	121	T2DM	243	242	244
Eroglu Z et al.(125)	2008	ME	rs699	T2DN	46	48	44	T2DM	56	62	50
Reis KA et al.(150)	2011	ME	rs699	T2DN	108	114	102	T2DM	111	89	133
Sancakdar E et al.(127)	2015	ME	rs699	T2DN	194	189	199	T2DM	100	95	105
Gao J et al.(49)	2015	EAS	rs699	IgAN	351	144	556	Healthy	310	125	495
Guo Y et al.(73)	2016	EAS	rs699	IgAN	45	19	71	Healthy	45	16	74

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Huang HD et al.(50)	2010	EAS	rs699	IgAN	130	35	225	Healthy	120	40	200
Kim SM et al.(51)	2009	EAS	rs699	IgAN	238	89	387	Healthy	300	115	485
Lau YK et al.(25)	2004	EAS	rs699	IgAN	118	27	209	Healthy	94	31	157
Kawada N et al.(22)	1997	EAS	rs699	ESRD	216	91	333	Healthy	208	64	340
Su SL et al.(60)	2014	EAS	rs699	ESRD	647	193	1101	Healthy	644	230	1058
Wang AY et al.(62)	2003	EAS	rs699	ESRD	246	76	416	Healthy	183	64	302

*Schmidt S et al., is included twice as the article contained two phenotypic comparisons.

Abbreviations: EAS, East Asian; EUR, European; ME, Middle Eastern; ESRD, End-Stage Renal Disease; IgAN, IgA Nephropathy; T1DM, Type 1 Diabetes Mellitus; T1DN, Type 1 Diabetic Nephropathy; T2DM, Type 2 Diabetes Mellitus; T2DN, Type 2 Diabetic Nephropathy.

Supplementary Table S6: Data included in quantitative analysis for *AGTR1*

Author	Year	Ethnicity	SNP	Cases				Controls			
				Definition	N	A Allele Frequency	C Allele Frequency	Definition	N	A Allele Frequency	C Allele Frequency
Gao J et al.(49)	2015	EAS	rs5186	IgAN	351	659	43	Healthy	310	577	43
Huang HD et al.(50)	2010	EAS	rs5186	IgAN	130	243	17	Healthy	120	220	20
Kim SM et al.(51)	2009	EAS	rs5186	IgAN	238	452	24	Healthy	300	576	24
Lau YK et al.(25)	2004	EAS	rs5186	IgAN	118	227	9	Healthy	94	178	10
Currie D et al.(95)	2010	EUR	rs5186	T1DN	718	1029	385	T1DM	749	1052	418
Doria A et al.(151)	1997	EUR	rs5186	T1DN	73	99	47	T1DM	79	119	39
Möllsten A et al.(145)	2008	EUR	rs5186	T1DN	72	78	18	T1DM	197	290	104
Savage DA et al.(52)	1999	EUR	rs5186	T1DN	95	136	54	T1DM	97	137	57
Tarnow L et al.(152)	1996	EUR	rs5186	T1DN	198	287	109	T1DM	190	274	106
van Ittersum FJ et al.(53)	2000	EUR	rs5186	T1DN	30	47	13	T1DM	188	238	138
Thomas GN et al.(112)	2001	EAS	rs5186	T2DN	51	99	3	T2DM	255	483	27
Wu SH et al.(114)	2000	EAS	rs5186	T2DN	71	127	15	T2DM	41	74	8
Young RP et al.(115)	1998	EAS	rs5186	T2DN	20	38	2	T2DM	54	103	5
Ahluwalia TS et al.(128)	2009	SAS	rs5186	T2DN	240	320	160	T2DM	255	381	129
Prasad P et al.(54)	2006	SAS	rs5186	T2DN	196	360	26	T2DM	225	417	33
Shah VN et al.(153)	2013	SAS	rs5186	T2DN	596	789	403	T2DM	566	840	282

Abbreviations: EAS, East Asian; EUR, European; SAS, South Asian; IgAN, IgA Nephropathy; T1DM, Type 1 Diabetes Mellitus; T1DN, Type 1 Diabetic Nephropathy; T2DM, Type 2 Diabetes Mellitus; T2DN, Type 2 Diabetic Nephropathy.

Supplementary Table S7. Included studies not complying with Hardy Weinberg equilibrium in cases or controls

Gene	Author	Year	Ethnicity	SNP	Cases		Controls	
					Definition	P value (where significant)	Definition	P value (where significant)
ACE	Jung ES	2010	EAS	Ins/Del	IgAN		Healthy	0.016
	Shanmuganathan R	2015	SAS	Ins/Del	CKD	1.31x10 ⁻⁰⁴	Healthy	1.9x10 ⁻⁰⁵
	Tang FY	2008	EAS	Ins/Del	ESRD	1.8x10 ⁻⁰⁵	Healthy	1x10 ⁻⁰⁶
	Nicod J	2002	EUR	Ins/Del	ESRD	0.0008	Healthy	0.004
	McLaughlin KJ	1996	EUR	Ins/Del	ESRD	0.04	Healthy	
	Yorioka T	1995	EAS	Ins/Del	IgAN	0.013	Healthy	
	Yoshida H	1995	EAS	Ins/Del	IgAN	0.01	Healthy	
	Yoon HJ	2002	EAS	Ins/Del	IgAN	0.002	Healthy	
	Schmidt S	1995	EUR	Ins/Del	IgAN	0.007	Healthy	
	Suzuki H	2004	EAS	Ins/Del	IgAN	0.036	Healthy	0.004
	Zsom M	2011	EUR	Ins/Del	Primary GN	0.005	Healthy	
	Currie D	2010	EUR	Ins/Del	T1DN		T1DM	0.005
	Ringel J	1997	EUR	Ins/Del	T1DN		T1DM	0.018
	Tarnow L	1995	EUR	Ins/Del	T1DN		T1DM	0.013
	Schmidt S	1995	EUR	Ins/Del	T1DN	0.002	T1DM	
	Mizuiri S	1995	EAS	Ins/Del	T2DN	0.019	T2DM	
	Hsieh MC	2000	EAS	Ins/Del	T2DN	4.2x10 ⁻⁰⁵	T2DM	0.004
	Ha SK	2003	EAS	Ins/Del	T2DN		T2DM	0.026
	Schmidt S	1997	EUR	Ins/Del	T2DN	0.0147	T2DM	
	El-Baz R	2012	ME	Ins/Del	T2DN	0.0025	T2DM	1x10 ⁻⁰⁶
Sancakdar E	2015	ME	Ins/Del	T2DN	0.0076	T2DM	0.003	
Kumar R	2013	SAS	Ins/Del	T2DN	0.0016	T2DM	0.0003	
Park HC	2005	EAS	Ins/Del	T2DN-ESRD		T2DM	0.022	
AGT	Fogarty DG	1996	EUR	rs699	T1DN		T1DM	0.044
	Wu SH	2000	EAS	rs699	T2DN	0.0008	T2DM	
	Freire MB	1998	EUR	rs699	T2DN	0.022	T2DM	
	Reis KA	2011	ME	rs699	T2DN	0.006	T2DM	

	Fradin S	2002	EUR	rs699	T2DN	0.008	T2DM	
AGTR1	Ahluwalia TS	2009	SAS	rs5186	T2DN		T2DM	0.0002
	Shah VN	2013	SAS	rs5186	T2DN		T2DM	4.2×10^{-08}
	Lau YK	2004	EAS	rs5186	IgAN	0.038	Healthy	
	Möllsten A	2008	EUR	rs5186	T1DN	0.029	T1DM	

Abbreviations: EAS, East Asian; EUR, European; ME, Middle Eastern; SAS, South Asian; CKD, Chronic Kidney Disease; ESRD, End-Stage Renal Disease; GN, Glomerulonephritis; IgAN, IgA Nephropathy; T1DM, Type 1 Diabetes Mellitus; T1DN, Type 1 Diabetic Nephropathy; T2DM, Type 2 Diabetes Mellitus; T2DN, Type 2 Diabetic Nephropathy.

Supplementary Table S3a

Exclusion S Title	Authors	PMID	Reason
1 Angiotensin I - C	Cambien, F	9519756	No data for ACE
1 Association of TI	Sener EF, T	24126814	No data for ACE
1 Clinical utility of	Elmonem N	25407738	No data for ACE
1 DDOST, PRKCSH	Hoverfelt A	20490454	No data for ACE
1 Effect of a polyn	Morita T, It	10543322	No data for ACE
1 Effects of erythr	Glicklich D,	10428268	No data for ACE
1 Impact of the pr	Lely AT, var	18077786	No data for ACE
1 Kinin-dependen	Molinaro G	17003818	No data for ACE
1 Manganese sup	Lee SJ, Cho	16324912	No data for ACE
1 Nephropathy in	Orchard TJ,	12164879	No data for ACE
1 Neuropeptide Y	Ito, H; Mor	10363627	No data for ACE
1 Polymorphisms	Frojdo, S; S	16211375	No data for ACE
1 Role of glycaemi	Powrie JK, '	7819935	No data for ACE
1 Connexin 43 is n	Gerl, M; Ku	24062052	Non-human
1 Kallikrein and ar	Catanzaro C	6186886	Non-human
1 Multi-species co	Hamilton N	23408978	Non-human
1 N-domain angio	Bueno, V; F	15194348	Non-human
1 Renal angiotens	Stoneking,	9719278	Non-human
1 Altered activitie	Sharma, JN	25964383	Not a case-control study
1 Angiotensin con	Yildiz A, Ya	12832741	Not a case-control study
1 Angiotensin-con	So WY, Ma	16395257	Not a case-control study
1 Angiotensin-con	AkÅşay A, C	15013293	Not a case-control study
1 Angiotensin-con	Woo KT, La	18536822	Not a case-control study
1 Angiotensin-con	Beige J, Off	9550656	Not a case-control study
1 Angiotensin-I co	Ng, D; Tai, l	15830182	Not a case-control study
1 Antihypertensiv	Kuznetsova	10918550	Not a case-control study
1 Antiproteinuric	Haneda M,	15364166	Not a case-control study
1 Association betw	Huang, ZK;	26000752	Not a case-control study
1 Association betw	van Essen C	8538349	Not a case-control study
1 Association of t	Akçay A, Se	15385810	Not a case-control study
1 Captopril enhan	Di Paolo S,	12499886	Not a case-control study
1 Contribution of	Wong TY, S	11431175	Not a case-control study
1 Correlates of AC	Nikzamir A,	17986476	Not a case-control study
1 Deletion inserti	BjÅrck S, l	9269704	Not a case-control study
1 Disease progres	Woo KT, La	17601378	Not a case-control study
1 Effect of deletio	Parving HH	8806248	Not a case-control study
1 Gene polymorpi	Zhang G, W	17984617	Not a case-control study
1 Genetics and th	Marre, M	10097900	Not a case-control study
1 Genetics of angi	Costerouss	9247746	Not a case-control study
1 Hereditary facto	Marre, M; l	10922971	Not a case-control study
1 Impact of geneti	Siekierka-H	19681973	Not a case-control study
1 Insertion/deleti	Osono E, Ki	9820440	Not a case-control study
1 Insertion/deleti	Fedor R, As	21620105	Not a case-control study
1 Is the presence	Ng, DPK; T	18523141	Not a case-control study
1 Is there a role	of Isbir CS, Ak	11525534	Not a case-control study
1 M235T angioten	Staessen, J,	10100088	Not a case-control study
1 Microfluidic chip	Sohni YR, B	12554058	Not a case-control study
1 Mistyping of the	Ueda, S; He	8863184	Not a case-control study

1 PAI-1 4G/5G anc Aucella F, N 12748347 Not a case-control study
 1 Risk factors for t Oue, T; Nar 10580616 Not a case-control study
 1 Survival in type : PadrÃ³-Mic 19014923 Not a case-control study
 1 The effect of an Nakayama 16312263 Not a case-control study
 1 A novel human l Barash U, C 20007507 Not a renal disease focus
 1 A study on the a Chmaisse F 19861867 Not a renal disease focus
 1 Abnormal hepat Drenth JP, 15057895 Not a renal disease focus
 1 ACE and PC-1 ge de Azevedo 12126783 Not a renal disease focus
 1 ACE gene inserti Dell'omo, C 16889537 Not a renal disease focus
 1 Albuminuria anc Thomas GN 11200871 Not a renal disease focus
 1 alpha-adducin a Clark, CJ; D 11116113 Not a renal disease focus
 1 Angiotensin con Nagi DK, M 8582133 Not a renal disease focus
 1 Angiotensin con Miller JA, S 8995725 Not a renal disease focus
 1 Angiotensin l co Tassiulas, K 9710341 Not a renal disease focus
 1 Angiotensin l-co Costerouss 9830503 Not a renal disease focus
 1 Angiotensin l-co Vasku, A; S 9607178 Not a renal disease focus
 1 Angiotensin-con Mansoor Q 22607040 Not a renal disease focus
 1 Angiotensin-con Negi VS, De 25957879 Not a renal disease focus
 1 Angiotensin-con Catarsi P, R 16002416 Not a renal disease focus
 1 Angiotensin-con Douglas G, 15338496 Not a renal disease focus
 1 Angiotensin-con Pedersen-E 19820429 Not a renal disease focus
 1 Angiotensin-con Stefansson 10855732 Not a renal disease focus
 1 Angiotensin-con Singh M, Si 27030424 Not a renal disease focus
 1 Angiotensin-con Uhm WS, L 12043886 Not a renal disease focus
 1 Angiotensin-Cor Lachurie, M 7796503 Not a renal disease focus
 1 Angiotensin-con Al-Awadhi , 17631741 Not a renal disease focus
 1 Angiotensin-con Prkacin I, N 11505631 Not a renal disease focus
 1 Are the angioter Dikmen M, 16791358 Not a renal disease focus
 1 Association betv Boomsma f 15830186 Not a renal disease focus
 1 Association of A Bahramali l 26861937 Not a renal disease focus
 1 Association of A Alsafar H, F 26491214 Not a renal disease focus
 1 Association of al Rabbani M. 18711292 Not a renal disease focus
 1 Association of al Nikzamir A, 18154415 Not a renal disease focus
 1 Association of al RodrÃ³-gue; 11345362 Not a renal disease focus
 1 Association of A Singh, PP; f 16621107 Not a renal disease focus
 1 Association of B Moholisa R 23730990 Not a renal disease focus
 1 Association of cl Elmonem N 26589000 Not a renal disease focus
 1 Association of cl Kitamura, f 9951811 Not a renal disease focus
 1 Association of p Meng, N; Z 25359286 Not a renal disease focus
 1 Association of re Conen D, G 18698212 Not a renal disease focus
 1 Association of tl Mayer, NJ; 11836444 Not a renal disease focus
 1 Carotid intima-n NergizoÃ¶l 10493570 Not a renal disease focus
 1 CCL18: a urinary Boot RG, V 16736095 Not a renal disease focus
 1 COL4A1 mutatic Weng, YC; ! 22522439 Not a renal disease focus
 1 Comprehensive Kato, N; Su 10953993 Not a renal disease focus
 1 Contribution of : Mondorf U 9524045 Not a renal disease focus
 1 Deletion polymc Gharavi AG 8677872 Not a renal disease focus
 1 Detection of the Matsumotc 11106834 Not a renal disease focus
 1 Different impact Olivieri O, C 11791024 Not a renal disease focus
 1 Distribution of d Diamantop 10821349 Not a renal disease focus

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2	1 Distribution of h Hussain N, 23448612 Not a renal disease focus
3	1 Effects of angiot Kulah E, Du 17625392 Not a renal disease focus
4	1 Efficacy of Korez Kwon, DH; 23717118 Not a renal disease focus
5	1 Elevated urinary Clausen, P; 10872702 Not a renal disease focus
6	1 Frequencies Of \Zee, Ryl; Be 7882587 Not a renal disease focus
7	1 Genetic polymoi Deuster, P/ 23543093 Not a renal disease focus
8	1 Genetic polymoi Olivieri O, T 10567188 Not a renal disease focus
9	1 Genetic risk for i Missouri C 8821841 Not a renal disease focus
10	1 Genetic risk of a van Onna N 15326089 Not a renal disease focus
11	1 Genetic variants Szperl M, D 19043368 Not a renal disease focus
12	1 Hepatocystin is i Overton JD 26671672 Not a renal disease focus
13	1 Impact of mater Pfab T, Stir 17563539 Not a renal disease focus
14	1 Increased amou Suehiro T, I 15164285 Not a renal disease focus
15	1 Increased D allel Morrison C 11381371 Not a renal disease focus
16	1 Increased expre Yamani Mf 17097490 Not a renal disease focus
17	1 Increased frequ Onizuka M, 16044138 Not a renal disease focus
18	1 Independent, M Morris, Bj; 8104754 Not a renal disease focus
19	1 Inhibition of tiss Montgome 9797175 Not a renal disease focus
20	1 Insertion/Deleti de Martino 21477733 Not a renal disease focus
21	1 Late-onset acid i Mehler M, 9923 Not a renal disease focus
22	1 Leukocyte beta- Raghavan S 6770675 Not a renal disease focus
23	1 Lys(173)Arg and Komiya I, Y 10720581 Not a renal disease focus
24	1 Mutations in PR Li A, Davila 12529853 Not a renal disease focus
25	1 No association t Yildiz A, Ak 10657713 Not a renal disease focus
26	1 Peripheral vascu Thomas GN 14632699 Not a renal disease focus
27	1 Pharmacogeneti Okamura A 10535720 Not a renal disease focus
28	1 Polymorphisms Deckers IA, 24978482 Not a renal disease focus
29	1 Relationship of l Fu Y, Katsu 15894833 Not a renal disease focus
30	1 Relationship of e Heltianu C, 15784171 Not a renal disease focus
31	1 Relationship of t Huang XH, 9544854 Not a renal disease focus
32	1 Renal ACE immu Mizuiri S, Y 9469501 Not a renal disease focus
33	1 Renal changes o Marre, M; l 10082486 Not a renal disease focus
34	1 Renal outcome i Molad Y, G 11071585 Not a renal disease focus
35	1 Renin-angiotens BuraczyÅ,,s 14502296 Not a renal disease focus
36	1 Renovascular di: Pizzolo F, N 14718831 Not a renal disease focus
37	1 Synergistic effec Barlassina e 10720960 Not a renal disease focus
38	1 Testing of poten Schoenfeld 24667567 Not a renal disease focus
39	1 The angiotensin Ebert, MPA 16365022 Not a renal disease focus
40	1 The Captopril Pr Hansson L, 9495662 Not a renal disease focus
41	1 The presence of GÄ¼ngÄ¼r 21332339 Not a renal disease focus
42	1 [A study on angi Nishina M. 9014479 Not English or Spanish
43	1 [Angiotensin-coi Krajina-Anc 23120809 Not English or Spanish
44	1 [Angiotensin-coi Guan T, Liu 10436947 Not English or Spanish
45	1 [Arterial hyperte Öko A, Åoc 14974362 Not English or Spanish
46	1 [Association bet Wang L, Pa 10923445 Not English or Spanish
47	1 [Association bet Qiu MY, Xie 25815490 Not English or Spanish
48	1 [Association bet Miloserdov 11234416 Not English or Spanish
49	1 [Association of e Lu LH, Cher 18393230 Not English or Spanish
50	1 [Association of t Kamysheva 15532370 Not English or Spanish
51	1 [Association of t BuraczyÅ,,s 12476891 Not English or Spanish
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1 [Correlative stud Wu XX, Zhe 15698501 Not English or Spanish
 1 [Genetic predisç Bzoma B, D 19112833 Not English or Spanish
 1 [I/D relationship Kaliev RR, E 16078593 Not English or Spanish
 1 [Is PstI polymorç Grzeszczak 9499204 Not English or Spanish
 1 [Polymorphism : Kutyrina IV 10420452 Not English or Spanish
 1 [Relationship be Wu S, Xianç 9596955 Not English or Spanish
 1 [Relationship be Moleda P, I 17941464 Not English or Spanish
 1 [Relationship be Liao L, Lei N 12016801 Not English or Spanish
 1 [Renin-angioten BuraczyÅ,,s 11865575 Not English or Spanish
 1 [Study on candic Lu J, Li LM, 12848919 Not English or Spanish
 1 ACE and AT1 rec Kostic, M; S 15179569 Paediatric individuals
 1 ACE gene inserti Sekerli E, K 19603195 Paediatric individuals
 1 ACE gene inserti Serdaroglu 16208534 Paediatric individuals
 1 ACE gene polym Haszon I, Fi 12478352 Paediatric individuals
 1 ACE gene polym Tanaka R, li 9590186 Paediatric individuals
 1 ACE gene polym Sasongko T 16421456 Paediatric individuals
 1 ACE gene polym Fahmy ME, 18792483 Paediatric individuals
 1 ACE gene polym Celik US, N 16825089 Paediatric individuals
 1 ACE I/D gene po Oktem F, Si 14986085 Paediatric individuals
 1 ACE I/D gene po Hohenfelln 10452281 Paediatric individuals
 1 Angiotensin con Al-Eisa A, H 11487079 Paediatric individuals
 1 Angiotensin con Bajpai M, P 14713838 Paediatric individuals
 1 Angiotensin con Patil SJ, Gu 16272677 Paediatric individuals
 1 Angiotensin I co Pavlovic, M 9950302 Paediatric individuals
 1 Angiotensin I-co Pavlovic, M 9354852 Paediatric individuals
 1 Angiotensin-con Rigoli, L; Cf 15470205 Paediatric individuals
 1 Angiotensin-con al-Eisa A, H 10986863 Paediatric individuals
 1 Angiotensin-con Zhou J, Tiar 15315169 Paediatric individuals
 1 Angiotensin-con Tsai IJ, Yanç 16645262 Paediatric individuals
 1 Angiotensin-con BatiniÅ† D, 25997642 Paediatric individuals
 1 Angiotensinoger Gallego, P† 18413222 Paediatric individuals
 1 Association of A Dhandapar 26154535 Paediatric individuals
 1 Association of ai Laksmi NK, 20149750 Paediatric individuals
 1 Association of tl Shahid S, A 22033511 Paediatric individuals
 1 DD genotype of Alasehirli B 22017506 Paediatric individuals
 1 Effect of angioe Saber-Ayac 20418353 Paediatric individuals
 1 Gene polymorpl Kaplan Å°, : 25262176 Paediatric individuals
 1 Genetic polymoi Frishberg Y 9853248 Paediatric individuals
 1 Glycosphingolipi Dawson G. 5016302 Paediatric individuals
 1 HPSE2 mutation Bulum B, Å 25924634 Paediatric individuals
 1 Impact of ACE I/ Hohenfelln 11354781 Paediatric individuals
 1 Impact of comm Hussein A, 25939993 Paediatric individuals
 1 Implication of gr Hahn H, Ku 16133060 Paediatric individuals
 1 Implications of c Ozen S, Ali† 10401028 Paediatric individuals
 1 Is ACE gene poly ErdoÅŸyan † 15138870 Paediatric individuals
 1 Late effects on r BÅŸirdi E, Ol 15390293 Paediatric individuals
 1 Low renin-angio Peruzzi L, L 16006956 Paediatric individuals
 1 Modification of Rangel M, c 25170764 Paediatric individuals
 1 Polymorphisms Amoroso A 9870486 Paediatric individuals
 1 Polymorphisms Maruyama 11354780 Paediatric individuals

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2	1 Polymorphisms Ece A, Teke 16109085 Paediatric individuals
3	1 Polymorphisms Savvidou A 20022049 Paediatric individuals
4	1 Renin-angiotensin Papp F, Frie 12579405 Paediatric individuals
5	1 Renin-angiotensin Ozkaya, O; 16521052 Paediatric individuals
6	1 Renin-angiotensin Pardo R, M 12579398 Paediatric individuals
7	1 Renin-angiotensin Liu KP, Lin C 15045574 Paediatric individuals
8	1 Role of platelet- Tanaka R, li 10430976 Paediatric individuals
9	1 Significance of A Hori C, Hira 11474225 Paediatric individuals
10	1 High serum enalapril Elung-Jensen 11881130 Pharmaceutical drug focus
11	1 ACE gene polymorphism Parving, HF 18199798 Pharmaceutical drug focus
12	1 Chronic proteinuria Ruggenti 10616844 Pharmaceutical drug focus
13	1 Effect of angiotensin Penno G, C 9726242 Pharmaceutical drug focus
14	1 Enalapril and losartan Rashtchizadeh 17222813 Pharmaceutical drug focus
15	1 Long-term renin-angiotensin Andersen S 12716812 Pharmaceutical drug focus
16	1 Randomized placebo Kvetny J, G 11181984 Pharmaceutical drug focus
17	1 Renin-angiotensin Noroozian 17524880 Pharmaceutical drug focus
18	1 The influence of angiotensin Luik PT, Ho 12856080 Pharmaceutical drug focus
20	2 Influence of angiotensin-converting enzyme gene polymorphism Parchwani 26214998 Incorrect patient group
21	2 Polymorphism of angiotensin-converting enzyme gene Woo, KT; Lee 15504143 Overlap in patient group
22	2 Polymorphism of angiotensin-converting enzyme gene Frimat, L; P 11053482 Incorrect patient group
23	2 Interaction of angiotensin-converting enzyme gene polymorphism Rahimi Z, H 21942443 Incorrect patient group
24	2 The frequency of angiotensin-converting enzyme gene polymorphism Rahimi Z, F 20853144 Incorrect patient group
25	2 Polymorphism of angiotensin-converting enzyme gene Hanyu, O; Fan 9509566 Incorrect patient group
26	2 Angiotensin-converting enzyme gene polymorphism Gutierrez, C 9258285 No data
27	2 The angiotensin-converting enzyme gene polymorphism Hibberd, M 9025006 Incorrect patient group
28	2 Genetic predisposition to angiotensin-converting enzyme gene polymorphism Doria, A; W 7909524 Incorrect patient group
29	2 Prognostic value of angiotensin-converting enzyme gene polymorphism Hadjadj S, F 18523145 No data
30	2 Association between angiotensin-converting enzyme gene polymorphism and hypertension Hadjadj S, T 17376814 No data
31	2 Combinational effect of angiotensin-converting enzyme gene polymorphism Osawa N, K 17143591 No data
32	2 Frequency of angiotensin-converting enzyme gene polymorphism in hypertension Degirmenci 16178979 No data
33	2 Genetic variation of angiotensin-converting enzyme gene polymorphism Boright AP, 15793268 Incorrect patient group
34	2 Effects of the angiotensin-converting enzyme gene polymorphism Luther Y, B 14610337 No data
35	2 ACE gene polymorphism and hypertension Lau YK, Wong 12119485 Overlap in patient group
36	2 Association of angiotensin-converting enzyme gene polymorphism and hypertension Gohda T, M 11770799 No data
37	2 The DD genotype of angiotensin-converting enzyme gene polymorphism Azar ST, Zal 11428725 Incorrect patient group
38	2 Genetic polymorphism of angiotensin-converting enzyme gene Lovati E, Ricci 11422735 No data
39	2 Association of angiotensin-converting enzyme gene polymorphism and hypertension Szelestei T, 10977777 No data
40	2 Lack of synergism between angiotensin-converting enzyme gene polymorphism and hypertension Tarnow L, K 10907125 No data
41	2 The ACE insertion/deletion polymorphism van Dijk M, 10831637 Incorrect patient group
42	2 The renin-angiotensin system and hypertension Ong-Ajyoot 10511770 No data
43	2 ACE, PAI-1, and angiotensin-converting enzyme gene polymorphism De Cosmo S 10495473 Incorrect patient group
44	2 Effect of angiotensin-converting enzyme gene polymorphism on hypertension Kuramoto I 10023638 Incorrect patient group
45	2 Angiotensin-converting enzyme gene polymorphism and hypertension Jeffers BW, 9264004 No data
46	2 Hypertensive and angiotensin-converting enzyme gene polymorphism Kario K, Kario 9081678 Incorrect patient group
47	2 Relationships between angiotensin-converting enzyme gene polymorphism and hypertension Oh TG, Shir 8854649 Incorrect patient group
48	2 Genetic polymorphism of angiotensin-converting enzyme gene Buraczyńska 12898858 No data
49	3 [Angiotensin-converting enzyme gene polymorphism and hypertension] Ortega-Piñero 17570179 < 3 populations reported per SNP
50	3 Angiotensin-converting enzyme gene polymorphism and hypertension Fernández- 9607207 < 3 populations reported per SNP
51	3 Angiotensin-converting enzyme gene polymorphism and hypertension Abbas D et al 21976404 < 3 populations reported per SNP
52	3 Angiotensin-converting enzyme gene polymorphism and hypertension Lee DY et al 9434071 < 3 populations reported per SNP
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2 3 Angiotensin-I Cc Kumar A et al. < 3 populations reported per SNP
3 3 Association betw Uemasu J e 9180368 < 3 populations reported per SNP
4 3 Association betw Huo P et al. 25227524 < 3 populations reported per SNP
5 3 Association of al Akai Y et al. 10099886 < 3 populations reported per SNP
6 3 Association of tl Li X et al. 20540812 < 3 populations reported per SNP
7 3 Chronic renal in: Prasad P et WOS:0002: < 3 populations reported per SNP
8 3 Clinical impact o Amorim et 23362199 < 3 populations reported per SNP
9 3 Contribution of ; Marre M et 9120002 < 3 populations reported per SNP
10 3 DNA polymorph Freire MBS 9794558 < 3 populations reported per SNP
11 3 Gene polymorph Su SL et al. 22147663 < 3 populations reported per SNP
12 3 Genes involved i Litovkina O 24727057 < 3 populations reported per SNP
13 3 Genetic Clues Tc Krcunovic z WOS:0002: < 3 populations reported per SNP
14 3 Genetic polymoi Miura J et z 10499884 < 3 populations reported per SNP
15 3 Genetic polymoi Fabris B et 15662219 < 3 populations reported per SNP
16 3 Genetic risk fact Tripathi G e 18242170 < 3 populations reported per SNP
17 3 Genetic variants Shaikh R et 24737640 < 3 populations reported per SNP
18 3 Identification of Ezzidi I et a 19787680 < 3 populations reported per SNP
19 3 Influence of ang Ramanatha 27748299 < 3 populations reported per SNP
20 3 Influence of gen Parchwani 26214998 < 3 populations reported per SNP
21 3 Influence of the Merta M et 12697976 < 3 populations reported per SNP
22 3 Lack of associati Arfa I et al. 18404607 < 3 populations reported per SNP
23 3 Polymorphism o Aucella F et 10773756 < 3 populations reported per SNP
24 3 Polymorphism o Aayed K et a 16635753 < 3 populations reported per SNP
25 3 Polymorphisms Sprovieri Sf 15934435 < 3 populations reported per SNP
26 3 Renin-angiotens Parsa A et z 15789057 < 3 populations reported per SNP
27 3 The DD genotyp Vleming LJ 10099885 < 3 populations reported per SNP
28 3 The effect of pol Möllsten A 18413189 < 3 populations reported per SNP
29 3 The presence of Canani LH e 16108844 < 3 populations reported per SNP
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Supplementary Table S3b

Exclusion S	Title	Authors	PMID	Reason
1	ACAC ¹ 2	gen Shah VN, C	23081748	No data for ACE2
1	ACE gene ir	Lee YJ, Tsai	12032106	No data for ACE2
1	ACE variant	Ahluwalia T	19108684	No data for ACE2
1	[Angiotensi	Ortega-Pier	17570179	No data for ACE2
1	[Clinical an	Diez Ojea B	21113220	No data for ACE2
1	A disease h	Ng DP, Plac	16936219	No data for ACE2
1	A functiona	MÄ¶llsten	17192491	No data for ACE2
1	A HindIII p	cOnaran M,	19616291	No data for ACE2
1	A Lack of Si	Jannot AS,	26829596	No data for ACE2
1	A leucine r	eFreedman I	17205963	No data for ACE2
1	A new poly	Smolenicka	9589699	No data for ACE2
1	A novel me	Chen Y, Bui	19162184	No data for ACE2
1	A polymor	çBhandary L	21624462	No data for ACE2
1	A rare hapl	Martin RJ, I	19783860	No data for ACE2
1	A risk allele	Genovese C	20668430	No data for ACE2
1	A simultan	ePapacostas	6688659	No data for ACE2
1	ACE gene p	Lau YK, Wo	12119485	No data for ACE2
1	ACE gene p	ViklickÄ½ C	11239522	No data for ACE2
1	ACE gene p	Felehgari V	20830509	No data for ACE2
1	ACE genoty	Stratta P, S	19034872	No data for ACE2
1	ACE, PAI-1,	De Cosmo !	10495473	No data for ACE2
1	ADAMTS13	Rurali E, Nc	23733198	No data for ACE2
1	African anc	Behar DM,	20144966	No data for ACE2
1	Albuminuri	Thomas GM	11200871	No data for ACE2
1	Aldosteron	Lajer M, Sc	16759311	No data for ACE2
1	Aldosteron	Yilmaz M, S	25957425	No data for ACE2
1	Allelic varia	ePatente TA	25862415	No data for ACE2
1	An integrat	Nanayakka	24351856	No data for ACE2
1	Analysis of	Ali A, Vasu	21421653	No data for ACE2
1	Angiotensii	FernÄ±nde	9607207	No data for ACE2
1	Angiotensii	Yildiz A, Ya	12832741	No data for ACE2
1	Angiotensii	Hueso M, A	15284309	No data for ACE2
1	Angiotensii	Schmidt S,	9269698	No data for ACE2
1	Angiotensii	Tassiulas IC	9710341	No data for ACE2
1	Angiotensii	Grzeszczak	9727375	No data for ACE2
1	Angiotensii	Stratta P, C	10352195	No data for ACE2
1	Angiotensii	So WY, Ma	16395257	No data for ACE2
1	Angiotensii	Abbas D, E	21976404	No data for ACE2
1	Angiotensii	Douglas G,	15338496	No data for ACE2
1	Angiotensii	Araz M, Yil	11640993	No data for ACE2
1	Angiotensii	Uhm WS, L	12043886	No data for ACE2
1	Angiotensii	Jeffers BW,	9264004	No data for ACE2
1	Angiotensii	Lee DY, Kir	9434071	No data for ACE2
1	Angiotensii	Al-Harbi EN	21207118	No data for ACE2
1	Angiotensii	Beige J, Sch	9259361	No data for ACE2
1	Angiotensii	AkÄ±ay A, C	15013293	No data for ACE2
1	Angiotensii	Woo KT, La	18536822	No data for ACE2
1	Angiotensii	Mizuiru S, H	7477652	No data for ACE2

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2 1 Angiotensin II Ortiz MA, C 15012717 No data for ACE2
3 1 Angiotensin II Schmidt A, 8785402 No data for ACE2
4 1 Angiotensin II Beige J, Off 9550656 No data for ACE2
5 1 Angiotensin II Arzu Ergen 15365253 No data for ACE2
6 1 Angiotensin II Zychma MJ 11096141 No data for ACE2
7 1 Anti-glutathione Aguilera I, 18308775 No data for ACE2
8 1 APOL1 variant Papeta N, K 21997397 No data for ACE2
9 1 Apolipoprotein Lipkowitz N 22832513 No data for ACE2
10 1 Assessment Karsli Cepp 21859400 No data for ACE2
11 1 Association Ohno T, Ka 8596493 No data for ACE2
12 1 Association Prasad P, T 20353610 No data for ACE2
13 1 Association Kavanagh E 21103979 No data for ACE2
14 1 Association Wu LS, Hsie 19506043 No data for ACE2
15 1 Association Doi Y, Yosh 8720609 No data for ACE2
16 1 Association Melander C 11114699 No data for ACE2
17 1 Association Uemasu J, I 9180368 No data for ACE2
18 1 Association Hadjadj S, T 17376814 No data for ACE2
19 1 Association van Essen C 8538349 No data for ACE2
20 1 Association Li WL, Lu C. 26125729 No data for ACE2
21 1 Association Ferrareso 21851254 No data for ACE2
22 1 Association Huo P, Zhai 25227524 No data for ACE2
23 1 Association Xiong H, Xie 19682085 No data for ACE2
24 1 Association Vigo Gago I 15887856 No data for ACE2
25 1 Association de Souza C 17914260 No data for ACE2
26 1 Association Morris BJ, I 11907646 No data for ACE2
27 1 Association Szelestey T, 10977777 No data for ACE2
28 1 Association Pawlik M, M 23681285 No data for ACE2
29 1 Association Tang FY, Liu 18629615 No data for ACE2
30 1 Association Pei Y, Schol 9259580 No data for ACE2
31 1 Association Cai Z, Chen 22720119 No data for ACE2
32 1 Association Park HJ, Kir 24621205 No data for ACE2
33 1 Association Siddarth M 23619522 No data for ACE2
34 1 Association Nagase S, S 12701818 No data for ACE2
35 1 Association BÄ¶lger CA, 21980298 No data for ACE2
36 1 Association Bellini MH, 17498125 No data for ACE2
37 1 Association Thaha M, P 18793530 No data for ACE2
38 1 Association Ezzidi I, Mti 18413207 No data for ACE2
39 1 Association Santos KG, 21255858 No data for ACE2
40 1 Association Issac MS, A 24151105 No data for ACE2
41 1 Association Yoshida T, I 19424605 No data for ACE2
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43 1 Association Vieira SM, I 21962117 No data for ACE2
44 1 Association Yoshida T, I 19578796 No data for ACE2
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46 1 Association Yoshida T, I 19406964 No data for ACE2
47 1 Association Datta SK, K 20954980 No data for ACE2
48 1 Association Turki A, Ma 23727064 No data for ACE2
49 1 Association Bostrom M 20466664 No data for ACE2
50 1 Association Liu Y, Zhou 26841219 No data for ACE2
51 1 Association Eroglu Z, C 18413162 No data for ACE2
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2	1 Association Gohda T, M 11770799 No data for ACE2
3	1 Association Keene KL, M 18184924 No data for ACE2
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5	1 Association Neugebauer 10868974 No data for ACE2
6	1 Association Hodgkinson 14578247 No data for ACE2
7	1 Association Sener EF, T 24126814 No data for ACE2
8	1 Association Genovese C 20647424 No data for ACE2
9	1 Association Pazik J, OÅ, 22210424 No data for ACE2
10	1 Association Zhao YG, S 23044313 No data for ACE2
11	1 Association Lavery GG, 11916625 No data for ACE2
12	1 Association Kim SK, Par 24654912 No data for ACE2
13	1 Association Zhu AN, Ya 25867326 No data for ACE2
14	1 Balkan end Andonova I 15365959 No data for ACE2
15	1 Base excision Cai Z, Guo 22780951 No data for ACE2
16	1 BsmI polymorphism Zhang H, W 22245613 No data for ACE2
17	1 Calpain 10 Demirci H, 18554168 No data for ACE2
18	1 Cardiac hypertrophy Wang AY, C 12675870 No data for ACE2
19	1 Carnosine Janssen B, I 16046297 No data for ACE2
20	1 Catalase/superoxide dismutase Åzmen E 11440784 No data for ACE2
21	1 Characterization Munkert A, 18927121 No data for ACE2
22	1 Characterization Armstrong 23762448 No data for ACE2
23	1 Chronic pruritus Ruggenenti 10616844 No data for ACE2
24	1 Chronic renal Marra M, M 23129820 No data for ACE2
25	1 Circulating Anguiano, I 25813276 No data for ACE2
26	1 Circulating Caplin B, N 20010544 No data for ACE2
27	1 Clinical and Kim IW, M 22183771 No data for ACE2
28	1 Clinical importance Amorim CE 23362199 No data for ACE2
29	1 Clinical utility Elmonem M 25407738 No data for ACE2
30	1 Combinatorial Osawa N, K 17143591 No data for ACE2
31	1 Common variant Ahluwalia T 21573905 No data for ACE2
32	1 Contribution Wong TY, S 11431175 No data for ACE2
33	1 Copy Number Ruchi R, Ge 25933006 No data for ACE2
34	1 Correlates Nikzamir A, 17986476 No data for ACE2
35	1 CYP2C9 and MiroÅjevic 24024895 No data for ACE2
36	1 CYP3A4 genotype Wang YY, Z 23217392 No data for ACE2
37	1 Cys327Cys KalousovÅi 24667032 No data for ACE2
38	1 DDOST, PRIN Hoverfelt A 20490454 No data for ACE2
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40	1 Dense map Nelson GW 20124285 No data for ACE2
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42	1 Different in Olivieri O, C 11791024 No data for ACE2
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47	1 Distribution Thaha M, Y 23770786 No data for ACE2
48	1 DNA polymorphism Freire MB, 9794558 No data for ACE2
49	1 DNA repair Radwan W 25310768 No data for ACE2
50	1 Donor age De Meyer I 22835948 No data for ACE2
51	1 Donor DNA Rutkowska 18290564 No data for ACE2
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1 Effect of a | Morita T, It 10543322 No data for ACE2
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2	1 Genetic po Huang HD, 21163122 No data for ACE2
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6	1 Genetic prε Doria A, Wi 7909524 No data for ACE2
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8	1 Genetic risl Tripathi G, 18242170 No data for ACE2
9	1 Genetic var Pirulli D, Cr 19229831 No data for ACE2
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12	1 Genetic var Boright AP, 15793268 No data for ACE2
13	1 Genetic var Tayo BO, Ki 22956460 No data for ACE2
14	1 Genetic var Kure M, Pe 21277817 No data for ACE2
15	1 Genetic var Xu CW, Wu 22932273 No data for ACE2
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19	1 Glutathionε Suvakov S, 23034843 No data for ACE2
20	1 Glutathionε Chen B, Bai 22116675 No data for ACE2
21	1 G-Protein ε Zychma MJ 10970984 No data for ACE2
22	1 G-protein ε ViklickÄ½ C 12424427 No data for ACE2
23	1 Haplotype ε Doi K, Noiri 16215641 No data for ACE2
24	1 HDL choles Radeau T, \ 10754410 No data for ACE2
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35	1 Identificati Jacobasch C 7315101 No data for ACE2
36	1 Identificati Li M, Foo JI 26028593 No data for ACE2
37	1 Identificati Yang T, Me 24582653 No data for ACE2
38	1 Identificati Toncheva L 15365958 No data for ACE2
39	1 Identificati Ezzidi I, Mti 19787680 No data for ACE2
40	1 Immune re Nobuoka Y, 24454479 No data for ACE2
41	1 Immunoglε Demaine A 2985495 No data for ACE2
42	1 Impact of a Bantis C, Hi 21476902 No data for ACE2
43	1 Impact of C Elens L, Caε 24052064 No data for ACE2
44	1 Impact of C de Jonge H 24024898 No data for ACE2
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46	1 Impact of c Cho JH, Yoc 22310591 No data for ACE2
47	1 Impact of d Krajewska I 19857655 No data for ACE2
48	1 Impact of E Eller P, Hoc 17848394 No data for ACE2
49	1 Impact of g Siekierka-H 19681973 No data for ACE2
50	1 Impact of n El-Din Bess 21854353 No data for ACE2
51	1 Impact of p SchÄ¶n S, F 16164625 No data for ACE2
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2 1 Impact of p Jung ES, Kir 21150220 No data for ACE2
3 1 In vivo acti Lee JP, Yan 21429967 No data for ACE2
4 1 Increased f Hsieh MC, I 10862639 No data for ACE2
5 1 Increased f BlÃ¼thner 10200987 No data for ACE2
6 1 Increased l Siddarth M 24216264 No data for ACE2
7 1 Influence o Bantis C, H 21777344 No data for ACE2
8 1 Influence o Marco MP, 11522087 No data for ACE2
9 1 Influence o Provenzani 21922127 No data for ACE2
10 1 Influence o Quteineh L 19067682 No data for ACE2
11 1 Influence o Singh R, M 19486347 No data for ACE2
12 1 Influence o Parchwani 26214998 No data for ACE2
13 1 Influence o Nekooie-M 23649768 No data for ACE2
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16 1 Insertion/d Osono E, Ki 9820440 No data for ACE2
17 1 Insertion/d Fedor R, As 21620105 No data for ACE2
18 1 Interaction Stratta P, B 14767013 No data for ACE2
19 1 Interaction Rahimi Z, H 21942443 No data for ACE2
20 1 Interaction Reljic Z, Zla 25111321 No data for ACE2
21 1 Is increase Ozdem S, Y 26022923 No data for ACE2
22 1 Is Klothe F 11525534 No data for ACE2
23 1 Is there a r Isbir CS, Ak 11525534 No data for ACE2
24 1 Kinin-depe Molinaro G 17003818 No data for ACE2
25 1 Lack of ass Arfa I, Abid 18404607 No data for ACE2
26 1 Lack of ass Wong TY, C 10352194 No data for ACE2
27 1 Lack of rela Tarnow L, C 7729604 No data for ACE2
28 1 Lack of ser Moeller S, C 24732864 No data for ACE2
29 1 Lack of syn Tarnow L, K 10907125 No data for ACE2
30 1 Lipoprotein Sechi LA, Zi 10469373 No data for ACE2
31 1 Low preval Trochen N, 15304560 No data for ACE2
32 1 Major-hist Welch TR, I 3458025 No data for ACE2
33 1 Manganese Lee SJ, Cho 16324912 No data for ACE2
34 1 Manganese Kadir V, Uz 26787049 No data for ACE2
35 1 Matrix met Marson BP, 22302011 No data for ACE2
36 1 Matrix met Cozzolino M 19221176 No data for ACE2
37 1 Membrano Gradden C 11181983 No data for ACE2
38 1 Microarray Lim SC, Liu 19415232 No data for ACE2
39 1 Microfluidi Sohni YR, B 12554058 No data for ACE2
40 1 MTHFR C6 El-Baz R, Se 22554825 No data for ACE2
41 1 Multiple su Al-Kateb H, 17914031 No data for ACE2
42 1 Mutation a Zhang S, M 15775720 No data for ACE2
43 1 MYH9 and Colares VS, 24658608 No data for ACE2
44 1 MYH9 is a r Kopp JB, Sn 18794856 No data for ACE2
45 1 MYH9 is as Kao WH, Kl 18794854 No data for ACE2
46 1 MYH9-rela Pecci A, Kle 24186861 No data for ACE2
47 1 Nephropat Orchard TJ, 12164879 No data for ACE2
48 1 Nitric oxide Passauer J, 15840038 No data for ACE2
49 1 Nitric oxide Rippin JD, F 12687343 No data for ACE2
50 1 No associat Schmidt S, 7485124 No data for ACE2
51 1 Nodular glc Wang, M; Z 26973293 No data for ACE2
52 1 Non-muscl Freedman I 19567477 No data for ACE2
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2	1 Nosocomia Phipps LM,	22129760	No data for ACE2
3	1 Novel polyJ Jacobson P,	21206424	No data for ACE2
4	1 Novel sequ Bahr C, Sch	16759312	No data for ACE2
5	1 Optimizatic Thervet E, I	20393454	No data for ACE2
6	1 Oxidative s Tiwari AK, F	18413200	No data for ACE2
7	1 PAI-1 4G/5 Auceella F, M	12748347	No data for ACE2
8	1 Paraoxona: Eren Z, Kan	22555481	No data for ACE2
9	1 Paraoxona: Agachan B,	15251338	No data for ACE2
10	1 Paraoxona: Biasioli S, S	12790379	No data for ACE2
11	1 Paraoxona: KovÁjcs TJ,	17173245	No data for ACE2
12	1 Paraoxona: Pinizzotto F	11206400	No data for ACE2
13	1 Parathyroic Gohda T, SI	12046039	No data for ACE2
14	1 Patients wi Sekine T, Ki	20200500	No data for ACE2
15	1 Pharmacog Larriba J, In	20172323	No data for ACE2
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17	1 Polymorph Frimat L, Ph	11053482	No data for ACE2
18	1 Polymorph Ko GJ, Kang	18771471	No data for ACE2
19	1 Polymorph Yorioka T, S	8529313	No data for ACE2
20	1 Polymorph Hanyu O, H	9509566	No data for ACE2
21	1 Polymorph Auceella F, V	10773756	No data for ACE2
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23	1 Polymorph Chen Y, Hu	18079690	No data for ACE2
24	1 Polymorph Cooke JN, E	21968013	No data for ACE2
25	1 Polymorph Zhou H, Ch	26627442	No data for ACE2
26	1 Polymorph Narne P, Pc	25041504	No data for ACE2
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28	1 Polymorph Cheng W, Z	21245129	No data for ACE2
29	1 Polymorph Freedman I	19177153	No data for ACE2
30	1 Polymorph Araki S, Ma	11151764	No data for ACE2
31	1 Polymorph RajkoviÄ† M	21620813	No data for ACE2
32	1 Polymorph Sprovieri SI	15934435	No data for ACE2
33	1 Posttranspl BariÄ©ty J,	11158216	No data for ACE2
34	1 Prevalence Shanmugar	26440392	No data for ACE2
35	1 Primary hy van der Ho	22844106	No data for ACE2
36	1 Prognostic Hadjadj S, F	18523145	No data for ACE2
37	1 Protein los: Wanner C,	7724034	No data for ACE2
38	1 Quantitativ Tamano M,	15069174	No data for ACE2
39	1 RAGE and C Franko B, B	26607824	No data for ACE2
40	1 Rare mutat Sveinbjorn:	25082825	No data for ACE2
41	1 Relation be Tang FY, Zh	21045268	No data for ACE2
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44	1 Relationshi Lim SC, Gol	16922713	No data for ACE2
45	1 Relationshi Agrawal S,	18067039	No data for ACE2
46	1 Relationshi Xue JN, Gu	26782518	No data for ACE2
47	1 Relationshi Movva S, A	17616353	No data for ACE2
48	1 Relationshi El-Shehaby	23198772	No data for ACE2
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50	1 Relationshi Santos KG,	16358232	No data for ACE2

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2 1 Relationshi Huang XH, 9544854 No data for ACE2
3 1 Relationshi Oh TG, Shir 8854649 No data for ACE2
4 1 Relationshi Marre M, B 8314010 No data for ACE2
5 1 Relationshi Xin HW, Xie 19048245 No data for ACE2
6 1 Renin-angiotensin Lau YK, Wo 15153745 No data for ACE2
7 1 Renin-angiotensin Chen WJ, H 24907556 No data for ACE2
8 1 Replication Maeda S, Iw 23543049 No data for ACE2
9 1 Resequencing McKnight A 17319955 No data for ACE2
10 1 Re-Sequencing Hawkins G 26343748 No data for ACE2
11 1 Risk factors Oue T, Naka 10580616 No data for ACE2
12 1 Risk of advanced Zanchi A, M 10652017 No data for ACE2
13 1 Role of alpha1 Conway BR 15187197 No data for ACE2
14 1 Role of glycocalyx Powrie JK, 7819935 No data for ACE2
15 1 Role of the Nicotinic J, Fre 11918733 No data for ACE2
16 1 Serum paraoxon Suehiro T, I 12226554 No data for ACE2
17 1 Serum paraoxon Itahara T, S 11480456 No data for ACE2
18 1 Sick cell toxicity Hicks PJ, La 21849968 No data for ACE2
19 1 Single nucleotide Alwohhaib 24821155 No data for ACE2
20 1 Sirolimus polymorphisms Djebli N, R 17048977 No data for ACE2
21 1 SIRTUIN 1 polymorphism Shimoyama 22200427 No data for ACE2
22 1 Structural polymorphism Zaehner T, 11012876 No data for ACE2
23 1 Suppression Matsui M, 24048373 No data for ACE2
24 1 Survival in patients Padrão³-Mic 19014923 No data for ACE2
25 1 Synergism between Testa A, M 25435339 No data for ACE2
26 1 T(-786)-->C Asakimori 12138283 No data for ACE2
27 1 Tacrolimus polymorphisms Li L, Li CJ, Z 21331500 No data for ACE2
28 1 The A736V polymorphism Pelusi S, Gi 23433094 No data for ACE2
29 1 The ACE inhibition van Dijk M 10831637 No data for ACE2
30 1 The acetylation Tang SC, Le 20519229 No data for ACE2
31 1 The angiotensin Hibberd MI 9025006 No data for ACE2
32 1 The angiotensin Lu M, Zhan 27633502 No data for ACE2
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36 1 The DD genotype Azar ST, Zal 11428725 No data for ACE2
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40 1 The emergence Nogueira E 17161359 No data for ACE2
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42 1 The frequency Rahimi Z, F 20853144 No data for ACE2
43 1 The function Zhang W, Y 25447894 No data for ACE2
44 1 The impact Kurzawski I 16044099 No data for ACE2
45 1 The influenza McDonough 19373489 No data for ACE2
46 1 The influenza Reiterová 15287194 No data for ACE2
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48 1 The interaction Stratta P, C 22101623 No data for ACE2
49 1 The manga Liu L, Zheng 18989629 No data for ACE2
50 1 The N-acetylation Neugebauer 7851073 No data for ACE2
51 1 The number Stern M, El 18444913 No data for ACE2
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15	1 Uromodulin KÅttgen A 19959715 No data for ACE2
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19	1 A knock-in Arsenault F 24121508 Non-human
20	1 An inducible Chowdhury 23336180 Non-human
21	1 Cardiac anæ Ferrario CM 26873967 Non-human
22	1 Carnosine t Peters V, S 21833769 Non-human
23	1 Chronic rer Stockelmar 9689017 Non-human
24	1 Control of I Shaws TB, I 4856818 Non-human
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26	1 Detection c Singh KP, R 10087325 Non-human
27	1 Effect of pñ Tenenhous 7873297 Non-human
28	1 Enhanced ç de Morais 2501210 Non-human
29	1 Fecal carriage Alonso S, M 17661289 Non-human
30	1 First WNK4 Gandolfi B, 23285264 Non-human
31	1 From man ò Olabisi O, A 27509583 Non-human
32	1 Gain-of-function Li N, Nakan 14695357 Non-human
33	1 Generation Fujimoto K, 17827337 Non-human
34	1 Increased iljuin T, Yu 18573875 Non-human
35	1 Kallikrein a Catanzaro C 6186886 Non-human
36	1 Kallikrein g Liu K, Li QZ 19307730 Non-human
37	1 Metabolic f Fujino H, Yi 12442637 Non-human
38	1 Multi-species Hamilton N 23408978 Non-human
39	1 MyoD cont Xiong Q, C 20336382 Non-human
40	1 N-Domain ò Bueno V, P 15194348 Non-human
41	1 Nitric oxide Migliori M, 10394113 Non-human
42	1 Overexpression Liu X, Zhao 19279555 Non-human
43	1 Purification Sekine M, F 7983056 Non-human
44	1 Rat Ace allæ Kamilic, J; F 21788250 Non-human
45	1 Re-engineer Davies B, H 26840484 Non-human
46	1 Role of ang Yang, XH; V 22580272 Non-human
47	1 Susceptibility Kleymenov 14604887 Non-human
48	1 Targeted d FrÅhlich L 20427744 Non-human
49	1 Telomerase Sachsinger 11454711 Non-human
50	1 Testosterone Smolen TN, 8437129 Non-human
51	1 The activated Wilson CH, 20531296 Non-human
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1 The gene I¹ Marion E, K 12086927 Non-human
 1 The mll-AF¹ Dobson CL, 10393173 Non-human
 1 The Pex1-G¹ Hiebler S, M 24503136 Non-human
 1 The T309G de Martino 25415135 Non-human
 1 Tissue-spec Hu JF, Orug 9482664 Non-human
 1 Transgenic Liu Z, Segal 21303955 Non-human
 1 Tubule-spe Zhou D, Li 22622501 Non-human
 1 A common Wang H, Li 21282199 Non-human
 1 A function¹ Herrera VL, 25615575 Non-human
 1 Allelic Vari¹ Jia Z, Johns 26172442 Non-human
 1 Alternative Ren S, Ngu 15788398 Non-human
 1 An alternat Wang Y, Ne 11786430 Non-human
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 1 Atrial natri¹ Nakagawa 25027872 Non-human
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 1 BAP1 misse Morrison A 25830670 Non-human
 1 Blocking th Stenstr¹ Å 19657284 Non-human
 1 Characteriz Qiu H, Dai 18508765 Non-human
 1 Characteriz Gui J, Song 17389928 Non-human
 1 CpG island Gillespie G 1709739 Non-human
 1 Cystic echir Mitrea IL, I 23075460 Non-human
 1 Cytotoxicit Ilinskaya O 14733942 Non-human
 1 DAPIT Over Kontro H, C 26161955 Non-human
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 1 Evidence th Bittner MA 8626670 Non-human
 1 Expression Zhang CJ, R 8294513 Non-human
 1 Factor VIIa Sundaram . 24977291 Non-human
 1 Fluorescen Liu J, Ernst 15489225 Non-human
 1 Functional Tonna S, Di 18206321 Non-human
 1 Generation Roy A, Goo 25477473 Non-human
 1 Hepatitis C Hiasa Y, Ku 18459156 Non-human
 1 Holocarbox Liu D, Zem 24840043 Non-human
 1 Human GRI Wang Z, Ze 26667412 Non-human
 1 Hypoxia inc Ward ME, T 16276418 Non-human
 1 Î±1,3-galac Park JY, Pa 22775484 Non-human
 1 Identificati Wang L, Ve 25906147 Non-human
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 1 Implication Heilig C, Br 14578187 Non-human
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 1 Mammalia Zhao Y, Zh 26061549 Non-human
 1 Mediation Yao H, Bric 20966046 Non-human
 1 Mitochond Chandler R 19088183 Non-human
 1 Modulator Gray SG, Ig 12691522 Non-human
 1 N-terminal Bodenstein 17220356 Non-human
 1 Organizatic Cabral CM, 12181335 Non-human
 1 p300 inter¹ Eid JE, Kun 11030627 Non-human
 1 p38MAPK c Wong ES, L 19619499 Non-human
 1 Pitchfork re Kinzel D, Bc 20643351 Non-human
 1 Presence o Teixeira AC 23387326 Non-human

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2	1 Primary hyp
3	1 Production Turner N, F
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6	1 Renal angic
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1 A novel hu Barash U, C 20007507 Not a renal disease focus
 1 A novel ME Braga E, Lo 21423093 Not a renal disease focus
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 1 A significan Wang YH, Y 19686770 Not a renal disease focus
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 1 Acetylator Hein DW, F 3677303 Not a renal disease focus
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 1 Allelic loss Mochida J, 18554638 Not a renal disease focus
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 1 Alternative Tomlinson 16288035 Not a renal disease focus
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 1 Cancer risk Garre P, Mi 24061861 Not a renal disease focus
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2	1 Chromosom Chung WY, 8842727 Not a renal disease focus
3	1 Circulating Deprimo SE 17605814 Not a renal disease focus
4	1 Clear cell p Shi SS, Sher 24294381 Not a renal disease focus
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6	1 Coding mut O'Keefe D, 9311733 Not a renal disease focus
7	1 Combined i Pei J, Feder 20461753 Not a renal disease focus
8	1 Common g SchÄ¶del J, 22406644 Not a renal disease focus
9	1 Compreher Kondo K, Yi 11921283 Not a renal disease focus
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12	1 Constitutio Roversi G, I 26482194 Not a renal disease focus
13	1 CYP24A1 ai Jacobs ET, 23423976 Not a renal disease focus
14	1 CYP2E1 ger Farker K, Le 9760005 Not a renal disease focus
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17	1 Defects in t Perkins DJ, 14966282 Not a renal disease focus
18	1 Developme Pang Y, Li V 18778725 Not a renal disease focus
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21	1 Do DNA reę Gangwar R, 19815090 Not a renal disease focus
22	1 Dominant-i Maynard M 17998805 Not a renal disease focus
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26	1 EGF-r gene Moch H, Sa 9664910 Not a renal disease focus
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28	1 Elevated cc Takashi M, 2515181 Not a renal disease focus
29	1 Endothelial Ziaei SA, Sa 23015399 Not a renal disease focus
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31	1 ERBB4 gen Hashemi M 27609473 Not a renal disease focus
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37	1 FHIT gene ę Bugert P, M 9290948 Not a renal disease focus
38	1 Fluid intake Wang J, Wu 23632476 Not a renal disease focus
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41	1 Functional Horvath A, 19549888 Not a renal disease focus
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44	1 Gain-of-fur Hirota S, Ni 11276010 Not a renal disease focus
45	1 Gene-envir Semenza JC 11323315 Not a renal disease focus
46	1 Genetic alt Feng C, Xio 26662507 Not a renal disease focus
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50	1 Genetic Po Adabi Z, M 26319608 Not a renal disease focus
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1 Genetic po Habib SL, D 17932460 Not a renal disease focus
 2 1 Genetic Va Zhao R, Liu 26066055 Not a renal disease focus
 3 1 Genetic var Mandal RK, 23054000 Not a renal disease focus
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 5 1 Genetic var Tan X, Wan 24157827 Not a renal disease focus
 6 1 Genomic a Gerlinger N 24487277 Not a renal disease focus
 7 1 Germline B Ohar JA, Ch 26719535 Not a renal disease focus
 8 1 Germline B de la Fouch 25080371 Not a renal disease focus
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 10 1 Glutathion Sweeney C, 10794492 Not a renal disease focus
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 14 1 GSTM1, GS ChirilĂf DN 26158735 Not a renal disease focus
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 16 1 HABP2 G53 Tomsic J, F 26745718 Not a renal disease focus
 17 1 HER2 prote Sasaki Y, Sa 24551292 Not a renal disease focus
 18 1 hOGG1 Ser Zhao H, Qir 21166493 Not a renal disease focus
 19 1 Hypoxia-re Koshikawa 16357173 Not a renal disease focus
 20 1 Identificati Zatyka M, c 12097293 Not a renal disease focus
 21 1 Immunoex GiuffrĂ G, 17390038 Not a renal disease focus
 22 1 Impact of C Farker K, Le 9784018 Not a renal disease focus
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 27 1 Increased   Wang WH, 8910385 Not a renal disease focus
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 29 1 Influence o Kesarwani I 20804486 Not a renal disease focus
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 34 1 Inhibition c Kondo K, Kl 12086860 Not a renal disease focus
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 40 1 JAK3 in cle de Martino 21868263 Not a renal disease focus
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 42 1 Lack of ass Piccoli MF, 17980059 Not a renal disease focus
 43 1 LMP2, a no Zheng G, Cl 22705098 Not a renal disease focus
 44 1 Loss of BAF Mochel MC 25972334 Not a renal disease focus
 45 1 Loss of het Drake KM, 19789318 Not a renal disease focus
 46 1 Loss of het Sithananda 2566144 Not a renal disease focus
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 48 1 Mapping o Tang W, Fu 22228101 Not a renal disease focus
 49 1 Matrix met Awakura Y, 16466849 Not a renal disease focus
 50 1 MDM2 SNF Hirata H, H 17634539 Not a renal disease focus

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2	1 Meningiom Zang KD, 11528114 Not a renal disease focus
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4	1 MicroRNA Wei H, Ke H, 22517515 Not a renal disease focus
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10	1 Novel somi Yang K, Lin, 10454237 Not a renal disease focus
11	1 Occupatio Moore LE, I, 20663906 Not a renal disease focus
12	1 Oncocytic i Mai KT, Kol, 18251779 Not a renal disease focus
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14	1 p53 mutati Imai Y, Stro, 7824511 Not a renal disease focus
15	1 Patients wi Skeldon SC, 22883484 Not a renal disease focus
16	1 Phase 1 trii Puzanov I, i, 25294187 Not a renal disease focus
17	1 Phosphodiε Faucz FR, H, 20881257 Not a renal disease focus
18	1 Point muta Cairns P, Ev, 9671402 Not a renal disease focus
19	1 Polymorph Mandal RK, 20590474 Not a renal disease focus
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23	1 Polymorph Deckers IA, 24978482 Not a renal disease focus
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26	1 Prevalence van Houwe, 15932632 Not a renal disease focus
27	1 Progestero Mai KT, Tec, 18081814 Not a renal disease focus
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29	1 Recurrent ε Torrezan G, 24909261 Not a renal disease focus
30	1 Reduced ε Thompson, 8971182 Not a renal disease focus
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32	1 Relevance i Schraml P, 12937142 Not a renal disease focus
33	1 Renal cell c De Martinc, 20083259 Not a renal disease focus
34	1 Renal cell c Hughson M, 8959640 Not a renal disease focus
35	1 Renal cell c Lv C, Bai Z, 26191297 Not a renal disease focus
36	1 Renal cell c Karami S, B, 18566013 Not a renal disease focus
37	1 Renin in blk Taylor GM, 2450464 Not a renal disease focus
38	1 Replicative Singh V, Jai, 25218484 Not a renal disease focus
39	1 Retrospect Singh N, Sa, 25913740 Not a renal disease focus
40	1 Rhabdoid t Sredni ST, T, 25494491 Not a renal disease focus
41	1 Risk factor Wang G, Hc, 22000673 Not a renal disease focus
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43	1 Role of MN Srivastava I, 20574775 Not a renal disease focus
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45	1 RTK/ERK pε Chen Y, Xin, 24223781 Not a renal disease focus
46	1 Somatic inε Prowse AH, 9106522 Not a renal disease focus
47	1 Somatic mε Alimov A, L, 10628321 Not a renal disease focus
48	1 Somatic mε Di Renzo M, 10734314 Not a renal disease focus
49	1 Structural k Forman JR, 19408298 Not a renal disease focus
50	1 Subtype-sp Williams RI, 20332316 Not a renal disease focus
51	1 Telomerasε Dahse R, Fi, 10504477 Not a renal disease focus
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1 TERT Prom de Biase D, 26148423 Not a renal disease focus
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22 BRAF muta Choueiri Tk 22727996 Not a renal disease focus
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2 1 Genetic risk Missouri C 8821841 Not a renal disease focus
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5	1 Role of P450 cytochrome CYP2C9 Bräsen K, I 2060250 Not a renal disease focus
6	1 Role of PTPN22 López-Mejías A, M 26458874 Not a renal disease focus
7	1 S-adenosylmethionine Feld JJ, Mo 20854821 Not a renal disease focus
8	1 Selected ACE inhibitors Benhaj Mbarki M, B 21612638 Not a renal disease focus
9	1 Serum angiotensin-converting enzyme Inoue M, S 11092501 Not a renal disease focus
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13	1 Single nucleotide polymorphism Basson JJ, C 25063733 Not a renal disease focus
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16	1 Slight association Capoluongo L, 16806146 Not a renal disease focus
17	1 SNP Variants Coulter-Matthews A, 25854853 Not a renal disease focus
18	1 Soluble fms-like tyrosine kinase Jin J, Sison 23063127 Not a renal disease focus
19	1 Somatic mutations Weber A, H 22573489 Not a renal disease focus
20	1 Spectrum of disease Guggilla SR 25982861 Not a renal disease focus
21	1 Spondyloarthritis Briggs TA, F 26951490 Not a renal disease focus
22	1 Structural changes Hall AV, An 7528745 Not a renal disease focus
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25	1 Synergistic effects Barlassina C 10720960 Not a renal disease focus
26	1 System-wide changes Zhang W, V 26949039 Not a renal disease focus
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28	1 Testing of disease Schoenfeld DA 24667567 Not a renal disease focus
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 45 Polymorph Ece A, Teke 16109085 Paediatric individuals
 46 Polymorph Savvidou A 20022049 Paediatric individuals
 47 PON1 Q192 Vasconcelo 24972570 Paediatric individuals
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3 Investigatic Currie D, M 20854388 < 3 populations reported per SNP
3 Polymorph Frojdo, S; S 16211375 < 3 populations reported per SNP
3 Angiotensii Yang, HY; L 23477970 < 3 populations reported per SNP

For peer review only

Supplementary Table S3c

Exclusion S Title	Authors	PMID	Reason	
1	Identificati	Chen, Z; W	27756246	Gene expression based study
2	1 A disease h	Ng, DPK; PI	16936219	No data for AGT
3	1 A polymorç	Mollsten, A	21316998	No data for AGT
4	1 A rare hapl	Martin, RJL	19783860	No data for AGT
5	1 ACACÎ² gen	Shah VN, C	23081748	No data for AGT
6	1 ACE gene p	Felehgari, \	20830509	No data for AGT
7	1 alpha(1)-ar	Perdu, J; Gi	16531799	No data for AGT
8	1 Analysis of	Drouet, M;	12005241	No data for AGT
9	1 Angiotensii	Yildiz A, Ya;	12832741	No data for AGT
10	1 Angiotensii	Haque, SF; NA		No data for AGT
11	1 Angiotensii	Schmidt, S;	9269698	No data for AGT
12	1 Angiotensii	Grzeszczak,	9727375	No data for AGT
13	1 Angiotensii	Stratta, P; C	10352195	No data for AGT
14	1 Angiotensii	El-Banawy, NA		No data for AGT
15	1 Angiotensii	Buraczynsk	12187084	No data for AGT
16	1 Angiotensii	Yoneda, A;	12187255	No data for AGT
17	1 Angiotensii	Uhm, WS; I	12043886	No data for AGT
18	1 Angiotensii	Woo KT, La	18536822	No data for AGT
19	1 Angiotensii	Schmidt, A;	8785402	No data for AGT
20	1 Angiotensii	Ergen, HA; NA		No data for AGT
21	1 Angiotensii	Tarnow L, C	8671962	No data for AGT
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23	1 Association	Gao, JX; Zh	26045844	No data for AGT
24	1 Association	Conen D, G	18698212	No data for AGT
25	1 Association	Bagci, B; Bâ	27118566	No data for AGT
26	1 Carnosine ç	Janssen, B;	16046297	No data for AGT
27	1 Clinical impç	Amorim, Ci	23362199	No data for AGT
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34	1 GENETIC Pç	DORIA, A; \	7909524	No data for AGT
35	1 Haplotype ç	Doi, K; Noir	16215641	No data for AGT
36	1 Hereditary	Marre, M; I	10922971	No data for AGT
37	1 High preval	Tripathi G,	17042963	No data for AGT
38	1 Impact of P	Jung, ES; Ki	21150220	No data for AGT
39	1 Increased ç	Ulrich, C; H	16476718	No data for AGT
40	1 Insertion/d	Demurov, I NA		No data for AGT
41	1 Involvement	Yamada, K;	11349729	No data for AGT
42	1 Kinin-depe	Molinaro G	17003818	No data for AGT
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44	1 Neuropept	Ito, H; Mor	10363627	No data for AGT
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48	1 Polymorph	Chistyakov, NA		No data for AGT

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2	1 Polymorph Hanyu, O; F 9509566 No data for AGT
3	1 Polymorph Yorioka, T; 8529313 No data for AGT
4	1 Polymorph Frojdo, S; S 16211375 No data for AGT
5	1 Proteomic Kwak, NJ; V 21136694 No data for AGT
6	1 Relations b Shin, YS; Bæ 15331206 No data for AGT
7	1 Relationshi Movva, S; A 17616353 No data for AGT
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9	1 Relationshi Marre, M; I 8314010 No data for AGT
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12	1 Serological Coppo, R; A 17988266 No data for AGT
13	1 Susceptibili Hanna, MC 25316403 No data for AGT
14	1 Synergistic Doria, A; O 9389421 No data for AGT
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17	1 The angiotæ Lu, M; Zhar 27633502 No data for AGT
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19	1 The freque Rahimi, Z; F 20853144 No data for AGT
20	1 The influen Maixnerov; 17328840 No data for AGT
21	1 The influen Maixnerov; 18498720 No data for AGT
22	1 The ras res Bonomo, J/ 25027322 No data for AGT
23	1 Transformi August, P; !NA No data for AGT
24	1 20-Hydroxy Savas, S; W NA Non-human
25	1 Acute elevæ Frisbee, JC; 10329253 Non-human
26	1 Adenosine Gao, X; Pelæ 25251152 Non-human
27	1 Adrenomeç Caron, K; H 17360661 Non-human
28	1 Angiotensii Shahid, SM 24035938 Non-human
29	1 Angiotensii Jonsson, JR 11438504 Non-human
30	1 Angiotensii Noshiro, T; NA Non-human
31	1 Appropriat Catanzaro I 9931123 Non-human
32	1 Associatio Soria, LA; C 19665052 Non-human
33	1 Blood pres: Venegas-Pæ 21900645 Non-human
34	1 Blood pres: Bohlander, 22728903 Non-human
35	1 Cardiac anç Ferrario CM 26873967 Non-human
36	1 CCN1 expræ Bonda, TA; 23690222 Non-human
37	1 Chronic hyj Merrill, DC; 8613528 Non-human
38	1 Compensat Wang, Q; H 11380824 Non-human
39	1 Co-operatiç Stepinski, J 11016869 Non-human
40	1 Cosegregat Yu, H; Harræ 9794718 Non-human
41	1 Effect of so Maekawa, 8720419 Non-human
42	1 Effect of th Handtrack, 17333097 Non-human
43	1 Effects of p Omogbai, E 15834453 Non-human
44	1 Effects of S Ott, IM; Alt 22900035 Non-human
45	1 Endotheliu Pruneau, D 8453977 Non-human
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49	1 Hypervoler Morgan, Tk 16796982 Non-human
50	1 Increased æ Turkstra, E; 10523346 Non-human
51	1 Inhibition c Wang, XM; 26883268 Non-human
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2	1 Gene Trapç Park, S; Liu, 22547438 Non-human
3	1 Genetic-Co Kim, Hs; Kr 7708716 Non-human
4	1 Human GRI Wang, Z; Zè 26667412 Non-human
5	1 Identificati Bauer, Y; H 21357272 Non-human
6	1 Knockdown Raison, D; C 23720345 Non-human
7	1 Lack of an € Kittikulsuth 24431204 Non-human
8	1 Lack of in v Bonvini, JM 10966489 Non-human
9	1 Loss of Not Ragot, H; M 27296994 Non-human
10	1 Lysine-Speç Williams, JS 22534796 Non-human
11	1 Macula Dei Lu, Y; Wei, 26647426 Non-human
12	1 Mechanisr Todkar, A; I 25071088 Non-human
13	1 mPGES-1 d Jia, ZJ; Liu, 22237797 Non-human
14	1 Natriuretic Demerath, 24717731 Non-human
15	1 Nephron-sç Ramkumar, 25995108 Non-human
16	1 Nitric oxide Liang, MY; 10432402 Non-human
17	1 NOS1-depe Hyndman, I 25391901 Non-human
18	1 N-terminal Bodenstein 17220356 Non-human
19	1 Organizatic Cabral, CM 12181335 Non-human
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21	1 Physiologic Le, TH; Kim 12963678 Non-human
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24	1 Reciprocal Kurt, B; Kur 21209011 Non-human
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26	1 Regulation Liu, JL; Zucl 10066676 Non-human
27	1 Renal angic Stoneking, 9719278 Non-human
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36	1 A systemat Feng, X; Zh 23178513 Not a case-control study
37	1 ACE gene p Schena, FP; 11473656 Not a case-control study
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43	1 Association Ji, LD; Zhan 20087216 Not a case-control study
44	1 Gastric-Car Straccapan 7726143 Not a case-control study
45	1 Weber-Chr Sterling, KA 23216240 Not a case-control study
46	1 Whole-Gen Cordell, HJ; 19959718 Not a case-control study
47	1 A Synergist Rodriguez-I 19546528 Not a case-control study
48	1 Association Zhou, TB; Y 23971628 Not a case-control study
49	1 CYP3A5 anç Bochud, M, 19290795 Not a case-control study
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51	1 Disorders c Connell, JV 11469810 Not a case-control study
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1 Genetic de Schmidt, S; NA Not a case-control study
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 3 1 Genetics of Costerouss 9247746 Not a case-control study
 4 1 HLA genes Griffith, ME 9493788 Not a case-control study
 5 1 Improveme Matsunaga 19603250 Not a case-control study
 6 1 Is the prese Ng, DPK; T 18523141 Not a case-control study
 7 1 M235T ang Staessen, J. 10100088 Not a case-control study
 8 1 microRNAs Marques, F 26663185 Not a case-control study
 9 1 Mistyping c Ueda, S; He 8863184 Not a case-control study
 10 1 Nonmodul Hollenberg 16672145 Not a case-control study
 11 1 Normative Prasad, P; T 18027817 Not a case-control study
 12 1 Partial Dele Nogueira, F 10737993 Not a case-control study
 13 1 Risk of dev Savage, DA 10328465 Not a case-control study
 14 1 The deletio Staessen, J. 9488209 Not a case-control study
 15 1 The Phenoi Korner, PI 21208016 Not a case-control study
 16 1 The renopr Locatelli, F; 10048500 Not a case-control study
 17 1 Varicella-zc Velez, AMANA Not a case-control study
 18 1 Add-on an Aggarwal, R 11380832 Not a case-control study
 19 1 Analysis of Torres VE, C 22205355 Not a case-control study
 20 1 Angiotensii Akcay, A; O 15013293 Not a case-control study
 21 1 Angiotensii Narita, I; G 12911556 Not a case-control study
 22 1 Angiotensii Hopkins, PI 11997278 Not a case-control study
 23 1 Antiproteir Haneda, M 15364166 Not a case-control study
 24 1 Association Pei, Y; Schc 9259580 Not a case-control study
 25 1 Association Akcay, A; S 15385810 Not a case-control study
 26 1 Contributio Wong, TYH 11431175 Not a case-control study
 27 1 Gene Polyn Zhang, G; V 17984617 Not a case-control study
 28 1 Impact of g Siekierka-H 19681973 Not a case-control study
 29 1 Polymorph Frimat, L; P 11053482 Not a case-control study
 30 1 Survival in i Padro-Miq 19014923 Not a case-control study
 31 1 The role of Kelly TN, R 25906781 Not a case-control study
 32 1 Major clinic Alderman, NA Not a case-control study
 33 1 NHLBI Fam Williams, R 10964005 Not a case-control study
 34 1 Germline g Audenet F, 23911636 Not a renal disease focus
 35 1 Impact of n Pfab T, Stir 17563539 Not a renal disease focus
 36 1 Insertion/D de Martino 21477733 Not a renal disease focus
 37 1 Polymorph Deckers, IA 24978482 Not a renal disease focus
 38 1 The angiot Ebert, MPA 16365022 Not a renal disease focus
 39 1 Variants in Andreotti, i 20047954 Not a renal disease focus
 40 1 alpha(1)-Ar Greene, DN 22215832 Not a renal disease focus
 41 1 VASODILAT DUBEY, RK 8169847 Not a renal disease focus
 42 1 2 NOVEL P (MORIYAM 8656071 Not a renal disease focus
 43 1 A Computa Guillaud, F; 20683640 Not a renal disease focus
 44 1 A new thec Eggers, AE 26243176 Not a renal disease focus
 45 1 A Polymor Sugimoto, I 18936345 Not a renal disease focus
 46 1 A study on Chmaisse F 19861867 Not a renal disease focus
 47 1 ACE gene ir Dell'omo, C 16889537 Not a renal disease focus
 48 1 Alanine : gl Danpure, C 12686111 Not a renal disease focus
 49 1 alpha(1)-ar Callea, F; G 9279535 Not a renal disease focus
 50 1 Alpha1-ant Taddei C, A 10563543 Not a renal disease focus

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1 Alpha-1-pr O'Donogh 8296629 Not a renal disease focus
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1 Angiotensii Pedersen-E 19820429 Not a renal disease focus
1 Angiotensii Stefansson 10855732 Not a renal disease focus
1 Angiotensii Badr, S; Ral NA Not a renal disease focus
1 Association Boomsma F 15830186 Not a renal disease focus
1 Association Nalbantogl 23151617 Not a renal disease focus
1 Association Song SB, Jir 21342026 Not a renal disease focus
1 Association Assali, A; G 21570644 Not a renal disease focus
1 Association Rabbani M. 18711292 Not a renal disease focus
1 Association RodrÃ-gue; 11345362 Not a renal disease focus
1 Association Singh, PP; M 16621107 Not a renal disease focus
1 Association Mokretar, I 26670794 Not a renal disease focus
1 Association Meng, N; Z 25359286 Not a renal disease focus
1 Association Mayer, NJ; NA Not a renal disease focus
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1 Compreher Kato, N; Su 10953993 Not a renal disease focus
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1 Contributic Mondorf U 9524045 Not a renal disease focus
1 Crystal stru Zhang, XX; 12899834 Not a renal disease focus
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1 Detection c Matsumoto 11106834 Not a renal disease focus
1 Effect of AC Poduri, A; M 18200034 Not a renal disease focus
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1 Effects of o Maeda, K; I 16678545 Not a renal disease focus
1 Efficacy of I Kwon, DH; 23717118 Not a renal disease focus
1 Elevated ur Clausen, P; 10872702 Not a renal disease focus
1 Endothelial Page, A; Re 16093452 Not a renal disease focus
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1 Evaluation Rumsby G, 15327387 Not a renal disease focus
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1 Functional Coto E, Pal; 20594303 Not a renal disease focus
1 Functional Lumb MJ, L 10960483 Not a renal disease focus

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2 1 Functional Gainer, JV; 15611369 Not a renal disease focus
3 1 Further stu Danpure CJ 3416563 Not a renal disease focus
4 1 Genetic po Deuster, P/ 23543093 Not a renal disease focus
5 1 Genetic po Wu, CK; Ts: 19330904 Not a renal disease focus
6 1 Genetic po Olivieri, O; 10567188 Not a renal disease focus
7 1 Genetic prε Tousoulis D 23479071 Not a renal disease focus
8 1 Genetic rislvan Onna, I 15326089 Not a renal disease focus
9 1 Genetic var Ichikawa, N 24549414 Not a renal disease focus
10 1 Genetic var Hsu, CCC; E 16396964 Not a renal disease focus
11 1 Genomic a: Turner ST, I 22566498 Not a renal disease focus
12 1 Genotype-ı Watkins, W 19770777 Not a renal disease focus
13 1 Genotypic i Mehri, S; K 20580725 Not a renal disease focus
14 1 G-protein k Zagradisnik 15337465 Not a renal disease focus
15 1 Identificati Purdue PE, 1703535 Not a renal disease focus
16 1 Increased ε Yamani, MI 17097490 Not a renal disease focus
17 1 Independeı Morris, Bj; 8104754 Not a renal disease focus
18 1 Inhibition c Montgome 9797175 Not a renal disease focus
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22 1 Low-salt diı Manunta, F 14684671 Not a renal disease focus
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24 1 Middle cerı Thomas, GI 12865608 Not a renal disease focus
25 1 Molecular ı Corvol, P; S 9296068 Not a renal disease focus
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29 1 No associat Ishikawa, K 9607391 Not a renal disease focus
30 1 No Evidenc Liktor, B; C: 23370555 Not a renal disease focus
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32 1 Oxidative s Cal^Å2 LA, P: 12897089 Not a renal disease focus
33 1 Peripheral ı Thomas, GI 14632699 Not a renal disease focus
34 1 Pharmacolı Miyata N, S 25237136 Not a renal disease focus
35 1 Phenotype Gong L, Chı 24474657 Not a renal disease focus
36 1 Polymorph Baudin, B 15640279 Not a renal disease focus
37 1 Polymorph Bofinger, A 11317203 Not a renal disease focus
38 1 Potential B Grisk, O 23852615 Not a renal disease focus
39 1 Rab1 Small Zhuang, XL 20861236 Not a renal disease focus
40 1 Renal chan Marre, M; I 10082486 Not a renal disease focus
41 1 Renal haen Skov, K; Mı 17083073 Not a renal disease focus
42 1 Renin-aldo: Hanukoglu, 18634878 Not a renal disease focus
43 1 Renin-angiı BuraczyÅ,,s 14502296 Not a renal disease focus
44 1 Renin-Angi Joyce-Tan, NA Not a renal disease focus
45 1 Risk given k Li, Q; Sun, I 26391364 Not a renal disease focus
46 1 Role of ACE Cordonnier 11708761 Not a renal disease focus
47 1 Role of GRı Chen, K; Fu 24218433 Not a renal disease focus
48 1 Serum liver Larizza, D; I 10664223 Not a renal disease focus
49 1 Single nuclı Demir AK, I 27936341 Not a renal disease focus
50 1 Single Strar Bettinaglio, 12270765 Not a renal disease focus
51 1 SNP Varian Coulter-Ma 25854853 Not a renal disease focus
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2	1 Somatic Vo Gilcrease, M 8522307 Not a renal disease focus
3	1 The consen Mesa-Torre 24957194 Not a renal disease focus
4	1 The genetic Stanczuk, C 17653872 Not a renal disease focus
5	1 The interac Gatti, RR; S 22791701 Not a renal disease focus
6	1 The M235T van den Bo 17921816 Not a renal disease focus
7	1 The major : Coulter-Ma 15963748 Not a renal disease focus
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9	1 The state a Price, DA; C 10232494 Not a renal disease focus
10	1 Ubiquitin li Shen Y, Bal 16979136 Not a renal disease focus
11	1 Vitamin B6 Hoyer-Kuhn 24385516 Not a renal disease focus
12	1 [A study on Nishina M. 9014479 Not written in English or Spanish
13	1 [AGTR1 A1: Yin X, Li H, 23505107 Not written in English or Spanish
14	1 [Arterial hy Ermolenko 7700 Not written in English or Spanish
15	1 [Associatio Xue Y, Cher 11798574 Not written in English or Spanish
16	1 [Associatio BuraczyÅ„s 12476891 Not written in English or Spanish
17	1 [Effect of e Kaliuzhin V 24261234 Not written in English or Spanish
18	1 [Genetic pr Bzoma B, D 19112833 Not written in English or Spanish
19	1 [Identificat Savost'ianc 12500539 Not written in English or Spanish
20	1 [Is Pstl poly Grzeszczak 9499204 Not written in English or Spanish
21	1 [Pharmacol Mormol' IA 25286611 Not written in English or Spanish
22	1 [Polymorph Chistiakov I 10576062 Not written in English or Spanish
23	1 [Polymorph Kutyrina IM 10420452 Not written in English or Spanish
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25	1 [Relationsh Liao L, Lei M 12016801 Not written in English or Spanish
26	1 [Relationsh Wang J, Zhi 10514536 Not written in English or Spanish
27	1 [Renin-angi BuraczyÅ„s 11865575 Not written in English or Spanish
28	1 A-20C angi Nakanishi, 14648325 Paediatric Individuals
29	1 ACE and AT Kostic, M; S 15179569 Paediatric Individuals
30	1 ACE gene p Tanaka, R; I 9590186 Paediatric Individuals
31	1 ACE gene p Fahmy, ME 18792483 Paediatric Individuals
32	1 Angiotensii Pavlovic, M 9950302 Paediatric Individuals
33	1 Angiotensii Pavlovic, M 9354852 Paediatric Individuals
34	1 Angiotensii Siomou, E; 17515833 Paediatric Individuals
35	1 Angiotensii Rigoli, L; Ch 15470205 Paediatric Individuals
36	1 Angiotensii Gallego, P- 18413222 Paediatric Individuals
37	1 Donor and Buscher, R; 21309964 Paediatric Individuals
38	1 Effects of g Tabel, Y; Be 16525944 Paediatric Individuals
39	1 Gene Polyn Kaplan, I; S 25262176 Paediatric Individuals
40	1 Genetic coi Yim, HE; Ba 17597658 Paediatric Individuals
41	1 Genetic po Elshamaa, I 21859496 Paediatric Individuals
42	1 Genetic po Frishberg, 9853248 Paediatric Individuals
43	1 Impact of c Hussein, A; 25939993 Paediatric Individuals
44	1 Polymorph Maruyama, 11354780 Paediatric Individuals
45	1 Polymorph Ece, A; Tek 16109085 Paediatric Individuals
46	1 Renin-angi Papp, F; Fri 12579405 Paediatric Individuals
47	1 Renin-angi Liu, DS; Lu, NA Paediatric Individuals
48	1 ACE gene p Haszon, I; F 12478352 Paediatric Individuals
49	1 Angiotensii Hohenfelln 10353402 Paediatric Individuals
50	1 Implication Hahn, H; Kt 16133060 Paediatric Individuals
51	1 Renin-angi Pardo, R; N 12579398 Paediatric Individuals
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2	1 Renin-angi Liu, KP; Lin, 15045574 Paediatric Individuals
3	1 Autosomal Geller, DS; 16611713 Paediatric Individuals
4	1 Genetic po Yim, HE; Ju 14764974 Paediatric Individuals
5	1 Genetic risl Taranta, A; 19110485 Paediatric Individuals
6	1 Hemorrhag Levin M, Pi 2783733 Paediatric Individuals
7	1 Identificati Forino, M; 14673707 Paediatric Individuals
8	1 Implication Ozen S, Ali 10401028 Paediatric Individuals
9	1 Low renin- Peruzzi, L; I 16006956 Paediatric Individuals
10	1 Posterior u Bajpai, M; I 15643266 Paediatric Individuals
11	1 Renal tubul Lacoste M, 16790508 Paediatric Individuals
12	1 Renin-angi Ozkaya, O; 16521052 Paediatric Individuals
13	1 The juxtagl Taugner R, 3128915 Paediatric Individuals
14	1 Variants of Halkas, AC; 9475086 Paediatric Individuals
15	1 ACE gene p Parving, H 18199798 Pharmaceutical drug focus
16	1 Angiotensii Cambien, F 9519756 Pharmaceutical drug focus
17	1 Association Kuriyama, S 11675943 Pharmaceutical drug focus
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19	1 Effects of lc Argani, H; C 18261537 Pharmaceutical drug focus
20	1 Efficacy an Axelsson, A 25533774 Pharmaceutical drug focus
21	1 Enalapril ar Rashtchiza 17222813 Pharmaceutical drug focus
22	1 Exaggerate Simonsen, . 21749320 Pharmaceutical drug focus
23	1 High serum Elung-Jense 11881130 Pharmaceutical drug focus
24	1 Long-term Andersen S 12716812 Pharmaceutical drug focus
25	1 Losartan de Campistol, 10432413 Pharmaceutical drug focus
26	1 Renin-angi Noroozian 17524880 Pharmaceutical drug focus
27	1 Randomize Amara, AB; 20061926 Pharmaceutical drug focus
28	1 Renal impli Hollenberg 11459212 Pharmaceutical drug focus
29	1 The influen Goyache-G 24241364 Pharmaceutical drug focus
30	1 The influen Luik, PT; H 12856080 Pharmaceutical drug focus
31	2 U.K. Prosp Dudley CR, 8587251 No data
32	2 The renin-- Ong-Ajyoot 10511770 No data
33	2 The relatio Shestakova WOS:0002 No data
34	2 Relationshi Wang, JJ; Z 11717948 No data
35	2 Polymorph Chistyakov, WOS:0000 No data
36	2 Polymorph Woo, KT; L; 15504143 No data
37	2 Lack of ass Wong, TYH 10352194 No data
38	2 Influence o Bantis, C; K 15031629 No data
39	2 Genetic po Buraczyński 12898858 No data
40	2 Effects of tl Luther Y, B; 14610337 No data
41	2 Combinatic Osawa 17143591 No data
42	2 Renin-angi Mtiraoui, N 21421655 Incorrect patient group
43	2 Angiotensii Gutierrez 9258285 No data
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45	3 Analysis of Anbazhaga 19520069 < 3 populations reported per SNP
46	3 Angiotensii Lee KB et a 12950120 < 3 populations reported per SNP
47	3 Angiotensii Reis KA et a 16228848 < 3 populations reported per SNP
48	3 Angiotensii Gnanasaml 26482465 < 3 populations reported per SNP
49	3 Association Pawlik M e 23681285 < 3 populations reported per SNP
50	3 Association Pei Y et al. 9259580 < 3 populations reported per SNP
51	3 Chronic rer Prasad P et 16672053 < 3 populations reported per SNP
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3 Contributic Marre M et 9120002 < 3 populations reported per SNP
3 Gene polyn Su SL et al. 22147663 < 3 populations reported per SNP
3 Genes invo Litovkina O 24727057 < 3 populations reported per SNP
3 Genetic po Miura J et 10499884 < 3 populations reported per SNP
3 Genetic po Zsom M et 22111818 < 3 populations reported per SNP
3 Genetic po Fabris B et 15662219 < 3 populations reported per SNP
3 Genetic var Shaikh R et 24737640 < 3 populations reported per SNP
3 Hypertensi El-Essawy A 11926202 < 3 populations reported per SNP
3 Interaction Stratta P et 14767013 < 3 populations reported per SNP
3 M235T Pol Sarkar S et 25660845 < 3 populations reported per SNP
3 Polymorph Ayed K et a 16635753 < 3 populations reported per SNP
3 Polymorph Sprovieri SI 15934435 < 3 populations reported per SNP
3 Renin-angi Parsa A et 15789057 < 3 populations reported per SNP
3 Renin-angi Mtiraoui N 21421655 < 3 populations reported per SNP
3 Renin-angi Chen WJ et 24907556 < 3 populations reported per SNP

Supplementary Table S3d

Exclusion S	Title	Authors	PMID	Reason
1	Identificati	Chen, Z; W	27756246	Gene expression based study
1	Polymorph	Liu, ZH; Li, LS		No data for AGTR1
1	The effect	(Nakayama	16312263	No data for AGTR1
1	The genetic	Heringer-W	22652430	Non-human
1	Angiotensi	Maeda A, T	23902639	Non-human
1	Cardiac phe	van Esch, JI	20071356	Non-human
1	CCN1 expr	Bonda, TA;	23690222	Non-human
1	Human GRI	Wang, Z; Z	26667412	Non-human
1	Losartan ar	Srisawat, U	25947921	Non-human
1	The angiot	Hunley, TE;	10652034	Non-human
1	Mechanisr	Todkar, A; I	25071088	Non-human
1	Physiologic	Le, TH; Kim	12963678	Non-human
1	Specific pr	Bird, IM; M	9687288	Non-human
1	A systemat	Feng, X; Zh	23178513	Not a case-control study
1	Associatio	Ding, W; W	21607620	Not a case-control study
1	Associatio	Zhou, TB; Y	23971628	Not a case-control study
1	Genetic de	Cardinal-Fe	22436318	Not a case-control study
1	A Synergist	Rodriguez-I	19546528	Not a case-control study
1	Add-on an	Agarwal, R	11380832	Not a case-control study
1	Analysis of	Torres VE, (22205355	Not a case-control study
1	Angiotensi	Woo KT, La	18536822	Not a case-control study
1	Associatio	Akçay A, Se	15385810	Not a case-control study
1	Gene Polyn	Zhang, G; V	17984617	Not a case-control study
1	Impact of g	Siekierka-H	19681973	Not a case-control study
1	Influence o	Bantis, C; I	15031629	Not a case-control study
1	Polymorph	Frimat, L; P	11053482	Not a case-control study
1	Survival in	Padro-Miqu	19014923	Not a case-control study
1	Angiotensi	Miller, JA; T	10969844	Not a renal disease focus
1	Associatio	Song SB, Jir	21342026	Not a renal disease focus
1	Associatio	Assali, A; G	21570644	Not a renal disease focus
1	Eprosartan	Vase, H; La	18341678	Not a renal disease focus
1	Functional	Coto E, Pak	20594303	Not a renal disease focus
1	Genetic po	Wu, CK; Ts	19330904	Not a renal disease focus
1	Genetic ris	van Onna, I	15326089	Not a renal disease focus
1	Genetic var	Ichikawa, M	24549414	Not a renal disease focus
1	Genetic var	Hsu, CCC; E	16396964	Not a renal disease focus
1	Genomic a	Turner ST, I	22566498	Not a renal disease focus
1	Increased	Yamani, MI	17097490	Not a renal disease focus
1	Peripheral	Thomas, GI	14632699	Not a renal disease focus
1	Polymorph	Deckers, IA	24978482	Not a renal disease focus
1	Polymorph	Bofinger, A	11317203	Not a renal disease focus
1	Renin-angi	BuraczyÅ,,s	14502296	Not a renal disease focus
1	Renin-Angi	Joyce-Tan, SM; Zain, SI		Not a renal disease focus
1	Single nucl	Demir AK, I	27936341	Not a renal disease focus
1	The M235T	van den Bo	17921816	Not a renal disease focus

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2	1 Angiotensin Sparks, MA 21242463 Not a renal disease focus
3	1 Association Conen D, G 18698212 Not a renal disease focus
4	1 Comprehensive Kato, N; Su 10953993 Not a renal disease focus
5	1 Deep-target Pescatello, LS; Schifano Not a renal disease focus
6	1 Genetic Clu Krcunovic, Z; Novakovi Not a renal disease focus
7	1 Polymorph Baudin, B 15640279 Not a renal disease focus
8	1 Renin-angiotensin Lau YK, Wo 15153745 Not a renal disease focus
9	1 [AGTR1 A1: Yin X, Li H, 23505107 Not written in English or Spanish
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11	1 [Effect of e Kaliuzhin V 24261234 Not written in English or Spanish
12	1 [Genetic polymorph Bzoma B, D 19112833 Not written in English or Spanish
13	1 [Identification Savost'ianov 12500539 Not written in English or Spanish
14	1 [Pharmacokinetic Mormol' IA 25286611 Not written in English or Spanish
15	1 [Polymorph Chistiakov I 10576062 Not written in English or Spanish
16	1 [Renin-angiotensin Buraczyńska 11865575 Not written in English or Spanish
17	1 ACE gene polymorph Haszon, I; F 12478352 Paediatric Individuals
18	1 Renin-angiotensin Papp, F; Fri 12579405 Paediatric Individuals
19	1 ACE and AT1 Kostic, M; S 15179569 Paediatric Individuals
20	1 Angiotensin Hohenfellner 10353402 Paediatric Individuals
21	1 Angiotensin Gallego, P 18413222 Paediatric Individuals
22	1 Donor and Buscher, R; 21309964 Paediatric Individuals
23	1 Effects of g Tabel Y, Be 16525944 Paediatric Individuals
24	1 Genetic polymorph Yim, HE; Ju 14764974 Paediatric Individuals
25	1 Genetic polymorph Elshamaa, I 21859496 Paediatric Individuals
26	1 Genetic polymorph Frishberg, N 9853248 Paediatric Individuals
27	1 Genetic risk Taranta, A; 19110485 Paediatric Individuals
28	1 Impact of c Hussein, A; 25939993 Paediatric Individuals
29	1 Polymorph Maruyama 11354780 Paediatric Individuals
30	1 Polymorph Ece, A; Tekin 16109085 Paediatric Individuals
31	1 Renin-angiotensin Pardo, R; N 12579398 Paediatric Individuals
32	1 Renin-angiotensin Liu, KP; Lin, 15045574 Paediatric Individuals
33	1 Implication Ozen S, Ali 10401028 Paediatric Individuals
34	1 Mapping c Weber, S; L 20605837 Paediatric Individuals
35	1 Renin-angiotensin Ozkaya, O; 16521052 Paediatric Individuals
36	1 Effect of ACE inhibitor Angler CA, 16961167 Pharmaceutical drug focus
37	1 Chronic renal Prasad P, T 16672053 Pharmaceutical drug focus
38	1 CYP2C9 genotype Joy MS, Do 19669737 Pharmaceutical drug focus
39	1 Enalapril and Rashtchizade 17222813 Pharmaceutical drug focus
40	1 Evaluation Palmer, ND 24551085 Pharmaceutical drug focus
41	1 Long-term Andersen S 12716812 Pharmaceutical drug focus
42	1 The influence Goyache-G 24241364 Pharmaceutical drug focus
43	1 Genetic polymorph Buraczyńska 12898858 Pharmaceutical drug focus
44	1 Genotypic polymorph Mehri, S; K 20580725 Pharmaceutical drug focus
45	2 A polymorph Möllsten A, 21316998 Incorrect patient group
46	2 Association Yoshida T, I 19056482 Overlap in patient group
47	2 Combinatorial Osawa N, K 17143591 No data
48	2 Effects of thalidomide Luther Y, B; 14610337 No data
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2 Gene polyn Su, SL; Lu, H 22147663 Overlap in patient group
3 Lack of syn Tarnow L, H 10907125 No data
4 Polymorph Woo, KT; Li 15504143 Overlap in patient group
5 The renin-- Ong-Ajyoot 10511770 No data
6 Polymorph Ayed K et al 16635753 < 3 populations reported per SNP
7 Angiotensin Buraczynski 12187084 < 3 populations reported per SNP
8 Genetic po Buraczynski 16384824 < 3 populations reported per SNP
9 Renin-angi Chen WJ et al 24907556 < 3 populations reported per SNP
10 Hypertensi El-Essawy / WOS:0001 < 3 populations reported per SNP
11 Genetic po Fabris B et al 15662219 < 3 populations reported per SNP
12 Relationshi Fradin S et al 11938025 < 3 populations reported per SNP
13 Susceptibili Hanna MO 25316403 < 3 populations reported per SNP
14 Renin-angi Kawada N et al WOS:0000 < 3 populations reported per SNP
15 GENETIC CI Krcunovic Z WOS:0002 < 3 populations reported per SNP
16 Angiotensin Lee KB et al 12950120 < 3 populations reported per SNP
17 Genes invo Litovkina O 24727057 < 3 populations reported per SNP
18 Polymorph Losito A et al WOS:0001 < 3 populations reported per SNP
19 Contributic Marre M et al 9120002 < 3 populations reported per SNP
20 Associati Pei Y et al 9259580 < 3 populations reported per SNP
21 Polymorph Sprovieri SI 15934435 < 3 populations reported per SNP
22 Interaction Stratta P et al 14767013 < 3 populations reported per SNP
23 Gene polyn Su SL et al. 22147663 < 3 populations reported per SNP
24 Gene-Gene Su SL et al. 24977181 < 3 populations reported per SNP
25 Associati Yoshida T et al 19406964 < 3 populations reported per SNP
26 Genetic po Zsom M et al 22111818 < 3 populations reported per SNP
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Supplementary Table S3e

Exclusion	Title	Authors	PMID	Reason
1	Associator	Pei Y, Scho	9259580	No data for AGTR2
1	Synergistic	Doria A, Or	9389421	No data for AGTR2
1	Lack of syn	Tarnow L, I	10907125	No data for AGTR2
1	Angiotensi	Miller JA, T	10969844	No data for AGTR2
1	Polymorph	Frimat L, P	11053482	No data for AGTR2
1	Altered re	O'Tierney,	18192845	No data for AGTR2
1	The angiot	Hunley, TE	10652034	Non-human
1	Renin-angi	Pardo, R; N	12579398	Not a case-control study
1	Associator	Akcaay A, S	15385810	Not a case-control study
1	Whole-gen	Cordell HJ,	19959718	Not a case-control study
1	Associator	Laksmi NK,	20149750	Not a case-control study
1	Angiotensi	Hohenfeln	10353402	Not a renal disease focus
1	Angiotensi	Yoneda, A;	12187255	Not a renal disease focus
1	Genetic po	Yim, HE; Ju	14764974	Not a renal disease focus
1	Polymorph	Baudin, B	15640279	Not a renal disease focus
1	No evidenc	Struwe E, I	16944335	Not a renal disease focus
1	[Effect of e	Kaliuzhin V	24261234	Not written in English or Spanish
1	No evidenc	Hiraoka M,	11260384	Paediatric Individuals
1	Polymorph	Maruyama	11354780	Paediatric Individuals
1	Angiotensi	Rigoli L, Ch	15470205	Paediatric Individuals
1	Implicator	Hahn H, Kl	16133060	Paediatric Individuals
1	Angiotensi	Siomou, E;	17515833	Paediatric Individuals
1	Associator	Miranda D	24995698	Paediatric Individuals
2	Angiotensi	Pedersen-I	19820429	Incorrect patient group

Supplementary Table S3f

Exclusion S Title	Authors	PMID	Reason
1 Increased amount of the angiotensin	Suehiro T, Morita T, Inoue T	15164285	Gene expression based
1 Increased expression of monocyte	Ulrich, C; Heine, GH; Garcia	16476718	Gene expression based
1 Synergistic expression of angiotensin	Wakahara, S; Konoshita, T;	17303661	Gene expression based
1 A biallelic gene polymorphism of CYP11B2	Nicod J, Bruhin D, Auer L, V	12788845	No data for REN
1 A candidate gene approach to gene	Yamamoto, R; Nagasawa, Y	21737517	No data for REN
1 A polymorphism in the angiotensin	Mollsten, A; Vionnet, N; For	21316998	No data for REN
1 ACAC1 gene (rs2268388) and AGTR	Shah VN, Cheema BS, Sharr	23081748	No data for REN
1 ACE variants interact with the RAS	Ahluwalia TS, Ahuja M, Rai	19108684	No data for REN
1 ACE, PAI-1, decorin and Warner	Del Cosmo, S; Margaglione,	10495473	No data for REN
1 Aldosterone synthase (CYP11B2)-3'UTR	Lajer, M; Schjoedt, KJ; Jaco	16759311	No data for REN
1 Aldosterone Synthase CYP11B2	Ger Yilmaz, M; Sari, I; Bagci, B; C	25957425	No data for REN
1 Analysis of insertion/deletion polymorphisms	Ali A, Vasudevan R, Ismail P	21421653	No data for REN
1 Analysis of polymorphism in Renin	Anbazhagan, K; Sampathku	19520069	No data for REN
1 Angiotensin converting enzyme gene	Yildiz A, Yazici H, Cine N, Ka	12832741	No data for REN
1 Angiotensin I converting enzyme gene	Gutierrez, C; Vendrell, J; Pa	9258285	No data for REN
1 Angiotensin I converting enzyme gene	Schmidt, S; Ritz, E	9269698	No data for REN
1 Angiotensin II type 1 receptor (AT1R)	El-Banawy, H; Bedair, R; Mc	NA	No data for REN
1 Angiotensin II type 1 receptor gene	Buraczynska, M; Ksiazek, P;	12187084	No data for REN
1 Angiotensin-converting enzyme (ACE)	So, WY; Ma, RCW; Ozaki, R;	16395257	No data for REN
1 Angiotensin-converting enzyme polymorphism	Ortiz, MA; De Prado, A; Dor	15012717	No data for REN
1 Angiotensin-I converting enzyme gene	Ergen, HA; Hatemi, H; Agac	NA	No data for REN
1 Angiotensin-II type 1 receptor gene	Tarnow L, Cambien F, Rossi	8671962	No data for REN
1 Angiotensinogen gene polymorphism	Gnanasambandan, R; Elum	26482465	No data for REN
1 Angiotensinogen M235T and chymotrypsin	Zychma, MJ; Zukowska-Szco	11096141	No data for REN
1 Apparent Mineralocorticoid Excess	Alzahrani, AS; Aljuhani, N; C	24936560	No data for REN
1 Assessment of matrix Gla protein, Klotho	Karsli Ceppio, Ylu S, Yurdun	21859400	No data for REN
1 Association analysis of ADPRT1, AKI	Prasad, P; Tiwari, AK; Kuma	20353610	No data for REN
1 Association between angiotensin converting	enzyme Uemasu, J; Nakaoka, A; Kav	9180368	No data for REN
1 Association between CCDC132, FDX1	Niu D, Ren Y, Xie L, Sun J, Lu	26370181	No data for REN
1 Association of aldosterone synthase	Pawlik M, Mostowska A, Lia	23681285	No data for REN
1 Association of apolipoprotein E gene	Lahrach H, Essiarab F, Timir	25155022	No data for REN
1 Association of glutathione S-transferase	Datta SK, Kumar V, Pathak I	20954980	No data for REN
1 Association of plasminogen activator	Xu F, Liu H, Sun Y.	26616527	No data for REN
1 Association of sequence polymorphisms	Bai Y, Guo Z, Xu J, Zhang J, C	24576051	No data for REN
1 Association of the angiotensinogen	Reis KA, Ebin, FA, Ko, E,	21500980	No data for REN
1 Association of the genetic polymorphisms	Li, X; An, J; Guo, R; Jin, Z; Li,	20540812	No data for REN
1 Association studies between the HSD17B4	Lavery, GG; McTernan, CL; I	11916625	No data for REN
1 Association study of ACE polymorphisms	Gong, AM; Li, XY; Wang, YQ	22729880	No data for REN
1 Associations between apolipoprotein E	Arikan H, Koc M, Sari H, Tuğ	17763167	No data for REN
1 CYP11B2-RFLP profiles for serum angiotensin	Ozdemir O, Kayatas M, Ceti	25394530	No data for REN
1 Blood Pressure-Related Genes and	Kim, SM; Chin, HJ; Oh, YK; K	19729965	No data for REN
1 Circulating angiotensin-converting enzyme	Anguiano, L; Riera, M; Pasc	25813276	No data for REN
1 Clinical impact of an angiotensin II	Amorim, CEN; Nogueira, E;	23362199	No data for REN
1 Combinational effect of genes for	Osawa, N; Koya, D; Araki, S;	17143591	No data for REN
1 Different Mechanisms for the Progression	Nakayama, Y; Nonoguchi, H	19293592	No data for REN

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2	1	Distribution of ACE I/D Polymorphisms	Shaikh, R; Shahid, SM; Naw NA No data for REN
3	1	DNA polymorphisms in the ACE gene	Freire, MBS; van Dijk, DJ; Er 9794558 No data for REN
4	1	DNA repair genes XPD and XRCC1	p Radwan WM, Elbarbary HS, 25310768 No data for REN
5	1	Effect of ACE gene on diabetic nephropathy	Kuramoto, N; Iizuka, T; Ito, 10023638 No data for REN
6	1	Effect of IL-6 C-572G polymorphism	Chen SY, Chen CH, Huang Y 20954977 No data for REN
7	1	Effects of erythropoietin, angiotensin II	Glicklich, D; Kapoian, T; Miao 10428268 No data for REN
8	1	Effects of the genetic polymorphisms	Luther, Y; Bantis, C; Ivens, K 14610337 No data for REN
9	1	Endothelial nitric oxide synthase gene	Cherney, DZI; Scholey, JW; 19037250 No data for REN
10	1	Factors affecting progression of renal disease	Locatelli, F; Manzoni, C; Ma 9387138 No data for REN
11	1	Familial renal glucosuria: SLC5A2 mutation	Calado, J; Loeffler, J; Sakalli 16518345 No data for REN
12	1	GAS6 intron 8 c.834 + 7G > A gene polymorphism	Erkoc R, Cikrikcioglu MA, Ai 25869052 No data for REN
13	1	Gene polymorphisms of angiotensinogen	Su, SL; Lu, KC; Lin, YF; Hsu, 22147663 No data for REN
14	1	Gene-Gene Interactions in Renin-Angiotensin System	Su, SL; Yang, HY; Wu, CC; Le NA No data for REN
15	1	Genes involved in the regulation of renin-angiotensin system	Litovkina, O; Nekipelova, E; 24727057 No data for REN
16	1	Genetic Clues To The Etiology Of Renal Disease	Krcunovic, Z; Novakovic, I; 1 NA No data for REN
17	1	Genetic determination of TNF and its receptors	Buraczynska K, Koziol-Mont 15600254 No data for REN
18	1	Genetic polymorphisms of the renin-angiotensin system	Buraczynska, M; Ksiazek, P; 16384824 No data for REN
19	1	Genetic polymorphisms of the renin-angiotensin system	Huang, HD; Lin, FJ; Li, XJ; W 21163122 No data for REN
20	1	Genetic polymorphisms of the renin-angiotensin system	Buraczynska, M; Ksiazek, P; 16384824 No data for REN
21	1	Genetic variants of ACE (Insertion/Deletion)	Shaikh, R; Shahid, SM; Man 24737640 No data for REN
22	1	High prevalence of ACE DD genotype	Tripathi G, Dharmani P, Kha 17042963 No data for REN
23	1	Identification of Cathepsin L as a potential target	Bauer, Y; Hess, P; Qiu, CB; K 21357272 No data for REN
24	1	Impact of aldosterone synthase gene polymorphisms	Bantis C, Heering PJ, Siekier 21476902 No data for REN
25	1	Impact of interaction of cigarette smoking and angiotensin II	Yang HY, Lu KC, Fang WH, L 23477970 No data for REN
26	1	Impact of interferon-gamma and angiotensin II on endothelial nitric oxide synthase	Masutani, K; Miyake, K; Nal 12552499 No data for REN
27	1	Impact of nitric oxide synthase gene polymorphisms	El-Din Bessa SS, Hamdy SM. 21854353 No data for REN
28	1	Impact of Polymorphisms of the Renin-Angiotensin System	Jung, ES; Kim, SM; Cha, RH; 21150220 No data for REN
29	1	Increased frequency of angiotensin II receptor type 1 gene polymorphisms	Hsieh, MC; Lin, SR; Hsieh, T. 10862639 No data for REN
30	1	Influence of aldosterone synthase gene polymorphisms	Bantis, C; Heering, PJ; Stang 21777344 No data for REN
31	1	Influence of angiotensin converting enzyme gene polymorphisms	Ramanathan, G; Ghosh, S; E 27748299 No data for REN
32	1	Influence of cytokine gene polymorphisms	Bantis, C; Heering, PJ; Luthe 15308875 No data for REN
33	1	Influence of the endothelial nitric oxide synthase gene polymorphisms	Merta M, Reiterovaj J, Tesa 12212826 No data for REN
34	1	Interaction between gene polymorphisms and environmental factors	Stratta, P; Bermond, F; Gua 14767013 No data for REN
35	1	Interleukin 1 receptor antagonist gene polymorphisms	Shu KH, Cheng CH, Wu MJ, 15717635 No data for REN
36	1	Lack of association between the angiotensin II receptor type 1 gene polymorphisms	Arfa I, Abid A, Noura S, Ello 18404607 No data for REN
37	1	Lack of association between the angiotensin II receptor type 1 gene polymorphisms	Fujita H, Narita T, Meguro H 10586428 No data for REN
38	1	Lack of association between transmembrane protein 63 gene polymorphisms	Chen WC, Chen SY, Chen Ch 20540633 No data for REN
39	1	Lack Of Relationship Between Angiotensin II Receptor Type 1 Gene Polymorphisms	Tarnow, L; Cambien, F; Ros 7729604 No data for REN
40	1	Lack of synergism between long-term treatment with angiotensin II receptor antagonists	Tarnow, L; Kjeld, T; Knudsen 10907125 No data for REN
41	1	Manganese Superoxide Dismutase Gene Polymorphisms	Mohammedi, K; Bellili-Mun 24819633 No data for REN
42	1	Manganese superoxide dismutase, angiotensin II receptor type 1 gene polymorphisms	Kidir V, Uz E, Yigit A, Altun 26787049 No data for REN
43	1	Mthfr C677T, A1298C And Ace I/D Polymorphisms	El-Baz R, Settin A, Ismaeel A 22554825 No data for REN
44	1	Nodular glomerulosclerosis and angiotensin II receptor type 1 gene polymorphisms	Wang, M; Zhang, XX; Song, 26973293 No data for REN
45	1	Non-relation of parathyroid hormone-related protein gene polymorphisms	Chen JB, Chou FF, Hsu KT. 15083922 No data for REN
46	1	Platelet glycoprotein IIb/IIIa HPA-3 a/b gene polymorphisms	Wu JH, Zhang DW, Cheng X 22880801 No data for REN
47	1	Polymorphism of angiotensin converting enzyme gene	Frimat, L; Philippe, C; Magh 11053482 No data for REN
48	1	Polymorphism of renin-angiotensin system	Losito, A; Kalidas, K; Santon 12454231 No data for REN
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2	1 Polymorphism of renin-angiotensin Woo, KT; Lau, YK; Choong, I 15504143 No data for REN
3	1 Polymorphism of the angiotensin I- Hanyu O, Hanawa H, Nakag 9509566 No data for REN
4	1 Polymorphisms in NADPH oxidase (Zhou H, Chen M, Zhu Y, Wa 26627442 No data for REN
5	1 Polymorphisms in the gene encodir Frojdo, S; Sjolind, L; Parkko 16211375 No data for REN
6	1 Polymorphisms of the renin-angiot Sprovieri, SRS; Sens, YAS 15934435 No data for REN
7	1 Predicting the development of diab William, J; Hogan, D; Batlle, 15822056 No data for REN
8	1 Pronatriodilatin gene polymorphis Nannipieri, M; Penno, G; Pu 10405209 No data for REN
9	1 Relationship between angiotensino Wang J, Zhu X, Yang L, Liu Y 11717948 No data for REN
10	1 Relationship between GSTs gene p Agrawal S, Tripathi G, Khan 18067039 No data for REN
11	1 Renal clearance of endogenous ery Nowicki M, Kokot F, Kokot I 7759206 No data for REN
12	1 Renal perfusion and the renal hemc Lansang, MC; Hollenberg, N 12086929 No data for REN
13	1 Renin-aldosterone response, urinar Hanukoglu, A; Edelheit, O; S 18634878 No data for REN
14	1 Renin-angiotensin system compone Kawada, N; Moriyama, T; Y 1NA No data for REN
15	1 Renin-angiotensin system gene pol Lau YK, Woo KT, Choong HL 15153745 No data for REN
16	1 Renin-angiotensin-aldosterone syst Chen, WJ; Huang, YL; Shiue, 24907556 No data for REN
17	1 Role of ADDUCIN Gly460Trp, ACE I/ Sancakdar, E; Ates, K; Kama NA No data for REN
18	1 Role of the alpha-adducin genotype Nicod, J; Frey, BM; Frey, FJ; 11918733 No data for REN
19	1 Serological and genetic factors in e; Coppo, R; Amore, A; Chiesa 17988266 No data for REN
20	1 SIRTUIN 1 gene polymorphisms are Shimoyama Y, Mitsuda Y, T 22200427 No data for REN
21	1 Structural analysis of the 11 beta-h Zaehner, T; Plueshke, V; Fre 11012876 No data for REN
22	1 Study of the association of -667 aqt Kang SW, Kim YW, Kim YH, 17763164 No data for REN
23	1 Study on 3'-UTR length polymorphi Sui W, Zheng C, Yang M, Ou 26554293 No data for REN
24	1 Survival in type 2 diabetic patients i Padro-Miquel, A; Alia-Ramc 19014923 No data for REN
25	1 The DD genotype of the ACE gene ç Azar, ST; Zalloua, P; Medlej, 11428725 No data for REN
26	1 The DD genotype of the ACE gene ç Vleming, LJ; van der Pijl, JW 10099885 No data for REN
27	1 The effect of polymorphisms in the Mollsten, A; Kockum, I; Sve 18413189 No data for REN
28	1 The influence of G-protein beta3-sú ReiterovÁj J, Miroslav M, St 15287194 No data for REN
29	1 The influence of the endothelin-cor ReiterovÁj J, Merta M, Stek 16526315 No data for REN
30	1 The relationship between genetic a Shestakova, MV; Vikulova, 1NA No data for REN
31	1 The relationship between the TGF-I Li Y, Liu FY, Peng YM, Li J, St 20446778 No data for REN
32	1 The renin--angiotensin system gene Ong-Ajyooth S, Ong-Ajyootl 10511770 No data for REN
33	1 Toll-like receptor 9 SNPs are suscep Chen YT, Wei CC, Ng KL, Ch 23964786 No data for REN
34	1 U.K. Prospective Diabetes Study. X\ Dudley CR, Keavney B, Strat 8587251 No data for REN
35	1 Vitamin D binding protein and the r Speeckaert MM, Glorieux G 18721734 No data for REN
36	1 Vitamin D receptor genetic variants Tripathi G, Sharma R, Sharn 20722565 No data for REN
37	1 20-Hydroxyeicosatetraenoic Acid (I Savas, S; Wei, SZ; Hsu, MH; NA Non-human
38	1 Adenosine A(1) receptor-dependen Gao, X; Peleli, M; Zollbrecht 25251152 Non-human
39	1 Adrenomedullin gene expression di Caron, K; Hagaman, J; Nishi 17360661 Non-human
40	1 Altered regulation of renal interstit O'Tierney, PF; Komolova, M 18192845 Non-human
41	1 Alternative splicing of vitamin D-24 Ren S, Nguyen L, Wu S, Enci 15788398 Non-human
42	1 An essential role of angiotensin II r Hisada, Y; Sugaya, T; Tanaka 11555672 Non-human
43	1 Angiotensin converting enzyme (AC Shahid, SM; Fatima, SN; Ma 24035938 Non-human
44	1 Angiotensin II mesenteric and renal Broome, M; Aneman, A; Ha 11065204 Non-human
45	1 Angiotensin-converting enzyme inh Jonsson, JR; Clouston, AD; A 11438504 Non-human
46	1 Angiotensin-li Enhances Norepinep NOSHIRO, T; SHIMIZU, K; W NA Non-human
47	1 Antihypertensive Role of Tissue Kal Waeckel, L; Potier, L; Cholle 22669897 Non-human
48	1 Appropriate regulation of renin anc Catanzaro DF, Chen R, Yan ` 9931123 Non-human
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2	1	Blood pressure and renal hemodyn	Kumari, S; Sharma, N; Thak 27350671 Non-human
3	1	Blood pressure and renin-angiotens	Bohlender, J; Bader, M; Me 22728903 Non-human
4	1	Cardiac angiotensin-(1-12) expressi	Ferrario CM, VonCannon J, 26873967 Non-human
5	1	Cardiovascular dysfunction in Zucke	Marsh, SA; Powell, PC; Agar 17351065 Non-human
6	1	Chronic hypertension and altered b	Merrill, DC; Thompson, MW 8613528 Non-human
7	1	Collecting duct-specific knockout of	Gao, Y; Stuart, D; Pollock, J 27707708 Non-human
8	1	Compensatory up-regulation of an	Wang, Q; Hummler, E; Mail 11380824 Non-human
9	1	Control of renin secretion from kidr	Dong Y, Wang M, Nong L, V 25824806 Non-human
10	1	Cosegregation of spontaneously hy	Gao, Y; Stuart, D; Pollock, J 27707708 Non-human
11	1	Dendritic cell nuclear protein-1, a n	Zhou T, Wang S, Ren H, Qi 20693543 Non-human
12	1	Effect Of Angiotensin-Converting En	NOSHIRO, T; WAY, D; MCGI 1648463 Non-human
13	1	Effect Of Nitric-Oxide On Renin Sec	GREENBERG, SG; HE, XR; SC 7771523 Non-human
14	1	Effect of SWL on renal hemodynam	Yilmaz, E; Mert, C; Keskil, Z; 22945811 Non-human
15	1	Effect of the angiotensinogen geno	Handtrack, C; Cordasic, N; k 17333097 Non-human
16	1	Effects of plasma kallikrein deficien	Bird, JE; Smith, PL; Wang, X 22398951 Non-human
17	1	Elevated blood pressures in mice la	Shesely, EG; Maeda, N; Kim 8917564 Non-human
18	1	Endothelium-Dependent Relaxator	STEPHAN, D; BILLING, A; KR 8606521 Non-human
19	1	Functional genetic variation in amir	Tonna, S; Dandapani, SV; U 18206321 Non-human
20	1	Gene Trapping Uncovers Sex-Specif	Park, S; Liu, XB; Davis, DR; S 22547438 Non-human
21	1	Genetic analysis of the S-A and Na+	Lodwick, D; Zagato, L; Kaise 9535139 Non-human
22	1	GPR48 Increases Mineralocorticoid	Wang, J; Li, XY; Ke, YY; Lu, Y 22135314 Non-human
23	1	Hypertension in unilaterally nephre	Marley, WS; Bowen, R; Got 10567853 Non-human
24	1	Hypervolemia of pregnancy is not n	Morgan, TK; Rohrwasser, A 16796982 Non-human
25	1	Knockdown of parathyroid hormon	Raison, D; Coquard, C; Hocf 23720345 Non-human
26	1	Lack of an effect of collecting duct-	Kittikulsuth, W; Stuart, D; V 24431204 Non-human
27	1	Local Renal Circadian Clocks Contro	Tokonami, N; Mordasini, D; 24652800 Non-human
28	1	Low Blood Pressure in Endothelial	Kisanuki, YY; Emoto, N; Oh 20516397 Non-human
29	1	Metformin prevents the impairmer	Gomes, MB; Cailleaux, S; Ti 16133490 Non-human
30	1	Mice lacking endothelial ACE - Norr	Cole, JM; Khokhlova, N; Sut 12574101 Non-human
31	1	Mice with targeted disruption of th	Langaa, S; Bloksgaard, M; B 22237802 Non-human
32	1	N-domain angiotensin I-converting	Bueno, V; Palos, M; Ronchi, 15194348 Non-human
33	1	Nebivolol treatment improves resis	Wang, Y; Zhang, MS; Liu, Y 23263161 Non-human
34	1	Nephron-specific deletion of the pr	Ramkumar, N; Stuart, D; Ca 25995108 Non-human
35	1	Parallel regulation of renin and lyso	Schmid, J; Oelbe, M; Saftig, 23229015 Non-human
36	1	Physiological impact of increased e	Le, TH; Kim, HS; Allen, AM; 12963678 Non-human
37	1	Pituitary adenylate cyclase-activatir	Hautmann, M; Friis, UG; De 17360952 Non-human
38	1	Preserved macula densa-dependen	Schweda, F; Wagner, C; Kra 12475747 Non-human
39	1	Rat Ace allele variation determines	Kamilic, J; Hamming, I; Lely, 21788250 Non-human
40	1	Reciprocal expression of connexin 4	Kurt, B; Kurtz, L; Sequeira-L 21209011 Non-human
41	1	Regulation of renin secretion and e	Kim, SM; Chen, LM; Faulhak 17515456 Non-human
42	1	Renal cyst growth is the main deter	Fonseca, JM; Bastos, AP; Ar 24429399 Non-human
43	1	Replacement of connexin 40 by cor	Kurtz, L; Gerl, M; Kriz, W; V 19474190 Non-human
44	1	Role of angiotensin-converting enz	Yang, XH; Wang, YH; Wang, 22580272 Non-human
45	1	Role of blood pressure and the reni	Zhang, MZ; Wang, SW; Yan 22114203 Non-human
46	1	Role of cGMP-kinase II in the contr	Wagner, C; Pfeifer, A; Ruth, 9788971 Non-human
47	1	Role of neutral endopeptidase 24.1	Wegner, M; HirthDietrich, C 8759244 Non-human
48	1	Stimulation of renin release by pro	Schweda, F; Klar, J; Narumi 15113745 Non-human
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2	1	Stimulation of renin secretion by ni Kurtz, A; Gotz, KH; Hamann	9539809 Non-human
3	1	Stimulation of renin secretion by Ni Kurtz, A; Gotz, KH; Hamann	9575895 Non-human
4	1	The angiotensin II receptor blocker Laesser, M; Oi, Y; Ewert, S;	14995942 Non-human
5	1	The angiotensin type II receptor tor Hunley, TE; Tamura, M; Sto	10652034 Non-human
6	1	The elevated blood pressure of hun Wang, Z; Armando, I; Asico,	17259440 Non-human
7	1	The genetic deletion of Mas abolish Heringer-Walther, S; Gemb	22652430 Non-human
8	1	Thyroid hormones stimulate renal € Pinto, ACOD; Barbosa, CML NA	Non-human
9	1	Transfer of a salt-resistant renin all Jiang, J; Stec, DE; Drummor	9040448 Non-human
10	1	Vascular and renal effects of vasopri Cheng, ZJ; Gronholm, T; Lot	16093923 Non-human
11	1	Vascular angiotensin-converting en Muller, DN; Bohlender, J; H	9039087 Non-human
12	1	A female with X-linked Alport syndr Mohammad, M; Nanra, R; C	24337245 Not a case-control stuc
13	1	A Genetic Variant in the Distal Enhã Makino, Y; Konoshita, T; On	26366736 Not a case-control stuc
14	1	A Synergistic Association of ACE I/D Rodriguez-Perez, JC; Macia:	19546528 Not a case-control stuc
15	1	ACE gene polymorphism in focal se; Kuzmanic, D; Jelakovic, B; BNA	Not a case-control stuc
16	1	Alport Syndrome in Women and Gi Savige, J; Colville, D; Rheaul	27287265 Not a case-control stuc
17	1	Angiotensin converting enzyme ger Miller, JA; Scholey, JW; Tha	8995725 Not a case-control stuc
18	1	Angiotensin-converting enzyme ger Beige, J; Scherer, S; Weber,	9259361 Not a case-control stuc
19	1	Angiotensin-converting enzyme ger Akcay, A; Ozdemir, FN; Atac	15013293 Not a case-control stuc
20	1	Angiotensin-converting-enzyme ins Beige, J; Offermann, G; Dist	9550656 Not a case-control stuc
21	1	Angiotensinogen concentrations an Bohlender J, MÃ©nard J, G	10720595 Not a case-control stuc
22	1	Angiotensinogen gene variation an Narita, I; Goto, S; Saito, N; S	12911556 Not a case-control stuc
23	1	Antihypertensive treatment modul; Kuznetsova, T; Staessen, JA	10918550 Not a case-control stuc
24	1	Assessing genetic susceptibility to c Tanaka, N; Babazono, T	16174281 Not a case-control stuc
25	1	Association between Angiotensin I- Huang, ZK; Wu, B; Tao, J; H;	26000752 Not a case-control stuc
26	1	Association between two genetic p Ding, W; Wang, FR; Fang, Q	21607620 Not a case-control stuc
27	1	Association of angiotensinogen gen Pei, Y; Scholey, J; Thai, K; Su	9259580 Not a case-control stuc
28	1	Association of the genetic polymor; Akcay, A; Sezer, S; Ozdemir,	15385810 Not a case-control stuc
29	1	Bilateral high origins of testicular ar Geller, DS; Zhang, JH; Zennã	16611713 Not a case-control stuc
30	1	Catalase activity, allelic variations ir Mohammadi, K; Patente, T;	24057136 Not a case-control stuc
31	1	Contribution of gene polymorphisr Anguiano, L; Riera, M; Pasc	25813276 Not a case-control stuc
32	1	Correlates of ACE activity in macroã Amorim, CEN; Nogueira, E;	23362199 Not a case-control stuc
33	1	Deletion insertion polymorphism of Bjorck, S; Blohme, G; Sylver	9269704 Not a case-control stuc
34	1	Diabetes, nephropathy, and the rer Hollenberg, NK	16601578 Not a case-control stuc
35	1	Diagnosis of a case of Gitelman's sy Kageyama, K; Terui, K; Shoj	16370563 Not a case-control stuc
36	1	Disorders of mineralocorticoid synt Connell, JMC; Fraser, R; Dav	11469810 Not a case-control stuc
37	1	Epidemiology and genetics of calcif O'Brien, KD	17963677 Not a case-control stuc
38	1	Expert Guidelines for the Manager Savige, J; Gregory, M; Gross	23349312 Not a case-control stuc
39	1	Frequencies of apolipoprotein E all; Su YY, Zhang YF, Yang S, Wa	25707516 Not a case-control stuc
40	1	Gene Polymorphisms of the Renin-; Zhang, G; Wang, H; Wang, I	17984617 Not a case-control stuc
41	1	Genetic determinants of diabetic re Schmidt, S; Ritz, E	NA Not a case-control stuc
42	1	Genetic polymorphisms of renin-an BuraczyÅ„ska M, Grzebalsk	12898858 Not a case-control stuc
43	1	Genetics and the prediction of com Marre, M	10097900 Not a case-control stuc
44	1	Genetics of diabetic nephropathy Rippin, JD; Patel, A; Bain, SC	11554775 Not a case-control stuc
45	1	Genome-Wide Association Analysis Musani, SK; Fox, ER; Kraja, ;	25561047 Not a case-control stuc
46	1	Identification of a novel mutation ir Riepe, FG; Krone, N; Morlot	12679457 Not a case-control stuc
47	1	Impact of genetic polymorphisms o Siekierka-Harreis, M; Kuhr,	19681973 Not a case-control stuc
48	1	Impact of polymorphisms in the rer Orenes-Pinero, E; Hernand	21507890 Not a case-control stuc
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2	1	Increased left ventricular mass in n	Sato, A; Tarnow, L; Parving, 9727905 Not a case-control stuc
3	1	Influence of cytokine gene polymor	Bantis C, Heering P, Aker S, 18300111 Not a case-control stuc
4	1	Influence of genetic polymorphism:	Bantis, C; Ivens, K; Kreusser 15031629 Not a case-control stuc
5	1	Is there a role of angiotensin-conve	Isbir, CS; Akgun, S; Yilmaz, F 11525534 Not a case-control stuc
6	1	Juxtaglomerular cell tumor of the k	Endoh, Y; Motoyama, T; Ha 9211527 Not a case-control stuc
7	1	Normative genetic profiles of RAAS	Prasad, P; Thelma, BK 18027817 Not a case-control stuc
8	1	Novel mutations in the inverted for	Xie J, Hao X, Azeloglu EU, R 26039629 Not a case-control stuc
9	1	Prognostic role of serum ACE activi	Wong, TYH; Szeto, CC; Chov 11979350 Not a case-control stuc
10	1	Randomized Controlled Trial: Lisino	Amara, AB; Sharma, A; Alex 20061926 Not a case-control stuc
11	1	Rapid detection and quantification	Zhou H, Hoek M, Yi P, Rohr 24591025 Not a case-control stuc
12	1	Relationships between HLA-A, -B, -I	Ozdemir BH, Izdemir FN, Cc 15354972 Not a case-control stuc
13	1	Renal angiomyolipoma - Further im	Stone, CH; Lee, MW; Amin, 11371226 Not a case-control stuc
14	1	Renal Tubular Dysgenesis in Israel:	Moldavsky, M 19344005 Not a case-control stuc
15	1	Renin-angiotensin system gene pol	Parsa, A; Lovett, DH; Peden 15789057 Not a case-control stuc
16	1	Renoprotective efficacy of renin-an	Narita, I; Goto, S; Saito, N; S 14684698 Not a case-control stuc
17	1	Rho kinase polymorphism influence	Seasholtz, TM; Wessel, J; R 16585408 Not a case-control stuc
18	1	Risk of developing diabetic nephro	Savage, DA; Feeney, SA; Fo 10328465 Not a case-control stuc
19	1	Role Of The Deletion Polymorphisr	YOSHIDA, H; MITARAI, T; K/ 7593601 Not a case-control stuc
20	1	Successful treatment of decompens	Csatary, LK; Schnabel, R; Ba 10216467 Not a case-control stuc
21	1	The deletion/insertion polymorphis	Staessen, JA; Wang, JG; Gin 9488209 Not a case-control stuc
22	1	The effects of angiotensin-converti	Draman, CR; Kong, NCT; Ga 19037561 Not a case-control stuc
23	1	The Epithelial Sodium Channel gam	Busst, CJ; Bloomer, LDS; Sci 22006290 Not a case-control stuc
24	1	The kidney in diabetes: How to con	Mogensen, CE 11158852 Not a case-control stuc
25	1	The role of renin-angiotensin-aldos	Kelly TN, Raj D, Rahman M, 25906781 Not a case-control stuc
26	1	Tip lesion variant of primary focal a	Mungan S, Turkmen E, Aydi 25857429 Not a case-control stuc
27	1	Tip variant of focal segmental glom	Trivedi M, Pasari A, Chowdl 25721429 Not a case-control stuc
28	1	Twenty-one additional cases of farr	Calado, J; Sznajer, Y; Metzg 18622023 Not a case-control stuc
29	1	[Possible pathogenetic role of 11 b	Morales MA, Carvajal CA, O 18769825 Not a renal disease foc
30	1	A clinical phenotype mimicking ess	Rossi E, Farnetti E, Nicoli D, 21525970 Not a renal disease foc
31	1	A Computational Model of the Circ	Guillaud, F; Hannaert, P 20683640 Not a renal disease foc
32	1	A functional variant of the NEDD4L	Svensson-FÅrnbom P, Wahl 21052022 Not a renal disease foc
33	1	A new mutation, R563Q, of the bet	Rayner, BL; Owen, EP; King, 12714866 Not a renal disease foc
34	1	A new theory of essential hyperten	Eggers, AE 26243176 Not a renal disease foc
35	1	A role for CETP TaqIB polymorphisn	Asselbergs, FW; Moore, JH; 16623947 Not a renal disease foc
36	1	ACE and PC-1 gene polymorphisms	de Azevedo, MJ; Dalmaz, C/ 12126783 Not a renal disease foc
37	1	ACE gene insertion/deletion polym	Lee, YJ; Tsai, JCR 12032106 Not a renal disease foc
38	1	Activation of the hypothalamic-pitu	Walker BR, Andrew R, Escor 24712576 Not a renal disease foc
39	1	ADAM33: a newly identified gene ir	Holgate ST, Davies DE, Pow 16257631 Not a renal disease foc
40	1	Adsorption of cytotoxic anti-HLA ar	DeVito LD, Sollinger HW, Bl 2186524 Not a renal disease foc
41	1	Albuminuria and the renin-angioter	Thomas, GN; Critchley, JAJ/ 11200871 Not a renal disease foc
42	1	Alpha Adducin G460T Variant is a R	Soualmia, H; Ben Romdhan 27349000 Not a renal disease foc
43	1	Alpha-adducin polymorphism in hy	Barlassina C, Norton GR, Sa 10912759 Not a renal disease foc
44	1	alpha-Adducin polymorphisms and	Manunta, P; Cusi, D; Barlas 9607177 Not a renal disease foc
45	1	Amelioration of genetic hypertensi	Sanada, H; Yatabe, J; Midor 16636192 Not a renal disease foc
46	1	Amiloride, a specific drug for hyper	Baker EH, Duggal A, Dong Y 12105131 Not a renal disease foc
47	1	Androgen-Sensitive Hypertension	A Wu, CC; Mei, SJ; Cheng, J; C 23641057 Not a renal disease foc
48	1	Angiotensin converting enzyme ger	Fernandez-Llama, P; Poch, I 9607207 Not a renal disease foc
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2	1	Angiotensin II sensitivity in nonpregnancy	Spaanderman, MEA; Ekhardt 15350256 Not a renal disease foc
3	1	Angiotensin II type 1 receptor gene	Miller, JA; Thai, K; Scholey, 10969844 Not a renal disease foc
4	1	Angiotensin II Type 1A Receptors in	Sparks, MA; Parsons, KK; St 21242463 Not a renal disease foc
5	1	Angiotensin II type 2 receptor gene	Yoneda, A; Cascio, S; Green 12187255 Not a renal disease foc
6	1	Angiotensin II-dependent chronic	hypertension Touyz, RM; Mercure, C; He, 15753233 Not a renal disease foc
7	1	Angiotensin-converting enzyme (ACE)	Mansoor Q, Javaid A, Bilal M 22607040 Not a renal disease foc
8	1	Angiotensin-converting enzyme gene	Wipff J, Gallier G, Dieude P, 19132786 Not a renal disease foc
9	1	Angiotensin-converting enzyme gene	Stefansson, B; Ricksten, A; I 10855732 Not a renal disease foc
10	1	Angiotensin-converting enzyme gene	Singh M, Singh AK, Singh S, 27030424 Not a renal disease foc
11	1	Angiotensin-converting enzyme gene	Uhm, WS; Lee, HS; Chung, Y 12043886 Not a renal disease foc
12	1	ANGIOTENSIN-CONVERTING ENZYME	LACHURIE, ML; AZIZI, M; GU 7796503 Not a renal disease foc
13	1	Angiotensin-converting enzyme gene	Prkacin I, Novak B, SertiÅk J 11505631 Not a renal disease foc
14	1	Angiotensinogen and angiotensin II	Lee, KB; Kim, UK 12950120 Not a renal disease foc
15	1	Angiotensinogen genotype affects	hypertension Hopkins, PN; Hunt, SC; Jeur 11997278 Not a renal disease foc
16	1	Angiotensinogen T235 and ACE	inhibitors Young, RP; Chan, JCN; Critcl 9540028 Not a renal disease foc
17	1	Apparent mineralocorticoid excess:	Mantero, F; Palermo, M; Pe 8732999 Not a renal disease foc
18	1	Association between plasma activity	Boomsma F, Pedersen-Bjerg 15830186 Not a renal disease foc
19	1	Association Between Polymorphism	Li, Y; Li, NF; Yao, XG; Heizat 27555048 Not a renal disease foc
20	1	Association between polymorphism	Sprovieri, SRS; Sens, YA; Ma 16047641 Not a renal disease foc
21	1	Association between RAS gene poly	Nalbantoglu, S; Tabel, Y; Mi 23151617 Not a renal disease foc
22	1	Association between renin-angiotensi	Song SB, Jin HS, Hong KW, L 21342026 Not a renal disease foc
23	1	Association of ACE gene D polymor	Bahramali, E; Rajabi, M; Jan 26861937 Not a renal disease foc
24	1	Association of angiotensin-converti	Zhou, J; Zheng, SC; Wang, Z 26823847 Not a renal disease foc
25	1	Association of angiotensinogen M2	RodrÃ-guez-PÃ©rez JC, Roc 11345362 Not a renal disease foc
26	1	Association of hypertension with	TGF-β Baker, EH; Dong, YB; Sagnel 9593408 Not a renal disease foc
27	1	Association of Polymorphisms in	Endothelin Mokretar, K; Velinov, H; Po 26670794 Not a renal disease foc
28	1	Association of renin-angiotensin an	Conen D, Glynn RJ, Buring J 18698212 Not a renal disease foc
29	1	Associations between the human ir	Frossard PM, Parvez SH, Le 14647005 Not a renal disease foc
30	1	Atrial Natriuretic Peptide Locally	Controlled Nakagawa, H; Oberwinkler, 25027872 Not a renal disease foc
31	1	Beneficial role of D allele in control	Kumari, S; Sharma, N; Thak 27350671 Not a renal disease foc
32	1	Biochemical and genetic characteri	Osdemir O, Kayatas M, Ceti 25394530 Not a renal disease foc
33	1	Blunted renal vascular response to	hypertension Hopkins, PN; Lifton, RP; Hol 8728297 Not a renal disease foc
34	1	CARD8 rs2043211 polymorphism is	associated Chen Y, Ren X, Li C, Xing S, F 25790751 Not a renal disease foc
35	1	Cardiovascular effects of aldosteron	receptor Escoubet B, Couffignal C, La 23852419 Not a renal disease foc
36	1	Clinical and laboratory characteriza	Dong Y, Wang M, Nong L, W 25824806 Not a renal disease foc
37	1	Common genetic variants and haplo	type Barlassina, C; Dal Fiume, C; 17510212 Not a renal disease foc
38	1	Common genetic variants in the chi	mosome Yu L, Jiang L, Zhou XJ, Zhu L 20113265 Not a renal disease foc
39	1	Common variation in KLKB1 and es	trogen Lu, XF; Zhao, WY; Huang, JF 17318641 Not a renal disease foc
40	1	Comprehensive analysis of the reni	ngin Kato, N; Sugiyama, T; Morit 10953993 Not a renal disease foc
41	1	Connexin 40 is dispensable for vasc	ular remodeling Machura, K; Neubauer, B; M 25241776 Not a renal disease foc
42	1	Connexin 43 is not essential for the	vascular remodeling Gerl, M; Kurt, B; Kurtz, A; W 24062052 Not a renal disease foc
43	1	Contribution of angiotensin I conve	rsion Mondorf UF, Russ A, Wiese 9524045 Not a renal disease foc
44	1	CYP2C9 genotype modifies activity	Osawa, N; Koya, D; Araki, S; 17143591 Not a renal disease foc
45	1	CYP3A5 and ABCB1 genes and hype	rtension Bochud, M; Bovet, P; Burnie 19290795 Not a renal disease foc
46	1	CYP3A5 genotype is associated with	hypertension Fromm MF, Schmidt BM, Pa 16141800 Not a renal disease foc
47	1	Deletion polymorphism of the angi	otensin Gharavi AG, Lipkowitz MS, I 8677872 Not a renal disease foc
48	1	Detection of the association betwe	n Matsumoto, A; Iwashima, Y 11106834 Not a renal disease foc
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2	1	Effect of the plasminogen-plasmin	Knier, B; Cordasic, N; Klank	21610512 Not a renal disease foc
3	1	Efficacy of large doses of IL-2-activa	Cao S, Wang YL, Ren XB, Yu	21812652 Not a renal disease foc
4	1	Endothelial nitric oxide synthase ge	Page, A; Reich, H; Zhou, J; L	16093452 Not a renal disease foc
5	1	Evaluation of risk factors for the de	Barnas, U; Schmidt, A; Illiev	9084972 Not a renal disease foc
6	1	Evaluation Of The Sa Locus In Hum	Nabika, T; Bonnardeaux, A;	7843754 Not a renal disease foc
7	1	Exaggerated natriuresis during clar	Simonsen, JA; Rasmussen, I	21749320 Not a renal disease foc
8	1	Extensive personal experience - Ex	Dave-Sharma, S; Wilson, RC	9661590 Not a renal disease foc
9	1	Frequencies Of Variants Of Candida	Zee, Ryl; Bennett, Cl; Schrac	7882587 Not a renal disease foc
10	1	Gene polymorphism of vascular en	Yang, JW; Hutchinson, IV; S	21080079 Not a renal disease foc
11	1	Genetic polymorphism of Na-K cotr	Cusi D, Stella P, Pozzoli E, B	2258861 Not a renal disease foc
12	1	Genetic polymorphisms of the renin	Oliveri, O; Trabetti, E; Graz	10567188 Not a renal disease foc
13	1	Genetic polymorphisms of the renin	Fabris, B; Bortoletto, M; Cal	15662219 Not a renal disease foc
14	1	Genetic risk of atherosclerotic rena	van Onna, M; Kroon, AA; Ho	15326089 Not a renal disease foc
15	1	Genetic variant of the renin-angiot	Ichikawa, M; Konoshita, T; I	24549414 Not a renal disease foc
16	1	Genetic variants in five novel loci in	Jiang DK, Ma XP, Yu H, Cao	25802187 Not a renal disease foc
17	1	Genetic variants in hypertensive pa	Szperl, M; Dzielinska, Z; Ros	19043368 Not a renal disease foc
18	1	Genetic variants in the inositol pho	Tan J, Yu CY, Wang ZH, Che	25683757 Not a renal disease foc
19	1	Genetic variation in the KCNMA1 p	Tomas, M; Vazquez, E; Fern	18854754 Not a renal disease foc
20	1	Genetic variation of the renin-angic	Hsu, CCC; Bray, MS; Kao, W	16396964 Not a renal disease foc
21	1	Genetic-Control Of Blood-Pressure	Kim, Hs; Krege, Jh; Kluckma	7708716 Not a renal disease foc
22	1	Genomic association analysis identi	Turner ST, Bailey KR, Schwa	22566498 Not a renal disease foc
23	1	Genotype-phenotype analysis of an	Watkins, WS; Hunt, SC; Will	19770777 Not a renal disease foc
24	1	Genotypic interactions of renin-ang	Mehri, S; Koubaa, N; Hamr	20580725 Not a renal disease foc
25	1	Haplotype-based case-control stud	Kobayashi, Y; Nakayama, T;	16097366 Not a renal disease foc
26	1	High aldosterone-to-renin variants	Escher G, Cristiano M, Caus	19151144 Not a renal disease foc
27	1	Higher thrombin activatable fibrino	Bavbek N, Ceri M, Akdeniz I	24580410 Not a renal disease foc
28	1	Identification of diuretic non-respo	Yang, YY; Lin, HC; Lin, MW;	21692745 Not a renal disease foc
29	1	Impact of maternal angiotensinoge	Pfab T, Stirnberg B, Sohn A,	17563539 Not a renal disease foc
30	1	Incidence of renal failure and neph	Temme J, Peters F, Lange K,	22237748 Not a renal disease foc
31	1	Inefficient arterial hypertension cor	Morales-Suarez-Varela, MM	21471972 Not a renal disease foc
32	1	Inhibition of tissue angiotensin con	Montgomery HE, Kiernan L	9797175 Not a renal disease foc
33	1	Insertion-deletion polymorphism in	Bayoumi, RA; Simsek, M; Ya	16900885 Not a renal disease foc
34	1	Is angiotensin-converting enzyme ir	Mao, YQ; Xu, X; Wang, X; Zh	26760503 Not a renal disease foc
35	1	Is the influence of variation in the A	Muthumala, A; Gable, DR; F	17624939 Not a renal disease foc
36	1	Juxtaglomerular cell tumor: A morp	Kuroda, N; Maris, S; Monzo	22939575 Not a renal disease foc
37	1	Liver pyruvate kinase polymorphisn	Wang H, Chu W, Das SK, Re	12196482 Not a renal disease foc
38	1	Long-term follow-up of patients wit	Puricelli E, Bettinelli A, Bors	20219833 Not a renal disease foc
39	1	Low-salt diet and diuretic effect on	Manunta, P; Bianchi, G	14684671 Not a renal disease foc
40	1	Lys(173)Arg and -344T/C variants o	Komiya I, Yamada T, Takara	10720581 Not a renal disease foc
41	1	Malignant Nephrosclerosis in a Pati	Yamanouchi, M; Ubara, Y; I	26466703 Not a renal disease foc
42	1	Mechanisms of suppression of rena	Shimamoto K, Masuda A, A	2676859 Not a renal disease foc
43	1	Melatonin prevents maternal fruct	Tain, YL; Leu, S; Wu, KLH; Le	24867192 Not a renal disease foc
44	1	Middle cerebral artery stenosis in t	Thomas, GN; Lin, JW; Lam, '	12865608 Not a renal disease foc
45	1	miR149 rs71428439 polymorphism	Wang Z, Wei M, Ren Y, Liu	25213695 Not a renal disease foc
46	1	Molecular genetics of the renin-an	Corvol, P; Soubrier, F; Jeun	9296068 Not a renal disease foc
47	1	Molecular variants of the sodium/h	Zhu, HD; Sagnella, GA; Don	15201541 Not a renal disease foc
48	1	Molecular-Biology Of Hypertension	Krieger, Je; Dzau, Vj	NA Not a renal disease foc
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2	1	Natriuretic peptides buffer renin-angiotensin system	Demerath, T; Staffel, J; Schröter	24717731	Not a renal disease focus
3	1	No Evidence for the Expression of Renin in the Kidney	Liktor, B; Csomor, P; Szasz, Z	23370555	Not a renal disease focus
4	1	Nonmodulation and essential hypertension in the elderly	Hollenberg, NK; Williams, G	16672145	Not a renal disease focus
5	1	Novel SLC12A3 mutations in Chinese hypertensive patients	Shao L, Ren H, Wang W, Zhang H	18287808	Not a renal disease focus
6	1	Oxidative stress-related factors in essential hypertension	Calzavara LA, Pagnin E, Davis PA	12897089	Not a renal disease focus
7	1	Papillary renal cell carcinoma: a clinicopathological study	Liu K, Ren Y, Pang L, Qi Y, Ji H	26339402	Not a renal disease focus
8	1	Peripheral vascular disease in type 2 diabetes mellitus	Thomas, GN; Critchley, JAJ	14632699	Not a renal disease focus
9	1	Pharmacogenetic association of the renin-angiotensin system	Arnett, DK; Davis, BR; Ford, AS	15967849	Not a renal disease focus
10	1	Phenotype-genotype interactions of the renin-angiotensin system	Song, XY; Lee, SY; Ma, RCW	19479237	Not a renal disease focus
11	1	Polymorphism in angiotensin II receptor type 1	Baudin, B	15640279	Not a renal disease focus
12	1	Polymorphism of the aldosterone synthase gene	Ko, GJ; Kang, YS; Lee, MH; Song Y	18771471	Not a renal disease focus
13	1	Polymorphisms in genes of the renin-angiotensin system	Deckers, IA; van den Brandt PA	24978482	Not a renal disease focus
14	1	Polymorphisms of the renin-angiotensin system	Bofinger, A; Hawley, C; Fishbane	11317203	Not a renal disease focus
15	1	Possible role for nephron-derived angiotensin II	Ramkumar, N; Stuart, D; Calzavara	NA	Not a renal disease focus
16	1	Prevalence of angiotensin converting enzyme gene polymorphisms	Shanmuganathan R, Kumar	26440392	Not a renal disease focus
17	1	Randomised controlled trial of dual renin-angiotensin system inhibition	Mogensen, CE; Neldam, S; Vague	11110735	Not a renal disease focus
18	1	Recurrence of the R947X mutation in the renin-angiotensin system	Fernandes-Rosa FL, de Castro	16757525	Not a renal disease focus
19	1	Renal ACE immunohistochemical localization in essential hypertension	Mizuiiri, S; Yoshikawa, H; Takahashi	9469501	Not a renal disease focus
20	1	Renal genetic mechanisms of essential hypertension	Manunta, P; Cerutti, R; Bertoni	9377722	Not a renal disease focus
21	1	Renal haemodynamics are not related to renin-angiotensin system	Skov, K; Madsen, JK; Hansson	17083073	Not a renal disease focus
22	1	Renal Mechanisms of Association between Renin-Angiotensin System	Tomaszewski, M; Eales, J; D'Amico	25918036	Not a renal disease focus
23	1	Renal redox-sensitive signaling, but not renin-angiotensin system	Yogi, A; Mercure, C; Touyz, RJ	18195161	Not a renal disease focus
24	1	Renin in blood vessels in human hypertension	Taylor GM, Cook HT, Sheffer AL	2450464	Not a renal disease focus
25	1	Renin Production in Congenital Nephropathy	TSUCHIDA, Y; SHIMIZU, K; FUKUDA	8385325	Not a renal disease focus
26	1	Renin-angiotensin system gene polymorphisms in essential hypertension	Buraczyńska M, Pijanowski	14502296	Not a renal disease focus
27	1	Renin-Angiotensin System Gene Polymorphisms in Essential Hypertension	Joyce-Tan, SM; Zain, SM; Srinivasan	NA	Not a renal disease focus
28	1	Renin-Angiotensin System Polymorphisms in Essential Hypertension	Forman, JP; Fisher, NDL; Pollock	18550936	Not a renal disease focus
29	1	Risk given by AGT polymorphisms in essential hypertension	Li, Q; Sun, LJ; Du, J; Ran, PZ; Wang	26391364	Not a renal disease focus
30	1	Role of ACE inhibitors in patients with essential hypertension	Cordonnier, DJ; Zaoui, P; Haddad	11708761	Not a renal disease focus
31	1	Role of GRK4 in the Regulation of Angiotensin II Receptor Type 1	Chen, K; Fu, CJ; Chen, CY; Li, H	24218433	Not a renal disease focus
32	1	Serum paraoxonase-1 gene polymorphisms in essential hypertension	Atar A, Gedikbasi A, Sonmez	26795139	Not a renal disease focus
33	1	Single Strand Conformation Polymorphism Analysis of Renin-Angiotensin System	Bettinaglio, P; Galbusera, A	12270765	Not a renal disease focus
34	1	Synergistic effect of alpha-adducin polymorphisms on essential hypertension	Barlassina, C; Schork, NJ; Menni	10720960	Not a renal disease focus
35	1	Systemic nitric oxide clamping in essential hypertension	Simonsen, JA; Rasmussen, I	19785629	Not a renal disease focus
36	1	TGF-beta1 gene polymorphisms and essential hypertension	Ebin FA, Derici U, Gökçe	18197538	Not a renal disease focus
37	1	The alpha-adducin Gly460Trp polymorphism in essential hypertension	Pescatello LS, Blanchard BE	17472579	Not a renal disease focus
38	1	The association between vitamin D polymorphisms and essential hypertension	Maia, J; da Silva, AS; do Carmo	27536155	Not a renal disease focus
39	1	The association of the R563Q genotype with essential hypertension	Jones ES, Owen EP, Rayner	22895453	Not a renal disease focus
40	1	The brain and salt-sensitive hypertension	Leenen, FHH; Ruzicka, M; Hildebrandt	11884268	Not a renal disease focus
41	1	The cardiovascular system in families with essential hypertension	Jakobsen, NFB; Laugesen, E	NA	Not a renal disease focus
42	1	The Connexin40 A96S Mutation Causes Essential Hypertension	Lubkemeier, I; Machura, K; Gellera	21597036	Not a renal disease focus
43	1	The interaction of AGT and NOS3 gene polymorphisms in essential hypertension	Gatti, RR; Santos, PS; Sena, A	22791701	Not a renal disease focus
44	1	The M235T polymorphism in the renin-angiotensin system	van den Born, BJH; van Meurs	17921816	Not a renal disease focus
45	1	The presence of PAI-1 4G/5G and A235G polymorphisms in essential hypertension	Y, Kayata M, `	21332339	Not a renal disease focus
46	1	The state and responsiveness of the renin-angiotensin system	Price, DA; De'Oliveira, JMF; de	10232494	Not a renal disease focus
47	1	Transforming growth factor-beta(1) gene polymorphisms in essential hypertension	Suthanthiran, M; Li, BG; Sorci	10725360	Not a renal disease focus
48	1	Trientine and renin-angiotensin system inhibition in essential hypertension	Moya-Olano L, Milne HM, R	22029676	Not a renal disease focus
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2	1	Unclassified renal cell carcinoma: a Hu	ZY, Pang LJ, Qi Y, Kang X	25120763 Not a renal disease foc
3	1	Urinary UMOD excretion and chron	Wu CH, Lee CT, Lee CH, Che	21332338 Not a renal disease foc
4	1	Vitamin D Deficiency in the Pathog	Rostand, SG	24929953 Not a renal disease foc
5	1	Vitamin D receptor gene polymorpl	Cottone S, Guarino L, Arsen	25500899 Not a renal disease foc
6	1	Wilms' tumor protein (-KTS) modul	Steege, A; Fahling, M; Palie	18496514 Not a renal disease foc
7	1	[A novel COL4A5 splicing mutation	Tang Z, Dai Y, Wan Z, Zhan	19065523 Not English or Spanish
8	1	[Angiotensin-converting enzyme ins	Krajina-AndriceviÄ† M, Ziba	23120809 Not English or Spanish
9	1	[Angiotensin-converting enzyme ge	Guan T, Liu Z, Chen Z.	10436947 Not English or Spanish
10	1	[Arterial hypertension and chronic	Ermolenko VM, Lifshits NL,	7700 Not English or Spanish
11	1	[Association of single nucleotide po	Wang ZH, Chen N, Pan XX, F	16796905 Not English or Spanish
12	1	[Association of the renin-angiotens	BuraczyÅ„ska M, Ksiazek P,	12476891 Not English or Spanish
13	1	[Correlation between HLA-DQA1 all	Ren S, Tong L, Xilin G, Sui J,	11836690 Not English or Spanish
14	1	[Correlation of cyclin D1 overexpre	Ren YY, Du LJ, Feng ZQ, Len	16480581 Not English or Spanish
15	1	[Gene mutation analysis of X-linked	Song Y, Ma HW, Li F, Hu M,	24229582 Not English or Spanish
16	1	[Genetic predisposition to systemic	Bzoma B, Debska-SlizieÅ„ A	19112833 Not English or Spanish
17	1	[Is PstI polymorphism of the angiot	Grzeszczak W, Zychma M, Z	9499204 Not English or Spanish
18	1	[Morphofunctional characteristics	Sokolova RI, Bobusheva GS,	2678677 Not English or Spanish
19	1	[Mutations in NPHS2 in familial ste	Fu R, Chen XM, Wang QH, C	19099831 Not English or Spanish
20	1	[Relationship between I/D polymor	Moleda P, Majkowska L, Sa	17941464 Not English or Spanish
21	1	[Renin-angiotensin system genes in	BuraczyÅ„ska M, JÅ³Å³owiak	11865575 Not English or Spanish
22	1	[Study on the association between	Yang HY, Tai WL, Yuan HY, >	15192842 Not English or Spanish
23	1	Genomics of type 1 diabetes mellit	Nosikov, VV	NA Not English or Spanish
24	1	A rare case of juvenile hypertensio	Paragliola, RM; Capoluongc	26084817 Paediatric individuals
25	1	ACE and AT1 receptor gene polymo	Kostic, M; Stankovic, A; Zivk	15179569 Paediatric individuals
26	1	ACE gene insertion/deletion polym	Serdaroglu, E; Mir, S; Berde	16208534 Paediatric individuals
27	1	ACE gene polymorphism and renal	Haszon, I; Friedman, AL; Pa	12478352 Paediatric individuals
28	1	ACE gene polymorphism in Egyptian	Fahmy, ME; Fattouh, AM; H	18792483 Paediatric individuals
29	1	ACE gene polymorphism in Turkish	Celik US, Noyan A, Bayazit /	16825089 Paediatric individuals
30	1	ACE I/D gene polymorphism in prim	Oktem, F; Sirin, A; Bilge, I; E	14986085 Paediatric individuals
31	1	An insertion/deletion ACE polymor	Kaczmarczyk, M; Loniewska	22674971 Paediatric individuals
32	1	Angiotensin converting enzyme ger	Bajpai, M; Pratap, A; Somite	14713838 Paediatric individuals
33	1	Angiotensin-converting enzyme ger	Al-Eisa, A; Haider, MZ; Sriva	10986863 Paediatric individuals
34	1	Angiotensinogen gene T235 variant	Gallego, PH; Shephard, N; E	18413222 Paediatric individuals
35	1	Association of angiotensin converti	Narasimhan, KL; Madhu, K; NA	Paediatric individuals
36	1	Association of angiotensin type 2 r	Miranda, DM; Dos Santos, /	24995698 Paediatric individuals
37	1	Autosomal dominant pseudohypoa	Geller, DS; Zhang, JH; Zenn	16611713 Paediatric individuals
38	1	DD Genotype of ACE Gene in Boys:	Alasehirli, B; Balat, A; Buyul	22017506 Paediatric individuals
39	1	Donor and recipient ACE I/D genoty	Buscher, R; Nagel, D; Finkel	21309964 Paediatric individuals
40	1	Earlier Onset of Complications in Y	Dart, AB; Martens, PJ; Rigat	24130346 Paediatric individuals
41	1	Effect of angiotensin-converting en	Saber-Ayad M, Sabry S, Abc	20418353 Paediatric individuals
42	1	Effects of genetic polymorphisms o	Tabel, Y; Berdeli, A; Mir, S; :	16525944 Paediatric individuals
43	1	Genetic polymorphism of the renin	Yim, HE; Jung, MI; Choi, BM	14764974 Paediatric individuals
44	1	Genetic polymorphisms of the renin	Frishberg, Y; Becker-Cohen,	9853248 Paediatric individuals
45	1	Genetic risk factors in typical haem	Taranta, A; Gianviti, A; Paln	19110485 Paediatric individuals
46	1	Heterozygous Loss-of-Function SEC	Bolar, NA; Golzio, C; Zivna,	27392076 Paediatric individuals
47	1	Impact of ACE I/D gene polymorphi	Hohenfellner, K; Wingen, A	11354781 Paediatric individuals
48	1	Impact of common functional polyr	Hussein, A; Elderwy, AA; As	25939993 Paediatric individuals
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1	1 Implication of genetic variations in	Hahn, H; Ku, SE; Kim, KS; Pa	16133060	Paediatric individuals
2	1 Implications of certain genetic poly	Ozen S, Alikasifoglu M, Saat	10401028	Paediatric individuals
3	1 Increased HLA- A*11 in Chinese chi	Cheung W, Ren EC, Chan SF	11956863	Paediatric individuals
4	1 Low renin-angiotensin system activ	Peruzzi, L; Lombardo, F; Ar	16006956	Paediatric individuals
5	1 Mapping candidate regions and ger	Weber, S; Landwehr, C; Rer	20605837	Paediatric individuals
6	1 MCP1 2518 A/G polymorphism affe	Besbas N, Kalyoncu M, Cil C	26335292	Paediatric individuals
7	1 Nitric oxide synthase gene polymor	Balat A, Alasehirli B, Oguzka	17365914	Paediatric individuals
8	1 NPHS2 variation in Chinese souther	Dai Y, Yang H, Gao P, Liu WI	25112471	Paediatric individuals
9	1 Polymorphisms of renin-angiotensi	Maruyama, K; Yoshida, M; I	11354780	Paediatric individuals
10	1 Posterior urethral valves: Prelimina	Bajpai, M; Pratap, A; Tripatl	15643266	Paediatric individuals
11	1 Prioritization and burden analysis o	Nicolaou, N; Pulit, SL; Nijma	26489027	Paediatric individuals
12	1 Renal tubular dysgenesis, a not unc	Lacoste M, Cai Y, Guicharna	16790508	Paediatric individuals
13	1 Renin-angiotensin gene polymorph	Papp, F; Friedman, AL; Bere	12579405	Paediatric individuals
14	1 Renin-angiotensin system gene pol	Liu, DS; Lu, F; Zhai, SH; Wei, NA		Paediatric individuals
15	1 Renin-angiotensin system gene pol	Ozkaya, O; Soylemezoglu, C	16521052	Paediatric individuals
16	1 Renin-angiotensin system polymor	Pardo, R; Malaga, S; Coto, E	12579398	Paediatric individuals
17	1 Renin-angiotensin system polymor	Liu, KP; Lin, CY; Chen, HJ; W	15045574	Paediatric individuals
18	1 Risk factors for loss of residual rena	Ha, IS; Yap, HK; Munarriz, R	25874598	Paediatric individuals
19	1 The juxtaglomerular apparatus in B	Taugner R, Waldherr R, Sey	3128915	Paediatric individuals
20	1 The role of vitamin D receptor gene	Goknar N, A-ktem F, Torun	26908058	Paediatric individuals
21	1 Add-on angiotensin receptor block	Agarwal, R	11380832	Pharmaceutical drug fc
22	1 Antiproteinuric effect of candesart	Haneda, M; Kikkawa, R; Sak	15364166	Pharmaceutical drug fc
23	1 Application of Direct Renin Inhibitic	Mende, CW	20490905	Pharmaceutical drug fc
24	1 Captopril enhances transforming gr	Di Paolo S, Schena A, Stallo	12499886	Pharmaceutical drug fc
25	1 DPP-4 Inhibition on Top of Angioter	Alter, ML; Ott, IM; von Wek	23171828	Pharmaceutical drug fc
26	1 Effects of losartan and enalapril on	Argani, H; Ghorbanihaghjo,	18261537	Pharmaceutical drug fc
27	1 Enalapril and losartan affect lipid p	Rashtchizadeh, N; Aghaeish	17222813	Pharmaceutical drug fc
28	1 Losartan decreases plasma levels o	Campistol, JM; Inigo, P; Jim	10432413	Pharmaceutical drug fc
29	1 Pentoxifylline for Renoprotection ir	Navarro-Gonzalez, JF; Murc	21144773	Pharmaceutical drug fc
30	1 Renal implications of angiotensin r	Hollenberg, NK	11459212	Pharmaceutical drug fc
31	1 Renin-angiotensin system polymor	Noroozianavval, M; Argani,	17524880	Pharmaceutical drug fc
32	1 The influence of renin-angiotensin :	Goyache-Goni, B; Aranda-Li	24241364	Pharmaceutical drug fc
33	1 The influence of the ACE (I/D) polyr	Luik, PT; Hoogenberg, K; Ke	12856080	Pharmaceutical drug fc
34	1 Thiazolidinediones and the renal ar	Goenka, N; Kotonya, C; Pen	18230694	Pharmaceutical drug fc
35	2 Relationship between the renin-angi	Wu S, Xiang K, Zheng T, Su	11776100	No data
36	3 Chronic renal insufficiency among A	Prasad P et al.	16672053	< 3 populations report
37	3 M235T polymorphism in the AGT ge	Sarkar S, Gupta V, Kumar A	25660845	< 3 populations report
38	3 Plasma renin and prorenin and reni	Deinum J et al.	10462269	< 3 populations report
39	3 Renin gene rs1464816 polymorphis	Ramanathan G, Elumalai R.	26753721	< 3 populations report
40	3 Renin-angiotensin-aldosterone sys	Mtiraoui N et al.	21421655	< 3 populations report

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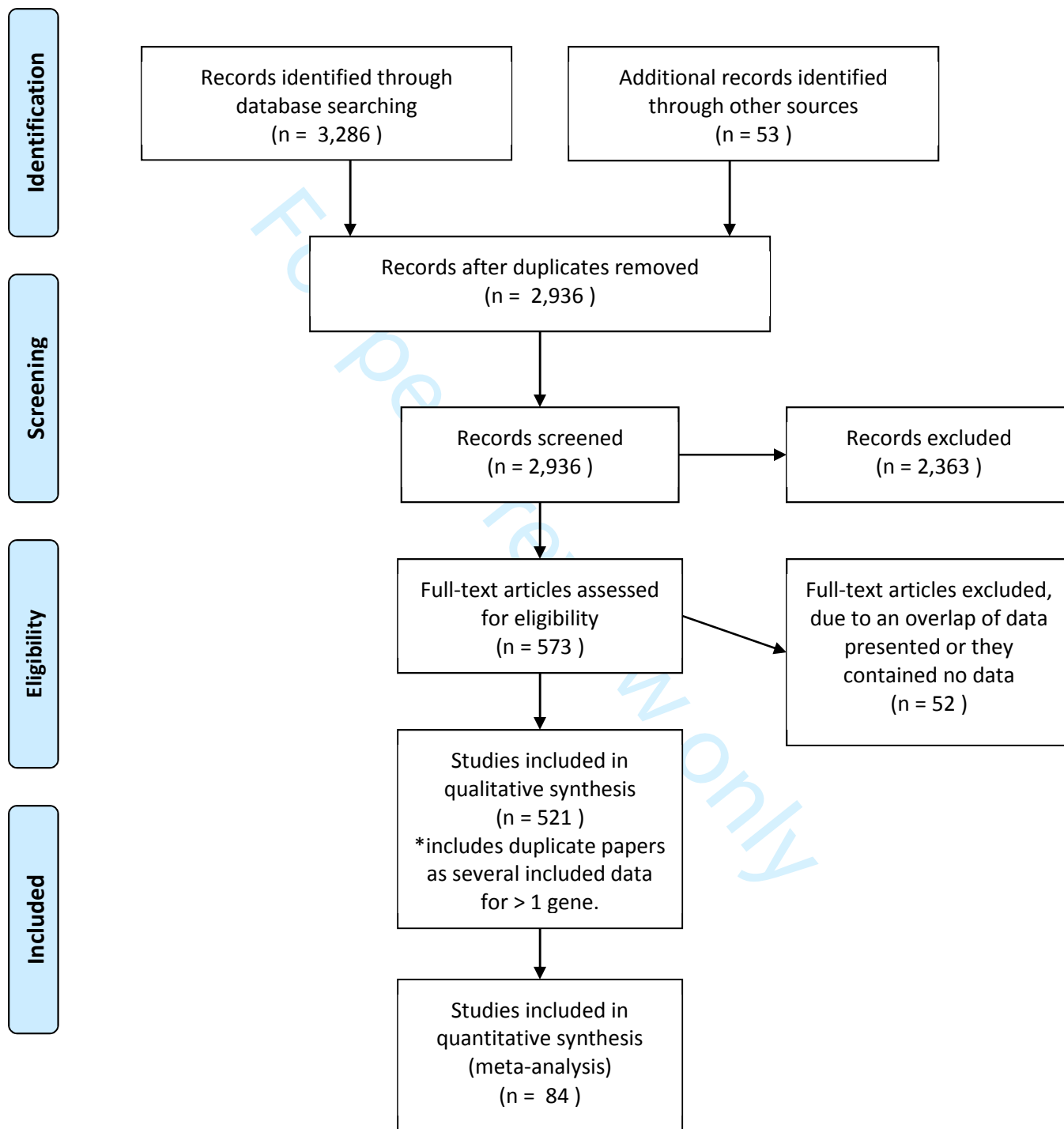
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PRISMA 2009 Flow Diagram



From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

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PRISMA 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	1&2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	2&3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	1&3
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	5
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	4
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	3-4
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	3
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	3
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	4
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	4
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	4
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	4
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	4



PRISMA 2009 Checklist

Page 1 of 2

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	4
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	5
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	5
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	4&5
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	4-6
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	5&6
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	5&6
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	5&6
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	NA
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	7-9
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	8-9
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	7-9
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	9

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

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Reporting checklist for meta-analysis of observational studies.

Based on the MOOSE guidelines.

Instructions to authors

Complete this checklist by entering the page numbers from your manuscript where readers will find each of the items listed below.

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In your methods section, say that you used the MOOSE reporting guidelines, and cite them as:

Stroup DF, Berlin JA, Morton SC, Olkin I, Williamson GD, Rennie D, Moher D, Becker BJ, Sipe TA, Thacker SB. Meta-analysis of observational studies in epidemiology: a proposal for reporting. Meta-analysis Of Observational Studies in Epidemiology (MOOSE) group. JAMA. 2000; 283(15):2008-2012.

	Reporting Item	Page Number
#1	Identify the study as a meta-analysis of observational research	1
#2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number (From PRISMA checklist)	1&2
#3a	Problem definition	3
#3b	Hypothesis statement	2
#3c	Description of study outcomes	3
#3d	Type of exposure or intervention used	3
#3e	Type of study designs used	3

1	#3f	Study population	3
2			
3	Search	#4a Qualifications of searchers (eg, librarians and investigators)	3-4
4	strategy		
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7		#4b Search strategy, including time period included in the synthesis	4
8		and keywords	
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11		#4c Effort to include all available studies, including contact with	4
12		authors	
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14		#4d Databases and registries searched	3
15			
16		#4e Search software used, name and version, including special	4
17		features used (eg, explosion)	
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19		#4f Use of hand searching (eg, reference lists of obtained articles)	3
20			
21		#4g List of citations located and those excluded, including	3
22		justification	
23			
24		#4h Method of addressing articles published in languages other than	4
25		English	
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27		#4i Method of handling abstracts and unpublished studies	4
28			
29		#4j Description of any contact with authors	NA
30			
31		#5a Description of relevance or appropriateness of studies gathered	3&4
32		for assessing the hypothesis to be tested	
33			
34		#5b Rationale for the selection and coding of data (eg, sound clinical	3&4
35		principles or convenience)	
36			
37		#5c Documentation of how data were classified and coded (eg,	3&4
38		multiple raters, blinding, and interrater reliability)	
39			
40		#5d Assessment of confounding (eg, comparability of cases and	4
41		controls in studies where appropriate)	
42			
43		#5e Assessment of study quality, including blinding of quality	4
44		assessors; stratification or regression on possible predictors of	
45		study results	
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47		#5f Assessment of heterogeneity	4
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49		#5g Description of statistical methods (eg, complete description of	4-5
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fixed or random effects models, justification of whether the chosen models account for predictors of study results, dose-response models, or cumulative meta-analysis) in sufficient detail to be replicated

#5h	Provision of appropriate tables and graphics	4-6 & additional materials
#6a	Graphic summarizing individual study estimates and overall estimate	Figures & Supplementary Figures
#6b	Table giving descriptive information for each study included	ST4-ST6
#6c	Results of sensitivity testing (eg, subgroup analysis)	5
#6d	Indication of statistical uncertainty of findings	4-6
#7a	Quantitative assessment of bias (eg. publication bias)	4-6
#7b	Justification for exclusion (eg, exclusion of non-English-language citations)	3
#7c	Assessment of quality of included studies	3-6
#8a	Consideration of alternative explanations for observed results	7-8
#8b	Generalization of the conclusions (ie, appropriate for the data presented and within the domain of the literature review)	8-9
#8c	Guidelines for future research	8-9
#8d	Disclosure of funding source	9

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BMJ Open

Genetic associations between genes in the renin-angiotensin-aldosterone system and renal disease: a systematic review and meta-analysis

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Primary Subject Heading:	Genetics and genomics
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Keywords:	CKD, NEPHROLOGY, RAAS, Meta-analysis, Renin-angiotensin-aldosterone system, Kidney

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Manuscripts

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2
3 1 **Genetic associations between genes in the renin-angiotensin-aldosterone system and renal**
4 2 **disease: a systematic review and meta-analysis**

5
6 3 Laura J. Smyth*, Marisa Cañadas-Garre, Ruaidhri C. Cappa, Alexander P. Maxwell, Amy Jayne
7 4 McKnight

8
9 5 Epidemiology and Public Health Research Group, Centre for Public Health, Queen's University
10 6 Belfast, Belfast, United Kingdom

11
12 7

13
14 8 *Corresponding author email: laura.smyth@qub.ac.uk

15
16 9

17
18 10 **SHORT TITLE**

19
20 11 A meta-analysis of RAAS gene variants and CKD

21
22 12

23
24 13 **WORD COUNT** (excluding Abstract, Keywords, References, Figures, Tables, Statements and
25 14 Contributions)

26
27 15 3,599

28
29 16

30
31 17 **ABSTRACT**

32
33 18 *Background*

34 19 Chronic kidney disease (CKD) is defined by abnormalities in kidney structure and/or function present
35 20 for more than three months. Worldwide, both the incidence and prevalence rates of CKD are
36 21 increasing. The renin-angiotensin-aldosterone system (RAAS) regulates fluid and electrolyte balance
37 22 through the kidney. RAAS activation is associated with hypertension, which is directly implicated in
38 23 causation and progression of CKD. RAAS blockade, using drugs targeting individual RAAS mediators
39 24 and receptors, has proven to be reno-protective.

40
41
42 25 *Objectives*

43
44 26 To assess genomic variants present within RAAS genes; *ACE*, *ACE2*, *AGT*, *AGTR1*, *AGTR2* and *REN*, for
45 27 association with CKD.

46
47 28 *Design and Data Sources*

48
49 29 A systematic review and meta-analysis of observational research was performed to evaluate the RAAS
50 30 gene polymorphisms in CKD using both PubMed and Web of Science databases with publication date
51 31 between the inception of each database and 31/12/2018. Eligible articles included case-control
52 32 studies of a defined kidney disease and included genotype counts.

53
54 33 *Eligibility Criteria*

55
56 34 Any paper was removed from the analysis if it was not written in English or Spanish, was a non-human
57 35 study, was a paediatric study, was not a case-control study, did not have a renal disease phenotype,
58 36 did not include data for the genes, was a gene expression based study or had a pharmaceutical drug
59 37 focus.

38 *Results*

39 A total of 3,531 studies were identified, 114 of which met the inclusion criteria. Genetic variants
40 reported in at least three independent publications for populations with the same ethnicity were
41 determined and quantitative analyses performed.

42 Three variants returned significant results in populations with different ethnicities at $p < 0.05$; *ACE*
43 insertion, *AGT* rs699-T allele, and *AGTR1* rs5186-A allele; each variant was associated with a reduced
44 risk of CKD development.

45 *Conclusions*

46 Further biological pathway and functional analyses of the RAAS gene polymorphisms will help define
47 how variation in components of the RAAS pathway contribute to CKD.

48

49 **Keywords**

50 CKD, kidney, meta-analysis, RAAS, renin-angiotensin-aldosterone system

51

52 **ARTICLE SUMMARY**

53 **Strengths and limitations of the study**

- 54 • Strength: Individuals with microalbuminuria were excluded from both the case and control
55 definitions to improve the discrimination between individuals with and without renal disease
56 as microalbuminuria may regress, remain stable or progress to macroalbuminuria.
- 57 • Strength: Due to previously reported heterogeneity between different ethnic groups, we
58 included this as a risk factor and performed each analysis per ethnicity.
- 59 • Limitation: Some studies in our search could not be included in quantitative analysis as they
60 lacked information relating to genotype counts and had an unclear measure and definition of
61 albuminuria for both cases and controls.

62 **Hypothesis statement**

- 63 • We hypothesise that there will be an association between genetic variants within RAAS genes
64 and CKD.

65 **INTRODUCTION**

66 Chronic kidney disease (CKD) is defined as a progressive loss of renal function measured as a reduction
67 in glomerular filtration rate (GFR) to < 60 mL/min/1.73m², or the presence of persistent urinary
68 abnormalities including albuminuria and/or structural alterations which have been present for at least
69 three months(1). CKD is an increasing public health issue given its associated morbidities, premature
70 mortality and management of advanced CKD is a significant burden on health care budgets
71 worldwide(2,3). There is substantial evidence that inherited genetic variants(4), the presence of
72 diabetes(5) or hypertension(6) and an individual's ethnicity(7,8) directly influence the development of
73 various CKD phenotypes.

74 The renin-angiotensin-aldosterone system (RAAS) is a homeostatic endocrine system which is of
75 critical importance to the regulation of blood pressure and maintenance of fluid and electrolyte
76 balance(9,10). Renin, secreted from the juxtaglomerular apparatus in response to reduced renal

77 perfusion pressure, catalyses the conversion of angiotensinogen to angiotensin I(11). Subsequently,
 78 angiotensin I converting enzyme (*ACE*) cleaves angiotensin I to generate angiotensin II, which
 79 regulates heart and kidney function by binding to and activating angiotensin II receptors (type I and
 80 type II)(11,12). The angiotensin II type I receptors are responsible for multiple biologic actions of RAAS
 81 including vasoconstriction and sodium reabsorption(11–14).

82 Increased RAAS activation is linked to progression of CKD of different aetiologies, especially diabetic
 83 nephropathy (DN)(11,15–18), and is mediated by hypertensive injury(17) and accelerated renal
 84 fibrosis(19). The physiological relevance of this pathway in the progression of CKD has focused
 85 attention on RAAS components including *ACE*, angiotensin I converting enzyme 2 (*ACE2*),
 86 angiotensinogen (*AGT*), angiotensin II receptor type 1 (*AGTR1*), angiotensin II receptor type 2 (*AGTR2*)
 87 and renin (*REN*), as candidate genes for various CKD-related phenotypes. Multiple studies have
 88 implicated RAAS gene variants in the progression of CKD(20–26).

89 This manuscript describes a systematic review and meta-analysis to examine published data reporting
 90 genetic variants present within six of the RAAS candidate genes: *ACE*, *ACE2*, *AGT*, *AGTR1*, *AGTR2* and
 91 *REN*, for a range of CKD phenotypes and ethnicities, to help define their putative roles as risk factors
 92 for CKD.

93

94 METHODS

95 Search Strategy: A systematic search was undertaken following recognised methods, the Meta-
 96 analysis of Observational Studies in Epidemiology (MOOSE) guidelines(27), by two investigators.
 97 PubMed and Web of Science online databases were searched for studies published between the
 98 inception of each database and 31st December 2018. All search terms are detailed in Supplementary
 99 Table S1.

100 The general strategy of the searches was to follow the structure; (all alternative versions of each gene
 101 name, separated by the boolean operator OR) AND (kidney OR nephrology OR nephropathy OR renal)
 102 AND (SNP OR polymorphism OR variant OR allele OR genotype). For each search term, where an
 103 appropriate MeSH term was available, the query included the quoted search term OR the MeSH term.
 104 Additional filters including English OR Spanish languages, human studies, case control studies, not
 105 clinical trials, not review articles, not a case report, not a meta-analysis were applied.

106 Reference lists from included publications were also manually searched. Two authors (LJS and MCG)
 107 independently conducted the literature search, screened the articles and extracted the data. In the
 108 case of any disagreement, a third author (RCC) considered the articles. A range of CKD phenotypes
 109 were included in this analysis, the case and control definitions are included in Table 1.

110 **Table 1:** Phenotypic comparisons included in this analysis

Case Group	Control Group
Autosomal dominant polycystic kidney disease	Healthy controls
Atherosclerotic renal artery stenosis	Healthy controls
Balkan endemic nephropathy	Healthy controls
Chronic glomerulonephritis	Healthy controls
Chronic kidney disease	Healthy controls
Diabetic nephropathy*	Diabetes mellitus
Diabetic nephropathy*	Healthy controls
End-stage renal disease	Healthy controls

End-stage renal disease	Type 1 diabetes mellitus
Focal segmental glomerulosclerosis	Healthy controls
Glomerulonephritis	Healthy controls
Hypertension-related renal disease	Healthy controls with hypertension
Hypertension-related renal disease	Healthy controls
IgA Nephropathy	Healthy controls
Interstitial nephritis	Healthy controls
Lupus nephritis	Systemic lupus erythematosus
Lupus nephritis	Healthy controls
Minimal change nephrotic syndrome	Healthy controls
Non-Balkan endemic nephropathy	Healthy controls
Nephroangiosclerosis	Healthy controls
Polycystic kidney disease	Healthy controls
Primary membranous glomerulonephritis	Healthy controls
Primary membranous glomerulonephritis	Organ donors
Renal transplant recipients	Healthy controls
Renal transplant recipients	Kidney Donors
Type 1 diabetic nephropathy*	Type 1 diabetes mellitus
Type 1 diabetic nephropathy linked to end-stage renal disease	Healthy controls
Type 1 diabetic nephropathy linked to end-stage renal disease	Type 1 diabetes mellitus
Type 2 diabetic nephropathy*	Type 2 diabetes mellitus
Type 2 diabetic nephropathy linked to end-stage renal disease	Healthy controls
Type 2 diabetic nephropathy linked to end-stage renal disease	Type 2 diabetes mellitus

* In the studies including diabetic nephropathy as cases, only individuals with reported macroalbuminuria or proteinuria were included. Individuals with microalbuminuria were excluded.

Inclusion/Exclusion Criteria: Inclusion criteria were judged against a standardised list of agreed criteria (LJS, MCG and AJM), whereby the English or Spanish language publication described an adult, human case-control study, of a defined kidney disease. In the rare instances when suspected duplicate data was identified within two or more included articles, only the article either published first, or that with the larger number of participants was included.

Articles were excluded if they included paediatric subjects, were a pharmacological based study reporting clinical trials of medications, did not contain genotypic data for the correct gene or were non-human studies.

Data extraction: Where available, the size of each study, case group disease definition and number of individuals, control group definition and number of individuals, ethnicity, genetic variant, genotype in the format of allele one–heterozygote–allele two and allele counts were recorded and calculated in spreadsheets by two authors (LJS and MCG). Articles were re-assessed where any disagreement occurred and a third reviewer was employed. Ethnicities were recorded from the articles and re-coded following the International Genome Sample Resources' online guidance(28). Where any population did not align to a listed population code, a new one was created for the purposes of this study. All ethnicity codes are available in Supplementary Table S2. The data collected was divided into disease phenotype groups to ensure a high level of homogeneity.

Statistical Analysis: Each genetic variant which had been investigated and reported in at least three independent publications for the same ethnicity and phenotype was included in quantitative statistical analyses. Review Manager (RevMan) 5.3 (The Cochrane Collaboration, The Nordic Cochrane Centre, Copenhagen, Denmark) was employed to facilitate the analysis of allele frequencies. For each SNP,

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2
3 134 the total number of alleles were recorded per case and control group. Hardy Weinberg equilibrium
4 135 was calculated for all included studies, for cases and controls separately. Statistical analyses were
5 136 performed using the random effects model as heterogeneity was expected. For each SNP, this analysis
6 137 provided the P value, odds ratio (OR) and 95% confidence intervals (CI). It also facilitated the
7 138 assessment of the heterogeneity level using the I^2 statistic(29). Forest plots and funnel plots were
8 139 generated automatically to assess publication bias and the significance value was set at $P < 0.05$ (LJS
9 140 and RCC).

11
12 141 The genotyping quality of the studies was assessed by reported genotype completion rate and Hardy
13 142 Weinberg equilibrium. Phenotypes included in this analysis are shown in Table 1; individuals with
14 143 microalbuminuria were excluded alongside the studies that focused on disease progression. No
15 144 sensitivity analysis was performed. All study methodology conformed to the MOOSE criteria(27). No
16 145 published protocol is available for this review. The workflow followed a consistent pattern for each
17 146 gene. A summary of this is included in Figure 1.

18 147 **Figure 1:** Workflow pattern

19
20 148 Patient and public involvement: Neither patients nor the public were directly involved in the design of
21 149 this study, which analysed previously published data available in the public domain.

22 150

23 151 **RESULTS**

24
25 152 The database searches returned 3,531 results, 144 of which remained following the application of
26 153 inclusion and exclusion criteria and the removal of any SNP which was not reported on at least three
27 154 occasions. Several articles included data for more than one gene, signifying that they have emerged
28 155 multiple times throughout the database searches; the total number of individual articles was
29 156 therefore 114. The search strategies are included as Supplementary Figures S1a-f. All excluded studies
30 157 are listed in Supplementary Tables S3a-f

31
32 158 The total number of subjects analysed within these studies ($n=114$) was 18,231 individuals with renal
33 159 disease and 21,887 individuals acting as controls. For SNPs in three of the RAAS genes, *ACE2*, *AGTR2*
34 160 and *REN*, there were less than three independent populations studied. A summary table detailing the
35 161 main results is included as Table 2.

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171 **Table 2:** Summary of the most significant result for each included gene

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Gene	Articles returned (n)	Articles analysed (n)	Max. individuals in analysis (n)	Most significant result	P Value	OR (95% CL)	I ² (%)	Allele	Average Allele Frequency - Controls
<i>ACE</i>	380	95	33,247	I/D (EAS)	0.008	0.80 (0.67, 0.94)	68	Insertion	0.62
<i>ACE2</i>	1556	0	NA		NA	NA	NA	NA	NA
<i>AGT</i>	693	33	13,234	rs699 (EUR)	0.002	0.84 (0.76, 0.94)	0	T	0.57
<i>AGTR1</i>	200	16	6917	rs5186 (SAS)	0.001	0.71 (0.58, 0.87)	37	A	0.81
<i>AGTR2</i>	29	0	NA		NA	NA	NA	NA	NA
<i>REN</i>	673	0	NA		NA	NA	NA	NA	NA

173

174 Abbreviations: EAS, East Asian; EUR, European; NA, Not Applicable; SAS, South Asian.

175

176 **ACE**

177 A total of 15 quantitative analyses were completed for the insertion / deletion (I/D) polymorphism
178 located within *ACE* in eight phenotypes, details of which are included in Supplementary Table S4.
179 Three quantitative analyses returned a significant result. The first analysis comprised 11 publications,
180 each studying an East Asian population with T2DN (type 2 diabetes and nephropathy) and compared
181 with T2DM (type 2 diabetes mellitus without nephropathy). Figure 2a displays these results, $P=0.009$;
182 $OR=0.74$; 95% $CI=0.59, 0.93$, $I^2=55\%$, showing that the presence of the insertion variant at this *ACE*
183 locus was significantly associated with this phenotype. The insertion provides a lower risk of
184 developing T2DN in an East Asian population as demonstrated in five studies, which contributed to
185 51.5% of the weight in this analysis. Figure 2b shows the associated funnel plot for this analysis.

186 **Figure 2a:** Forest plot - *ACE* I/D investigation, individuals with type 2 diabetic nephropathy compared
187 to individuals with type 2 diabetes mellitus in an East Asian population (*ACE* insertion compared to
188 deletion).

189 **Figure 2b:** Funnel plot - *ACE* I/D investigation, individuals with type 2 diabetes and nephropathy
190 compared to individuals with type 2 diabetes mellitus (without nephropathy) in an East Asian
191 population (*ACE* insertion compared to deletion).

192

193 The *ACE* insertion variant was similarly significantly associated with a lower risk of T2DN compared
194 with T2DM in a South Asian population, despite the presence of a high level of heterogeneity ($P=0.01$;
195 $OR=0.57$; 95% $CI=0.37, 0.87$; $I^2=89\%$). This was consistent with the direction of effect in four studies,
196 which contributed to 67.7% of the weight in this analysis (Figure 2c). The funnel plot for this analysis
197 is displayed within Figure 2d.

198 **Figure 2c:** Forest plot - *ACE* I/D investigation, individuals with type 2 diabetes and nephropathy
199 compared to individuals with type 2 diabetes mellitus (without nephropathy) in a South Asian
200 population (*ACE* insertion compared to deletion).

201 **Figure 2d:** Funnel plot - *ACE* I/D investigation, individuals with type 2 diabetic nephropathy compared
202 to individuals with type 2 diabetes mellitus in a South Asian population (*ACE* insertion compared to
203 deletion).

204

205 The comparison of East Asian individuals with end-stage renal disease (ESRD) compared to a healthy
206 population with no evidence of renal disease also showed a significant association with moderate
207 levels of heterogeneity ($P=0.008$; $OR=0.8$; 95% $CI=0.67, 0.94$; $I^2=68\%$). Four studies, supporting 69.7%
208 of the weight in the analysis had shown this effect (Figure 2e). Figure 2f shows the associated funnel
209 plot for this analysis.

210 **Figure 2e:** Forest plot - *ACE* I/D investigation, individuals with end-stage renal disease compared to
211 healthy controls in an East Asian population (*ACE* insertion compared to deletion).

212 **Figure 2f:** Funnel plot - *ACE* I/D investigation, individuals with end-stage renal disease compared to
213 healthy controls in an East Asian population (*ACE* insertion compared to deletion).

214

215 In each analysis (T2DN vs. T2DM; ESRD vs. normal), the presence of the *ACE* insertion was associated
216 with a lower risk of developing the CKD phenotype in the respective populations. The non-significant

217 forest plots are included in Supplementary Figures S2a-S2l and the associated funnel plots within
218 Supplementary Figures S3a-S3l.

219

220 **AGT**

221 Seven quantitative analyses were completed for rs699, where the T allele was compared to the C
222 allele. Details of each of these comparisons are included in Supplementary Table S5. One significant
223 result was identified - the comparison of ESRD with healthy controls in a European population. The
224 results were ($P=0.002$; $OR=0.84$; $95\% CI=0.76, 0.94$; $I^2=0\%$) and are shown in Figure 2g. Only the study
225 with population size over 2000 patients, supporting 46.2% of the weight in the meta-analysis, had
226 achieved significance with the original figures. These results indicate that the presence of the T allele
227 is associated with a lower risk of developing ESRD in this population. The funnel plot for this analysis
228 is displayed within Figure 2h. The forest plots containing the non-significant results are included in
229 Supplementary Figures S4a-S4f, and the associated funnel plots within Supplementary Figures S5a-
230 S5f.

231 **Figure 2g:** Forest plot - AGT rs699 investigation, individuals with end-stage renal disease compared
232 to healthy controls in a European population (AGT rs699 T allele compared to C allele).

233 **Figure 2h:** Funnel plot - AGT rs699 investigation, individuals with end-stage renal disease compared
234 to healthy controls in a European population (AGT rs699 T allele compared to C allele).

235

236 **AGTR1**

237 Four quantitative analyses were performed for AGTR1 rs5186, comparing the A allele with the C.
238 Details of these comparisons are included within Supplementary Table S6. One of the four studies
239 returned a significant result for association, the comparison of T2DN with T2DM in a South Asian
240 population ($P=0.001$; $OR=0.71$; $95\% CI=0.58, 0.87$; $I^2=37\%$). This result resembled the findings of two
241 of the three studies which contributed 87% of the weight in the meta-analysis, as shown in Figure 2i.
242 Figure 2j contains the associated funnel plot. These results indicate that the presence of the A allele
243 is associated with a lower risk of developing T2DN in this population. The non-significant results in
244 forest plot format are included in Supplementary Figures S6a-S6c and in funnel plot format within
245 Supplementary Figures S7a-S7c.

246 **Figure 2i:** Forest plot - AGTR1 rs5186 investigation, individuals with type 2 diabetic nephropathy
247 compared to individuals with type 2 diabetes mellitus in a South Asian population (AGTR1 rs5186 A
248 allele compared to C allele).

249 **Figure 2j:** Funnel plot - AGTR1 rs5186 investigation, individuals with type 2 diabetes and nephropathy
250 compared to individuals with type 2 diabetes mellitus (without nephropathy) in a South Asian
251 population (AGTR1 rs5186 A allele compared to C allele).

252

253 Studies not complying with Hardy Weinberg equilibrium are shown in Supplementary Table S7. Allele
254 frequencies for healthy control populations included in this analysis were assessed. None showed
255 signs of bias in any included study, in comparison to all available dbSNP reported frequencies as shown
256 in Supplementary Data File S1.

257

258 DISCUSSION

259 Investigations into RAAS genetic variants previously reported to have been associated with a range of
260 CKD phenotypes were undertaken. A total of 3,531 studies were identified, 114 of which met the
261 inclusion criteria. Subsequently, 26 quantitative analyses were completed for three RAAS genes where
262 there were at least three independent population studies of the RAAS gene variants. Five significant
263 results within three genes were obtained at the significance level $p < 0.05$, each revealing an association
264 with CKD.

265 *ACE* is encoded by *DCP1* and is a key component of the RAAS. It catalyses the modification of
266 angiotensin I to II, which is more biologically active(30). *ACE* is the most frequently studied gene of the
267 RAAS(31). First sequenced in 1992(32), this 287 bp ALU repetitive element at intron 16(32) is located
268 on chromosome 17 and is represented by four individual SNPs, rs4646994, rs1799752, rs4340 and
269 rs13447447. Further understanding of its genetic architecture and disease associations may enable
270 patient groups to benefit from targeted therapies with ACE inhibitors(33).

271 Since 1994, the association of *ACE* and DN has been rigorously investigated(33,34), with studies
272 returning conflicting results. A meta-analysis undertaken in 2005 by Ng and colleagues(35) reported a
273 statistically significant result wherein the *ACE* insertion was associated with protection from
274 development of diabetic nephropathy in Asians and Caucasians. A second meta-analysis undertaken
275 in 2012 also identified an association between the *ACE* I/D polymorphism and the development of
276 diabetic nephropathy to ESRD, in that the presence of the deletion was associated with ESRD
277 susceptibility(36). Despite having differences in the inclusion criteria to our meta-analysis, in that
278 these investigations did not include any article published since 2011(35,36) and included individuals
279 with microalbuminuria as cases(35), we returned similar results to the 2005 previous meta-analysis.
280 Including individuals with microalbuminuria in the control population may cause challenges with
281 phenotype definition as microalbuminuria may regress, remain stable, or progress to
282 macroalbuminuria(37–39) over time. Individuals with microalbuminuria were therefore excluded
283 from both case and control definitions to clarify the phenotypes in our review.

284 In our meta-analysis of *ACE*, which comprised 15,265 individuals with CKD and 18,474 individuals as
285 controls from 98 population groups, we identified three significant associations of the *ACE* I/D
286 polymorphism with CKD. Due to previously reported heterogeneity between different ethnic
287 groups(35), we included this as a risk factor and performed each analysis per ethnicity (Table S2).
288 Despite some of the allele frequency distributions varying across different ethnicities, the direction of
289 the effect was consistent among the different ethnicities: where population had different MAFs, they
290 often reported similar odds ratios in the meta-analysis.

291 Firstly, comparisons between T2DN and T2DM in East Asian and South Asian populations returned
292 significant results highlighting a protective effect of the *ACE* insertion in the development of diabetic
293 nephropathy ($P=0.009$ and $P=0.01$ respectively). This result was mimicked in the comparison of
294 individuals with ESRD, which was not caused by diabetic nephropathy, and healthy control individuals
295 in an East Asian population ($P=0.008$). The *ACE* I/D polymorphism remains a well characterised genetic
296 locus associated with the progression of diabetic nephropathy.

297 *AGT* encodes the AGT glycoprotein, which is created in the liver and facilitates the creation of
298 angiotensin I(11,40). It is located on chromosome 1. Several investigations have been conducted into
299 the *AGT* gene variants and their association with risk of CKD(40–43). Among these, Zhou and
300 colleagues undertook a meta-analysis investigation into *AGT* rs699 and its association with ESRD(40).
301 The results of this study are agreement with ours in relation to the European ethnicity. Our meta-

1
2
3 302 analysis encompassing 5, 463 individuals with renal disease and 6,385 individuals without; the T allele
4 303 provided a protective effect in ESRD development ($P=0.002$) within this European population.

6 304 In European and Middle Eastern populations, the allele distribution of rs699 were very similar for the
7 305 comparison of T2DN vs T2DM, yet different from the East Asian population. This may have had an
8 306 impact on the results, potentially limiting the robustness of association analyses across ethnicities.

10 307 The *AGTR1* gene has been shown to be involved in the regulation of blood pressure, fluid and
11 308 electrolyte balance(11). It may also have a role in inflammation and vasoconstriction(44). SNP rs5186,
12 309 an AC nucleotide substitution at position 1166 in the 3' untranslated region of chromosome 3, is
13 310 reportedly able to be recognised by microRNA-155. When the A allele is present at this locus,
14 311 microRNA-155 is able to undergo complementary base-pairing with *AGTR1* messenger RNA to
15 312 suppress translation. However this is not possible when the alternative C allele is present, resulting in
16 313 increased *AGTR1* protein levels(45). This interplay may affect blood pressure regulation and warrants
17 314 further investigation(45).

21 315 Previous studies have identified associations between rs5186 in *AGTR1* and diseases including
22 316 coronary artery disease(46), systemic lupus erythematosus(47) and cancer(48). Several smaller
23 317 studies had also been undertaken to assess links between this gene and renal disease(25,49–54). We
24 318 conducted this study to provide a clearer understanding of the effect of this SNP on CKD.

26 319 This meta-analysis of *AGTR1* variants included 3,197 individuals with renal disease and 3,720 controls
27 320 investigating rs5186. One significant result was identified; that the presence of an A allele at this locus
28 321 provided a lower risk of developing T2DN in a South Asian population ($P=0.001$).

30 322 One meta-analysis published in 2014(55) assessed *AGTR1* in individuals with CKD, ESRD, IgA
31 323 nephropathy or vesicoureteral reflux. This meta-analysis identified that rs5186 was not associated
32 324 with any of these diseases, which corresponds to the results from our investigation.

35 325 The three remaining RAAS genes included in this meta-analysis, *ACE2*, *AGTR2* and *REN*, have not been
36 326 researched as extensively as the *ACE*, *AGT* and *AGTR1* for associations with renal disease. Very few
37 327 articles were identified describing genetic association studies for these genes at the data extraction
38 328 stage of the analysis, and those that were, were removed prior to the quantitative analysis stage,
39 329 mainly due to the inclusion of paediatric individuals or non-human approaches, as outlined in Figures
40 330 S1b, S1e and S1f. Further research into the *ACE2*, *AGTR2* and *REN* genes and their polymorphisms
41 331 should be undertaken to elucidate their role in CKD and ESRD.

44 332 Some studies in our search could not be included in quantitative analysis as they lacked information
45 333 relating to genotype counts and had an unclear measure and definition of albuminuria for both cases
46 334 and controls, which could constitute a limitation. Results from GWAS studies would have strengthened
47 335 the analysis, but unfortunately they usually only report significant SNPs. Absolute frequencies are not
48 336 usually reported at individual SNP level for such large-scale studies. Publication bias was reported in
49 337 two of our quantitative analyses, but was not found in the analyses which provided our significant
50 338 results. Lack of clarity in phenotype definitions, along with unclear descriptions of ethnicities,
51 339 inherently challenge the use of meta-analyses of different populations as a valid instrument to
52 340 uncover robust associations. CKD itself has a range of causes including glomerular damage and
53 341 declining eGFR without albuminuria. Other confounding factors such as hypertension and
54 342 cardiovascular disease, and a lack of prospective follow up of included individuals, which would ensure
55 343 phenotypes are robust and stable, may also cause conflicting results.

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3 345 **CONCLUSION**
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5 347 This meta-analysis of the RAAS pathway genes and their association with renal disease has provided
6 348 evidence for five significant associations with individually small effect sizes that may cumulatively
7 349 contribute to dysfunction of the RAAS pathway leading to kidney disease. The insertion in *ACE I/D*
8 350 polymorphism was a protection factor for the development of diabetic nephropathy in individuals
9 351 with type 2 diabetes mellitus from both East and South Asian origin, and for ESRD in an East Asian
10 352 population. In Europeans, the T allele of the *AGT* rs699 conferred a lower risk of ESRD development
11 353 in healthy population. The A allele in *AGTR1* rs5186 acted as a protection factor for renal disease
12 354 development in South Asian population.

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16 355 Further study into the specific ethnicities and investigations into a broader range of RAAS linked genes,
17 356 or a deeper analysis of them including investigations of more variants, may pinpoint the molecular
18 357 basis underlying the role of pathway in kidney disease. Network analysis and functional studies
19 358 enlightening the mechanisms involved ultimately will be required to complete the picture of RAAS
20 359 variation in renal traits.
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3 361 **STATEMENTS AND CONTRIBUTIONS**
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17 371 **Statement of competing interests**

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19 372 The authors declare that they have no competing interests.
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21 373

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23 374 **Availability of data and material**

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25 375 The datasets generated and/or analysed during the current study are available from the
26 376 corresponding author on reasonable request.
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30 378 **Author contributions**

31
32 379 LJS formulated the research plan, conducted the analysis, interpreted the data, drafted the manuscript
33 380 and revised the manuscript.

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35 381 MCG conducted the analysis, interpreted the data and revised the manuscript.

36
37 382 RCC conducted the analysis, interpreted the data and revised the manuscript.

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39 383 APM acquired the funding, interpreted the data, managed the project and revised the manuscript.

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41 384 AJM acquired the funding, formulated the research plan, interpreted the data, managed the project
42 385 and revised the manuscript.

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44 386 All authors read and approved the final manuscript.
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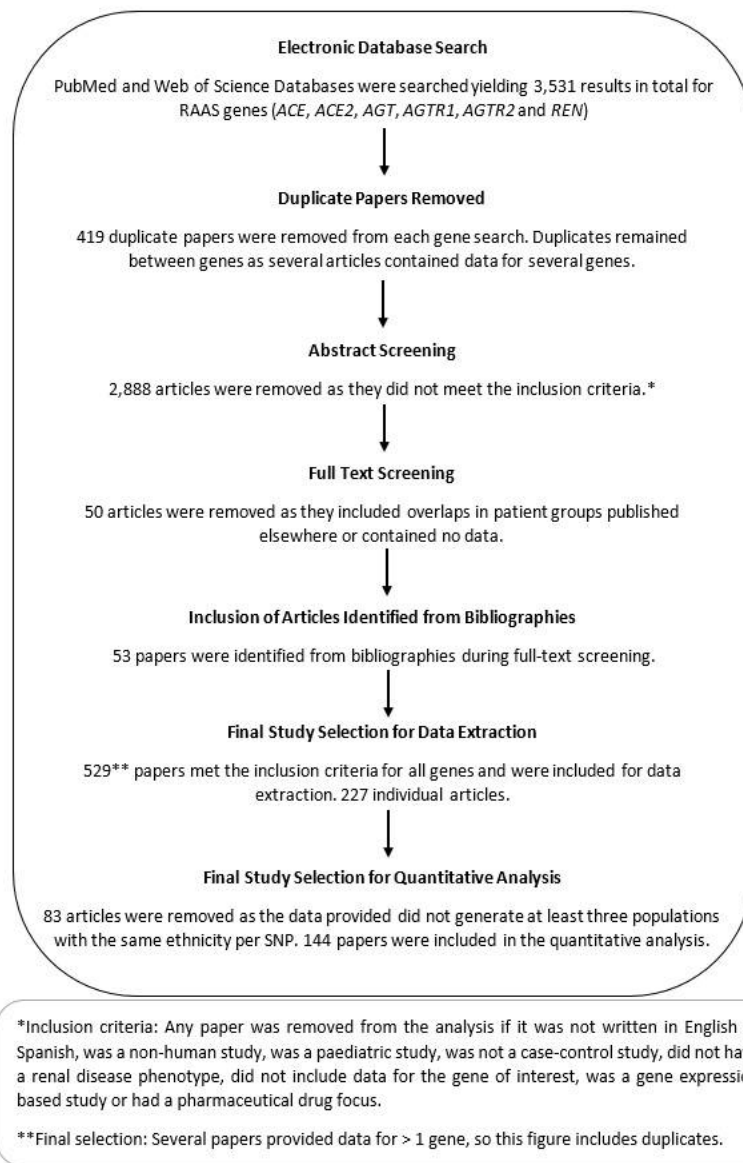


Figure 1: Workflow pattern

55x76mm (300 x 300 DPI)

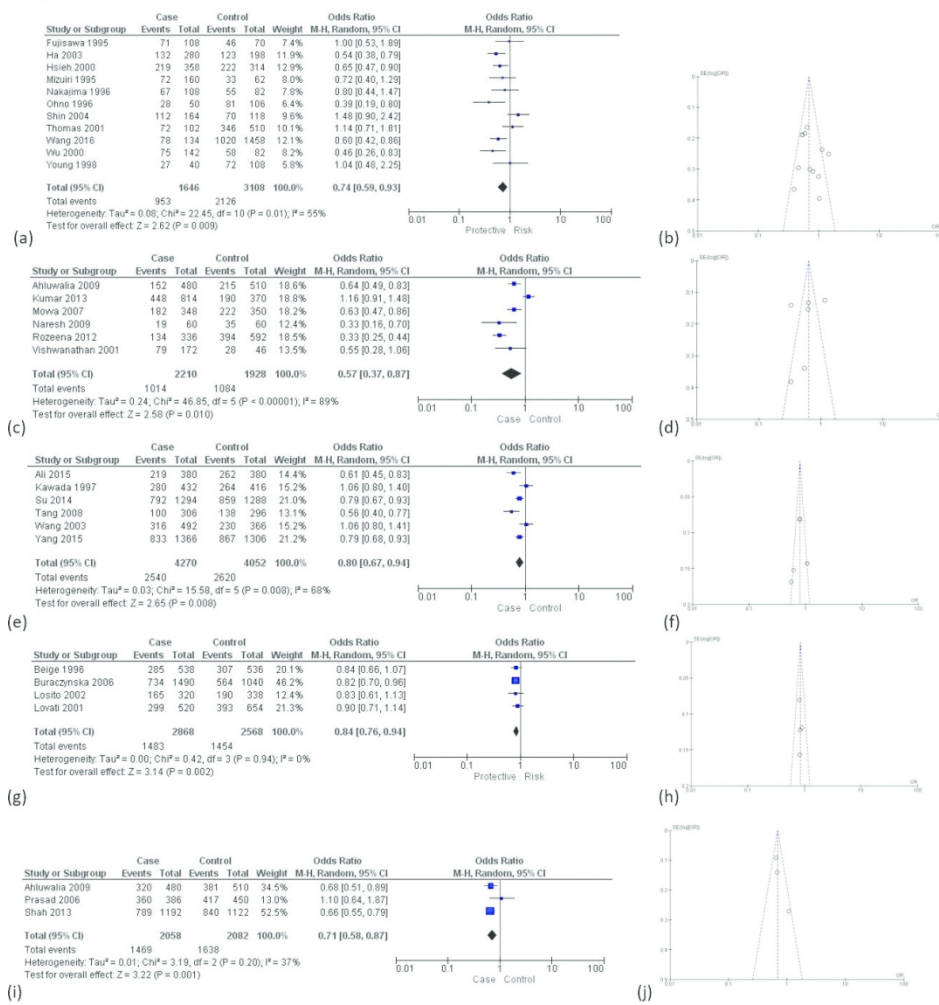
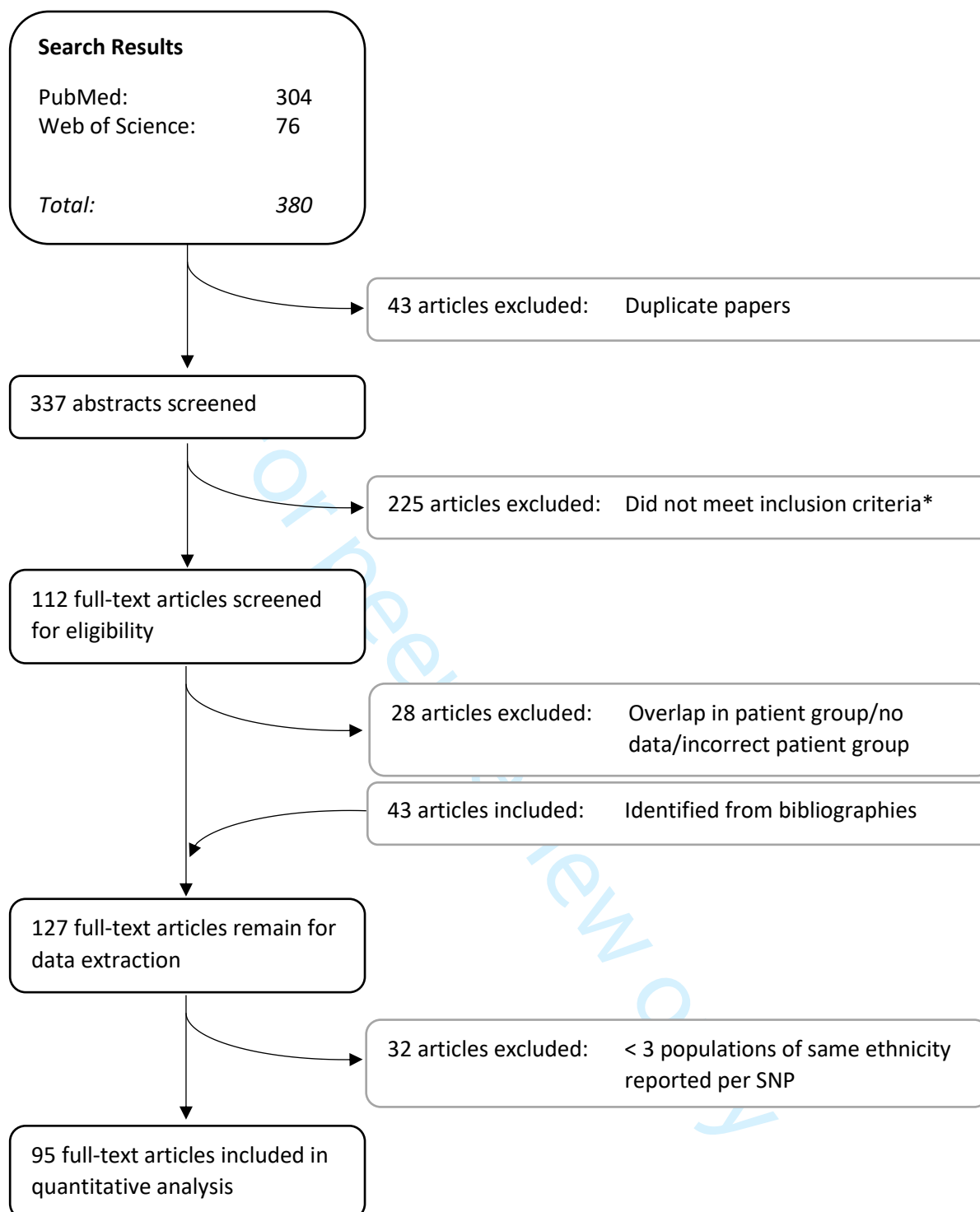


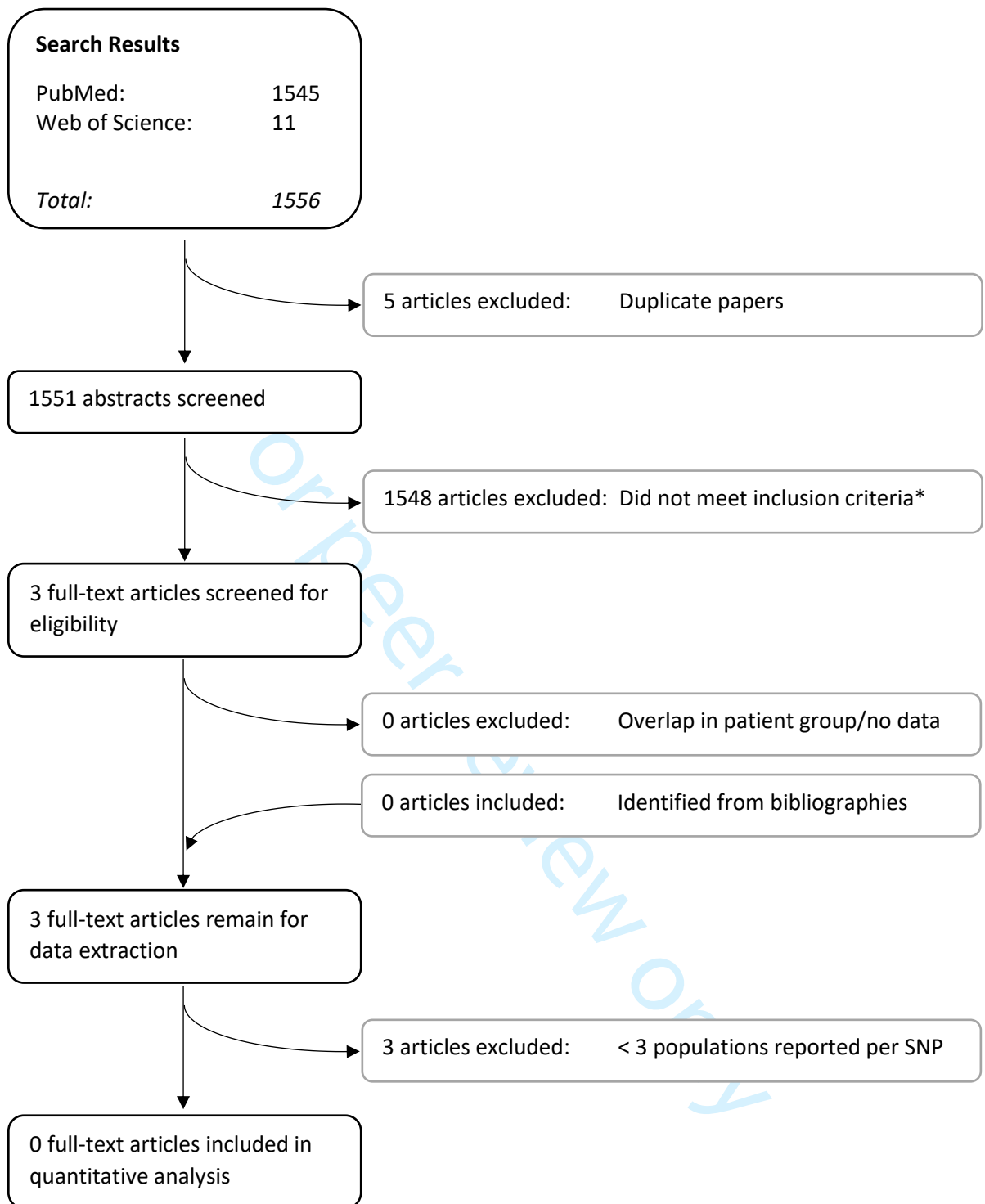
Figure 2: Forest and funnel plots for statistically significant results

119x124mm (300 x 300 DPI)



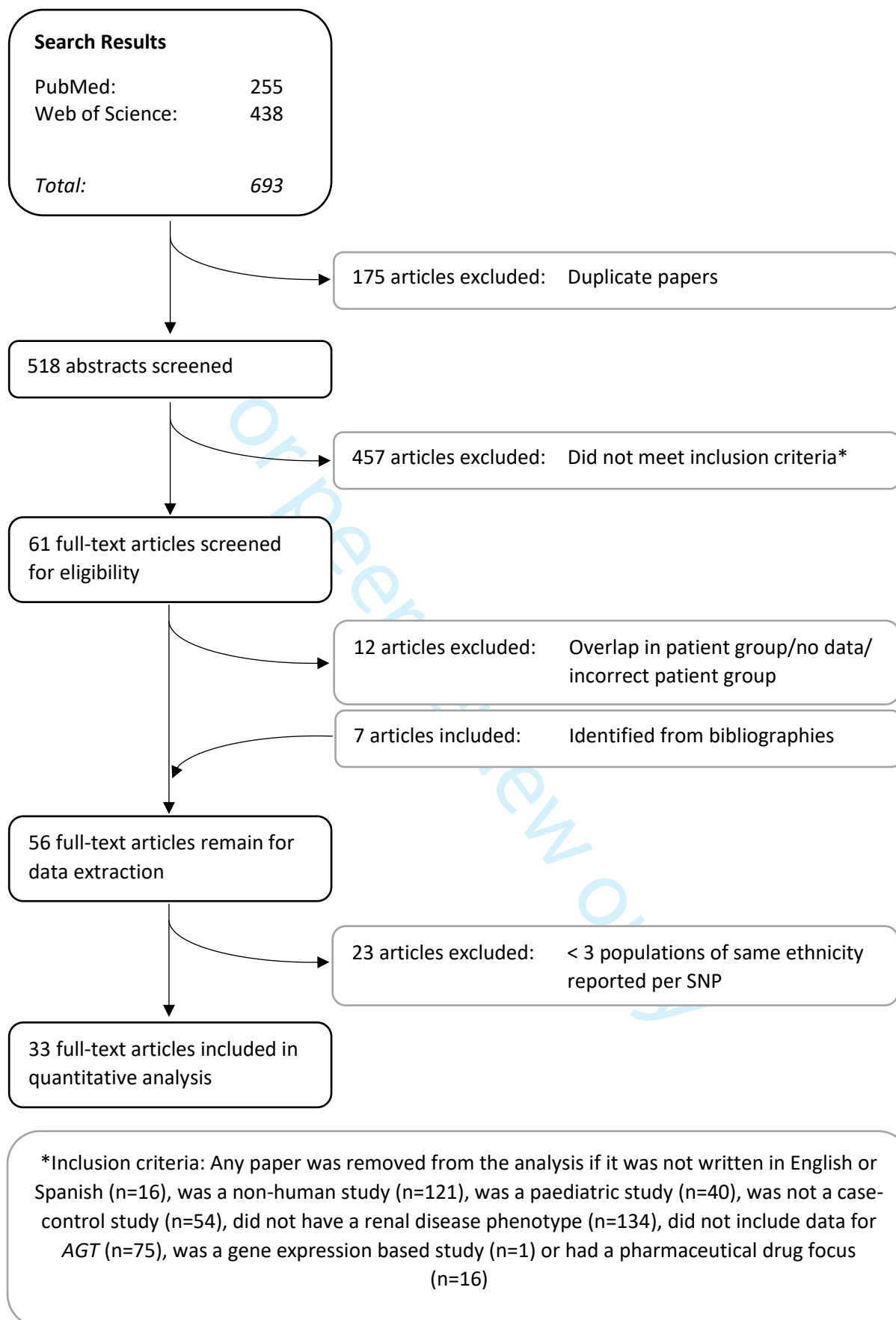
*Inclusion criteria: Any paper was removed from the analysis if it was not written in English or Spanish (n=20), was a non-human study (n=5), was a paediatric study (n=52), was not a case-control study (n=36), did not have a renal disease phenotype (n=90), did not include data for ACE (n=13) or had a pharmaceutical drug focus (n=9)

Supplementary Figure S1a: ACE Study Flow Diagram

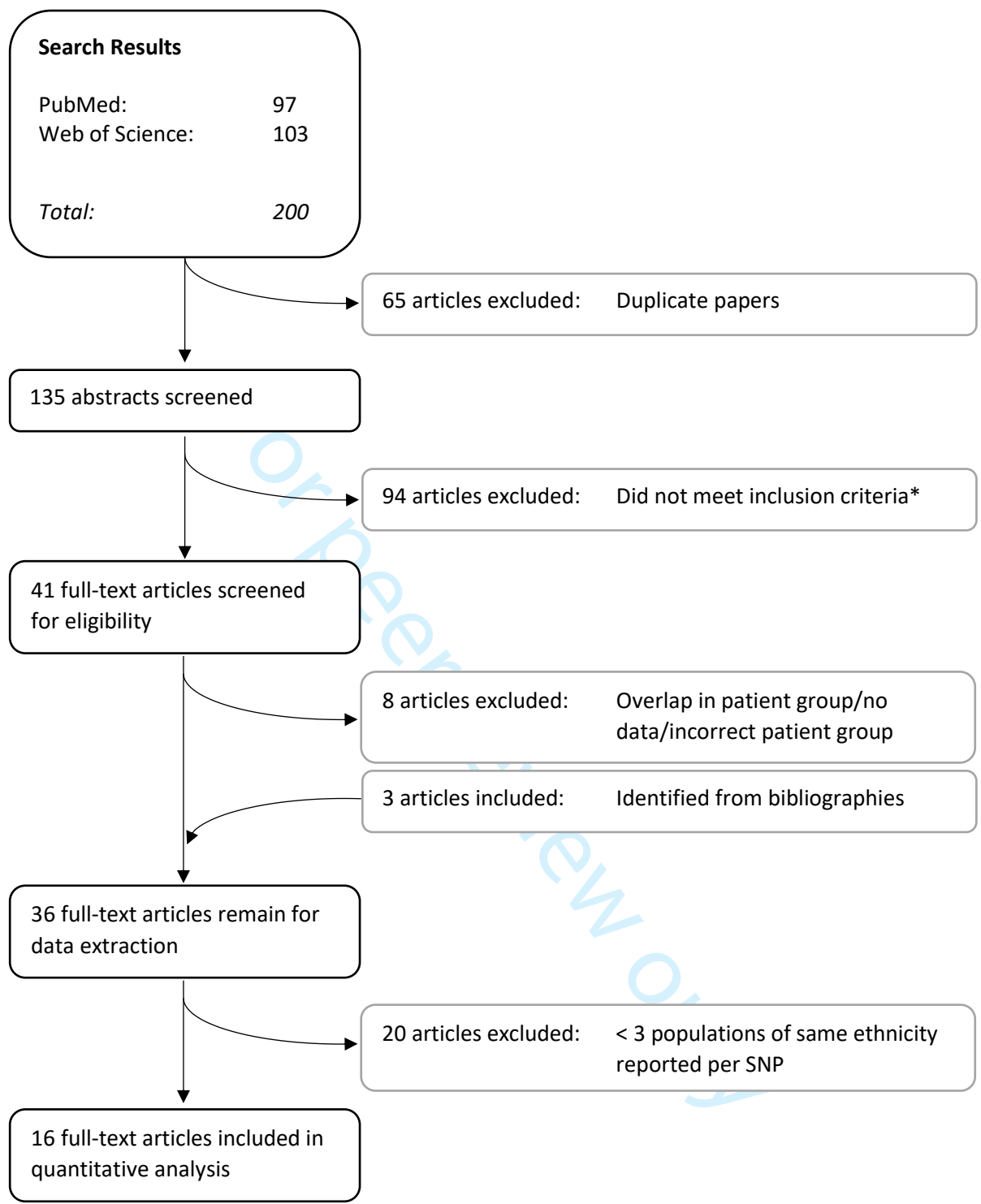


*Inclusion criteria: Any paper was removed from the analysis if it was not written in English or Spanish (n=55), was a non-human study (n=119), was a paediatric study (n=149), was not a case-control study (n=53), did not have a renal disease phenotype (n=693), did not include data for ACE2 (n=435) or had a pharmaceutical drug focus (n=44)

Supplementary Figure S1b: ACE2 Study Flow Diagram

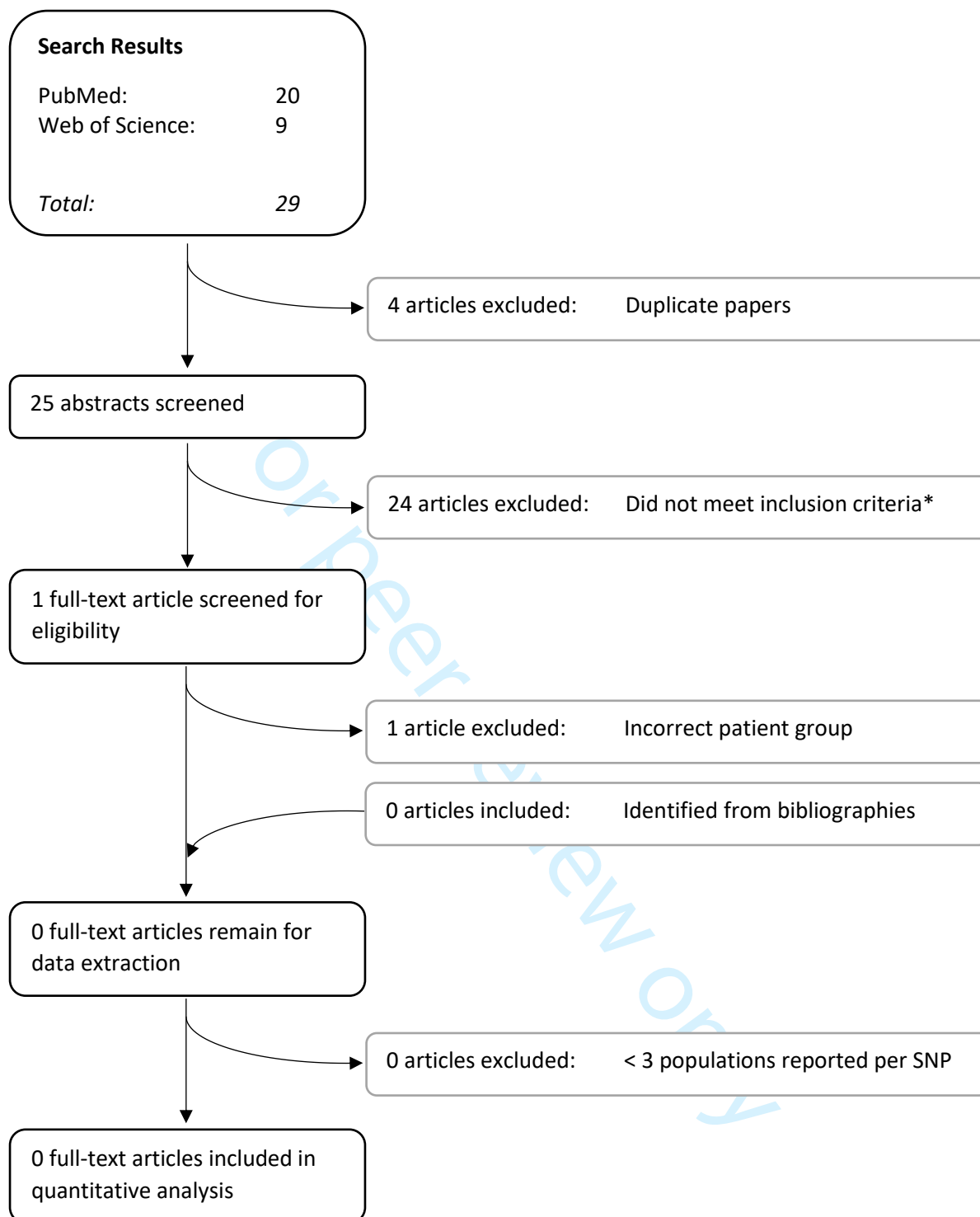


Supplementary Figure S1c: AGT Study Flow Diagram



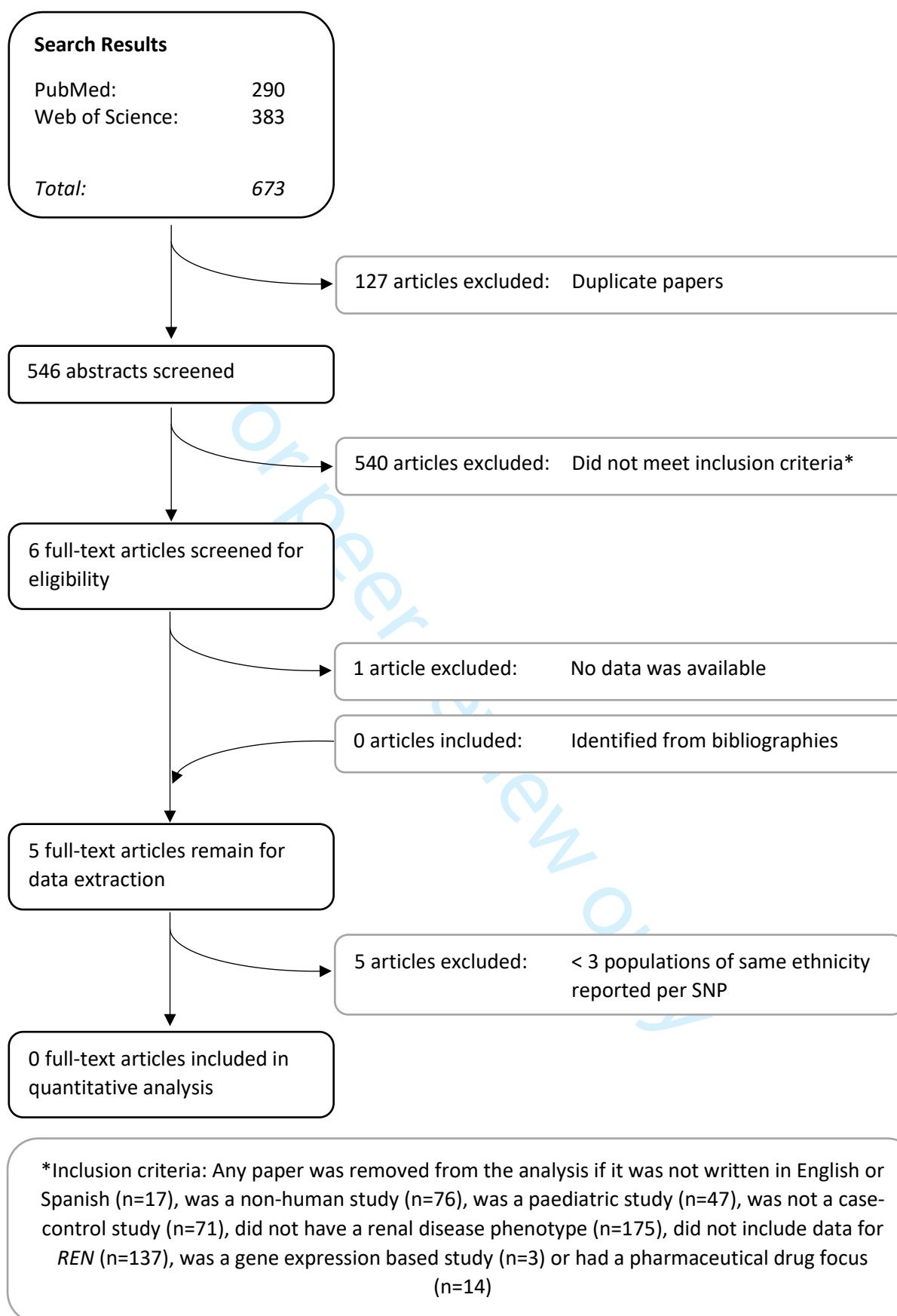
*Inclusion criteria: Any paper was removed from the analysis if it was not written in English or Spanish (n=8), was a non-human study (n=13), was a paediatric study (n=21), was not a case-control study (n=14), did not have a renal disease phenotype (n=25), did not include data for *AGTR1* (n=3), was a gene expression based study (n=1) or had a pharmaceutical drug focus (n=9)

Supplementary Figure S1d: AGTR1 Study Flow Diagram

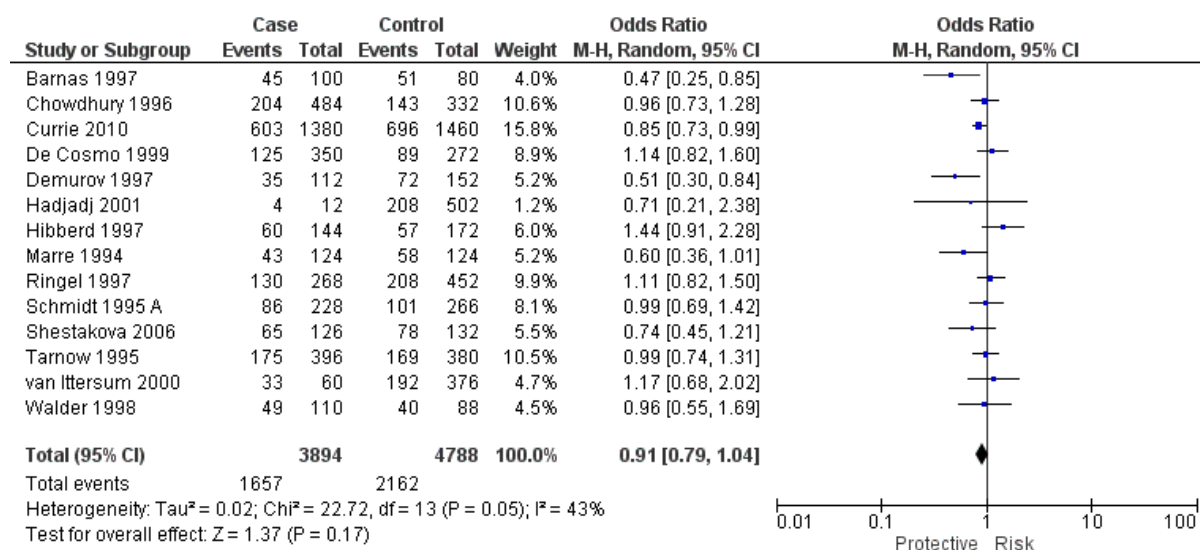


*Inclusion criteria: Any paper was removed from the analysis if it was not written in English or Spanish (n=1), was a non-human study (n=2), was a paediatric study (n=6), was not a case-control study (n=4), did not have a renal disease phenotype (n=5) or did not include data for *AGTR2* (n=6)

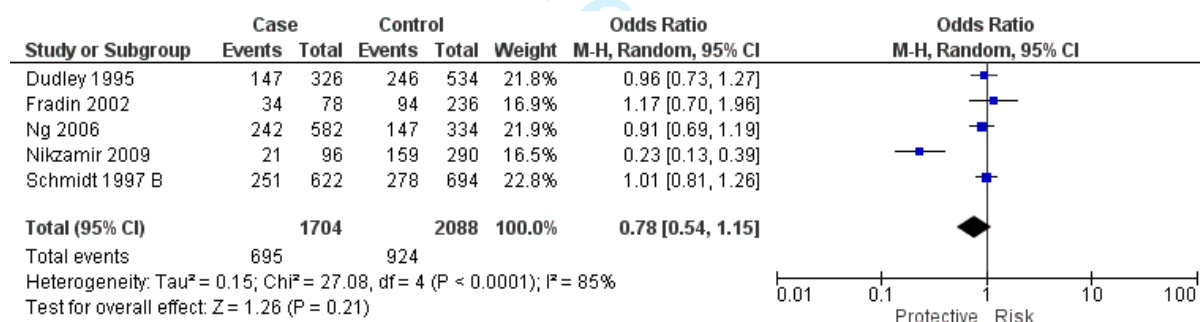
Supplementary Figure S1e: AGTR2 Study Flow Diagram



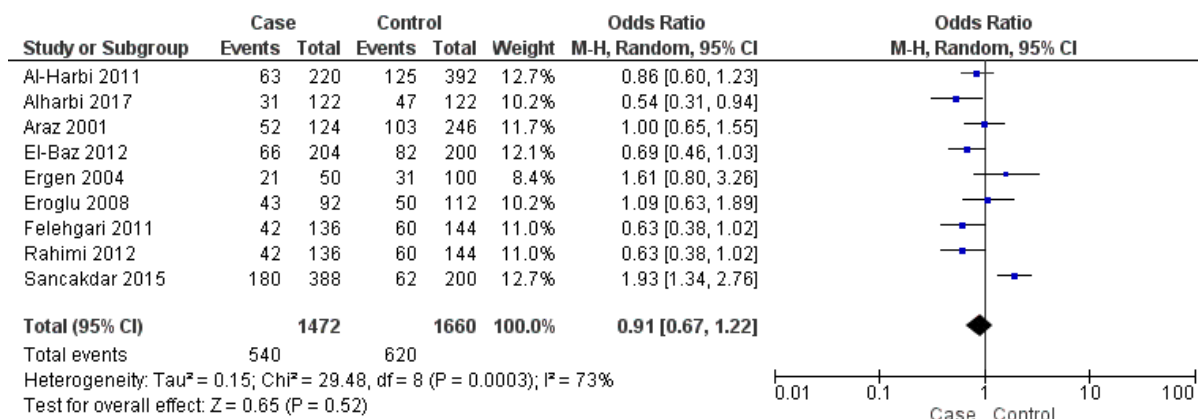
Supplementary Figure S1f: REN Study Flow Diagram



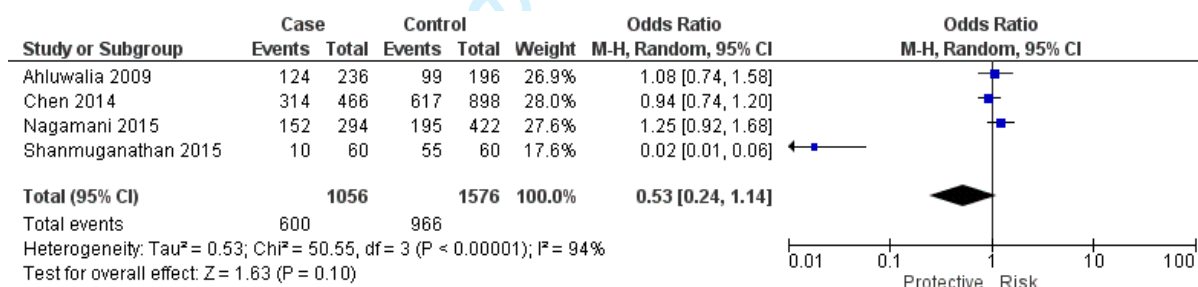
Supplementary Figure S2a: Forest plot - ACE I/D investigation, individuals with type 1 diabetic nephropathy compared to individuals with type 1 diabetes mellitus in a European population (ACE insertion compared to deletion).



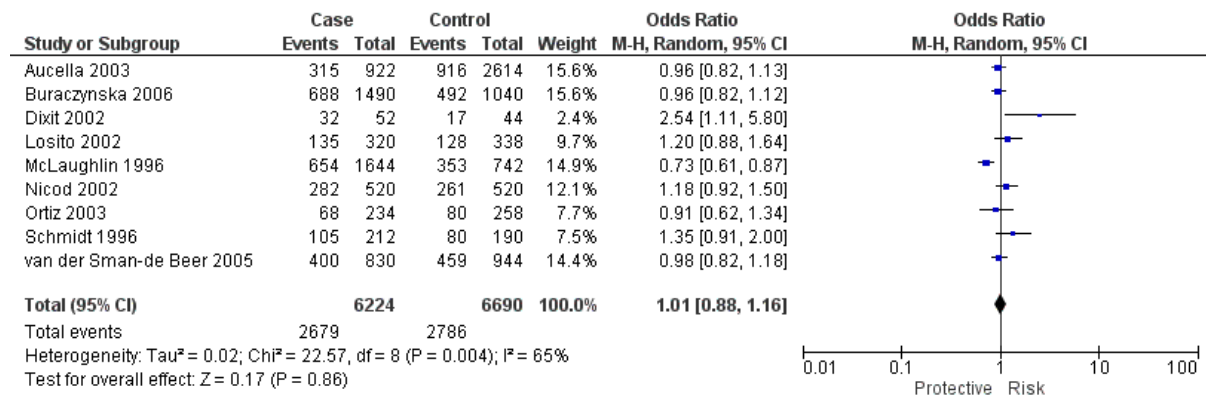
Supplementary Figure S2b: Forest plot - ACE I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European population (ACE insertion compared to deletion).



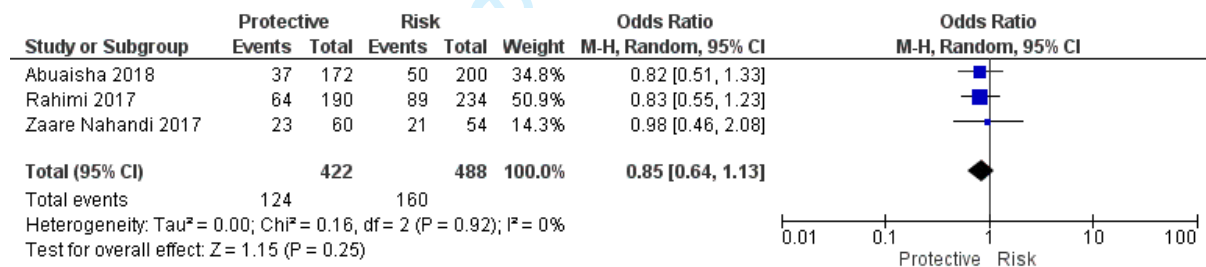
Supplementary Figure S2c: Forest plot - ACE I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a Middle Eastern population (ACE insertion compared to deletion).



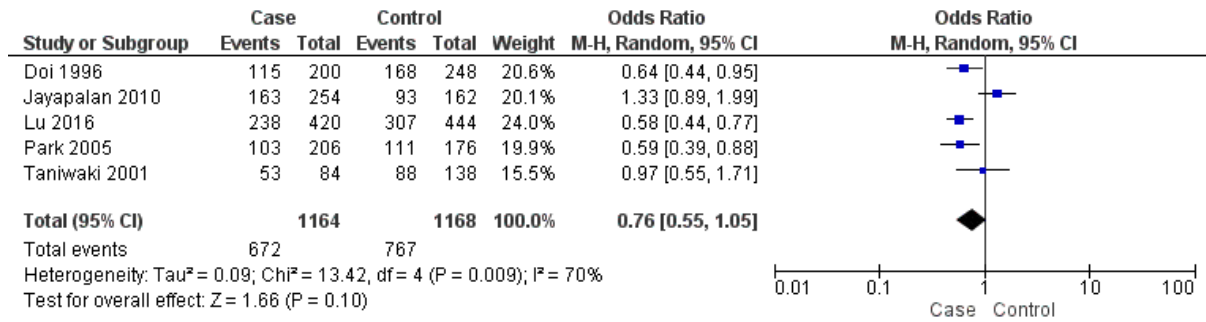
Supplementary Figure S2d: Forest plot - ACE I/D investigation, individuals with chronic kidney disease compared to healthy controls in a South Asian population (ACE insertion compared to deletion).



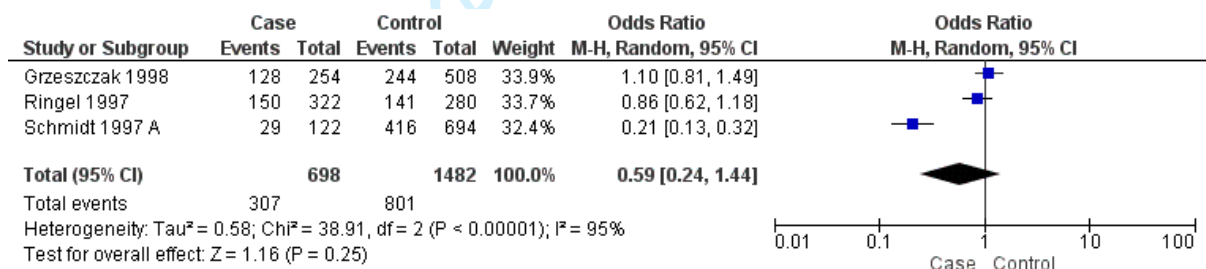
Supplementary Figure S2e: Forest plot - ACE I/D investigation, individuals with end-stage renal disease compared to healthy controls in a European population (ACE insertion compared to deletion).



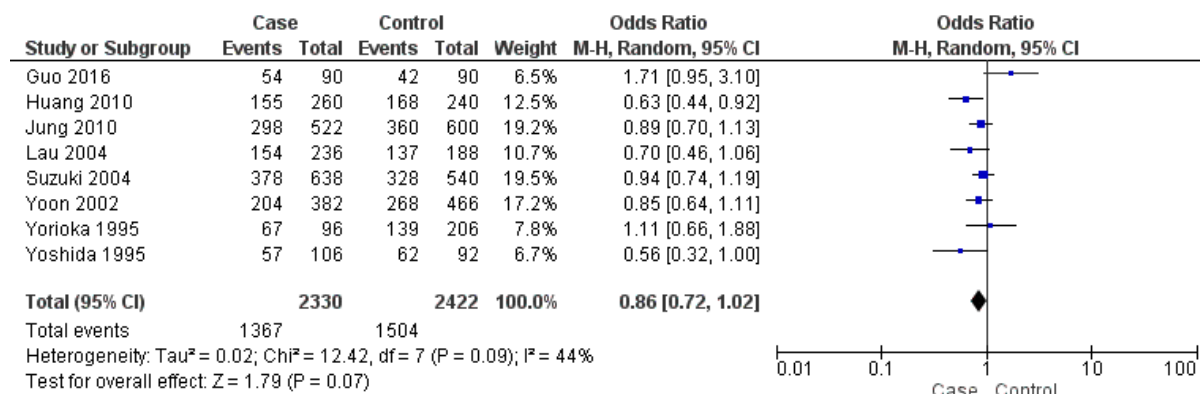
Supplementary Figure S2f: Forest plot - ACE I/D investigation, individuals with end-stage renal disease compared to healthy controls in a Middle Eastern population (ACE insertion compared to deletion).



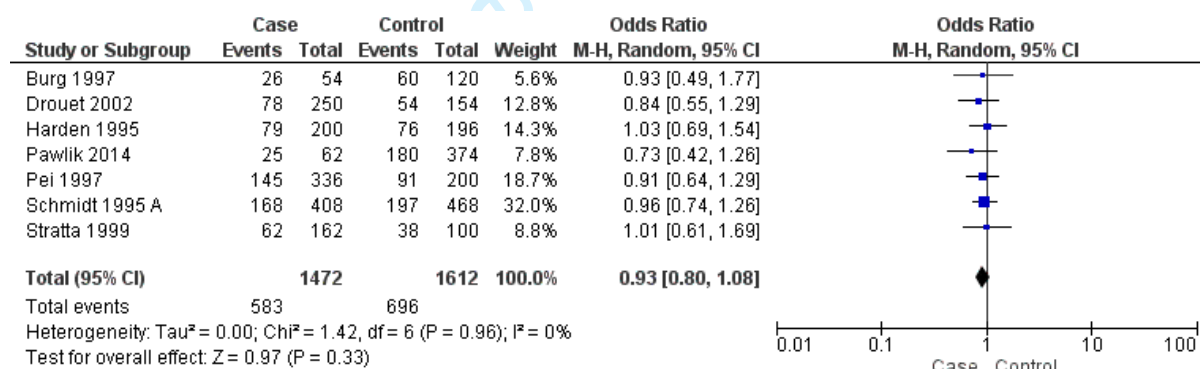
Supplementary Figure S2g: Forest plot - ACE I/D investigation, individuals with end-stage renal disease linked to type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian population (ACE insertion compared to deletion).



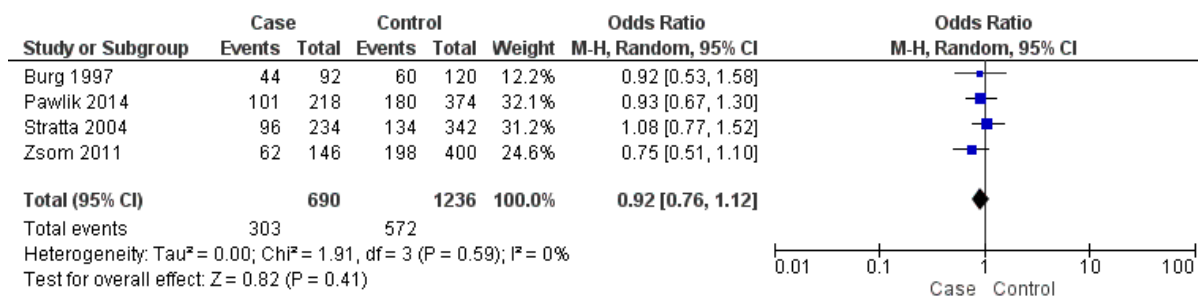
Supplementary Figure S2h: Forest plot - ACE I/D investigation, individuals with end-stage renal disease linked to type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European population (ACE insertion compared to deletion).



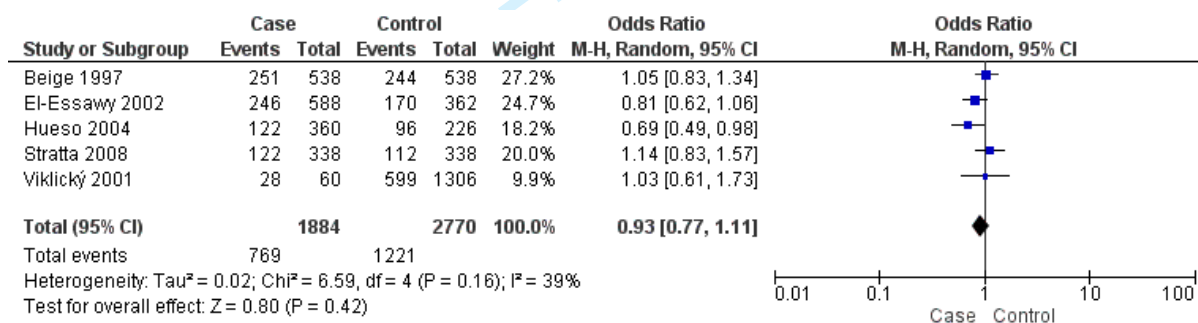
Supplementary Figure S2i: Forest plot - *ACE* I/D investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian population (*ACE* insertion compared to deletion).



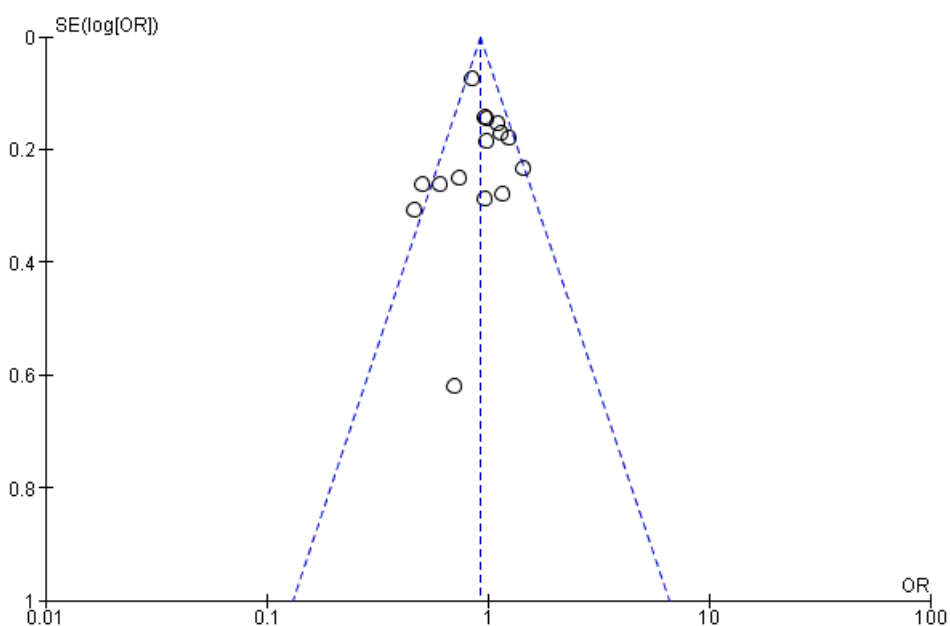
Supplementary Figure S2j: Forest plot - *ACE* I/D investigation, individuals with IgA nephropathy compared to healthy controls in a European population (*ACE* insertion compared to deletion).



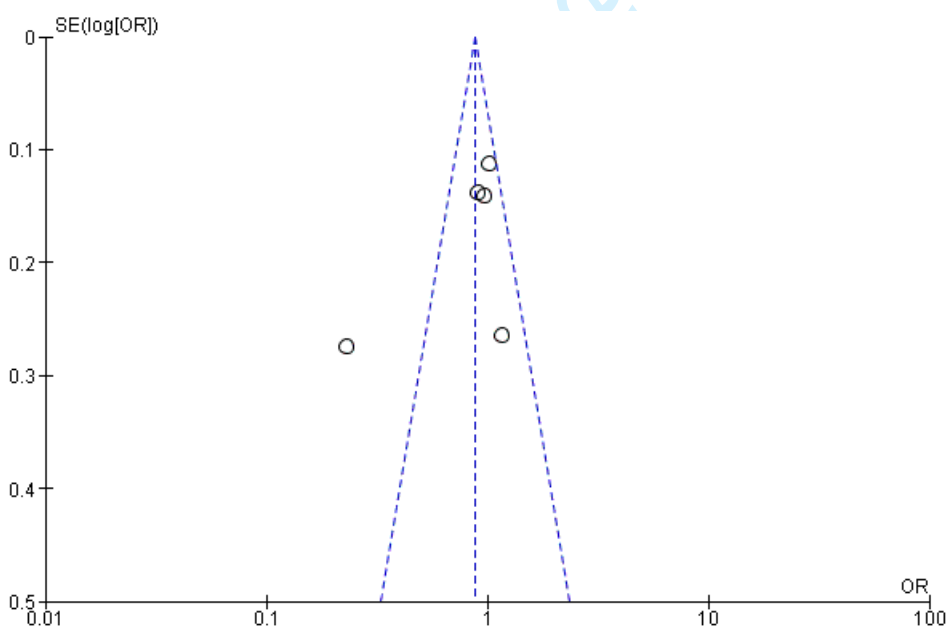
Supplementary Figure S2k: Forest plot - ACE I/D investigation, individuals with primary glomerulonephritis compared to healthy controls in a European population (ACE insertion compared to deletion).



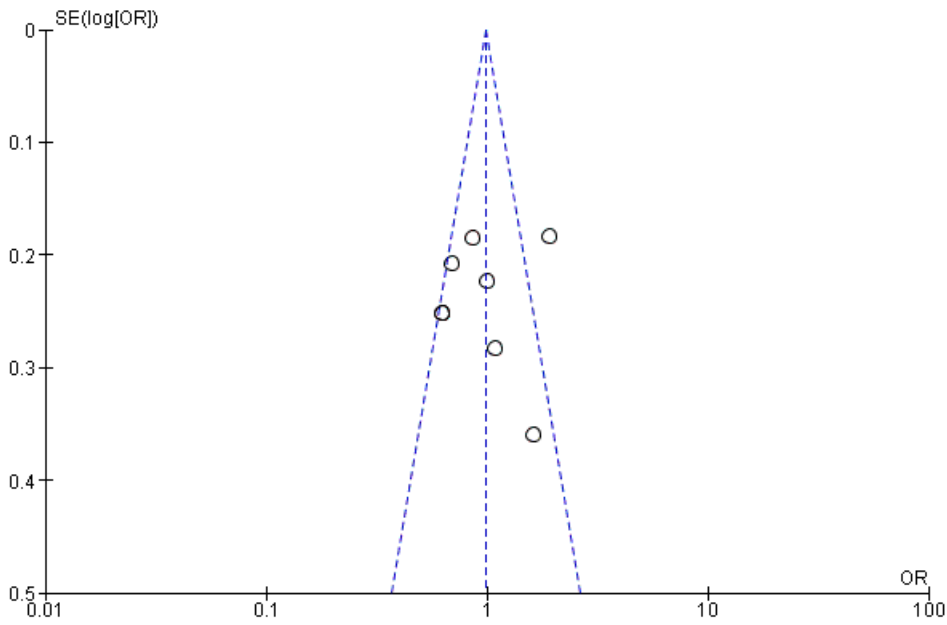
Supplementary Figure S2l: Forest plot - ACE I/D investigation, individuals who have had renal transplants compared to healthy controls in a European population (ACE insertion compared to deletion).



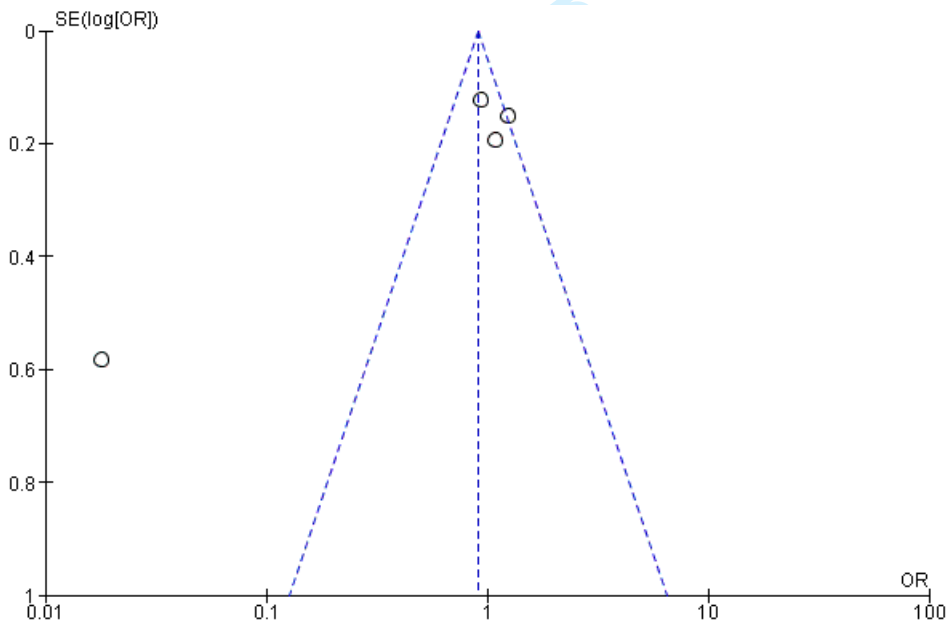
Supplementary Figure S3a: Funnel plot - ACE I/D investigation, individuals with type 1 diabetic nephropathy compared to individuals with type 1 diabetes mellitus in a European population (ACE insertion compared to deletion).



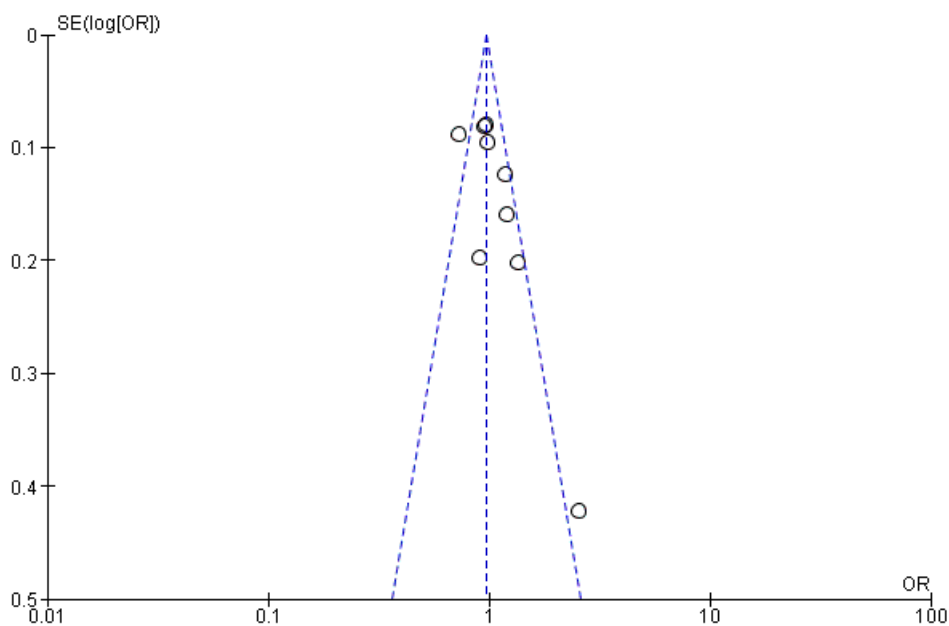
Supplementary Figure S3b: Funnel plot - ACE I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European population (ACE insertion compared to deletion).



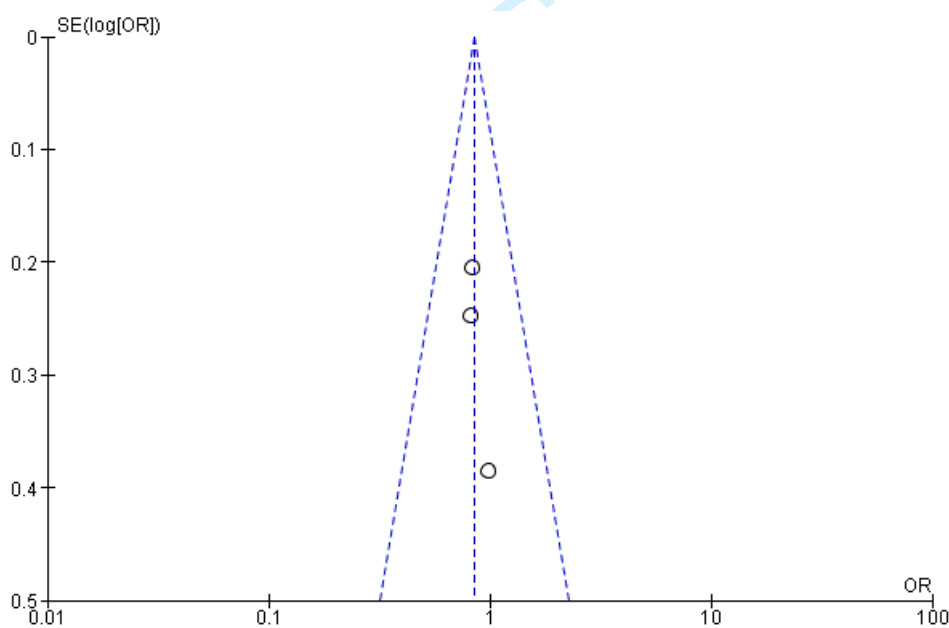
Supplementary Figure S3c: Funnel plot - *ACE* I/D investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a Middle Eastern population (*ACE* insertion compared to deletion).



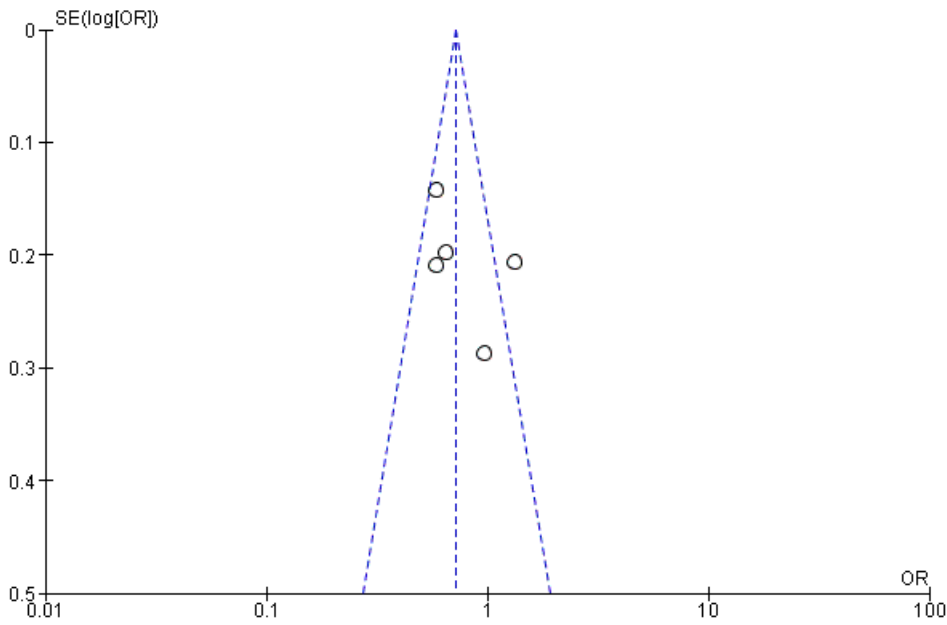
Supplementary Figure S3d: Funnel plot - *ACE* I/D investigation, individuals with chronic kidney disease compared to healthy controls in a South Asian population (*ACE* insertion compared to deletion).



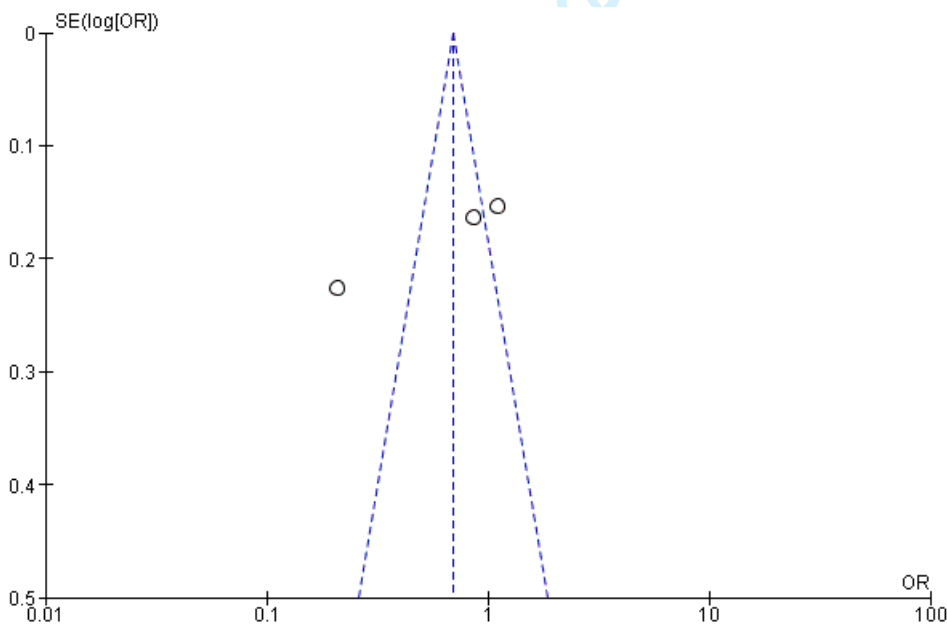
24 **Supplementary Figure S3e:** Funnel plot - *ACE* I/D investigation, individuals with end-stage renal
 25 disease compared to healthy controls in a European population (*ACE* insertion compared to deletion).
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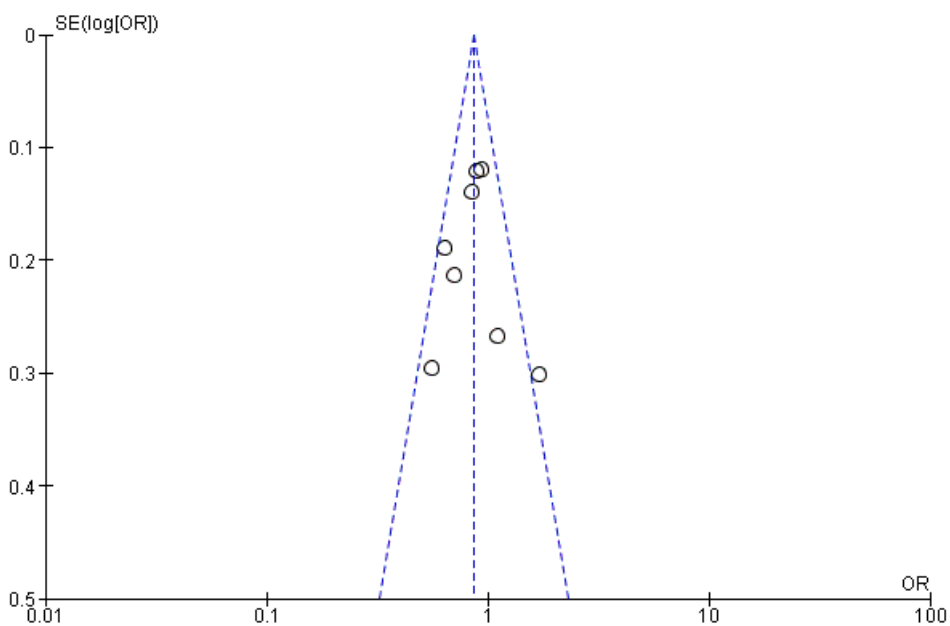
50 **Supplementary Figure S3f:** Funnel plot - *ACE* I/D investigation, individuals with end-stage renal
 51 disease compared to healthy controls in a Middle Eastern population (*ACE* insertion compared to deletion).
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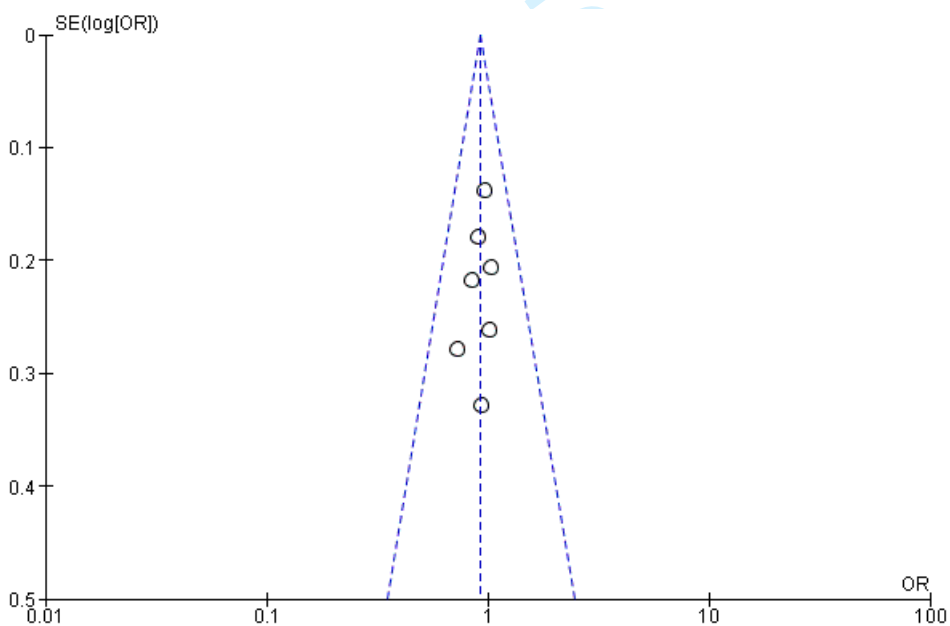
Supplementary Figure S3g: Funnel plot - ACE I/D investigation, individuals with end-stage renal disease linked to type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian population (ACE insertion compared to deletion).



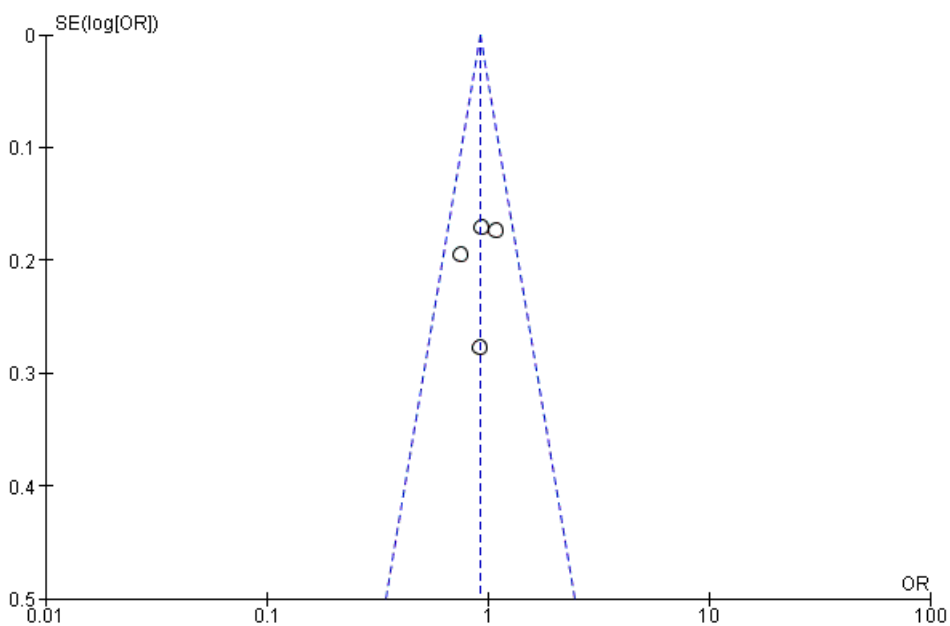
Supplementary Figure S3h: Funnel plot - ACE I/D investigation, individuals with end-stage renal disease linked to type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European population (ACE insertion compared to deletion).



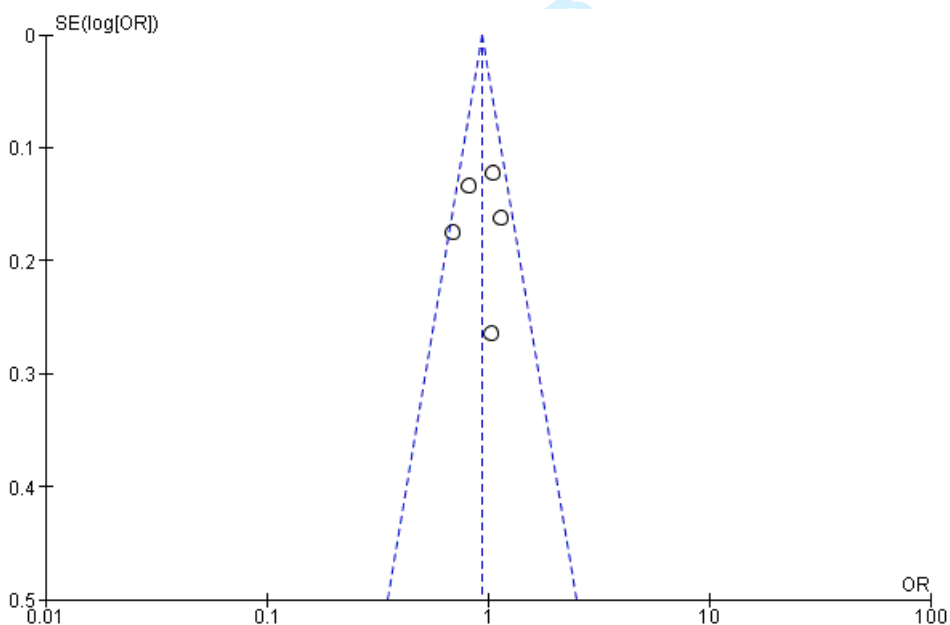
Supplementary Figure S3i: Funnel plot - ACE I/D investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian population (ACE insertion compared to deletion).



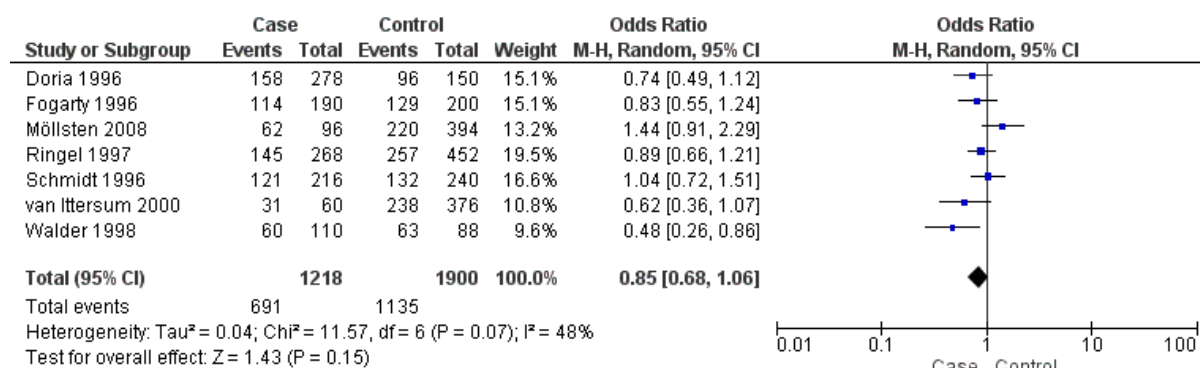
Supplementary Figure S3j: Funnel plot - ACE I/D investigation, individuals with IgA nephropathy compared to healthy controls in a European population (ACE insertion compared to deletion).



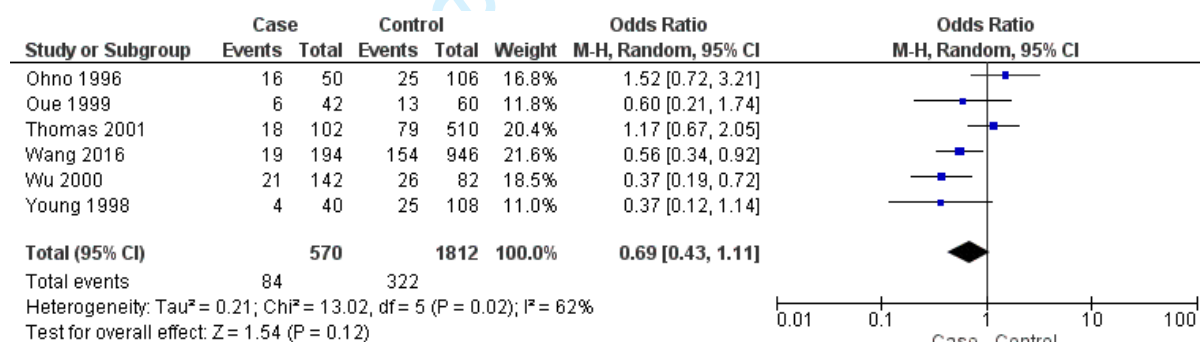
Supplementary Figure S3k: Funnel plot - ACE I/D investigation, individuals with primary glomerulonephritis compared to healthy controls in a European population (ACE insertion compared to deletion).



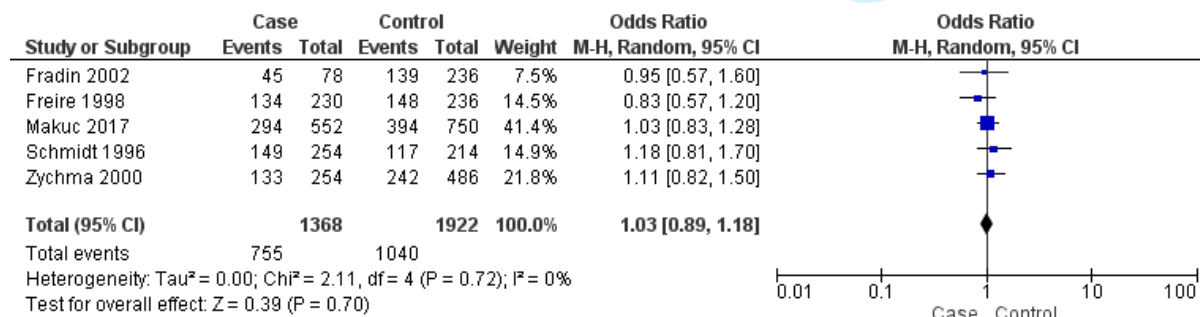
Supplementary Figure S3l: Funnel plot - ACE I/D investigation, individuals who have had renal transplants compared to healthy controls in a European population (ACE insertion compared to deletion).



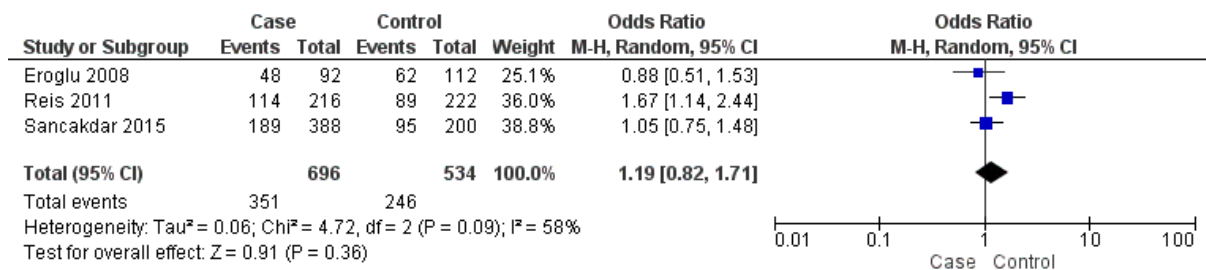
Supplementary Figure S4a: Forest plot - *AGT* rs699 investigation, individuals with type 1 diabetic nephropathy compared to individuals with type 1 diabetes mellitus in a European population (*AGT* rs699 T allele compared to C allele).



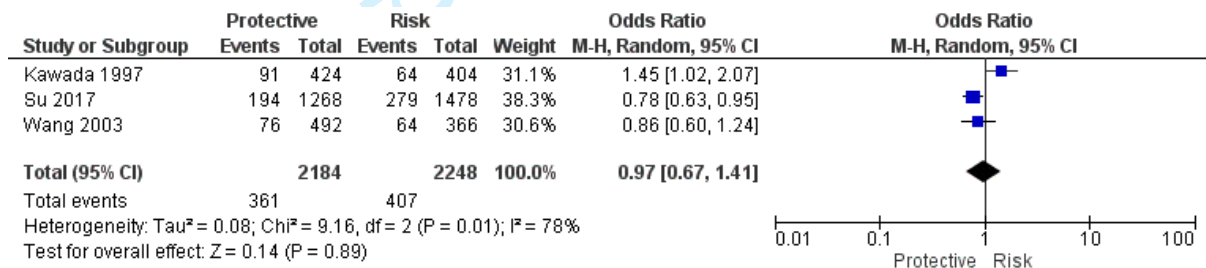
Supplementary Figure S4b: Forest plot - *AGT* rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian population (*AGT* rs699 T allele compared to C allele).



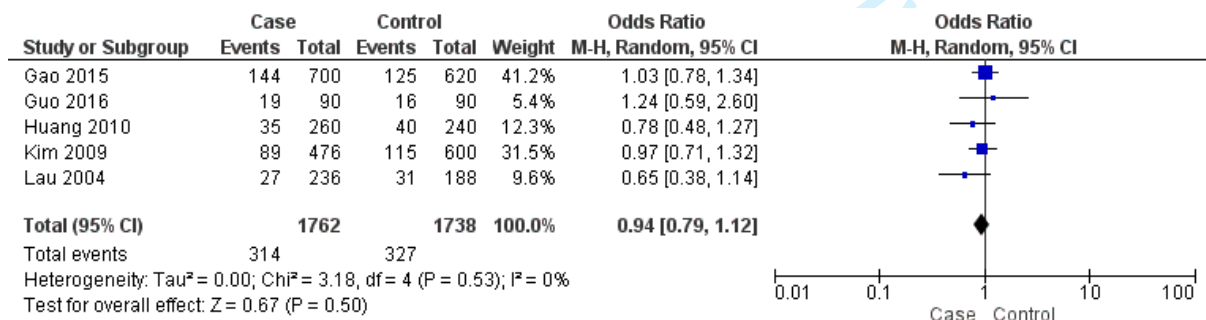
Supplementary Figure S4c: Forest plot - *AGT* rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European population (*AGT* rs699 T allele compared to C allele).



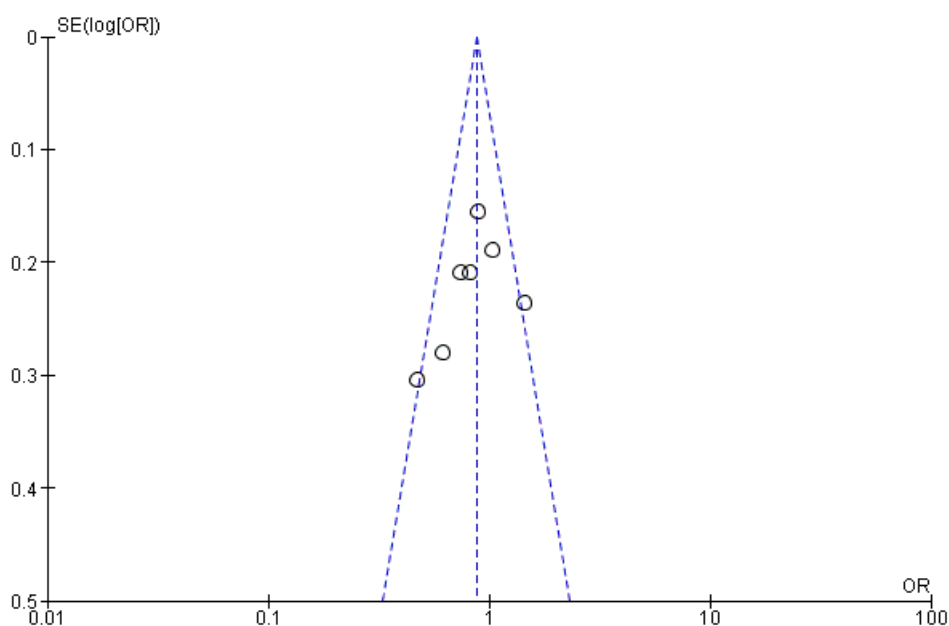
Supplementary Figure S4d: Forest plot - AGT rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a Middle Eastern population (AGT rs699 T allele compared to C allele).



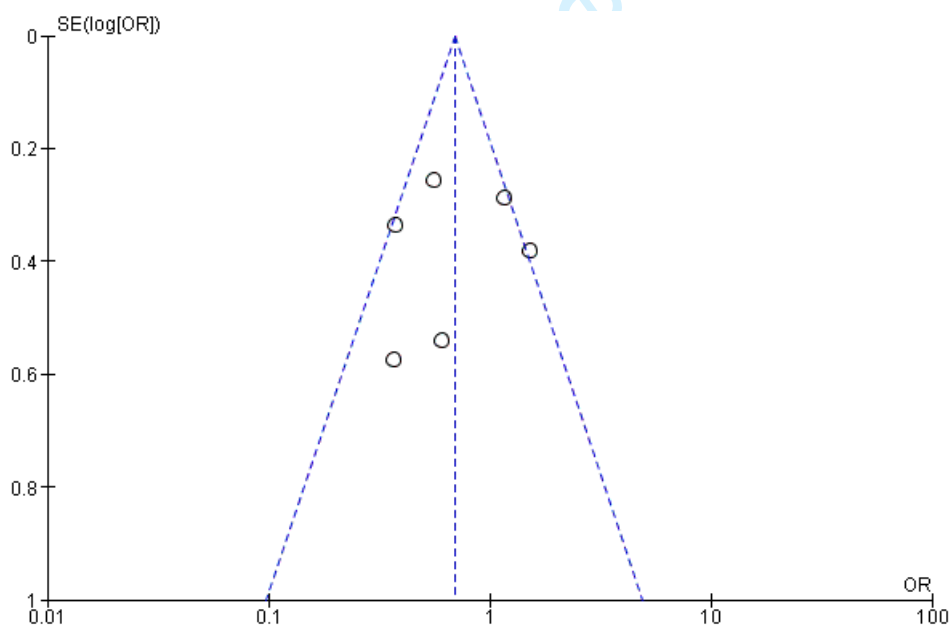
Supplementary Figure S4e: Forest plot - AGT rs699 investigation, individuals with end-stage renal disease compared to healthy controls in an East Asian population (AGT rs699 T allele compared to C allele).



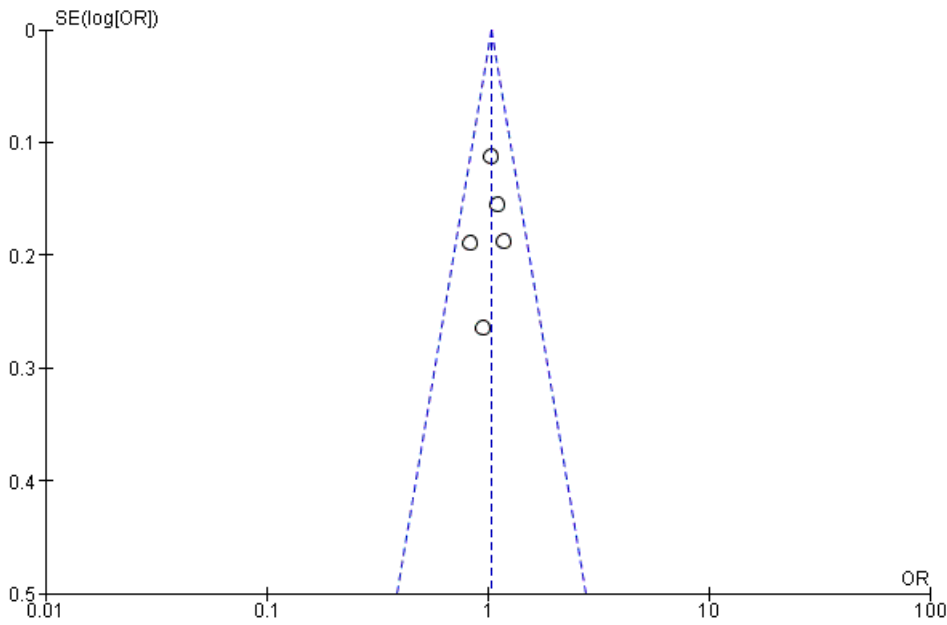
Supplementary Figure S4f: Forest plot - AGT rs699 investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian population (AGT rs699 T allele compared to C allele).



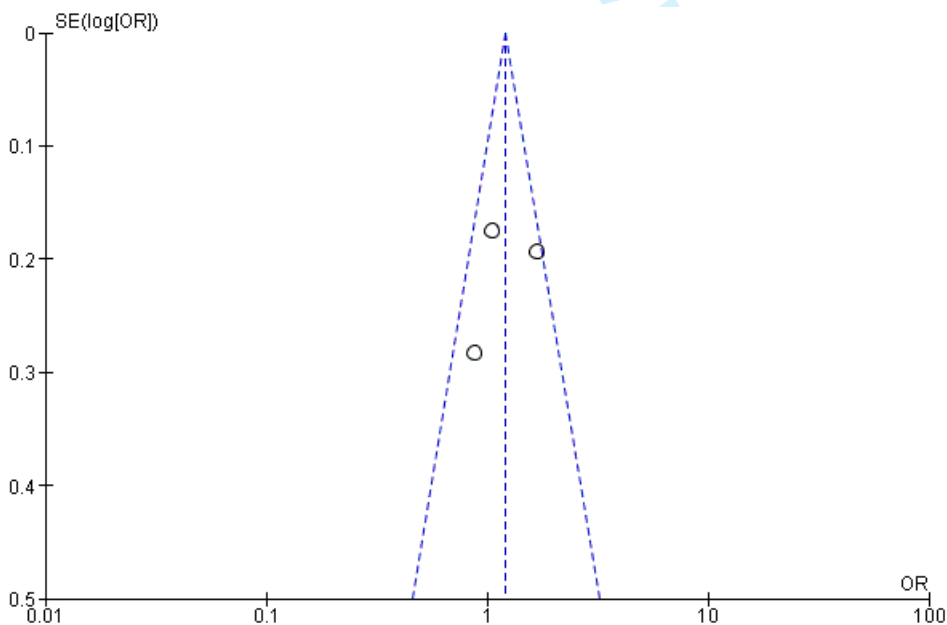
Supplementary Figure S5a: Funnel plot - *AGT* rs699 investigation, individuals with type 1 diabetic nephropathy compared to individuals with type 1 diabetes mellitus in a European population (*AGT* rs699 T allele compared to C allele).



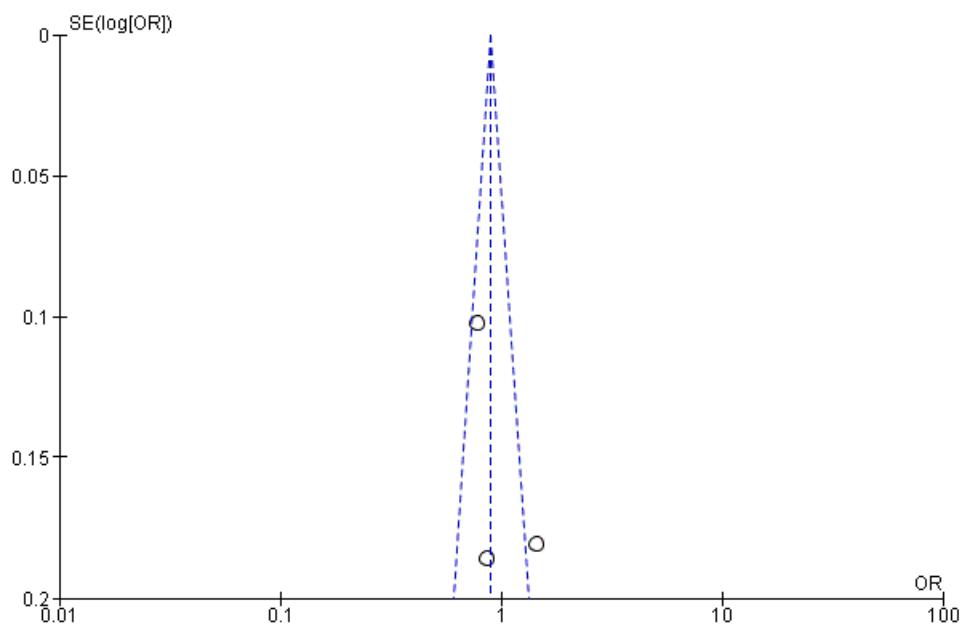
Supplementary Figure S5b: Funnel plot - *AGT* rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian population (*AGT* rs699 T allele compared to C allele).



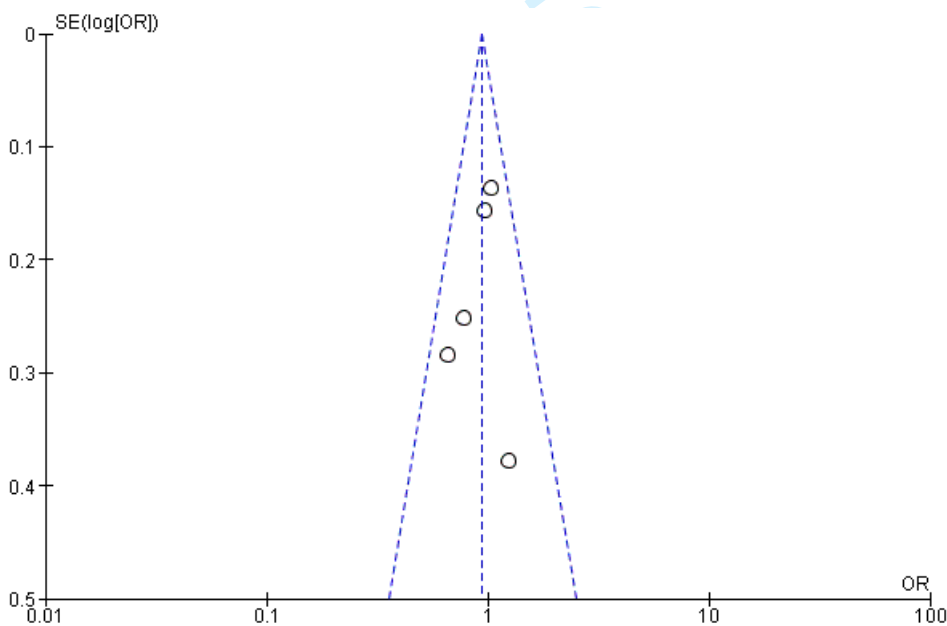
Supplementary Figure S5c: Funnel plot - AGT rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a European population (AGT rs699 T allele compared to C allele).



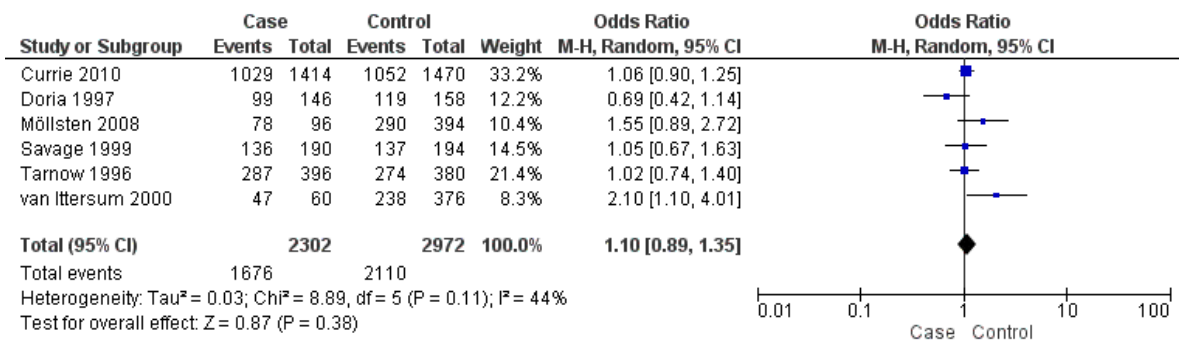
Supplementary Figure S5d: Funnel plot - AGT rs699 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in a Middle Eastern population (AGT rs699 T allele compared to C allele).



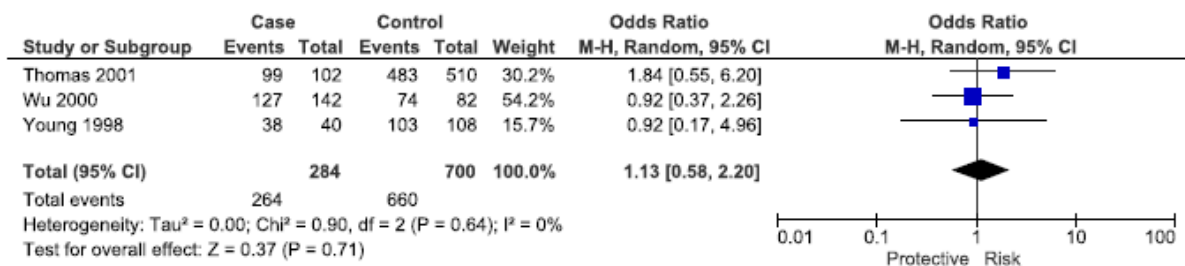
Supplementary Figure S5e: Funnel plot - AGT rs699 investigation, individuals with end-stage renal disease compared to healthy controls in an East Asian population (AGT rs699 T allele compared to C allele).



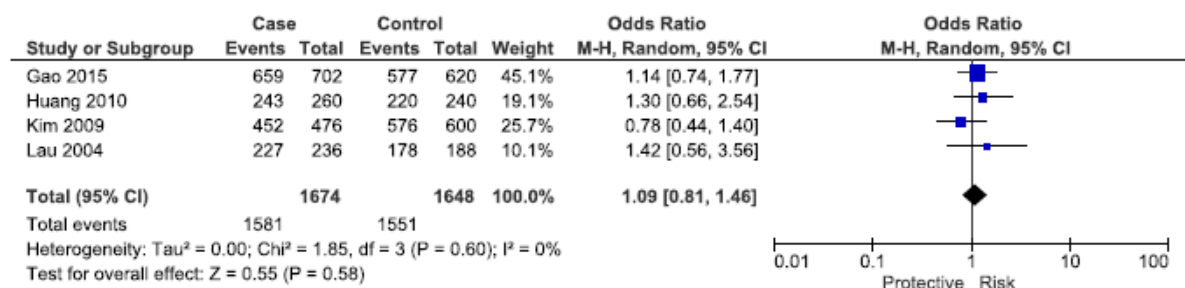
Supplementary Figure S5f: Funnel plot - AGT rs699 investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian population (AGT rs699 T allele compared to C allele).



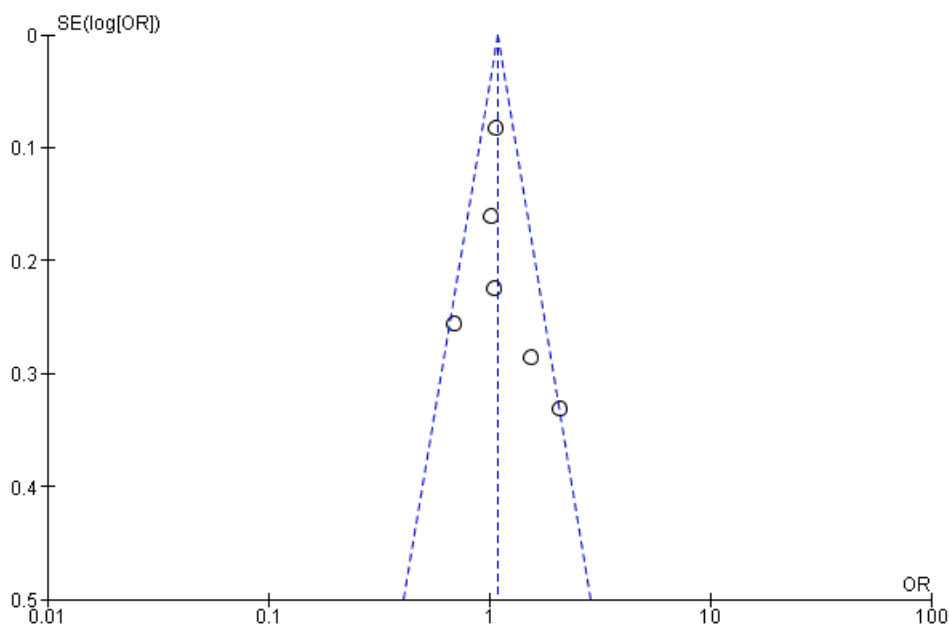
Supplementary Figure S6a: Forest plot - *AGTR1* rs5186 investigation, individuals with type 1 diabetic nephropathy compared to individuals with type 1 diabetes mellitus in a European population (*AGTR1* rs5186 A allele compared to C allele).



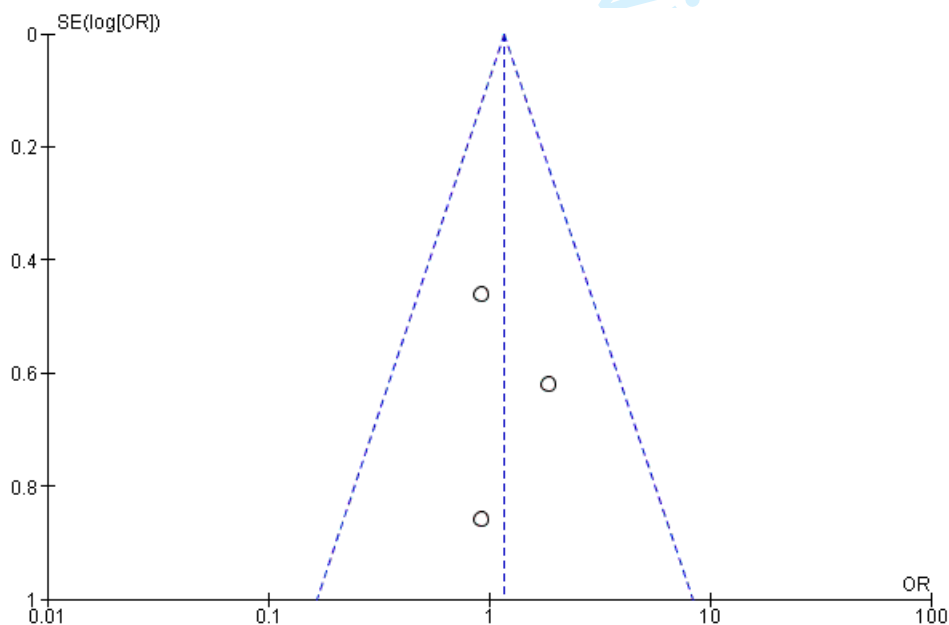
Supplementary Figure S6b: Forest plot - *AGTR1* rs5186 investigation, individuals with type 2 diabetic nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian population (*AGTR1* rs5186 A allele compared to C allele).



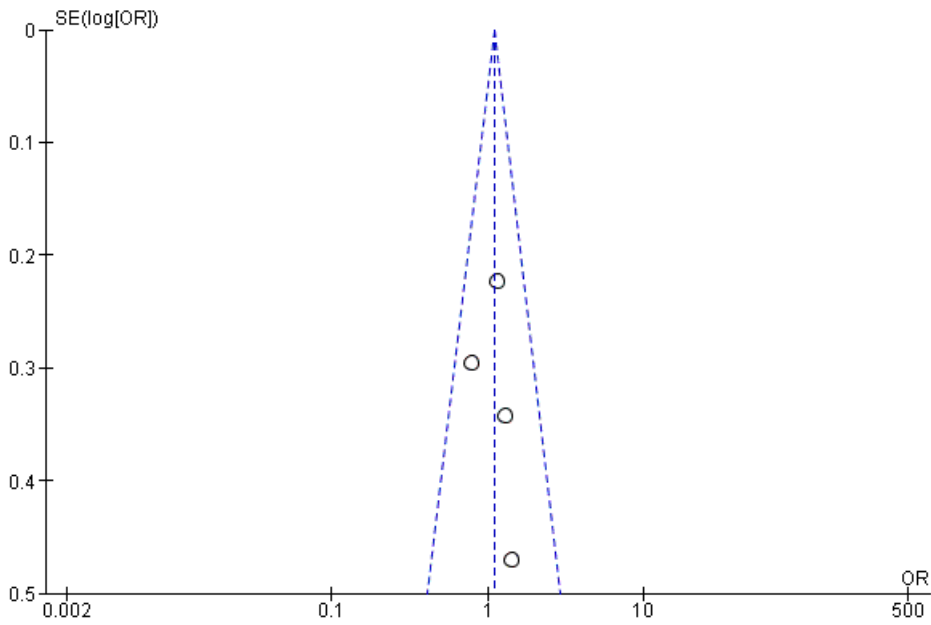
Supplementary Figure S6c: Forest plot - *AGTR1* rs5186 investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian population (*AGTR1* rs5186 A allele compared to C allele).



24 **Supplementary Figure S7a:** Funnel plot - *AGTR1* rs5186 investigation, individuals with type 1 diabetic
 25 nephropathy compared to individuals with type 1 diabetes mellitus in a European population (*AGTR1*
 26 rs5186 A allele compared to C allele).
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57 **Supplementary Figure S7b:** Funnel plot - *AGTR1* rs5186 investigation, individuals with type 2 diabetic
 58 nephropathy compared to individuals with type 2 diabetes mellitus in an East Asian population (*AGTR1*
 59 rs5186 A allele compared to C allele).
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Supplementary Figure S7c: Funnel plot - *AGTR1* rs5186 investigation, individuals with IgA nephropathy compared to healthy controls in an East Asian population (*AGTR1* rs5186 A allele compared to C allele).

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Supplementary Table S1: Search Terms

Gene	Search Terms
<i>ACE</i>	Angiotensin I Converting Enzyme Angiotensin I Converting Enzyme (Peptidyl-Dipeptidase A) 1 Dipeptidyl Carboxypeptidase I CD143 Antigen Kininase II DCP1 DCP Angiotensin I Converting Enzyme Peptidyl-Dipeptidase A 1 Transcript Angiotensin Converting Enzyme, Somatic Isoform Peptidyl-Dipeptidase A Carboxycathepsin Testicular ECA Peptidase P EC 3.4.15.1 EC 3.2.1.- CD143 MVCD3 ACE1 ACE ICH <u>AND</u> Kidney Nephrology Nephropathy Renal <u>AND</u> SNP Polymorphism Variant Allele Genotype
<i>ACE2</i>	Angiotensin I Converting Enzyme 2 Angiotensin I Converting Enzyme (Peptidyl-Dipeptidase A) 2 Angiotensin-Converting Enzyme Homolog ACE-Related Carboxypeptidase Metalloprotease MPROT15 Peptidyl-Dipeptidase A ACEH EC 3.4.17.23 EC 3.4.17 ACE2 <u>AND</u>

	<p>Kidney Nephrology Nephropathy Renal</p> <p><u>AND</u></p> <p>SNP Polymorphism Variant Allele Genotype</p>
<i>AGT</i>	<p>Angiotensinogen Angiotensinogen (Serpine Peptidase Inhibitor, Clade A, Member 8) Serpine Peptidase Inhibitor, Clade A, Member 8 Serpine A8 SERPINA8 Serine (Or Cysteine) Proteinase Inhibitor Alpha-1 Antiproteinase, Antitrypsin Alpha-1 Antiproteinase Pre-Angiotensinogen Angiotensin II Angiotensin I Antitrypsin ANHU AGT</p> <p><u>AND</u></p> <p>Kidney Nephrology Nephropathy Renal</p> <p><u>AND</u></p> <p>SNP Polymorphism Variant Allele Genotype</p>
<i>AGTR1</i>	<p>Angiotensin II Receptor Type 1 Angiotensin II Receptor, Type 1 AGTR1B AT1AR AT1BR AT2R1 AT1 Type-1B Angiotensin II Receptor Angiotensin II Type-1 Receptor Angiotensin Receptor 1B</p>

	<p>AGTR1A AT2R1B HAT1R AG2S AT1B AT1R AGTR1 AT2R1A</p> <p><u>AND</u></p> <p>Kidney Nephrology Nephropathy Renal</p> <p><u>AND</u></p> <p>SNP Polymorphism Variant Allele Genotype</p>
<i>AGTR2</i>	<p>Angiotensin II Receptor Type 2 Angiotensin II Receptor, Type 2 Angiotensin II Type-2 Receptor AT2 Angiotensin Receptor 2 ATGR2 MRX88</p> <p><u>AND</u></p> <p>Kidney Nephrology Nephropathy Renal</p> <p><u>AND</u></p> <p>SNP Polymorphism Variant Allele Genotype</p>
<i>REN</i>	<p>Renin Angiotensinogenase EC 3.4.23.15 Angiotensin-Forming Enzyme Renin Precursor, Renal EC 3.4.23</p>

	HNFJ2 REN <u>AND</u> Kidney Nephrology Nephropathy Renal <u>AND</u> SNP Polymorphism Variant Allele Genotype
<i>Additional filters added to database searches</i>	English / Spanish language Human studies Case / Control studies Not clinical trials Not review articles Not a case report Not a meta-analysis

Supplementary Table S2: Ethnicity Codes

Population	Population Code
Ad Mixed American (Southern USA and Central America)	AMR
African American	AFR
East Asian	EAS
European	EUR
Middle Eastern	ME
Mix of ethnicities	MIX
North African	NA
South Asian	SAS

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Supplementary Table S3a: Excluded studies from the ACE search

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1a)

Exclusion Stage	Title	Authors	Pubmed ID or WoS ID if Pubmed ID not available	Reason
1	Angiotensin I - Converting enzyme gene polymorphism modulates the consequences of in utero growth retardation on plasma insulin in young adults	Cambien F et al.	9519756	No data for ACE
1	Clinical utility of chitotriosidase enzyme activity in nephropathic cystinosis.	Elmonem MA et al.	25407738	No data for ACE
1	Polymorphisms in the gene encoding angiotensin I converting enzyme 2 and diabetic nephropathy	Frojdo S et al.	16211375	No data for ACE
1	Effects of erythropoietin, angiotensin II, and angiotensin-converting enzyme inhibitor on erythroid precursors in patients with posttransplantation erythrocytosis.	Glicklich D et al.	10428268	No data for ACE
1	DDOST, PRKCSH and LGALS3, which encode AGE-receptors 1, 2 and 3, respectively, are not associated with diabetic nephropathy in type 1 diabetes.	Hoverfelt A et al.	20490454	No data for ACE
1	Neuropeptide YY1 receptor polymorphism as a prognostic predictor in Japanese patients with IgA nephropathy	Ito H et al.	10363627	No data for ACE
1	Manganese superoxide dismutase gene polymorphism (V16A) is associated with stages of albuminuria in Korean type 2 diabetic patients.	Lee SJ et al.	16324912	No data for ACE
1	Impact of the preintervention rate of renal function decline on outcome of renoprotective intervention.	Lely AT et al.	18077786	No data for ACE

1	1	Kinin-dependent hypersensitivity reactions in hemodialysis: metabolic and genetic factors.	Molinaro G et al.	17003818	No data for ACE
2	1	Effect of a polymorphism of endothelial nitric oxide synthase gene in Japanese patients with IgA nephropathy.	Morita T et al.	10543322	No data for ACE
3	1	Nephropathy in type 1 diabetes: a manifestation of insulin resistance and multiple genetic susceptibilities? Further evidence from the Pittsburgh Epidemiology of Diabetes Complication Study.	Orchard TJ et al.	12164879	No data for ACE
4	1	Role of glycaemic control in development of microalbuminuria in patients with insulin dependent diabetes.	Powrie JK et al.	7819935	No data for ACE
5	1	Association of TNF- α -308 G > A and ACE I/D gene polymorphisms in hemodialysis patients with arteriovenous fistula thrombosis.	Sener EF et al.	24126814	No data for ACE
6	1	N-domain angiotensin I-converting enzyme expression in renal artery of Wistar, Wistar Kyoto, and spontaneously hypertensive rats	Bueno V et al.	15194348	Non-human study
7	1	Kallikrein and amylase contents in tissues from a mutant mouse model for human cystic fibrosis.	Catanzaro OL et al.	6186886	Non-human study
8	1	Connexin 43 is not essential for the control of renin synthesis and secretion	Gerl M et al.	24062052	Non-human study
9	1	Multi-species comparative analysis of the equine ACE gene identifies a highly conserved potential transcription factor binding site in intron 16.	Hamilton NA et al.	23408978	Non-human study
10	1	Renal angiotensin converting enzyme promotes renal damage during ureteral obstruction	Stoneking BJ et al.	9719278	Non-human study
11	1	Angiotensin-converting enzyme genotype is a predictive factor in the peak panel-reactive antibody response.	Akçay A et al.	15013293	Not a case-control study
12	1	Association of the genetic polymorphisms of the renin-angiotensin system and endothelial nitric oxide synthase with chronic renal transplant dysfunction.	Akçay A et al.	15385810	Not a case-control study

1	PAI-1 4G/5G and ACE I/D gene polymorphisms and the occurrence of myocardial infarction in patients on intermittent dialysis.	Aucella F et al.	12748347	Not a case-control study
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7	Angiotensin-converting-enzyme insertion/deletion genotype and long-term renal allograft survival.	Beige J et al.	9550656	Not a case-control study
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10	Deletion insertion polymorphism of the angiotensin converting enzyme gene and progression of diabetic nephropathy.	Bjorck S et al.	9269704	Not a case-control study
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13	Genetics of angiotensin I-converting enzyme	Costerousse O et al.	9247746	Not a case-control study
14				
15	Captopril enhances transforming growth factor (TGF)-beta1 expression in peripheral blood mononuclear cells: a mechanism independent from angiotensin converting enzyme inhibition? A study in cyclosporine-treated kidney-transplanted patients.	Di Paolo S et al.	12499886	Not a case-control study
16				
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20	Insertion/deletion polymorphism of the angiotensin-converting enzyme predicts left ventricular hypertrophy after renal transplantation.	Fedor R et al.	21620105	Not a case-control study
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23	Antiproteinuric effect of candesartan cilexetil in Japanese subjects with type 2 diabetes and nephropathy.	Haneda M et al.	15364166	Not a case-control study
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26	Association between Angiotensin I-Converting Enzyme Insertion/Deletion Polymorphism and Prognosis of Kidney Transplantation: A Meta-Analysis	Huang ZK et al.	26000752	Not a case-control study
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29	Is there a role of angiotensin-converting enzyme gene polymorphism in the failure of arteriovenous femoral shunts for hemodialysis?	Isbir CS et al.	11525534	Not a case-control study
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33	Smoking has no impact on survival and it is not associated with ACE gene I/D polymorphism in hemodialysis patients.	Kiss I et al.	28058974	Not a case-control study
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36	Antihypertensive treatment modulates the association between the D/I ACE gene polymorphism and left ventricular hypertrophy: a meta-analysis	Kuznetsova T et al.	10918550	Not a case-control study
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1	1	Genetics and the prediction of complications in type 1 diabetes	Marre M	10097900	Not a case-control study
2	1	Hereditary factors in the development of diabetic renal disease	Marre M et al.	10922971	Not a case-control study
3	1	The effect of angiotensin receptor blockade ARB on the regression of left ventricular hypertrophy in hemodialysis patients: comparison between patients with D allele and non-D allele ACE gene polymorphism.	Nakayama M et al.	16312263	Not a case-control study
4	1	Role of ACE and IL-1 β Gene Polymorphisms in Erythropoietin Hyporesponsive Patients with Chronic Kidney Disease with Anemia.	Nand N et al.	28457029	Not a case-control study
5	1	Angiotensin-I converting enzyme insertion/deletion polymorphism and its association with diabetic nephropathy: a meta-analysis of studies reported between 1994 and 2004 and comprising 14,727 subjects	Ng D et al.	15830182	Not a case-control study
6	1	Is the presence of retinopathy of practical value in defining cases of diabetic nephropathy in genetic association studies? The experience with the ACE insertion/deletion polymorphism in 53 studies comprising 17,791 subjects	Ng DPK et al.	18523141	Not a case-control study
7	1	Correlates of ACE activity in macroalbuminuric type 2 diabetic patients treated with chronic ACE inhibition.	Nikzamir A et al.	17986476	Not a case-control study
8	1	Insertion/deletion polymorphism in intron 16 of the ACE gene and left ventricular hypertrophy in patients with end-stage renal disease.	Osono E et al.	9820440	Not a case-control study
9	1	Risk factors for the progression of microalbuminuria in Japanese type 2 diabetic patients - a 10-year follow-up study	Oue T et al.	10580616	Not a case-control study
10	1	Survival in type 2 diabetic patients in dialysis and the number of risk alleles in polymorphisms of the renin-angiotensin system genes.	Padro-Miquel A et al.	19014923	Not a case-control study

1	Effect of deletion polymorphism of angiotensin converting enzyme gene on progression of diabetic nephropathy during inhibition of angiotensin converting enzyme: observational follow up study.	Parving HH et al.	8806248	Not a case-control study	
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6	1	Altered activities of kininase II, an angiotensin converting enzyme, prekallikrein, and nitric oxide in Kuwaiti patients with type 2 diabetes	Sharma JN et al.	25964383	Not a case-control study
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10	1	Impact of genetic polymorphisms of the renin-angiotensin system and of non-genetic factors on kidney transplant function--a single-center experience.	Siekierka-Harreis M et al.	19681973	Not a case-control study
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14	1	Angiotensin-converting enzyme (ACE) inhibition in type 2, diabetic patients-- interaction with ACE insertion/deletion polymorphism.	So WY et al.	16395257	Not a case-control study
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17	1	Microfluidic chip-based method for genotyping microsatellites, VNTRs and insertion/deletion polymorphisms.	Sohni YR et al.	12554058	Not a case-control study
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20	1	M235T angiotensinogen gene polymorphism and cardiovascular renal risk	Staessen JA et al.	10100088	Not a case-control study
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23	1	Mistyping of the human angiotensin-converting enzyme gene polymorphism: Frequency, causes and possible methods to avoid errors in typing	Ueda S et al.	8863184	Not a case-control study
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26	1	Association between angiotensin-converting-enzyme gene polymorphism and failure of renoprotective therapy.	van Essen GG et al.	8538349	Not a case-control study
27					
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29	1	Contribution of gene polymorphisms in the renin-angiotensin system to macroangiopathy in patients with diabetic nephropathy.	Wong TY et al.	11431175	Not a case-control study
30					
31					
32	1	Disease progression, response to ACEI/ATRA therapy and influence of ACE gene in IgA nephritis.	Woo KT et al.	17601378	Not a case-control study
33					
34					
35	1	Angiotensin-converting enzyme inhibitor versus angiotensin 2 receptor antagonist therapy and the influence of angiotensin-converting enzyme gene polymorphism in IgA nephritis.	Woo KT et al.	18536822	Not a case-control study
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1	Angiotensin converting enzyme gene polymorphism and development of post-transplant erythrocytosis.	Yildiz A et al.	12832741	Not a case-control study
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6	Gene polymorphisms of the renin-angiotensin-aldosterone system and angiotensin II type 1-receptor activating antibodies in renal rejection.	Zhang G et al.	17984617	Not a case-control study
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10	Angiotensin-converting enzyme gene polymorphism in Kuwaiti patients with systemic lupus erythematosus.	Al-Awadhi AM et al.	17631741	Not a renal disease focus
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13	Association of Angiotensin Converting Enzyme Insertion-Deletion Polymorphism with Hypertension in Emiratis with Type 2 Diabetes Mellitus and Its Interaction with Obesity Status.	Alsafar H et al.	26491214	Not a renal disease focus
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16	Association of ACE gene D polymorphism with left ventricular hypertrophy in patients with diastolic heart failure: a case-control study.	Bahramali E et al.	26861937	Not a renal disease focus
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19	A novel human heparanase splice variant, T5, endowed with protumorigenic characteristics.	Barash U et al.	20007507	Not a renal disease focus
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22	Synergistic effect of alpha-adducin and ACE genes causes blood pressure changes with body sodium and volume expansion.	Barlassina C et al.	10720960	Not a renal disease focus
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25	Isolated polycystic liver disease genes define effectors of polycystin-1 function.	Besse W et al.	28375157	Not a renal disease focus
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28	Association between plasma activities of semicarbazide-sensitive amine oxidase and angiotensin-converting enzyme in patients with type 1 diabetes mellitus.	Boomsma F et al.	15830186	Not a renal disease focus
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31	CCL18: a urinary marker of Gaucher cell burden in Gaucher patients.	Boot RG et al.	16736095	Not a renal disease focus
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34	Renin-angiotensin system gene polymorphisms: assessment of the risk of coronary heart disease.	Buraczynska M et al.	14502296	Not a renal disease focus
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37	Angiotensin-converting enzyme (ACE) haplotypes and cyclosporine A (CsA) response: a model of the complex relationship between ACE quantitative trait locus and pathological phenotypes.	Catarsi P et al.	16002416	Not a renal disease focus
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1	1	A study on the association between angiotensin-I converting enzyme I/D dimorphism and type-2 diabetes mellitus.	Chmaisse HN et al.	19861867	Not a renal disease focus
2	1	alpha-adducin and angiotensin I-converting enzyme polymorphisms in essential hypertension	Clark CJ et al.	11116113	Not a renal disease focus
3	1	Elevated urinary albumin excretion is not linked to the angiotensin I-converting enzyme gene polymorphism in clinically healthy subjects	Clausen P et al.	10872702	Not a renal disease focus
4	1	Association of renin-angiotensin and endothelial nitric oxide synthase gene polymorphisms with blood pressure progression and incident hypertension: prospective cohort study.	Conen D et al.	18698212	Not a renal disease focus
5	1	Angiotensin I-converting enzyme (kininase II) in cardiovascular and renal regulations and diseases	Costerousse O et al.	9830503	Not a renal disease focus
6	1	ACE and PC-1 gene polymorphisms in normoalbuminuric Type 1 diabetic patients: a 10-year prospective study.	de Azevedo MJ et al.	12126783	Not a renal disease focus
7	1	Insertion/Deletion Polymorphism of Angiotensin I-converting Enzyme Gene Is Linked With Chromophobe Renal Cell Carcinoma	de Martino M et al.	21477733	Not a renal disease focus
8	1	Polymorphisms in genes of the renin-angiotensin-aldosterone system and renal cell cancer risk: interplay with hypertension and intakes of sodium, potassium and fluid.	Deckers IA et al.	24978482	Not a renal disease focus
9	1	ACE gene insertion/deletion polymorphism modulates capillary permeability in hypertension	Dell'omo G et al.	16889537	Not a renal disease focus
10	1	Genetic polymorphisms associated with exertional rhabdomyolysis	Deuster PA et al.	23543093	Not a renal disease focus
11	1	Distribution of different HLA antigens in Greek hypertensives according to the angiotensin-converting enzyme genotype.	Diamantopoulos EJ et al.	10821349	Not a renal disease focus
12	1	Are the angiotensin-converting enzyme gene and activity risk factors for stroke?	Dikmen M et al.	16791358	Not a renal disease focus
13	1	Angiotensin-converting enzyme (insertion/deletion) and endothelial nitric oxide synthase polymorphisms in patients with systemic lupus erythematosus.	Douglas G et al.	15338496	Not a renal disease focus

1	Abnormal hepatocystin caused by truncating PRKCSH mutations leads to autosomal dominant polycystic liver disease.	Drenth JP et al.	15057895	Not a renal disease focus	
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4	1	The angiotensin I-converting enzyme gene insertion/deletion polymorphism is linked to early gastric cancer	Ebert MPA et al.	16365022	Not a renal disease focus
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7	1	Association of chitotriosidase enzyme activity and genotype with the risk of nephropathy in type 2 diabetes.	Elmonem MA et al.	26589000	Not a renal disease focus
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10	1	Relationship of bradykinin B2 receptor gene polymorphism with essential hypertension and left ventricular hypertrophy.	Fu Y et al.	15894833	Not a renal disease focus
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13	1	Deletion polymorphism of the angiotensin-converting enzyme gene is independently associated with left ventricular mass and geometric remodeling in systemic hypertension.	Gharavi AG et al.	8677872	Not a renal disease focus
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16	1	The presence of PAI-1 4G/5G and ACE DD genotypes increases the risk of early-stage AVF thrombosis in hemodialysis patients.	Gungor Y et al.	21332339	Not a renal disease focus
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19	1	The Captopril Prevention Project (CAPPP) in hypertension--baseline data and current status.	Hansson L et al.	9495662	Not a renal disease focus
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22	1	Relationship of eNOS gene variants to diseases that have in common an endothelial cell dysfunction.	Heltianu C et al.	15784171	Not a renal disease focus
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25	1	Relationship of the angiotensin-converting enzyme gene polymorphism to glucose intolerance, insulin resistance, and hypertension in NIDDM.	Huang XH et al.	9544854	Not a renal disease focus
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28	1	Distribution of human leukocyte antigen alleles in systemic lupus erythematosus patients with angiotensin converting enzyme insertion/deletion polymorphism.	Hussain N et al.	23448612	Not a renal disease focus
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31	1	Comprehensive analysis of the renin-angiotensin gene polymorphisms with relation to hypertension in the Japanese	Kato N et al.	10953993	Not a renal disease focus
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34	1	Association of clinical manifestations with HLA-B alleles in Takayasu arteritis	Kitamura H et al.	9951811	Not a renal disease focus
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37	1	Lys(173)Arg and -344T/C variants of CYP11B2 in Japanese patients with low-renin hypertension.	Komiya I et al.	10720581	Not a renal disease focus
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1	Effects of angiotensin-converting enzyme gene polymorphism and serum vitamin D levels on ambulatory blood pressure measurement and left ventricular mass in Turkish hypertensive population.	Kulah E et al.	17625392	Not a renal disease focus
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7	Efficacy of Korean Red Ginseng by Single Nucleotide Polymorphism in Obese Women: Randomized, Double-blind, Placebo-controlled Trial	Kwon DH et al.	23717118	Not a renal disease focus
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13	Angiotensin-Converting Enzyme Gene Polymorphism Has No Influence On The Circulating Renin-Angiotensin-Aldosterone System Or Blood-Pressure In Normotensive Subjects	Lachurie MI et al.	7796503	Not a renal disease focus
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15	1			
16	Mutations in PRKCSH cause isolated autosomal dominant polycystic liver disease.	Li A et al.	12529853	Not a renal disease focus
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18	1			
19	Angiotensin-converting enzyme (ACE) gene II genotype protects against the development of diabetic peripheral neuropathy in type 2 diabetes mellitus.	Mansoor Q et al.	22607040	Not a renal disease focus
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21	1			
22	Renal changes on hyperglycemia and angiotensin-converting enzyme in type 1 diabetes	Marre M et al.	10082486	Not a renal disease focus
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24	1			
25	Detection of the association between a deletion polymorphism in the gene encoding angiotensin I-converting enzyme and advanced diabetic retinopathy	Matsumoto A et al.	11106834	Not a renal disease focus
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27	1			
28	Association of the D allele of the angiotensin I converting enzyme polymorphism with malignant vascular injury	Mayer NJ et al.	11836444	Not a renal disease focus
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30	1			
31	Late-onset acid maltase deficiency. Detection of patients and heterozygotes by urinary enzyme assay.	Mehler M et al.	9923	Not a renal disease focus
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33	1			
34	Association of polymorphisms of angiotensin I converting enzyme 2 with retinopathy in type 2 diabetes mellitus among Chinese individuals	Meng N et al.	25359286	Not a renal disease focus
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36	1			
37	Angiotensin converting enzyme gene polymorphism and renal hemodynamic function in early diabetes.	Miller JA et al.	8995725	Not a renal disease focus
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1	1	Genetic risk for renal artery stenosis: association with deletion polymorphism in angiotensin 1-converting enzyme gene.	Missouris CG et al.	8821841	Not a renal disease focus
2	1	Renal ACE immunohistochemical localization in NIDDM patients with nephropathy.	Mizuri S et al.	9469501	Not a renal disease focus
3	1	Association of B2 receptor polymorphisms and ACE activity with ACE inhibitor-induced angioedema in black and mixed-race South Africans.	Moholisa RR et al.	23730990	Not a renal disease focus
4	1	Renal outcome and vascular morbidity in systemic lupus erythematosus (SLE): lack of association with the angiotensin-converting enzyme gene polymorphism.	Molad Y et al.	11071585	Not a renal disease focus
5	1	Contribution of angiotensin I converting enzyme gene polymorphism and angiotensinogen gene polymorphism to blood pressure regulation in essential hypertension.	Mondorf UF et al.	9524045	Not a renal disease focus
6	1	Inhibition of tissue angiotensin converting enzyme activity prevents malignant hypertension in TGR(mREN2)27.	Montgomery HE et al.	9797175	Not a renal disease focus
7	1	Independent, Marked Associations Of Alleles Of The Insulin-Receptor And Dipeptidyl Carboxypeptidase-I Genes With Essential-Hypertension	Morris Bj et al.	8104754	Not a renal disease focus
8	1	Increased D allele frequency of the angiotensin-converting enzyme gene in pulmonary fibrosis.	Morrison CD et al.	11381371	Not a renal disease focus
9	1	Angiotensin converting enzyme (ACE) insertion/deletion (I/D) polymorphism, and diabetic retinopathy in subjects with IDDM and NIDDM.	Nagi DK et al.	8582133	Not a renal disease focus
10	1	Angiotensin-converting enzyme (ACE) gene insertion/deletion polymorphism is not a risk factor for hypertension in SLE nephritis.	Negi VS et al.	25957879	Not a renal disease focus
11	1	Carotid intima-media thickness and ACE-gene polymorphism in hemodialysis patients.	Nergizoglu G et al.	10493570	Not a renal disease focus
12	1	Association of angiotensin-converting enzyme gene insertion/deletion polymorphism with metabolic syndrome in Iranians with type 2 diabetes mellitus.	Nikzamir A et al.	18154415	Not a renal disease focus

1	1	Angiotensin Converting Enzyme Gene Insertion/Deletion Variant and Familial Mediterranean Fever-related Amyloidosis.	Nursal AF et al.	29891744	Not a renal disease focus
2	1	Pharmacogenetic analysis of the effect of angiotensin-converting enzyme inhibitor on restenosis after percutaneous transluminal coronary angioplasty.	Okamura A et al.	10535720	Not a renal disease focus
3	1	Genetic polymorphisms of the renin-angiotensin system and atheromatous renal artery stenosis.	Olivieri O et al.	10567188	Not a renal disease focus
4	1	Different impact of deletion polymorphism of gene on the risk of renal and coronary artery disease.	Olivieri O et al.	11791024	Not a renal disease focus
5	1	Increased frequency of the angiotensin-converting enzyme gene D-allele is associated with noninfectious pulmonary dysfunction following allogeneic stem cell transplant.	Onizuka M et al.	16044138	Not a renal disease focus
6	1	Hepatocystin is Essential for TRPM7 Function During Early Embryogenesis.	Overton JD et al.	26671672	Not a renal disease focus
7	1	Angiotensin-converting enzyme and angiotensin II receptor subtype 2 genotypes in type 1 diabetes and severe hypoglycaemia requiring emergency treatment: a case cohort study.	Pedersen-Bjergaard U et al.	19820429	Not a renal disease focus
8	1	Impact of maternal angiotensinogen M235T polymorphism and angiotensin-converting enzyme insertion/deletion polymorphism on blood pressure, protein excretion and fetal outcome in pregnancy.	Pfab T et al.	17563539	Not a renal disease focus
9	1	Renovascular disease: effect of ACE gene deletion polymorphism and endovascular revascularization.	Pizzolo F et al.	14718831	Not a renal disease focus
10	1	Angiotensin-converting enzyme gene polymorphism in patients with systemic lupus.	Prkacin I et al.	11505631	Not a renal disease focus
11	1	The relationship between ACE/AGT gene polymorphisms and the risk of diabetic retinopathy in Chinese patients with type 2 diabetes.	Qiao YC et al.	29378484	Not a renal disease focus
12	1	Association of angiotensin-converting enzyme gene dimorphisms with severity of lupus disease.	Rabbani MA et al.	18711292	Not a renal disease focus

1	Leukocyte beta-glucosidase in homozygotes and heterozygotes for Gaucher disease.	Raghavan SS et al.	6770675	Not a renal disease focus
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7	Association of angiotensinogen M235T and A(-6)G gene polymorphisms with coronary heart disease with independence of essential hypertension: the PROCAGENE study. Prospective Cardiac Gene.	Rodriquez-Perez JC et al.	11345362	Not a renal disease focus
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11	Testing of potential glycan-based heparanase inhibitors in a fluorescence activity assay using either bacterial heparinase II or human heparanase.	Schoenfeld AK et al.	24667567	Not a renal disease focus
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15	Angiotensin-converting enzyme gene I/D polymorphism increases the susceptibility to hypertension and additive diseases: A study on North Indian patients.	Singh M et al.	27030424	Not a renal disease focus
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18	Association of APOE (Hha1) and ACE (I/D) gene polymorphisms with type 2 diabetes mellitus in North West India	Singh PP et al.	16621107	Not a renal disease focus
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21	Angiotensin-converting enzyme gene I/D polymorphism in malignant hypertension.	Stefansson B et al.	10855732	Not a renal disease focus
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24	Increased amount of the angiotensin-converting enzyme (ACE) mRNA originating from the ACE allele with deletion.	Suehiro T et al.	15164285	Not a renal disease focus
25				
26	Genetic variants in hypertensive patients with coronary artery disease and coexisting atheromatous renal artery stenosis.	Szperl M et al.	19043368	Not a renal disease focus
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29	Angiotensin I converting enzyme gene polymorphisms in systemic lupus erythematosus: decreased prevalence of DD genotype in African American patients	Tassiulas IO et al.	9710341	Not a renal disease focus
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32	Albuminuria and the renin-angiotensin system gene polymorphisms in type-2-diabetic and in normoglycemic hypertensive Chinese.	Thomas GN et al.	11200871	Not a renal disease focus
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35	Peripheral vascular disease in Type 2 diabetic Chinese patients: associations with metabolic indices, concomitant vascular disease and genetic factors.	Thomas GN et al.	14632699	Not a renal disease focus
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38	Angiotensin-converting enzyme gene polymorphism and vascular manifestations in Korean patients with SLE.	Uhm WS et al.	12043886	Not a renal disease focus
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1	Genetic risk of atherosclerotic renal artery disease: the candidate gene approach in a renal angiography cohort.	van Onna M et al.	15326089	Not a renal disease focus
1	Angiotensin I-converting enzyme and angiotensinogen gene interaction and prediction of essential hypertension	Vasku A et al.	9607178	Not a renal disease focus
1	Association between ACE gene polymorphisms and Alzheimer's disease in Han population in Hebei Peninsula	Wang XL et al.	WOS:000412148800122	Not a renal disease focus
1	COL4A1 mutations in patients with sporadic late-onset intracerebral hemorrhage	Weng YC et al.	22522439	Not a renal disease focus
1	Increased expression of angiotensin II type 1 receptor (AGTR1) in heart transplant recipients with recurrent rejection.	Yamani MH et al.	17097490	Not a renal disease focus
1	No association between deletion-type angiotensin-converting enzyme gene polymorphism and left-ventricular hypertrophy in hemodialysis patients.	Yildiz A et al.	10657713	Not a renal disease focus
1	Frequencies Of Variants Of Candidate Genes In Different Age-Groups Of Hypertensives	Zee Ryl et al.	7882587	Not a renal disease focus
1	[Renin-angiotensin system genes in chronic glomerulonephritis].	Buraczynska M et al.	11865575	Not English or Spanish
1	[Association of the renin-angiotensin system gene polymorphism with nephropathy in type II diabetes].	Buraczynska M et al.	12476891	Not English or Spanish
1	[Genetic predisposition to systemic complications of arterial hypertension in maintenance haemodialysis patients].	Bzoma B et al.	19112833	Not English or Spanish
1	[Is PstI polymorphism of the angiotensin I converting enzyme gene associated with nephropathy development in non-insulin-dependent diabetes mellitus (preliminary study)].	Grzeszczak W et al.	9499204	Not English or Spanish
1	[Angiotensin-converting enzyme gene polymorphism and the clinical pathological features and progression in lupus nephritis].	Guan T et al.	10436947	Not English or Spanish
1	[I/D relationship between polymorphism of ACE gene and progression of chronic glomerulonephritis].	Kaliev RR et al.	16078593	Not English or Spanish
1	[Association of the complex of polymorphic markers of ACE genes, aldosterone synthetase and endothelial synthetase of nitric oxide with progression of chronic glomerulonephritis].	Kamysheva ES et al.	15532370	Not English or Spanish

1	[Angiotensin-converting enzyme insertion/deletion polymorphism and blood pressure regulation in type 2 diabetic patients].	Krajina-Andricevic M et al.	23120809	Not English or Spanish	
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5	1	[Polymorphism studies of angiotensin converting enzyme gene in chronic glomerulonephritis].	Kutyryna IM et al.	10420452	Not English or Spanish
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9	1	[Relationship between serum angiotensin I-converting enzyme activity and diabetic nephropathy in patients with type II diabetes].	Liao L et al.	12016801	Not English or Spanish
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12	1	[Study on candidate genes of benazepril related cough in Chinese hypertensives].	Lu J et al.	12848919	Not English or Spanish
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14	1	[Association of alpha-adducin and angiotensin converting enzyme gene polymorphisms with salt-sensitive hypertension and early renal injury].	Lu LH et al.	18393230	Not English or Spanish
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18	1	[Association between insertion-deletion polymorphism of the angiotensin-converting enzyme gene and development of angiopathies in patients with non-insulin dependent diabetes mellitus from the Chuvash Republic].	Miloserdova OV et al.	11234416	Not English or Spanish
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21	1	[Relationship between I/D polymorphism of angiotensin I converting enzyme gene and microvascular complications in type 2 diabetic patients].	Moleda P et al.	17941464	Not English or Spanish
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24	1	[A study on angiotensin-I converting enzyme polymorphism in CAPD patients].	Nishina M	9014479	Not English or Spanish
25					
26	1	[Arterial hypertension in glomerulonephritis].	Oko A et al.	14974362	Not English or Spanish
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30	1	[Association between angiotensin-converting enzyme 2 gene polymorphisms and childhood primary nephrotic syndrome].	Qiu MY et al.	25815490	Not English or Spanish
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33	1	[Association between ACE gene polymorphism and therapeutic responsiveness of ACEI in diabetic nephropathy].	Wang L et al.	10923445	Not English or Spanish
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36	1	[Relationship between angiotensin 1 converting enzyme gene polymorphism and diabetic nephropathy].	Wu S et al.	9596955	Not English or Spanish
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1	[Correlative study between angiotensin-converting enzyme gene polymorphism and hepatorenal syndrome].	Wu XX et al.	15698501	Not English or Spanish
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4	1 DD genotype of ACE gene in boys: may it be a risk factor for minimal change nephrotic syndrome?	Alasehirli B et al.	22017506	Paediatric individuals
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6	1 Angiotensin-converting enzyme gene insertion/deletion polymorphism and renal damage in childhood uropathies.	al-Eisa A et al.	10986863	Paediatric individuals
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8	1 Angiotensin converting enzyme gene insertion/deletion polymorphism in idiopathic nephrotic syndrome in Kuwaiti Arab children.	Al-Eisa A et al.	11487079	Paediatric individuals
9				
10	1 Polymorphisms in angiotensin-converting enzyme gene and severity of renal disease in Henoch-Schoenlein patients. Italian Group of Renal Immunopathology.	Amoroso A et al.	9870486	Paediatric individuals
11				
12	1 Angiotensin converting enzyme gene polymorphism in Asian Indian children with congenital uropathies.	Bajpai M et al.	14713838	Paediatric individuals
13				
14	1 Late effects on renal glomerular and tubular function in childhood cancer survivors.	Bardi E et al.	15390293	Paediatric individuals
15				
16	1 Angiotensin-converting enzyme genotype is not a significant genetic risk factor for idiopathic nephrotic syndrome in Croatian children.	Batinc D et al.	25997642	Paediatric individuals
17				
18	1 HPSE2 mutations in urofacial syndrome, non-neurogenic neurogenic bladder and lower urinary tract dysfunction.	Bulum B et al.	25924634	Paediatric individuals
19				
20	1 ACE gene polymorphism in Turkish children with nephrotic syndrome.	Celik US et al.	16825089	Paediatric individuals
21				
22	1 Glycosphingolipid levels in an unusual neurovisceral storage disease characterized by lactosylceramide galactosyl hydrolase deficiency: lactosylceramidosis.	Dawson G	5016302	Paediatric individuals
23				
24	1 Association of ACE and MDR1 Gene Polymorphisms with Steroid Resistance in Children with Idiopathic Nephrotic Syndrome.	Dhandapani MC et al.	26154535	Paediatric individuals
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26	1 Polymorphisms of the angiotensin converting enzyme and angiotensin II type 1 receptor genes and renal scarring in non-uropathic children with recurrent urinary tract infection.	Ece A et al.	16109085	Paediatric individuals
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1	1	Is ACE gene polymorphism a risk factor for renal scarring with low-grade reflux?	Erdogan H et al.	15138870	Paediatric individuals
2	1	ACE gene polymorphism in Egyptian children with idiopathic nephrotic syndrome.	Fahmy ME et al.	18792483	Paediatric individuals
3	1	Genetic polymorphisms of the renin-angiotensin system and the outcome of focal segmental glomerulosclerosis in children.	Frishberg Y et al.	9853248	Paediatric individuals
4	1	Angiotensinogen gene T235 variant: a marker for the development of persistent microalbuminuria in children and adolescents with type 1 diabetes mellitus	Gallego PH et al.	18413222	Paediatric individuals
5	1	Implication of genetic variations in congenital obstructive nephropathy.	Hahn H et al.	16133060	Paediatric individuals
6	1	Angiotensin-converting enzyme insertion/deletion gene polymorphism in Egyptian children with systemic lupus erythematosus: a possible relation to proliferative nephritis.	Hammad A et al.	27956582	Paediatric individuals
7	1	ACE gene polymorphism and renal scarring in primary vesicoureteric reflux.	Haszon I et al.	12478352	Paediatric individuals
8	1	ACE I/D gene polymorphism predicts renal damage in congenital uropathies.	Hohenfellner K et al.	10452281	Paediatric individuals
9	1	Impact of ACE I/D gene polymorphism on congenital renal malformations.	Hohenfellner K et al.	11354781	Paediatric individuals
10	1	Significance of ACE genotypes and medical treatments in childhood focal glomerulosclerosis.	Hori C et al.	11474225	Paediatric individuals
11	1	Impact of common functional polymorphisms in renin angiotensin system genes on the risk of renal parenchymal scarring following childhood urinary tract infection.	Hussein A et al.	25939993	Paediatric individuals
12	1	Gene polymorphisms of adducin GLY460TRP, ACE I/D, AND AGT M235T in pediatric hypertension patients.	Kaplan I et al.	25262176	Paediatric individuals
13	1	ACE serum level and I/D gene polymorphism in children with obstructive uropathies and other congenital anomalies of the kidney and urinary tract.	Kostadinova ES et al.	27206329	Paediatric individuals

1	ACE and AT1 receptor gene polymorphisms and renal scarring in urinary bladder dysfunction	Kostic M et al.	15179569	Paediatric individuals
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6	1 Association of angiotensin converting enzyme and angiotensin type 2 receptor gene polymorphisms with renal damage in posterior urethral valves.	Laksmi NK et al.	20149750	Paediatric individuals
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10	1 Renin-angiotensin system polymorphisms in Taiwanese primary vesicoureteral reflux.	Liu KP et al.	15045574	Paediatric individuals
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12	1 Polymorphisms of renin-angiotensin system genes in childhood IgA nephropathy.	Maruyama K et al.	11354780	Paediatric individuals
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15	1 Angiotensin-Converting Enzyme Gene Polymorphism in Children with Idiopathic Nephrotic Syndrome, Effect on Biopsy Findings.	Monajemzadeh M et al.	28481137	Paediatric individuals
16				
17	1 ACE I/D gene polymorphism in primary FSGS and steroid-sensitive nephrotic syndrome.	Oktem F et al.	14986085	Paediatric individuals
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19	1 Implications of certain genetic polymorphisms in scarring in vesicoureteric reflux: importance of ACE polymorphism.	Ozen S et al.	10401028	Paediatric individuals
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22	1 Renin-angiotensin system gene polymorphisms: association with susceptibility to Henoch-Schonlein purpura and renal involvement	Ozkaya O et al.	16521052	Paediatric individuals
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24	1 Renin-angiotensin gene polymorphism in children with uremia and essential hypertension.	Papp F et al.	12579405	Paediatric individuals
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27	1 Renin-angiotensin system polymorphisms and renal scarring.	Pardo R et al.	12579398	Paediatric individuals
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30	1 Angiotensin converting enzyme gene polymorphism in Indian children with steroid sensitive nephrotic syndrome.	Patil SJ et al.	16272677	Paediatric individuals
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33	1 Angiotensin I-converting enzyme-gene-polymorphism: Relationship to albumin excretion and blood pressure in pediatric patients with type-I-diabetes mellitus	Pavlovic M et al.	9354852	Paediatric individuals
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36	1 Angiotensin I converting enzyme and angiotensinogen gene polymorphisms related to 24-h blood pressure in paediatric type I diabetes mellitus	Pavlovic M et al.	9950302	Paediatric individuals
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1	1	Low renin-angiotensin system activity gene polymorphism and dysplasia associated with posterior urethral valves.	Peruzzi L et al.	16006956	Paediatric individuals
2	1	Modification of epigenetic patterns in low birth weight children: importance of hypomethylation of the ACE gene promoter.	Rangel M et al.	25170764	Paediatric individuals
3	1	Angiotensin-converting enzyme and angiotensin type 2 receptor gene genotype distributions in Italian children with congenital uropathies	Rigoli L et al.	15470205	Paediatric individuals
4	1	Effect of angiotensin-converting enzyme gene insertion/deletion polymorphism on steroid resistance in Egyptian children with idiopathic nephrotic syndrome.	Saber-Ayad M et al.	20418353	Paediatric individuals
5	1	ACE gene polymorphism in children with nephrotic syndrome in the Indonesian population.	Sasongko TH et al.	16421456	Paediatric individuals
6	1	Polymorphisms of the TNF-alpha and ACE genes, and renal scarring in infants with urinary tract infection.	Savvidou A et al.	20022049	Paediatric individuals
7	1	ACE gene insertion/deletion polymorphism and renal scarring in children with urinary tract infections.	Sekerli E et al.	19603195	Paediatric individuals
8	1	ACE gene insertion/deletion polymorphism in childhood idiopathic nephrotic syndrome.	Serdaroglu E et al.	16208534	Paediatric individuals
9	1	Association of the ACE-II genotype with the risk of nephrotic syndrome in Pakistani children.	Shahid S et al.	22033511	Paediatric individuals
10	1	ACE gene polymorphism in childhood IgA nephropathy: association with clinicopathologic findings.	Tanaka R et al.	9590186	Paediatric individuals
11	1	Role of platelet-activating factor acetylhydrolase gene mutation in Japanese childhood IgA nephropathy.	Tanaka R et al.	10430976	Paediatric individuals
12	1	Angiotensin-converting enzyme gene polymorphism in children with idiopathic nephrotic syndrome.	Tsai IJ et al.	16645262	Paediatric individuals
13	1	Angiotensin-converting enzyme gene insertion/deletion polymorphism in children with Henoch-Schonlein purpura nephritis.	Zhou J et al.	15315169	Paediatric individuals
14	1	Estimation of the relationship between the polymorphisms of selected genes: ACE, AGTR1, TGF β 1 and GNB3 with the occurrence of primary vesicoureteral reflux.	Zyczkowski M et al.	27988909	Paediatric individuals

1	Long-term renoprotective effects of losartan in diabetic nephropathy: interaction with ACE insertion/deletion genotype?	Andersen S et al.	12716812	Pharmaceutical drug focus	
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5	1	High serum enalaprilat in chronic renal failure	Elung-Jensen T et al.	11881130	Pharmaceutical drug focus
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9	1	Randomized placebo-controlled trial of perindopril in normotensive, normoalbuminuric patients with type 1 diabetes mellitus.	Kvetny J et al.	11181984	Pharmaceutical drug focus
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13	1	The influence of the ACE (I/D) polymorphism on systemic and renal vascular responses to angiotensins in normotensive, normoalbuminuric Type 1 diabetes mellitus.	Luik PT et al.	12856080	Pharmaceutical drug focus
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17	1	Renin-angiotensin system polymorphisms and hemoglobin level in renal allografts: a comparative study between losartan and enalapril.	Noroozianaval M et al.	17524880	Pharmaceutical drug focus
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20	1	ACE gene polymorphism and losartan treatment in type 2 diabetic patients with nephropathy	Parving HH et al.	18199798	Pharmaceutical drug focus
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23	1	Effect of angiotensin-converting enzyme (ACE) gene polymorphism on progression of renal disease and the influence of ACE inhibition in IDDM patients: findings from the EUCLID Randomized Controlled Trial. EURODIAB Controlled Trial of Lisinopril in IDDM.	Penno G et al.	9726242	Pharmaceutical drug focus
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28	1	Enalapril and losartan affect lipid peroxidation in renal transplant recipients with renin-angiotensin system polymorphisms.	Rashtchizadeh N et al.	17222813	Pharmaceutical drug focus
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31	1	Chronic proteinuric nephropathies. II. Outcomes and response to treatment in a prospective cohort of 352 patients: differences between women and men in relation to the ACE gene polymorphism. Gruppo Italiano di Studi Epidemiologici in Nefrologia (Gisen)	Ruggenenti P et al.	10616844	Pharmaceutical drug focus
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37	2	The DD genotype of the ACE gene polymorphism is associated with diabetic nephropathy in the type-1 diabetics.	Azar ST et al.	11428725	Incorrect patient group
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2	Genetic variation at the ACE gene is associated with persistent microalbuminuria and severe nephropathy in type 1 diabetes: the DCCT/EDIC Genetics Study.	Boright AP et al.	15793268	Incorrect patient group
2	ACE, PAI-1, decorin and Werner helicase genes are not associated with the development of renal disease in European patients with type 1 diabetes.	De Cosmo S et al.	10495473	Incorrect patient group
2	Genetic Predisposition To Diabetic Nephropathy - Evidence For A Role Of The Angiotensin I-Converting Enzyme Gene	Doria A et al.	7909524	Incorrect patient group
2	Polymorphism of angiotensin converting enzyme, angiotensinogen, and angiotensin II type 1 receptor genes and end-stage renal failure in IgA nephropathy: IGARAS - A study of 274 men	Frimat L et al.	11053482	Incorrect patient group
2	Polymorphism of the angiotensin I-converting enzyme gene in diabetic nephropathy in type II diabetic patients with proliferative retinopathy	Hanyu O et al.	9509566	Incorrect patient group
2	The angiotensin I-converting enzyme (ACE) locus is strongly associated with age and duration of diabetes in patients with type I diabetes	Hibberd ML et al.	9025006	Incorrect patient group
2	Hypertensive nephropathy and the gene for angiotensin-converting enzyme.	Kario K et al.	9081678	Incorrect patient group
2	Effect of ACE gene on diabetic nephropathy in NIDDM patients with insulin resistance.	Kuramoto N et al.	10023638	Incorrect patient group
2	Relationships between angiotensin I converting enzyme gene polymorphism and renal complications in Korean IDDM patients.	Oh TG et al.	8854649	Incorrect patient group
2	The frequency of factor V Leiden mutation, ACE gene polymorphism, serum ACE activity and response to ACE inhibitor and angiotensin II receptor antagonist drugs in Iranians type II diabetic patients with microalbuminuria.	Rahimi Z et al.	20853144	Incorrect patient group
2	Interaction of MTHFR 1298C with ACE D allele augments the risk of diabetic nephropathy in Western Iran.	Rahimi Z et al.	21942443	Incorrect patient group

2	The ACE insertion/deletion polymorphism has no influence on progression of renal function loss in autosomal dominant polycystic kidney disease.	van Dijk MA et al.	10831637	Incorrect patient group
2	Genetic polymorphisms of renin-angiotensin system and progression of interstitial nephritis.	Buraczynska M et al.	12898858	No data
2	Frequency of angiotensin-converting enzyme gene polymorphism in Turkish type 2 diabetic patients.	Degirmenci I et al.	16178979	No data
2	Association of the DD genotype and development of Japanese type 2 diabetic nephropathy.	Gohda T et al.	11770799	No data
2	Angiotensin I converting enzyme and angiotensinogen gene polymorphisms in non-insulin-dependent diabetes mellitus. Lack of relationship with diabetic nephropathy and retinopathy in a Caucasian Mediterranean population	Gutierrez C et al.	9258285	No data
2	Association between angiotensin-converting enzyme gene polymorphisms and diabetic nephropathy: case-control, haplotype, and family-based study in three European populations.	Hadjadj S et al.	17376814	No data
2	Prognostic value of the insertion/deletion polymorphism of the ACE gene in type 2 diabetic subjects: results from the Non-insulin-dependent Diabetes, Hypertension, Microalbuminuria or Proteinuria, Cardiovascular Events, and Ramipril (DIABHYCAR), Diabete de type 2, Nephropathie et Genetique (DIAB2NEP...	Hadjadj S et al.	18523145	No data
2	Angiotensin-converting enzyme gene polymorphism in non-insulin dependent diabetes mellitus and its relationship with diabetic nephropathy.	Jeffers BW et al.	9264004	No data
2	Genetic polymorphisms of the renin-angiotensin-aldosterone system in end-stage renal disease.	Lovati E et al.	11422735	No data
2	Effects of the genetic polymorphisms of the renin-angiotensin system on focal segmental glomerulosclerosis.	Luther Y et al.	14610337	No data
2	The renin--angiotensin system gene polymorphisms and clinicopathological correlations in IgA nephropathy.	Ong-Ajyooth S et al.	10511770	No data

2	Combinational effect of genes for the renin-angiotensin system in conferring susceptibility to diabetic nephropathy.	Osawa N et al.	17143591	No data
2	Association of a uteroglobin polymorphism with rate of progression in patients with IgA nephropathy.	Szelestei T et al.	10977777	No data
2	Lack of synergism between long-term poor glycaemic control and three gene polymorphisms of the renin angiotensin system on risk of developing diabetic nephropathy in type I diabetic patients.	Tarnow L et al.	10907125	No data
2	ACE gene polymorphism and disease progression of IgA nephropathy in Asians in Singapore.	Lau YK et al.	12119485	Overlap in patient group
2	Polymorphism of renin-angiotensin system genes in IgA nephropathy	Woo KT et al.	15504143	Overlap in patient group
3	Angiotensin-converting enzyme (ACE) serum levels and gene polymorphism in Egyptian patients with systemic lupus erythematosus.	Abbas D et al.	21976404	< 3 populations reported per SNP
3	Association of an insertion polymorphism of angiotensin-converting enzyme gene with the activity of lupus nephritis.	Akai Y et al.	10099886	< 3 populations reported per SNP
3	Clinical impact of an angiotensin I-converting enzyme insertion/deletion and kinin B2 receptor +9/-9 polymorphisms in the prognosis of renal transplantation	Amorim et al.	23362199	< 3 populations reported per SNP
3	Lack of association between the angiotensin-converting enzyme gene (I/D) polymorphism and diabetic nephropathy in Tunisian type 2 diabetic patients.	Arfa I et al.	18404607	< 3 populations reported per SNP
3	Polymorphism of the angiotensin-converting enzyme gene in end-stage renal failure patients.	Aucella F et al.	10773756	< 3 populations reported per SNP
3	Polymorphism of the renin-angiotensin-aldosterone system in patients with chronic allograft dysfunction	Ayed K et al.	16635753	< 3 populations reported per SNP
3	The presence of allele D of angiotensin-converting enzyme polymorphism is associated with diabetic nephropathy in patients with less than 10 years duration of Type 2 diabetes.	Canani LH et al.	16108844	< 3 populations reported per SNP

3	Identification of specific angiotensin-converting enzyme variants and haplotypes that confer risk and protection against type 2 diabetic nephropathy.	Ezzidi I et al.	19787680	< 3 populations reported per SNP
3	Genetic polymorphisms of the renin-angiotensin-aldosterone system and renal insufficiency in essential hypertension	Fabris B et al.	15662219	< 3 populations reported per SNP
3	Angiotensin converting enzyme gene I/D polymorphism in essential hypertension and nephroangiosclerosis.	Fernández-Llama P et al.	9607207	< 3 populations reported per SNP
3	DNA polymorphisms in the ACE gene, serum ACE activity and the risk of nephropathy in insulin-dependent diabetes mellitus	Freire MBS et al.	9794558	< 3 populations reported per SNP
3	Association between genetic polymorphisms of ACE & eNOS and diabetic nephropathy.	Huo P et al.	25227524	< 3 populations reported per SNP
3	Genetic Clues To The Etiology Of Balkan Endemic Nephropathy: Investigating The Role Of Ace And At1R Polymorphisms	Krcunovic Z et al.	WOS:000287217500011	< 3 populations reported per SNP
3	Angiotensin-I Converting Enzyme Polymorphism and Diabetic Nephropathy in North India	Kumar A et al.	NA	< 3 populations reported per SNP
3	Angiotensin-converting enzyme gene polymorphism in patients with minimal-change nephrotic syndrome and focal segmental glomerulosclerosis.	Lee DY et al.	9434071	< 3 populations reported per SNP
3	Association of the genetic polymorphisms of the ACE gene and the eNOS gene with lupus nephropathy in northern Chinese population.	Li X et al.	20540812	< 3 populations reported per SNP
3	Genes involved in the regulation of vascular homeostasis determine renal survival rate in patients with chronic glomerulonephritis	Litovkina O et al.	24727057	< 3 populations reported per SNP
3	Contribution of genetic polymorphism in the renin-angiotensin system to the development of renal complications in insulin-dependent diabetes	Marre M et al.	9120002	< 3 populations reported per SNP
3	Influence of the alpha-adducin and ACE gene polymorphism on the progression of autosomal-dominant polycystic kidney disease.	Merta M et al.	12697976	< 3 populations reported per SNP

3	Genetic polymorphism of renin-angiotensin system is not associated with diabetic vascular complications in Japanese subjects with long-term insulin dependent diabetes mellitus.	Miura J et al.	10499884	< 3 populations reported per SNP
3	The effect of polymorphisms in the renin-angiotensin-aldosterone system on diabetic nephropathy risk.	Möllsten A et al.	18413189	< 3 populations reported per SNP
3	[Angiotensin-1 converting enzyme insertion/deletion gene polymorphism in a Mexican population with diabetic nephropathy].	Ortega-Pierres LE et al.	17570179	< 3 populations reported per SNP
3	Influence of genetic variability at the ACE locus in intron 16 on Diabetic Nephropathy in T1DM patients.	Parchwani DN et al.	26214998	< 3 populations reported per SNP
3	Renin-angiotensin system gene polymorphisms predict the progression to renal insufficiency among Asians with lupus nephritis.	Parsa A et al.	15789057	< 3 populations reported per SNP
3	Chronic renal insufficiency among Asian Indians with type 2 diabetes: I. Role of RAAS gene polymorphisms	Prasad P et al.	WOS:000238369400001	< 3 populations reported per SNP
3	Influence of angiotensin converting enzyme (ACE) gene rs4362 polymorphism on the progression of kidney failure in patients with autosomal dominant polycystic kidney disease (ADPKD)	Ramanathan G et al.	27748299	< 3 populations reported per SNP
3	Genetic variants of ACE (Insertion/Deletion) and AGT (M268T) genes in patients with diabetes and nephropathy.	Shaikh R et al.	24737640	< 3 populations reported per SNP
3	Polymorphisms of the renin-angiotensin system genes in Brazilian patients with lupus nephropathy.	Sprovieri SR et al.	15934435	< 3 populations reported per SNP
3	Gene polymorphisms of angiotensin-converting enzyme and angiotensin II Type 1 receptor among chronic kidney disease patients in a Chinese population	Su SL et al.	22147663	< 3 populations reported per SNP
3	Genetic risk factors for renal failure among north Indian ESRD patients.	Tripathi G et al.	18242170	< 3 populations reported per SNP
3	Association between angiotensin converting enzyme gene polymorphism and clinical features in autosomal dominant polycystic kidney disease.	Uemasu J et al.	9180368	< 3 populations reported per SNP
3	The DD genotype of the ACE gene polymorphism is associated with progression of diabetic nephropathy to end stage renal failure in IDDM.	Vleming LJ et al.	10099885	< 3 populations reported per SNP

Supplementary Table S3b: Excluded studies from the ACE2 search

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1b)

Exclusion Stage	Title	Authors	Pubmed ID or WoS ID if Pubmed ID not available	Reason
1	Angiotensin converting enzyme gene I/D polymorphism in essential hypertension and nephroangiosclerosis	Fernandez-Llama P et al.	9607207	No data for ACE2
1	Genetic predisposition to Balkan endemic nephropathy: ability to hydroxylate debrisoquine as a host risk factor.	Nikolov IG et al.	1820343	No data for ACE2
1	Immunoglobulin C mu gene restriction fragment length polymorphisms associated with chronic renal failure.	Demaine AG et al.	2985495	No data for ACE2
1	Genetic polymorphism of C3 and Bf in IgA nephropathy.	Rambausek M et al.	3118258	No data for ACE2
1	Factor B subtypes in Japanese patients with IgA nephropathy and with idiopathic membranous nephropathy.	Nishimukai H et al.	3272818	No data for ACE2
1	Major-histocompatibility-complex extended haplotypes in membranoproliferative glomerulonephritis.	Welch TR et al.	3458025	No data for ACE2
1	A simultaneous study of the polymorphism of five proteins in the serum and the urine of nephrotic patients.	Papacostas S et al.	6688659	No data for ACE2
1	Identification of mutants of pyruvate kinase from red blood cells by means of trypsinization, electrophoresis, kinetic properties and immunological methods.	Jacobasch G et al.	7315101	No data for ACE2
1	Angiotensin-converting enzyme polymorphism and development of diabetic nephropathy in non-insulin-dependent diabetes mellitus.	Mizuri S et al.	7477652	No data for ACE2
1	No association of converting enzyme insertion/deletion polymorphism with immunoglobulin A glomerulonephritis.	Schmidt S et al.	7485124	No data for ACE2
1	Protein loss and genetic polymorphism of apolipoprotein(a) modulate serum lipoprotein(a) in CAPD patients.	Wanner C et al.	7724034	No data for ACE2

1	Lack of relationship between an insertion/deletion polymorphism in the angiotensin I-converting enzyme gene and diabetic nephropathy and proliferative retinopathy in IDDM patients.	Tarnow L et al.	7729604	No data for ACE2
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1	The angiotensin I-converting enzyme (ACE) locus is strongly associated with age and duration of diabetes in patients with type I diabetes.	Hibberd ML et al.	9025006	No data for ACE2	
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6	1	Hypertensive nephropathy and the gene for angiotensin-converting enzyme.	Kario K et al.	9081678	No data for ACE2
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11	1	Evaluation of risk factors for the development of nephropathy in patients with IDDM: insertion/deletion angiotensin converting enzyme gene polymorphism, hypertension and metabolic control.	Barnas U et al.	9084972	No data for ACE2
12					
13	1	Association between angiotensin converting enzyme gene polymorphism and clinical features in autosomal dominant polycystic kidney disease.	Uemasu J et al.	9180368	No data for ACE2
14					
15	1	Angiotensin-converting enzyme genotype and renal allograft survival.	Beige J et al.	9259361	No data for ACE2
16					
17	1	Association of angiotensinogen gene T235 variant with progression of immunoglobulin A nephropathy in Caucasian patients.	Pei Y et al.	9259580	No data for ACE2
18					
19	1	Angiotensin-converting enzyme gene polymorphism in non-insulin dependent diabetes mellitus and its relationship with diabetic nephropathy.	Jeffers BW et al.	9264004	No data for ACE2
20					
21					
22	1	Angiotensin I converting enzyme gene polymorphism and diabetic nephropathy in type II diabetes.	Schmidt S et al.	9269698	No data for ACE2
23					
24					
25	1	Deletion insertion polymorphism of the angiotensin converting enzyme gene and progression of diabetic nephropathy.	Bjorck S et al.	9269704	No data for ACE2
26					
27					
28	1	Genetic regulation of the impaired immune response to hepatitis-B vaccine associated with low TCR density in end stage renal disease patients: contribution of complement C4 and factor B alleles.	Kramer J et al.	9334852	No data for ACE2
29					
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31	1	Gene-polymorphisms of angiotensin converting enzyme and endothelial nitric oxide synthase in patients with primary glomerulonephritis.	Burg M et al.	9352153	No data for ACE2
32					
33					
34	1	Angiotensin-converting enzyme gene polymorphism in patients with minimal-change nephrotic syndrome and focal segmental glomerulosclerosis.	Lee DY et al.	9434071	No data for ACE2
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37	1	Genetic variants of microsomal metabolism and susceptibility to hydrocarbon-associated glomerulonephritis.	Pai P et al.	9474350	No data for ACE2
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1	Polymorphism of the angiotensin I-converting enzyme gene in diabetic nephropathy in type II diabetic patients with proliferative retinopathy.	Hanyu O et al.	9509566	No data for ACE2	
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6	1	Identification of human plasma kallikrein gene polymorphisms and evaluation of their role in end-stage renal disease.	Yu H et al.	9535413	No data for ACE2
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9	1	Relationship of the angiotensin-converting enzyme gene polymorphism to glucose intolerance, insulin resistance, and hypertension in NIDDM.	Huang XH et al.	9544854	No data for ACE2
10					
11	1	Angiotensin-converting-enzyme insertion/deletion genotype and long-term renal allograft survival.	Beige J et al.	9550656	No data for ACE2
12					
13	1	A new polymorphic restriction site in the human 11 beta-hydroxysteroid dehydrogenase type 2 gene.	Smolenicka Z et al.	9589699	No data for ACE2
14					
15	1	Angiotensin I converting enzyme gene polymorphisms in systemic lupus erythematosus: decreased prevalence of DD genotype in African American patients.	Tassiulas IO et al.	9710341	No data for ACE2
16					
17	1	Angiotensin I-converting enzyme gene polymorphisms: relationship to nephropathy in patients with non-insulin dependent diabetes mellitus.	Grzeszczak W et al.	9727375	No data for ACE2
18					
19	1	The serum paraoxonase activity in patients with chronic renal failure and hyperlipidemia.	Paragh G et al.	9736814	No data for ACE2
20					
21	1	Homocysteine, B vitamins, and vascular-access thrombosis in patients treated with hemodialysis.	Tamura T et al.	9740165	No data for ACE2
22					
23	1	DNA polymorphisms in the ACE gene, serum ACE activity and the risk of nephropathy in insulin-dependent diabetes mellitus.	Freire MB et al.	9794558	No data for ACE2
24					
25	1	Insertion/deletion polymorphism in intron 16 of the ACE gene and left ventricular hypertrophy in patients with end-stage renal disease.	Osono E et al.	9820440	No data for ACE2
26					
27	1	The C825T polymorphism in the human G-protein beta3 subunit gene is not associated with diabetic nephropathy in Type I diabetes mellitus.	Fogarty DG et al.	9833937	No data for ACE2
28					
29	1	Effect of ACE gene on diabetic nephropathy in NIDDM patients with insulin resistance.	Kuramoto N et al.	10023638	No data for ACE2
30					
31	1	The DD genotype of the ACE gene polymorphism is associated with progression of diabetic nephropathy to end stage renal failure in IDDM.	Vleming LJ et al.	10099885	No data for ACE2
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1	Increased frequency of G-protein beta 3-subunit 825 T allele in dialyzed patients with type 2 diabetes.	Bluthner M et al.	10200987	No data for ACE2
1	Lack of association of angiotensin-converting enzyme (DD/II) and angiotensinogen M235T gene polymorphism with renal function among Chinese patients with type II diabetes.	Wong TY et al.	10352194	No data for ACE2
1	Angiotensin I-converting enzyme genotype significantly affects progression of IgA glomerulonephritis in an Italian population.	Stratta P et al.	10352195	No data for ACE2
1	Lipoprotein(a) and apolipoprotein(a) isoforms and proteinuria in patients with moderate renal failure.	Sechi LA et al.	10469373	No data for ACE2
1	ACE, PAI-1, decorin and Werner helicase genes are not associated with the development of renal disease in European patients with type 1 diabetes.	De Cosmo S et al.	10495473	No data for ACE2
1	The renin-angiotensin system gene polymorphisms and clinicopathological correlations in IgA nephropathy.	Ong-Ajyooth S et al.	10511770	No data for ACE2
1	Effect of a polymorphism of endothelial nitric oxide synthase gene in Japanese patients with IgA nephropathy.	Morita T et al.	10543322	No data for ACE2
1	Endothelial nitric oxide synthase gene polymorphism in intron 4 affects the progression of renal failure in non-diabetic renal diseases.	Wang Y et al.	10570094	No data for ACE2
1	Risk factors for the progression of microalbuminuria in Japanese type 2 diabetic patients--a 10 year follow-up study.	Oue T et al.	10580616	No data for ACE2
1	Chronic proteinuric nephropathies. II. Outcomes and response to treatment in a prospective cohort of 352 patients: differences between women and men in relation to the ACE gene polymorphism. Gruppo Italiano di Studi Epidemiologici in Nefrologia (Gisen)	Ruggenti P et al.	10616844	No data for ACE2
1	Risk of advanced diabetic nephropathy in type 1 diabetes is associated with endothelial nitric oxide synthase gene polymorphism.	Zanchi A et al.	10652017	No data for ACE2
1	HDL cholesterol and TaqIB cholesterol ester transfer protein gene polymorphism in renal transplant recipients.	Radeau T et al.	10754410	No data for ACE2

1	Polymorphism of the angiotensin-converting enzyme gene in end-stage renal failure patients.	Aucella F et al.	10773756	No data for ACE2
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6	1 The ACE insertion/deletion polymorphism has no influence on progression of renal function loss in autosomal dominant polycystic kidney disease.	van Dijk MA et al.	10831637	No data for ACE2
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10	1 Increased frequency of angiotensin-converting enzyme DD genotype in patients with type 2 diabetes in Taiwan.	Hsieh MC et al.	10862639	No data for ACE2
11				
12	1 Association of the nitric oxide synthase gene polymorphism with an increased risk for progression to diabetic nephropathy in type 2 diabetes.	Neugebauer S et al.	10868974	No data for ACE2
13				
14				
15	1 Lack of synergism between long-term poor glycaemic control and three gene polymorphisms of the renin angiotensin system on risk of developing diabetic nephropathy in type I diabetic patients.	Tarnow L et al.	10907125	No data for ACE2
16				
17				
18	1 Differential expression of cyclin-dependent kinase inhibitors in human glomerular disease: role in podocyte proliferation and maturation.	Shankland SJ et al.	10916090	No data for ACE2
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20				
21	1 G-Protein beta(3) subunit C825T variant, nephropathy and hypertension in patients with type 2 (Non-insulin-dependent) diabetes mellitus.	Zychma MJ et al.	10970984	No data for ACE2
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24	1 Association of a uteroglobin polymorphism with rate of progression in patients with IgA nephropathy.	Szelestei T et al.	10977777	No data for ACE2
25				
26	1 Deregulated platelet-activating factor levels and acetylhydrolase activity in patients with idiopathic IgA nephropathy.	Denizot Y et al.	10978389	No data for ACE2
27				
28				
29	1 Structural analysis of the 11beta-hydroxysteroid dehydrogenase type 2 gene in end-stage renal disease.	Zaehner T et al.	11012876	No data for ACE2
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31				
32	1 Polymorphism of angiotensin converting enzyme, angiotensinogen, and angiotensin II type 1 receptor genes and end-stage renal failure in IgA nephropathy: IGARAS--a study of 274 Men.	Frimat L et al.	11053482	No data for ACE2
33				
34				
35	1 Genetic analysis of nitric oxide and endothelin in end-stage renal disease.	Freedman BI et al.	11071967	No data for ACE2
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37				
38	1 Angiotensinogen M235T and chymase gene CMA/B polymorphisms are not associated with nephropathy in type II diabetes.	Zychma MJ et al.	11096141	No data for ACE2
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1	Association between a variant in the 11 beta-hydroxysteroid dehydrogenase type 2 gene and primary hypertension.	Melander O et al.	11114699	No data for ACE2
1	Polymorphisms of human paraoxonase 1 gene (PON1) and susceptibility to diabetic nephropathy in type I diabetes mellitus.	Araki S et al.	11151764	No data for ACE2
1	Posttransplantation relapse of FSGS is characterized by glomerular epithelial cell transdifferentiation.	Bariety J et al.	11158216	No data for ACE2
1	Membranous nephropathy, hydrocarbon exposure and genetic variants of hydrocarbon detoxification.	Gradden CW et al.	11181983	No data for ACE2
1	Albuminuria and the renin-angiotensin system gene polymorphisms in type-2-diabetic and in normoglycemic hypertensive Chinese.	Thomas GN et al.	11200871	No data for ACE2
1	Paraoxonase2 polymorphisms are associated with nephropathy in Type II diabetes.	Pinizzotto M et al.	11206400	No data for ACE2
1	ACE gene polymorphism and long-term renal graft function.	Viklicky O et al.	11239522	No data for ACE2
1	The C825T polymorphism in the G-protein beta3 subunit gene and diabetic complications in IDDM patients.	Shcherbak NS et al.	11322658	No data for ACE2
1	Polymorphisms in the hANP (human atrial natriuretic peptide) gene, albuminuria, and hypertension.	Nannipieri M et al.	11408388	No data for ACE2
1	Genetic polymorphisms of the renin-angiotensin-aldosterone system in end-stage renal disease.	Lovati E et al.	11422735	No data for ACE2
1	The DD genotype of the ACE gene polymorphism is associated with diabetic nephropathy in the type-1 diabetics.	Azar ST et al.	11428725	No data for ACE2
1	Contribution of gene polymorphisms in the renin-angiotensin system to macroangiopathy in patients with diabetic nephropathy.	Wong TY et al.	11431175	No data for ACE2
1	Catalase/superoxide dismutase (SOD) and catalase/paraoxonase (PON) ratios may implicate poor glycemic control.	Sozmen EY et al.	11440784	No data for ACE2
1	Serum paraoxonase and arylesterase activities in hemodialysis patients.	Itahara T et al.	11480456	No data for ACE2
1	Influence of Bsm1 vitamin D receptor gene polymorphism on the response to a single bolus of calcitrol in hemodialysis patients.	Marco MP et al.	11522087	No data for ACE2

1	1	Is there a role of angiotensin-converting enzyme gene polymorphism in the failure of arteriovenous femoral shunts for hemodialysis?	Isbir CS et al.	11525534	No data for ACE2
2	1	Endothelial nitric oxide synthase intron 4 polymorphism influences the progression of renal disease.	Asakimori Y et al.	11549906	No data for ACE2
3	1	Dinucleotide repeat polymorphism of matrix metalloproteinase-9 gene is associated with diabetic nephropathy.	Maeda S et al.	11576356	No data for ACE2
4	1	Angiotensin-converting enzyme gene polymorphism and microvascular complications in Turkish type 2 diabetic patients.	Araz M et al.	11640993	No data for ACE2
5	1	Effect of human OGG1 1245C-->G gene polymorphism on 8-hydroxy-2'-deoxyguanosine levels of leukocyte DNA among patients undergoing chronic hemodialysis.	Tarng DC et al.	11675410	No data for ACE2
6	1	Association of the DD genotype and development of Japanese type 2 diabetic nephropathy.	Gohda T et al.	11770799	No data for ACE2
7	1	Different impact of deletion polymorphism of gene on the risk of renal and coronary artery disease.	Olivieri O et al.	11791024	No data for ACE2
8	1	Gene mutations in lymphoproliferative disorders of T and NK/T cell phenotypes developing in renal transplant patients.	Hoshida Y et al.	11896204	No data for ACE2
9	1	Association of a functional inducible nitric oxide synthase promoter variant with complications in type 2 diabetes.	Morris BJ et al.	11907646	No data for ACE2
10	1	Association studies between the HSD11B2 gene (encoding human 11beta-hydroxysteroid dehydrogenase type 2), type 1 diabetes mellitus and diabetic nephropathy.	Lavery GG et al.	11916625	No data for ACE2
11	1	Polymorphism in ecto-nucleotide pyrophosphatase/phosphodiesterase 1 gene (ENPP1/PC-1) and early development of advanced diabetic nephropathy in type 1 diabetes.	Canani LH et al.	11916943	No data for ACE2
12	1	Role of the alpha-adducin genotype on renal disease progression.	Nicod J et al.	11918733	No data for ACE2
13	1	Hypertension after renal transplantation and polymorphism of genes involved in essential hypertension: ACE, AGT, AT1 R and eNOS.	Basset el-EA et al.	11926202	No data for ACE2

1	ACE gene insertion/deletion polymorphism associated with 1998 World Health Organization definition of metabolic syndrome in Chinese type 2 diabetic patients.	Lee YJ et al.	12032106	No data for ACE2	
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6	1	Angiotensin-converting enzyme gene polymorphism and vascular manifestations in Korean patients with SLE.	Uhm WS et al.	12043886	No data for ACE2
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11	1	Parathyroid hormone gene polymorphism and secondary hyperparathyroidism in hemodialysis patients.	Gohda T et al.	12046039	No data for ACE2
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14	1	Endothelial nitric oxide synthase affects the progression of autosomal dominant polycystic kidney disease.	Reiterova J et al.	12077489	No data for ACE2
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16	1	ACE gene polymorphism and disease progression of IgA nephropathy in Asians in Singapore.	Lau YK et al.	12119485	No data for ACE2
17					
18	1	T(-786)-->C polymorphism of the endothelial nitric oxide synthase gene influences the progression of renal disease.	Asakimori Y et al.	12138283	No data for ACE2
19					
20	1	The role of PC-1 and ACE genes in diabetic nephropathy in type 1 diabetic patients: evidence for a polygenic control of kidney disease progression.	De Cosmo S et al.	12147786	No data for ACE2
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23	1	Nephropathy in type 1 diabetes: a manifestation of insulin resistance and multiple genetic susceptibilities? Further evidence from the Pittsburgh Epidemiology of Diabetes Complication Study.	Orchard TJ et al.	12164879	No data for ACE2
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27	1	Influence of the endothelial nitric oxide synthase polymorphism on the progression of autosomal dominant polycystic kidney disease and IgA nephropathy.	Merta M et al.	12212826	No data for ACE2
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30	1	Serum paraoxonase (PON1) concentration in patients undergoing hemodialysis.	Suehiro T et al.	12226554	No data for ACE2
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33	1	Genetic determinants of delayed graft function after kidney transplantation.	St Peter SD et al.	12364860	No data for ACE2
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35	1	Endothelial nitric oxide synthase gene polymorphism in dialysis patients.	de Prado A et al.	12402580	No data for ACE2
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37	1	Endothelial nitric oxide synthase gene and the development of diabetic nephropathy.	Shimizu T et al.	12413777	No data for ACE2
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1	1	G-protein beta-3-subunit and eNOS gene polymorphism in transplant recipients with long-term renal graft function.	Viklicky O et al.	12424427	No data for ACE2
2	1	Microfluidic chip-based method for genotyping microsatellites, VNTRs and insertion/deletion polymorphisms.	Sohni YR et al.	12554058	No data for ACE2
3	1	The role of ACE gene polymorphism in rapidity of progression of focal segmental glomerulosclerosis.	Dixit M et al.	12571380	No data for ACE2
4	1	The response of antioxidant genes to hyperglycemia is abnormal in patients with type 1 diabetes and diabetic nephropathy.	Hodgkinson AD et al.	12606529	No data for ACE2
5	1	Epidermal growth factor receptor polymorphism and autosomal dominant polycystic kidney disease.	Magistrone R et al.	12653106	No data for ACE2
6	1	Cardiac hypertrophy and remodeling in relation to ACE and angiotensinogen genes genotypes in Chinese dialysis patients.	Wang AY et al.	12675870	No data for ACE2
7	1	Nitric oxide synthase gene polymorphisms and diabetic nephropathy.	Rippin JD et al.	12687343	No data for ACE2
8	1	Influence of the alpha-adducin and ACE gene polymorphism on the progression of autosomal-dominant polycystic kidney disease.	Merta M et al.	12697976	No data for ACE2
9	1	Association of ecNOS gene polymorphisms with end stage renal diseases.	Nagase S et al.	12701818	No data for ACE2
10	1	PAI-1 4G/5G and ACE I/D gene polymorphisms and the occurrence of myocardial infarction in patients on intermittent dialysis.	Aucella F et al.	12748347	No data for ACE2
11	1	Paraoxonase activity and paraoxonase 1 gene polymorphism in patients with uremia.	Biasioli S et al.	12790379	No data for ACE2
12	1	Evaluation of genetic variation and association in the matrix metalloproteinase 9 (MMP9) gene in ESRD patients.	Hirakawa S et al.	12830465	No data for ACE2
13	1	Angiotensin converting enzyme gene polymorphism and development of post-transplant erythrocytosis.	Yildiz A et al.	12832741	No data for ACE2
14	1	Identification of a common risk haplotype for diabetic nephropathy at the protein kinase C-beta1 (PRKCB1) gene locus.	Araki S et al.	12874455	No data for ACE2
15	1	Genotypic and phenotypic properties of coagulase-negative staphylococci causing dialysis catheter-related sepsis.	Spare MK et al.	12919757	No data for ACE2

1	Elevation of IgG antibodies against tissue transglutaminase as a diagnostic tool for coeliac disease in selective IgA deficiency.	Korponay-Szabo IR et al.	14570724	No data for ACE2	
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6	1	Association of the p22phox component of NAD(P)H oxidase with susceptibility to diabetic nephropathy in patients with type 1 diabetes.	Hodgkinson AD et al.	14578247	No data for ACE2
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9	1	Effects of the genetic polymorphisms of the renin-angiotensin system on focal segmental glomerulosclerosis.	Luther Y et al.	14610337	No data for ACE2
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11	1	Interaction between gene polymorphisms of nitric oxide synthase and renin-angiotensin system in the progression of membranous glomerulonephritis.	Stratta P et al.	14767013	No data for ACE2
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14	1	Angiotensin-converting enzyme polymorphism gene and evolution of nephropathy to end-stage renal disease.	Ortiz MA et al.	15012717	No data for ACE2
15					
16	1	Angiotensin-converting enzyme genotype is a predictive factor in the peak panel-reactive antibody response.	Akcay A et al.	15013293	No data for ACE2
17					
18	1	Quantitative polymorphism of complement receptor type 1 (CR1) in patients undergoing haemodialysis.	Tamano M et al.	15069174	No data for ACE2
19					
20	1	Renin-angiotensin system gene polymorphisms: its impact on IgAN and its progression to end-stage renal failure among Chinese in Singapore.	Lau YK et al.	15153745	No data for ACE2
21					
22	1	Role of alpha-adducin DNA polymorphisms in the genetic predisposition to diabetic nephropathy.	Conway BR et al.	15187197	No data for ACE2
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25	1	Estrogen receptor is significantly associated with the epithelioid variants of renal angiomyolipoma: a clinicopathological and immunohistochemical study of 67 cases.	Cho NH et al.	15189505	No data for ACE2
26					
27	1	Paraoxonase 192 polymorphism and its relationship to serum lipids in Turkish renal transplant recipients.	Agachan B et al.	15251338	No data for ACE2
28					
29	1	Angiotensin converting enzyme genotype and chronic allograft nephropathy in protocol biopsies.	Hueso M et al.	15284309	No data for ACE2
30					
31	1	The influence of G-protein beta3-subunit gene and endothelial nitric oxide synthase gene in exon 7 polymorphisms on progression of autosomal dominant polycystic kidney disease.	Reiterova J et al.	15287194	No data for ACE2
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1	Endothelial nitric oxide synthase gene intron 4 polymorphism in patients with end-stage renal disease.	Buraczynska M et al.	15299097	No data for ACE2
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6	1 Low prevalence of nonconservative mutations of serum and glucocorticoid-regulated kinase (SGK1) gene in hypertensive and renal patients.	Trochen N et al.	15304560	No data for ACE2
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10	1 Relations between eNOS Glu298Asp polymorphism and progression of diabetic nephropathy.	Shin Shin Y et al.	15331206	No data for ACE2
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13	1 Angiotensin-converting enzyme (insertion/deletion) and endothelial nitric oxide synthase polymorphisms in patients with systemic lupus erythematosus.	Douglas G et al.	15338496	No data for ACE2
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16	1 Angiotensin-I converting enzyme gene polymorphism in Turkish type 2 diabetic patients.	Arzu Ergen H et al.	15365253	No data for ACE2
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19	1 Identification of NQO1 and GSTs genotype frequencies in Bulgarian patients with Balkan endemic nephropathy.	Toncheva DI et al.	15365958	No data for ACE2
20				
21	1 Balkan endemic nephropathy and genetic variants of glutathione S-transferases.	Andonova IE et al.	15365959	No data for ACE2
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24	1 Association of the genetic polymorphisms of the renin-angiotensin system and endothelial nitric oxide synthase with chronic renal transplant dysfunction.	Akcay A et al.	15385810	No data for ACE2
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27	1 Genetic polymorphisms of cytochrome P450 among patients with Balkan endemic nephropathy (BEN).	Atanasova SY et al.	15708542	No data for ACE2
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30	1 Evidence for association of endothelial cell nitric oxide synthase gene polymorphism with earlier progression to end-stage renal disease in a cohort of Hellens from Greece and Cyprus.	Lamnissou K et al.	15727257	No data for ACE2
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33	1 Mutation analysis of autosomal dominant polycystic kidney disease genes in Han Chinese.	Zhang S et al.	15775720	No data for ACE2
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36	1 Genetic variation at the ACE gene is associated with persistent microalbuminuria and severe nephropathy in type 1 diabetes: the DCCT/EDIC Genetics Study.	Boright AP et al.	15793268	No data for ACE2
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1	Nitric oxide- and EDHF-mediated arteriolar tone in uremia is unaffected by selective inhibition of vascular cytochrome P450 2C9.	Passauer J et al.	15840038	No data for ACE2	
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6	1	Association between vitamin D receptor FokI. Polymorphism and serum parathyroid hormone level in patients with chronic renal failure.	Vigo Gago E et al.	15887856	No data for ACE2
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10	1	Polymorphisms of the renin-angiotensin system genes in Brazilian patients with lupus nephropathy.	Sprovieri SR et al.	15934435	No data for ACE2
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14	1	Effect of hepatic lipase -514C->T polymorphism and its interactions with apolipoprotein C3 -482C->T and apolipoprotein E exon 4 polymorphisms on the risk of nephropathy in chinese type 2 diabetic patients.	Baum L et al.	15983323	No data for ACE2
15					
16	1	The impact of thiopurine s-methyltransferase polymorphism on azathioprine-induced myelotoxicity in renal transplant recipients.	Kurzawski M et al.	16044099	No data for ACE2
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19	1	Carnosine as a protective factor in diabetic nephropathy: association with a leucine repeat of the carnosinase gene CNDP1.	Janssen B et al.	16046297	No data for ACE2
20					
21	1	Impact of polymorphisms in the genes encoding xylosyltransferase I and a homologue in type 1 diabetic patients with and without nephropathy.	Schon S et al.	16164625	No data for ACE2
22					
23	1	Frequency of angiotensin-converting enzyme gene polymorphism in Turkish type 2 diabetic patients.	Degirmenci I et al.	16178979	No data for ACE2
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26	1	Haplotype analysis of NAD(P)H oxidase p22 phox polymorphisms in end-stage renal disease.	Doi K et al.	16215641	No data for ACE2
27					
28	1	The effect of angiotensin receptor blockade ARB on the regression of left ventricular hypertrophy in hemodialysis patients: comparison between patients with D allele and non-D allele ACE gene polymorphism.	Nakayama M et al.	16312263	No data for ACE2
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31	1	Manganese superoxide dismutase gene polymorphism (V16A) is associated with stages of albuminuria in Korean type 2 diabetic patients.	Lee SJ et al.	16324912	No data for ACE2
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34	1	Hidden population substructures in an apparently homogeneous population bias association studies.	Berger M et al.	16333311	No data for ACE2
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37	1	Relationship of p22phox C242T polymorphism with nephropathy in type 2 diabetic patients.	Santos KG et al.	16358232	No data for ACE2
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1	Genetic polymorphisms of the renin-angiotensin system in end-stage renal disease.	Buraczynska M et al.	16384824	No data for ACE2	
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7	1	Angiotensin-converting enzyme (ACE) inhibition in type 2, diabetic patients-- interaction with ACE insertion/deletion polymorphism.	So WY et al.	16395257	No data for ACE2
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11	1	The influence of the endothelin-converting enzyme-1 gene polymorphism on the progression of autosomal dominant polycystic kidney disease.	Reiterova J et al.	16526315	No data for ACE2
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14	1	Aldosterone synthase (CYP11B2) -344T/C polymorphism is not associated with the initiation and progression of diabetic nephropathy in Caucasian Type 1 diabetic patients.	Lajer M et al.	16759311	No data for ACE2
15					
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17	1	Novel sequence variants in the human xylosyltransferase I gene and their role in diabetic nephropathy.	Bahr C et al.	16759312	No data for ACE2
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21	1	Relationship between common functional polymorphisms of the p22phox gene (-930A > G and +242C > T) and nephropathy as a result of Type 2 diabetes in a Chinese population.	Lim SC et al.	16922713	No data for ACE2
22					
23	1	A disease haplotype for advanced nephropathy in type 2 diabetes at the ACE locus.	Ng DP et al.	16936219	No data for ACE2
24					
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26	1	Efficient screening method of the thiopurine methyltransferase polymorphisms for patients considering taking thiopurine drugs in a Chinese Han population in Henan Province (central China).	Zhang LR et al.	16952345	No data for ACE2
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29	1	Kinin-dependent hypersensitivity reactions in hemodialysis: metabolic and genetic factors.	Molinaro G et al.	17003818	No data for ACE2
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32	1	High prevalence of ACE DD genotype among north Indian end stage renal disease patients.	Tripathi G et al.	17042963	No data for ACE2
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34	1	Sirolimus population pharmacokinetic/pharmacogenetic analysis and bayesian modelling in kidney transplant recipients.	Djebli N et al.	17048977	No data for ACE2
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37	1	Glu298Asp and NOS4ab polymorphisms in diabetic nephropathy.	Mollsten A et al.	17101543	No data for ACE2
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1	Combinational effect of genes for the renin-angiotensin system in conferring susceptibility to diabetic nephropathy.	Osawa N et al.	17143591	No data for ACE2	
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6	1	The emergence of cytomegalovirus resistance to ganciclovir therapy in kidney transplant recipients.	Nogueira E et al.	17161359	No data for ACE2
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9	1	Paraoxonase gene polymorphism and serum activity in progressive IgA nephropathy.	Kovacs TJ et al.	17173245	No data for ACE2
10					
11	1	A functional polymorphism in the manganese superoxide dismutase gene and diabetic nephropathy.	Mollsten A et al.	17192491	No data for ACE2
12					
13	1	A leucine repeat in the carnosinase gene CNDP1 is associated with diabetic end-stage renal disease in European Americans.	Freedman BI et al.	17205963	No data for ACE2
14					
15	1	Variants of C1GALT1 gene are associated with the genetic susceptibility to IgA nephropathy.	Li GS et al.	17228361	No data for ACE2
16					
17	1	Resequencing of genes for transforming growth factor beta1 (TGFB1) type 1 and 2 receptors (TGFB1, TGFB2), and association analysis of variants with diabetic nephropathy.	McKnight AJ et al.	17319955	No data for ACE2
18					
19	1	Association between angiotensin-converting enzyme gene polymorphisms and diabetic nephropathy: case-control, haplotype, and family-based study in three European populations.	Hadjadj S et al.	17376814	No data for ACE2
20					
21	1	Association of endothelial nitric oxide synthase gene intron 4 polymorphism with end-stage renal disease.	Bellini MH et al.	17498125	No data for ACE2
22					
23	1	[Angiotensin-1 converting enzyme insertion/deletion gene polymorphism in a Mexican population with diabetic nephropathy].	Ortega-Pierres LE et al.	17570179	No data for ACE2
24					
25	1	Disease progression, response to ACEI/ATRA therapy and influence of ACE gene in IgA nephritis.	Woo KT et al.	17601378	No data for ACE2
26					
27	1	Relationship of angiotensin-converting enzyme gene polymorphism with nephropathy associated with Type 2 diabetes mellitus in Asian Indians.	Movva S et al.	17616353	No data for ACE2
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29	1	Impact of ENPP1 genotype on arterial calcification in patients with end-stage renal failure.	Eller P et al.	17848394	No data for ACE2
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1	Multiple superoxide dismutase 1/splicing factor serine alanine 15 variants are associated with the development and progression of diabetic nephropathy: the Diabetes Control and Complications Trial/Epidemiology of Diabetes Interventions and Complications Genetics study.	Al-Kateb H et al.	17914031	No data for ACE2	
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9	1	Association between vitamin D receptor gene polymorphisms and susceptibility to chronic kidney disease and periodontitis.	de Souza CM et al.	17914260	No data for ACE2
10					
11	1	Gene polymorphisms of the renin-angiotensin-aldosterone system and angiotensin II type 1-receptor activating antibodies in renal rejection.	Zhang G et al.	17984617	No data for ACE2
12					
13	1	Correlates of ACE activity in macroalbuminuric type 2 diabetic patients treated with chronic ACE inhibition.	Nikzamir A et al.	17986476	No data for ACE2
14					
15	1	Genotyping with a dried blood spot method: a useful technique for application in pharmacogenetics.	Wijnen PA et al.	18028890	No data for ACE2
16					
17	1	Relationship between GSTs gene polymorphism and susceptibility to end stage renal disease among North Indians.	Agrawal S et al.	18067039	No data for ACE2
18					
19	1	Polymorphism of the endothelial nitric oxide synthase gene is associated with diabetic retinopathy in a cohort of West Africans.	Chen Y et al.	18079690	No data for ACE2
20					
21	1	Association of the distal region of the ectonucleotide pyrophosphatase/phosphodiesterase 1 gene with type 2 diabetes in an African-American population enriched for nephropathy.	Keene KL et al.	18184924	No data for ACE2
22					
23	1	Genetic risk factors for renal failure among north Indian ESRD patients.	Tripathi G et al.	18242170	No data for ACE2
24					
25	1	Donor DNA is detected in recipient blood for years after kidney transplantation using sensitive forensic medicine methods.	Rutkowska J et al.	18290564	No data for ACE2
26					
27	1	Anti-glutathione S-transferase T1 antibody-mediated rejection in C4d-positive renal allograft recipients.	Aguilera I et al.	18308775	No data for ACE2
28					
29	1	Endothelial nitric oxide synthase polymorphisms are associated with hypertension and cardiovascular disease in renal transplantation.	Bhandary UV et al.	18331440	No data for ACE2
30					
31	1	Endothelial nitric oxide synthase gene haplotypes and diabetic nephropathy among Asian Indians.	Ahluwalia TS et al.	18401556	No data for ACE2
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1	Lack of association between the angiotensin-converting enzyme gene (I/D) polymorphism and diabetic nephropathy in Tunisian type 2 diabetic patients.	Arfa I et al.	18404607	No data for ACE2
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1	Polymorphism of the aldosterone synthase gene is not associated with progression of diabetic nephropathy, but associated with hypertension in type 2 diabetic patients.	Ko GJ et al.	18771471	No data for ACE2
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6	1			
7	Association of endothelial nitric oxide synthase Glu298Asp polymorphism with end-stage renal disease.	Thaha M et al.	18793530	No data for ACE2
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11	1			
12	MYH9 is associated with nondiabetic end-stage renal disease in African Americans.	Kao WH et al.	18794854	No data for ACE2
13				
14	1			
15	MYH9 is a major-effect risk gene for focal segmental glomerulosclerosis.	Kopp JB et al.	18794856	No data for ACE2
16				
17	1			
18	Characterization of the transcriptional regulation of the human MT1-MMP gene and association of risk reduction for focal-segmental glomerulosclerosis with two functional promoter SNPs.	Munkert A et al.	18927121	No data for ACE2
19				
20	1			
21	The manganese superoxide dismutase Val16Ala polymorphism is associated with decreased risk of diabetic nephropathy in Chinese patients with type 2 diabetes.	Liu L et al.	18989629	No data for ACE2
22				
23	1			
24	Survival in type 2 diabetic patients in dialysis and the number of risk alleles in polymorphisms of the renin-angiotensin system genes.	Padro-Miquel A et al.	19014923	No data for ACE2
25				
26	1			
27	ACE genotype, body weight changes and target organ damage in renal transplant recipients.	Stratta P et al.	19034872	No data for ACE2
28				
29	1			
30	Relationships between thiopurine S-methyltransferase polymorphism and azathioprine-related adverse drug reactions in Chinese renal transplant recipients.	Xin HW et al.	19048245	No data for ACE2
31				
32	1			
33	Influence of CYP3A5 genetic polymorphism on tacrolimus daily dose requirements and acute rejection in renal graft recipients.	Quteineh L et al.	19067682	No data for ACE2
34				
35	1			
36	Tripterygium wilfordii hook f increase the blood concentration of tacrolimus.	Wen J et al.	19100464	No data for ACE2
37				
38	1			
39	ACE variants interact with the RAS pathway to confer risk and protection against type 2 diabetic nephropathy.	Ahluwalia TS et al.	19108684	No data for ACE2
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41	1			
42	A novel method for monitoring glucocorticoid-induced changes of the glucocorticoid receptor in kidney transplant recipients.	Chen Y et al.	19162184	No data for ACE2
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1	Polymorphisms in the non-muscle myosin heavy chain 9 gene (MYH9) are strongly associated with end-stage renal disease historically attributed to hypertension in African Americans.	Freedman BI et al.	19177153	No data for ACE2
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6	1			
7	Matrix metalloproteinase-1 and matrix metalloproteinase-3 gene promoter polymorphisms are associated with mortality in haemodialysis patients.	Cozzolino M et al.	19221176	No data for ACE2
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11	1			
12	TPMT but not ITPA gene polymorphism influences the risk of azathioprine intolerance in renal transplant recipients.	Kurzawski M et al.	19229528	No data for ACE2
13				
14	1			
15	Genetic variant of C1GalT1 contributes to the susceptibility to IgA nephropathy.	Pirulli D et al.	19229831	No data for ACE2
16				
17	1			
18	The endothelial nitric oxide synthase gene and risk of diabetic nephropathy and development of cardiovascular disease in type 1 diabetes.	Mollsten A et al.	19246226	No data for ACE2
19				
20	1			
21	Association of genetic variants with chronic kidney disease in Japanese individuals with type 2 diabetes mellitus.	Yoshida T et al.	19288030	No data for ACE2
22				
23	1			
24	The PTPN22 C1858T (R620W) functional polymorphism in kidney transplantation.	Sfar I et al.	19328948	No data for ACE2
25				
26	1			
27	Elevated MBL concentrations are not an indication of association between the MBL2 gene and type 1 diabetes or diabetic nephropathy.	Kaunisto MA et al.	19366862	No data for ACE2
28				
29	1			
30	The influence of carnosinase gene polymorphisms on diabetic nephropathy risk in African-Americans.	McDonough CW et al.	19373489	No data for ACE2
31				
32	1			
33	Endothelial nitric oxide synthetase, methylenetetrahydrofolate reductase polymorphisms, and cardiovascular complications in Tunisian patients with nondiabetic renal disease.	Kerkeni M et al.	19376104	No data for ACE2
34				
35	1			
36	Association of genetic variants with chronic kidney disease in Japanese individuals.	Yoshida T et al.	19406964	No data for ACE2
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38	1			
39	Microarray analysis of multiple candidate genes and associated plasma proteins for nephropathy secondary to type 2 diabetes among Chinese individuals.	Lim SC et al.	19415232	No data for ACE2
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1	Association of gene polymorphisms with chronic kidney disease in high- or low-risk subjects defined by conventional risk factors.	Yoshida T et al.	19424605	No data for ACE2	
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5	1	Influence of genetic polymorphisms in GSTM1, GSTM3, GSTT1 and GSTP1 on allograft outcome in renal transplant recipients.	Singh R et al.	19486347	No data for ACE2
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9	1	Association and interaction analyses of genetic variants in ADIPOQ, ENPP1, GHSR, PPARgamma and TCF7L2 genes for diabetic nephropathy in a Taiwanese population with type 2 diabetes.	Wu LS et al.	19506043	No data for ACE2
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13	1	Non-muscle myosin heavy chain 9 gene MYH9 associations in African Americans with clinically diagnosed type 2 diabetes mellitus-associated ESRD.	Freedman BI et al.	19567477	No data for ACE2
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16	1	Association of genetic variants with chronic kidney disease in individuals with different lipid profiles.	Yoshida T et al.	19578796	No data for ACE2
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19	1	A HindIII polymorphism of fibronectin gene is associated with nephrolithiasis.	Onaran M et al.	19616291	No data for ACE2
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21	1	Impact of genetic polymorphisms of the renin-angiotensin system and of non-genetic factors on kidney transplant function--a single-center experience.	Siekierka-Harreis M et al.	19681973	No data for ACE2
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24	1	Association between inosine triphosphate pyrophosphohydrolase deficiency and azathioprine-related adverse drug reactions in the Chinese kidney transplant recipients.	Xiong H et al.	19682085	No data for ACE2
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27	1	The prevalence of uridine diphosphate-glucuronosyltransferase 1A9 (UGT1A9) gene promoter region single-nucleotide polymorphisms T-275A and C-2152T and its influence on mycophenolic acid pharmacokinetics in stable renal transplant patients.	Sanchez-Fructoso AI et al.	19715905	No data for ACE2
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30	1	Association of gene polymorphisms with chronic kidney disease in Japanese individuals.	Yoshida T et al.	19724895	No data for ACE2
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33	1	A rare haplotype of the vitamin D receptor gene is protective against diabetic nephropathy.	Martin RJ et al.	19783860	No data for ACE2
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1	Identification of specific angiotensin-converting enzyme variants and haplotypes that confer risk and protection against type 2 diabetic nephropathy.	Ezzidi I et al.	19787680	No data for ACE2
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7	XbaI GLUT1 gene polymorphism and the risk of type 2 diabetes with nephropathy.	Stefanidis I et al.	19822956	No data for ACE2
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11	1			
12	The V16A polymorphism in SOD2 is associated with increased risk of diabetic nephropathy and cardiovascular disease in type 1 diabetes.	Mollsten A et al.	19834686	No data for ACE2
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15	1			
16	Time of drug administration, CYP3A5 and ABCB1 genotypes, and analytical method influence tacrolimus pharmacokinetics: a population pharmacokinetic study.	Musuamba FT et al.	19855314	No data for ACE2
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18	1			
19	Impact of donor-dependent genetic factors on long-term renal graft function.	Krajewska M et al.	19857655	No data for ACE2
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21	1			
22	Uromodulin levels associate with a common UMOD variant and risk for incident CKD.	Kottgen A et al.	19959715	No data for ACE2
23				
24	1			
25	Endothelial nitric oxide synthase (eNOS) gene polymorphism in early term chronic allograft nephropathy.	Yilmaz E et al.	20005399	No data for ACE2
26				
27	1			
28	Circulating methylarginine levels and the decline in renal function in patients with chronic kidney disease are modulated by DDAH1 polymorphisms.	Caplin B et al.	20010544	No data for ACE2
29				
30	1			
31	Dense mapping of MYH9 localizes the strongest kidney disease associations to the region of introns 13 to 15.	Nelson GW et al.	20124285	No data for ACE2
32				
33	1			
34	African ancestry allelic variation at the MYH9 gene contributes to increased susceptibility to non-diabetic end-stage kidney disease in Hispanic Americans.	Behar DM et al.	20144966	No data for ACE2
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36	1			
37	Pharmacogenetics of immunosuppressant polymorphism of CYP3A5 in renal transplant recipients.	Larriba J et al.	20172323	No data for ACE2
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39	1			
40	Patients with Epstein-Fechtner syndromes owing to MYH9 R702 mutations develop progressive proteinuric renal disease.	Sekine T et al.	20200500	No data for ACE2
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1	Association analysis of ADPRT1, AKR1B1, RAGE, GFPT2 and PAI-1 gene polymorphisms with chronic renal insufficiency among Asian Indians with type-2 diabetes.	Prasad P et al.	20353610	No data for ACE2	
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6	1	Optimization of initial tacrolimus dose using pharmacogenetic testing.	Thervet E et al.	20393454	No data for ACE2
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9	1	Identification of GDNF gene sequence variations in patients with medullary sponge kidney disease.	Torregrossa R et al.	20448065	No data for ACE2
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11					
12	1	Association of polymorphisms in the klotho gene with severity of non-diabetic ESRD in African Americans.	Bostrom MA et al.	20466664	No data for ACE2
13					
14	1	DDOST, PRKCSH and LGALS3, which encode AGE-receptors 1, 2 and 3, respectively, are not associated with diabetic nephropathy in type 1 diabetes.	Hoverfelt A et al.	20490454	No data for ACE2
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17	1	The acetyl-coenzyme A carboxylase beta (ACACB) gene is associated with nephropathy in Chinese patients with type 2 diabetes.	Tang SC et al.	20519229	No data for ACE2
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20	1	Association of trypanolytic ApoL1 variants with kidney disease in African Americans.	Genovese G et al.	20647424	No data for ACE2
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23	1	A risk allele for focal segmental glomerulosclerosis in African Americans is located within a region containing APOL1 and MYH9.	Genovese G et al.	20668430	No data for ACE2
24					
25	1	ACE gene polymorphism and serum ACE activity in Iranians type II diabetic patients with macroalbuminuria.	Felehgari V et al.	20830509	No data for ACE2
26					
27					
28	1	Endothelial nitric oxide genotypes and haplotypes are not associated with end-stage renal disease.	Marson BP et al.	20849252	No data for ACE2
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31	1	The frequency of factor V Leiden mutation, ACE gene polymorphism, serum ACE activity and response to ACE inhibitor and angiotensin II receptor antagonist drugs in Iranians type II diabetic patients with microalbuminuria.	Rahimi Z et al.	20853144	No data for ACE2
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34	1	Association of glutathione S-transferase M1 and T1 gene polymorphism with oxidative stress in diabetic and nondiabetic chronic kidney disease.	Datta SK et al.	20954980	No data for ACE2
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37	1	Toward personalized medicine in renal transplantation.	Lampreabe I et al.	20970553	No data for ACE2
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1	Relation between development of cardiovascular disease and the C242T CYBA polymorphism of the NADPH oxidase in ESRD patients.	Tang FY et al.	21045268	No data for ACE2
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6	Association analysis of Notch pathway signalling genes in diabetic nephropathy.	Kavanagh D et al.	21103979	No data for ACE2
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9	[Clinical and genetic basis of hypertensive nephrosclerosis. NEFROSEN Study].	Diez Ojea B et al.	21113220	No data for ACE2
10				
11	Impact of polymorphisms of the genes encoding angiotensin II-forming enzymes on the progression of IgA nephropathy.	Jung ES et al.	21150220	No data for ACE2
12				
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14	Genetic polymorphisms of the renin-angiotensin-aldosterone system in Chinese patients with end-stage renal disease secondary to IgA nephropathy.	Huang HD et al.	21163122	No data for ACE2
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17	Novel polymorphisms associated with tacrolimus trough concentrations: results from a multicenter kidney transplant consortium.	Jacobson PA et al.	21206424	No data for ACE2
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20	Angiotensin-converting enzyme gene polymorphisms and T2DM in a case-control association study of the Bahraini population.	Al-Harbi EM et al.	21207118	No data for ACE2
21				
22	Polymorphisms in the nonmuscle myosin heavy chain 9 gene (MYH9) are associated with the progression of IgA nephropathy in Chinese.	Cheng W et al.	21245129	No data for ACE2
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25	Association of eNOS gene polymorphisms with renal disease in Caucasians with type 2 diabetes.	Santos KG et al.	21255858	No data for ACE2
26				
27	Genetic variation in the matrix metalloproteinase genes and diabetic nephropathy in type 1 diabetes.	Kure M et al.	21277817	No data for ACE2
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30	Tacrolimus dosing in Chinese renal transplant recipients: a population-based pharmacogenetics study.	Li L et al.	21331500	No data for ACE2
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33	Analysis of insertion/deletion polymorphisms of the angiotensin converting enzyme gene in Malaysian end-stage renal disease patients.	Ali A et al.	21421653	No data for ACE2
34				
35	In vivo activity of epoxide hydrolase according to sequence variation affects the progression of human IgA nephropathy.	Lee JP et al.	21429967	No data for ACE2
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38	Impact of aldosterone synthase gene C-344T polymorphism on IgA nephropathy.	Bantis C et al.	21476902	No data for ACE2
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1	Expression of CYP3A5 and P-glycoprotein in renal allografts with histological signs of calcineurin inhibitor nephrotoxicity.	Metalidis C et al.	21544031	No data for ACE2	
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5	1	Common variants in CNDP1 and CNDP2, and risk of nephropathy in type 2 diabetes.	Ahluwalia TS et al.	21573905	No data for ACE2
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7	1	Insertion/deletion polymorphism of the angiotensin-converting enzyme predicts left ventricular hypertrophy after renal transplantation.	Fedor R et al.	21620105	No data for ACE2
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11	1	Polymorphisms of pon1 and pon2 genes in hemodialyzed patients.	Rajkovic MG et al.	21620813	No data for ACE2
12					
13	1	A polymorphism of NADPH oxidase p22 phox is associated with reduced susceptibility to acute rejection in renal allograft recipients.	Bhandary UV et al.	21624462	No data for ACE2
14					
15	1	Exome sequencing identified MYO1E and NEIL1 as candidate genes for human autosomal recessive steroid-resistant nephrotic syndrome.	Sanna-Cherchi S et al.	21697813	No data for ACE2
16					
17	1	Differential effects of MYH9 and APOL1 risk variants on FRMD3 Association with Diabetic ESRD in African Americans.	Freedman BI et al.	21698141	No data for ACE2
18					
19	1	Influence of aldosterone synthase gene C-344T polymorphism on focal segmental glomerulosclerosis.	Bantis C et al.	21777344	No data for ACE2
20					
21	1	Thiopurine S-methyltransferase polymorphism in Iranian kidney transplant recipients.	Aghdaie MH et al.	21819368	No data for ACE2
22					
23	1	Sickle cell trait is not independently associated with susceptibility to end-stage renal disease in African Americans.	Hicks PJ et al.	21849968	No data for ACE2
24					
25	1	Association between CYP3A5 polymorphisms and blood pressure in kidney transplant recipients receiving calcineurin inhibitors.	Ferraresso M et al.	21851254	No data for ACE2
26					
27	1	Impact of nitric oxide synthase Glu298Asp polymorphism on the development of end-stage renal disease in type 2 diabetic Egyptian patients.	El-Din Bessa SS et al.	21854353	No data for ACE2
28					
29	1	Assessment of matrix Gla protein, Klotho gene polymorphisms, and oxidative stress in chronic kidney disease.	Karsli Ceppioglu S et al.	21859400	No data for ACE2
30					
31	1	Influence of CYP3A5 and ABCB1 gene polymorphisms and other factors on tacrolimus dosing in Caucasian liver and kidney transplant patients.	Provenzani A et al.	21922127	No data for ACE2
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1	Interaction of MTHFR 1298C with ACE D allele augments the risk of diabetic nephropathy in Western Iran.	Rahimi Z et al.	21942443	No data for ACE2
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6	Association of genetic variants in the promoter region of genes encoding p22phox (CYBA) and glutamate cysteine ligase catalytic subunit (GCLC) and renal disease in patients with type 1 diabetes mellitus.	Vieira SM et al.	21962117	No data for ACE2
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11	Polymorphisms in MYH9 are associated with diabetic nephropathy in European Americans.	Cooke JN et al.	21968013	No data for ACE2
12				
13	Angiotensin-converting enzyme (ACE) serum levels and gene polymorphism in Egyptian patients with systemic lupus erythematosus.	Abbas D et al.	21976404	No data for ACE2
14				
15	Association of eGFR-Related Loci Identified by GWAS with Incident CKD and ESRD.	Boger CA et al.	21980298	No data for ACE2
16				
17	APOL1 variants increase risk for FSGS and HIVAN but not IgA nephropathy.	Papeta N et al.	21997397	No data for ACE2
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21	Genetic and functional effects of membrane metalloendopeptidase on diabetic nephropathy development.	Zhang D et al.	22024547	No data for ACE2
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23	The interactions of age, sex, body mass index, genetics, and steroid weight-based doses on tacrolimus dosing requirement after adult kidney transplantation.	Stratta P et al.	22101623	No data for ACE2
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27	Genetic polymorphisms and the risk of progressive renal failure in elderly Hungarian patients.	Zsom M et al.	22111818	No data for ACE2
28				
29	Glutathione S-transferases T1 null genotype is associated with susceptibility to aristolochic acid nephropathy.	Chen B et al.	22116675	No data for ACE2
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32	Nosocomial <i>Pneumocystis jirovecii</i> pneumonia: lessons from a cluster in kidney transplant recipients.	Phipps LM et al.	22129760	No data for ACE2
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34	Gene polymorphisms of angiotensin-converting enzyme and angiotensin II type 1 receptor among chronic kidney disease patients in a Chinese population.	Su SL et al.	22147663	No data for ACE2
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38	Clinical and genetic factors affecting tacrolimus trough levels and drug-related outcomes in Korean kidney transplant recipients.	Kim IW et al.	22183771	No data for ACE2
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1	SIRTUIN 1 gene polymorphisms are associated with cholesterol metabolism and coronary artery calcification in Japanese hemodialysis patients.	Shimoyama Y et al.	22200427	No data for ACE2
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1	Genetic polymorphisms located in genes related to immune and inflammatory processes are associated with end-stage renal disease: a preliminary study.	Jimenez-Sousa MA et al.	22817530	No data for ACE2
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6	1			
7	Apolipoprotein L1 gene variants associate with hypertension-attributed nephropathy and the rate of kidney function decline in African Americans.	Lipkowitz MS et al.	22832513	No data for ACE2
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11	1			
12	Donor age and ABCB1 1199G>A genetic polymorphism are independent factors affecting long-term renal function after kidney transplantation.	De Meyer M et al.	22835948	No data for ACE2
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14	1			
15	The effect of glutathione S-transferase polymorphisms and anti-GSTT1 antibodies on allograft functions in recipients of renal transplant.	Akgul SU et al.	22841242	No data for ACE2
16				
17	1			
18	Primary hyperoxaluria type 1, a too often missed diagnosis and potentially treatable cause of end-stage renal disease in adults: results of the Dutch cohort.	van der Hoeven SM et al.	22844106	No data for ACE2
19				
20	1			
21	Genetic and functional analyses of MRAS and HNF1A genes in diabetes and diabetic nephropathy.	Horova E et al.	22849862	No data for ACE2
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23	1			
24	Genetic variation in thrombin-activatable fibrinolysis inhibitor is associated with the risk of diabetic nephropathy.	Xu CW et al.	22932273	No data for ACE2
25				
26	1			
27	Genetic variation in APOL1 and MYH9 genes is associated with chronic kidney disease among Nigerians.	Tayo BO et al.	22956460	No data for ACE2
28				
29	1			
30	Glutathione S-transferase A1, M1, P1 and T1 null or low-activity genotypes are associated with enhanced oxidative damage among haemodialysis patients.	Suvakov S et al.	23034843	No data for ACE2
31				
32	1			
33	Association of vitamin D receptor FokI and Apal polymorphisms with human cytomegalovirus disease in the first three months following kidney transplantation.	Zhao YG et al.	23044313	No data for ACE2
34				
35	1			
36	Vitamin D receptor gene BsmI, FokI, Apal and TaqI polymorphisms and the risk of systemic lupus erythematosus.	Mostowska A et al.	23065277	No data for ACE2
37				
38	1			
39	ACAC1 ² gene (rs2268388) and AGTR1 gene (rs5186) polymorphism and the risk of nephropathy in Asian Indian patients with type 2 diabetes.	Shah VN et al.	23081748	No data for ACE2
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1	Chronic renal impairment and DDAH2-1151 A/C polymorphism determine ADMA levels in type 2 diabetic subjects.	Marra M et al.	23129820	No data for ACE2	
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6	1	Relationship of BsmI polymorphism of vitamin D receptor gene with left ventricular hypertrophy and atherosclerosis in hemodialysis patients.	El-Shehaby AM et al.	23198772	No data for ACE2
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9	1	CYP3A4 genetic polymorphisms predict cyclosporine-related clinical events in Chinese renal transplant recipients.	Wang YY et al.	23217392	No data for ACE2
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12	1	Clinical impact of an angiotensin I-converting enzyme insertion/deletion and kinin B2 receptor +9/-9 polymorphisms in the prognosis of renal transplantation.	Amorim CE et al.	23362199	No data for ACE2
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15	1	The A736V TMPRSS6 polymorphism influences hepcidin and iron metabolism in chronic hemodialysis patients: TMPRSS6 and hepcidin in hemodialysis.	Pelusi S et al.	23433094	No data for ACE2
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18	1	Identification of chromosome 3q28 and ALPK1 as susceptibility loci for chronic kidney disease in Japanese individuals by a genome-wide association study.	Yamada Y et al.	23539754	No data for ACE2
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21	1	Replication study for the association of 3 SNP loci identified in a genome-wide association study for diabetic nephropathy in European type 1 diabetes with diabetic nephropathy in Japanese patients with type 2 diabetes.	Maeda S et al.	23543049	No data for ACE2
22					
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24	1	eNOS 4a/b polymorphism and its interaction with eNOS G894T variants in type 2 diabetes mellitus: modifying the risk of diabetic nephropathy.	Rahimi Z et al.	23594559	No data for ACE2
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27	1	Association of CYP1A1 gene polymorphism with chronic kidney disease: a case control study.	Siddarth M et al.	23619522	No data for ACE2
28					
29	1	Influence of GSTO2 (N142D) genetic polymorphism on acute renal rejection.	Nekooie-Marnany N et al.	23649768	No data for ACE2
30					
31					
32	1	Association of aldosterone synthase (CYP11B2) gene -344T/C polymorphism with the risk of primary chronic glomerulonephritis in the Polish population.	Pawlik M et al.	23681285	No data for ACE2
33					
34					
35	1	Association of POL1, MALT1, MC4R, PHLPP and DSEL single nucleotide polymorphisms in chromosome 18q region with type 2 diabetes in Tunisians.	Turki A et al.	23727064	No data for ACE2
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1	ADAMTS13 predicts renal and cardiovascular events in type 2 diabetic patients and response to therapy.	Rurali E et al.	23733198	No data for ACE2	
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6	1	Characterization of three vasopressin receptor 2 variants: an apparent polymorphism (V266A) and two loss-of-function mutations (R181C and M311V).	Armstrong SP et al.	23762448	No data for ACE2
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10	1	Distribution of dimethylarginine-dimethylaminohydrolase-II (DDAH2) gene polymorphism in hemodialysis patients.	Thaha M et al.	23770786	No data for ACE2
11					
12	1	Genetic predisposition for development of nephropathy in type 2 diabetes mellitus.	Kumar R et al.	23846111	No data for ACE2
13					
14	1	CYP2C9 and ABCG2 polymorphisms as risk factors for developing adverse drug reactions in renal transplant patients taking fluvastatin: a case-control study.	Mirosevic Skvrce N et al.	24024895	No data for ACE2
15					
16	1	Impact of CYP3A5 genotype on tacrolimus versus midazolam clearance in renal transplant recipients: new insights in CYP3A5-mediated drug metabolism.	de Jonge H et al.	24024898	No data for ACE2
17					
18	1	Suppressed soluble Fms-like tyrosine kinase-1 production aggravates atherosclerosis in chronic kidney disease.	Matsui M et al.	24048373	No data for ACE2
19					
20	1	Impact of CYP3A4*22 allele on tacrolimus pharmacokinetics in early period after renal transplantation: toward updated genotype-based dosage guidelines.	Elens L et al.	24052064	No data for ACE2
21					
22	1	Association of TNF- α -308 G > A and ACE I/D gene polymorphisms in hemodialysis patients with arteriovenous fistula thrombosis.	Sener EF et al.	24126814	No data for ACE2
23					
24	1	Association of E-selectin gene polymorphism and serum PAPP-A with carotid atherosclerosis in end-stage renal disease.	Issac MS et al.	24151105	No data for ACE2
25					
26	1	MYH9-related disease: a novel prognostic model to predict the clinical evolution of the disease based on genotype-phenotype correlations.	Pecci A et al.	24186861	No data for ACE2
27					
28	1	Increased level of organochlorine pesticides in chronic kidney disease patients of unknown etiology: role of GSTM1/GSTT1 polymorphism.	Siddarth M et al.	24216264	No data for ACE2
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1	1	An integrative study of the genetic, social and environmental determinants of chronic kidney disease characterized by tubulointerstitial damages in the North Central Region of Sri Lanka.	Nanayakkara S et al.	24351856	No data for ACE2
2	1	Immune response following liver transplantation compared to kidney transplantation: usefulness of monitoring peripheral blood CD4+ adenosine triphosphate activity and cytochrome P450 3A5 genotype assay.	Nobuoka Y et al.	24454479	No data for ACE2
3	1	Relationship of CYP3A5 genotype and ABCB1 diplotype to tacrolimus disposition in Brazilian kidney transplant patients.	Cusinato DA et al.	24528196	No data for ACE2
4	1	Evaluation of candidate nephropathy susceptibility genes in a genome-wide association study of African American diabetic kidney disease.	Palmer ND et al.	24551085	No data for ACE2
5	1	Identification of novel mutations of PKD1 gene in Chinese patients with autosomal dominant polycystic kidney disease by targeted next-generation sequencing.	Yang T et al.	24582653	No data for ACE2
6	1	Association of BH3 interacting domain death agonist (BID) gene polymorphisms with proteinuria of immunoglobulin A nephropathy.	Park HJ et al.	24621205	No data for ACE2
7	1	Association studies of cytochrome P450, family 2, subfamily E, polypeptide 1 (CYP2E1) gene polymorphisms with acute rejection in kidney transplantation recipients.	Kim SK et al.	24654912	No data for ACE2
8	1	MYH9 and APOL1 gene polymorphisms and the risk of CKD in patients with lupus nephritis from an admixture population.	Colares VS et al.	24658608	No data for ACE2
9	1	Cys327Cys polymorphism of the PAPP-A gene (pregnancy associated plasma protein A) is related to mortality of long term hemodialysis patients.	Kalousova M et al.	24667032	No data for ACE2
10	1	Genes involved in the regulation of vascular homeostasis determine renal survival rate in patients with chronic glomerulonephritis.	Litovkina O et al.	24727057	No data for ACE2
11	1	Lack of serologic evidence to link IgA nephropathy with celiac disease or immune reactivity to gluten.	Moeller S et al.	24732864	No data for ACE2
12	1	Genetic variants of ACE (Insertion/Deletion) and AGT (M268T) genes in patients with diabetes and nephropathy.	Shaikh R et al.	24737640	No data for ACE2

1	Single nucleotide polymorphisms at erythropoietin, superoxide dismutase 1, splicing factor, arginine/serin-rich 15 and plasmacytoma variant translocation genes association with diabetic nephropathy.	Alwohhaib M et al.	24821155	No data for ACE2	
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8	1	NOS3 tagSNPs does not modify the chronic kidney disease progression in autosomal dominant polycystic kidney disease.	Ramanathan G et al.	24824375	No data for ACE2
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11	1	Renin-angiotensin-aldosterone system related gene polymorphisms and urinary total arsenic is related to chronic kidney disease.	Chen WJ et al.	24907556	No data for ACE2
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14	1	Gene-gene interactions in renin-angiotensin-aldosterone system contributes to end-stage renal disease susceptibility in a Han Chinese population.	Su SL et al.	24977181	No data for ACE2
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16	1	Polymorphisms in oxidative stress pathway genes and risk of diabetic nephropathy in South Indian type 2 diabetic patients.	Narne P et al.	25041504	No data for ACE2
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19	1	Rare mutations associating with serum creatinine and chronic kidney disease.	Sveinbjornsson G et al.	25082825	No data for ACE2
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22	1	Is increased susceptibility to Balkan endemic nephropathy in carriers of common GSTA1 (*A/*B) polymorphism linked with the catalytic role of GSTA1 in ochratoxin a biotransformation? Serbian case control study and in silico analysis.	Reljic Z et al.	25111321	No data for ACE2
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26	1	Association between genetic polymorphisms of ACE & eNOS and diabetic nephropathy.	Huo P et al.	25227524	No data for ACE2
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29	1	DNA repair genes XPD and XRCC1 polymorphisms and risk of end-stage renal disease in Egyptian population.	Radwan WM et al.	25310768	No data for ACE2
30					
31	1	Clinical utility of chitotriosidase enzyme activity in nephropathic cystinosis.	Elmonem MA et al.	25407738	No data for ACE2
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34	1	Synergism between asymmetric dimethylarginine (ADMA) and a genetic marker of uric acid in CKD progression.	Testa A et al.	25435339	No data for ACE2
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36	1	The functional Q84R polymorphism of TRIB3 gene is associated with diabetic nephropathy in Chinese type 2 diabetic patients.	Zhang W et al.	25447894	No data for ACE2
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1	1	Circulating angiotensin-converting enzyme 2 activity in patients with chronic kidney disease without previous history of cardiovascular disease	Anguiano L et al.	25813276	No data for ACE2
2	1	Allelic variations in the CYBA gene of NADPH oxidase and risk of kidney complications in patients with type 1 diabetes.	Patente TA et al.	25862415	No data for ACE2
3	1	Associations between INSR and MTOR polymorphisms in type 2 diabetes mellitus and diabetic nephropathy in a Northeast Chinese Han population.	Zhu AN et al.	25867326	No data for ACE2
4	1	Polymorphism of the CYP3A5 gene and its effect on tacrolimus blood level.	Nair SS et al.	25894154	No data for ACE2
5	1	Copy Number Variation at the APOL1 Locus.	Ruchi R et al.	25933006	No data for ACE2
6	1	Aldosterone Synthase CYP11B2 Gene Promoter Polymorphism in a Turkish Population With Chronic Kidney Disease.	Yilmaz M et al.	25957425	No data for ACE2
7	1	Is Klotho F352V Polymorphism the Missing Piece of the Bone Loss Puzzle in Renal Transplant Recipients?	Ozdem S et al.	26022923	No data for ACE2
8	1	Identification of new susceptibility loci for IgA nephropathy in Han Chinese.	Li M et al.	26028593	No data for ACE2
9	1	Association between C1GALT1 variants and genetic susceptibility to IgA nephropathy in Uygur.	Li WL et al.	26125729	No data for ACE2
10	1	Estimated glomerular filtration rate (eGFR), 25(OH) D3, chronic kidney disease (CKD), the MYH9 (myosin heavy chain 9) gene in old and very elderly people.	Otero Gonzalez A et al.	26152646	No data for ACE2
11	1	Influence of genetic variability at the ACE locus in intron 16 on Diabetic Nephropathy in T1DM patients.	Parchwani DN et al.	26214998	No data for ACE2
12	1	How to handle missed or delayed doses of tacrolimus in renal transplant recipients? A pharmacokinetic investigation.	Saint-Marcoux F et al.	26316426	No data for ACE2
13	1	Re-Sequencing of the APOL1-APOL4 and MYH9 Gene Regions in African Americans Does Not Identify Additional Risks for CKD Progression.	Hawkins GA et al.	26343748	No data for ACE2

1	Prevalence of angiotensin converting enzyme (ACE) gene insertion/deletion polymorphism in South Indian population with hypertension and chronic kidney disease.	Shanmuganathan R et al.	26440392	No data for ACE2
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7	RAGE and CYBA polymorphisms are associated with microalbuminuria and end-stage renal disease onset in a cohort of type 1 diabetes mellitus patients over a 20-year follow-up.	Franko B et al.	26607824	No data for ACE2
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11	Polymorphisms in NADPH oxidase CYBA gene modify the risk of ESRD in patients with chronic glomerulonephritis.	Zhou H et al.	26627442	No data for ACE2
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14	1			
15	Impact of CYP3A5 polymorphism on trough concentrations and outcomes of tacrolimus minimization during the early period after kidney transplantation.	Yaowakulpatana K et al.	26635230	No data for ACE2
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17	1			
18	Relationship between rs1047763 polymorphism of the C1GALT1 gene and susceptibility to immunoglobulin A nephropathy in Xinjiang Uyghur people.	Xue JN et al.	26782518	No data for ACE2
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20	1			
21	Manganese superoxide dismutase, glutathione peroxidase and catalase gene polymorphisms and clinical outcomes in acute kidney injury.	Kidir V et al.	26787049	No data for ACE2
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23	1			
24	Genetic analysis and functional characterization of novel mutations in a series of patients with atypical hemolytic uremic syndrome.	Szarvas N et al.	26826462	No data for ACE2
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26	1			
27	A Lack of Significant Effect of POR*28 Allelic Variant on Tacrolimus Exposure in Kidney Transplant Recipients.	Jannot AS et al.	26829596	No data for ACE2
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29	1			
30	Association of RAC1 Gene Polymorphisms with Primary End-Stage Renal Disease in Chinese Renal Recipients.	Liu Y et al.	26841219	No data for ACE2
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32	1			
33	Nodular glomerulosclerosis and renin angiotensin system in Chinese patients with type 2 diabetes	Wang M et al.	26973293	No data for ACE2
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35	1			
36	Genome-Wide Association Study of Acute Renal Graft Rejection.	Ghisdal L et al.	27272414	No data for ACE2
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38	1			
39	The angiotensin-I converting enzyme gene I/D variation contributes to end-stage renal disease risk in Chinese patients with type 2 diabetes receiving hemodialysis.	Lu M et al.	27633502	No data for ACE2
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1	Pin1 and secondary hyperparathyroidism of chronic kidney disease: gene polymorphisms and protein levels.	Zhao Y et al.	27876426	No data for ACE2	
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6	1	Lysine 63 ubiquitination is involved in the progression of tubular damage in diabetic nephropathy.	Pontrelli P et al.	27881486	No data for ACE2
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9	1	Mutational Analysis of Agxt in Tunisian Population with Primary Hyperoxaluria Type 1.	M'dimegh S et al.	27935012	No data for ACE2
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11	1	Mutation screening of ACKR3 and COPS8 in kidney cancer cases from the CONFIRM study.	Mahmoodi M et al.	28063109	No data for ACE2
12					
13	1	Glutathione Peroxidase 1 Gene Polymorphism in Nephrolithiasis Patients From South of Iran.	Aghakhani R et al.	28174350	No data for ACE2
14					
15	1	Association of MMP-9 gene polymorphisms with nephrolithiasis patients.	Mehde AA et al.	28205286	No data for ACE2
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17	1	Galactosylation of IgA1 Is Associated with Common Variation in C1GALT1.	Gale DP et al.	28209808	No data for ACE2
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19	1	Relationship of Serum Klotho Level With ACE Gene Polymorphism in Stable Kidney Allograft Recipients.	Zaare Nahandi M et al.	28270648	No data for ACE2
20					
21	1	GSTM1 genotype is an independent prognostic factor in clear cell renal cell carcinoma.	Coric VM et al.	28284893	No data for ACE2
22					
23	1	Effect of AMP-activated protein kinase subunit alpha 2 (PRKAA2) genetic polymorphisms on susceptibility to type 2 diabetes mellitus and diabetic nephropathy in a Chinese population.	Li Q et al.	28322508	No data for ACE2
24					
25	1	Transcriptional Coactivator p300 and Silent Information Regulator 1 (SIRT1) Gene Polymorphism Associated with Diabetic Kidney Disease in a Chinese Cohort.	Tang K et al.	28444663	No data for ACE2
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27	1	Association of polymorphic variants of PTPN22, TNF and VDR genes in children with lupus nephritis: A study in Colombian family triads.	Garavito G et al.	28527290	No data for ACE2
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29	1	The Contribution of MMP-7 Promoter Polymorphisms in Renal Cell Carcinoma.	Liao CH et al.	28652430	No data for ACE2
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31	1	MDR-1 and CYP3A5 Polymorphisms in Pediatric Idiopathic Nephrotic Syndrome: Impact on Susceptibility and Response to Steroids (Preliminary Results).	Moussa A et al.	28792718	No data for ACE2
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1	CYP3A genotypes of donors but not those of the patients increase the risk of acute rejection in renal transplant recipients on calcineurin inhibitors: a pilot study.	Gervasini G et al.	29043387	No data for ACE2
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8	1	Ma L et al.	29629376	No data for ACE2
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11	1	Tariq A et al.	29655960	No data for ACE2
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14	1	Gantala SR et al.	29883760	No data for ACE2
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17	1	Ciftci HS et al.	30012031	No data for ACE2
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21	1	Gillespie GA et al.	1709739	Non-human study
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24	1	Velan B et al.	1849451	Non-human study
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27	1	de Morais SM et al.	2501210	Non-human study
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30	1	Shaws TB et al.	4856818	Non-human study
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32	1	Catanzaro OL et al.	6186886	Non-human study
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35	1	Tenenhouse HS et al.	7873297	Non-human study
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37	1	Sekine M et al.	7983056	Non-human study
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39	1	Turner N et al.	8006020	Non-human study
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1	Expression of a dominant allele of human ARF1 inhibits membrane traffic in vivo.	Zhang CJ et al.	8294513	Non-human study	
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5	1	Testosterone modulation of N-acetylation in mouse kidney.	Smolen TN et al.	8437129	Non-human study
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7	1	Evidence that syntaxin 1A is involved in storage in the secretory pathway.	Bittner MA et al.	8626670	Non-human study
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9	1	Role of the ceramide-signaling pathway in cytokine responses to P-fimbriated Escherichia coli.	Hedlund M et al.	8642245	Non-human study
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11	1	Tissue-specific imprinting of the mouse insulin-like growth factor II receptor gene correlates with differential allele-specific DNA methylation.	Hu JF et al.	9482664	Non-human study
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13	1	Chronic renal failure in a mouse model of human adenine phosphoribosyltransferase deficiency.	Stockelman MG et al.	9689017	Non-human study
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15	1	Renal angiotensin converting enzyme promotes renal damage during ureteral obstruction	Stoneking BJ et al.	9719278	Non-human study
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17	1	Detection of mutation(s) or polymorphic loci in the genome of experimental animal and human cancer tissues by RAPD/AP-PCR depend on DNA polymerase.	Singh KP et al.	10087325	Non-human study
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19	1	Truncated human leptin (delta133) associated with extreme obesity undergoes proteasomal degradation after defective intracellular transport.	Rau H et al.	10098508	Non-human study
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21	1	The mll-AF9 gene fusion in mice controls myeloproliferation and specifies acute myeloid leukaemogenesis.	Dobson CL et al.	10393173	Non-human study
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23	1	Nitric oxide-dependent renal vasodilatation is not altered in rat with rHuEpo-induced hypertension.	Migliori M et al.	10394113	Non-human study
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25	1	Decreased matrix metalloproteinase activity in the kidneys of hereditary nephrotic mice (ICGN strain).	Uchio K et al.	11014984	Non-human study
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27	1	p300 interacts with the nuclear proto-oncoprotein SYT as part of the active control of cell adhesion.	Eid JE et al.	11030627	Non-human study
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1	Telomerase inhibition in RenCa, a murine tumor cell line with short telomeres, by overexpression of a dominant negative mTERT mutant, reveals fundamental differences in telomerase regulation between human and murine cells.	Sachsinger J et al.	11454711	Non-human study
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1	Fluorescence resonance energy transfer reports properties of syntaxin1a interaction with Munc18-1 in vivo.	Liu J et al.	15489225	Non-human study	
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4	1	Sprouty1 is a critical regulator of GDNF/RET-mediated kidney induction.	Basson MA et al.	15691764	Non-human study
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6	1	Alternative splicing of vitamin D-24-hydroxylase: a novel mechanism for the regulation of extrarenal 1,25-dihydroxyvitamin D synthesis.	Ren S et al.	15788398	Non-human study
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8	1	Hypoxia induces a functionally significant and translationally efficient neuronal NO synthase mRNA variant.	Ward ME et al.	16276418	Non-human study
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10	1	Luteinizing hormone receptor ectodomain splice variant misroutes the full-length receptor into a subcompartment of the endoplasmic reticulum.	Apaja PM et al.	16495341	Non-human study
11					
12	1	N-terminal residues control proteasomal degradation of RGS2, RGS4, and RGS5 in human embryonic kidney 293 cells.	Bodenstein J et al.	17220356	Non-human study
13					
14	1	Characterization of transcriptional regulation of neurogranin by nitric oxide and the role of neurogranin in SNP-induced cell death: implication of neurogranin in an increased neuronal susceptibility to oxidative stress.	Gui J et al.	17389928	Non-human study
15					
16	1	Fecal carriage of Escherichia coli O157:H7 and carcass contamination in cattle at slaughter in northern Italy.	Alonso S et al.	17661289	Non-human study
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18	1	Generation and functional characterization of mice with a disrupted glutathione S-transferase, theta 1 gene.	Fujimoto K et al.	17827337	Non-human study
19					
20	1	Functional genetic variation in aminopeptidase A (ENPEP): lack of clear association with focal and segmental glomerulosclerosis (FSGS).	Tonna S et al.	18206321	Non-human study
21					
22	1	Hepatitis C virus replication is inhibited by 22beta-methoxyolean-12-ene-3beta, 24(4beta)-diol (ME3738) through enhancing interferon-beta.	Hiasa Y et al.	18459156	Non-human study
23					
24	1	Characterization of a novel cardiac isoform of the cell cycle-related kinase that is regulated during heart failure.	Qiu H et al.	18508765	Non-human study
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26	1	Increased insulin action in SKIP heterozygous knockout mice.	Ijuin T et al.	18573875	Non-human study
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28	1	Mitochondrial dysfunction in mut methylmalonic acidemia.	Chandler RJ et al.	19088183	Non-human study
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30	1	Overexpression of cytochrome P450 4F2 in mice increases 20-hydroxyeicosatetraenoic acid production and arterial blood pressure.	Liu X et al.	19279555	Non-human study
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1	1	Kallikrein genes are associated with lupus and glomerular basement membrane-specific antibody-induced nephritis in mice and humans.	Liu K et al.	19307730	Non-human study
2	1	p38MAPK controls expression of multiple cell cycle inhibitors and islet proliferation with advancing age.	Wong ES et al.	19619499	Non-human study
3	1	Blocking the salt-inducible kinase 1 network prevents the increases in cell sodium transport caused by a hypertension-linked mutation in human alpha-adducin.	Stenstrom K et al.	19657284	Non-human study
4	1	Maitotoxin converts the plasmalemmal Ca(2+) pump into a Ca(2+)-permeable nonselective cation channel.	Sinkins WG et al.	19794142	Non-human study
5	1	MyoD control of SKIP expression during pig skeletal muscle development.	Xiong Q et al.	20336382	Non-human study
6	1	Targeted deletion of the Nesp55 DMR defines another Gnas imprinting control region and provides a mouse model of autosomal dominant PHP-1b.	Frohlich LF et al.	20427744	Non-human study
7	1	Autosomal recessive polycystic kidney disease epithelial cell model reveals multiple basolateral epidermal growth factor receptor sorting pathways.	Ryan S et al.	20519437	Non-human study
8	1	The activating mutation R201C in GNAS promotes intestinal tumourigenesis in Apc(Min/+) mice through activation of Wnt and ERK1/2 MAPK pathways.	Wilson CH et al.	20531296	Non-human study
9	1	Pitchfork regulates primary cilia disassembly and left-right asymmetry.	Kinzel D et al.	20643351	Non-human study
10	1	Mediation of CTCF transcriptional insulation by DEAD-box RNA-binding protein p68 and steroid receptor RNA activator SRA.	Yao H et al.	20966046	Non-human study
11	1	A common polymorphism in the human aromatase gene alters the risk for polycystic ovary syndrome and modifies aromatase activity in vitro.	Wang H et al.	21282199	Non-human study
12	1	Transgenic overexpression of the extra-large Gs1± variant XL1±s enhances Gs1±-mediated responses in the mouse renal proximal tubule in vivo.	Liu Z et al.	21303955	Non-human study
13	1	Rat Ace allele variation determines susceptibility to AngII-induced renal damage	Kamilic J et al.	21788250	Non-human study
14	1	Carnosine treatment largely prevents alterations of renal carnosine metabolism in diabetic mice.	Peters V et al.	21833769	Non-human study

1	YME1L controls the accumulation of respiratory chain subunits and is required for apoptotic resistance, cristae morphogenesis, and cell proliferation.	Stiburek L et al.	22262461	Non-human study	
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6	1	Primary hyperoxaluria in Coton de Tulear.	Vidgren G et al.	22486513	Non-human study
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11	1	Role of angiotensin-converting enzyme (ACE and ACE2) imbalance on tourniquet-induced remote kidney injury in a mouse hindlimb ischemia-reperfusion model	Yang XH et al.	22580272	Non-human study
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13	1	Tubule-specific ablation of endogenous β -catenin aggravates acute kidney injury in mice.	Zhou D et al.	22622501	Non-human study
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15	1	β 1,3-galactosyltransferase deficiency in germ-free miniature pigs increases N-glycolylneuraminic acids as the xenoantigenic determinant in pig-human xenotransplantation.	Park JY et al.	22775484	Non-human study
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18	1	Cystic echinococcosis in Romania: an epidemiological survey of livestock demonstrates the persistence of hyperendemicity.	Mitreă IL et al.	23075460	Non-human study
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20	1	First WNK4-hypokalemia animal model identified by genome-wide association in Burmese cats.	Gandolfi B et al.	23285264	Non-human study
21					
22	1	Identification of aldo-keto reductases as NRF2-target marker genes in human cells.	Jung KA et al.	23305850	Non-human study
23					
24	1	An inducible transgenic mouse model for familial hypertension with hyperkalaemia (Gordon's syndrome or pseudohypoaldosteronism type II).	Chowdhury JA et al.	23336180	Non-human study
25					
26	1	Presence of N-glycosylated transthyretin in plasma of V30M carriers in familial amyloidotic polyneuropathy: an escape from ERAD.	Teixeira AC et al.	23387326	Non-human study
27					
28	1	Multi-species comparative analysis of the equine ACE gene identifies a highly conserved potential transcription factor binding site in intron 16.	Hamilton NA et al.	23408978	Non-human study
29					
30	1	Renal collecting duct NOS1 maintains fluid-electrolyte homeostasis and blood pressure.	Hyndman KA et al.	23608660	Non-human study
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32	1	ARHGDI1 mutations cause nephrotic syndrome via defective RHO GTPase signaling.	Gee HY et al.	23867502	Non-human study
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1	A knock-in mouse model of human PHD2 gene-associated erythrocytosis establishes a haploinsufficiency mechanism.	Arsenault PR et al.	24121508	Non-human study	
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6	1	The Pex1-G844D mouse: a model for mild human Zellweger spectrum disorder.	Hiebler S et al.	24503136	Non-human study
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10	1	Holocarboxylase synthetase interacts physically with nuclear receptor co-repressor, histone deacetylase 1 and a novel splicing variant of histone deacetylase 1 to repress repeats.	Liu D et al.	24840043	Non-human study
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12	1	Factor VIIa binding to endothelial cell protein C receptor protects vascular barrier integrity in vivo.	Sundaram J et al.	24977291	Non-human study
13					
14	1	Atrial natriuretic peptide locally counteracts the deleterious effects of cardiomyocyte mineralocorticoid receptor activation.	Nakagawa H et al.	25027872	Non-human study
15					
16	1	The T309G murine double minute 2 gene polymorphism is an independent prognostic factor for patients with renal cell carcinoma.	de Martino M et al.	25415135	Non-human study
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19	1	Generation of WNK1 knockout cell lines by CRISPR/Cas-mediated genome editing.	Roy A et al.	25477473	Non-human study
20					
21	1	PTPN2 controls differentiation of CD4 ⁺ T cells and limits intestinal inflammation and intestinal dysbiosis.	Spalinger MR et al.	25492475	Non-human study
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23	1	A functional 12T-insertion polymorphism in the ATP1A1 promoter confers decreased susceptibility to hypertension in a male Sardinian population.	Herrera VL et al.	25615575	Non-human study
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27	1	BAP1 missense mutation c.2054 A>T (p.E685V) completely disrupts normal splicing through creation of a novel 5' splice site in a human mesothelioma cell line.	Morrison A et al.	25830670	Non-human study
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29	1	Identification of a receptor for extracellular renalase.	Wang L et al.	25906147	Non-human study
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31	1	Mammalian target of rapamycin signaling inhibition ameliorates vascular calcification via Klotho upregulation.	Zhao Y et al.	26061549	Non-human study
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33	1	TNF α Amplifies DNaseI Expression in Renal Tubular Cells while IL-1 β Promotes Nuclear DNaseI Translocation in an Endonuclease-Inactive Form.	Thiyagarajan D et al.	26065428	Non-human study
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35	1	DAPIT Over-Expression Modulates Glucose Metabolism and Cell Behaviour in HEK293T Cells.	Kontro H et al.	26161955	Non-human study
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1	Allelic Variants in Arhgef11 via the Rho-Rock Pathway Are Linked to Epithelial-Mesenchymal Transition and Contributes to Kidney Injury in the Dahl Salt-Sensitive Rat.	Jia Z et al.	26172442	Non-human study
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8	1 Human GRK4 ^{T3142V} Variant Promotes Angiotensin II Type I Receptor-Mediated Hypertension via Renal Histone Deacetylase Type 1 Inhibition.	Wang Z et al.	26667412	Non-human study
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10	1 Dynamamin-2 is a novel NOS1 ^β interacting protein and negative regulator in the collecting duct.	Hyndman KA et al.	26791826	Non-human study
11				
12	1 Re-engineering the zinc fingers of PRDM9 reverses hybrid sterility in mice.	Davies B et al.	26840484	Non-human study
13				
14	1 Cardiac angiotensin-(1-12) expression and systemic hypertension in rats expressing the human angiotensinogen gene.	Ferrario CM et al.	26873967	Non-human study
15				
16	1 From man to fish: What can Zebrafish tell us about ApoL1 nephropathy?	Olabisi O et al.	27509583	Non-human study
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18	1 Cabozantinib inhibits tumor growth and metastasis of a patient-derived xenograft model of papillary renal cell carcinoma with MET mutation.	Zhao H et al.	27715452	Non-human study
19				
20	1 Renin-angiotensin system transgenic mouse model recapitulates pathophysiology similar to human preeclampsia with renal injury that may be mediated through VEGF.	Denney JM et al.	27927648	Non-human study
21				
22	1 Inhibition of TRPC6 channels ameliorates renal fibrosis and contributes to renal protection by soluble klotho.	Wu YL et al.	27979597	Non-human study
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24	1 Activated ERK1/2 increases CD44 in glomerular parietal epithelial cells leading to matrix expansion.	Roeder SS et al.	27998643	Non-human study
25				
26	1 Parallel microarray profiling identifies ErbB4 as a determinant of cyst growth in ADPKD and a prognostic biomarker for disease progression.	Streets AJ et al.	28077374	Non-human study
27				
28	1 Targeting mTOR Signaling Can Prevent the Progression of FSGS.	Zschiedrich S et al.	28270414	Non-human study
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30	1 The leukotriene B(4)-leukotriene B(4) receptor axis promotes cisplatin-induced acute kidney injury by modulating neutrophil recruitment.	Deng B et al.	28318626	Non-human study
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32	1 DNase-active TREX1 frame-shift mutants induce serologic autoimmunity in mice.	Sakai T et al.	28325644	Non-human study
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34	1 Human SR-BII mediates SAA uptake and contributes to SAA pro-inflammatory signaling in vitro and in vivo.	Baranova IN et al.	28423002	Non-human study
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1	1	Bim gene dosage is critical in modulating nephron progenitor survival in the absence of microRNAs during kidney development.	Cerqueira DM et al.	28446592	Non-human study
2	1	DBA/2J Haplotype on Distal Chromosome 2 Reduces Mertk Expression, Restricts Efferocytosis, and Increases Susceptibility to Atherosclerosis.	Kayashima Y et al.	28473436	Non-human study
3	1	Inhibition of HDAC enhances STAT acetylation, blocks NF- κ B, and suppresses the renal inflammation and fibrosis in Npr1 haplotype male mice.	Kumar P et al.	28566502	Non-human study
4	1	The regulatory 1 β subunit of protein kinase A modulates renal cystogenesis.	Ye H et al.	28615245	Non-human study
5	1	Functional analysis of human aromatic amino acid transporter MCT10/TAT1 using the yeast <i>Saccharomyces cerevisiae</i> .	Uemura S et al.	28754537	Non-human study
6	1	Kindlin-2 Association with Rho GDP-Dissociation Inhibitor β Suppresses Rac1 Activation and Podocyte Injury.	Sun Y et al.	28775002	Non-human study
7	1	Interference with Gs β -Coupled Receptor Signaling in Renin-Producing Cells Leads to Renal Endothelial Damage.	Lachmann P et al.	28775003	Non-human study
8	1	Blood Pressure Control by a Secreted FGF1 (Fibroblast Growth Factor-Binding Protein).	Tassi E et al.	29158353	Non-human study
9	1	Caspase-independent programmed cell death triggers Ca(2)PO(4) deposition in an in vitro model of nephrocalcinosis.	Priante G et al.	29208768	Non-human study
10	1	Knockout of the interleukin-36 receptor protects against renal ischemia-reperfusion injury by reduction of proinflammatory cytokines.	Nishikawa H et al.	29241623	Non-human study
11	1	Xyloketal B exerts antihypertensive effect in renovascular hypertensive rats via the NO-sGC-cGMP pathway and calcium signaling.	Zhao LY et al.	29595193	Non-human study
12	1	Mice Carrying a Dominant-Negative Human PI3K Mutation Are Protected From Obesity and Hepatic Steatosis but Not Diabetes.	Solheim MH et al.	29724723	Non-human study
13	1	A homozygous KAT2B variant modulates the clinical phenotype of ADD3 deficiency in humans and flies.	Goncalves S et al.	29768408	Non-human study
14	1	Haploinsufficiency of the Mouse <i>Atp6v1b1</i> Gene Leads to a Mild Acid-Base Disturbance with Implications for Kidney Stone Disease.	Bourgeois S et al.	29843146	Non-human study
15	1	RFLP-DR beta and serological HLA-DR typing of 200 kidney recipients and 1000 controls.	Mytilineos J et al.	1975140	Not a case-control study

1	Superoxide dismutase isozymes in different human tissues, their genetic control and intracellular localization.	Beckman G et al.	4775457	Not a case-control study	
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4	1	Genetic counselling in lethal X-linked disorders.	Emery AE et al.	4976958	Not a case-control study
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7	1	DNA-based presymptomatic diagnosis for the von Hippel-Lindau disease by linkage analysis.	Olschwang S et al.	7552140	Not a case-control study
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10	1	Role of the deletion of polymorphism of the angiotensin converting enzyme gene in the progression and therapeutic responsiveness of IgA nephropathy.	Yoshida H et al.	7593601	Not a case-control study
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13	1	Mistyping of the human angiotensin-converting enzyme gene polymorphism: frequency, causes and possible methods to avoid errors in typing.	Ueda S et al.	8863184	Not a case-control study
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16	1	Analysis of linkage disequilibrium between polymorphisms in the KCNJ9 gene with type 2 diabetes mellitus in Pima Indians.	Wolford JK et al.	11350189	Not a case-control study
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19	1	A family of autosomal dominant hypocalcemia with a positive correlation between serum calcium and magnesium: identification of a novel gain of function mutation (Ser(820)Phe) in the calcium-sensing receptor.	Nagase T et al.	12050233	Not a case-control study
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22	1	Captopril enhances transforming growth factor (TGF)-beta1 expression in peripheral blood mononuclear cells: a mechanism independent from angiotensin converting enzyme inhibition? A study in cyclosporine-treated kidney-transplanted patients.	Di Paolo S et al.	12499886	Not a case-control study
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25	1	Clinical assessment and mutation analysis of Kallmann syndrome 1 (KAL1) and fibroblast growth factor receptor 1 (FGFR1, or KAL2) in five families and 18 sporadic patients.	Sato N et al.	15001591	Not a case-control study
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28	1	The effect of CYP3A5 and MDR1 (ABCB1) polymorphisms on cyclosporine and tacrolimus dose requirements and trough blood levels in stable renal transplant patients.	Haufroid V et al.	15167702	Not a case-control study
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31	1	Antiproteinuric effect of candesartan cilexetil in Japanese subjects with type 2 diabetes and nephropathy.	Haneda M et al.	15364166	Not a case-control study
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34	1	An unusual association of contralateral congenital small kidney, reduced renal function and hyperparathyroidism in sponge kidney patients: on the track of the molecular basis.	Gambaro G et al.	15814540	Not a case-control study
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1	Presentation and role of transplantation in adult patients with type 1 primary hyperoxaluria and the I244T AGXT mutation: Single-center experience.	Lorenzo V et al.	16912707	Not a case-control study	
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6	1	Familial nonsyndromic pheochromocytoma.	Opocher G et al.	17102081	Not a case-control study
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8	1	Synergistic expression of angiotensin-converting enzyme (ACE) and ACE2 in human renal tissue and confounding effects of hypertension on the ACE to ACE2 ratio	Wakahara et al.	17303661	Not a case-control study
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10	1	Verification of consumers' experiences and perceptions of genetic discrimination and its impact on utilization of genetic testing.	Barlow-Stewart K et al.	19287242	Not a case-control study
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12	1	Porphyria in Switzerland, 15 years experience.	Schneider-Yin X et al.	19350426	Not a case-control study
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14	1	Whole-genome linkage and association scan in primary, nonsyndromic vesicoureteric reflux.	Cordell HJ et al.	19959718	Not a case-control study
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16	1	Identification of a gene for renal-hepatic-pancreatic dysplasia by microarray-based homozygosity mapping.	Fiskerstrand T et al.	20007846	Not a case-control study
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18	1	Bardet-Biedl syndrome in Denmark--report of 13 novel sequence variations in six genes.	Hjortshoj TD et al.	20120035	Not a case-control study
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20	1	Chromosome 7p linkage and association study for diabetes related traits and type 2 diabetes in an African-American population enriched for nephropathy.	Leak TS et al.	20144192	Not a case-control study
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22	1	MYH9 genetic variants associated with glomerular disease: what is the role for genetic testing?	Kopp JB et al.	20807613	Not a case-control study
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24	1	A prospective, open-label, observational clinical cohort study of the association between delayed renal allograft function, tacrolimus exposure, and CYP3A5 genotype in adult recipients.	Kuypers DR et al.	21118736	Not a case-control study
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26	1	Acute kidney injury reduces the hepatic metabolism of midazolam in critically ill patients.	Kirwan CJ et al.	22005822	Not a case-control study
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28	1	ABCB1 polymorphisms are associated with cyclosporine-induced nephrotoxicity and gingival hyperplasia in renal transplant recipients.	Garcia M et al.	22886152	Not a case-control study
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1	Novel SMARCAL1 bi-allelic mutations associated with a chromosomal breakage phenotype in a severe SIOD patient.	Simon AJ et al.	24197801	Not a case-control study	
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6	1	Brief Report: identification of MTMR3 as a novel susceptibility gene for lupus nephritis in northern Han Chinese by shared-gene analysis with IgA nephropathy.	Zhou XJ et al.	24943867	Not a case-control study
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9	1	An efficient and comprehensive strategy for genetic diagnostics of polycystic kidney disease.	Eisenberger T et al.	25646624	Not a case-control study
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12	1	ABCB1 (MDR-1) pharmacogenetics of tacrolimus in renal transplanted patients: a Next Generation Sequencing approach.	Tavira B et al.	25781547	Not a case-control study
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14	1	Novel mutations in the inverted formin 2 gene of Chinese families contribute to focal segmental glomerulosclerosis.	Xie J et al.	26039629	Not a case-control study
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16	1	A Novel von Hippel Lindau Gene Intronic Variant and Its Reclassification from VUS to Pathogenic: the Impact on a Large Family.	Sexton A et al.	26323595	Not a case-control study
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19	1	Genome-wide Association Studies Identify Genetic Loci Associated With Albuminuria in Diabetes.	Teumer A et al.	26631737	Not a case-control study
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21	1	Updated genetic testing of Italian patients referred with a clinical diagnosis of primary hyperoxaluria.	Pelle A et al.	26946417	Not a case-control study
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23	1	Polypoid urothelial tumor with inverted growth pattern in the renal pelvis: morphologic and molecular characteristics of a unique diagnostic entity.	Wobker SE et al.	27574810	Not a case-control study
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26	1	Haploinsufficiency in tumor predisposition syndromes: altered genomic transcription in morphologically normal cells heterozygous for VHL or TSC mutation.	Peri S et al.	27682873	Not a case-control study
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29	1	CYP3A4*1G and CYP3A5*3 genetic polymorphisms alter the antihypertensive efficacy of amlodipine in patients with hypertension following renal transplantation.	Huang Y et al.	27841150	Not a case-control study
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31	1	Clinical, Genetic and Innate Immunity Characteristics of Melanoma in Organ Transplant Recipients.	Brocard A et al.	27868139	Not a case-control study
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34	1	Clinical impact of the CYP3A5 6986A>G allelic variant on kidney transplantation outcomes.	Flahault A et al.	27977332	Not a case-control study
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36	1	Smoking has no impact on survival and it is not associated with ACE gene I/D polymorphism in hemodialysis patients.	Kiss I et al.	28058974	Not a case-control study
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1	1	Evaluation of Glutathione Peroxidase and KCNJ11 Gene Polymorphisms in Patients with New Onset Diabetes Mellitus After Renal Transplantation.	Yalin GY et al.	28073131	Not a case-control study
2	1	The CYP3A biomarker 4 β -hydroxycholesterol does not improve tacrolimus dose predictions early after kidney transplantation.	Storset E et al.	28146606	Not a case-control study
3	1	Prograf produces more benefits for CYP3A5 low expression patients in early stage after kidney transplantation.	Fan B et al.	28157649	Not a case-control study
4	1	The genetic and clinical spectrum of a large cohort of patients with distal renal tubular acidosis.	Palazzo V et al.	28233610	Not a case-control study
5	1	Impact of the CYP3A5 genotype on the distributions of dose-adjusted trough concentrations and incidence of rejection in Japanese renal transplant recipients receiving different tacrolimus formulations.	Nioka T et al.	28271256	Not a case-control study
6	1	Influence of ABCC2, CYP2C8, and CYP2J2 Polymorphisms on Tacrolimus and Mycophenolate Sodium-Based Treatment in Brazilian Kidney Transplant Recipients.	Genvigir FDV et al.	28316087	Not a case-control study
7	1	Role of ACE and IL-1 β Gene Polymorphisms in Erythropoietin Hyporesponsive Patients with Chronic Kidney Disease with Anemia.	Nand N et al.	28457029	Not a case-control study
8	1	Pretransplant 4 β -hydroxycholesterol does not predict tacrolimus exposure or dose requirements during the first days after kidney transplantation.	Vanhove T et al.	28603840	Not a case-control study
9	1	Sequencing of FIC1, BSEP and MDR3 in a large cohort of patients with cholestasis revealed a high number of different genetic variants.	Droge C et al.	28733223	Not a case-control study
10	1	Low renal but high extrarenal phenotype variability in Schimke immunosseous dysplasia.	Lipska-Zietkiewicz BS et al.	28796785	Not a case-control study
11	1	Wuzhi Tablet (Schisandra sphenanthera Extract) is a Promising Tacrolimus-Sparing Agent for Renal Transplant Recipients Who are CYP3A5 Expressers: a Two-Phase Prospective Study.	Li J et al.	28864749	Not a case-control study
12	1	Crizotinib achieves long-lasting disease control in advanced papillary renal-cell carcinoma type 1 patients with MET mutations or amplification. EORTC 90101 CREATE trial.	Schoffski P et al.	29149761	Not a case-control study

1	1	Cost-effectiveness analysis of elbasvir-grazoprevir regimen for treating hepatitis C virus genotype 1 infection in stage 4-5 chronic kidney disease patients in France.	Maunoury F et al.	29543897	Not a case-control study
2	1	Late-onset acid maltase deficiency. Detection of patients and heterozygotes by urinary enzyme assay.	Mehler M et al.	9923	Not a renal disease focus
3	1	Differential inhibition of the products of the human alkaline phosphatase loci.	Mulivor RA et al.	686677	Not a renal disease focus
4	1	A classification of tumor development based on an analysis of enzymes in tissue sections of hypernephroid carcinoma in man.	Wachsmuth ED et al.	1016198	Not a renal disease focus
5	1	Identification of mutations associated with peroxisome-to-mitochondrion mistargeting of alanine/glyoxylate aminotransferase in primary hyperoxaluria type 1.	Purdue PE et al.	1703535	Not a renal disease focus
6	1	Concentrations of ochratoxin A in the urine of endemic nephropathy patients and controls in Bulgaria: lack of detection of 4-hydroxyochratoxin A.	Castegnaro M et al.	1820331	Not a renal disease focus
7	1	T-cell receptor beta-subunit gene polymorphism and autoimmune disease.	Niven MJ et al.	1969400	Not a renal disease focus
8	1	Role of P450IID6, the target of the sparteine-debrisoquin oxidation polymorphism, in the metabolism of imipramine.	Brosen K et al.	2060250	Not a renal disease focus
9	1	Immunological heterogeneity of hepatic alanine:glyoxylate aminotransferase in primary hyperoxaluria type 1.	Wise PJ et al.	2443389	Not a renal disease focus
10	1	Renin in blood vessels in human pulmonary tumors. An immunohistochemical and biochemical study.	Taylor GM et al.	2450464	Not a renal disease focus
11	1	Elevated concentrations of brain-type glycogen phosphorylase in renal cell carcinoma.	Takashi M et al.	2515181	Not a renal disease focus
12	1	Origin of rare Ha-ras alleles: relationship of VTR length to a 5' polymorphic Xho I site.	Baxter GD et al.	2558964	Not a renal disease focus
13	1	Loss of heterozygosity at the c-raf locus in small cell lung carcinoma.	Sithanandam G et al.	2566144	Not a renal disease focus
14	1	Mechanisms of suppression of renal kallikrein activity in low renin essential hypertension and renoparenchymal hypertension.	Shimamoto K et al.	2676859	Not a renal disease focus

1	Reduced expression of multiple forms of the alpha subunit of the stimulatory GTP-binding protein in pseudohypoparathyroidism type Ia.	Carter A et al.	2890163	Not a renal disease focus
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6	1 The beta-subunit of follicle-stimulating hormone is deleted in patients with aniridia and Wilms' tumour, allowing a further definition of the WAGR locus.	Glaser T et al.	3014343	Not a renal disease focus
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10	1 Further studies on the activity and subcellular distribution of alanine:glyoxylate aminotransferase in the livers of patients with primary hyperoxaluria type 1.	Danpure CJ et al.	3416563	Not a renal disease focus
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13	1 Acetylator genotype-dependent metabolic activation of carcinogenic N-hydroxyarylamines by S-acetyl coenzyme A-dependent enzymes of inbred hamster tissue cytosols: relationship to arylamine N-acetyltransferase.	Hein DW et al.	3677303	Not a renal disease focus
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17	1 Persistence of streptococcal group A antibody in patients with rheumatic valvular disease.	Dudding BA et al.	5682941	Not a renal disease focus
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20	1 Studies of an abnormal serum albumin unstable upon storage.	Rousseaux J et al.	6215190	Not a renal disease focus
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22	1 Allotypes of properdin factor B(Bf) and lymphocytotoxic antibody production.	Davidson JA et al.	6399879	Not a renal disease focus
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25	1 Control of serum C3 levels by beta 1H and C3b inactivator.	Wyatt RJ et al.	6445926	Not a renal disease focus
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27	1 Leukocyte beta-glucosidase in homozygotes and heterozygotes for Gaucher disease.	Raghavan SS et al.	6770675	Not a renal disease focus
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30	1 Structural organization of the human neuronal nitric oxide synthase gene (NOS1).	Hall AV et al.	7528745	Not a renal disease focus
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32	1 Analysis of meningiomas by methylation- and transcription-based clonality assays.	Zhu J et al.	7641206	Not a renal disease focus
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34	1 Cytochrome P4501A1 gene polymorphism and homozygous deletion of the glutathione S-transferase M1 gene in urothelial cancer patients.	Katoh T et al.	7697828	Not a renal disease focus
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36	1 Distribution of MHC class II alleles in primary systemic vasculitis.	Zhang L et al.	7731160	Not a renal disease focus
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1	Angiotensin-converting enzyme gene polymorphism has no influence on the circulating renin-angiotensin-aldosterone system or blood pressure in normotensive subjects	Lachurie ML et al.	7796503	Not a renal disease focus	
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6	1	p53 mutations and MDM-2 amplification in renal cell cancers.	Imai Y et al.	7824511	Not a renal disease focus
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8	1	Frequencies of variants of candidate genes in different age groups of hypertensives.	Zee RY et al.	7882587	Not a renal disease focus
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11	1	Independent, marked associations of alleles of the insulin receptor and dipeptidyl carboxypeptidase-I genes with essential hypertension.	Morris BJ et al.	8104754	Not a renal disease focus
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13	1	Increased expression of vascular permeability factor (vascular endothelial growth factor) and its receptors in kidney and bladder carcinomas.	Brown LF et al.	8238242	Not a renal disease focus
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15	1	Alpha-1-proteinase inhibitor and pulmonary haemorrhage in systemic vasculitis.	O'Donoghue DJ et al.	8296629	Not a renal disease focus
16					
17	1	Expression of NAD(P)H:quinone oxidoreductase and glutathione S-transferases alpha and pi in human renal cell carcinoma and in kidney cancer-derived cell lines.	Eickelmann P et al.	8313512	Not a renal disease focus
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19	1	A homoallelic Gly317-->Asp mutation in ALPL causes the perinatal (lethal) form of hypophosphatasia in Canadian mennonites.	Greenberg CR et al.	8406453	Not a renal disease focus
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21	1	Angiotensin converting enzyme (ACE) insertion/deletion (I/D) polymorphism, and diabetic retinopathy in subjects with IDDM and NIDDM.	Nagi DK et al.	8582133	Not a renal disease focus
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23	1	Characterization of Gas6, a member of the superfamily of G domain-containing proteins, as a ligand for Rse and Axl.	Mark MR et al.	8621659	Not a renal disease focus
24					
25	1	C-antineutrophil cytoplasmic antibody positivity in vasculitis patients is associated with the Z allele of alpha-1-antitrypsin, and P-antineutrophil cytoplasmic antibody positivity with the S allele.	Griffith ME et al.	8671812	Not a renal disease focus
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27	1	Absence of mutations in parathyroid hormone (PTH)/PTH-related protein receptor complementary deoxyribonucleic acid in patients with pseudohypoparathyroidism type Ib.	Fukumoto S et al.	8675577	Not a renal disease focus
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29	1	Deletion polymorphism of the angiotensin-converting enzyme gene is independently associated with left ventricular mass and geometric remodeling in systemic hypertension.	Gharavi AG et al.	8677872	Not a renal disease focus
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1	Azathioprine pharmacogenetics: the relationship between 6-thioguanine nucleotides and thiopurine methyltransferase in patients after heart and kidney transplantation.	Schutz E et al.	8721407	Not a renal disease focus	
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8	1	Examination of the role of nitric oxide synthase and renal kallikrein as candidate genes for essential hypertension.	Friend LR et al.	8800585	Not a renal disease focus
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10	1	Genetic risk for renal artery stenosis: association with deletion polymorphism in angiotensin 1-converting enzyme gene.	Missouris CG et al.	8821841	Not a renal disease focus
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12	1	Chromosome 11p15.5 regional imprinting: comparative analysis of KIP2 and H19 in human tissues and Wilms' tumors.	Chung WY et al.	8842727	Not a renal disease focus
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14	1	Germline mutations in glial cell line-derived neurotrophic factor (GDNF) and RET in a Hirschsprung disease patient.	Angrist M et al.	8896568	Not a renal disease focus
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16	1	Germline mutations of the RET ligand GDNF are not sufficient to cause Hirschsprung disease.	Salomon R et al.	8896569	Not a renal disease focus
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19	1	Increased expression of the insulin-like growth factor-II gene in Wilms' tumor is not dependent on loss of genomic imprinting or loss of heterozygosity.	Wang WH et al.	8910385	Not a renal disease focus
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21	1	Genetic analysis of the NAT2 and CYP2D6 polymorphisms in white patients with non-insulin-dependent diabetes mellitus.	Agundez JA et al.	8946479	Not a renal disease focus
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23	1	Renal cell carcinoma of end-stage renal disease: a histopathologic and molecular genetic study.	Hughson MD et al.	8959640	Not a renal disease focus
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25	1	Reduced expression of the cyclin-dependent kinase inhibitor gene p57KIP2 in Wilms' tumor.	Thompson JS et al.	8971182	Not a renal disease focus
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27	1	Angiotensin converting enzyme gene polymorphism and renal hemodynamic function in early diabetes.	Miller JA et al.	8995725	Not a renal disease focus
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29	1	Somatic inactivation of the VHL gene in Von Hippel-Lindau disease tumors.	Prowse AH et al.	9106522	Not a renal disease focus
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31	1	Association of diabetic neuropathy with Na/K ATPase gene polymorphism.	Vague P et al.	9165217	Not a renal disease focus
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33	1	Angiotensin I-converting enzyme and angiotensinogen gene polymorphisms in non-insulin-dependent diabetes mellitus. Lack of relationship with diabetic nephropathy and retinopathy in a Caucasian Mediterranean population.	Gutierrez C et al.	9258285	Not a renal disease focus
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4	1	Influence of polymorphisms of GSTM1 and GSTT1 for risk of renal cell cancer in workers with long-term high occupational exposure to trichloroethene.	Bruning T et al.	9285043	Not a renal disease focus
5	1	FHIT gene and the FRA3B region are not involved in the genetics of renal cell carcinomas.	Bugert P et al.	9290948	Not a renal disease focus
6	1	Isolation and characterization of UGT2B15(Y85): a UDP-glucuronosyltransferase encoded by a polymorphic gene.	Levesque E et al.	9295060	Not a renal disease focus
7	1	Analyses of mutations in the human renal kallikrein (hKLK1) gene and their possible relevance to blood pressure regulation and risk of myocardial infarction.	Berge KE et al.	9298743	Not a renal disease focus
8	1	Coding mutations in p57KIP2 are present in some cases of Beckwith-Wiedemann syndrome but are rare or absent in Wilms tumors.	O'Keefe D et al.	9311733	Not a renal disease focus
9	1	Loss of heterozygosity of the nm23-H1 gene in human renal cell carcinomas.	Bosnar MH et al.	9341897	Not a renal disease focus
10	1	Biological monitoring of workers exposed to low levels of 2-butoxyethanol.	Haufroid V et al.	9342622	Not a renal disease focus
11	1	Renal ACE immunohistochemical localization in NIDDM patients with nephropathy.	Mizuiru S et al.	9469501	Not a renal disease focus
12	1	The Captopril Prevention Project (CAPPP) in hypertension--baseline data and current status.	Hansson L et al.	9495662	Not a renal disease focus
13	1	Angiotensin I-converting enzyme gene polymorphism modulates the consequences of in utero growth retardation on plasma insulin in young adults.	Cambien F et al.	9519756	Not a renal disease focus
14	1	Contribution of angiotensin I converting enzyme gene polymorphism and angiotensinogen gene polymorphism to blood pressure regulation in essential hypertension.	Mondorf UF et al.	9524045	Not a renal disease focus
15	1	Evidence of association of the ecNOS gene polymorphism with plasma NO metabolite levels in humans.	Tsukada T et al.	9535806	Not a renal disease focus
16	1	Human GFRA1: cloning, mapping, genomic structure, and evaluation as a candidate gene for Hirschsprung disease susceptibility.	Angrist M et al.	9545641	Not a renal disease focus
17	1	Serum paraoxonase activity and its relationship to diabetic complications in patients with non-insulin-dependent diabetes mellitus.	Ikeda Y et al.	9591753	Not a renal disease focus
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1	Inhibition by platelet-activating factor of Src- and hepatocyte growth factor-dependent invasiveness of intestinal and kidney epithelial cells. Phosphatidylinositol 3'-kinase is a critical mediator of tumor invasion.	Kotelevets L et al.	9603913	Not a renal disease focus
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1	1	G-Protein beta3 subunit C825T variant and ambulatory blood pressure in essential hypertension.	Beige J et al.	10205246	Not a renal disease focus
2	1	Novel mutations in the 1alpha-hydroxylase (P450c1) gene in three families with pseudovitamin D-deficiency rickets resulting in loss of functional enzyme activity in blood-derived macrophages.	Smith SJ et al.	10320521	Not a renal disease focus
3	1	Gene structure, chromosomal location, and expression pattern of maleylacetoacetate isomerase.	Fernandez-Canon JM et al.	10373324	Not a renal disease focus
4	1	Candidate genetic modifiers of individual susceptibility to renal cell carcinoma: a study of polymorphic human xenobiotic-metabolizing enzymes.	Longuemaux S et al.	10383153	Not a renal disease focus
5	1	Absence of PTEN germ-line mutations in men with a potential inherited predisposition to prostate cancer.	Cooney KA et al.	10389923	Not a renal disease focus
6	1	Increased fragmentation of von Willebrand factor, due to abnormal cleavage of the subunit, parallels disease activity in recurrent hemolytic uremic syndrome and thrombotic thrombocytopenic purpura and discloses predisposition in families. The Italian Registry of Familial and Recurrent HUS/TTP.	Galbusera M et al.	10397728	Not a renal disease focus
7	1	Mutations of the VHL gene in sporadic renal cell carcinoma: definition of a risk factor for VHL patients to develop an RCC.	Gallou C et al.	10408776	Not a renal disease focus
8	1	Novel somatic mutations in the VHL gene in Swedish archived sporadic renal cell carcinomas.	Yang K et al.	10454237	Not a renal disease focus
9	1	The gene encoding hydroxypyruvate reductase (GRHPR) is mutated in patients with primary hyperoxaluria type II.	Cramer SD et al.	10484776	Not a renal disease focus
10	1	Carotid intima-media thickness and ACE-gene polymorphism in hemodialysis patients.	Nergizoglu G et al.	10493570	Not a renal disease focus
11	1	Telomerase activity and telomere lengths: alterations in renal cell carcinomas.	Dahse R et al.	10504477	Not a renal disease focus
12	1	Genotyping and functional analysis of a polymorphic (CCTTT)(n) repeat of NOS2A in diabetic retinopathy.	Warpeha KM et al.	10506586	Not a renal disease focus
13	1	Molecular basis of human salt sensitivity: the role of the 11beta-hydroxysteroid dehydrogenase type 2.	Lovati E et al.	10523024	Not a renal disease focus

1	Genetic polymorphisms of the renin-angiotensin system and atheromatous renal artery stenosis.	Olivieri O et al.	10567188	Not a renal disease focus	
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6	1	Molecular characterization of the human PEA15 gene on 1q21-q22 and association with type 2 diabetes mellitus in Pima Indians.	Wolford JK et al.	10607908	Not a renal disease focus
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8	1	Somatic mutation and homozygous deletion of PTEN/MMAC1 gene of 10q23 in renal cell carcinoma.	Alimov A et al.	10628321	Not a renal disease focus
9					
10	1	No association between deletion-type angiotensin-converting enzyme gene polymorphism and left-ventricular hypertrophy in hemodialysis patients.	Yildiz A et al.	10657713	Not a renal disease focus
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12	1	Analysis of point mutation in exon 2 of CYP2E1 gene in renal cell/urothelial cancer patients in comparison with control population.	Farker K et al.	10667834	Not a renal disease focus
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14	1	Association between diabetic retinopathy and genetic variations in alpha2beta1 integrin, a platelet receptor for collagen.	Matsubara Y et al.	10688808	Not a renal disease focus
15					
16	1	Lys(173)Arg and -344T/C variants of CYP11B2 in Japanese patients with low-renin hypertension.	Komiya I et al.	10720581	Not a renal disease focus
17					
18	1	Synergistic effect of alpha-adducin and ACE genes causes blood pressure changes with body sodium and volume expansion.	Barlassina C et al.	10720960	Not a renal disease focus
19					
20	1	Somatic mutations of the MET oncogene are selected during metastatic spread of human HNSC carcinomas.	Di Renzo MF et al.	10734314	Not a renal disease focus
21					
22	1	Identification of fifteen novel PHEX gene mutations in Finnish patients with hypophosphatemic rickets.	Tynnismaa H et al.	10737991	Not a renal disease focus
23					
24	1	Abnormal RNA expression of 11p15 imprinted genes and kidney developmental genes in Wilms' tumor.	Schwiebacher C et al.	10749116	Not a renal disease focus
25					
26	1	VHL alterations in human clear cell renal cell carcinoma: association with advanced tumor stage and a novel hot spot mutation.	Brauch H et al.	10766184	Not a renal disease focus
27					
28	1	An insertion/deletion polymorphism in intron 18 of the type B human natriuretic peptide receptor gene is not associated with cerebral infarction.	Rahmutula D et al.	10770265	Not a renal disease focus
29					
30	1	Glutathione S-transferase M1, T1, and P1 polymorphisms as risk factors for renal cell carcinoma: a case-control study.	Sweeney C et al.	10794492	Not a renal disease focus
31					
32	1	Familial clear cell renal cell carcinoma (FCRC): clinical features and mutation analysis of the VHL, MET, and CUL2 candidate genes.	Woodward ER et al.	10807693	Not a renal disease focus
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1	1	Trisomy 4 leading to duplication of a mutated KIT allele in acute myeloid leukemia with mast cell involvement.	Beghini A et al.	10812167	Not a renal disease focus
2	1	Distribution of different HLA antigens in Greek hypertensives according to the angiotensin-converting enzyme genotype.	Diamantopoulos EJ et al.	10821349	Not a renal disease focus
3	1	Angiotensin-converting enzyme gene I/D polymorphism in malignant hypertension.	Stefansson B et al.	10855732	Not a renal disease focus
4	1	An intron 4 gene polymorphism in endothelial cell nitric oxide synthase might modulate volume-dependent hypertension in patients on hemodialysis.	Yokoyama K et al.	10867538	Not a renal disease focus
5	1	Elevated urinary albumin excretion is not linked to the angiotensin I-converting enzyme gene polymorphism in clinically healthy subjects.	Clausen P et al.	10872702	Not a renal disease focus
6	1	Functional analyses of amino acid substitutions Arg883Ser and Asp905Tyr of protein phosphatase-1 G-subunit.	Permana PA et al.	10873397	Not a renal disease focus
7	1	Functional synergism between the most common polymorphism in human alanine:glyoxylate aminotransferase and four of the most common disease-causing mutations.	Lumb MJ et al.	10960483	Not a renal disease focus
8	1	G-protein beta(3)-subunit C825T genotype and nephropathy in diabetes mellitus.	Beige J et al.	10978395	Not a renal disease focus
9	1	Alterations of the DNA repair gene OGG1 in human clear cell carcinomas of the kidney.	Audebert M et al.	10987279	Not a renal disease focus
10	1	Missense mutation of the MET gene detected in human glioma.	Moon YW et al.	11007037	Not a renal disease focus
11	1	Renal outcome and vascular morbidity in systemic lupus erythematosus (SLE): lack of association with the angiotensin-converting enzyme gene polymorphism.	Molad Y et al.	11071585	Not a renal disease focus
12	1	Serum arylesterase/diazoxonase activity and genetic polymorphisms in patients with type 2 diabetes.	Inoue M et al.	11092501	Not a renal disease focus
13	1	Detection of the association between a deletion polymorphism in the gene encoding angiotensin I-converting enzyme and advanced diabetic retinopathy.	Matsumoto A et al.	11106834	Not a renal disease focus
14	1	Proteinase 3 gene polymorphisms and Wegener's granulomatosis.	Gencik M et al.	11115080	Not a renal disease focus

1	alpha-adducin and angiotensin I-converting enzyme polymorphisms in essential hypertension.	Clark CJ et al.	11116113	Not a renal disease focus	
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4	1	Alleviating transcript insufficiency caused by Friedreich's ataxia triplet repeats.	Grabczyk E et al.	11121484	Not a renal disease focus
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7	1	Glutathione transferase activities in renal carcinomas and adjacent normal renal tissues: factors influencing renal carcinogenesis induced by xenobiotics.	Delbanco EH et al.	11218045	Not a renal disease focus
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10	1	Random mutagenesis-PCR to introduce alterations into defined DNA sequences for validation of SNP and mutation detection methods.	Nickerson ML et al.	11241843	Not a renal disease focus
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13	1	Gain-of-function mutation at the extracellular domain of KIT in gastrointestinal stromal tumours.	Hirota S et al.	11276010	Not a renal disease focus
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15	1	Gene-environment interactions in renal cell carcinoma.	Semenza JC et al.	11323315	Not a renal disease focus
16					
17	1	von Hippel-Lindau protein mutants linked to type 2C VHL disease preserve the ability to downregulate HIF.	Hoffman MA et al.	11331612	Not a renal disease focus
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20	1	Association of angiotensinogen M235T and A(-6)G gene polymorphisms with coronary heart disease with independence of essential hypertension: the PROCAGENE study. Prospective Cardiac Gene.	Rodriguez-Perez JC et al.	11345362	Not a renal disease focus
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23	1	Cholesteryl ester transfer protein polymorphism associated with macroangiopathy in Japanese patients with type 2 diabetes.	Meguro S et al.	11369008	Not a renal disease focus
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25	1	Mixed epithelial and stromal tumor of the kidney lacks the genetic alterations of cellular congenital mesoblastic nephroma.	Pierson CR et al.	11381370	Not a renal disease focus
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27	1	Increased D allele frequency of the angiotensin-converting enzyme gene in pulmonary fibrosis.	Morrison CD et al.	11381371	Not a renal disease focus
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30	1	Class II HLA associations with autoantibodies in scleroderma: a highly significant role for HLA-DP.	Gilchrist FC et al.	11393660	Not a renal disease focus
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32	1	IRAK1b, a novel alternative splice variant of interleukin-1 receptor-associated kinase (IRAK), mediates interleukin-1 signaling and has prolonged stability.	Jensen LE et al.	11397809	Not a renal disease focus
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34	1	Cancer risk in heterozygotes for ataxia-telangiectasia.	Geoffroy-Perez B et al.	11410879	Not a renal disease focus
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36	1	VHL c.505 T>C mutation confers a high age related penetrance but no increased overall mortality.	Bender BU et al.	11483638	Not a renal disease focus
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1	Angiotensin-converting enzyme gene polymorphism in patients with systemic lupus.	Prkacin I et al.	11505631	Not a renal disease focus	
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4	1	Polymorphism screening of the insulin receptor-related receptor gene (INSRR) on 1q in Pima Indians.	Wolford JK et al.	11513557	Not a renal disease focus
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6	1	The pVHL-associated SCF ubiquitin ligase complex: molecular genetic analysis of elongin B and C, Rbx1 and HIF-1alpha in renal cell carcinoma.	Clifford SC et al.	11526493	Not a renal disease focus
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8	1	Meningioma: a cytogenetic model of a complex benign human tumor, including data on 394 karyotyped cases.	Zang KD	11528114	Not a renal disease focus
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10	1	Epigenetic inactivation of the RASSF1A 3p21.3 tumor suppressor gene in both clear cell and papillary renal cell carcinoma.	Morrissey C et al.	11585766	Not a renal disease focus
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12	1	Crystal structures of NK1-heparin complexes reveal the basis for NK1 activity and enable engineering of potent agonists of the MET receptor.	Lietha D et al.	11597998	Not a renal disease focus
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14	1	Detection of AGXT bgene mutations by denaturing high-performance liquid chromatography for diagnosis of hyperoxaluria type 1.	Pirulli D et al.	11699734	Not a renal disease focus
15					
16	1	Identification of six novel MYH9 mutations and genotype-phenotype relationships in autosomal dominant macrothrombocytopenia with leukocyte inclusions.	Kunishima S et al.	11776386	Not a renal disease focus
17					
18	1	Biallelic inactivation of the von Hippel-Lindau tumor suppressor gene in sporadic renal cell carcinoma.	Hamano K et al.	11792959	Not a renal disease focus
19					
20	1	Association of the D allele of the angiotensin I converting enzyme polymorphism with malignant vascular injury.	Mayer NJ et al.	11836444	Not a renal disease focus
21					
22	1	Comprehensive mutational analysis of the VHL gene in sporadic renal cell carcinoma: relationship to clinicopathological parameters.	Kondo K et al.	11921283	Not a renal disease focus
23					
24	1	Mutations in the von Hippel-Lindau (VHL) gene refine differential diagnostic criteria in renal cell carcinoma.	Barnabas N et al.	11967908	Not a renal disease focus
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26	1	Enhanced activity of variant phospholipase C-delta1 protein (R257H) detected in patients with coronary artery spasm.	Nakano T et al.	11980680	Not a renal disease focus
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28	1	Inhibition of HIF is necessary for tumor suppression by the von Hippel-Lindau protein.	Kondo K et al.	12086860	Not a renal disease focus
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1	Identification of cyclin D1 and other novel targets for the von Hippel-Lindau tumor suppressor gene by expression array analysis and investigation of cyclin D1 genotype as a modifier in von Hippel-Lindau disease.	Zatyka M et al.	12097293	Not a renal disease focus
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1	Serum extracellular superoxide dismutase in patients with type 2 diabetes: relationship to the development of micro- and macrovascular complications.	Kimura F et al.	12663605	Not a renal disease focus
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1	1	Expression of the proto-oncogene Axl in renal cell carcinoma.	Chung BI et al.	14565870	Not a renal disease focus
2	1	Paraoxonase (Pon1) Q192R polymorphism and serum Pon1 activity in diabetic patients on maintenance hemodialysis.	Zhang B et al.	14579940	Not a renal disease focus
3	1	Endothelial nitric oxide synthase gene intron 4 polymorphism in type 2 diabetes mellitus.	Ksiazek P et al.	14580231	Not a renal disease focus
4	1	Cytochrome P450 and manganese superoxide dismutase genes polymorphisms in systemic lupus erythematosus.	Yen JH et al.	14611903	Not a renal disease focus
5	1	Peripheral vascular disease in Type 2 diabetic Chinese patients: associations with metabolic indices, concomitant vascular disease and genetic factors.	Thomas GN et al.	14632699	Not a renal disease focus
6	1	The rapid effects of 1,25-dihydroxyvitamin D3 require the vitamin D receptor and influence 24-hydroxylase activity: studies in human skin fibroblasts bearing vitamin D receptor mutations.	Nguyen TM et al.	14665637	Not a renal disease focus
7	1	Renovascular disease: effect of ACE gene deletion polymorphism and endovascular revascularization.	Pizzolo F et al.	14718831	Not a renal disease focus
8	1	Genetic characterization and structural analysis of VHL Spanish families to define genotype-phenotype correlations.	Ruiz-Llorente S et al.	14722919	Not a renal disease focus
9	1	Congenital disorder of oxygen sensing: association of the homozygous Chuvash polycythemia VHL mutation with thrombosis and vascular abnormalities but not tumors.	Gordeuk VR et al.	14726398	Not a renal disease focus
10	1	Defects in translational regulation mediated by the alpha subunit of eukaryotic initiation factor 2 inhibit antiviral activity and facilitate the malignant transformation of human fibroblasts.	Perkins DJ et al.	14966282	Not a renal disease focus
11	1	Polymorphisms of the CYP1B1 gene as risk factors for human renal cell cancer.	Sasaki M et al.	15041720	Not a renal disease focus
12	1	Abnormal hepatocystin caused by truncating PRKCSH mutations leads to autosomal dominant polycystic liver disease.	Drenth JP et al.	15057895	Not a renal disease focus
13	1	KIT expression in chromophobe renal cell carcinoma: comparative immunohistochemical analysis of KIT expression in different renal cell neoplasms.	Petit A et al.	15105658	Not a renal disease focus

1	Association of the serum and glucocorticoid regulated kinase (sgk1) gene with QT interval.	Busjahn A et al.	15107590	Not a renal disease focus	
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6	1	Three novel missense mutations of WNK4, a kinase mutated in inherited hypertension, in Japanese hypertensives: implication of clinical phenotypes.	Kamide K et al.	15110905	Not a renal disease focus
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9	1	Intron 4 polymorphism of the endothelial nitric oxide synthase gene is associated with the development of lupus nephritis.	Lee YH et al.	15119548	Not a renal disease focus
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12	1	Identification of PIK3C3 promoter variant associated with bipolar disorder and schizophrenia.	Stopkova P et al.	15121481	Not a renal disease focus
13					
14	1	The role of the LRPPRC (leucine-rich pentatricopeptide repeat cassette) gene in cytochrome oxidase assembly: mutation causes lowered levels of COX (cytochrome c oxidase) I and COX III mRNA.	Xu F et al.	15139850	Not a renal disease focus
15					
16	1	A naturally occurring human Nedd4-2 variant displays impaired ENaC regulation in <i>Xenopus laevis</i> oocytes.	Fouladkou F et al.	15140763	Not a renal disease focus
17					
18	1	Increased amount of the angiotensin-converting enzyme (ACE) mRNA originating from the ACE allele with deletion.	Suehiro T et al.	15164285	Not a renal disease focus
19					
20	1	G protein beta3 subunit C825T polymorphism in primary IgA nephropathy.	Thibaudin L et al.	15200440	Not a renal disease focus
21					
22	1	A novel missense substitution (Val1483Ile) in the fatty acid synthase gene (FAS) is associated with percentage of body fat and substrate oxidation rates in nondiabetic Pima Indians.	Kovacs P et al.	15220220	Not a renal disease focus
23					
24	1	Functional analysis of polymorphisms in the promoter regions of genes on 22q11.	Hoogendoorn B et al.	15221787	Not a renal disease focus
25					
26	1	Clinical implications of mutation analysis in primary hyperoxaluria type 1.	van Woerden CS et al.	15253729	Not a renal disease focus
27					
28	1	Paraoxonase 1 Gln/Arg polymorphism is associated with the risk of microangiopathy in Type 2 diabetes mellitus.	Murata M et al.	15270786	Not a renal disease focus
29					
30	1	Identification of 108 SNPs in TSC, WNK1, and WNK4 and their association with hypertension in a Japanese general population.	Kokubo Y et al.	15309683	Not a renal disease focus
31					
32	1	Association of a haplotype of matrix metalloproteinase (MMP)-1 and MMP-3 polymorphisms with renal cell carcinoma.	Hirata H et al.	15319295	Not a renal disease focus
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34	1	Genetic risk of atherosclerotic renal artery disease: the candidate gene approach in a renal angiography cohort.	van Onna M et al.	15326089	Not a renal disease focus
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1	1	Evaluation of mutation screening as a first line test for the diagnosis of the primary hyperoxalurias.	Rumsby G et al.	15327387	Not a renal disease focus
2	1	G-protein beta3 subunit gene C825T polymorphism in patients with vesico-ureteric reflux.	Zagradisnik B et al.	15337465	Not a renal disease focus
3	1	An intronic variant of the TGFBR1 gene is associated with carcinomas of the kidney and bladder.	Chen T et al.	15382067	Not a renal disease focus
4	1	Polymorphisms in the 5'-upstream region of the PKCbeta gene in Japanese patients with Type 2 diabetes.	Ikeda Y et al.	15384959	Not a renal disease focus
5	1	Glutathione S-transferase T1 deletion is a risk factor for developing end-stage renal disease in diabetic patients.	Yang Y et al.	15492856	Not a renal disease focus
6	1	CHEK2 is a multiorgan cancer susceptibility gene.	Cybulski C et al.	15492928	Not a renal disease focus
7	1	Molecular basis of hypoxanthine-guanine phosphoribosyltransferase deficiency in Italian Lesch-Nyhan patients: identification of nine novel mutations.	Bertelli M et al.	15505382	Not a renal disease focus
8	1	Distinct patterns of abnormal GNAS imprinting in familial and sporadic pseudohypoparathyroidism type IB.	Liu J et al.	15537666	Not a renal disease focus
9	1	Chromophobe renal cell carcinoma: a comparative study of histological, immunohistochemical and ultrastructural features using high throughput tissue microarray.	Abrahams NA et al.	15569050	Not a renal disease focus
10	1	Association of a functional single-nucleotide polymorphism of PTPN22, encoding lymphoid protein phosphatase, with rheumatoid arthritis and systemic lupus erythematosus.	Orozco G et al.	15641066	Not a renal disease focus
11	1	Altered gene expression in phenotypically normal renal cells from carriers of tumor suppressor gene mutations.	Stoyanova R et al.	15662135	Not a renal disease focus
12	1	Thrombin activatable fibrinolysis inhibitor in Behçet's disease.	Donmez A et al.	15668188	Not a renal disease focus
13	1	Allelic variants of the human scavenger receptor class B type 1 and paraoxonase 1 on coronary heart disease: genotype-phenotype correlations.	Rodriquez-Esparragon F et al.	15681296	Not a renal disease focus
14	1	A novel recessive mutation in fibroblast growth factor-23 causes familial tumoral calcinosis.	Larsson T et al.	15687325	Not a renal disease focus

1	DNase II polymorphisms associated with risk of renal disorder among systemic lupus erythematosus patients.	Shin HD et al.	15723160	Not a renal disease focus	
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4	1	Analysis of the apolipoprotein(a) size polymorphism in patients with systemic lupus erythematosus.	Peros E et al.	15754029	Not a renal disease focus
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6	1	Relationship of eNOS gene variants to diseases that have in common an endothelial cell dysfunction.	Heltianu C et al.	15784171	Not a renal disease focus
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8	1	Variable number of tandem repeat of the 5'-flanking region of type-C human natriuretic peptide receptor gene influences blood pressure levels in obesity-associated hypertension.	Aoi N et al.	15785005	Not a renal disease focus
9					
10	1	Renin-angiotensin system gene polymorphisms predict the progression to renal insufficiency among Asians with lupus nephritis.	Parsa A et al.	15789057	Not a renal disease focus
11					
12	1	A novel STX16 deletion in autosomal dominant pseudohypoparathyroidism type Ib redefines the boundaries of a cis-acting imprinting control element of GNAS.	Linglart A et al.	15800843	Not a renal disease focus
13					
14	1	Overexpression of human alanine:glyoxylate aminotransferase in Escherichia coli: renaturation from guanidine-HCl and affinity for pyridoxal phosphate co-factor.	Coulter-Mackie MB et al.	15802217	Not a renal disease focus
15					
16	1	Association between plasma activities of semicarbazide-sensitive amine oxidase and angiotensin-converting enzyme in patients with type 1 diabetes mellitus.	Boomsma F et al.	15830186	Not a renal disease focus
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18	1	Relationship of bradykinin B2 receptor gene polymorphism with essential hypertension and left ventricular hypertrophy.	Fu Y et al.	15894833	Not a renal disease focus
19					
20	1	Genetic variation in the bleomycin hydrolase gene and bleomycin-induced pulmonary toxicity in germ cell cancer patients.	Nuver J et al.	15900213	Not a renal disease focus
21					
22	1	Prevalence of von Hippel-Lindau gene mutations in sporadic renal cell carcinoma: results from The Netherlands cohort study.	van Houwelingen KP et al.	15932632	Not a renal disease focus
23					
24	1	Inducible nitric oxide synthase polymorphism is associated with susceptibility to Henoch-Schönlein purpura in northwestern Spain.	Martin J et al.	15940772	Not a renal disease focus
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26	1	Association between CYP2C9 slow metabolizer genotypes and severe hypoglycaemia on medication with sulphonylurea hypoglycaemic agents.	Holstein A et al.	15963101	Not a renal disease focus
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1	The major allele of the alanine:glyoxylate aminotransferase gene: nine novel mutations and polymorphisms associated with primary hyperoxaluria type 1.	Coulter-Mackie MB et al.	15963748	Not a renal disease focus	
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9	1	Angiotensin-converting enzyme (ACE) haplotypes and cyclosporine A (CsA) response: a model of the complex relationship between ACE quantitative trait locus and pathological phenotypes.	Catarsi P et al.	16002416	Not a renal disease focus
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12	1	Increased frequency of the angiotensin-converting enzyme gene D-allele is associated with noninfectious pulmonary dysfunction following allogeneic stem cell transplant.	Onizuka M et al.	16044138	Not a renal disease focus
13					
14	1	Association between polymorphisms of the renin-angiotensin system and more severe histological forms of lupus nephritis.	Sprovieri SR et al.	16047641	Not a renal disease focus
15					
16	1	The R620W C/T polymorphism of the gene PTPN22 is associated with SLE independently of the association of PDCD1.	Reddy MV et al.	16052172	Not a renal disease focus
17					
18	1	Does complement factor B have a role in the pathogenesis of atypical HUS?	Kavanagh D et al.	16061287	Not a renal disease focus
19					
20	1	Association of NEDD4L ubiquitin ligase with essential hypertension.	Russo CJ et al.	16103266	Not a renal disease focus
21					
22	1	CYP3A5 genotype is associated with elevated blood pressure.	Fromm MF et al.	16141800	Not a renal disease focus
23					
24	1	Complement factor B allotypes in the susceptibility and severity of coeliac disease in patients and relatives.	da Rosa Utiyama SR et al.	16164698	Not a renal disease focus
25					
26	1	The Prevalence of CYP2C8, 2C9, 2J2, and soluble epoxide hydrolase polymorphisms in African Americans with hypertension.	Dreisbach AW et al.	16202848	Not a renal disease focus
27					
28	1	Natural history of Fabry disease in females in the Fabry Outcome Survey.	Deegan PB et al.	16227523	Not a renal disease focus
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30	1	ADAM33: a newly identified gene in the pathogenesis of asthma.	Holgate ST et al.	16257631	Not a renal disease focus
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32	1	Alternative splicing of fibroblast growth factor receptor 3 produces a secreted isoform that inhibits fibroblast growth factor-induced proliferation and is repressed in urothelial carcinoma cell lines.	Tomlinson DC et al.	16288035	Not a renal disease focus
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34	1	Homozygous and compound heterozygous mutations in ZMPSTE24 cause the laminopathy restrictive dermopathy.	Moulson CL et al.	16297189	Not a renal disease focus
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1	1	The PTPN22 620W allele is a risk factor for Wegener's granulomatosis.	Jagiello P et al.	16320352	Not a renal disease focus
2	1	Hypoxia-regulated expression of attenuated diphtheria toxin A fused with hypoxia-inducible factor-1alpha oxygen-dependent degradation domain preferentially induces apoptosis of hypoxic cells in solid tumor.	Koshikawa N et al.	16357173	Not a renal disease focus
3	1	Is factor V Leiden a risk factor for thrombotic microangiopathies without severe ADAMTS 13 deficiency?	Krieg S et al.	16411392	Not a renal disease focus
4	1	Int7G24A variant of transforming growth factor-beta receptor type I is associated with invasive breast cancer.	Chen T et al.	16428477	Not a renal disease focus
5	1	Antiepidermal growth factor variant III scFv fragment: effect of radioiodination method on tumor targeting and normal tissue clearance.	Shankar S et al.	16459265	Not a renal disease focus
6	1	Matrix metalloproteinase-9 polymorphisms and renal cell carcinoma in a Japanese population.	Awakura Y et al.	16466849	Not a renal disease focus
7	1	Association of CYP3A5 genotypes with blood pressure and renal function in African families.	Bochud M et al.	16612255	Not a renal disease focus
8	1	Relationship of serum paraoxonase 1 activity and paraoxonase 1 genotype to risk of systemic lupus erythematosus.	Tripi LM et al.	16729301	Not a renal disease focus
9	1	CCL18: a urinary marker of Gaucher cell burden in Gaucher patients.	Boot RG et al.	16736095	Not a renal disease focus
10	1	Adult leydig cell tumors of the testis caused by germline fumarate hydratase mutations.	Carvajal-Carmona LG et al.	16757530	Not a renal disease focus
11	1	Are the angiotensin-converting enzyme gene and activity risk factors for stroke?	Dikmen M et al.	16791358	Not a renal disease focus
12	1	Increased neutrophil membrane expression and plasma level of proteinase 3 in systemic vasculitis are not a consequence of the - 564 A/G promotor polymorphism.	Abdgawad M et al.	16792675	Not a renal disease focus
13	1	Slight association between type 1 diabetes and "ff" VDR FokI genotype in patients from the Italian Lazio Region. Lack of association with diabetes complications.	Capoluongo E et al.	16806146	Not a renal disease focus

1	No association of the CYP3A5*1 allele with blood pressure and left ventricular mass and geometry: the KORA/MONICA Augsburg echocardiographic substudy.	Lieb W et al.	16822233	Not a renal disease focus
1	Autosomal-dominant pseudohypoparathyroidism type 1b is caused by different microdeletions within or upstream of the GNAS locus.	Juppner H et al.	16831926	Not a renal disease focus
1	VHL P25L is not a pathogenic von Hippel-Lindau mutation: a family study.	Pettman RK et al.	16884327	Not a renal disease focus
1	ACE gene insertion/deletion polymorphism modulates capillary permeability in hypertension.	Dell'omo G et al.	16889537	Not a renal disease focus
1	Allelic variation in the CNDP1 gene and its lack of association with longevity and coronary heart disease.	Zschocke J et al.	16965804	Not a renal disease focus
1	Ubiquitin ligase gp78 increases solubility and facilitates degradation of the Z variant of alpha-1-antitrypsin.	Shen Y et al.	16979136	Not a renal disease focus
1	NFkappaB and its inhibitor IkappaB in relation to type 2 diabetes and its microvascular and atherosclerotic complications.	Romzova M et al.	17002901	Not a renal disease focus
1	Predicting the impact of population level risk reduction in cardio-vascular disease and stroke on acute hospital admission rates over a 5 year period--a pilot study.	Whitfield MD et al.	17084425	Not a renal disease focus
1	Increased expression of angiotensin II type 1 receptor (AGTR1) in heart transplant recipients with recurrent rejection.	Yamani MH et al.	17097490	Not a renal disease focus
1	Effect of synthetic corticosteroids on vascular reactivity in the human forearm.	Mangos GJ et al.	17132537	Not a renal disease focus
1	Association of genetic polymorphisms of ACADSB and COMT with human hypertension.	Kamide K et al.	17143180	Not a renal disease focus
1	Role of the STK15 Phe31Ile polymorphism in renal cell carcinoma.	Hammerschmied CG et al.	17143471	Not a renal disease focus
1	Genetic and epigenetic analysis of CHEK2 in sporadic breast, colon, and ovarian cancers.	Williams LH et al.	17145815	Not a renal disease focus
1	Blastemal expression of type I insulin-like growth factor receptor in Wilms' tumors is driven by increased copy number and correlates with relapse.	Natrajan R et al.	17145858	Not a renal disease focus

1	Identification of a novel BBS gene (BBS12) highlights the major role of a vertebrate-specific branch of chaperonin-related proteins in Bardet-Biedl syndrome.	Stoetzel C et al.	17160889	Not a renal disease focus	
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9	1	Association of the C825T polymorphism of the G-protein beta3 subunit gene with hypertension, obesity, hyperlipidemia, insulin resistance, diabetes, diabetic complications, and diabetic therapies among Japanese.	Hayakawa T et al.	17161225	Not a renal disease focus
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12	1	Adrenal hyperplasia and adenomas are associated with inhibition of phosphodiesterase 11A in carriers of PDE11A sequence variants that are frequent in the population.	Horvath A et al.	17178847	Not a renal disease focus
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14	1	Mucinous tubular and spindle cell carcinoma of kidney is probably a variant of papillary renal cell carcinoma with spindle cell features.	Shen SS et al.	17240302	Not a renal disease focus
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17	1	EGFR sequence variations and real-time quantitative polymerase chain reaction analysis of gene dosage in brain metastases of solid tumors.	Franco-Hernandez C et al.	17284372	Not a renal disease focus
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20	1	Nosocomial outbreak of CTX-M-15-producing E. coli in Norway.	Naseer U et al.	17295678	Not a renal disease focus
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22	1	Association of genotypes of thrombin-activatable fibrinolysis inhibitors with thrombotic microangiopathies--a pilot study.	Sucker C et al.	17327284	Not a renal disease focus
23					
24	1	Functional polymorphism in human CYP4F2 decreases 20-HETE production.	Stec DE et al.	17341693	Not a renal disease focus
25					
26	1	Immunoexpression of lactoferrin in human sporadic renal cell carcinomas.	Giuffre G et al.	17390038	Not a renal disease focus
27					
28	1	Association of ATP1A1 and dear single-nucleotide polymorphism haplotypes with essential hypertension: sex-specific and haplotype-specific effects.	Glorioso N et al.	17446437	Not a renal disease focus
29					
30	1	Comprehensive mutation screening in 55 probands with type 1 primary hyperoxaluria shows feasibility of a gene-based diagnosis.	Monico CG et al.	17460142	Not a renal disease focus
31					
32	1	Mutations in the SBDS gene in acquired aplastic anemia.	Calado RT et al.	17478638	Not a renal disease focus
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34	1	Re-assessment of the influence of polymorphisms of phase-II metabolic enzymes on renal cell cancer risk of trichloroethylene-exposed workers.	Wiesenhutter B et al.	17479278	Not a renal disease focus
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1	Uncommon CHEK2 mis-sense variant and reduced risk of tobacco-related cancers: case control study.	Brennan P et al.	17517688	Not a renal disease focus
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6	Impact of maternal angiotensinogen M235T polymorphism and angiotensin-converting enzyme insertion/deletion polymorphism on blood pressure, protein excretion and fetal outcome in pregnancy.	Pfab T et al.	17563539	Not a renal disease focus
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9	Lack of association between endothelial nitric oxide synthase gene polymorphisms, microalbuminuria and endothelial dysfunction in hypertensive men.	Dell'Omo G et al.	17563560	Not a renal disease focus
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13	Circulating protein biomarkers of pharmacodynamic activity of sunitinib in patients with metastatic renal cell carcinoma: modulation of VEGF and VEGF-related proteins.	Deprimo SE et al.	17605814	Not a renal disease focus
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16	Glutathione S-transferase polymorphisms, cruciferous vegetable intake and cancer risk in the Central and Eastern European Kidney Cancer Study.	Moore LE et al.	17617661	Not a renal disease focus
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19	Effects of angiotensin-converting enzyme gene polymorphism and serum vitamin D levels on ambulatory blood pressure measurement and left ventricular mass in Turkish hypertensive population.	Kulah E et al.	17625392	Not a renal disease focus
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22	Manganese superoxide dismutase (Mn-SOD) gene polymorphisms in urolithiasis.	Tugcu V et al.	17628794	Not a renal disease focus
23				
24	Angiotensin-converting enzyme gene polymorphism in Kuwaiti patients with systemic lupus erythematosus.	Al-Awadhi AM et al.	17631741	Not a renal disease focus
25				
26	MDM2 SNP309 polymorphism as risk factor for susceptibility and poor prognosis in renal cell carcinoma.	Hirata H et al.	17634539	Not a renal disease focus
27				
28	Protein expression and mutational analysis of epidermal growth factor receptor in renal angiomyolipomas.	Lim SD et al.	17685929	Not a renal disease focus
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31	Germline VHL gene mutations in three Serbian families with von Hippel-Lindau disease.	Stanojevic BR et al.	17688370	Not a renal disease focus
32				
33	The E3 ligase HACE1 is a critical chromosome 6q21 tumor suppressor involved in multiple cancers.	Zhang L et al.	17694067	Not a renal disease focus
34				
35	Genetic variation in the paraoxonase-3 (PON3) gene is associated with serum PON1 activity.	Sanghera DK et al.	17900266	Not a renal disease focus
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38	Genetic polymorphisms in OGG1 and their association with angiomyolipoma, a benign kidney tumor in patients with tuberosclerosis.	Habib SL et al.	17932460	Not a renal disease focus
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1	Human G(salpa) mutant causes pseudohypoparathyroidism type Ia/neonatal diarrhea, a potential cell-specific role of the palmitoylation cycle.	Makita N et al.	17962410	Not a renal disease focus
1	Association of the nitric oxide synthase (eNOS) gene polymorphism with increased risk for both lupus glomerulonephritis and rheumatoid arthritis in a single genetically homogeneous population.	Vazgiourakis V et al.	17971359	Not a renal disease focus
1	Lack of association between matrix metalloproteinase-1 (MMP-1) promoter polymorphism and risk of renal cell carcinoma.	Piccoli MF et al.	17980059	Not a renal disease focus
1	Differential regulation of serum- and glucocorticoid-inducible kinase 1 (SGK1) splice variants based on alternative initiation of transcription.	Simon P et al.	17982254	Not a renal disease focus
1	Polymorphisms in genes related to activation or detoxification of carcinogens might interact with smoking to increase renal cancer risk: results from The Netherlands Cohort Study on diet and cancer.	Smits KM et al.	17982751	Not a renal disease focus
1	Dominant-negative HIF-3 alpha 4 suppresses VHL-null renal cell carcinoma progression.	Maynard MA et al.	17998805	Not a renal disease focus
1	The extracolonic cancer spectrum in females with the common 'South African' hMLH1 c.C1528T mutation.	Blokhuis MM et al.	18049911	Not a renal disease focus
1	Position of nonmuscle myosin heavy chain IIA (NMMHC-IIA) mutations predicts the natural history of MYH9-related disease.	Pecci A et al.	18059020	Not a renal disease focus
1	Lack of association of a functional single nucleotide polymorphism of PTPN22, encoding lymphoid protein phosphatase, with susceptibility to Henoch-Schönlein purpura.	Orozco G et al.	18078626	Not a renal disease focus
1	Progesterone receptor reactivity in renal oncocytoma and chromophobe renal cell carcinoma.	Mai KT et al.	18081814	Not a renal disease focus
1	Constant allelic alteration on chromosome 16p (TSC2 gene) in perivascular epithelioid cell tumour (PEComa): genetic evidence for the relationship of PEComa with angiomyolipoma.	Pan CC et al.	18085521	Not a renal disease focus
1	Association of angiotensin-converting enzyme gene insertion/deletion polymorphism with metabolic syndrome in Iranians with type 2 diabetes mellitus.	Nikzamir A et al.	18154415	Not a renal disease focus
1	Association of CDKAL1, IGF2BP2, CDKN2A/B, HHEX, SLC30A8, and KCNJ11 with susceptibility to type 2 diabetes in a Japanese population.	Omori S et al.	18162508	Not a renal disease focus

1	Renal oncocytoma with and without intravascular extension into the branches of renal vein have the same morphological, immunohistochemical and genetic features.	Hes O et al.	18196270	Not a renal disease focus	
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8	1	Association of SGK1 gene polymorphisms with type 2 diabetes.	Schwab M et al.	18209482	Not a renal disease focus
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10	1	Association of a functional cytochrome P450 4F2 haplotype with urinary 20-HETE and hypertension.	Liu H et al.	18235092	Not a renal disease focus
11					
12	1	Haplotypes of the HRES-1 endogenous retrovirus are associated with development and disease manifestations of systemic lupus erythematosus.	Pullmann R Jr et al.	18240231	Not a renal disease focus
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15	1	Genetic and epigenetic alterations in the von hippel-lindau gene: the influence on renal cancer prognosis.	Smits KM et al.	18245539	Not a renal disease focus
16					
17	1	AMP-activated protein kinase inhibits transforming growth factor-beta-induced Smad3-dependent transcription and myofibroblast transdifferentiation.	Mishra R et al.	18250161	Not a renal disease focus
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20	1	Oncocytic papillary renal cell carcinoma with solid architecture: mimic of renal oncocytoma.	Mai KT et al.	18251779	Not a renal disease focus
21					
22	1	Structure of the N-terminal region of complement factor H and conformational implications of disease-linked sequence variations.	Hocking HG et al.	18252712	Not a renal disease focus
23					
24	1	The role of type 1 and type 2 5'-deiodinase in the pathophysiology of the 3,5,3'-triiodothyronine toxicosis of McCune-Albright syndrome.	Celi FS et al.	18349068	Not a renal disease focus
25					
26	1	N-acetyltransferase 8, a positional candidate for blood pressure and renal regulation: resequencing, association and in silico study.	Juhanson P et al.	18402670	Not a renal disease focus
27					
28	1	Association analysis in african americans of European-derived type 2 diabetes single nucleotide polymorphisms from whole-genome association studies.	Lewis JP et al.	18443202	Not a renal disease focus
29					
30	1	PPP2R2B CAG repeat length in the Han Chinese in Taiwan: Association analyses in neurological and psychiatric disorders and potential functional implications.	Chen CM et al.	18484086	Not a renal disease focus
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32	1	Glutathione S-transferase variants and hypertension.	Delles C et al.	18551009	Not a renal disease focus
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34	1	Allelic loss analysis of tumor suppressor genes regardless of heterozygosity: von Hippel-Lindau gene loss in renal cell carcinoma.	Mochida J et al.	18554638	Not a renal disease focus
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1	Renal cell carcinoma, occupational pesticide exposure and modification by glutathione S-transferase polymorphisms.	Karami S et al.	18566013	Not a renal disease focus	
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4	1	No association between single nucleotide polymorphisms and the development of nephrotoxicity after orthotopic heart transplantation.	Klauke B et al.	18582803	Not a renal disease focus
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6	1	Association of GSTM3 intron 6 variant with cigarette smoking, tobacco chewing and alcohol as modifier factors for prostate cancer risk.	Kesarwani P et al.	18668224	Not a renal disease focus
7					
8	1	Association of renin-angiotensin and endothelial nitric oxide synthase gene polymorphisms with blood pressure progression and incident hypertension: prospective cohort study.	Conen D et al.	18698212	Not a renal disease focus
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10	1	Association of angiotensin-converting enzyme gene dimorphisms with severity of lupus disease.	Rabbani MA et al.	18711292	Not a renal disease focus
11					
12	1	Development of human cell models for assessing the carcinogenic potential of chemicals.	Pang Y et al.	18778725	Not a renal disease focus
13					
14	1	SIRT1 genetic variants associate with the metabolic response of Caucasians to a controlled lifestyle intervention--the TULIP Study.	Weyrich P et al.	19014491	Not a renal disease focus
15					
16	1	Influence of XPD and APE1 DNA repair gene polymorphism on bladder cancer susceptibility in north India.	Gangwar R et al.	19041121	Not a renal disease focus
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18	1	Genetic variants in hypertensive patients with coronary artery disease and coexisting atheromatous renal artery stenosis.	Szperl M et al.	19043368	Not a renal disease focus
19					
20	1	When should genetic testing be obtained in a patient with pheochromocytoma or paraganglioma?	Erlic Z et al.	19067729	Not a renal disease focus
21					
22	1	Identification of novel mutations and sequence variation in the Zellweger syndrome spectrum of peroxisome biogenesis disorders.	Yik WY et al.	19105186	Not a renal disease focus
23					
24	1	High aldosterone-to-renin variants of CYP11B2 and pregnancy outcome.	Escher G et al.	19151144	Not a renal disease focus
25					
26	1	The Leu262Val polymorphism of presenilin associated rhomboid like protein (PARL) is associated with earlier onset of type 2 diabetes and increased urinary microalbumin creatinine ratio in an Irish case-control population.	Hatunic M et al.	19185381	Not a renal disease focus
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28	1	A pilot study of genetic polymorphisms and hemodialysis vascular access thrombosis.	Brophy DF et al.	19210273	Not a renal disease focus
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1	CYP1B1 mutations in Spanish patients with primary congenital glaucoma: phenotypic and functional variability.	Campos-Mollo E et al.	19234632	Not a renal disease focus
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6	Impact of nucleotide excision repair ERCC2 and base excision repair APEX1 genes polymorphism and its association with recurrence after adjuvant BCG immunotherapy in bladder cancer patients of North India.	Gangawar R et al.	19242824	Not a renal disease focus
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9	Functional basis of protection against age-related macular degeneration conferred by a common polymorphism in complement factor B.	Montes T et al.	19255449	Not a renal disease focus
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12	Insight into mechanism of oxidative DNA damage in angiomyolipomas from TSC patients.	Habib SL	19265534	Not a renal disease focus
13				
14	Alu-Alu recombination underlies the vast majority of large VHL germline deletions: Molecular characterization and genotype-phenotype correlations in VHL patients.	Franke G et al.	19280651	Not a renal disease focus
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18	Loss of function of Sco1 and its interaction with cytochrome c oxidase.	Stiburek L et al.	19295170	Not a renal disease focus
19				
20	Expression of hepatocyte growth factor and its receptor met in Wilms' tumors and nephrogenic rests reflects their roles in kidney development.	Vuononvirta R et al.	19318497	Not a renal disease focus
21				
22	A human polymorphism affects NEDD4L subcellular targeting by leading to two isoforms that contain or lack a C2 domain.	Garrone NF et al.	19364400	Not a renal disease focus
23				
24	The action and mode of binding of thiazolidinedione ligands at free fatty acid receptor 1.	Smith NJ et al.	19398560	Not a renal disease focus
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27	Tropical calcific pancreatitis and its association with CTSC and SPINK1 (p.N34S) variants.	Derikx MH et al.	19404200	Not a renal disease focus
28				
29	GSTM1, GSTM3 and GSTT1 gene variants and risk of benign prostate hyperplasia in North India.	Mittal RD et al.	19407363	Not a renal disease focus
30				
31	Structural bioinformatics mutation analysis reveals genotype-phenotype correlations in von Hippel-Lindau disease and suggests molecular mechanisms of tumorigenesis.	Forman JR et al.	19408298	Not a renal disease focus
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34	Caspase 9 and caspase 8 gene polymorphisms and susceptibility to bladder cancer in north Indian population.	Gangwar R et al.	19412632	Not a renal disease focus
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36	Is polymorphism within eNOS gene associated with the late onset of myocardial infarction? A pilot study.	Gluba A et al.	19505886	Not a renal disease focus
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1	Functional phosphodiesterase 11A mutations may modify the risk of familial and bilateral testicular germ cell tumors.	Horvath A et al.	19549888	Not a renal disease focus	
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4	1	Analysis of germline variants in CDH1, IGFBP3, MMP1, MMP3, STK15 and VEGF in familial and sporadic renal cell carcinoma.	Ricketts C et al.	19551141	Not a renal disease focus
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6	1	The calcineurin homologous protein-1 increases Na(+)/H(+)-exchanger 3 trafficking via ezrin phosphorylation.	Di Sole F et al.	19556366	Not a renal disease focus
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8	1	A functional variant of NEDD4L is associated with hypertension, antihypertensive response, and orthostatic hypotension.	Luo F et al.	19635985	Not a renal disease focus
9					
10	1	A significantly joint effect between arsenic and occupational exposures and risk genotypes/diplotypes of CYP2E1, GSTO1 and GSTO2 on risk of urothelial carcinoma.	Wang YH et al.	19686770	Not a renal disease focus
11					
12	1	Genetic polymorphisms in genes encoding antioxidant enzymes are associated with diabetic retinopathy in type 1 diabetes.	Hovnik T et al.	19752172	Not a renal disease focus
13					
14	1	Loss of heterozygosity at 2q37 in sporadic Wilms' tumor: putative role for miR-562.	Drake KM et al.	19789318	Not a renal disease focus
15					
16	1	Apolipoprotein E/C1 locus variants modify renal cell carcinoma risk.	Moore LE et al.	19808960	Not a renal disease focus
17					
18	1	Do DNA repair genes OGG1, XRCC3 and XRCC7 have an impact on susceptibility to bladder cancer in the North Indian population?	Gangwar R et al.	19815090	Not a renal disease focus
19					
20	1	Angiotensin-converting enzyme and angiotensin II receptor subtype 2 genotypes in type 1 diabetes and severe hypoglycaemia requiring emergency treatment: a case cohort study.	Pedersen-Bjergaard U et al.	19820429	Not a renal disease focus
21					
22	1	Clinical predictors and algorithm for the genetic diagnosis of pheochromocytoma patients.	Erlic Z et al.	19825962	Not a renal disease focus
23					
24	1	A polymorphism within the fructosamine-3-kinase gene is associated with HbA1c Levels and the onset of type 2 diabetes mellitus.	Mohas M et al.	19834870	Not a renal disease focus
25					
26	1	A study on the association between angiotensin-I converting enzyme I/D dimorphism and type-2 diabetes mellitus.	Chmaisse HN et al.	19861867	Not a renal disease focus
27					
28	1	The Int7G24A variant of transforming growth factor-beta receptor type I is a risk factor for colorectal cancer in the male Spanish population: a case-control study.	Castillejo A et al.	19930569	Not a renal disease focus
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1	The role of polymorphisms within paraoxonases (192 Gln/Arg in PON1 and 311Ser/Cys in PON2) in the modulation of cardiovascular risk: a pilot study.	Gluba A et al.	19939821	Not a renal disease focus	
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9	1	Endothelial nitric oxide synthase and nicotinamide adenosine dinucleotide phosphate oxidase p22phox gene (C242T) polymorphisms and systemic lupus erythematosus in a Chinese Population.	Tang FY et al.	19965945	Not a renal disease focus
10					
11	1	A novel human heparanase splice variant, T5, endowed with protumorigenic characteristics.	Barash U et al.	20007507	Not a renal disease focus
12					
13	1	Influence of CYP3A5 and ABCB1 gene polymorphisms on calcineurin inhibitor-related neurotoxicity after hematopoietic stem cell transplantation.	Yanagimachi M et al.	20030680	Not a renal disease focus
14					
15	1	Development of a multiplex ligation-dependent probe amplification (MLPA) assay for quantification of the OCRL1 gene.	Coutton C et al.	20043897	Not a renal disease focus
16					
17	1	DNA repair gene X-ray repair cross-complementing group 1 and xeroderma pigmentosum group D polymorphisms and risk of prostate cancer: a study from North India.	Mandal RK et al.	20070155	Not a renal disease focus
18					
19	1	Renal cell carcinoma Fuhrman grade and histological subtype correlate with complete polymorphic deletion of glutathione S-transferase M1 gene.	De Martino M et al.	20083259	Not a renal disease focus
20					
21	1	Genetic variations in the sodium balance-regulating genes ENaC, NEDD4L, NDFIP2 and USP2 influence blood pressure and hypertension.	Jin HS et al.	20090362	Not a renal disease focus
22					
23	1	Multiorgan detection and characterization of protease-resistant prion protein in a case of variant CJD examined in the United States.	Notari S et al.	20098730	Not a renal disease focus
24					
25	1	Genetic disorders in complement (regulating) genes in patients with atypical haemolytic uraemic syndrome (aHUS).	Westra D et al.	20106822	Not a renal disease focus
26					
27	1	CYP4F2 gene V433M polymorphism is associated with ischemic stroke in the male Northern Chinese Han population.	Deng S et al.	20227456	Not a renal disease focus
28					
29	1	Subtype-specific FBXW7 mutation and MYCN copy number gain in Wilms' tumor.	Williams RD et al.	20332316	Not a renal disease focus
30					
31	1	Association of selected variants in genes involved in cell cycle and apoptosis with bladder cancer risk in North Indian population.	Gangwar R et al.	20380574	Not a renal disease focus
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33	1	Association of CAPN10 gene with insulin sensitivity, glucose tolerance and renal function in essential hypertensive patients.	Zhou X et al.	20406624	Not a renal disease focus
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1	1	Clinical and molecular features of familial and sporadic cases of von Hippel-Lindau disease from Mexico.	Chacon-Camacho OF et al.	20447124	Not a renal disease focus
2	1	N-glycosylation of carnosinase influences protein secretion and enzyme activity: implications for hyperglycemia.	Riedl E et al.	20460427	Not a renal disease focus
3	1	Combined classical cytogenetics and microarray-based genomic copy number analysis reveal frequent 3;5 rearrangements in clear cell renal cell carcinoma.	Pei J et al.	20461753	Not a renal disease focus
4	1	The association of glutathione-S-transferase gene polymorphisms (GSTM1, GSTT1, GSTP1) with idiopathic male infertility.	Safarinejad MR et al.	20505681	Not a renal disease focus
5	1	The non-muscle Myosin heavy chain 9 gene (MYH9) is not associated with lupus nephritis in African Americans.	Freedman BI et al.	20523037	Not a renal disease focus
6	1	Association of the genetic polymorphisms of the ACE gene and the eNOS gene with lupus nephropathy in northern Chinese population.	Li X et al.	20540812	Not a renal disease focus
7	1	eNOS gene polymorphism association with retinopathy in type 1 diabetes.	Bazzaz JT et al.	20565248	Not a renal disease focus
8	1	Clinical and molecular characterization of Brazilian families with von Hippel-Lindau disease: a need for delineating genotype-phenotype correlation.	Gomy I et al.	20567917	Not a renal disease focus
9	1	Functional polymorphisms in cell death pathway genes and risk of renal cell carcinoma.	Zhu J et al.	20572163	Not a renal disease focus
10	1	Role of MMP-3 and MMP-9 and their haplotypes in risk of bladder cancer in North Indian cohort.	Srivastava P et al.	20574775	Not a renal disease focus
11	1	The role of endothelial nitric oxide synthase (eNOS) T-786C, G894T, and 4a/b gene polymorphisms in the risk of idiopathic male infertility.	Safarinejad MR et al.	20586099	Not a renal disease focus
12	1	Polymorphic variants of DNA repair gene XRCC3 and XRCC7 and risk of prostate cancer: a study from North Indian population.	Mandal RK et al.	20590474	Not a renal disease focus
13	1	Association of TNFAIP3 polymorphism with susceptibility to systemic lupus erythematosus in a Japanese population.	Kawasaki A et al.	20617138	Not a renal disease focus
14	1	Functional polymorphisms in the CYP3A4, CYP3A5, and CYP21A2 genes in the risk for hypertension in pregnancy.	Coto E et al.	20617557	Not a renal disease focus
15	1	Functional polymorphism of the CK2alpha intronless gene plays oncogenic roles in lung cancer.	Hung MS et al.	20625391	Not a renal disease focus

1	Occupational trichloroethylene exposure and renal carcinoma risk: evidence of genetic susceptibility by reductive metabolism gene variants.	Moore LE et al.	20663906	Not a renal disease focus	
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6	1	Influence of caspases 8 and 9 gene promoter polymorphism on prostate cancer susceptibility and early development of hormone refractory prostate cancer.	Kesarwani P et al.	20804486	Not a renal disease focus
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9	1	Are cell cycle and apoptosis genes associated with prostate cancer risk in North Indian population?	Mandal RK et al.	20822933	Not a renal disease focus
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12	1	Bladder cancer risk associated with genotypic polymorphism of the matrix metalloproteinase-1 and 7 in North Indian population.	Srivastava P et al.	20826916	Not a renal disease focus
13					
14	1	Association of TNFAIP3 interacting protein 1, TNIP1 with systemic lupus erythematosus in a Japanese population: a case-control association study.	Kawasaki A et al.	20849588	Not a renal disease focus
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17	1	S-adenosyl methionine improves early viral responses and interferon-stimulated gene induction in hepatitis C nonresponders.	Feld JJ et al.	20854821	Not a renal disease focus
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20	1	Phosphodiesterase 11A (PDE11A) genetic variants may increase susceptibility to prostatic cancer.	Faucz FR et al.	20881257	Not a renal disease focus
21					
22	1	A functional variant of the NEDD4L gene is associated with beneficial treatment response with β -blockers and diuretics in hypertensive patients.	Svensson-Farbom P et al.	21052022	Not a renal disease focus
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25	1	Characterization of UDP-glucuronosyltransferase 2A1 (UGT2A1) variants and their potential role in tobacco carcinogenesis.	Bushey RT et al.	21164388	Not a renal disease focus
26					
27	1	hOGG1 Ser326Cys polymorphism and renal cell carcinoma risk in a Chinese population.	Zhao H et al.	21166493	Not a renal disease focus
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30	1	Cancer risks for monoallelic MUTYH mutation carriers with a family history of colorectal cancer.	Win AK et al.	21171015	Not a renal disease focus
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32	1	Isocitrate dehydrogenase 1/2 mutational analyses and 2-hydroxyglutarate measurements in Wilms tumors.	Rakheja D et al.	21225914	Not a renal disease focus
33					
34	1	A WNK4 gene variant relates to osteoporosis and not to hypertension in the Portuguese population.	Mendes AI et al.	21236712	Not a renal disease focus
35					
36	1	Three novel mutations in the PHEX gene in Chinese subjects with hypophosphatemic rickets extends genotypic variability.	Jap TS et al.	21293852	Not a renal disease focus
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1	1	Bimodal distribution of RNA expression levels in human skeletal muscle tissue.	Mason CC et al.	21299892	Not a renal disease focus
2	1	Investigating paraoxonase-1 gene Q192R and L55M polymorphism in patients with renal cell cancer.	Uyar OA et al.	21308654	Not a renal disease focus
3	1	The presence of PAI-1 4G/5G and ACE DD genotypes increases the risk of early-stage AVF thrombosis in hemodialysis patients.	Gungor Y et al.	21332339	Not a renal disease focus
4	1	Association of genetic polymorphisms of CYP 2C19 with hypertension in a Chinese Han population.	Ma Y et al.	21332417	Not a renal disease focus
5	1	Association between renin-angiotensin-aldosterone system-related genes and blood pressure in a Korean population.	Song SB et al.	21342026	Not a renal disease focus
6	1	Admixture aberration analysis: application to mapping in admixed population using pooled DNA.	Bercovici S et al.	21385031	Not a renal disease focus
7	1	Polymorphisms and haplotypes in caspases 8 and 9 genes and risk for prostate cancer: a case-control study in cohort of North India.	George GP et al.	21396853	Not a renal disease focus
8	1	A novel MECA3 region in human 3p21.3 harboring putative tumor suppressor genes and oncogenes.	Braga E et al.	21423093	Not a renal disease focus
9	1	GSTT1, GSTM1, and CYP1B1 gene polymorphisms and susceptibility to sporadic renal cell cancer.	Salinas-Sanchez AS et al.	21458313	Not a renal disease focus
10	1	Insertion/deletion polymorphism of angiotensin I-converting enzyme gene is linked with chromophobe renal cell carcinoma.	de Martino M et al.	21477733	Not a renal disease focus
11	1	Genetic polymorphisms in APE1 are associated with renal cell carcinoma risk in a Chinese population.	Cao Q et al.	21538578	Not a renal disease focus
12	1	In vitro transforming potential, intracellular signaling properties, and sensitivity to a kinase inhibitor (sorafenib) of RET proto-oncogene variants Glu511Lys, Ser649Leu, and Arg886Trp.	Prazeres H et al.	21551259	Not a renal disease focus
13	1	Hypercholesterolemia and a candidate gene within the 12q24 locus.	Gragnoli C.	21554682	Not a renal disease focus
14	1	Lack of association of Klotho gene variants with valvular and vascular calcification in Caucasians: a candidate gene study of the Framingham Offspring Cohort.	Tangri N et al.	21565945	Not a renal disease focus

1	Clear-cell papillary renal cell carcinoma: molecular and immunohistochemical analysis with emphasis on the von Hippel-Lindau gene and hypoxia-inducible factor pathway-related proteins.	Rohan SM et al.	21602815	Not a renal disease focus	
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6	1	Selected AGXT gene mutations analysis provides a genetic diagnosis in 28% of Tunisian patients with primary hyperoxaluria.	Benhaj Mbarek I et al.	21612638	Not a renal disease focus
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10	1	Familial renal cell carcinoma from the Swedish Family-Cancer Database.	Liu H et al.	21621909	Not a renal disease focus
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12	1	Adult renal cell carcinoma with rhabdoid morphology represents a neoplastic dedifferentiation analogous to sarcomatoid carcinoma.	Chapman-Fredricks JR et al.	21665507	Not a renal disease focus
13					
14	1	Association of caspases with an increased prostate cancer risk in north Indian population.	Mittal RD et al.	21668377	Not a renal disease focus
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16	1	Association of death receptor 4, Caspase 3 and 5 gene polymorphism with increased risk to bladder cancer in North Indians.	Mittal RD et al.	21700414	Not a renal disease focus
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18	1	The polymorphisms in the VHL and HIF1A genes are associated with the prognosis but not the development of renal cell carcinoma.	Qin C et al.	21778301	Not a renal disease focus
19					
20	1	Association of single nucleotide polymorphisms in promoter of matrix metalloproteinase-2, 8 genes with bladder cancer risk in Northern India.	Srivastava P et al.	21784671	Not a renal disease focus
21					
22	1	Association of PTPN22 gene polymorphism and systemic lupus erythematosus in a cohort of Egyptian patients: impact on clinical and laboratory results.	Moez P et al.	21818561	Not a renal disease focus
23					
24	1	Thrombotic events in MYH9 gene-related autosomal macrothrombocytopenias (old May-Hegglin, Sebastian, Fechtner and Epstein syndromes).	Girolami A et al.	21842307	Not a renal disease focus
25					
26	1	JAK3 in clear cell renal cell carcinoma: mutational screening and clinical implications.	de Martino M et al.	21868263	Not a renal disease focus
27					
28	1	Genetic diagnosis of X-linked dominant Hypophosphatemic Rickets in a cohort study: tubular reabsorption of phosphate and 1,25(OH) ₂ D serum levels are associated with PHEX mutation type.	Morey M et al.	21902834	Not a renal disease focus
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30	1	Gene-gene interaction of BLK, TNFSF4, TRAF1, TNFAIP3, and REL in systemic lupus erythematosus.	Zhou XJ et al.	21905002	Not a renal disease focus
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32	1	Vitamin D receptor FokI and BsmI gene polymorphism and its association with grade and stage of renal cell carcinoma in North Indian population.	Arjumand W et al.	21931993	Not a renal disease focus
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1	The polymorphisms of P53 codon 72 and MDM2 SNP309 and renal cell carcinoma risk in a low arsenic exposure area.	Huang CY et al.	21982800	Not a renal disease focus	
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4	1	Risk factor for clear cell renal cell carcinoma in Chinese population: a case-control study.	Wang G et al.	22000673	Not a renal disease focus
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6	1	Base excision repair pathway genes polymorphism in prostate and bladder cancer risk in North Indian population.	Mittal RD et al.	22019847	Not a renal disease focus
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8	1	Von Hippel-Lindau (VHL) inactivation in sporadic clear cell renal cancer: associations with germline VHL polymorphisms and etiologic risk factors.	Moore LE et al.	22022277	Not a renal disease focus
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10	1	Impact of glutathione transferase M1, T1, and P1 gene polymorphisms in the genetic susceptibility of North Indian population to renal cell carcinoma.	Ahmad ST et al.	22054067	Not a renal disease focus
11					
12	1	Whole-exome sequencing of human pancreatic cancers and characterization of genomic instability caused by MLH1 haploinsufficiency and complete deficiency.	Wang L et al.	22156295	Not a renal disease focus
13					
14	1	Association between urothelial carcinoma after kidney transplantation and aristolochic acid exposure: the potential role of aristolochic acid in HRas and TP53 gene mutations.	Xiao J et al.	22172840	Not a renal disease focus
15					
16	1	Mapping of the UGT1A locus identifies an uncommon coding variant that affects mRNA expression and protects from bladder cancer.	Tang W et al.	22228101	Not a renal disease focus
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18	1	Paravertebral ligament ossification in vitamin D-resistant rickets: incidence, clinical significance, and genetic evaluation.	Lee SH et al.	22261628	Not a renal disease focus
19					
20	1	Risk of renal cell carcinoma and polymorphism in phase I xenobiotic metabolizing CYP1A1 and CYP2D6 enzymes.	Ahmad ST et al.	22281432	Not a renal disease focus
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22	1	Relationship between CYP1A1 genetic polymorphisms and renal cancer in China.	Chen J et al.	22296350	Not a renal disease focus
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24	1	Genetic variations in the ADAMTS12 gene are associated with schizophrenia in Puerto Rican patients of Spanish descent.	Bespalova IN et al.	22322903	Not a renal disease focus
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26	1	Association of promoter polymorphisms in MMP2 and TIMP2 with prostate cancer susceptibility in North India.	Srivastava P et al.	22374248	Not a renal disease focus
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28	1	Polymorphisms in base-excision & nucleotide-excision repair genes & prostate cancer risk in north Indian population.	Mandal RK et al.	22382185	Not a renal disease focus
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30	1	Common genetic variants at the 11q13.3 renal cancer susceptibility locus influence binding of HIF to an enhancer of cyclin D1 expression.	Schodel J et al.	22406644	Not a renal disease focus
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1	Mutation screening of the EYA1, SIX1, and SIX5 genes in an East Asian cohort with branchio-oto-renal syndrome.	Wang SH et al.	22447252	Not a renal disease focus	
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6	1	Association of Ku70 A-31G polymorphism and risk of renal cell carcinoma in a Chinese population.	Wang W et al.	22455395	Not a renal disease focus
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8	1	INPPL1 is associated with the metabolic syndrome in men with Type 1 diabetes, but not with diabetic nephropathy.	Hyvonen ME et al.	22486725	Not a renal disease focus
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10	1	MicroRNA target site polymorphisms in the VHL-HIF1 α pathway predict renal cell carcinoma risk.	Wei H et al.	22517515	Not a renal disease focus
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12	1	A two-stage matched case-control study on multiple hypertensive candidate genes in Han Chinese.	Kuo TY et al.	22534794	Not a renal disease focus
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14	1	Somatic mutation analysis of the SDHB, SDHC, SDHD, and RET genes in the clinical assessment of sporadic and hereditary pheochromocytoma.	Weber A et al.	22573489	Not a renal disease focus
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16	1	Mutational analysis of patients with FGF23-related hypophosphatemic rickets.	Kinoshita Y et al.	22577109	Not a renal disease focus
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18	1	A functional polymorphism C-1310G in the promoter region of Ku70/XRCC6 is associated with risk of renal cell carcinoma.	Wang W et al.	22593040	Not a renal disease focus
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20	1	Angiotensin-converting enzyme (ACE) gene II genotype protects against the development of diabetic peripheral neuropathy in type 2 diabetes mellitus.	Mansoor Q et al.	22607040	Not a renal disease focus
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22	1	LMP2, a novel immunohistochemical marker to distinguish renal oncocytoma from the eosinophilic variant of chromophobe renal cell carcinoma.	Zheng G et al.	22705098	Not a renal disease focus
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24	1	BRAF mutations in metanephric adenoma of the kidney.	Choueiri T et al.	22727996	Not a renal disease focus
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26	1	Resequencing the whole MYH7 gene (including the intronic, promoter, and 3' UTR sequences) in hypertrophic cardiomyopathy.	Coto E et al.	22765922	Not a renal disease focus
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28	1	Higher frequency of paraoxonase gene polymorphism and cardiovascular impairment among Brazilian Fabry Disease patients.	Barris-Oliveira AC et al.	22796398	Not a renal disease focus
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30	1	Paraoxonase 1 (PON1) C/T-108 association with longitudinal mean arterial blood pressure.	Bhatnagar V et al.	22854640	Not a renal disease focus
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1	Patients with Lynch syndrome mismatch repair gene mutations are at higher risk for not only upper tract urothelial cancer but also bladder cancer.	Skeldon SC et al.	22883484	Not a renal disease focus	
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8	1	Novel missense mutations of WNK1 in patients with hypokalemic salt-losing tubulopathies.	Zhang C et al.	22934535	Not a renal disease focus
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10	1	Proteasome modulator 9 and depression in type 2 diabetes.	Gragnoli C	22934761	Not a renal disease focus
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12	1	Regulatory regions of the paraoxonase 1 (PON1) gene are associated with neovascular age-related macular degeneration (AMD).	Oczos J et al.	22956172	Not a renal disease focus
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14	1	New insights into Dok-4 PTB domain structure and function.	Hooker E et al.	22982678	Not a renal disease focus
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16	1	The role of XRCC6 T-991C functional polymorphism in renal cell carcinoma.	Chang WS et al.	22993329	Not a renal disease focus
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18	1	Integrated multiplex ligation dependent probe amplification (MLPA) assays for the detection of alterations in the HEXB, GM2A and SMARCA1 genes to support the diagnosis of Morbus Sandhoff, M. Tay-Sachs variant AB and Schimke immuno-osseous dysplasia in humans.	Sobek AK et al.	23010210	Not a renal disease focus
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20	1	Endothelial nitric oxide synthase Glu298Asp polymorphism as a risk factor for prostate cancer.	Ziaei SA et al.	23015399	Not a renal disease focus
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22	1	Calpain-10 gene polymorphisms in type 2 diabetes and its micro- and macrovascular complications.	Buraczynska M et al.	23021796	Not a renal disease focus
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24	1	Genetic variants in metabolizing genes NQO1, NQO2, MTHFR and risk of prostate cancer: a study from North India.	Mandal RK et al.	23054000	Not a renal disease focus
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26	1	Soluble FLT1 binds lipid microdomains in podocytes to control cell morphology and glomerular barrier function.	Jin J et al.	23063127	Not a renal disease focus
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28	1	Polymorphism in protein tyrosine phosphatase receptor delta is associated with the risk of clear cell renal cell carcinoma.	Du Y et al.	23069849	Not a renal disease focus
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30	1	Impact of glutathione S-transferase T1 gene polymorphisms on acute cellular rejection in living donor liver transplantation.	Kamei H et al.	23153768	Not a renal disease focus
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32	1	Interaction of C1GALT1-IL5RA on the susceptibility to IgA nephropathy in Southern Han Chinese.	Wang W et al.	23190752	Not a renal disease focus
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34	1	A functional variant in the MTOR promoter modulates its expression and is associated with renal cell cancer risk.	Cao Q et al.	23209702	Not a renal disease focus
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1	Association of the formiminotransferase N-terminal sub-domain containing gene and thrombospondin, type 1, domain-containing 7A gene with the prevalence of vertebral fracture in 2427 consecutive autopsy cases.	Zhou H et al.	23303384	Not a renal disease focus
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1	1	Klotho gene polymorphism of rs3752472 is associated with the risk of urinary calculi in the population of Han nationality in Eastern China.	Xu C et al.	23756195	Not a renal disease focus
2	1	Oncocytic papillary renal cell carcinoma: a clinicopathological study emphasizing distinct morphology, extended immunohistochemical profile and cytogenetic features.	Xia QY et al.	23826421	Not a renal disease focus
3	1	Impact of MMP-3 and TIMP-3 gene polymorphisms on prostate cancer susceptibility in North Indian cohort.	Srivastava P et al.	23872201	Not a renal disease focus
4	1	Clinical phenotypes of Chinese primary hyperparathyroidism patients are associated with the calcium-sensing receptor gene R990G polymorphism.	Han G et al.	23946278	Not a renal disease focus
5	1	Q222R polymorphism in DNase I gene is a risk factor for nephritis in South Indian SLE patients.	Panneer D et al.	23963431	Not a renal disease focus
6	1	cGMP-dependent protein kinase 1 polymorphisms underlie renal sodium handling impairment.	Citterio L et al.	24060892	Not a renal disease focus
7	1	Cancer risk and overall survival in mismatch repair proficient hereditary non-polyposis colorectal cancer, Lynch syndrome and sporadic colorectal cancer.	Garre P et al.	24061861	Not a renal disease focus
8	1	Clinical and Genetic Factors Associated With Severe Hematological Toxicity in Glioblastoma Patients During Radiation Plus Temozolomide Treatment: A Prospective Study.	Lombardi G et al.	24064758	Not a renal disease focus
9	1	Mutations in the mevalonate kinase (MVK) gene cause nonsyndromic retinitis pigmentosa.	Siemiatkowska AM et al.	24084495	Not a renal disease focus
10	1	Three novel mutations in the carnitine-acylcarnitine translocase (CACT) gene in patients with CACT deficiency and in healthy individuals.	Fukushima T et al.	24088670	Not a renal disease focus
11	1	Delineation of PIGV mutation spectrum and associated phenotypes in hyperphosphatasia with mental retardation syndrome.	Horn D et al.	24129430	Not a renal disease focus
12	1	Genetic variation in the GSTM3 promoter confer risk and prognosis of renal cell carcinoma by reducing gene expression.	Tan X et al.	24157827	Not a renal disease focus
13	1	Early (2008-2010) hospital outbreak of Klebsiella pneumoniae producing OXA-48 carbapenemase in the UK.	Thomas CP et al.	24207018	Not a renal disease focus
14	1	RTK/ERK pathway under natural selection associated with prostate cancer.	Chen Y et al.	24223781	Not a renal disease focus

1	1	Amylase $\hat{\pm}$ -1A (AMY1A): a novel immunohistochemical marker to differentiate chromophobe renal cell carcinoma from benign oncocytoma.	Jain S et al.	24225843	Not a renal disease focus
2	1	Clear cell papillary renal cell carcinoma: a clinicopathological study emphasizing ultrastructural features and cytogenetic heterogeneity.	Shi SS et al.	24294381	Not a renal disease focus
3	1	The epidemic of extended-spectrum- $\hat{\beta}$ -lactamase-producing Escherichia coli ST131 is driven by a single highly pathogenic subclone, H30-Rx.	Price LB et al.	24345742	Not a renal disease focus
4	1	Mutations in the UQCC1-interacting protein, UQCC2, cause human complex III deficiency associated with perturbed cytochrome b protein expression.	Tucker EJ et al.	24385928	Not a renal disease focus
5	1	The association of endothelial nitric oxide synthase gene G894T polymorphism and serum nitric oxide concentration with microalbuminuria in patients with gestational diabetes.	Atay AE et al.	24403014	Not a renal disease focus
6	1	Association of candidate genetic variants with restless legs syndrome in end stage renal disease: a multicenter case-control study in Taiwan.	Lin CH et al.	24433515	Not a renal disease focus
7	1	VHL and HIF-1 $\hat{\pm}$: gene variations and prognosis in early-stage clear cell renal cell carcinoma.	Lessi F et al.	24446253	Not a renal disease focus
8	1	Genomic architecture and evolution of clear cell renal cell carcinomas defined by multiregion sequencing.	Gerlinger M et al.	24487277	Not a renal disease focus
9	1	IFT27, encoding a small GTPase component of IFT particles, is mutated in a consanguineous family with Bardet-Biedl syndrome.	Aldahmesh MA et al.	24488770	Not a renal disease focus
10	1	TNFAIP3 gene polymorphisms associated with differential susceptibility to rheumatoid arthritis and systemic lupus erythematosus in the Korean population.	Kim SK et al.	24489017	Not a renal disease focus
11	1	HER2 protein overexpression and gene amplification in upper urinary tract urothelial carcinoma-an analysis of 171 patients.	Sasaki Y et al.	24551292	Not a renal disease focus
12	1	Genotype-phenotype correlations, and retinal function and structure in von Hippel-Lindau disease.	Wittstrom E et al.	24555745	Not a renal disease focus
13	1	Higher thrombin activatable fibrinolysis inhibitor levels are associated with inflammation in attack-free familial Mediterranean fever patients.	Bavbek N et al.	24580410	Not a renal disease focus
14	1	Contribution of CDKAL1 rs7756992 and IGF2BP2 rs4402960 polymorphisms in type 2 diabetes, diabetic complications, obesity risk and hypertension in the Tunisian population.	Lasram K et al.	24636221	Not a renal disease focus

1	1	Testing of potential glycan-based heparanase inhibitors in a fluorescence activity assay using either bacterial heparinase II or human heparanase.	Schoenfeld AK et al.	24667567	Not a renal disease focus
2	1	Impact of the common genetic associations of age-related macular degeneration upon systemic complement component C3d levels.	Ristau T et al.	24675670	Not a renal disease focus
3	1	Lipoprotein (a) concentrations, apolipoprotein (a) phenotypes, and peripheral arterial disease in three independent cohorts.	Laschkolnig A et al.	24760552	Not a renal disease focus
4	1	TMPRSS6 rs855791 polymorphism influences the susceptibility to iron deficiency anemia in women at reproductive age.	Pei SN et al.	24782651	Not a renal disease focus
5	1	Manganese superoxide dismutase (SOD2) polymorphisms, plasma advanced oxidation protein products (AOPP) concentration and risk of kidney complications in subjects with type 1 diabetes.	Mohammedi K et al.	24819633	Not a renal disease focus
6	1	A labor- and cost-effective non-optical semiconductor (Ion Torrent) next-generation sequencing of the SLC12A3 and CLCNKA/B genes in Gitelman's syndrome patients.	Tavira B et al.	24830959	Not a renal disease focus
7	1	Genetic polymorphisms of paraoxonase1 192 and glutathione peroxidase1 197 enzymes in familial Mediterranean fever.	Oktem F et al.	24841661	Not a renal disease focus
8	1	Common variants of cGKII/PRKG2 are not associated with gout susceptibility.	Sakiyama M et al.	24882840	Not a renal disease focus
9	1	Bobby Sox homology regulates odontoblast differentiation of human dental pulp stem cells/progenitors.	Choi YA et al.	24885382	Not a renal disease focus
10	1	A complement factor B mutation in a large kindred with atypical hemolytic uremic syndrome.	Funato M et al.	24906628	Not a renal disease focus
11	1	Recurrent somatic mutation in DROSHA induces microRNA profile changes in Wilms tumour.	Torrezan GT et al.	24909261	Not a renal disease focus
12	1	Breast cancer risk, nightwork, and circadian clock gene polymorphisms.	Truong T et al.	24919398	Not a renal disease focus
13	1	The role of endothelial nitric oxide synthase gene G894T and intron 4 VNTR polymorphisms in hemodialysis patients with vascular access thrombosis.	Sener EF et al.	24936541	Not a renal disease focus
14	1	The consensus-based approach for gene/enzyme replacement therapies and crystallization strategies: the case of human alanine-glyoxylate aminotransferase.	Mesa-Torres N et al.	24957194	Not a renal disease focus

1	Polymorphisms in genes of the renin-angiotensin-aldosterone system and renal cell cancer risk: interplay with hypertension and intakes of sodium, potassium and fluid.	Deckers IA et al.	24978482	Not a renal disease focus
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1	1	Variants in angiogenesis-related genes and the risk of clear cell renal cell carcinoma.	Qin C et al.	25239121	Not a renal disease focus
2	1	PYGM expression analysis in white blood cells: a complementary tool for diagnosing McArdle disease?	de Luna N et al.	25240406	Not a renal disease focus
3	1	LRRK2 G2385R and R1628P mutations are associated with an increased risk of Parkinson's disease in the Malaysian population.	Gopalai AA et al.	25243190	Not a renal disease focus
4	1	Gender differences in impact of CYP2C19 polymorphism on development of coronary artery disease.	Hokimoto S et al.	25264752	Not a renal disease focus
5	1	Genotype and phenotype frequencies of paraoxonase 1 in fertile and infertile men.	Tavilani H et al.	25264968	Not a renal disease focus
6	1	Phase 1 trial of tivantinib in combination with sorafenib in adult patients with advanced solid tumors.	Puzanov I et al.	25294187	Not a renal disease focus
7	1	G-protein receptor kinase 4 polymorphism and response to antihypertensive therapy.	Muskalla AM et al.	25301854	Not a renal disease focus
8	1	Downregulation of NDUFB6 due to 9p24.1-p13.3 loss is implicated in metastatic clear cell renal cell carcinoma.	Narimatsu T et al.	25315157	Not a renal disease focus
9	1	Association of polymorphisms of angiotensin I converting enzyme 2 with retinopathy in type 2 diabetes mellitus among Chinese individuals	Meng N et al.	25359286	Not a renal disease focus
10	1	Matrix metalloproteinase 9 polymorphisms and systemic lupus erythematosus: correlation with systemic inflammatory markers and oxidative stress.	Bahremand F et al.	25416694	Not a renal disease focus
11	1	Rhabdoid tumor predisposition syndrome.	Sredni ST et al.	25494491	Not a renal disease focus
12	1	Autosomal recessive lissencephaly with cerebellar hypoplasia is associated with a loss-of-function mutation in CDK5.	Magen D et al.	25560765	Not a renal disease focus
13	1	Exome-wide Sequencing Shows Low Mutation Rates and Identifies Novel Mutated Genes in Seminomas.	Cutcutache I et al.	25597018	Not a renal disease focus
14	1	Molecular and immunohistochemical characterization reveals novel BRAF mutations in metanephric adenoma.	Udager AM et al.	25602792	Not a renal disease focus
15	1	Genome-wide association study of clinically defined gout identifies multiple risk loci and its association with clinical subtypes.	Matsuo H et al.	25646370	Not a renal disease focus

1	The role of hOGG1 C1245G polymorphism in the susceptibility to lupus nephritis and modulation of the plasma 8-OHdG in patients with systemic lupus erythematosus.	Lee HT et al.	25671815	Not a renal disease focus	
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6	1	Endothelial nitric oxide synthase gene intron 4 variable number tandem repeat polymorphism in β -thalassemia major: relation to cardiovascular complications.	Tantawy AA et al.	25699607	Not a renal disease focus
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9	1	Genetic variants in five novel loci including CFB and CD40 predispose to chronic hepatitis B.	Jiang DK et al.	25802187	Not a renal disease focus
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12	1	SNP Variants in RET and PAX2 and Their Possible Contribution to the Primary Hyperoxaluria Type 1 Phenotype.	Coulter-Mackie MB	25854853	Not a renal disease focus
13					
14	1	Polymorphic differences in the SOD-2 gene may affect the pathogenesis of nephropathy in patients with diabetes and diabetic complications.	Houldsworth A et al.	25858271	Not a renal disease focus
15					
16	1	Retrospective analysis of FFPE based Wilms' Tumor samples through copy number and somatic mutation related Molecular Inversion Probe Based Array.	Singh N et al.	25913740	Not a renal disease focus
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18	1	Genotype-phenotype analysis of von Hippel-Lindau syndrome in fifteen Indian families.	Vikkath N et al.	25952756	Not a renal disease focus
19					
20	1	Angiotensin-converting enzyme (ACE) gene insertion/deletion polymorphism is not a risk factor for hypertension in SLE nephritis.	Negi VS et al.	25957879	Not a renal disease focus
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22	1	A novel phenotype in N-glycosylation disorders: Gillessen-Kaesbach-Nishimura skeletal dysplasia due to pathogenic variants in ALG9.	Tham E et al.	25966638	Not a renal disease focus
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24	1	Loss of BAP1 Expression in Basal Cell Carcinomas in Patients With Germline BAP1 Mutations.	Mochel MC et al.	25972334	Not a renal disease focus
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26	1	Spectrum of mutations in the ATP binding domain of ATP7B gene of Wilson Disease in a regional Indian cohort.	Guggilla SR et al.	25982861	Not a renal disease focus
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28	1	Prevalence of Mycobacterium avium subsp. paratuberculosis and Escherichia coli in blood samples from patients with inflammatory bowel disease.	Nazareth N et al.	25994082	Not a renal disease focus
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30	1	Matrix metalloproteinase-2 (MMP-2) gene polymorphism and cardiovascular comorbidity in type 2 diabetes patients.	Buraczynska M et al.	26025700	Not a renal disease focus
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32	1	Genetic Variants in Caveolin-1 and RhoA/ROCK1 Are Associated with Clear Cell Renal Cell Carcinoma Risk in a Chinese Population.	Zhao R et al.	26066055	Not a renal disease focus
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1	1	Genetic and Functional Analysis of Polymorphisms in the Human Dopamine Receptor and Transporter Genes in Small Cell Lung Cancer.	Cherubini E et al.	26081799	Not a renal disease focus
2	1	Exploring genotype-phenotype relationships in Bardet-Biedl syndrome families.	Castro-Sanchez S et al.	26082521	Not a renal disease focus
3	1	Whole Exome Sequencing Reveals Novel PHEX Splice Site Mutations in Patients with Hypophosphatemic Rickets.	Ma SL et al.	26107949	Not a renal disease focus
4	1	Exome sequencing in seven families and gene-based association studies indicate genetic heterogeneity and suggest possible candidates for fibromuscular dysplasia.	Kiando SR et al.	26147384	Not a renal disease focus
5	1	TERT Promoter Mutations in Papillary Thyroid Microcarcinomas.	de Biase D et al.	26148423	Not a renal disease focus
6	1	A genome-wide screening and SNPs-to-genes approach to identify novel genetic risk factors associated with frontotemporal dementia.	Ferrari R et al.	26154020	Not a renal disease focus
7	1	GSTM1, GSTT1 and GSTP1 Genetic Variants in Multiple Urologic Cancers.	Chirila DN et al.	26158735	Not a renal disease focus
8	1	Renal cell carcinoma risk is associated with the interactions of APOE, VHL and MTHFR gene polymorphisms.	Lv C et al.	26191297	Not a renal disease focus
9	1	Financial incentives for kidney donation: A comparative case study using synthetic controls.	Bilgel F et al.	26218985	Not a renal disease focus
10	1	Novel mutations of the ATP7B gene in Han Chinese families with pre-symptomatic Wilson's disease.	Yuan ZF et al.	26253413	Not a renal disease focus
11	1	Lack of genetic association of the TGM2 gene with schizophrenia in a Chinese population.	Wang J et al.	26307914	Not a renal disease focus
12	1	Genetic Polymorphism of MMP2 Gene and Susceptibility to Prostate Cancer.	Adabi Z et al.	26319608	Not a renal disease focus
13	1	A method for predicting target drug efficiency in cancer based on the analysis of signaling pathway activation.	Artemov A et al.	26320181	Not a renal disease focus
14	1	Effect of a functional polymorphism in the pre-miR-146a gene on the risk and prognosis of renal cell carcinoma.	Huang Z et al.	26323945	Not a renal disease focus
15	1	The sirtuin inhibitor sirtinol inhibits hepatitis A virus (HAV) replication by inhibiting HAV internal ribosomal entry site activity.	Kanda T et al.	26388050	Not a renal disease focus

1	Molecular characterization of multidrug-resistant <i>Klebsiella pneumoniae</i> isolates.	Hou XH et al.	26413058	Not a renal disease focus
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6	1 Variants in Vitamin D Binding Protein Gene Are Associated With Gestational Diabetes Mellitus.	Wang Y et al.	26448018	Not a renal disease focus
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9	1 Role of PTPN22 and CSK gene polymorphisms as predictors of susceptibility and clinical heterogeneity in patients with Henoch-Schönlein purpura (IgA vasculitis).	Lopez-Mejias R et al.	26458874	Not a renal disease focus
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12	1 Association of polymorphisms in PRKCI gene and risk of prostate cancer in a sample of Iranian Population.	Hashemi M et al.	26475383	Not a renal disease focus
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15	1 Analysis of Multiple Families With Single Individuals Affected by Pseudohypoparathyroidism Type 1b (PHP1B) Reveals Only One Novel Maternally Inherited GNAS Deletion.	Takatani R et al.	26479409	Not a renal disease focus
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18	1 Constitutional de novo deletion of the FBXW7 gene in a patient with focal segmental glomerulosclerosis and multiple primitive tumors.	Roversi G et al.	26482194	Not a renal disease focus
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21	1 MKS1 regulates ciliary INPP5E levels in Joubert syndrome.	Slaats GG et al.	26490104	Not a renal disease focus
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24	1 Association of Angiotensin Converting Enzyme Insertion-Deletion Polymorphism with Hypertension in Emiratis with Type 2 Diabetes Mellitus and Its Interaction with Obesity Status.	Alsafar H et al.	26491214	Not a renal disease focus
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26	1 Association of chitotriosidase enzyme activity and genotype with the risk of nephropathy in type 2 diabetes.	Elmonem MA et al.	26589000	Not a renal disease focus
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29	1 Use of a High-Density Protein Microarray to Identify Autoantibodies in Subjects with Type 2 Diabetes Mellitus and an HLA Background Associated with Reduced Insulin Secretion.	Chang DC et al.	26606528	Not a renal disease focus
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32	1 Analysis of urinary cathepsin C for diagnosing Papillon-Lefèvre syndrome.	Hamon Y et al.	26607765	Not a renal disease focus
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34	1 Genetic alteration in notch pathway is associated with better prognosis in renal cell carcinoma.	Feng C et al.	26662507	Not a renal disease focus
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36	1 Genotype-guided tacrolimus dosing in African-American kidney transplant recipients.	Sanghavi K et al.	26667830	Not a renal disease focus
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38	1 Hepatocystin is Essential for TRPM7 Function During Early Embryogenesis.	Overton JD et al.	26671672	Not a renal disease focus
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1	1	XRCC3 Thr241Met and XPD Lys751Gln gene polymorphisms and risk of clear cell renal cell carcinoma.	Loghin A et al.	26682510	Not a renal disease focus
2	1	Germline BAP1 Mutational Landscape of Asbestos-Exposed Malignant Mesothelioma Patients with Family History of Cancer.	Ohar JA et al.	26719535	Not a renal disease focus
3	1	HABP2 G534E Variant in Papillary Thyroid Carcinoma.	Tomsic J et al.	26745718	Not a renal disease focus
4	1	Glutathione peroxidase-1 gene (GPX1) variants, oxidative stress and risk of kidney complications in people with type 1 diabetes.	Mohammedi K et al.	26773925	Not a renal disease focus
5	1	Serum paraoxonase-1 gene polymorphism and enzyme activity in patients with urolithiasis.	Atar A et al.	26795139	Not a renal disease focus
6	1	Association of ACE gene D polymorphism with left ventricular hypertrophy in patients with diastolic heart failure: a case-control study.	Bahramali E et al.	26861937	Not a renal disease focus
7	1	Association of the BsmI, ApaI, TaqI, Tru9I and FokI Polymorphisms of the Vitamin D Receptor Gene with Nephrolithiasis in the Turkish Population.	Cakir OO et al.	26945655	Not a renal disease focus
8	1	System-Wide Modulation of HECT E3 Ligases with Selective Ubiquitin Variant Probes.	Zhang W et al.	26949039	Not a renal disease focus
9	1	Spondyloenchondrodysplasia Due to Mutations in ACP5: A Comprehensive Survey.	Briggs TA et al.	26951490	Not a renal disease focus
10	1	Novel NEK8 Mutations Cause Severe Syndromic Renal Cystic Dysplasia through YAP Dysregulation.	Grampa V et al.	26967905	Not a renal disease focus
11	1	Angiotensin-converting enzyme gene I/D polymorphism increases the susceptibility to hypertension and additive diseases: A study on North Indian patients.	Singh M et al.	27030424	Not a renal disease focus
12	1	Cystinosis deficiency causes podocyte damage and loss associated with increased cell motility.	Ivanova EA et al.	27083281	Not a renal disease focus
13	1	The VHL short variant involves in protein quality control.	Liu Y et al.	27196060	Not a renal disease focus
14	1	Vascular endothelial growth factor polymorphism (-460 T/C) is related to hypertension-associated chronic kidney disease.	Malkiewicz A et al.	27367286	Not a renal disease focus
15	1	The association between fructosamine-3 kinase 900C/G polymorphism, transferrin polymorphism and human herpesvirus-8 infection in diabetics living in South Kivu.	Cikomola JC et al.	27461879	Not a renal disease focus

1	Pro198Leu Polymorphism in the Glutathione Peroxidase 1 Gene Contributes to Diabetic Peripheral Neuropathy in Type 2 Diabetes Patients.	Buraczynska M et al.	27592002	Not a renal disease focus
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7	ERBB4 gene polymorphisms and the risk of prostate cancer in a sample of Iranian Population.	Hashemi M et al.	27609473	Not a renal disease focus
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9	VEGF-A and VEGFR1 SNPs associate with preeclampsia in a Philippine population.	Amosco MD et al.	27668980	Not a renal disease focus
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11	Assessment of Human Tribbles Homolog 3 Genetic Variation (rs2295490) Effects on Type 2 Diabetes Patients with Glucose Control and Blood Pressure Lowering Treatment.	He F et al.	27793583	Not a renal disease focus
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13	TET2 binds the androgen receptor and loss is associated with prostate cancer.	Nickerson ML et al.	27819678	Not a renal disease focus
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15	PCSK9 genetic variants and risk of type 2 diabetes: a mendelian randomisation study.	Schmidt AF et al.	27908689	Not a renal disease focus
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17	Hypertension is a characteristic complication of X-linked hypophosphatemia.	Nakamura Y et al.	28025445	Not a renal disease focus
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19	URAT1 inhibition by ALPK1 is associated with uric acid homeostasis.	Kuo TM et al.	28039413	Not a renal disease focus
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21	Autophagy-related gene LRRK2 is likely a susceptibility gene for systemic lupus erythematosus in northern Han Chinese.	Zhang YM et al.	28099919	Not a renal disease focus
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23	Association Study of Klotho Gene Polymorphism With Calcium Oxalate Stones in The Uyghur Population of Xinjiang, China.	Ali A et al.	28116736	Not a renal disease focus
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25	Rare and low-frequency coding variants alter human adult height.	Marouli E et al.	28146470	Not a renal disease focus
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27	An association between overexpression of DNA methyltransferase 3B4 and clear cell renal cell carcinoma.	Liu Y et al.	28160561	Not a renal disease focus
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29	BARD1 Gene Polymorphisms Confer Nephroblastoma Susceptibility.	Fu W et al.	28161399	Not a renal disease focus
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31	Genetic susceptibility variants for lung cancer: replication study and assessment as expression quantitative trait loci.	Pintarelli G et al.	28181565	Not a renal disease focus
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33	Relationship between salivary/pancreatic amylase and body mass index: a systems biology approach.	Bonnefond A et al.	28228143	Not a renal disease focus
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1	Development of hypomelanotic macules is associated with constitutive activated mTORC1 in tuberous sclerosis complex.	Moller LB et al.	28336152	Not a renal disease focus	
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4	1	A Low-Frequency Inactivating AKT2 Variant Enriched in the Finnish Population Is Associated With Fasting Insulin Levels and Type 2 Diabetes Risk.	Manning A et al.	28341696	Not a renal disease focus
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6	1	Cost-effectiveness Analysis for Genotyping before Allopurinol Treatment to Prevent Severe Cutaneous Adverse Drug Reactions.	Ke CH et al.	28365572	Not a renal disease focus
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8	1	Hepatitis C viral load, genotype, and increased risk of developing end-stage renal disease: REVEAL-HCV study.	Lai TS et al.	28370058	Not a renal disease focus
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10	1	Isolated polycystic liver disease genes define effectors of polycystin-1 function.	Besse W et al.	28375157	Not a renal disease focus
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12	1	Role of MMP-7 in the pathogenesis of systemic lupus erythematosus (SLE).	Vira H et al.	28420044	Not a renal disease focus
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14	1	Frequent somatic mutations in epigenetic regulators in newly diagnosed chronic myeloid leukemia.	Togasaki E et al.	28452984	Not a renal disease focus
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16	1	Ocular Pathology of Oculocerebrorenal Syndrome of Lowe: Novel Mutations and Genotype-Phenotype Analysis.	Song E et al.	28473699	Not a renal disease focus
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18	1	A novel, de novo mutation in the PRKAG2 gene: infantile-onset phenotype and the signaling pathway involved.	Xu Y et al.	28550180	Not a renal disease focus
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20	1	Genome-wide association study of erythrocyte density in sickle cell disease patients.	Ilboudo Y et al.	28552477	Not a renal disease focus
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22	1	Functional polymorphism at the miR-502-binding site in the 3' untranslated region of the SETD8 gene increased the risk of prostate cancer in a sample of Iranian population.	Narouie B et al.	28578017	Not a renal disease focus
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24	1	Acute lymphoblastic leukemia and genetic variations in BHMT gene: Case-control study and computational characterization.	Bellampalli R et al.	28582843	Not a renal disease focus
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26	1	Unusual clinical outcome of primary Hyperoxaluria type 1 in Tunisian patients carrying 33_34InsC mutation.	Mbarek IB et al.	28619084	Not a renal disease focus
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28	1	Disease-linked mutations in factor H reveal pivotal role of cofactor activity in self-surface-selective regulation of complement activation.	Kerr H et al.	28637873	Not a renal disease focus
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30	1	Glomerular Hyperfiltration in Obese African American Hypertensive Patients Is Associated With Elevated Urinary Mitochondrial-DNA Copy Number.	Eirin A et al.	28641368	Not a renal disease focus
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1	Expression and secretion of the Giardia duodenalis variant surface protein 9B10A by transfected trophozoites causes damage to epithelial cell monolayers mediated by protease activity.	Cabrera-Licona A et al.	28668253	Not a renal disease focus
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7	Identification of sequence polymorphisms in the mitochondrial cytochrome c oxidase genes as risk factors for hepatocellular carcinoma.	Wang H et al.	28703354	Not a renal disease focus
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9	Genome-wide association study identifies inversion in the CTRB1-CTRB2 locus to modify risk for alcoholic and non-alcoholic chronic pancreatitis.	Rosendahl J et al.	28754779	Not a renal disease focus
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11	A role of the endothelial nitric oxide system in acute renal colic caused by ureteral stone.	Bulbul E et al.	28802544	Not a renal disease focus
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13	An apical MRCK-driven morphogenetic pathway controls epithelial polarity.	Zihni C et al.	28825699	Not a renal disease focus
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15	Frequent Genetic Aberrations in the CDK4 Pathway in Acral Melanoma Indicate the Potential for CDK4/6 Inhibitors in Targeted Therapy.	Kong Y et al.	28830923	Not a renal disease focus
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17	Association between interferon-induced helicase (IFIH1) rs1990760 polymorphism and seasonal variation in the onset of type 1 diabetes mellitus.	Jermendy A et al.	28929635	Not a renal disease focus
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19	AGXT2 rs37369 polymorphism predicts the renal function in patients with chronic heart failure.	Hu XL et al.	28942034	Not a renal disease focus
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21	The Endothelial Nitric Oxide Synthase Gene Polymorphism is Associated with the Susceptibility to Immunoglobulin a Nephropathy in Chinese Population.	Gao J et al.	28946141	Not a renal disease focus
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23	APOL1, CDKN2A/CDKN2B, and HDAC9 polymorphisms and small vessel ischemic stroke.	Akinyemi R et al.	28975602	Not a renal disease focus
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25	Polymorphisms of DNA repair genes XRCC1 and LIG4 and idiopathic male infertility.	Ghasemi H et al.	28991497	Not a renal disease focus
26				
27	Alcohol consumption, variability in alcohol dehydrogenase genes and risk of renal cell carcinoma.	Antwi SO et al.	29023769	Not a renal disease focus
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29	Rare ADAR and RNASEH2B variants and a type I interferon signature in glioma and prostate carcinoma risk and tumorigenesis.	Beyer U et al.	29030706	Not a renal disease focus
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31	Familial Mediterranean fever mutations are hypermorphic mutations that specifically decrease the activation threshold of the Pyrin inflammasome.	Jamilloux Y et al.	29040788	Not a renal disease focus
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1	Circulating Endothelial Markers in Retinal Vasculopathy With Cerebral Leukoencephalopathy and Systemic Manifestations.	Pelzer N et al.	29114091	Not a renal disease focus	
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4	1	Relationship between rs854560 PON1 Gene Polymorphism and Tobacco Smoking with Coronary Artery Disease.	Iwanicka J et al.	29118461	Not a renal disease focus
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6	1	Polymorphism of ERCC1 rs3212986 in Chinese Han women with preeclampsia.	Liu MC et al.	29153678	Not a renal disease focus
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8	1	Analysis of the influence of the T393C polymorphism of the GNAS gene on the clinical expression of primary hyperparathyroidism.	Piedra M et al.	29179855	Not a renal disease focus
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10	1	Association Between Klotho Gene Polymorphism and Markers of Bone Metabolism in Patients Receiving Maintenance Hemodialysis in Iran.	Nazarian A et al.	29190606	Not a renal disease focus
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12	1	Association Between HACE1 Gene Polymorphisms and Wilms' Tumor Risk in a Chinese Population.	Jia W et al.	29243987	Not a renal disease focus
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14	1	PDE1A polymorphism contributes to the susceptibility of nephrolithiasis.	Yang Z et al.	29262781	Not a renal disease focus
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16	1	Genetic screening and functional analysis of CASP9 mutations in a Chinese cohort with neural tube defects.	Liu XZ et al.	29365368	Not a renal disease focus
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18	1	The relationship between ACE/AGT gene polymorphisms and the risk of diabetic retinopathy in Chinese patients with type 2 diabetes.	Qiao YC et al.	29378484	Not a renal disease focus
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20	1	HIPK2 polymorphisms rs2058265, rs6464214, and rs7456421 were associated with kidney stone disease in Chinese males not females.	Lin H et al.	29428801	Not a renal disease focus
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22	1	The association of endothelial nitric oxide synthase gene single nucleotide polymorphisms with paediatric systemic lupus erythematosus.	Zhu J et al.	29465350	Not a renal disease focus
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24	1	Common Variants in ALPL Gene Contribute to the Risk of Kidney Stones in the Han Chinese Population.	Li X et al.	29489416	Not a renal disease focus
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26	1	Impact of eNOS 27-bp VNTR (4b/a) gene polymorphism with the risk of Systemic Lupus Erythematosus in south Indian subjects.	Katkam SK et al.	29524578	Not a renal disease focus
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28	1	Rationale, design, and preliminary results of the Quebec Warfarin Cohort Study.	Perreault S et al.	29542828	Not a renal disease focus
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30	1	The evaluation of two genetic polymorphisms of paraoxonase 1 in patients with pulmonary embolism.	Basol N et al.	29682786	Not a renal disease focus
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1	HCMV UL97 phosphotransferase gene mutations may be associated with antiviral resistance in immunocompromised patients in Belém, PA, Northern Brazil.	Silva DFLD et al.	29768545	Not a renal disease focus
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7	Screening for mutation hotspots in Bardet-Biedl syndrome patients from India.	Chandrasekar SP et al.	29806606	Not a renal disease focus
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9	Angiotensin Converting Enzyme Gene Insertion/Deletion Variant and Familial Mediterranean Fever-related Amyloidosis.	Nursal AF et al.	29891744	Not a renal disease focus
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11	Base Excision Repair Gene Polymorphisms and Wilms Tumor Susceptibility.	Zhu J et al.	29937070	Not a renal disease focus
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13	Concomitance of Polymorphisms in Glutathione Transferase Omega Genes Is Associated with Risk of Clear Cell Renal Cell Carcinoma.	Radic TM et al.	30224590	Not a renal disease focus
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15	Dissociation of Fatty Liver and Insulin Resistance in I148M PNPLA3 Carriers: Differences in Diacylglycerol (DAG) FA18:1 Lipid Species as a Possible Explanation.	Franko A et al.	30227635	Not a renal disease focus
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17	[Uric acid stones in children. Identification and therapy of a newly detected defect of adenine-phosphoribosyltransferase (author's transl)].	Simmonds HA	118367	Not English or Spanish
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19	[The functional properties of the erythrocyte membranes in patients with chronic glomerulonephritis].	Rakhov DA et al.	1475876	Not English or Spanish
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21	[Lipid peroxidation and the antioxidant system in bicarbonate hemodialysis and acetate-free biofiltration].	Eiselt J et al.	7762187	Not English or Spanish
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23	[A study on angiotensin-I converting enzyme polymorphism in CAPD patients].	Nishina M	9014479	Not English or Spanish
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25	[Is PstI polymorphism of the angiotensin I converting enzyme gene associated with nephropathy development in non-insulin-dependent diabetes mellitus (preliminary study)].	Grzeszczak W et al.	9499204	Not English or Spanish
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27	[Relationship between angiotensin 1 converting enzyme gene polymorphism and diabetic nephropathy].	Wu S et al.	9596955	Not English or Spanish
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29	[Polymorphism studies of angiotensin converting enzyme gene in chronic glomerulonephritis].	Kutyryna IM et al.	10420452	Not English or Spanish
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31	[Angiotensin-converting enzyme gene polymorphism and the clinical pathological features and progression in lupus nephritis].	Guan T et al.	10436947	Not English or Spanish
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1	[Association between ACE gene polymorphism and therapeutic responsiveness of ACEI in diabetic nephropathy].	Wang L et al.	10923445	Not English or Spanish	
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4	1	[Increased clinical and economic advantages using PROSIT (proteinuria screening and intervention) in type 2 diabetic patients].	Gozzoli V et al.	11075242	Not English or Spanish
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7	1	[Association between insertion-deletion polymorphism of the angiotensin-converting enzyme gene and development of angiopathies in patients with non-insulin dependent diabetes mellitus from the Chuvash Republic].	Miloserdova OV et al.	11234416	Not English or Spanish
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10	1	[Renin-angiotensin system genes in chronic glomerulonephritis].	Buraczynska M et al.	11865575	Not English or Spanish
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13	1	[The association between polymorphism of endothelial nitric oxide synthase gene and diabetic nephropathy].	Li C et al.	11930675	Not English or Spanish
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16	1	[Relationship between serum angiotensin I-converting enzyme activity and diabetic nephropathy in patients with type II diabetes].	Liao L et al.	12016801	Not English or Spanish
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19	1	[Acquired mutation of type II transforming growth factor-beta receptor gene in glomerulosclerosis].	Liu Z et al.	12126523	Not English or Spanish
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22	1	[Renal effects of low doses of mercury].	Alinovi R et al.	12197269	Not English or Spanish
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25	1	[Association of ecNOS 4 b/a polymorphism and end-stage chronic renal failure].	Lin S et al.	12421496	Not English or Spanish
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28	1	[Associative analysis of the connection between mutation C1167T in the catalase gene and polymorphic marker D6S392 nearby the Mn-dependent superoxide dismutase gene with diabetic microangiopathies].	Chistiakov D et al.	12469627	Not English or Spanish
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31	1	[Association of the renin-angiotensin system gene polymorphism with nephropathy in type II diabetes].	Buraczynska M et al.	12476891	Not English or Spanish
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34	1	[Study on candidate genes of benazepril related cough in Chinese hypertensives].	Lu J et al.	12848919	Not English or Spanish
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37	1	[Polymorphism at the glutathione S-transferase pi locus as a risk factor for ifosfamide nephrotoxicity in children].	Zielinska E et al.	12868187	Not English or Spanish
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40	1	[Correlation analysis between WNK4 gene and essential hypertension].	Sun ZJ et al.	12905707	Not English or Spanish
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6	1 [Search for the association of polymorphic markers for genes coding for antioxidant defense enzymes, with development of diabetic polyneuropathies in patients with type 1 diabetes mellitus].	Zotova EV et al.	15125229	Not English or Spanish
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9	1 [Association of the complex of polymorphic markers of ACE genes, aldosterone synthetase and endothelial synthetase of nitric oxide with progression of chronic glomerulonephritis].	Kamysheva ES et al.	15532370	Not English or Spanish
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12	1 [Correlative study between angiotensin-converting enzyme gene polymorphism and hepatorenal syndrome].	Wu XX et al.	15698501	Not English or Spanish
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14	1 [Screening for new binding proteins which interact with BM2 of influenza B virus with yeast two-hybrid system].	Yu H et al.	16027793	Not English or Spanish
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16	1 [I/D relationship between polymorphism of ACE gene and progression of chronic glomerulonephritis].	Kaliev RR et al.	16078593	Not English or Spanish
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18	1 [A search for association between the polymorphic markers of PON1 and PON2 genes and diabetic nephropathy in patients with type I diabetes mellitus].	Voron'ko OE et al.	16080611	Not English or Spanish
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20	1 [Correlation of cyclin D1 overexpression to mutations of von hippel-lindau gene in renal clear cell carcinoma].	Ren YY et al.	16480581	Not English or Spanish
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22	1 [Activation of RHOA gene transcription in epithelial tumors may be caused by gene amplification and/or demethylation of its promotor region].	Braga EA et al.	17086988	Not English or Spanish
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24	1 [Association of aldosterone synthase gene -344 T/C polymorphism with early renal damage in Han nationality with essential hypertension].	Sun XJ et al.	17407071	Not English or Spanish
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26	1 [Relationship between I/D polymorphism of angiotensin I converting enzyme gene and microvascular complications in type 2 diabetic patients].	Moleda P et al.	17941464	Not English or Spanish
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28	1 [Inactivation of the VHL gene in sporadic clear cell renal cancer].	Mikhailenko DS et al.	18389622	Not English or Spanish
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30	1 [Association of alpha-adducin and angiotensin converting enzyme gene polymorphisms with salt-sensitive hypertension and early renal injury].	Lu LH et al.	18393230	Not English or Spanish
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32	1 [Distribution of polymorphism in endothelial nitric oxide synthase gene in Singapore Chinese and its association with diabetic nephropathy].	Dong JJ et al.	18476541	Not English or Spanish
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1	[Effect of tissue factor pathway inhibitor on apoptosis of rat mesangial cells and Fas and bcl-2 expression].	Lin YF et al.	19094710	Not English or Spanish	
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4	1	[Genetic predisposition to systemic complications of arterial hypertension in maintenance haemodialysis patients].	Bzoma B et al.	19112833	Not English or Spanish
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6	1	[Factors responsible for inter-individual variations in dosage/concentration of tacrolimus in renal transplant recipients].	Fu SJ et al.	19114346	Not English or Spanish
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8	1	[Association analysis of genetic polymorphisms of TCF7L2, CDKAL1, SLC30A8, HHEX genes and microvascular complications of type 2 diabetes mellitus].	Fu LL et al.	22487833	Not English or Spanish
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10	1	[Angiotensin-converting enzyme insertion/deletion polymorphism and blood pressure regulation in type 2 diabetic patients].	Krajina-Andricevic M et al.	23120809	Not English or Spanish
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12	1	[Association between mannose-binding lectin 2 gene and protein kinase C-beta 1 gene polymorphisms and type 2 diabetic macrovascular complications in northern Chinese Han population].	Zhang NN et al.	23225056	Not English or Spanish
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14	1	[Gene polymorphisms of CYP3A5 and MDR-1 in Hans renal transplant recipients in Hunan Province].	Shao M et al.	23981990	Not English or Spanish
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16	1	[Association of CYP3A5 and MDR1 genetic polymorphisms with the blood concentration of tacrolimus in Chinese liver and renal transplant recipients].	Sun JY et al.	24059111	Not English or Spanish
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18	1	[Gene mutation analysis of X-linked hypophosphatemic rickets].	Song Y et al.	24229582	Not English or Spanish
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20	1	[Mutational analysis of MYO1E in children with sporadic steroid-resistant nephrotic syndrome in Chinese Han ethnic group].	Zhao F et al.	25224051	Not English or Spanish
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22	1	[Children with idiopathic hypogonadotropic hypogonadism: clinical data analysis and mutations analysis of KAL1 and FGFR1 gene].	Qin M et al.	25619354	Not English or Spanish
23					
24	1	[DNA repair XRCC1, XPD genes polymorphism as associated with the development of bladder cancer and renal cell carcinoma].	Akhmadishina LZ et al.	25715450	Not English or Spanish
25					
26	1	[Association between angiotensin-converting enzyme 2 gene polymorphisms and childhood primary nephrotic syndrome].	Qiu MY et al.	25815490	Not English or Spanish
27					
28	1	[GENETIC RISK FACTORS FOR MULTIPLE KIDNEY STONE FORMATION IN THE RUSSIAN POPULATION].	Apolihin OI et al.	26665756	Not English or Spanish
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1	[Polymorphism at the miR-502 binding site in the 3' untranslated region of SET8 gene is associated with the risk of clear cell renal cell carcinoma].	Xu JS et al.	27346408	Not English or Spanish
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6	1 [Expression of cadherin17 in metanephric adenoma and its value in differential diagnosis].	Wang X et al.	27430690	Not English or Spanish
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9	1 [Clinical and immunological analysis of patients with activated phosphoinositide 3-kinase $\hat{\Gamma}$ syndrome resulting from PIK3CD mutation].	Tang WJ et al.	28072954	Not English or Spanish
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11	1 [Molecular features of metanephric adenoma and their values in differential diagnosis].	Wang X et al.	28072975	Not English or Spanish
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13				
14	1 [Early diagnosis of risk for developing calcium oxalate urolithiasis].	Apolikhin OI et al.	28845932	Not English or Spanish
15				
16	1 HLA extended haplotypes in steroid-sensitive nephrotic syndrome of childhood.	Lagueruela CC et al.	1974661	Paediatric individuals
17				
18	1 Major histocompatibility complex antigens in steroid-responsive nephrotic syndrome.	McEnery PT et al.	2702084	Paediatric individuals
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21	1 Glycosphingolipid levels in an unusual neurovisceral storage disease characterized by lactosylceramide galactosyl hydrolase deficiency: lactosylceramidosis.	Dawson G.	5016302	Paediatric individuals
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23				
24	1 Differentiation of human adult and fetal intestinal alkaline phosphatases with monoclonal antibodies.	Vockley J et al.	6437214	Paediatric individuals
25				
26	1 Deficient fumarylacetoacetate fumarylhydrolase activity in lymphocytes and fibroblasts from patients with hereditary tyrosinemia.	Kvittingen EA et al.	6622096	Paediatric individuals
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29	1 A polymorphism at codon 160 of human O6-methylguanine-DNA methyltransferase gene in young patients with adult type cancers and functional assay.	Imai Y et al.	7586149	Paediatric individuals
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32	1 Streptokinase activity among group A streptococci in relation to streptokinase genotype, plasminogen binding, and disease manifestations.	Tewodros W et al.	7783598	Paediatric individuals
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35	1 Heterogeneous AVPR2 gene mutations in congenital nephrogenic diabetes insipidus.	Wildin RS et al.	7913579	Paediatric individuals
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38	1 Variability in the rate of 6-mercaptopurine methylation in the erythrocytes, liver and kidney in an Italian population.	Ferroni MA et al.	8880047	Paediatric individuals
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1	Prostanoid biosynthesis by blood monocytes of children with hyperprostaglandin E syndrome.	Nusing RM et al.	9262230	Paediatric individuals	
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4	1	Angiotensin I-converting enzyme-gene-polymorphism: relationship to albumin excretion and blood pressure in pediatric patients with type-I-diabetes mellitus.	Pavlovic M et al.	9354852	Paediatric individuals
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6	1	Inherited mutations in PTEN that are associated with breast cancer, cowden disease, and juvenile polyposis.	Lynch ED et al.	9399897	Paediatric individuals
7					
8	1	ACE gene polymorphism in childhood IgA nephropathy: association with clinicopathologic findings.	Tanaka R et al.	9590186	Paediatric individuals
9					
10	1	ETV6-NTRK3 gene fusions and trisomy 11 establish a histogenetic link between mesoblastic nephroma and congenital fibrosarcoma.	Knezevich SR et al.	9823307	Paediatric individuals
11					
12	1	Genetic polymorphisms of the renin-angiotensin system and the outcome of focal segmental glomerulosclerosis in children.	Frishberg Y et al.	9853248	Paediatric individuals
13					
14	1	Platelet-activating factor acetylhydrolase gene mutation in Japanese nephrotic children.	Xu H et al.	9853251	Paediatric individuals
15					
16	1	Polymorphisms in angiotensin-converting enzyme gene and severity of renal disease in Henoch-Schoenlein patients. Italian Group of Renal Immunopathology.	Amoroso A et al.	9870486	Paediatric individuals
17					
18	1	Implications of certain genetic polymorphisms in scarring in vesicoureteric reflux: importance of ACE polymorphism.	Ozen S et al.	10401028	Paediatric individuals
19					
20	1	Role of platelet-activating factor acetylhydrolase gene mutation in Japanese childhood IgA nephropathy.	Tanaka R et al.	10430976	Paediatric individuals
21					
22	1	ACE I/D gene polymorphism predicts renal damage in congenital uropathies.	Hohenfellner K et al.	10452281	Paediatric individuals
23					
24	1	Thiopurine methyltransferase activity and its relationship to the occurrence of rejection episodes in paediatric renal transplant recipients treated with azathioprine.	Dervieux T et al.	10594482	Paediatric individuals
25					
26	1	Platelet-activating factor acetylhydrolase gene mutation in Japanese children with Escherichia coli O157-associated hemolytic uremic syndrome.	Xu H et al.	10873870	Paediatric individuals
27					
28	1	Angiotensin-converting enzyme gene insertion/deletion polymorphism and renal damage in childhood uropathies.	al-Eisa A et al.	10986863	Paediatric individuals
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1	Genetic polymorphism in paraoxonase is a risk factor for childhood focal segmental glomerulosclerosis.	Frishberg Y et al.	11096050	Paediatric individuals
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6	1 Polymorphisms of renin-angiotensin system genes in childhood IgA nephropathy.	Maruyama K et al.	11354780	Paediatric individuals
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9	1 Impact of ACE I/D gene polymorphism on congenital renal malformations.	Hohenfellner K et al.	11354781	Paediatric individuals
10				
11	1 Significance of ACE genotypes and medical treatments in childhood focal glomerulosclerosis.	Hori C et al.	11474225	Paediatric individuals
12				
13	1 Angiotensin converting enzyme gene insertion/deletion polymorphism in idiopathic nephrotic syndrome in Kuwaiti Arab children.	Al-Eisa A et al.	11487079	Paediatric individuals
14				
15	1 Distribution and development of CLN2 protein, the late-infantile neuronal ceroid lipofuscinosis gene product.	Kurachi Y et al.	11547947	Paediatric individuals
16				
17	1 G protein beta3 subunit 825T genotype is not associated with differing outcome in pediatric renal transplant recipients.	Hocher B et al.	12000471	Paediatric individuals
18				
19	1 Genomic rearrangements of EYA1 account for a large fraction of families with BOR syndrome.	Vervoort VS et al.	12404110	Paediatric individuals
20				
21	1 Novel ATP6V1B1 and ATP6V0A4 mutations in autosomal recessive distal renal tubular acidosis with new evidence for hearing loss.	Stover EH et al.	12414817	Paediatric individuals
22				
23	1 ACE gene polymorphism and renal scarring in primary vesicoureteric reflux.	Haszon I et al.	12478352	Paediatric individuals
24				
25	1 Renin-angiotensin system polymorphisms and renal scarring.	Pardo R et al.	12579398	Paediatric individuals
26				
27	1 Renin-angiotensin gene polymorphism in children with uremia and essential hypertension.	Papp F et al.	12579405	Paediatric individuals
28				
29	1 HbA1c levels and erythrocyte transport functions in complication-free type 1 diabetic children and adolescents.	Deak B et al.	12682823	Paediatric individuals
30				
31	1 Genetic heterogeneity of peroxisome biogenesis disorders among Japanese patients: evidence for a founder haplotype for the most common PEX10 gene mutation.	Shimozawa N et al.	12794690	Paediatric individuals
32				
33	1 Angiotensin converting enzyme gene polymorphism in Asian Indian children with congenital uropathies.	Bajpai M et al.	14713838	Paediatric individuals
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1	ACE I/D gene polymorphism in primary FSGS and steroid-sensitive nephrotic syndrome.	Oktem F et al.	14986085	Paediatric individuals	
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4	1	Renin-angiotensin system polymorphisms in Taiwanese primary vesicoureteral reflux.	Liu KP et al.	15045574	Paediatric individuals
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6	1	Is ACE gene polymorphism a risk factor for renal scarring with low-grade reflux?	Erdogan H et al.	15138870	Paediatric individuals
7					
8	1	ACE and AT1 receptor gene polymorphisms and renal scarring in urinary bladder dysfunction.	Kostic M et al.	15179569	Paediatric individuals
9					
10	1	Angiotensin-converting enzyme gene insertion/deletion polymorphism in children with Henoch-Schonlein purpura nephritis.	Zhou J et al.	15315169	Paediatric individuals
11					
12	1	Late effects on renal glomerular and tubular function in childhood cancer survivors.	Bardi E et al.	15390293	Paediatric individuals
13					
14	1	Role of truncating mutations in MME gene in fetomaternal alloimmunisation and antenatal glomerulopathies.	Debiec H et al.	15464186	Paediatric individuals
15					
16	1	Angiotensin-converting enzyme and angiotensin type 2 receptor gene genotype distributions in Italian children with congenital uropathies.	Rigoli L et al.	15470205	Paediatric individuals
17					
18	1	Low renin-angiotensin system activity gene polymorphism and dysplasia associated with posterior urethral valves.	Peruzzi L et al.	16006956	Paediatric individuals
19					
20	1	Polymorphisms of the angiotensin converting enzyme and angiotensin II type 1 receptor genes and renal scarring in non-uropathic children with recurrent urinary tract infection.	Ece A et al.	16109085	Paediatric individuals
21					
22	1	Implication of genetic variations in congenital obstructive nephropathy.	Hahn H et al.	16133060	Paediatric individuals
23					
24	1	Is paraoxonase 192 gene polymorphism a risk factor for membranoproliferative glomerulonephritis in children?	Bilge I et al.	16175651	Paediatric individuals
25					
26	1	ACE gene insertion/deletion polymorphism in childhood idiopathic nephrotic syndrome.	Serdaroglu E et al.	16208534	Paediatric individuals
27					
28	1	Angiotensin converting enzyme gene polymorphism in Indian children with steroid sensitive nephrotic syndrome.	Patil SJ et al.	16272677	Paediatric individuals
29					
30	1	Evaluation of the antitumor efficacy, pharmacokinetics, and pharmacodynamics of the histone deacetylase inhibitor depsipeptide in childhood cancer models in vivo.	Graham C et al.	16397046	Paediatric individuals
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1	ACE gene polymorphism in children with nephrotic syndrome in the Indonesian population.	Sasongko TH et al.	16421456	Paediatric individuals	
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4	1	Renin-angiotensin system gene polymorphisms: association with susceptibility to Henoch-Schonlein purpura and renal involvement.	Ozkaya O et al.	16521052	Paediatric individuals
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7	1	Paraoxonase 1 192 and 55 polymorphisms in nephrotic children.	Biyikli NK et al.	16565923	Paediatric individuals
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10	1	Angiotensin-converting enzyme gene polymorphism in children with idiopathic nephrotic syndrome.	Tsai IJ et al.	16645262	Paediatric individuals
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13	1	ACE gene polymorphism in Turkish children with nephrotic syndrome.	Celik US et al.	16825089	Paediatric individuals
14					
15	1	Roles of paraoxonase and oxidative stress in adolescents with uraemic, essential or obesity-induced hypertension.	Barath A et al.	16912512	Paediatric individuals
16					
17	1	Endothelial nitric oxide synthase gene intron 4 a/b VNTR polymorphism in children with APSGN.	Dursun H et al.	16941147	Paediatric individuals
18					
19	1	Bardet-Biedl syndrome gene variants are associated with both childhood and adult common obesity in French Caucasians.	Benzinou M et al.	17003356	Paediatric individuals
20					
21	1	HLA class II influences humoral autoimmunity in patients with type 2 autoimmune hepatitis.	Djilali-Saiah et al.	17050030	Paediatric individuals
22					
23	1	Nitric oxide synthase gene polymorphisms in children with primary nocturnal enuresis: a preliminary study.	Balat A et al.	17365914	Paediatric individuals
24					
25	1	Molecular and functional characterization of novel glycerol-3-phosphate dehydrogenase 1 like gene (GPD1-L) mutations in sudden infant death syndrome.	Van Norstrand DW et al.	17967976	Paediatric individuals
26					
27	1	Sudden infant death syndrome and activating GNAS1 gene mutations.	Roman R et al.	18075835	Paediatric individuals
28					
29	1	Endothelial nitric oxide synthase gene T-786C and 27-bp repeat gene polymorphisms in retinopathy of prematurity.	Rusai K et al.	18334945	Paediatric individuals
30					
31	1	Loss of nephrocystin-3 function can cause embryonic lethality, Meckel-Gruber-like syndrome, situs inversus, and renal-hepatic-pancreatic dysplasia.	Bergmann C et al.	18371931	Paediatric individuals
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33	1	The polymorphism in insulin receptor substrate-1 gene and birth weight in neonates at term.	Simonska-Cichocka E et al.	18615395	Paediatric individuals
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1	Report of a family segregating mutations in both the APC and MSH2 genes: juvenile onset of colorectal cancer in a double heterozygote.	Uhrhammer N et al.	18629513	Paediatric individuals	
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4	1	ACE gene polymorphism in Egyptian children with idiopathic nephrotic syndrome.	Fahmy ME et al.	18792483	Paediatric individuals
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7	1	A common RET variant is associated with reduced newborn kidney size and function.	Zhang Z et al.	18820179	Paediatric individuals
8					
9	1	Activation of the AKT/mTOR pathway in autosomal recessive polycystic kidney disease (ARPKD).	Fischer DC et al.	19176689	Paediatric individuals
10					
11	1	Mutations of NPHP2 and NPHP3 in infantile nephronophthisis.	Tory K et al.	19177160	Paediatric individuals
12					
13	1	Lethal cystic kidney disease in Amish neonates associated with homozygous nonsense mutation of NPHP3.	Simpson MA et al.	19303681	Paediatric individuals
14					
15	1	Nitric oxide synthase gene polymorphisms in children with minimal change nephrotic syndrome.	Alasehirli B et al.	19371282	Paediatric individuals
16					
17	1	ACE gene insertion/deletion polymorphism and renal scarring in children with urinary tract infections.	Sekerli E et al.	19603195	Paediatric individuals
18					
19	1	Effect of paraoxonase 1 gene polymorphisms on clinical course of Henoch-Schönlein purpura.	Yilmaz A et al.	19967651	Paediatric individuals
20					
21	1	Hypophosphatemia, hyperphosphaturia, and bisphosphonate treatment are associated with survival beyond infancy in generalized arterial calcification of infancy.	Rutsch F et al.	20016754	Paediatric individuals
22					
23	1	Changes in glomerular mesangium in kidneys with congenital nephrotic syndrome of the Finnish type.	Kaukinen A et al.	20020158	Paediatric individuals
24					
25	1	Polymorphisms of the TNF-alpha and ACE genes, and renal scarring in infants with urinary tract infection.	Savidou A et al.	20022049	Paediatric individuals
26					
27	1	Genetic polymorphisms of 17 β -hydroxysteroid dehydrogenase 3 and the risk of hypospadias.	Sata F et al.	20059664	Paediatric individuals
28					
29	1	Association of angiotensin converting enzyme and angiotensin type 2 receptor gene polymorphisms with renal damage in posterior urethral valves.	Laksmi NK et al.	20149750	Paediatric individuals
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31	1	Glutathione S-transferase T1-null seems to be associated with graft failure in hematopoietic SCT.	Elhasid R et al.	20348973	Paediatric individuals
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1	Linkage and association study of discoidin domain receptor 1 as a novel susceptibility gene for childhood IgA nephropathy.	Hahn WH et al.	20372823	Paediatric individuals	
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6	1	Effect of angiotensin-converting enzyme gene insertion/deletion polymorphism on steroid resistance in Egyptian children with idiopathic nephrotic syndrome.	Saber-Ayad M et al.	20418353	Paediatric individuals
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9	1	Phosphodiesterase-5 gene (PDE5A) polymorphisms are associated with progression of childhood IgA nephropathy.	Hahn WH et al.	20563733	Paediatric individuals
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11	1	Mutational analysis of the PLCE1 gene in steroid resistant nephrotic syndrome.	Boyer O et al.	20591883	Paediatric individuals
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14	1	The association of genetic variability in patatin-like phospholipase domain-containing protein 3 (PNPLA3) with histological severity of nonalcoholic fatty liver disease.	Rotman Y et al.	20684021	Paediatric individuals
15					
16	1	Founder mutations in the ATP6V1B1 gene explain most Cypriot cases of distal renal tubular acidosis: first prenatal diagnosis.	Elia A et al.	20805693	Paediatric individuals
17					
18	1	Polymorphisms of insulin-like growth factor-1 (IGF-1) and IGF-1 receptor (IGF-1R) contribute to pathologic progression in childhood IgA nephropathy.	Hahn WH et al.	21047277	Paediatric individuals
19					
20	1	Renal manifestations of patients with MYH9-related disorders.	Han KH et al.	21210153	Paediatric individuals
21					
22	1	Clinical utility of genetic testing in children and adults with steroid-resistant nephrotic syndrome.	Santin S et al.	21415313	Paediatric individuals
23					
24	1	Induction of podocyte-derived VEGF ameliorates podocyte injury and subsequent abnormal glomerular development caused by puromycin aminonucleoside.	Ma J et al.	21451433	Paediatric individuals
25					
26	1	ADAMTS13 gene mutations in children with hemolytic uremic syndrome.	Choi HS et al.	21488199	Paediatric individuals
27					
28	1	RET and GDNF mutations are rare in fetuses with renal agenesis or other severe kidney development defects.	Jeanpierre C et al.	21490379	Paediatric individuals
29					
30	1	Endothelial nitric oxide synthase gene intron4 VNTR polymorphism in patients with chronic kidney disease.	Elshamaa MF et al.	21519233	Paediatric individuals
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32	1	Disruption of PTPRO causes childhood-onset nephrotic syndrome.	Ozaltin F et al.	21722858	Paediatric individuals
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1	Age and CYP3A5 genotype affect tacrolimus dosing requirements after transplant in pediatric heart recipients.	Gijsen V et al.	21930396	Paediatric individuals	
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4	1	DD genotype of ACE gene in boys: may it be a risk factor for minimal change nephrotic syndrome?	Alasehirli B et al.	22017506	Paediatric individuals
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6	1	Association of the ACE-II genotype with the risk of nephrotic syndrome in Pakistani children.	Shahid S et al.	22033511	Paediatric individuals
7					
8	1	C1GALT1 polymorphisms are associated with Henoch-Schönlein purpura nephritis.	He X et al.	22544166	Paediatric individuals
9					
10	1	Genes in the ureteric budding pathway: association study on vesico-ureteral reflux patients.	van Eerde AM et al.	22558067	Paediatric individuals
11					
12	1	Genetic polymorphisms influence the steroid treatment of children with idiopathic nephrotic syndrome.	Chiou YH et al.	22610055	Paediatric individuals
13					
14	1	Mutations in NEK8 link multiple organ dysplasia with altered Hippo signalling and increased c-MYC expression.	Frank V et al.	23418306	Paediatric individuals
15					
16	1	Association of eNOS gene intron 4 a/b VNTR polymorphisms in children with nephrotic syndrome.	Dursun H et al.	23570878	Paediatric individuals
17					
18	1	A molecular genetic analysis of childhood nephrotic syndrome in a cohort of Saudi Arabian families.	Al-Hamed MH et al.	23595123	Paediatric individuals
19					
20	1	Cost-effective PKHD1 genetic testing for autosomal recessive polycystic kidney disease.	Krall P et al.	24162162	Paediatric individuals
21					
22	1	EIF2AK3 mutations in South Indian children with permanent neonatal diabetes mellitus associated with Wolcott-Rallison syndrome.	Jahnavi S et al.	24168455	Paediatric individuals
23					
24	1	Molecular diagnosis of distal renal tubular acidosis in Tunisian patients: proposed algorithm for Northern Africa populations for the ATP6V1B1, ATP6V0A4 and SCL4A1 genes.	Elhayek D et al.	24252324	Paediatric individuals
25					
26	1	MMP-1 and -3 haplotype is associated with congenital anomalies of the kidney and urinary tract.	Djuric T et al.	24414606	Paediatric individuals
27					
28	1	Mutation screening and array comparative genomic hybridization using a 180K oligonucleotide array in VACTERL association.	Winberg J et al.	24416387	Paediatric individuals
29					
30	1	Conversion from twice- to once-daily tacrolimus in pediatric kidney recipients: a pharmacokinetic and bioequivalence study.	Lapeyraque AL et al.	24435759	Paediatric individuals
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1	1	Muscle involvement in Dent disease 2.	Park E et al.	24912603	Paediatric individuals
2	1	PON1 Q192R polymorphism (rs662) is associated with childhood embryonal tumors.	Vasconcelos GM et al.	24972570	Paediatric individuals
3	1	Genetic analysis of strictly defined Leber congenital amaurosis with (and without) neurodevelopmental delay.	Khan AO et al.	24997176	Paediatric individuals
4	1	Modification of epigenetic patterns in low birth weight children: importance of hypomethylation of the ACE gene promoter.	Rangel M et al.	25170764	Paediatric individuals
5	1	Gene polymorphisms of adducin GLY460TRP, ACE I/D, AND AGT M235T in pediatric hypertension patients.	Kaplan I et al.	25262176	Paediatric individuals
6	1	Endothelial nitric oxide synthase gene intron 4 VNTR polymorphism in sickle cell disease: relation to vasculopathy and disease severity.	Tantawy AA et al.	25263931	Paediatric individuals
7	1	HLA-DQA1 and PLCG2 Are Candidate Risk Loci for Childhood-Onset Steroid-Sensitive Nephrotic Syndrome.	Gbadegesin RA et al.	25349203	Paediatric individuals
8	1	Activation of human telomerase reverse transcriptase through gene fusion in clear cell sarcoma of the kidney.	Karlsson J et al.	25481751	Paediatric individuals
9	1	Coinheritance of COL4A5 and MYO1E mutations accentuate the severity of kidney disease.	Lennon R et al.	25739341	Paediatric individuals
10	1	Novel carboxypeptidase A6 (CPA6) mutations identified in patients with juvenile myoclonic and generalized epilepsy.	Sapio MR et al.	25875328	Paediatric individuals
11	1	HPSE2 mutations in urofacial syndrome, non-neurogenic neurogenic bladder and lower urinary tract dysfunction.	Bulum B et al.	25924634	Paediatric individuals
12	1	Impact of common functional polymorphisms in renin angiotensin system genes on the risk of renal parenchymal scarring following childhood urinary tract infection.	Hussein A et al.	25939993	Paediatric individuals
13	1	Angiotensin-converting enzyme genotype is not a significant genetic risk factor for idiopathic nephrotic syndrome in Croatian children.	Batinic D et al.	25997642	Paediatric individuals
14	1	BRAF mutations in pediatric metanephric tumors.	Chami R et al.	26014474	Paediatric individuals
15	1	Expressions of mRNA for innate immunity-associated functional molecules in urinary sediment in immunoglobulin A nephropathy.	Tsuruga K et al.	26058859	Paediatric individuals

1	1	Association of ACE and MDR1 Gene Polymorphisms with Steroid Resistance in Children with Idiopathic Nephrotic Syndrome.	Dhandapani MC et al.	26154535	Paediatric individuals
2	1	Inflammasome polymorphisms in juvenile systemic lupus erythematosus.	Pontillo A et al.	26182076	Paediatric individuals
3	1	Associations of the eNOS G894T gene polymorphism with target organ damage in children with newly diagnosed primary hypertension.	Sladowska-Kozłowska J et al.	26227630	Paediatric individuals
4	1	Paraoxnase1 Gene Polymorphism in Childhood Idiopathic Nephrotic Syndrome.	Al-Eisa AA et al.	26780374	Paediatric individuals
5	1	Coagulation, thrombophilia and patency of arteriovenous fistula in children undergoing haemodialysis compared with healthy volunteers: a prospective analysis.	Fadel FI et al.	26829282	Paediatric individuals
6	1	Components of the lectin pathway of complement activation in paediatric patients of intensive care units.	Swierzko AS et al.	26850322	Paediatric individuals
7	1	ACE serum level and I/D gene polymorphism in children with obstructive uropathies and other congenital anomalies of the kidney and urinary tract.	Kostadinova ES et al.	27206329	Paediatric individuals
8	1	Association study between matrix metalloproteinase-9 gene (MMP9) polymorphisms and the risk of Henoch-Schönlein purpura in children.	Xu ED et al.	27323137	Paediatric individuals
9	1	Clinicopathological features and BRAF(V600E) mutations in patients with isolated hypothalamic-pituitary Langerhans cell histiocytosis.	Huo Z et al.	27760550	Paediatric individuals
10	1	BRAF exon 15 mutations in pediatric renal stromal tumors: prevalence in metanephric stromal tumors.	Marsden L et al.	27769870	Paediatric individuals
11	1	Angiotensin-converting enzyme insertion/deletion gene polymorphism in Egyptian children with systemic lupus erythematosus: a possible relation to proliferative nephritis.	Hammad A et al.	27956582	Paediatric individuals
12	1	Estimation of the relationship between the polymorphisms of selected genes: ACE, AGTR1, TGF β 21 and GNB3 with the occurrence of primary vesicoureteral reflux.	Zyczkowski M et al.	27988909	Paediatric individuals
13	1	Spectrum of mutations in Chinese children with steroid-resistant nephrotic syndrome.	Wang F et al.	28204945	Paediatric individuals
14	1	Lectin pathway factors in patients suffering from juvenile idiopathic arthritis.	Kasperkiewicz K et al.	28405017	Paediatric individuals

1	Association of Endothelial Nitric Oxide Synthase Gene Polymorphism with Susceptibility and Nephritis Development of Henoch-Schönlein Purpura in Chinese Han Children.	Wang A et al.	28409662	Paediatric individuals
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7	Angiotensin-Converting Enzyme Gene Polymorphism in Children with Idiopathic Nephrotic Syndrome, Effect on Biopsy Findings.	Monajemzadeh M et al.	28481137	Paediatric individuals
8				
9	Inducible nitric oxide synthase gene polymorphisms are associated with a risk of nephritis in Henoch-Schönlein purpura children.	Jiang J et al.	28593405	Paediatric individuals
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11	Inborn errors in RNA polymerase III underlie severe varicella zoster virus infections.	Ogunjimi B et al.	28783042	Paediatric individuals
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14	Association of single-nucleotide polymorphism in the FKBP5 gene with response to steroids in pediatric patients with primary nephrotic syndrome.	Du N et al.	28992850	Paediatric individuals
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17	Monogenic diabetes in overweight and obese youth diagnosed with type 2 diabetes: the TODAY clinical trial.	Kleinberger JW et al.	29758564	Paediatric individuals
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20	Evaluation of Genetic Polymorphisms for Determining Steroid Response in Nephrotic Children.	Kara A et al.	30143489	Paediatric individuals
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22	A randomized clinical trial of age and genotype-guided tacrolimus dosing after pediatric solid organ transplantation.	Min S et al.	30178515	Paediatric individuals
23				
24	Pharmacogenetics of acute azathioprine toxicity: relationship to thiopurine methyltransferase genetic polymorphism.	Lennard L et al.	2758725	Pharmaceutical drug focus
25				
26	Genetic association of 11 beta-hydroxysteroid dehydrogenase type 2 (HSD11B2) flanking microsatellites with essential hypertension in blacks.	Watson B Jr et al.	8794836	Pharmaceutical drug focus
27				
28	Effect of deletion polymorphism of angiotensin converting enzyme gene on progression of diabetic nephropathy during inhibition of angiotensin converting enzyme: observational follow up study.	Parving HH et al.	8806248	Pharmaceutical drug focus
29				
30	Effect of angiotensin-converting enzyme (ACE) gene polymorphism on progression of renal disease and the influence of ACE inhibition in IDDM patients: findings from the EUCLID Randomized Controlled Trial. EURODIAB Controlled Trial of Lisinopril in IDDM.	Penno G et al.	9726242	Pharmaceutical drug focus
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37	Effects of erythropoietin, angiotensin II, and angiotensin-converting enzyme inhibitor on erythroid precursors in patients with posttransplantation erythrocytosis.	Glicklich D et al.	10428268	Pharmaceutical drug focus
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1	1	Nifedipine improves endothelial function in hypercholesterolemia, independently of an effect on blood pressure or plasma lipids.	Verhaar MC et al.	10533616	Pharmaceutical drug focus
2	1	Pharmacogenetic analysis of the effect of angiotensin-converting enzyme inhibitor on restenosis after percutaneous transluminal coronary angioplasty.	Okamura A et al.	10535720	Pharmaceutical drug focus
3	1	The norbornenyl moiety of cyclothiazide determines the preference for flip-flop variants of AMPA receptor subunits.	Kessler M et al.	10854736	Pharmaceutical drug focus
4	1	Randomized placebo-controlled trial of perindopril in normotensive, normoalbuminuric patients with type 1 diabetes mellitus.	Kvetny J et al.	11181984	Pharmaceutical drug focus
5	1	Human thiopurine S-methyltransferase activity in uremia and after renal transplantation.	Weyer N et al.	11417444	Pharmaceutical drug focus
6	1	Long-term renoprotective effects of losartan in diabetic nephropathy: interaction with ACE insertion/deletion genotype?	Andersen S et al.	12716812	Pharmaceutical drug focus
7	1	The influence of the ACE (I/D) polymorphism on systemic and renal vascular responses to angiotensins in normotensive, normoalbuminuric Type 1 diabetes mellitus.	Luik PT et al.	12856080	Pharmaceutical drug focus
8	1	Venous response to nitroglycerin is enhanced in young, healthy carriers of the 825T allele of the G protein beta3 subunit gene (GNB3).	Mitchell A et al.	14586390	Pharmaceutical drug focus
9	1	Matrix metalloproteinase-1 gene polymorphism in renal transplant patients with and without gingival enlargement.	Kurzawski M et al.	16945025	Pharmaceutical drug focus
10	1	Enalapril and losartan affect lipid peroxidation in renal transplant recipients with renin-angiotensin system polymorphisms.	Rashtchizadeh N et al.	17222813	Pharmaceutical drug focus
11	1	Renin-angiotensin system polymorphisms and hemoglobin level in renal allografts: a comparative study between losartan and enalapril.	Noroozianavval M et al.	17524880	Pharmaceutical drug focus
12	1	Genetic analysis of fluvastatin response and dyslipidemia in renal transplant recipients.	Singer JB et al.	17563401	Pharmaceutical drug focus
13	1	Impact of the preintervention rate of renal function decline on outcome of renoprotective intervention.	Lely AT et al.	18077786	Pharmaceutical drug focus
14	1	CYP3A5 genotype is not associated with a higher risk of acute rejection in tacrolimus-treated renal transplant recipients.	Hesselink DA et al.	18334918	Pharmaceutical drug focus
15	1	Endothelial nitric oxide synthase gene polymorphisms and the renal hemodynamic response to L-arginine.	Cherney DZ et al.	19037250	Pharmaceutical drug focus

1	Modulating effect of atorvastatin on paraoxonase 1 activity in type 2 diabetic Egyptian patients with or without nephropathy.	Abdin AA et al.	19553142	Pharmaceutical drug focus	
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6	1	CYP2C9 genotype and pharmacodynamic responses to losartan in patients with primary and secondary kidney diseases.	Joy MS et al.	19669737	Pharmaceutical drug focus
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8	1	Matrix metalloproteinase-3 gene polymorphism in renal transplant patients with gingival overgrowth.	Drozdik A et al.	19778329	Pharmaceutical drug focus
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11	1	Presence of CYP2C9*3 allele increases risk for hypoglycemia in Type 2 diabetic patients treated with sulfonylureas.	Ragia G et al.	19891554	Pharmaceutical drug focus
12					
13	1	Drug-resistant cytomegalovirus in transplant recipients: a French cohort study.	Hantz S et al.	20961907	Pharmaceutical drug focus
14					
15	1	CYP3A5 genotype does not influence everolimus in vitro metabolism and clinical pharmacokinetics in renal transplant recipients.	Picard N et al.	21389905	Pharmaceutical drug focus
16					
17	1	Cytochrome P450 polymorphisms and the response of lupus nephritis to cyclophosphamide therapy.	Winoto J et al.	21543025	Pharmaceutical drug focus
18					
19	1	Exaggerated natriuresis during clamping of systemic NO supply in healthy young men.	Simonsen JA et al.	21749320	Pharmaceutical drug focus
20					
21	1	In vivo CYP3A activity is significantly lower in cyclosporine-treated as compared with tacrolimus-treated renal allograft recipients.	de Jonge H et al.	21753749	Pharmaceutical drug focus
22					
23	1	Lack of association between the Trp719Arg polymorphism in kinesin-like protein-6 and cardiovascular risk and efficacy of atorvastatin among subjects with diabetes on dialysis: the 4D study.	Hoffmann MM et al.	21871624	Pharmaceutical drug focus
24					
25	1	Influence of NAT2 polymorphisms on sulfamethoxazole pharmacokinetics in renal transplant recipients.	Kagaya H et al.	22106207	Pharmaceutical drug focus
26					
27	1	Comparing antihypertensive effect and plasma ciclosporin concentration between amlodipine and valsartan regimens in hypertensive renal transplant patients receiving ciclosporin therapy.	Cai J et al.	22149319	Pharmaceutical drug focus
28					
29	1	Genetic and clinical determinants of early, acute calcineurin inhibitor-related nephrotoxicity: results from a kidney transplant consortium.	Jacobson PA et al.	22334041	Pharmaceutical drug focus
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31	1	Risk of tacrolimus toxicity in CYP3A5 nonexpressors treated with intravenous nicardipine after kidney transplantation.	Hooper DK et al.	22491658	Pharmaceutical drug focus
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33	1	CYP3A5 polymorphism effect on cyclosporine pharmacokinetics in living donor renal transplant recipients: analysis by population pharmacokinetics.	Song J et al.	22947591	Pharmaceutical drug focus
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1	1	Comparison of pharmacokinetics and pharmacogenetics of once- and twice-daily tacrolimus in the early stage after renal transplantation.	Nioka T et al.	23073468	Pharmaceutical drug focus
2	1	Impact of tacrolimus intraindividual variability and CYP3A5 genetic polymorphism on acute rejection in kidney transplantation.	Ro H et al.	23149441	Pharmaceutical drug focus
3	1	Endothelial nitric oxide synthase gene polymorphisms and renal responsiveness to RAS inhibition therapy in type 2 diabetic Asian Indians.	Cheema BS et al.	23260854	Pharmaceutical drug focus
4	1	Individualization of tacrolimus dosage basing on cytochrome P450 3A5 polymorphism--a prospective, randomized, controlled study.	Chen SY et al.	23432535	Pharmaceutical drug focus
5	1	Genetic polymorphisms of UGT1A8, UGT1A9 and HNF-1 α and gastrointestinal symptoms in renal transplant recipients taking mycophenolic acid.	Vu D et al.	23721685	Pharmaceutical drug focus
6	1	CYP2C9*2 allele increases risk for hypoglycemia in POR*1/*1 type 2 diabetic patients treated with sulfonylureas.	Ragia G et al.	24464600	Pharmaceutical drug focus
7	1	Association of CYP3A4*18B and CYP3A5*3 polymorphism with cyclosporine-related liver injury in Chinese renal transplant recipients.	Xin HW et al.	24691060	Pharmaceutical drug focus
8	1	Genetic variance in ABCB1 and CYP3A5 does not contribute toward the development of chronic kidney disease after liver transplantation.	Tapirdamaz O et al.	25014506	Pharmaceutical drug focus
9	1	Associations of HSD11B1 polymorphisms with tacrolimus concentrations in Chinese renal transplant recipients with prednisone combined therapy.	Liu X et al.	25587129	Pharmaceutical drug focus
10	3	Impact of interaction of cigarette smoking with angiotensin-converting enzyme polymorphisms on end-stage renal disease risk in a Han Chinese population	Yang HY et al.	23477970	< 3 populations reported per SNP
11	3	Polymorphisms in the gene encoding angiotensin I converting enzyme 2 and diabetic nephropathy	Frojdo S et al.	16211375	< 3 populations reported per SNP
12	3	Investigation of ACE, ACE2 and AGTR1 genes for association with nephropathy in Type 1 diabetes mellitus.	Currie D et al.	20854388	< 3 populations reported per SNP

Supplementary Table S3c: Excluded studies from the AGT search

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1c)

Exclusion Stage	Title	Authors	Pubmed ID or WoS ID if Pubmed ID not available	Reason
1	Identification of potential candidate genes for hypertensive nephropathy based on gene expression profile	Chen Z et al.	27756246	Gene expression based study
1	Defining Uremic Arterial Functional Abnormalities in Patients Recently Started on Haemodialysis: Combined In Vivo and Ex Vivo Assessment	Abushufa AM et al.	25546407	No data for AGT
1	Angiotensin I Converting Enzyme Gene Polymorphism in Type 2 Diabetes Mellitus with Nephropathy in Saudi Population	Alharbi SA et al.	WOS:000415063100003	No data for AGT
1	Clinical impact of an angiotensin I-converting enzyme insertion/deletion and kinin B2 receptor +9/-9 polymorphisms in the prognosis of renal transplantation	Amorim CEN et al.	23362199	No data for AGT
1	Transforming growth factor beta and progression of renal disease	August P et al.	WOS:000185812000016	No data for AGT
1	Associations of fractalkine receptor (CX3CR1) and CCR5 gene variants with hypertension, diabetes and atherosclerosis in chronic renal failure patients undergoing hemodialysis	Bagci B et al.	27118566	No data for AGT
1	Effect of ACE and AT-2 inhibitors on mortality and progression to microalbuminuria in a nested case-control study of diabetic nephropathy in diabetes mellitus type 2: results from the GENDIAN study.	Boger CA et al.	16961167	No data for AGT
1	The ras responsive transcription factor RREB1 is a novel candidate gene for type 2 diabetes associated end-stage kidney disease	Bonomo JA et al.	25027322	No data for AGT
1	Angiotensin II type 1 receptor gene polymorphism in end-stage renal disease	Buraczyńska M et al.	12187084	No data for AGT

1	Endothelial nitric oxide synthase gene polymorphisms and renal responsiveness to RAS inhibition therapy in type 2 diabetic Asian Indians	Cheema BS et al.	23260854	No data for AGT
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1	ACE gene polymorphism and serum ACE activity in Iranians type II diabetic patients with macroalbuminuria	Felehgari V et al.	20830509	No data for AGT
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6	1 DNA polymorphisms in the ACE gene, serum ACE activity and the risk of nephropathy in insulin-dependent diabetes mellitus	Freire MBS et al.	9794558	No data for AGT
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9	1 Polymorphisms in the gene encoding angiotensin I converting enzyme 2 and diabetic nephropathy	Frojdo S et al.	16211375	No data for AGT
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12	1 Association of fibronectin Msp iv polymorphism and diabetic nephropathy susceptibility in Chinese Han population	Gao JX et al.	26045844	No data for AGT
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15	1 Effects of erythropoietin, angiotensin II, and angiotensin-converting enzyme inhibitor on erythroid precursors in patients with posttransplantation erythrocytosis	Glicklich D et al.	10428268	No data for AGT
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18	1 Association of Angiotensin converting Enzyme (ACE) gene polymorphism and diabetic nephropathy	Golmohamadi T et al.	WOS:000242619000003	No data for AGT
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21	1 Angiotensin I-converting enzyme gene polymorphisms: Relationship to nephropathy in patients with non-insulin dependent diabetes mellitus	Grzeszczak W et al.	9727375	No data for AGT
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24	1 Susceptibility and progression of end stage renal disease are not associated with angiotensin II type 1 receptor gene polymorphism	Hanna MOF et al.	25316403	No data for AGT
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27	1 Polymorphism of the angiotensin I-converting enzyme gene in diabetic nephropathy in type II diabetic patients with proliferative retinopathy	Hanyu O et al.	9509566	No data for AGT
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30	1 Angiotensin Converting Enzyme Insertion/Deletion gene polymorphism and genomic sequence in Diabetic Nephropathy	Haque SF et al.	WOS:000300381000004	No data for AGT
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33	1 The angiotensin I-converting enzyme (ACE) locus is strongly associated with age and duration of diabetes in patients with type I diabetes	Hibberd ML et al.	9025006	No data for AGT
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36	1 Role of transforming growth factor beta-1 gene polymorphisms in the development of chronic allograft nephropathy in renal transplant recipients	Inigo P et al.	14558330	No data for AGT
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1	1	Neuropeptide YY1 receptor polymorphism as a prognostic predictor in Japanese patients with IgA nephropathy	Ito H et al.	10363627	No data for AGT
2	1	Carnosine as a protective factor in diabetic nephropathy - Association with a leucine repeat of the carnosinase gene CNDP1	Janssen B et al.	16046297	No data for AGT
3	1	Impact of Polymorphisms of the Genes Encoding Angiotensin II-Forming Enzymes on the Progression of IgA Nephropathy	Jung ES et al.	21150220	No data for AGT
4	1	Proteomic analysis of alpha-1-antitrypsin in immunoglobulin A nephropathy	Kwak NJ et al.	21136694	No data for AGT
5	1	Renal perfusion and the renal hemodynamic response to blocking the renin system in diabetes - Are the forces leading to vasodilation and vasoconstriction linked?	Lansang MC et al.	12086929	No data for AGT
6	1	Polymorphism in IgA nephropathy	Liu ZH et al.	WOS:A1997WW80600013	No data for AGT
7	1	The angiotensin-I converting enzyme gene I/D variation contributes to end-stage renal disease risk in Chinese patients with type 2 diabetes receiving hemodialysis	Lu M et al.	27633502	No data for AGT
8	1	The influence of three endothelin-1 polymorphisms on the progression of IgA nephropathy	Maixnerova D et al.	17328840	No data for AGT
9	1	The influence of two megsin polymorphisms on the progression of IgA nephropathy	Maixnerova D et al.	18498720	No data for AGT
10	1	Relationships Between Angiotensin-I Converting-Enzyme Gene Polymorphism, Plasma-Levels, And Diabetic Retinal And Renal Complications	Marre M et al.	8314010	No data for AGT
11	1	Hereditary factors in the development of diabetic renal disease	Marre M et al.	10922971	No data for AGT
12	1	A rare haplotype of the vitamin D receptor gene is protective against diabetic nephropathy	Martin RJL et al.	19783860	No data for AGT
13	1	Mutational Analysis of Agxt in Tunisian Population with Primary Hyperoxaluria Type 1.	M'dimegh S et al.	27935012	No data for AGT
14	1	Kinin-dependent hypersensitivity reactions in hemodialysis: metabolic and genetic factors.	Molinaro G et al.	17003818	No data for AGT

1	A polymorphism in the angiotensin II type 1 receptor gene has different effects on the risk of diabetic nephropathy in men and women	Mollsten A et al.	21316998	No data for AGT
1	Relationship of angiotensin-converting enzyme gene polymorphism with nephropathy associated with Type 2 diabetes mellitus in Asian Indians	Movva S et al.	17616353	No data for AGT
1	Relationship of Serum Klotho Level With ACE Gene Polymorphism in Stable Kidney Allograft Recipients	Nahandi MZ et al.	28270648	No data for AGT
1	The effect of angiotensin receptor blockade (ARB) on the regression of left ventricular hypertrophy in hemodialysis patients: comparison between patients with D allele and non-D allele (ACE gene polymorphism)	Nakayama M et al.	16312263	No data for AGT
1	Different Mechanisms for the Progression of CKD with ACE Gene Polymorphisms	Nakayama Y et al.	19293592	No data for AGT
1	A disease haplotype for advanced nephropathy in type 2 diabetes at the ACE locus	Ng DPK et al.	16936219	No data for AGT
1	Relationships between angiotensin I converting enzyme gene polymorphism and renal complications in Korean IDDM patients.	Oh TG et al.	8854649	No data for AGT
1	alpha(1)-antitrypsin gene polymorphisms are not associated with renal arterial fibromuscular dysplasia	Perdu J et al.	16531799	No data for AGT
1	The frequency of factor V Leiden mutation, ACE gene polymorphism, serum ACE activity and response to ACE inhibitor and angiotensin II receptor antagonist drugs in Iranians type II diabetic patients with microalbuminuria	Rahimi Z et al.	20853144	No data for AGT
1	AGTR1 rs5186 variants in patients with type 2 diabetes mellitus and nephropathy	Razi F et al.	WOS:000419720600009	No data for AGT
1	Angiotensin-converting enzyme polymorphism in patients with terminal renal failure	Schmidt A et al.	8785402	No data for AGT

1	No association of converting enzyme insertion/deletion polymorphism with immunoglobulin A glomerulonephritis	Schmidt S et al.	7485124	No data for AGT	
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6	1	Angiotensin I converting enzyme gene polymorphism and diabetic nephropathy in type II diabetes	Schmidt S et al.	9269698	No data for AGT
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9	1	ACAC ¹ gene (rs2268388) and AGTR1 gene (rs5186) polymorphism and the risk of nephropathy in Asian Indian patients with type 2 diabetes.	Shah VN et al.	23081748	No data for AGT
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12	1	Relations between eNOS Glu298Asp polymorphism and progression of diabetic nephropathy	Shin Shin Y et al.	15331206	No data for AGT
13					
14	1	Angiotensin I-converting enzyme genotype significantly affects progression of IgA glomerulonephritis in an Italian population	Stratta P et al.	10352195	No data for AGT
15					
16	1	The association of LOX-1 rs1050283 polymorphism with renal hypertension susceptibility in a Chinese population	Sun YC et al.	WOS:000395739000087	No data for AGT
17					
18	1	Lack Of Relationship Between An Insertion Deletion Polymorphism In The Angiotensin I-Converting Enzyme Gene And Diabetic Nephropathy And Proliferative Retinopathy In Iddm Patients	Tarnow L et al.	7729604	No data for AGT
19					
20	1	Angiotensin-II type 1 receptor gene polymorphism and diabetic microangiopathy.	Tarnow L et al.	8671962	No data for AGT
21					
22	1	High prevalence of ACE DD genotype among north Indian end stage renal disease patients.	Tripathi G et al.	17042963	No data for AGT
23					
24	1	Angiotensin-converting enzyme gene polymorphism and vascular manifestations in Korean patients with SLE	Uhm WS et al.	12043886	No data for AGT
25					
26	1	Increased expression of monocytic angiotensin-converting enzyme in dialysis patients with cardiovascular disease	Ulrich C et al.	16476718	No data for AGT
27					
28	1	Synergistic expression of angiotensin-converting enzyme (ACE) and ACE2 in human renal tissue and confounding effects of hypertension on the ACE to ACE2 ratio	Wakahara S et al.	17303661	No data for AGT
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30	1	Angiotensin-converting enzyme inhibitor versus angiotensin 2 receptor antagonist therapy and the influence of angiotensin-converting enzyme gene polymorphism in IgA nephritis.	Woo KT et al.	18536822	No data for AGT
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1	Involvement of platelet-derived growth factor and histocompatibility of DRB 1 in chronic renal allograft nephropathy	Yamada K et al.	11349729	No data for AGT	
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7	1	Angiotensin converting enzyme gene polymorphism and development of post-transplant erythrocytosis.	Yildiz A et al.	12832741	No data for AGT
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9	1	Angiotensin II type 2 receptor gene is not responsible for familial vesicoureteral reflux	Yoneda A et al.	12187255	No data for AGT
10					
11	1	Polymorphism Of The Angiotensin-Converting Enzyme Gene And Clinical Aspects Of Iga Nephropathy	Yorioka T et al.	8529313	No data for AGT
12					
13	1	Interleukin-4 (IL4)-590C/T (rs2243250) gene polymorphism is not associated with diabetic nephropathy (DN) in Caucasians with type 2 diabetes mellitus (T2DM)	Zavrsnik M et al.	29514038	No data for AGT
14					
15	1	Hemodynamic Parameters During Normal And Hypertensive Pregnancy In Rats: Evaluation Of Renal Salt And Water Transporters	Abreu N et al.	18293204	Non-human study
16					
17	1	DPP-4 Inhibition on Top of Angiotensin Receptor Blockade Offers a New Therapeutic Approach for Diabetic Nephropathy	Alter ML et al.	23171828	Non-human study
18					
19	1	Long-Term Angiotensin II Receptor Blockade Limits Hypertension, Aortic Dysfunction, and Structural Remodeling in a Rat Model of Chronic Kidney Disease	Ameer OZ et al.	27880955	Non-human study
20					
21	1	Effects of Diets with Different Proportions of Protein/Carbohydrate on Retinal Manifestations in db Mice	Arimura E et al.	29475908	Non-human study
22					
23	1	Identification of Cathepsin L as a Potential Sex-Specific Biomarker for Renal Damage	Bauer Y et al.	21357272	Non-human study
24					
25	1	Blood pressure (BP) and renal vasoconstrictor responses to acute blockade of nitric oxide: persistence of renal vasoconstriction despite normalization of BP with either verapamil or sodium nitroprusside.	Baylis C et al.	7562480	Non-human study
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27	1	Specific pregnancy-induced angiotensin II type-1 receptor expression in ovine uterine artery does not involve formation of alternate splice variants or alternate promoter usage	Bird IM et al.	9687288	Non-human study
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1	N-terminal residues control proteasomal degradation of RGS2, RGS4, and RGS5 in human embryonic kidney 293 cells	Bodenstein J et al.	17220356	Non-human study	
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6	1	Angiotensinogen concentrations and renin clearance : implications for blood pressure regulation.	Bohlender J et al.	10720595	Non-human study
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9	1	Blood pressure and renin-angiotensin system resetting in transgenic rats with elevated plasma Val(5)-angiotensinogen	Bohlender J et al.	22728903	Non-human study
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11	1	CCN1 expression in interleukin-6 deficient mouse kidney in experimental model of heart failure	Bonda TA et al.	23690222	Non-human study
12					
13	1	Advanced Glycated End-Products Affect HIF-Transcriptional Activity in Renal Cells	Bondeva T et al.	24030251	Non-human study
14					
15	1	Lack of in vivo function of osteopontin in experimental anti-GBM nephritis	Bonvini JM et al.	10966489	Non-human study
16					
17	1	Hypoxia/Reoxygenation of Rat Renal Arteries Impairs Vasorelaxation via Modulation of Endothelium-Independent sGC/cGMP/PKG Signaling	Braun D et al.	29773995	Non-human study
18					
19	1	Angiotensin II mesenteric and renal vasoregulation: Dissimilar modulatory effects with nitroprusside	Broome M et al.	11065204	Non-human study
20					
21	1	N-domain angiotensin I-converting enzyme expression in renal artery of Wistar, Wistar Kyoto, and spontaneously hypertensive rats	Bueno V et al.	15194348	Non-human study
22					
23	1	Organizational diversity among distinct glycoprotein endoplasmic reticulum-associated degradation programs	Cabral CM et al.	12181335	Non-human study
24					
25	1	Role of NOX2 in the regulation of afferent arteriole responsiveness	Carlstrom M et al.	18987286	Non-human study
26					
27	1	Adrenomedullin gene expression differences in mice do not affect blood pressure but modulate hypertension-induced pathology in males	Caron K et al.	17360661	Non-human study
28					
29	1	Appropriate regulation of renin and blood pressure in 45-kb human renin/human angiotensinogen transgenic mice.	Catanzaro DF et al.	9931123	Non-human study
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31	1	Mice lacking endothelial ACE - Normal blood pressure with elevated angiotensin	Cole JM et al.	12574101	Non-human study
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1	1	Natriuretic peptides buffer renin-dependent hypertension	Demerath T et al.	24717731	Non-human study
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5	1	Renin-angiotensin system transgenic mouse model recapitulates pathophysiology similar to human preeclampsia with renal injury that may be mediated through VEGF.	Denney JM et al.	27927648	Non-human study
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8	1	Mycophenolate mofetil prevents cerebrovascular injury in stroke-prone spontaneously hypertensive rats	Dhande IS et al.	28011882	Non-human study
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11	1	Inhibition of proximal tubular fluid absorption by nitric oxide and atrial natriuretic peptide in rat kidney	Eitle E et al.	9575805	Non-human study
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14	1	Complex interactions of NO/cGMP/PKG systems on Ca ²⁺ signaling in afferent arteriolar vascular smooth muscle	Fellner SK et al.	19880669	Non-human study
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17	1	Cardiac angiotensin-(1-12) expression and systemic hypertension in rats expressing the human angiotensinogen gene.	Ferrario CM et al.	26873967	Non-human study
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20	1	Attenuation of accelerated renal cystogenesis in Pkd1 mice by renin-angiotensin system blockade	Fitzgibbon WR et al.	29021226	Non-human study
21					
22	1	Renal cyst growth is the main determinant for hypertension and concentrating deficit in Pkd1-deficient mice	Fonseca JM et al.	24429399	Non-human study
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25	1	Acute elevations in salt intake and reduced renal mass hypertension compromise arteriolar dilation in rat cremaster muscle	Frisbee JC et al.	10329253	Non-human study
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28	1	Contribution of cytochrome P-450 omega-hydroxylase to altered arteriolar reactivity with high-salt diet and hypertension	Frisbee JC et al.	10775129	Non-human study
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30	1	Adenosine A(1) receptor-dependent and independent pathways in modulating renal vascular responses to angiotensin II	Gao X et al.	25251152	Non-human study
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33	1	Connexin 43 is not essential for the control of renin synthesis and secretion	Gerl M et al.	24062052	Non-human study
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36	1	Metformin prevents the impairment of endothelium-dependent vascular relaxation induced by high glucose challenge in rabbit isolated perfused kidneys	Gomes MB et al.	16133490	Non-human study
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39	1	Effect of the angiotensinogen genotype on experimental hypertension in mice	Handtrack C et al.	17333097	Non-human study
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1	Cytoprotective effects of nitrates in a cellular model of hydronephrosis	Hegarty NJ et al.	12081565	Non-human study	
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4	1	The genetic deletion of Mas abolishes salt induced hypertension in mice	Heringer-Walther S et al.	22652430	Non-human study
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6	1	Pressor and sympathoexcitatory effects of nitric oxide in the rostral ventrolateral medulla	Hirooka Y et al.	8934360	Non-human study
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8	1	An essential role of angiotensin II receptor type 1a in recipient kidney, not in transplanted peripheral blood leukocytes, in progressive immune-mediated renal injury	Hisada Y et al.	11555672	Non-human study
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10	1	The angiotensin type II receptor tonically inhibits angiotensin-converting enzyme in AT2 null mutant mice	Hunley TE et al.	10652034	Non-human study
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12	1	NOS1-dependent negative feedback regulation of the epithelial sodium channel in the collecting duct	Hyndman KA et al.	25391901	Non-human study
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14	1	Collecting Duct Nitric Oxide Synthase 1 beta Activation Maintains Sodium Homeostasis During High Sodium Intake Through Suppression of Aldosterone and Renal Angiotensin II Pathways	Hyndman KA et al.	29066445	Non-human study
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16	1	Pathophysiological roles of adrenomedullin-RAMP2 system in acute and chronic cerebral ischemia	Igarashi K et al.	25252154	Non-human study
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18	1	Role of A(1) receptors in renal sympathetic neurotransmission in the mouse kidney	Jackson EK et al.	22874760	Non-human study
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20	1	mPGES-1 deletion potentiates urine concentrating capability after water deprivation	Jia ZJ et al.	22237797	Non-human study
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22	1	Transfer of a salt-resistant renin allele raises blood pressure in Dahl salt-sensitive rats	Jiang J et al.	9040448	Non-human study
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24	1	Angiotensin-converting enzyme inhibition attenuates the progression of rat hepatic fibrosis	Jonsson JR et al.	11438504	Non-human study
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26	1	Rat Ace allele variation determines susceptibility to AngII-induced renal damage	Kamilic J et al.	21788250	Non-human study
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28	1	Genetic-Control Of Blood-Pressure And The Angiotensinogen Locus	Kim HS et al.	7708716	Non-human study
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1	1	Regulation of renin secretion and expression in mice deficient in ss 1-and ss 2-adrenergic receptors	Kim SM et al.	17515456	Non-human study
2	1	Low Blood Pressure in Endothelial Cell-Specific Endothelin 1 Knockout Mice	Kisanuki YY et al.	20516397	Non-human study
3	1	Lack of an effect of collecting duct-specific deletion of adenylyl cyclase 3 on renal Na ⁺ and water excretion or arterial pressure	Kittikulstuth W et al.	24431204	Non-human study
4	1	Effect of the plasminogen-plasmin system on hypertensive renal and cardiac damage	Knier B et al.	21610512	Non-human study
5	1	Axl mediates vascular remodeling induced by deoxycorticosterone acetate-salt hypertension	Korshunov VA et al.	17923589	Non-human study
6	1	Reciprocal expression of connexin 40 and 45 during phenotypical changes in renin-secreting cells	Kurt B et al.	21209011	Non-human study
7	1	Stimulation of renin secretion by NO donors is related to the cAMP pathway	Kurtz A et al.	9575895	Non-human study
8	1	The angiotensin II receptor blocker candesartan improves survival and mesenteric perfusion in an acute porcine endotoxin model	Laesser M et al.	14995942	Non-human study
9	1	Physiological impact of increased expression of the AT(1) angiotensin receptor	Le TH et al.	12963678	Non-human study
10	1	Nitric oxide reduces the molecular activity of Na ⁺ ,K ⁺ -ATPase in opossum kidney cells	Liang MY et al.	10432402	Non-human study
11	1	Regulation of sympathetic nerve activity in heart failure - A role for nitric oxide and angiotensin II	Liu JL et al.	10066676	Non-human study
12	1	Overexpression of cytochrome P450 4F2 in mice increases 20-hydroxyeicosatetraenoic acid production and arterial blood pressure	Liu XL et al.	19279555	Non-human study
13	1	Sodium-Nitroprusside Increases Glomerular Capillary Hydraulic Conductivity In Isolated Rat Glomeruli	Lovell HB et al.	7706899	Non-human study
14	1	Macula Densa Nitric Oxide Synthase 1 beta Protects against Salt-Sensitive Hypertension	Lu Y et al.	26647426	Non-human study
15	1	Correction of an enzyme trafficking defect in hereditary kidney stone disease in vitro	Lumb MJ et al.	12737622	Non-human study

1	Development and Analysis of Alpha 1-Antitrypsin Neoglycoproteins: The Impact of Additional N-Glycosylation Sites on Serum Half-Life	Lusch A et al.	23668542	Non-human study	
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4	1	Connexin 40 is dispensable for vascular renin cell recruitment but is indispensable for vascular baroreceptor control of renin secretion	Machura K et al.	25241776	Non-human study
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6	1	Angiotensin receptor-binding protein ATRAP/Agtrap inhibits metabolic dysfunction with visceral obesity.	Maeda A et al.	23902639	Non-human study
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8	1	Effect of sodium nitroprusside on norepinephrine overflow and antidiuresis induced by stimulation of renal nerves in anesthetized dogs	Maekawa H et al.	8720419	Non-human study
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10	1	Hypertension in unilaterally nephrectomized rats induced by single-kidney transfection with angiotensinogen cDNA	Marley WS et al.	10567853	Non-human study
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12	1	A novel rodent model of pregnancy complications associated with genetically determined angiotensin-converting enzyme (ACE) activity	Mata-Greenwood E et al.	29360395	Non-human study
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14	1	Chronic regulation of arterial blood pressure by ANP: role of endogenous vasoactive endothelial factors	Melo LG et al.	9815091	Non-human study
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16	1	Chronic hypertension and altered baroreflex responses in transgenic mice containing the human renin and human angiotensinogen genes	Merrill DC et al.	8613528	Non-human study
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18	1	Role of endothelium-derived relaxing factors in the renal response to vasoactive agents in hypothyroid rats	Moreno JM et al.	12657567	Non-human study
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20	1	Hypervolemia of pregnancy is not maintained in mice chronically overexpressing angiotensinogen	Morgan TK et al.	16796982	Non-human study
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22	1	Vascular angiotensin-converting enzyme expression regulates local angiotensin II	Muller DN et al.	9039087	Non-human study
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24	1	AKAP150 is required for stuttering persistent Ca ²⁺ sparklets and angiotensin II-induced hypertension	Navedo MF et al.	18174462	Non-human study
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26	1	Angiotensin-II Enhances Norepinephrine Spillover During Sympathetic Activation In Conscious Rabbits	Noshiro T et al.	WOS:A1994NP99600022	Non-human study
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1	Effects of potassium adaptation on blood pressure and pressor responses in normotensive and renal hypertensive Wistar rats	Omogbai EL et al.	15834453	Non-human study
1	Altered regulation of renal interstitial hydrostatic pressure and the renal renin-angiotensin system in the absence of atrial natriuretic peptide	O'Tierney PF et al.	18192845	Non-human study
1	Effects of Stimulation of Soluble Guanylate Cyclase on Diabetic Nephropathy in Diabetic eNOS Knockout Mice on Top of Angiotensin II Receptor Blockade	Ott IM et al.	22900035	Non-human study
1	Nitric oxide modulates angiotensin II- and norepinephrine-dependent vasoconstriction in rat kidney	Parekh N et al.	8780230	Non-human study
1	Gene Trapping Uncovers Sex-Specific Mechanisms for Upstream Stimulatory Factors 1 and 2 in Angiotensinogen Expression	Park S et al.	22547438	Non-human study
1	Hyperplastic Growth Of Aortic Smooth-Muscle Cells In Renovascular Hypertensive Rabbits Is Characterized By The Expansion Of An Immature Cell Phenotype	Pauletto P et al.	8156626	Non-human study
1	Mechanical Basis of Osmosensory Transduction in Magnocellular Neurosecretory Neurones of the Rat Supraoptic Nucleus	Prager-Khoutorsky M et al.	25712904	Non-human study
1	Calcium/Calmodulin-Dependent Kinase II Inhibition in Smooth Muscle Reduces Angiotensin II-Induced Hypertension by Controlling Aortic Remodeling and Baroreceptor Function	Prasad AM et al.	26077587	Non-human study
1	Endothelium-Dependent Control Of Vascular Tone In The Rabbit Kidney After Ischemia And Reperfusion	Pruneau D et al.	8453977	Non-human study
1	Angiotensin II stimulates the synthesis and secretion of vascular permeability factor vascular endothelial growth factor in human mesangial cells	Pupilli C et al.	10215323	Non-human study
1	Loss of Notch3 Signaling in Vascular Smooth Muscle Cells Promotes Severe Heart Failure Upon Hypertension	Ragot H et al.	27296994	Non-human study
1	Knockdown of parathyroid hormone related protein in smooth muscle cells alters renal hemodynamics but not blood pressure	Raison D et al.	23720345	Non-human study

1	Nephron-specific deletion of the prorenin receptor causes a urine concentration defect	Ramkumar N et al.	25995108	Non-human study	
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6	1	Possible role for nephron-derived angiotensinogen in angiotensin-II dependent hypertension	Ramkumar N et al.	WOS:000380233800013	Non-human study
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14	1	20-Hydroxyeicosatetraenoic Acid (HETE)-dependent Hypertension in Human Cytochrome P450 (CYP) 4A11 Transgenic Mice NORMALIZATION OF BLOOD PRESSURE BY SODIUM RESTRICTION, HYDROCHLOROTHIAZIDE, OR BLOCKADE OF THE TYPE 1 ANGIOTENSIN II RECEPTOR	Savas S et al.	WOS:000380826700046	Non-human study
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16	1	Angiotensin converting enzyme (ACE) gene expression in experimentally induced liver cirrhosis in rats	Shahid SM et al.	24035938	Non-human study
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20	1	Strain differences in angiotensin-converting enzyme and angiotensin II type I receptor expression. Possible implications for experimental chronic renal transplant failure	Smit-van Oosten A et al.	11984748	Non-human study
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22	1	Association of a novel polymorphism in the bovine PPARGC1A gene with growth, slaughter and meat quality traits in Brangus steers	Soria LA et al.	19665052	Non-human study
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24	1	Angiotensin II Type 1A Receptors in Vascular Smooth Muscle Cells Do Not Influence Aortic Remodeling in Hypertension	Sparks MA et al.	21242463	Non-human study
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26	1	Thromboxane Receptors in Smooth Muscle Promote Hypertension, Vascular Remodeling, and Sudden Death	Sparks MA et al.	23150508	Non-human study
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29	1	Losartan and Sodium Nitroprusside Effectively Protect against Renal Impairments after Ischemia and Reperfusion in Rats	Srisawat U et al.	25947921	Non-human study
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31	1	Natriuretic Peptide Receptor Guanylyl Cyclase-A in Podocytes is Renoprotective but Dispensable for Physiologic Renal Function	Staffel J et al.	27153922	Non-human study
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34	1	Co-operation between particulate and soluble guanylyl cyclase systems in the rat renal glomeruli	Stepinski J et al.	11016869	Non-human study
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36	1	Renal angiotensin converting enzyme promotes renal damage during ureteral obstruction	Stoneking BJ et al.	9719278	Non-human study
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39	1	Mediation of tubuloglomerular feedback by adenosine: Evidence from mice lacking adenosine 1 receptors	Sun DQ et al.	11504952	Non-human study
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1	Cross-species transcriptomic analysis elucidates constitutive aryl hydrocarbon receptor activity	Sun RX et al.	25467400	Non-human study
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6	1 Blood Pressure Control by a Secreted FGF1 (Fibroblast Growth Factor-Binding Protein).	Tassi E et al.	29158353	Non-human study
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9	1 Regulation of Na ⁺ /K ⁺ -ATPase activity by nitric oxide in the kidney and gill of the brown trout (<i>Salmo trutta</i>)	Tipsmark CK et al.	12654889	Non-human study
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11	1 Mechanisms of Renal. Control of Potassium Homeostasis in Complete Aldosterone Deficiency	Todkar A et al.	25071088	Non-human study
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13	1 Functional genetic variation in aminopeptidase A (ENPEP): Lack of clear association with focal and segmental glomerulosclerosis (FSGS)	Tonna S et al.	18206321	Non-human study
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15	1 Angiotensin II-dependent chronic hypertension and cardiac hypertrophy are unaffected by gp91phox-containing NADPH oxidase	Touyz RM et al.	15753233	Non-human study
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17	1 Increased availability of nitric oxide leads to enhanced nitric oxide dependency of tubuloglomerular feedback in the contralateral kidney of rats with 2-kidney, 1-clip Goldblatt hypertension	Turkstra E et al.	10523346	Non-human study
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19	1 Cardiac phenotype and angiotensin II levels in AT(1a), AT(1b), and AT(2) receptor single, double, and triple knockouts	van Esch JHM et al.	20071356	Non-human study
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21	1 Blood pressure and renal hemodynamic responses to acute angiotensin II infusion are enhanced in a female mouse model of systemic lupus erythematosus	Venegas-Pont M et al.	21900645	Non-human study
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23	1 Compensatory up-regulation of angiotensin II subtype 1 receptors in alpha ENaC knockout heterozygous mice	Wang Q et al.	11380824	Non-human study
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25	1 Inhibition of Nitric Oxide Synthase 1 Induces Salt-Sensitive Hypertension in Nitric Oxide Synthase 1 alpha Knockout and Wild-Type Mice	Wang XM et al.	26883268	Non-human study
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27	1 Nebivolol treatment improves resistant arterial function and reduces ventricular hypertrophy and angiotensin II in spontaneously hypertension rats	Wang Y et al.	23263161	Non-human study
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1	Human GRK4 gamma(142V) Variant Promotes Angiotensin II Type I Receptor-Mediated Hypertension via Renal Histone Deacetylase Type 1 Inhibition	Wang Z et al.	26667412	Non-human study	
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7	1	Role of neutral endopeptidase 24.11 in AV fistular rat model of heart failure	Wegner M et al.	8759244	Non-human study
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10	1	Lysine-Specific Demethylase 1: An Epigenetic Regulator of Salt-Sensitive Hypertension	Williams JS et al.	22534796	Non-human study
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13	1	Role of angiotensin-converting enzyme (ACE and ACE2) imbalance on tourniquet-induced remote kidney injury in a mouse hindlimb ischemia-reperfusion model	Yang XH et al.	22580272	Non-human study
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16	1	Renal redox-sensitive signaling, but not blood pressure, is attenuated by Nox1 knockout in angiotensin II-dependent chronic hypertension	Yogi A et al.	18195161	Non-human study
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20	1	Signal transduction through Ca ²⁺ /calmodulin-dependent Ras-GTPase and protein kinase II contributes to development of diabetes-induced renal vascular dysfunction	Yousif MH	16287213	Non-human study
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23	1	Cosegregation of spontaneously hypertensive rat renin gene with elevated blood pressure in an F-2 generation	Yu H et al.	9794718	Non-human study
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26	1	Add-on angiotensin receptor blockade with maximized ACE inhibition	Agarwal R	11380832	Not a case-control study
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29	1	Angiotensin-converting enzyme genotype is a predictive factor in the peak panel-reactive antibody response	Akçay A et al.	15013293	Not a case-control study
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32	1	Association of the genetic polymorphisms of the renin-angiotensin system and endothelial nitric oxide synthase with chronic renal transplant dysfunction	Akçay A et al.	15385810	Not a case-control study
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35	1	Major clinical trials of hypertension - What should be done next?	Alderman MH et al.	WOS:000230012700001	Not a case-control study
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38	1	Allergic reaction related to ramipril use: a case report	Alencar RC et al.	20180980	Not a case-control study
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1	1	CYP3A5 and ABCB1 genes and hypertension	Bochud M et al.	19290795	Not a case-control study
2	1	Disorders of mineralocorticoid synthesis	Connell JMC et al.	11469810	Not a case-control study
3	1	Whole-Genome Linkage and Association Scan in Primary, Nonsyndromic Vesicoureteric Reflux	Cordell HJ et al.	19959718	Not a case-control study
4	1	Genetics of angiotensin I-converting enzyme	Costerousse O et al.	9247746	Not a case-control study
5	1	Renin Angiotensin System and Cytokines in Chronic Kidney Disease: Clinical and Experimental Evidence	da Silva AAS et al.	28820061	Not a case-control study
6	1	Association between two genetic polymorphisms of the renin-angiotensin-aldosterone system and diabetic nephropathy: a meta-analysis	Ding W et al.	21607620	Not a case-control study
7	1	A systematic review and meta-analysis of the association between angiotensin II type 1 receptor A1166C gene polymorphism and myocardial infarction susceptibility	Feng X et al.	23178513	Not a case-control study
8	1	Polymorphism of angiotensin converting enzyme, angiotensinogen, and angiotensin II type 1 receptor genes and end-stage renal failure in IgA nephropathy: IGARAS - A study of 274 men	Frimat L et al.	11053482	Not a case-control study
9	1	HLA genes in ANCA-associated vasculitides	Griffith ME et al.	9493788	Not a case-control study
10	1	Antiproteinuric effect of candesartan cilexetil in Japanese subjects with type 2 diabetes and nephropathy	Haneda M et al.	15364166	Not a case-control study
11	1	Nonmodulation and essential hypertension	Hollenberg NK et al.	16672145	Not a case-control study
12	1	Angiotensinogen genotype affects renal and adrenal responses to angiotensin II in essential hypertension	Hopkins PN et al.	11997278	Not a case-control study
13	1	Association between Angiotensin I-Converting Enzyme Insertion/Deletion Polymorphism and Prognosis of Kidney Transplantation: A Meta-Analysis	Huang ZK et al.	26000752	Not a case-control study

1	Association of angiotensinogen gene M235T and angiotensin-converting enzyme gene I/D polymorphisms with essential hypertension in Han Chinese population: a meta-analysis	Ji LD et al.	20087216	Not a case-control study	
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9	1	The role of renin-angiotensin-aldosterone system genes in the progression of chronic kidney disease: findings from the Chronic Renal Insufficiency Cohort (CRIC) study.	Kelly TN et al.	25906781	Not a case-control study
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12	1	The Phenotypic Patterns of Essential Hypertension Are the Key to Identifying "High Blood Pressure" Genes	Korner PI	21208016	Not a case-control study
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14	1	Glucocorticoids Reduce Aberrant O-Glycosylation of IgA Nephropathy Patients	Kosztu P et al.	29529610	Not a case-control study
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16	1	Antihypertensive treatment modulates the association between the D/I ACE gene polymorphism and left ventricular hypertrophy: a meta-analysis	Kuznetsova T et al.	10918550	Not a case-control study
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19	1	The renoprotective effect of antihypertensive drugs	Locatelli F et al.	10048500	Not a case-control study
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22	1	microRNAs in Essential Hypertension and Blood Pressure Regulation	Marques FZ et al.	26663185	Not a case-control study
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24	1	Genetics and the prediction of complications in type 1 diabetes	Marre M	10097900	Not a case-control study
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26	1	Improvement of nephrotic syndrome by intensive lipid-lowering therapy in a patient with lipoprotein glomerulopathy	Matsunaga A et al.	19603250	Not a case-control study
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28	1	Mechanisms of plasminogen activator inhibitor 1 action in stromal remodeling and related diseases	Milenkovic J et al.	29097819	Not a case-control study
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30	1	Angiotensinogen gene variation and renoprotective efficacy of renin-angiotensin system blockade in IgA nephropathy	Narita I et al.	12911556	Not a case-control study
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32	1	Angiotensin-I converting enzyme insertion/deletion polymorphism and its association with diabetic nephropathy: a meta-analysis of studies reported between 1994 and 2004 and comprising 14,727 subjects	Ng D et al.	15830182	Not a case-control study
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1	Is the presence of retinopathy of practical value in defining cases of diabetic nephropathy in genetic association studies? The experience with the ACE insertion/deletion polymorphism in 53 studies comprising 17,791 subjects	Ng DPK et al.	18523141	Not a case-control study	
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8	1	Partial Deletion of the AGXT Gene (EX1_EX7del): A New Genotype in Hyperoxaluria Type 1	Nogueira PK et al.	10737993	Not a case-control study
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11	1	A case of rapid amelioration of hepatitis C virus-associated cryoglobulinemic membranoproliferative glomerulonephritis treated by interferon-free directly acting antivirals for HCV in the absence of immunosuppressant	Obata F et al.	28509128	Not a case-control study
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15	1	Survival in type 2 diabetic patients in dialysis and the number of risk alleles in polymorphisms of the renin-angiotensin system genes	Padro-Miquel A et al.	19014923	Not a case-control study
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18	1	Normative genetic profiles of RAAS pathway gene Polymorphisms in north Indian and south Indian Populations	Prasad P et al.	18027817	Not a case-control study
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21	1	Stress, Genes, and Hypertension. Contribution of the ISIAH Rat Strain Study	Redina et al.	29909475	Not a case-control study
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23	1	A Synergistic Association of ACE I/D and eNOS G894T Gene Variants with the Progression of Immunoglobulin A Nephropathy - A Pilot Study	Rodriguez-Perez JC et al.	19546528	Not a case-control study
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26	1	Diabetic nephropathy is associated with AGT polymorphism T235 - Results of a family-based study	Rogus JJ et al.	9461232	Not a case-control study
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29	1	Risk of developing diabetic nephropathy is not associated with synergism between the angiotensin II (type 1) receptor C-1166 allele and poor glycaemic control	Savage DA et al.	10328465	Not a case-control study
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32	1	ACE gene polymorphism and IgA nephropathy: An ethnically homogeneous study and a meta-analysis	Schena FP et al.	11473656	Not a case-control study
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35	1	Genetic determinants of diabetic renal disease and their impact on therapeutic interventions	Schmidt S et al.	WOS:A1997YJ60500008	Not a case-control study
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1	Impact of genetic polymorphisms of the renin-angiotensin system and of non-genetic factors on kidney transplant function - a single-center experience	Siekierka-Harreis M et al.	19681973	Not a case-control study
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1	1	Variants in blood pressure genes and the risk of renal cell carcinoma	Andreotti G et al.	20047954	Not a renal disease focus
2	1	Association of angiotensin II type 1 receptor gene A1166C polymorphism with the presence of diabetes mellitus and metabolic syndrome in patients with documented coronary artery disease	Assali A et al.	21570644	Not a renal disease focus
3	1	Germline genetic variations at 11q13 and 12p11 locus modulate age at onset for renal cell carcinoma.	Audenet F et al.	23911636	Not a renal disease focus
4	1	Angiotensinogen M235T and angiotensin-converting enzyme I/D gene polymorphism and their association with type 2 diabetes in Egypt	Badr S et al.	WOS:000309728600182	Not a renal disease focus
5	1	Polymorphism in angiotensin II receptor genes and hypertension	Baudin B	15640279	Not a renal disease focus
6	1	Analyses of mutations in the human renal kallikrein (hKLK1) gene and their possible relevance to blood pressure regulation and risk of myocardial infarction	Berge KE et al.	9298743	Not a renal disease focus
7	1	Single Strand Conformation Polymorphism (SSCP) as a quick and reliable method to genotype M235T polymorphism of angiotensinogen gene	Bettinaglio P et al.	12270765	Not a renal disease focus
8	1	Polymorphisms of the renin-angiotensin system in patients with multifocal renal arterial fibromuscular dysplasia	Bofinger A et al.	11317203	Not a renal disease focus
9	1	Association between plasma activities of semicarbazide-sensitive amine oxidase and angiotensin-converting enzyme in patients with type 1 diabetes mellitus.	Boomsma F et al.	15830186	Not a renal disease focus
10	1	Can the choice of diet undermine the potential genetic risk of AT1R 1166A>C gene polymorphism?	Bozina T et al.	30205174	Not a renal disease focus
11	1	Structure-Based Analysis of Single Nucleotide Variants in the Renin-Angiotensinogen Complex	Brown DK et al.	28302554	Not a renal disease focus
12	1	Interactions between serotonin and endogenous and exogenous noradrenaline in the human forearm.	Bruning TA et al.	7866595	Not a renal disease focus

1	Renin-angiotensin system gene polymorphisms: assessment of the risk of coronary heart disease.	Buraczyńska M et al.	14502296	Not a renal disease focus	
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4	1	Oxidative stress-related factors in Bartter's and Gitelman's syndromes: relevance for angiotensin II signalling.	Calo LA et al.	12897089	Not a renal disease focus
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6	1	alpha(1)-antitrypsin (AAT) deficiency and ANCA-positive systemic vasculitis: genetic and clinical implications	Callea F et al.	9279535	Not a renal disease focus
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8	1	Evaluation of Alpha-1 Antitrypsin Levels and SERPINA1 Gene Polymorphisms in Sickle Cell Disease	Carvalho MOS et al.	29163550	Not a renal disease focus
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10	1	Role of GRK4 in the Regulation of Arterial AT(1) Receptor in Hypertension	Chen K et al.	24218433	Not a renal disease focus
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12	1	A study on the association between angiotensin-I converting enzyme I/D dimorphism and type-2 diabetes mellitus.	Chmaisse HN et al.	19861867	Not a renal disease focus
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14	1	alpha-adducin and angiotensin I-converting enzyme polymorphisms in essential hypertension	Clark CJ et al.	11116113	Not a renal disease focus
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16	1	Elevated urinary albumin excretion is not linked to the angiotensin I-converting enzyme gene polymorphism in clinically healthy subjects	Clausen P et al.	10872702	Not a renal disease focus
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18	1	Role of ACE inhibitors in patients with diabetes mellitus	Cordonnier DJ et al.	11708761	Not a renal disease focus
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20	1	Molecular genetics of the renin-angiotensin-aldosterone system in human hypertension	Corvol P et al.	9296068	Not a renal disease focus
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22	1	Angiotensin I-converting enzyme (kininase II) in cardiovascular and renal regulations and diseases	Costerousse O et al.	9830503	Not a renal disease focus
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24	1	Functional polymorphisms in genes of the Angiotensin and Serotonin systems and risk of hypertrophic cardiomyopathy: AT1R as a potential modifier.	Coto E et al.	20594303	Not a renal disease focus
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26	1	SNP Variants in RET and PAX2 and Their Possible Contribution to the Primary Hyperoxaluria Type 1 Phenotype	Coulter-Mackie MB	25854853	Not a renal disease focus
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28	1	Overexpression of human alanine:glyoxylate aminotransferase in Escherichia coli: renaturation from guanidine-HCl and affinity for pyridoxal phosphate co-factor.	Coulter-Mackie MB et al.	15802217	Not a renal disease focus
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1	The major allele of the alanine:glyoxylate aminotransferase gene: nine novel mutations and polymorphisms associated with primary hyperoxaluria type 1.	Coulter-Mackie MB et al.	15963748	Not a renal disease focus
1	Mutation-based diagnostic testing for primary hyperoxaluria type 1: survey of results.	Coulter-Mackie MB et al.	18282470	Not a renal disease focus
1	Further studies on the activity and subcellular distribution of alanine:glyoxylate aminotransferase in the livers of patients with primary hyperoxaluria type 1.	Danpure CJ et al.	3416563	Not a renal disease focus
1	Alanine : glyoxylate aminotransferase peroxisome-to-mitochondrion mistargeting in human hereditary kidney stone disease	Danpure CJ et al.	12686111	Not a renal disease focus
1	Insertion/Deletion Polymorphism of Angiotensin I-converting Enzyme Gene Is Linked With Chromophobe Renal Cell Carcinoma	de Martino M et al.	21477733	Not a renal disease focus
1	Polymorphisms in genes of the renin-angiotensin-aldosterone system and renal cell cancer risk: Interplay with hypertension and intakes of sodium, potassium and fluid	Deckers IA et al.	24978482	Not a renal disease focus
1	ACE gene insertion/deletion polymorphism modulates capillary permeability in hypertension	Dell'omo G et al.	16889537	Not a renal disease focus
1	Single nucleotide polymorphism of adiponectin +276 G/T is associated with the susceptibility to essential hypertension in a Turkish population.	Demir AK et al.	27936341	Not a renal disease focus
1	Genetic polymorphisms associated with exertional rhabdomyolysis	Deuster PA et al.	23543093	Not a renal disease focus
1	Vasodilator-derived nitric oxide inhibits fetal calf serum- and angiotensin-II-induced growth of renal arteriolar smooth muscle cells	Dubey RK et al.	8169847	Not a renal disease focus
1	The angiotensin I-converting enzyme gene insertion/deletion polymorphism is linked to early gastric cancer	Ebert MPA et al.	16365022	Not a renal disease focus
1	A new theory of essential hypertension based on analysis of the association between a polymorphism of the alpha(2)-adrenoceptor at the 10q24-q26 locus and hypertension in African-Americans	Eggers AE	26243176	Not a renal disease focus

1	1	CYP3A5 genotype is associated with elevated blood pressure.	Fromm MF et al.	16141800	Not a renal disease focus
2	1	Functional variant of CYP4A11 20-hydroxyeicosatetraenoic acid synthase is associated with essential hypertension	Gainer JV et al.	15611369	Not a renal disease focus
3	1	The interaction of AGT and NOS3 gene polymorphisms with conventional risk factors increases predisposition to hypertension	Gatti RR et al.	22791701	Not a renal disease focus
4	1	Somatic Von Hippel-Lindau Mutation In Clear-Cell Papillary Cystadenoma Of The Epididymis	Gilcrease MZ et al.	8522307	Not a renal disease focus
5	1	Phenotype-genotype analysis in two Chinese families with Liddle syndrome.	Gong L et al.	24474657	Not a renal disease focus
6	1	alpha(1)-Antitrypsin Deficiency in Fraternal Twins Born With Familial Spontaneous Pneumothorax	Greene DN et al.	22215832	Not a renal disease focus
7	1	C-antineutrophil cytoplasmic antibody positivity in vasculitis patients is associated with the Z allele of alpha-1-antitrypsin, and P-antineutrophil cytoplasmic antibody positivity with the S allele.	Griffith ME et al.	8671812	Not a renal disease focus
8	1	Potential Benefits of Rho-kinase Inhibition in Arterial Hypertension	Grisk O	23852615	Not a renal disease focus
9	1	A Computational Model of the Circulating Renin-Angiotensin System and Blood Pressure Regulation	Guillaud F et al.	20683640	Not a renal disease focus
10	1	The presence of PAI-1 4G/5G and ACE DD genotypes increases the risk of early-stage AVF thrombosis in hemodialysis patients.	Gungor Y et al.	21332339	Not a renal disease focus
11	1	Renin-aldosterone response, urinary Na/K ratio and growth in pseudohypoaldosteronism patients with mutations in epithelial sodium channel (ENaC) subunit genes	Hanukoglu A et al.	18634878	Not a renal disease focus
12	1	Blunted renal vascular response to angiotensin II is associated with a common Variant of the angiotensinogen gene and obesity	Hopkins PN et al.	8728297	Not a renal disease focus
13	1	Vitamin B6 in Primary Hyperoxaluria I: First Prospective Trial after 40 Years of Practice	Hoyer-Kuhn H et al.	24385516	Not a renal disease focus

1	Genetic variation of the renin-angiotensin system and chronic kidney disease progression in black individuals in the atherosclerosis risk in communities study	Hsu CCC et al.	16396964	Not a renal disease focus
1	Clinical and Genetic Factors Associated With Thiazide-Induced Hyponatremia.	Huang CC et al.	26313793	Not a renal disease focus
1	A case control association study of ACE gene polymorphism (I/D) with hypertension in Punjabi population from Faisalabad, Pakistan	Hussain M et al.	29058472	Not a renal disease focus
1	Genetic variant of the renin-angiotensin system and prevalence of type 2 diabetes mellitus: a modest but significant effect of aldosterone synthase	Ichikawa M et al.	24549414	Not a renal disease focus
1	No association between alpha-adducin 460 polymorphism and essential hypertension in a Japanese population	Ishikawa K et al.	9607391	Not a renal disease focus
1	Renin-Angiotensin System Gene Variants and Type 2 Diabetes Mellitus: Influence of Angiotensinogen	Joyce-Tan SM et al.	WOS:000370250500001	Not a renal disease focus
1	Lack of association between the alpha-adducin locus and essential hypertension in the Japanese population	Kato N et al.	9495254	Not a renal disease focus
1	Comprehensive analysis of the renin-angiotensin gene polymorphisms with relation to hypertension in the Japanese	Kato N et al.	10953993	Not a renal disease focus
1	Lys(173)Arg and -344T/C variants of CYP11B2 in Japanese patients with low-renin hypertension.	Komiya I et al.	10720581	Not a renal disease focus
1	Molecular-Biology Of Hypertension	Krieger Je et al.	WOS:A1991GF39900002	Not a renal disease focus
1	Effects of angiotensin-converting enzyme gene polymorphism and serum vitamin D levels on ambulatory blood pressure measurement and left ventricular mass in Turkish hypertensive population	Kulah E et al.	17625392	Not a renal disease focus
1	Efficacy of Korean Red Ginseng by Single Nucleotide Polymorphism in Obese Women: Randomized, Double-blind, Placebo-controlled Trial	Kwon DH et al.	23717118	Not a renal disease focus
1	Serum liver enzymes in Turner syndrome	Larizza D et al.	10664223	Not a renal disease focus

1	Risk given by AGT polymorphisms in inducing susceptibility to essential hypertension among isolated populations from a remote region of China: A case-control study among the isolated populations	Li Q et al.	26391364	Not a renal disease focus
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1	Association of polymorphisms of angiotensin I converting enzyme 2 with retinopathy in type 2 diabetes mellitus among Chinese individuals	Meng N et al.	25359286	Not a renal disease focus
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1	Angiotensin converting enzyme (ACE) insertion/deletion (I/D) polymorphism, and diabetic retinopathy in subjects with IDDM and NIDDM	Nagi Dk et al.	8582133	Not a renal disease focus	
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4	1	Association between RAS gene polymorphisms (ACE I/D, AGT M235T) and Henoch-Schonlein purpura in a Turkish population	Nalbantoglu S et al.	23151617	Not a renal disease focus
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6	1	Enhanced renal production of cyclic GMP and reduced free water clearance during sodium nitroprusside infusion in healthy man	Nielsen CB et al.	8393795	Not a renal disease focus
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8	1	Alpha-1-proteinase inhibitor and pulmonary haemorrhage in systemic vasculitis.	O'Donoghue DJ et al.	8296629	Not a renal disease focus
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10	1	Genetic polymorphisms of the renin-angiotensin system and atheromatous renal artery stenosis	Olivieri O et al.	10567188	Not a renal disease focus
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12	1	Endothelial nitric oxide synthase gene/gender interactions and the renal hemodynamic response to angiotensin II	Page A et al.	16093452	Not a renal disease focus
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14	1	Angiotensin-converting enzyme and angiotensin II receptor subtype 2 genotypes in type 1 diabetes and severe hypoglycaemia requiring emergency treatment: a case cohort study	Pedersen-Bjergaard U et al.	19820429	Not a renal disease focus
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16	1	Deep-targeted exon sequencing reveals renal polymorphisms associate with postexercise hypotension among African Americans	Pescatello LS et al.	WOS:000387445200013	Not a renal disease focus
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18	1	Impact of maternal angiotensinogen M235T polymorphism and angiotensin-converting enzyme insertion/deletion polymorphism on blood pressure, protein excretion and fetal outcome in pregnancy.	Pfab T et al.	17563539	Not a renal disease focus
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20	1	Effect of ACE inhibitors and beta-blockers on homocysteine levels in essential hypertension	Poduri A et al.	18200034	Not a renal disease focus
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22	1	The state and responsiveness of the renin-angiotensin-aldosterone system in patients with type II diabetes mellitus	Price DA et al.	10232494	Not a renal disease focus
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24	1	Identification of mutations associated with peroxisome-to-mitochondrion mistargeting of alanine/glyoxylate aminotransferase in primary hyperoxaluria type 1.	Purdue PE et al.	1703535	Not a renal disease focus
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26	1	The relationship between ACE/AGT gene polymorphisms and the risk of diabetic retinopathy in Chinese patients with type 2 diabetes.	Qiao YC et al.	29378484	Not a renal disease focus
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1	Association of angiotensin-converting enzyme gene dimorphisms with severity of lupus disease.	Rabbani MA et al.	18711292	Not a renal disease focus
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6	Association of angiotensinogen M235T and A(-6)G gene polymorphisms with coronary heart disease with independence of essential hypertension: the PROCAGENE study. Prospective Cardiac Gene.	Rodriquez-Perez JC et al.	11345362	Not a renal disease focus
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11	Evaluation of mutation screening as a first line test for the diagnosis of the primary hyperoxalurias.	Rumsby G et al.	15327387	Not a renal disease focus
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14	Angiotensin II acutely attenuates range of arterial baroreflex control of renal sympathetic nerve activity	Sanderford MG et al.	11009467	Not a renal disease focus
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16	An Erythropoietin Gene Polymorphism in the Hypoxia-Responsive Element at Position 3434 Is Possibly Associated with Hypertension	Schulz EG et al.	21912181	Not a renal disease focus
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18	Ubiquitin ligase gp78 increases solubility and facilitates degradation of the Z variant of alpha-1-antitrypsin.	Shen Y et al.	16979136	Not a renal disease focus
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20	Association of APOE (Hha1) and ACE (I/D) gene polymorphisms with type 2 diabetes mellitus in North West India	Singh PP et al.	16621107	Not a renal disease focus
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23	Renal haemodynamics are not related to genotypes in offspring of parents with essential hypertension	Skov K et al.	17083073	Not a renal disease focus
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25	Association between renin-angiotensin-aldosterone system-related genes and blood pressure in a Korean population.	Song SB et al.	21342026	Not a renal disease focus
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28	Angiotensin II sensitivity in nonpregnant formerly preeclamptic women and healthy parous controls	Spaanderman MEA et al.	15350256	Not a renal disease focus
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30	The genetic predisposition to produce high levels of TGF-beta 1 impacts on the severity of eclampsia/pre-eclampsia	Stanczuk GA et al.	17653872	Not a renal disease focus
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33	Angiotensin-converting enzyme gene I/D polymorphism in malignant hypertension	Stefansson B et al.	10855732	Not a renal disease focus
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35	A Polymorphism Regulates CYP4A11 Transcriptional Activity and Is Associated With Hypertension in a Japanese Population	Sugimoto K et al.	18936345	Not a renal disease focus
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1	Blunted cGMP response to agonists and enhanced glomerular cyclic 3',5'-nucleotide phosphodiesterase activities in experimental congestive heart failure	Supaporn T et al.	8914042	Not a renal disease focus
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7	Alpha1-antitrypsin phenotypes and anti-neutrophil cytoplasmic auto-antibodies in inflammatory bowel disease.	Taddei C et al.	10563543	Not a renal disease focus
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12	Angiotensin I converting enzyme gene polymorphisms in systemic lupus erythematosus: decreased prevalence of DD genotype in African American patients	Tassiulas IO et al.	9710341	Not a renal disease focus
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15	Middle cerebral artery stenosis in type II diabetic Chinese patients is associated with conventional risk factors but not with polymorphisms of the renin-angiotensin system genes	Thomas GN et al.	12865608	Not a renal disease focus
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18	Peripheral vascular disease in type 2 diabetic Chinese patients: associations with metabolic indices, concomitant vascular disease and genetic factors	Thomas GN et al.	14632699	Not a renal disease focus
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21	Genetic predisposition to left ventricular hypertrophy and the potential involvement of cystatin-C in untreated hypertension.	Tousoulis D et al.	23479071	Not a renal disease focus
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23	1			
24	Genomic association analysis identifies multiple loci influencing antihypertensive response to an angiotensin II receptor blocker.	Turner ST et al.	22566498	Not a renal disease focus
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26	1			
27	The M235T polymorphism in the angiotensinogen gene is associated with the risk of malignant hypertension in white patients	van den Born BJH et al.	17921816	Not a renal disease focus
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30	Genetic risk of atherosclerotic renal artery disease - The candidate gene approach in a renal angiography cohort	van Onna M et al.	15326089	Not a renal disease focus
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32	1			
33	Eprosartan modulates the reflex activation of the sympathetic nervous system in sodium restricted healthy humans	Vase H et al.	18341678	Not a renal disease focus
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35	1			
36	Angiotensin I-converting enzyme and angiotensinogen gene interaction and prediction of essential hypertension	Vasku A et al.	9607178	Not a renal disease focus
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39	Association between ACE gene polymorphisms and Alzheimer's disease in Han population in Hebei Peninsula	Wang XL et al.	WOS:000412148800122	Not a renal disease focus
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42	Genotype-phenotype analysis of angiotensinogen polymorphisms and essential hypertension: the importance of haplotypes	Watkins WS et al.	19770777	Not a renal disease focus
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1	No association between a genetic variant of the p22(phox) component of NAD(P)H oxidase and the incidence and progression of IgA nephropathy	Wolf G et al.	12147803	Not a renal disease focus
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1	[Effect of eprosartan on the hemostatic system in patients with chronic kidney disease associated with hereditary thrombophilia].	Kaliuzhin VV et al.	24261234	Not written in English or Spanish
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6	1 [Polymorphism studies of angiotensin converting enzyme gene in chronic glomerulonephritis].	Kutyryna IM et al.	10420452	Not written in English or Spanish
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9	1 [Relationship between serum angiotensin I-converting enzyme activity and diabetic nephropathy in patients with type II diabetes].	Liao L et al.	12016801	Not written in English or Spanish
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12	1 [Relationship between I/D polymorphism of angiotensin I converting enzyme gene and microvascular complications in type 2 diabetic patients].	Moleda P et al.	17941464	Not written in English or Spanish
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15	1 [Pharmacogenetic aspects of candesartan application for the treatment of arterial hypertension in patients with chronic pyelonephritis].	Mormol' IA	25286611	Not written in English or Spanish
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18	1 [A study on angiotensin-I converting enzyme polymorphism in CAPD patients].	Nishina M	9014479	Not written in English or Spanish
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21	1 [Identification of the locus associated with diabetic nephropathy in type 1 diabetes mellitus].	Savost'ianov KV et al.	12500539	Not written in English or Spanish
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23	1 [Relationships of angiotensinogen gene M235T variant with diabetic nephropathy in Chinese type 2 diabetes mellitus].	Wang J et al.	10514536	Not written in English or Spanish
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26	1 [Association between angiotensin-II receptor gene type I polymorphism and diabetic nephropathy in type 2 diabetes mellitus].	Xue Y et al.	11798574	Not written in English or Spanish
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29	1 [AGTR1 A1166C polymorphism is associated with risk of diabetic nephropathy].	Yin X et al.	23505107	Not written in English or Spanish
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32	1 Posterior urethral valves: Preliminary observations on the significance of plasma renin activity as a prognostic marker	Bajpai M et al.	15643266	Paediatric Individuals
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34	1 Donor and recipient ACE I/D genotype are associated with loss of renal function in children following renal transplantation	Buscher R et al.	21309964	Paediatric Individuals
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36	1 Polymorphisms of the angiotensin converting enzyme and angiotensin II type 1 receptor genes and renal scarring in non-uropathic children with recurrent urinary tract infection	Ece A et al.	16109085	Paediatric Individuals
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1	Genetic polymorphism of ACE and the angiotensin II type1 receptor genes in children with chronic kidney disease	Elshamaa MF et al.	21859496	Paediatric Individuals
1	ACE gene polymorphism in Egyptian children with idiopathic nephrotic syndrome	Fahmy ME et al.	18792483	Paediatric Individuals
1	Identification of a novel splice site mutation of CLCN5 gene and characterization of a new alternative 5 ' UTR end of CIC-5 mRNA in human renal tissue and leukocytes	Forino M et al.	14673707	Paediatric Individuals
1	Genetic polymorphisms of the renin-angiotensin system and the outcome of focal segmental glomerulosclerosis in children	Frishberg Y et al.	9853248	Paediatric Individuals
1	Angiotensinogen gene T235 variant: a marker for the development of persistent microalbuminuria in children and adolescents with type 1 diabetes mellitus	Gallego PH et al.	18413222	Paediatric Individuals
1	Autosomal dominant pseudohypoaldosteronism type 1: Mechanisms, evidence for neonatal lethality, and phenotypic expression in adults	Geller DS et al.	16611713	Paediatric Individuals
1	Implication of genetic variations in congenital obstructive nephropathy	Hahn H et al.	16133060	Paediatric Individuals
1	Variants of alpha(1)-proteinase inhibitor in black and white South African patients with focal glomerulosclerosis and minimal change nephrotic syndrome	Halkas AC et al.	9475086	Paediatric Individuals
1	Angiotensin-converting enzyme insertion/deletion gene polymorphism in Egyptian children with systemic lupus erythematosus: a possible relation to proliferative nephritis.	Hammad A et al.	27956582	Paediatric Individuals
1	ACE gene polymorphism and renal scarring in primary vesicoureteric reflux	Haszon I et al.	12478352	Paediatric Individuals
1	Angiotensin type 2 receptor is important in the normal development of the ureter	Hohenfellner K et al.	10353402	Paediatric Individuals
1	Impact of common functional polymorphisms in renin angiotensin system genes on the risk of renal parenchymal scarring following childhood urinary tract infection	Hussein A et al.	25939993	Paediatric Individuals

1	Gene Polymorphisms of Adducin GLY460TRP, ACE I/D, and AGT M235T in Pediatric Hypertension Patients	Kaplan I et al.	25262176	Paediatric Individuals	
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4	1	ACE and AT1 receptor gene polymorphisms and renal scarring in urinary bladder dysfunction	Kostic M et al.	15179569	Paediatric Individuals
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6	1	Renal tubular dysgenesis, a not uncommon autosomal recessive disorder leading to oligohydramnios: Role of the Renin-Angiotensin system.	Lacoste M et al.	16790508	Paediatric Individuals
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8	1	Hemorrhagic shock and encephalopathy: clinical, pathologic, and biochemical features.	Levin M et al.	2783733	Paediatric Individuals
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10	1	Renin-angiotensin system gene polymorphisms in children with Henoch-Schonlein purpura in West China	Liu DS et al.	WOS:000284763300006	Paediatric Individuals
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12	1	Renin-angiotensin system polymorphisms in Taiwanese primary vesicoureteral reflux	Liu KP et al.	15045574	Paediatric Individuals
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14	1	Polymorphisms of renin-angiotensin system genes in childhood IgA nephropathy	Maruyama K et al.	11354780	Paediatric Individuals
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16	1	Angiotensin-Converting Enzyme Gene Polymorphism in Children with Idiopathic Nephrotic Syndrome, Effect on Biopsy Findings.	Monajemzadeh M et al.	28481137	Paediatric Individuals
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18	1	A-20C angiotensinogen gene polymorphism and proteinuria in childhood IgA nephropathy	Nakanishi K et al.	14648325	Paediatric Individuals
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20	1	Implications of certain genetic polymorphisms in scarring in vesicoureteric reflux: importance of ACE polymorphism.	Ozen S et al.	10401028	Paediatric Individuals
21					
22	1	Renin-angiotensin system gene polymorphisms: association with susceptibility to Henoch-Schonlein purpura and renal involvement	Ozkaya O et al.	16521052	Paediatric Individuals
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24	1	Renin-angiotensin gene polymorphism in children with uremia and essential hypertension	Papp F et al.	12579405	Paediatric Individuals
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26	1	Renin-angiotensin system polymorphisms and renal scarring	Pardo R et al.	12579398	Paediatric Individuals
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28	1	Angiotensin I-converting enzyme-gene-polymorphism: Relationship to albumin excretion and blood pressure in pediatric patients with type-I-diabetes mellitus	Pavlovic M et al.	9354852	Paediatric Individuals
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1	Angiotensin I converting enzyme and angiotensinogen gene polymorphisms related to 24-h blood pressure in paediatric type I diabetes mellitus	Pavlovic M et al.	9950302	Paediatric Individuals	
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8	1	Low renin-angiotensin system activity gene polymorphism and dysplasia associated with posterior urethral valves	Peruzzi L et al.	16006956	Paediatric Individuals
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11	1	Angiotensin-converting enzyme and angiotensin type 2 receptor gene genotype distributions in Italian children with congenital uropathies	Rigoli L et al.	15470205	Paediatric Individuals
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14	1	Angiotensin II type 2 receptor gene polymorphism in Caucasian children with a wide spectrum of congenital anomalies of the kidney and urinary tract	Siomou E et al.	17515833	Paediatric Individuals
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17	1	Effects of genetic polymorphisms of the renin-angiotensin system in children with nephrotic syndrome	Tabel Y et al.	16525944	Paediatric Individuals
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20	1	ACE gene polymorphism in childhood IgA nephropathy: Association with clinicopathologic findings	Tanaka R et al.	9590186	Paediatric Individuals
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22	1	Genetic risk factors in typical haemolytic uraemic syndrome	Taranta A et al.	19110485	Paediatric Individuals
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25	1	The juxtaglomerular apparatus in Bartter's syndrome and related tubulopathies. An immunocytochemical and electron microscopic study.	Taugner R et al.	3128915	Paediatric Individuals
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28	1	Genetic polymorphism of the renin-angiotensin system on the development of primary vesicoureteral reflux	Yim HE et al.	14764974	Paediatric Individuals
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30	1	Genetic control of VEGF and TGF-beta 1 gene polymorphisms in childhood urinary tract infection and vesicoureteral reflux	Yim HE et al.	17597658	Paediatric Individuals
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33	1	Estimation of the relationship between the polymorphisms of selected genes: ACE, AGTR1, TGF beta 1 and GNB3 with the occurrence of primary vesicoureteral reflux	Zyckowski et al.	27988909	Paediatric Individuals
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36	1	Randomized Controlled Trial: Lisinopril Reduces Proteinuria, Ammonia, and Renal Polypeptide Tubular Catabolism in Patients With Chronic Allograft Nephropathy	Amara AB et al.	20061926	Pharmaceutical drug focus
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1	1	Long-term renoprotective effects of losartan in diabetic nephropathy: interaction with ACE insertion/deletion genotype?	Andersen S et al.	12716812	Pharmaceutical drug focus
2	1	Effects of losartan and enalapril on high-sensitivity C-reactive protein and total antioxidant in renal transplant recipients with renin-angiotensin system polymorphisms	Argani H et al.	18261537	Pharmaceutical drug focus
3	1	Efficacy and safety of the angiotensin II receptor blocker losartan for hypertrophic cardiomyopathy: the INHERIT randomised, double-blind, placebo-controlled trial	Axelsson A et al.	25533774	Pharmaceutical drug focus
4	1	Angiotensin I - Converting enzyme gene polymorphism modulates the consequences of in utero growth retardation on plasma insulin in young adults	Cambien F et al.	9519756	Pharmaceutical drug focus
5	1	Losartan decreases plasma levels of TGF-beta 1 in transplant patients with chronic allograft nephropathy	Campistol JM et al.	10432413	Pharmaceutical drug focus
6	1	High serum enalaprilat in chronic renal failure	Elung-Jensen et al.	11881130	Pharmaceutical drug focus
7	1	The influence of renin-angiotensin system genotypes on the antiproteinuric response to high doses of olmesartan in non-diabetic protein uric nephropathies	Goyache-Goni B et al.	24241364	Pharmaceutical drug focus
8	1	Renal implications of angiotensin receptor blockers	Hollenberg NK	11459212	Pharmaceutical drug focus
9	1	CYP2C9 genotype and pharmacodynamic responses to losartan in patients with primary and secondary kidney diseases.	Joy MS et al.	19669737	Pharmaceutical drug focus
10	1	Association of angiotensinogen gene polymorphism with erythropoietin-induced hypertension: a preliminary report	Kuriyama S et al.	11675943	Pharmaceutical drug focus
11	1	The influence of the ACE (I/D) polymorphism on systemic and renal vascular responses to angiotensins in normotensive, normoalbuminuric Type 1 diabetes mellitus	Luik PT et al.	12856080	Pharmaceutical drug focus
12	1	Renin-angiotensin system polymorphisms and hemoglobin level in renal allografts: A comparative study between losartan and enalapril	Noroozianavval M et al.	17524880	Pharmaceutical drug focus
13	1	ACE gene polymorphism and losartan treatment in type 2 diabetic patients with nephropathy	Parving HH et al.	18199798	Pharmaceutical drug focus

1	Enalapril and losartan affect lipid peroxidation in renal transplant recipients with renin-angiotensin system polymorphisms	Rashtchizadeh N et al.	17222813	Pharmaceutical drug focus
2	Exaggerated natriuresis during clamping of systemic NO supply in healthy young men	Simonsen JA et al.	21749320	Pharmaceutical drug focus
3	Influence of genetic polymorphisms of the renin-angiotensin system on IgA nephropathy	Bantis C et al.	15031629	No data
4	Genetic polymorphisms of renin-angiotensin system and progression of interstitial nephritis.	Buraczyńska M et al.	12898858	No data
5	Polymorphism of the angiotensinogen gene and genetic predisposition to diabetic nephropathy in diabetes mellitus type 1	Chistyakov DA et al.	WOS:000079798700011	No data
6	U.K. Prospective Diabetes Study. XV: Relationship of renin-angiotensin system gene polymorphisms with microalbuminuria in NIDDM.	Dudley CR et al.	8587251	No data
7	Angiotensin I-converting enzyme and angiotensinogen gene polymorphisms in non-insulin-dependent diabetes mellitus. Lack of relationship with diabetic nephropathy and retinopathy in a Caucasian Mediterranean population.	Gutierrez C et al.	9258285	No data
8	Effects of the genetic polymorphisms of the renin-angiotensin system on focal segmental glomerulosclerosis.	Luther Y et al.	14610337	No data
9	The renin--angiotensin system gene polymorphisms and clinicopathological correlations in IgA nephropathy.	Ong-Ajyooth S et al.	10511770	No data
10	Combinational effect of genes for the renin-angiotensin system in conferring susceptibility to diabetic nephropathy.	Osawa N et al.	17143591	No data
11	The relationship between genetic and haemodynamic factors in diabetic nephropathy (DN): Case-control study in type 1 diabetes mellitus (T1DM)	Shestakova MV et al.	WOS:000242410600010	No data
12	Relationship between angiotensinogen gene M235T variant with diabetic nephropathy in Chinese NIDDM	Wang JJ et al.	11717948	No data
13	Lack of association of angiotensin-converting enzyme (D/D/II) and angiotensinogen M235T gene polymorphism with renal function among Chinese patients with type II diabetes	Wong TYH et al.	10352194	No data

2	Polymorphism of renin-angiotensin system genes in IgA nephropathy	Woo KT et al.	15504143	No data
3	ACE variants interact with the RAS pathway to confer risk and protection against type 2 diabetic nephropathy.	Ahluwalia TS et al.	19108684	< 3 populations reported per SNP
3	Analysis of polymorphism in renin angiotensin system and other related genes in South Indian chronic kidney disease patients.	Anbazhagan K et al.	19520069	< 3 populations reported per SNP
3	Polymorphism of the renin-angiotensin-aldosterone system in patients with chronic allograft dysfunction	Ayed K et al.	16635753	< 3 populations reported per SNP
3	Renin-angiotensin-aldosterone system related gene polymorphisms and urinary total arsenic is related to chronic kidney disease	Chen WJ et al.	24907556	< 3 populations reported per SNP
3	Hypertension after renal transplantation and polymorphism of genes involved in essential hypertension: ACE, AGT, AT1R and ecNOS	El-Essawy AB et al.	11926202	< 3 populations reported per SNP
3	Genetic polymorphisms of the renin-angiotensin-aldosterone system and renal insufficiency in essential hypertension.	Fabris B et al.	15662219	< 3 populations reported per SNP
3	Angiotensinogen gene polymorphisms and progression of chronic kidney disease in ADPKD patients	Gnanasambandan R et al.	26482465	< 3 populations reported per SNP
3	Angiotensinogen and angiotensin II type 1 receptor gene polymorphism in patients with autosomal dominant polycystic kidney disease: effect on hypertension and ESRD.	Lee KB et al.	12950120	< 3 populations reported per SNP
3	Genes involved in the regulation of vascular homeostasis determine renal survival rate in patients with chronic glomerulonephritis	Litovkina O et al.	24727057	< 3 populations reported per SNP
3	Contribution of genetic polymorphism in the renin-angiotensin system to the development of renal complications in insulin-dependent diabetes	Marre M et al.	9120002	< 3 populations reported per SNP
3	Genetic polymorphism of renin-angiotensin system is not associated with diabetic vascular complications in Japanese subjects with long-term insulin dependent diabetes mellitus.	Miura J et al.	10499884	< 3 populations reported per SNP
3	Renin-angiotensin-aldosterone system genotypes and haplotypes affect the susceptibility to nephropathy in type 2 diabetes patients	Mtiraoui N et al.	21421655	< 3 populations reported per SNP

3	Renin-angiotensin system gene polymorphisms predict the progression to renal insufficiency among Asians with lupus nephritis	Parsa A et al.	15789057	< 3 populations reported per SNP
3	Association of aldosterone synthase (CYP11B2) gene -344T/C polymorphism with the risk of primary chronic glomerulonephritis in the Polish population.	Pawlik M et al.	23681285	< 3 populations reported per SNP
3	Association of angiotensinogen gene T235 variant with progression of immunoglobulin A nephropathy in Caucasian patients	Pei Y et al.	9259580	< 3 populations reported per SNP
3	Chronic renal insufficiency among Asian Indians with type 2 diabetes: I. Role of RAAS gene polymorphisms.	Prasad P et al.	16672053	< 3 populations reported per SNP
3	Angiotensinogen and plasminogen activator inhibitor-1 gene polymorphism in relation to renovascular disease.	Reis KA et al.	16228848	< 3 populations reported per SNP
3	M235T Polymorphism in the AGT Gene and A/G18-83 Substitution in the REN Gene Correlate with End-Stage Renal Disease	Sarkar S et al.	25660845	< 3 populations reported per SNP
3	Genetic variants of ACE (Insertion/Deletion) and AGT (M268T) genes in patients with diabetes and nephropathy	Shaikh R et al.	24737640	< 3 populations reported per SNP
3	Polymorphisms of the renin-angiotensin system genes in Brazilian patients with lupus nephropathy.	Sprovieri SR et al.	15934435	< 3 populations reported per SNP
3	Interaction between gene polymorphisms of nitric oxide synthase and renin-angiotensin system in the progression of membranous glomerulonephritis	Stratta P et al.	14767013	< 3 populations reported per SNP
3	Gene polymorphisms of angiotensin-converting enzyme and angiotensin II type 1 receptor among chronic kidney disease patients in a Chinese population.	Su SL et al.	22147663	< 3 populations reported per SNP
3	Genetic polymorphisms and the risk of progressive renal failure in elderly Hungarian patients.	Zsom M et al.	22111818	< 3 populations reported per SNP

Supplementary Table S3d: Excluded studies from the *AGTR1* search

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1d)

Exclusion Stage	Title	Authors	Pubmed ID or WoS ID if Pubmed ID not available	Reason
1	Identification of potential candidate genes for hypertensive nephropathy based on gene expression profile	Chen Z et al.	27756246	Gene expression based study
1	Polymorphism in IgA nephropathy	Liu ZH et al.	WOS:A1997WW80600013	No data for AGTR1
1	The effect of angiotensin receptor blockade ARB on the regression of left ventricular hypertrophy in hemodialysis patients: comparison between patients with D allele and non-D allele ACE gene polymorphism.	Nakayama M et al.	16312263	No data for AGTR1
1	Angiotensin II receptor type 1 A1166C modifies the association between angiotensinogen M235T and chronic kidney disease	Su SL et al.	29296205	No data for AGTR1
1	Specific pregnancy-induced angiotensin II type-1 receptor expression in ovine uterine artery does not involve formation of alternate splice variants or alternate promoter usage	Bird IM et al.	9687288	Non-human study
1	CCN1 expression in interleukin-6 deficient mouse kidney in experimental model of heart failure	Bonda TA et al.	23690222	Non-human study
1	The genetic deletion of Mas abolishes salt induced hypertension in mice	Heringer-Walther S et al.	22652430	Non-human study
1	The angiotensin type II receptor tonically inhibits angiotensin-converting enzyme in AT2 null mutant mice	Hunley TE et al.	10652034	Non-human study
1	Collecting Duct Nitric Oxide Synthase 1 beta Activation Maintains Sodium Homeostasis During High Sodium Intake Through Suppression of Aldosterone and Renal Angiotensin II Pathways	Hyndman KA et al.	29066445	Non-human study
1	Physiological impact of increased expression of the AT(1) angiotensin receptor	Le TH et al.	12963678	Non-human study

1	1	Angiotensin receptor-binding protein ATRAP/Agtrap inhibits metabolic dysfunction with visceral obesity.	Maeda A et al.	23902639	Non-human study
2	1	A novel rodent model of pregnancy complications associated with genetically determined angiotensin-converting enzyme (ACE) activity	Mata-Greenwood E et al.	29360395	Non-human study
3	1	Losartan and Sodium Nitroprusside Effectively Protect against Renal Impairments after Ischemia and Reperfusion in Rats	Srisawat U et al.	25947921	Non-human study
4	1	Blood Pressure Control by a Secreted FGFBP1 (Fibroblast Growth Factor-Binding Protein).	Tassi E et al.	29158353	Non-human study
5	1	Mechanisms of Renal. Control of Potassium Homeostasis in Complete Aldosterone Deficiency	Todkar A et al.	25071088	Non-human study
6	1	Cardiac phenotype and angiotensin II levels in AT(1a), AT(1b), and AT(2) receptor single, double, and triple knockouts	van Esch JHM et al.	20071356	Non-human study
7	1	Human GRK4 gamma(142V) Variant Promotes Angiotensin II Type I Receptor-Mediated Hypertension via Renal Histone Deacetylase Type 1 Inhibition	Wang Z et al.	26667412	Non-human study
8	1	Add-on angiotensin receptor blockade with maximized ACE inhibition	Agarwal R	11380832	Not a case-control study
9	1	Association of the genetic polymorphisms of the renin-angiotensin system and endothelial nitric oxide synthase with chronic renal transplant dysfunction.	Akcay A et al.	15385810	Not a case-control study
10	1	Influence of genetic polymorphisms of the renin-angiotensin system on IgA nephropathy	Bantis C et al.	15031629	Not a case-control study
11	1	Genetic determinants of acute renal damage risk and prognosis: a systematic review	Cardinal-Fernandez P et al.	22436318	Not a case-control study
12	1	Association between two genetic polymorphisms of the renin-angiotensin-aldosterone system and diabetic nephropathy: a meta-analysis	Ding W et al.	21607620	Not a case-control study
13	1	A systematic review and meta-analysis of the association between angiotensin II type 1 receptor A1166C gene polymorphism and myocardial infarction susceptibility	Feng X et al.	23178513	Not a case-control study

1	Polymorphism of angiotensin converting enzyme, angiotensinogen, and angiotensin II type 1 receptor genes and end-stage renal failure in IgA nephropathy: IGARAS - A study of 274 men	Frimat L et al.	11053482	Not a case-control study
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1	Association of renin-angiotensin and endothelial nitric oxide synthase gene polymorphisms with blood pressure progression and incident hypertension: prospective cohort study.	Conen D et al.	18698212	Not a renal disease focus	
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6	1	Functional polymorphisms in genes of the Angiotensin and Serotonin systems and risk of hypertrophic cardiomyopathy: AT1R as a potential modifier.	Coto E et al.	20594303	Not a renal disease focus
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9	1	Polymorphisms in genes of the renin-angiotensin-aldosterone system and renal cell cancer risk: Interplay with hypertension and intakes of sodium, potassium and fluid	Deckers IA et al.	24978482	Not a renal disease focus
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12	1	Single nucleotide polymorphism of adiponectin +276 G/T is associated with the susceptibility to essential hypertension in a Turkish population.	Demir AK et al.	27936341	Not a renal disease focus
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15	1	Genetic variation of the renin-angiotensin system and chronic kidney disease progression in black individuals in the atherosclerosis risk in communities study	Hsu CCC et al.	16396964	Not a renal disease focus
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18	1	Genetic variant of the renin-angiotensin system and prevalence of type 2 diabetes mellitus: a modest but significant effect of aldosterone synthase	Ichikawa M et al.	24549414	Not a renal disease focus
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21	1	Renin-Angiotensin System Gene Variants and Type 2 Diabetes Mellitus: Influence of Angiotensinogen	Joyce-Tan SM et al.	26682227	Not a renal disease focus
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24	1	Comprehensive analysis of the renin-angiotensin gene polymorphisms with relation to hypertension in the Japanese	Kato N et al.	10953993	Not a renal disease focus
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27	1	Renin-angiotensin system gene polymorphisms: its impact on IgAN and its progression to end-stage renal failure among Chinese in Singapore.	Lau YK et al.	15153745	Not a renal disease focus
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30	1	Angiotensin II type 1 receptor gene polymorphism and the response to hyperglycemia in early type 1 diabetes	Miller JA et al.	10969844	Not a renal disease focus
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32	1	Deep-targeted exon sequencing reveals renal polymorphisms associate with postexercise hypotension among African Americans	Pescatello LS et al.	27940662	Not a renal disease focus
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35	1	Association between renin-angiotensin-aldosterone system-related genes and blood pressure in a Korean population.	Song SB et al.	21342026	Not a renal disease focus
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37	1	Angiotensin II Type 1A Receptors in Vascular Smooth Muscle Cells Do Not Influence Aortic Remodeling in Hypertension	Sparks MA et al.	21242463	Not a renal disease focus
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1	Peripheral vascular disease in type 2 diabetic Chinese patients: associations with metabolic indices, concomitant vascular disease and genetic factors	Thomas GN et al.	14632699	Not a renal disease focus
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1	[Pharmacogenetic aspects of candesartan application for the treatment of arterial hypertension in patients with chronic pyelonephritis].	Mormol' IA	25286611	Not written in English or Spanish
1	[Identification of the locus associated with diabetic nephropathy in type 1 diabetes mellitus].	Savost'ianov KV et al.	12500539	Not written in English or Spanish
1	[AGTR1 A1166C polymorphism is associated with risk of diabetic nephropathy].	Yin X et al.	23505107	Not written in English or Spanish
1	Donor and recipient ACE I/D genotype are associated with loss of renal function in children following renal transplantation	Buscher R et al.	21309964	Paediatric Individuals
1	Polymorphisms of the angiotensin converting enzyme and angiotensin II type 1 receptor genes and renal scarring in non-uropathic children with recurrent urinary tract infection	Ece A et al.	16109085	Paediatric Individuals
1	Cyclosporine A responsive congenital nephrotic syndrome with single heterozygous variants in NPHS1, NPHS2, and PLCE1	Eichinger A et al.	29663071	Paediatric Individuals
1	Genetic polymorphism of ACE and the angiotensin II type1 receptor genes in children with chronic kidney disease	Eishamaa MF et al.	21859496	Paediatric Individuals
1	Genetic polymorphisms of the renin-angiotensin system and the outcome of focal segmental glomerulosclerosis in children	Frishberg Y et al.	9853248	Paediatric Individuals
1	Angiotensinogen gene T235 variant: a marker for the development of persistent microalbuminuria in children and adolescents with type 1 diabetes mellitus	Gallego PH et al.	18413222	Paediatric Individuals
1	ACE gene polymorphism and renal scarring in primary vesicoureteric reflux	Haszon I et al.	12478352	Paediatric Individuals
1	Angiotensin type 2 receptor is important in the normal development of the ureter	Hohenfellner K et al.	10353402	Paediatric Individuals
1	Impact of common functional polymorphisms in renin angiotensin system genes on the risk of renal parenchymal scarring following childhood urinary tract infection	Hussein A et al.	25939993	Paediatric Individuals
1	ACE and AT1 receptor gene polymorphisms and renal scarring in urinary bladder dysfunction	Kostic M et al.	15179569	Paediatric Individuals

1	1	Renin-angiotensin system polymorphisms in Taiwanese primary vesicoureteral reflux	Liu KP et al.	15045574	Paediatric Individuals
2	1	Polymorphisms of renin-angiotensin system genes in childhood IgA nephropathy	Maruyama K et al.	11354780	Paediatric Individuals
3	1	Implications of certain genetic polymorphisms in scarring in vesicoureteric reflux: importance of ACE polymorphism.	Ozen S et al.	10401028	Paediatric Individuals
4	1	Renin-angiotensin system gene polymorphisms: association with susceptibility to Henoch-Schonlein purpura and renal involvement	Ozkaya O et al.	16521052	Paediatric Individuals
5	1	Renin-angiotensin gene polymorphism in children with uremia and essential hypertension	Papp F et al.	12579405	Paediatric Individuals
6	1	Renin-angiotensin system polymorphisms and renal scarring	Pardo R et al.	12579398	Paediatric Individuals
7	1	Effects of genetic polymorphisms of the renin-angiotensin system in children with nephrotic syndrome.	Tabel Y et al.	16525944	Paediatric Individuals
8	1	Genetic risk factors in typical haemolytic uraemic syndrome	Taranta A et al.	19110485	Paediatric Individuals
9	1	Mapping candidate regions and genes for congenital anomalies of the kidneys and urinary tract (CAKUT) by array-based comparative genomic hybridization	Weber S et al.	20605837	Paediatric Individuals
10	1	Genetic polymorphism of the renin-angiotensin system on the development of primary vesicoureteral reflux	Yim HE et al.	14764974	Paediatric Individuals
11	1	Estimation of the relationship between the polymorphisms of selected genes: ACE, AGTR1, TGF β 1 and GNB3 with the occurrence of primary vesicoureteral reflux.	Zyczkowski M et al.	27988909	Paediatric Individuals
12	1	Long-term renoprotective effects of losartan in diabetic nephropathy: interaction with ACE insertion/deletion genotype?	Andersen S et al.	12716812	Pharmaceutical drug focus
13	1	Effect of ACE and AT-2 inhibitors on mortality and progression to microalbuminuria in a nested case-control study of diabetic nephropathy in diabetes mellitus type 2: results from the GENDIAN study.	Boger CA et al.	16961167	Pharmaceutical drug focus
14	1	Genetic polymorphisms of renin-angiotensin system and progression of interstitial nephritis.	Buraczynska M et al.	12898858	Pharmaceutical drug focus

1	The influence of renin-angiotensin system genotypes on the antiproteinuric response to high doses of olmesartan in non-diabetic protein uric nephropathies	Goyache-Goni B et al.	24241364	Pharmaceutical drug focus
2	CYP2C9 genotype and pharmacodynamic responses to losartan in patients with primary and secondary kidney diseases.	Joy MS et al.	19669737	Pharmaceutical drug focus
3	Genotypic interactions of renin-angiotensin system genes with diabetes type 2 in a Tunisian population	Mehri S et al.	20580725	Pharmaceutical drug focus
4	Evaluation of Candidate Nephropathy Susceptibility Genes in a Genome-Wide Association Study of African American Diabetic Kidney Disease	Palmer ND et al.	24551085	Pharmaceutical drug focus
5	Chronic renal insufficiency among Asian Indians with type 2 diabetes: I. Role of RAAS gene polymorphisms.	Prasad P et al.	16672053	Pharmaceutical drug focus
6	Enalapril and losartan affect lipid peroxidation in renal transplant recipients with renin-angiotensin system polymorphisms	Rashtchizadeh N et al.	17222813	Pharmaceutical drug focus
7	A polymorphism in the angiotensin II type 1 receptor gene has different effects on the risk of diabetic nephropathy in men and women	Möllsten A et al.	21316998	Incorrect patient group
8	Effects of the genetic polymorphisms of the renin-angiotensin system on focal segmental glomerulosclerosis	Luther Y et al.	14610337	No data
9	The renin--angiotensin system gene polymorphisms and clinicopathological correlations in IgA nephropathy.	Ong-Ajyooth S et al.	10511770	No data
10	Combinational effect of genes for the renin-angiotensin system in conferring susceptibility to diabetic nephropathy.	Osawa N et al.	17143591	No data
11	Lack of synergism between long-term poor glycaemic control and three gene polymorphisms of the renin angiotensin system on risk of developing diabetic nephropathy in type I diabetic patients.	Tarnow L et al.	10907125	No data
12	Gene polymorphisms of angiotensin-converting enzyme and angiotensin II Type 1 receptor among chronic kidney disease patients in a Chinese population	Su SL et al.	22147663	Overlap in patient group
13	Polymorphism of renin-angiotensin system genes in IgA nephropathy	Woo KT et al.	15504143	Overlap in patient group
14	Association of a polymorphism of the apolipoprotein E gene with chronic kidney disease in Japanese individuals with metabolic syndrome	Yoshida T et al.	19056482	Overlap in patient group

3	Polymorphism of the renin–angiotensin–aldosterone system in patients with chronic allograft dysfunction	Ayed K et al.	16635753	< 3 populations reported per SNP
3	Angiotensin II type 1 receptor gene polymorphism in end-stage renal disease	Buraczynska M et al.	12187084	< 3 populations reported per SNP
3	Genetic polymorphisms of the renin-angiotensin system in end-stage renal disease.	Buraczynska M et al.	16384824	< 3 populations reported per SNP
3	Renin-angiotensin-aldosterone system related gene polymorphisms and urinary total arsenic is related to chronic kidney disease.	Chen WJ et al.	24907556	< 3 populations reported per SNP
3	Hypertension after renal transplantation and polymorphism of genes involved in essential hypertension: ACE, AGT, AT1R and ecNOS	El-Essawy AB et al.	WOS:000174306600003 (11926202)	< 3 populations reported per SNP
3	Genetic polymorphisms of the renin-angiotensin-aldosterone system and renal insufficiency in essential hypertension	Fabris B et al.	15662219	< 3 populations reported per SNP
3	Relationship between polymorphisms in the renin-angiotensin system and nephropathy in type 2 diabetic patients.	Fradin S et al.	11938025	< 3 populations reported per SNP
3	Susceptibility and progression of end stage renal disease are not associated with angiotensin II type 1 receptor gene polymorphism	Hanna MO et al.	25316403	< 3 populations reported per SNP
3	Renin-angiotensin system component gene polymorphisms in Japanese maintenance haemodialysis patients	Kawada N et al.	WOS:000071880400005	< 3 populations reported per SNP
3	GENETIC CLUES TO THE ETIOLOGY OF BALKAN ENDEMIC NEPHROPATHY: INVESTIGATING THE ROLE OF ACE AND AT1R POLYMORPHISMS	Krcunovic Z et al.	WOS:000287217500011	< 3 populations reported per SNP
3	Angiotensinogen and angiotensin II type 1 receptor gene polymorphism in patients with autosomal dominant polycystic kidney disease: Effect on hypertension and ESRD	Lee KB et al.	12950120	< 3 populations reported per SNP

3	Genes involved in the regulation of vascular homeostasis determine renal survival rate in patients with chronic glomerulonephritis	Litovkina O et al.	24727057	< 3 populations reported per SNP
3	Polymorphism of renin-angiotensin system genes in dialysis patients - association with cerebrovascular disease	Losito A et al.	WOS:000179668600025 (12454231)	< 3 populations reported per SNP
3	Contribution of genetic polymorphism in the renin-angiotensin system to the development of renal complications in insulin-dependent diabetes	Marre M et al.	9120002	< 3 populations reported per SNP
3	Association of angiotensinogen gene T235 variant with progression of immunoglobulin A nephropathy in Caucasian patients.	Pei Y et al.	9259580	< 3 populations reported per SNP
3	Polymorphisms of the renin-angiotensin system genes in Brazilian patients with lupus nephropathy.	Sprovieri SR et al.	15934435	< 3 populations reported per SNP
3	Interaction between gene polymorphisms of nitric oxide synthase and renin-angiotensin system in the progression of membranous glomerulonephritis.	Stratta P et al.	14767013	< 3 populations reported per SNP
3	Gene-Gene Interactions in Renin-Angiotensin-Aldosterone System Contributes to End-Stage Renal Disease Susceptibility in a Han Chinese Population	Su SL et al.	24977181	< 3 populations reported per SNP
3	Association of Genetic Variants with Chronic Kidney Disease in Japanese Individuals	Yoshida T et al.	19406964	< 3 populations reported per SNP
3	Genetic polymorphisms and the risk of progressive renal failure in elderly Hungarian patients.	Zsom M et al.	22111818	< 3 populations reported per SNP

Supplementary Table S3e: Excluded studies from the *AGTR2* search

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1e)

Exclusion Stage	Title	Authors	Pubmed ID	Reason
1	Association of angiotensinogen gene T235 variant with progression of immunoglobulin A nephropathy in Caucasian patients.	Pei Y et al.	9259580	No data for AGTR2
1	Synergistic effect of angiotensin II type 1 receptor genotype and poor glycaemic control on risk of nephropathy in IDDM.	Doria A et al.	9389421	No data for AGTR2
1	Lack of synergism between long-term poor glycaemic control and three gene polymorphisms of the renin angiotensin system on risk of developing diabetic nephropathy in type I diabetic patients.	Tarnow L et al.	10907125	No data for AGTR2
1	Angiotensin II type 1 receptor gene polymorphism and the response to hyperglycemia in early type 1 diabetes.	Miller JA et al.	10969844	No data for AGTR2
1	Polymorphism of angiotensin converting enzyme, angiotensinogen, and angiotensin II type 1 receptor genes and end-stage renal failure in IgA nephropathy: IGARAS--a study of 274 Men.	Frimat L et al.	11053482	No data for AGTR2
1	Altered regulation of renal interstitial hydrostatic pressure and the renal renin-angiotensin system in the absence of atrial natriuretic peptide	O'Tierney PF et al.	18192845	No data for AGTR2
1	The angiotensin type II receptor tonically inhibits angiotensin-converting enzyme in AT2 null mutant mice	Hunley TE et al.	10652034	Non-human study
1	A novel rodent model of pregnancy complications associated with genetically determined angiotensin-converting enzyme (ACE) activity	Mata-Greenwood E et al.	29360395	Non-human study
1	Renin-angiotensin system polymorphisms and renal scarring	Pardo R et al.	12579398	Not a case-control study

1	Association of the genetic polymorphisms of the renin-angiotensin system and endothelial nitric oxide synthase with chronic renal transplant dysfunction.	Akçay A et al.	15385810	Not a case-control study	
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6	1	Whole-genome linkage and association scan in primary, nonsyndromic vesicoureteric reflux.	Cordell HJ et al.	19959718	Not a case-control study
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11	1	Association of angiotensin converting enzyme and angiotensin type 2 receptor gene polymorphisms with renal damage in posterior urethral valves.	Lakshmi NK et al.	20149750	Not a case-control study
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14	1	Angiotensin type 2 receptor is important in the normal development of the ureter	Hohenfellner K et al.	10353402	Not a renal disease focus
15					
16	1	Angiotensin II type 2 receptor gene is not responsible for familial vesicoureteral reflux	Yoneda A et al.	12187255	Not a renal disease focus
17					
18	1	Genetic polymorphism of the renin-angiotensin system on the development of primary vesicoureteral reflux	Yim HE et al.	14764974	Not a renal disease focus
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21	1	Polymorphism in angiotensin II receptor genes and hypertension	Baudin B et al.	15640279	Not a renal disease focus
22					
23	1	No evidence for angiotensin type 2 receptor gene polymorphism in intron 1 in patients with coarctation of the aorta and Ullrich-Turner syndrome.	Struwe E et al.	16944335	Not a renal disease focus
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26	1	[Effect of eprosartan on the hemostatic system in patients with chronic kidney disease associated with hereditary thrombophilia].	Kaliuzhin VV et al.	24261234	Not written in English or Spanish
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29	1	No evidence for AT2R gene derangement in human urinary tract anomalies.	Hiraoka M et al.	11260384	Paediatric Individuals
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31	1	Polymorphisms of renin-angiotensin system genes in childhood IgA nephropathy.	Maruyama K et al.	11354780	Paediatric Individuals
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34	1	Angiotensin-converting enzyme and angiotensin type 2 receptor gene genotype distributions in Italian children with congenital uropathies.	Rigoli L et al.	15470205	Paediatric Individuals
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37	1	Implication of genetic variations in congenital obstructive nephropathy.	Hahn H et al.	16133060	Paediatric Individuals
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1	Angiotensin II type 2 receptor gene polymorphism in Caucasian children with a wide spectrum of congenital anomalies of the kidney and urinary tract	Siomou E et al.	17515833	Paediatric Individuals
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Supplementary Table S3f: Excluded studies from the *REN* search

*Exclusion stage relates to the stage at which the article was removed as shown in the flow diagram (Supplementary Figure S1f)

Exclusion Stage	Title	Authors	Pubmed ID or WoS ID if Pubmed ID not available	Reason
1	Increased amount of the angiotensin-converting enzyme (ACE) mRNA originating from the ACE allele with deletion.	Suehiro T et al.	15164285	Gene expression based study
1	Increased expression of monocytic angiotensin-converting enzyme in dialysis patients with cardiovascular disease	Ulrich C et al.	16476718	Gene expression based study
1	Synergistic expression of angiotensin-converting enzyme (ACE) and ACE2 in human renal tissue and confounding effects of hypertension on the ACE to ACE2 ratio	Wakahara S et al.	17303661	Gene expression based study
1	Insertion / Deletion Polymorphism of Angiotensin Converting Enzyme Gene Does Not Contribute to Chronic Kidney Disease in Palestine	Abuaisha AM et al.	WOS:000433049000003	No data for REN
1	Relationship between GSTs gene polymorphism and susceptibility to end stage renal disease among North Indians.	Agrawal S et al.	18067039	No data for REN
1	ACE variants interact with the RAS pathway to confer risk and protection against type 2 diabetic nephropathy.	Ahluwalia TS et al.	19108684	No data for REN
1	Analysis of insertion/deletion polymorphisms of the angiotensin converting enzyme gene in Malaysian end-stage renal disease patients.	Ali A et al.	21421653	No data for REN
1	Apparent Mineralocorticoid Excess Caused By A Novel Mutation In 11-Beta Hydroxysteroid Dehydrogenase Type 2 Enzyme: Its Genetics And Response To Therapy	Alzahrani AS et al.	24936560	No data for REN
1	Clinical impact of an angiotensin I-converting enzyme insertion/deletion and kinin B2 receptor +9/-9 polymorphisms in the prognosis of renal transplantation	Amorim CEN et al.	23362199	No data for REN

1	Analysis of polymorphism in Renin Angiotensin System and other related genes in South Indian chronic kidney disease patients	Anbazhagan K et al.	19520069	No data for REN
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1	Genetic polymorphisms of the renin-angiotensin system in end-stage renal disease	Buraczynska M et al.	16384824	No data for REN
1	Angiotensin II type 1 receptor gene polymorphism in end-stage renal disease	Buraczynska M et al.	12187084	No data for REN
1	Familial renal glucosuria: SLC5A2 mutation analysis and evidence of salt-wasting	Calado J et al.	16518345	No data for REN
1	Non-relation of parathyroid hormone gene polymorphisms to secondary hyperparathyroidism in Chinese hemodialysis patients.	Chen JB et al.	15083922	No data for REN
1	Effect of IL-6 C-572G polymorphism on idiopathic membranous nephropathy risk in a Han Chinese population.	Chen SY et al.	20954977	No data for REN
1	Lack of association between transient receptor potential cation channel 6 polymorphisms and primary membranous glomerulonephritis.	Chen WC et al.	20540633	No data for REN
1	Renin-angiotensin-aldosterone system related gene polymorphisms and urinary total arsenic is related to chronic kidney disease	Chen WJ et al.	24907556	No data for REN
1	Toll-like receptor 9 SNPs are susceptible to the development and progression of membranous glomerulonephritis: 27 years follow-up in Taiwan.	Chen YT et al.	23964786	No data for REN
1	Endothelial nitric oxide synthase gene polymorphisms and the renal hemodynamic response to L-arginine	Cherney DZI et al.	19037250	No data for REN
1	Influence of uridine diphosphate-glucuronosyltransferases (1A9) polymorphisms on mycophenolic acid pharmacokinetics in patients with renal transplant.	Ciftci HS et al.	30012031	No data for REN
1	Serological and genetic factors in early recurrence of IgA nephropathy after renal transplantation	Coppo R et al.	17988266	No data for REN
1	Association of glutathione S-transferase M1 and T1 gene polymorphism with oxidative stress in diabetic and nondiabetic chronic kidney disease.	Datta SK et al.	20954980	No data for REN
1	ACE, PAI-1, decorin and Warner helicase genes are not associated with the development of renal disease in European patients with Type 1 diabetes	De Cosmo S et al.	10495473	No data for REN
1	U.K. Prospective Diabetes Study. XV: Relationship of renin-angiotensin system gene polymorphisms with microalbuminuria in NIDDM.	Dudley CR et al.	8587251	No data for REN

1	Angiotensin II type 1 receptor (A1166C) gene polymorphism in Egyptian adult hemodialysis patients	El-Banawy H et al.	WOS:000365886400009	No data for REN	
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4	1	Mthfr C677T, A1298C And Ace I/D Polymorphisms As Risk Factors For Diabetic Nephropathy Among Type 2 Diabetic Patients.	El-Baz R et al.	22554825	No data for REN
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6	1	Impact of nitric oxide synthase Glu298Asp polymorphism on the development of end-stage renal disease in type 2 diabetic Egyptian patients.	El-Din Bessa SS et al.	21854353	No data for REN
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8	1	Angiotensin-I converting enzyme gene polymorphism in Turkish type 2 diabetic patients	Ergen HA et al.	15365253	No data for REN
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10	1	GAS6 intron 8 c.834 + 7G > A gene polymorphism in diabetic nephropathy.	Erkoc R et al.	25869052	No data for REN
11					
12	1	DNA polymorphisms in the ACE gene, serum ACE activity and the risk of nephropathy in insulin-dependent diabetes mellitus	Freire MBS et al.	9794558	No data for REN
13					
14	1	Polymorphism of angiotensin converting enzyme, angiotensinogen, and angiotensin II type 1 receptor genes and end-stage renal failure in IgA nephropathy: IGARAS - A study of 274 men	Frimat L et al.	11053482	No data for REN
15					
16	1	Polymorphisms in the gene encoding angiotensin I converting enzyme 2 and diabetic nephropathy	Frojdo S et al.	16211375	No data for REN
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18	1	Lack of association between the heparan sulfate proteoglycan gene polymorphism and diabetic nephropathy in Japanese NIDDM with proliferative diabetic retinopathy.	Fujita H et al.	10586428	No data for REN
19					
20	1	Effects of erythropoietin, angiotensin II, and angiotensin-converting enzyme inhibitor on erythroid precursors in patients with posttransplantation erythrocytosis	Glicklich D et al.	10428268	No data for REN
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22	1	Angiotensinogen gene polymorphisms and progression of chronic kidney disease in ADPKD patients	Gnanasambandan R et al.	26482465	No data for REN
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24	1	Association study of ACE polymorphisms and systemic lupus erythematosus in Northern Chinese Han population	Gong AM et al.	22729880	No data for REN
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1	Angiotensin I converting enzyme and angiotensinogen gene polymorphisms in non-insulin-dependent diabetes mellitus. Lack of relationship with diabetic nephropathy and retinopathy in a Caucasian Mediterranean population	Gutierrez C et al.	9258285	No data for REN	
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11	1	Renin-aldosterone response, urinary Na/K ratio and growth in pseudohypoaldosteronism patients with mutations in epithelial sodium channel (ENaC) subunit genes	Hanukoglu A et al.	18634878	No data for REN
12					
13	1	Polymorphism of the angiotensin I-converting enzyme gene in diabetic nephropathy in type II diabetic patients with proliferative retinopathy.	Hanyu O et al.	9509566	No data for REN
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15	1	Increased frequency of angiotensin-converting enzyme DD genotype in patients with type 2 diabetes in Taiwan	Hsieh MC et al.	10862639	No data for REN
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18	1	Genetic polymorphisms of the renin-angiotensin-aldosterone system in Chinese patients with end-stage renal disease secondary to IgA nephropathy	Huang HD et al.	21163122	No data for REN
19					
20	1	Impact of Polymorphisms of the Genes Encoding Angiotensin II-Forming Enzymes on the Progression of IgA Nephropathy	Jung ES et al.	21150220	No data for REN
21					
22	1	Study of the association of -667 aquaporin-2 (AQP-2) A/G promoter polymorphism with the incidence and clinical course of chronic kidney disease in Korea.	Kang SW et al.	17763164	No data for REN
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24	1	Assessment of matrix Gla protein, Klotho gene polymorphisms, and oxidative stress in chronic kidney disease.	Karsli Ceppioglu S et al.	21859400	No data for REN
25					
26	1	Renin-angiotensin system component gene polymorphisms in Japanese maintenance haemodialysis patients	Kawada N et al.	WOS:000071880400005	No data for REN
27					
28	1	Manganese superoxide dismutase, glutathione peroxidase and catalase gene polymorphisms and clinical outcomes in acute kidney injury.	Kidir V et al.	26787049	No data for REN
29					
30	1	Blood Pressure-Related Genes and the Progression of IgA Nephropathy	Kim SM et al.	19729965	No data for REN
31					
32	1	Genetic Clues To The Etiology Of Balkan Endemic Nephropathy: Investigating The Role Of Ace And At1R Polymorphisms	Krcunovic Z et al.	WOS:000287217500011	No data for REN
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1	Effect of ACE gene on diabetic nephropathy in NIDDM patients with insulin resistance	Kuramoto N et al.	10023638	No data for REN	
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6	1	Association of apolipoprotein E gene polymorphism with end-stage renal disease and hyperlipidemia in patients on long-term hemodialysis.	Lahrach H et al.	25155022	No data for REN
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11	1	Aldosterone synthase (CYP11B2)-344T/C polymorphism is not associated with the initiation and progression of diabetic nephropathy in Caucasian Type 1 diabetic patients	Lajer M et al.	16759311	No data for REN
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14	1	Renal perfusion and the renal hemodynamic response to blocking the renin system in diabetes - Are the forces leading to vasodilation and vasoconstriction linked?	Lansang MC et al.	12086929	No data for REN
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18	1	Renin-angiotensin system gene polymorphisms: its impact on IgAN and its progression to end-stage renal failure among Chinese in Singapore.	Lau YK et al.	15153745	No data for REN
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21	1	Association studies between the HSD11B2 gene (encoding human 11 beta-hydroxysteroid dehydrogenase type 2), type 1 diabetes mellitus and diabetic nephropathy	Lavery GG et al.	11916625	No data for REN
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24	1	Association of the genetic polymorphisms of the ACE gene and the eNOS gene with lupus nephropathy in northern Chinese population	Li X et al.	20540812	No data for REN
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27	1	The relationship between the TGF-beta1 gene -509C/T polymorphism and tubulointerstitial damage resulting from primary nephrotic syndrome.	Li Y et al.	20446778	No data for REN
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30	1	Genes involved in the regulation of vascular homeostasis determine renal survival rate in patients with chronic glomerulonephritis	Litovkina O et al.	24727057	No data for REN
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33	1	Factors affecting progression of renal insufficiency	Locatelli F et al.	9387138	No data for REN
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35	1	Polymorphism of renin-angiotensin system genes in dialysis patients - association with cerebrovascular disease	Losito A et al.	12454231	No data for REN
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38	1	Genetic polymorphisms of the renin-angiotensin-aldosterone system in end-stage renal disease	Lovati E et al.	11422735	No data for REN
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1	Effects of the genetic polymorphisms of the renin-angiotensin system on focal segmental glomerulosclerosis	Luther Y et al.	14610337	No data for REN
1	Angiotensinogen (AGT) gene missense polymorphisms (rs699 and rs4762) and diabetic nephropathy in Caucasians with type 2 diabetes mellitus.	Makuc J et al.	28488548	No data for REN
1	Impact of interferon-gamma and interleukin-4 gene polymorphisms on development and progression of IgA nephropathy in Japanese patients	Masutani K et al.	12552499	No data for REN
1	Influence of the endothelial nitric oxide synthase polymorphism on the progression of autosomal dominant polycystic kidney disease and IgA nephropathy.	Merta M et al.	12212826	No data for REN
1	Manganese Superoxide Dismutase (SOD2) Polymorphisms, Plasma Advanced Oxidation Protein Products (AOPP) Concentration and Risk of Kidney Complications in Subjects with Type 1 Diabetes	Mohammedi K et al.	24819633	No data for REN
1	The effect of polymorphisms in the renin-angiotensin-aldosterone system on diabetic nephropathy risk	Mollsten A et al.	18413189	No data for REN
1	A polymorphism in the angiotensin II type 1 receptor gene has different effects on the risk of diabetic nephropathy in men and women	Mollsten A et al.	21316998	No data for REN
1	Different Mechanisms for the Progression of CKD with ACE Gene Polymorphisms	Nakayama Y et al.	19293592	No data for REN
1	Pronatriodilatin gene polymorphisms, microvascular permeability, and diabetic nephropathy in type 1 diabetes mellitus	Nannipieri M et al.	10405209	No data for REN
1	A biallelic gene polymorphism of CYP11B2 predicts increased aldosterone to renin ratio in selected hypertensive patients.	Nicod J et al.	12788845	No data for REN
1	Role of the alpha-adducin genotype on renal disease progression	Nicod J et al.	11918733	No data for REN
1	Association between CCDC132, FDX1 and TNFSF13 gene polymorphisms and the risk of IgA nephropathy.	Niu D et al.	26370181	No data for REN
1	Chemerin rs17173608 and vaspin rs2236242 gene variants on the risk of end stage renal disease (ESRD) and correlation with plasma malondialdehyde (MDA) level.	Nomani H et al.	29644922	No data for REN

1	Renal clearance of endogenous erythropoietin in patients with proteinuria.	Nowicki M et al.	7759206	No data for REN	
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4	1	The renin--angiotensin system gene polymorphisms and clinicopathological correlations in IgA nephropathy.	Ong-Ajyooth S et al.	10511770	No data for REN
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6	1	Angiotensin-converting enzyme polymorphism gene and evolution of nephropathy to end-stage renal disease	Ortiz MA et al.	15012717	No data for REN
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8	1	Combinational effect of genes for the renin-angiotensin system in conferring susceptibility to diabetic nephropathy	Osawa N et al.	17143591	No data for REN
9					
10	1	Bcii--RFLP profiles for serum amiloid A1 and mutated MEFV gene prevalence in chronic renal failure patients requiring long-term hemodialysis.	Ozdemir O et al.	25394530	No data for REN
11					
12	1	Survival in type 2 diabetic patients in dialysis and the number of risk alleles in polymorphisms of the renin-angiotensin system genes	Padro-Miquel A et al.	19014923	No data for REN
13					
14	1	Association of aldosterone synthase (CYP11B2) gene -344T/C polymorphism with the risk of primary chronic glomerulonephritis in the Polish population.	Pawlik M et al.	23681285	No data for REN
15					
16	1	Does copy number variation of APOL1 gene affect the susceptibility to focal segmental glomerulosclerosis?	Peng T et al.	28494221	No data for REN
17					
18	1	Association analysis of ADPRT1, AKR1B1, RAGE, GFPT2 and PAI-1 gene polymorphisms with chronic renal insufficiency among Asian Indians with type-2 diabetes	Prasad P et al.	20353610	No data for REN
19					
20	1	DNA repair genes XPD and XRCC1 polymorphisms and risk of end-stage renal disease in Egyptian population.	Radwan WM et al.	25310768	No data for REN
21					
22	1	ACE I/D and MMP-7 A-181G variants and the risk of end stage renal disease	Rahimi Z et al.	28447048	No data for REN
23					
24	1	Influence of angiotensin converting enzyme (ACE) gene rs4362 polymorphism on the progression of kidney failure in patients with autosomal dominant polycystic kidney disease (ADPKD)	Ramanathan G et al.	27748299	No data for REN
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1	Aldosterone synthase gene is not a major susceptibility gene for progression of chronic kidney disease in patients with autosomal dominant polycystic kidney disease	Ramanathan G et al.	28540892	No data for REN	
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6	1	AGTR1 rs5186 variants in patients with type 2 diabetes mellitus and nephropathy	Razi F et al.	WOS:000419720600009	No data for REN
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11	1	Association of the angiotensinogen M235T and APO E gene polymorphisms in Turkish type 2 diabetic patients with and without nephropathy.	Reis KA et al.	21500980	No data for REN
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14	1	The influence of the endothelin-converting enzyme-1 gene polymorphism on the progression of autosomal dominant polycystic kidney disease.	Reiterova J et al.	16526315	No data for REN
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18	1	The influence of G-protein beta3-subunit gene and endothelial nitric oxide synthase gene in exon 7 polymorphisms on progression of autosomal dominant polycystic kidney disease.	Reiterova J et al.	15287194	No data for REN
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22	1	Role of ADDUCIN Gly460Trp, ACE I/D and AGT M235T Gene Polymorphisms in Genetic Susceptibility to Diabetic Nephropathy	Sancakdar E et al.	WOS:000367541400005	No data for REN
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25	1	Angiotensin I converting enzyme gene polymorphism and diabetic nephropathy in type II diabetes	Schmidt S et al.	9269698	No data for REN
26					
27	1	ACAC1 ² gene (rs2268388) and AGTR1 gene (rs5186) polymorphism and the risk of nephropathy in Asian Indian patients with type 2 diabetes.	Shah VN et al.	23081748	No data for REN
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30	1	Genetic variants of ACE (Insertion/Deletion) and AGT (M268T) genes in patients with diabetes and nephropathy	Shaikh R et al.	24737640	No data for REN
31					
32	1	Distribution of ACE I/D Polymorphism in the Patients of Diabetes and Nephropathy in Pakistan	Shaikh R et al.	WOS:000312053000001	No data for REN
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35	1	The relationship between genetic and haemodynamic factors in diabetic nephropathy (DN): Case-control study in type 1 diabetes mellitus (T1DM)	Shestakova MV et al.	WOS:000242410600010	No data for REN
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1	SIRTUIN 1 gene polymorphisms are associated with cholesterol metabolism and coronary artery calcification in Japanese hemodialysis patients.	Shimoyama Y et al.	22200427	No data for REN	
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7	1	Interleukin 1 receptor antagonist and tumor necrosis factor-alpha gene polymorphism in patients with end-stage renal failure.	Shu KH et al.	15717635	No data for REN
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10	1	Angiotensin-converting enzyme (ACE) inhibition in type 2, diabetic patients - interaction with ACE insertion/deletion polymorphism	So WY et al.	16395257	No data for REN
11					
12	1	Vitamin D binding protein and the need for vitamin D in hemodialysis patients.	Speeckaert MM et al.	18721734	No data for REN
13					
14	1	Polymorphisms of the renin-angiotensin system genes in Brazilian patients with lupus nephropathy	Sprovieri SRS et al.	15934435	No data for REN
15					
16	1	Prospective study on the potential of RAAS blockade to halt renal disease in Alport syndrome patients with heterozygous mutations.	Stock J et al.	27402170	No data for REN
17					
18	1	Interaction between gene polymorphisms of nitric oxide synthase and renin-angiotensin system in the progression of membranous glomerulonephritis	Stratta P et al.	14767013	No data for REN
19					
20	1	Angiotensin II receptor type 1 A1166C modifies the association between angiotensinogen M235T and chronic kidney disease	Su SL et al.	29296205	No data for REN
21					
22	1	Gene polymorphisms of angiotensin-converting enzyme and angiotensin II Type 1 receptor among chronic kidney disease patients in a Chinese population	Su SL et al.	22147663	No data for REN
23					
24	1	Gene-Gene Interactions in Renin-Angiotensin-Aldosterone System Contributes to End-Stage Renal Disease Susceptibility in a Han Chinese Population	Su SL et al.	24977181	No data for REN
25					
26	1	Study on 3'-UTR length polymorphism in peripheral blood mononuclear cells of uremia patient.	Sui W et al.	26554293	No data for REN
27					
28	1	Angiotensin-II type 1 receptor gene polymorphism and diabetic microangiopathy.	Tarnow L et al.	8671962	No data for REN
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1	Lack Of Relationship Between An Insertion Deletion Polymorphism In The Angiotensin I-Converting Enzyme Gene And Diabetic Nephropathy And Proliferative Retinopathy In Iddm Patients	Tarnow L et al.	7729604	No data for REN
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1	Impact of interaction of cigarette smoking with angiotensin-converting enzyme polymorphisms on end-stage renal disease risk in a Han Chinese population.	Yang HY et al.	23477970	No data for REN	
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8	1	Angiotensin converting enzyme gene polymorphism and development of post-transplant erythrocytosis.	Yildiz A et al.	12832741	No data for REN
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10	1	Aldosterone Synthase CYP11B2 Gene Promoter Polymorphism in a Turkish Population With Chronic Kidney Disease	Yilmaz M et al.	25957425	No data for REN
11					
12	1	Structural analysis of the 11 beta-hydroxysteroid dehydrogenase type 2 gene in end-stage renal disease	Zaehner T et al.	11012876	No data for REN
13					
14	1	Arg913Gln of SLC12A3 gene promotes development and progression of end-stage renal disease in Chinese type 2 diabetes mellitus	Zhang R et al.	28744814	No data for REN
15					
16	1	Pin1 and secondary hyperparathyroidism of chronic kidney disease: gene polymorphisms and protein levels.	Zhao Y et al.	27876426	No data for REN
17					
18	1	Polymorphisms in NADPH oxidase CYBA gene modify the risk of ESRD in patients with chronic glomerulonephritis.	Zhou H et al.	26627442	No data for REN
19					
20	1	Angiotensinogen M235T and chymase gene CMA/B polymorphisms are not associated with nephropathy in type II diabetes	Zychma MJ et al.	11096141	No data for REN
21					
22	1	Effects of Diets with Different Proportions of Protein/Carbohydrate on Retinal Manifestations in db Mice	Arimura E et al.	29475908	Non-human study
23					
24	1	Effects of plasma kallikrein deficiency on haemostasis and thrombosis in mice: Murine Ortholog of the Fletcher Trait	Bird JE et al.	22398951	Non-human study
25					
26	1	Blood pressure and renin-angiotensin system resetting in transgenic rats with elevated plasma Val(5)-angiotensinogen	Bohlender J et al.	22728903	Non-human study
27					
28	1	Angiotensin II mesenteric and renal vasoregulation: Dissimilar modulatory effects with nitroprusside	Broome M et al.	11065204	Non-human study
29					
30	1	N-domain angiotensin I-converting enzyme expression in renal artery of Wistar, Wistar Kyoto, and spontaneously hypertensive rats	Bueno V et al.	15194348	Non-human study
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32	1	Adrenomedullin gene expression differences in mice do not affect blood pressure but modulate hypertension-induced pathology in males	Caron K et al.	17360661	Non-human study
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1	Appropriate regulation of renin and blood pressure in 45-kb human renin/human angiotensinogen transgenic mice.	Catanzaro DF et al.	9931123	Non-human study	
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6	1	Vascular and renal effects of vasopeptidase inhibition and angiotensin-converting enzyme blockade in spontaneously diabetic Goto-Kakizaki rats	Cheng ZJ et al.	16093923	Non-human study
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10	1	Mice lacking endothelial ACE - Normal blood pressure with elevated angiotensin	Cole JM et al.	12574101	Non-human study
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13	1	Thyroid hormones stimulate renal expression of CFTR	de Andrade Pinto AC et al.	17595518	Non-human study
14					
15	1	Renin-angiotensin system transgenic mouse model recapitulates pathophysiology similar to human preeclampsia with renal injury that may be mediated through VEGF.	Denney JM et al.	27927648	Non-human study
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18	1	Cardiac angiotensin-(1-12) expression and systemic hypertension in rats expressing the human angiotensinogen gene.	Ferrario CM et al.	26873967	Non-human study
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21	1	Attenuation of accelerated renal cystogenesis in Pkd1 mice by renin-angiotensin system blockade	Fitzgibbon WR et al.	29021226	Non-human study
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24	1	Renal cyst growth is the main determinant for hypertension and concentrating deficit in Pkd1-deficient mice	Fonseca JM et al.	24429399	Non-human study
25					
26	1	Adenosine A(1) receptor-dependent and independent pathways in modulating renal vascular responses to angiotensin II	Gao X et al.	25251152	Non-human study
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29	1	Collecting duct-specific knockout of nitric oxide synthase 3 impairs water excretion in a sex-dependent manner	Gao Y et al.	27707708	Non-human study
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31	1	Metformin prevents the impairment of endothelium-dependent vascular relaxation induced by high glucose challenge in rabbit isolated perfused kidneys	Gomes MB et al.	16133490	Non-human study
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35	1	Effect Of Nitric-Oxide On Renin Secretion .1. Studies In Isolated Juxtaglomerular Granular Cells	Greenberg SG et al.	7771523	Non-human study
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1	Effect of the angiotensinogen genotype on experimental hypertension in mice	Handtrack C et al.	17333097	Non-human study	
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4	1	Pituitary adenylate cyclase-activating polypeptide stimulates renin secretion via activation of PAC1 receptors	Hautmann M et al.	17360952	Non-human study
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6	1	The genetic deletion of Mas abolishes salt induced hypertension in mice	Heringer-Walther S et al.	22652430	Non-human study
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8	1	An essential role of angiotensin II receptor type 1a in recipient kidney, not in transplanted peripheral blood leukocytes, in progressive immune-mediated renal injury	Hisada Y et al.	11555672	Non-human study
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10	1	The angiotensin type II receptor tonically inhibits angiotensin-converting enzyme in AT2 null mutant mice	Hunley TE et al.	10652034	Non-human study
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12	1	Collecting Duct Nitric Oxide Synthase 1 beta Activation Maintains Sodium Homeostasis During High Sodium Intake Through Suppression of Aldosterone and Renal Angiotensin II Pathways	Hyndman KA et al.	29066445	Non-human study
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14	1	Transfer of a salt-resistant renin allele raises blood pressure in Dahl salt-sensitive rats	Jiang J et al.	9040448	Non-human study
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16	1	Angiotensin-converting enzyme inhibition attenuates the progression of rat hepatic fibrosis	Jonsson JR et al.	11438504	Non-human study
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18	1	Rat Ace allele variation determines susceptibility to AngII-induced renal damage	Kamilic J et al.	21788250	Non-human study
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20	1	Regulation of renin secretion and expression in mice deficient in ss 1- and ss 2-adrenergic receptors	Kim SM et al.	17515456	Non-human study
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22	1	Low Blood Pressure in Endothelial Cell-Specific Endothelin 1 Knockout Mice	Kisanuki YY et al.	20516397	Non-human study
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24	1	Lack of an effect of collecting duct-specific deletion of adenylyl cyclase 3 on renal Na ⁺ and water excretion or arterial pressure	Kittikulsuth W et al.	24431204	Non-human study
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1	1	A High Fat Diet During Pregnancy and Lactation Induces Cardiac and Renal Abnormalities in GLUT4+/- Male Mice	Kruse M et al.	28750406	Non-human study
2	1	Blood pressure and renal hemodynamic responses to acute angiotensin II infusion are enhanced in a female mouse model of systemic lupus erythematosus	Kumari S et al.	27350671	Non-human study
3	1	Control of renin secretion from kidneys with renin cell hyperplasia	Kurt B et al.	24285498	Non-human study
4	1	Reciprocal expression of connexin 40 and 45 during phenotypical changes in renin-secreting cells	Kurt B et al.	21209011	Non-human study
5	1	Stimulation of renin secretion by NO donors is related to the cAMP pathway	Kurtz A et al.	9575895	Non-human study
6	1	Stimulation of renin secretion by nitric oxide is mediated by phosphodiesterase 3	Kurtz A et al.	9539809	Non-human study
7	1	Replacement of connexin 40 by connexin 45 causes ectopic localization of renin-producing cells in the kidney but maintains in vivo control of renin gene expression	Kurtz L et al.	19474190	Non-human study
8	1	Interference with Gs \pm -Coupled Receptor Signaling in Renin-Producing Cells Leads to Renal Endothelial Damage.	Lachmann P et al.	28775003	Non-human study
9	1	The angiotensin II receptor blocker candesartan improves survival and mesenteric perfusion in an acute porcine endotoxin model	Laesser M et al.	14995942	Non-human study
10	1	Mice with targeted disruption of the acyl-CoA binding protein display attenuated urine concentrating ability and diminished renal aquaporin-3 abundance	Langaa S et al.	22237802	Non-human study
11	1	Physiological impact of increased expression of the AT(1) angiotensin receptor	Le TH et al.	12963678	Non-human study
12	1	Genetic analysis of the S-A and Na ⁺ /K ⁺ -ATPase alpha(1) genes in the Milan hypertensive rat	Lodwick D et al.	9535139	Non-human study

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4	1	Hypertension in unilaterally nephrectomized rats induced by single-kidney transfection with angiotensinogen cDNA	Marley WS et al.	10567853	Non-human study
5	1	Cardiovascular dysfunction in Zucker obese and Zucker diabetic fatty rats: role of hydronephrosis	Marsh SA et al.	17351065	Non-human study
6	1	A novel rodent model of pregnancy complications associated with genetically determined angiotensin-converting enzyme (ACE) activity	Mata-Greenwood E et al.	29360395	Non-human study
7	1	Chronic hypertension and altered baroreflex responses in transgenic mice containing the human renin and human angiotensinogen genes	Merrill DC et al.	8613528	Non-human study
8	1	Hypervolemia of pregnancy is not maintained in mice chronically overexpressing angiotensinogen	Morgan TK et al.	16796982	Non-human study
9	1	Vascular angiotensin-converting enzyme expression regulates local angiotensin II	Muller DN et al.	9039087	Non-human study
10	1	Angiotensin-1i Enhances Norepinephrine Spillover During Sympathetic Activation In Conscious Rabbits	Noshiro T et al.	8203585	Non-human study
11	1	Effect Of Angiotensin-Converting Enzyme-Inhibition On Renal Norepinephrine Spillover Rate And Baroreflex Responses In Conscious Rabbits	Noshiro T et al.	1648463	Non-human study
12	1	Altered regulation of renal interstitial hydrostatic pressure and the renal renin-angiotensin system in the absence of atrial natriuretic peptide	O'Tierney PF et al.	18192845	Non-human study
13	1	Gene Trapping Uncovers Sex-Specific Mechanisms for Upstream Stimulatory Factors 1 and 2 in Angiotensinogen Expression	Park S et al.	22547438	Non-human study
14	1	Knockdown of parathyroid hormone related protein in smooth muscle cells alters renal hemodynamics but not blood pressure	Raison D et al.	23720345	Non-human study
15	1	Nephron-specific deletion of the prorenin receptor causes a urine concentration defect	Ramkumar N et al.	25995108	Non-human study
16	1	Alternative splicing of vitamin D-24-hydroxylase: a novel mechanism for the regulation of extrarenal 1,25-dihydroxyvitamin D synthesis.	Ren S et al.	15788398	Non-human study
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1	20-Hydroxyeicosatetraenoic Acid (HETE)-dependent Hypertension in Human Cytochrome P450 (CYP) 4A11 Transgenic Mice NORMALIZATION OF BLOOD PRESSURE BY SODIUM RESTRICTION, HYDROCHLOROTHIAZIDE, OR BLOCKADE OF THE TYPE 1 ANGIOTENSIN II RECEPTOR	Savas S et al.	27298316	Non-human study
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1	Nebivolol treatment improves resistant arterial function and reduces ventricular hypertrophy and angiotensin II in spontaneously hypertension rats	Wang Y et al.	23263161	Non-human study
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1	Angiotensin-converting-enzyme insertion/deletion genotype and long-term renal allograft survival	Beige J et al.	9550656	Not a case-control study	
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4	1	Angiotensin-converting enzyme genotype and renal allograft survival	Beige J et al.	9259361	Not a case-control study
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7	1	Deletion insertion polymorphism of the angiotensin converting enzyme gene and progression of diabetic nephropathy	Bjorck S et al.	9269704	Not a case-control study
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10	1	Angiotensinogen concentrations and renin clearance : implications for blood pressure regulation.	Bohlender J et al.	10720595	Not a case-control study
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13	1	Genetic polymorphisms of renin-angiotensin system and progression of interstitial nephritis.	Buraczynska M et al.	12898858	Not a case-control study
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15	1	The Epithelial Sodium Channel gamma-Subunit Gene and Blood Pressure Family Based Association, Renal Gene Expression, and Physiological Analyses	Busst CJ et al.	22006290	Not a case-control study
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17	1	Twenty-one additional cases of familial renal glucosuria: absence of genetic heterogeneity, high prevalence of private mutations and further evidence of volume depletion	Calado J et al.	18622023	Not a case-control study
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20	1	Discovery of a novel dominant mutation in the REN gene after forty years of renal disease: a case report	Clissold RL et al.	28701203	Not a case-control study
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23	1	Disorders of mineralocorticoid synthesis	Connell JMC et al.	11469810	Not a case-control study
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25	1	Successful treatment of decompensated chronic viral hepatitis by bursal disease virus vaccine	Csatary LK et al.	10216467	Not a case-control study
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28	1	Natriuretic peptides buffer renin-dependent hypertension	Demerath T et al.	24717731	Not a case-control study
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30	1	Association between two genetic polymorphisms of the renin-angiotensin-aldosterone system and diabetic nephropathy: a meta-analysis	Ding W et al.	21607620	Not a case-control study
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33	1	The effects of angiotensin-converting enzyme gene polymorphism on the progression of immunoglobulin A nephropathy in Malaysian patients	Draman CR et al.	19037561	Not a case-control study
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1	1	Juxtaglomerular cell tumor of the kidney: Report of a non-functioning variant	Endoh Y et al.	9211527	Not a case-control study
2	1	Prograf produces more benefits for CYP3A5 low expression patients in early stage after kidney transplantation.	Fan B et al.	28157649	Not a case-control study
3	1	Diabetes, nephropathy, and the renin system	Hollenberg NK	16601578	Not a case-control study
4	1	Association between Angiotensin I-Converting Enzyme Insertion/Deletion Polymorphism and Prognosis of Kidney Transplantation: A Meta-Analysis	Huang ZK et al.	26000752	Not a case-control study
5	1	Is there a role of angiotensin-converting enzyme gene polymorphism in the failure of arteriovenous femoral shunts for hemodialysis?	Isbir CS et al.	11525534	Not a case-control study
6	1	Hyperuricemia, Acute and Chronic Kidney Disease, Hypertension, and Cardiovascular Disease: Report of a Scientific Workshop Organized by the National Kidney Foundation	Johnson RJ et al.	29496260	Not a case-control study
7	1	Diagnosis of a case of Gitelman's syndrome based on renal clearance studies and gene analysis of a novel mutation of the thiazide-sensitive Na-Cl cotransporter	Kageyama K et al.	16370563	Not a case-control study
8	1	Paricalcitol as an Antiproteinuric Agent Can Result in the Deterioration of Renal and Heart Function in a Patient with Fabry Disease	Keber T et al.	28596512	Not a case-control study
9	1	The role of renin-angiotensin-aldosterone system genes in the progression of chronic kidney disease: findings from the Chronic Renal Insufficiency Cohort (CRIC) study.	Kelly TN et al.	25906781	Not a case-control study
10	1	Smoking has no impact on survival and it is not associated with ACE gene I/D polymorphism in hemodialysis patients.	Kiss I et al.	28058974	Not a case-control study
11	1	ACE gene polymorphism in focal segmental glomerulosclerosis and membranous glomerulonephritis - Is observed difference of clinical significance?	Kuzmanic D et al.	WOS:000087339600012	Not a case-control study
12	1	Antihypertensive treatment modulates the association between the D/I ACE gene polymorphism and left ventricular hypertrophy: a meta-analysis	Kuznetsova T et al.	10918550	Not a case-control study

1	1	Bilateral high origins of testicular arteries: a rare variant.	Li J et al.	22732819	Not a case-control study
2	1	A Genetic Variant in the Distal Enhancer Region of the Human Renin Gene Affects Renin Expression	Makino Y et al.	26366736	Not a case-control study
3	1	Genetics and the prediction of complications in type 1 diabetes	Marre M	10097900	Not a case-control study
4	1	Angiotensin converting enzyme gene polymorphism and renal hemodynamic function in early diabetes	Miller JA et al.	8995725	Not a case-control study
5	1	The kidney in diabetes: How to control renal and related cardiovascular complications	Mogensen CE	11158852	Not a case-control study
6	1	A female with X-linked Alport syndrome and compound heterozygous COL4A5 mutations	Mohammad M et al.	24337245	Not a case-control study
7	1	Catalase activity, allelic variations in the catalase gene and risk of kidney complications in patients with type 1 diabetes	Mohammedi K et al.	24057136	Not a case-control study
8	1	Renal Tubular Dysgenesis in Israel: Pathologist's Experience and Literature Review	Moldavsky M	19344005	Not a case-control study
9	1	Tip lesion variant of primary focal and segmental glomerulosclerosis: clinicopathological analysis of 20 cases.	Mungan S et al.	25857429	Not a case-control study
10	1	Genome-Wide Association Analysis of Plasma B-Type Natriuretic Peptide in Blacks The Jackson Heart Study	Musani SK et al.	25561047	Not a case-control study
11	1	Angiotensinogen gene variation and renoprotective efficacy of renin-angiotensin system blockade in IgA nephropathy	Narita I et al.	12911556	Not a case-control study
12	1	Renoprotective efficacy of renin-angiotensin inhibitors in IgA nephropathy is influenced by ACE A2350G polymorphism	Narita I et al.	14684698	Not a case-control study
13	1	Correlates of ACE activity in macroalbuminuric type 2 diabetic patients treated with chronic ACE inhibition.	Nikzamid et al.	17986476	Not a case-control study
14	1	Epidemiology and genetics of calcific aortic valve disease	O'Brien KD	17963677	Not a case-control study

1	Impact of polymorphisms in the renin-angiotensin-aldosterone system on hypertrophic cardiomyopathy	Orenes-Pinero E et al.	21507890	Not a case-control study	
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4	1	Relationships between HLA-A, -B, -DQ and -DR antigens and interstitial fibrosis in renal allografts.	Ozdemir BH et al.	15354972	Not a case-control study
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6	1	Renin-angiotensin system gene polymorphisms predict the progression to renal insufficiency among Asians with lupus nephritis	Parsa A et al.	15789057	Not a case-control study
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8	1	Association of angiotensinogen gene T235 variant with progression of immunoglobulin A nephropathy in Caucasian patients	Pei Y et al.	9259580	Not a case-control study
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10	1	Normative genetic profiles of RAAS pathway gene Polymorphisms in north Indian and south Indian Populations	Prasad P et al.	18027817	Not a case-control study
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12	1	Identification of a novel mutation in the human mineralocorticoid receptor gene in a German family with autosomal-dominant pseudohypoaldosteronism type 1: Further evidence for marked interindividual clinical heterogeneity	Riepe FG et al.	12679457	Not a case-control study
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14	1	Genetics of diabetic nephropathy	Rippin JD et al.	11554775	Not a case-control study
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16	1	A Synergistic Association of ACE I/D and eNOS G894T Gene Variants with the Progression of Immunoglobulin A Nephropathy - A Pilot Study	Rodriguez-Perez JC et al.	19546528	Not a case-control study
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18	1	Increased left ventricular mass in normotensive type 1 diabetic patients with diabetic nephropathy	Sato A et al.	9727905	Not a case-control study
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20	1	Risk of developing diabetic nephropathy is not associated with synergism between the angiotensin II (type 1) receptor C-1166 allele and poor glycaemic control	Savage DA et al.	10328465	Not a case-control study
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22	1	Alport Syndrome in Women and Girls	Savige J et al.	27287265	Not a case-control study
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24	1	Expert Guidelines for the Management of Alport Syndrome and Thin Basement Membrane Nephropathy	Savige J et al.	23349312	Not a case-control study
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26	1	Genetic determinants of diabetic renal disease and their impact on therapeutic interventions	Schmidt S et al.	9407416	Not a case-control study
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1	Rho kinase polymorphism influences blood pressure and systemic vascular resistance in human twins - Role of heredity	Seasholtz TM et al.	16585408	Not a case-control study
1	Impact of genetic polymorphisms of the renin-angiotensin system and of non-genetic factors on kidney transplant function - a single-center experience	Siekierka-Harreis M et al.	19681973	Not a case-control study
1	The deletion/insertion polymorphism of the angiotensin converting enzyme gene and cardiovascular-renal risk	Staessen JA et al.	9488209	Not a case-control study
1	Renal angiomyolipoma - Further immunophenotypic characterization of an expanding morphologic spectrum	Stone CH et al.	11371226	Not a case-control study
1	Frequencies of apolipoprotein E alleles in depressed patients undergoing hemodialysis--a case-control study.	Su YY et al.	25707516	Not a case-control study
1	Assessing genetic susceptibility to diabetic nephropathy	Tanaka N et al.	16174281	Not a case-control study
1	Tip variant of focal segmental glomerulosclerosis: is it truly a benign variant?	Trivedi M et al.	25721429	Not a case-control study
1	Roles of Loss of Chromosome 14q Allele in the Prognosis of Renal Cell Carcinoma with C-reactive Protein Abnormality.	Wang G et al.	28875953	Not a case-control study
1	Contribution of gene polymorphisms in the renin-angiotensin system to macroangiopathy in patients with diabetic nephropathy	Wong et al.	11431175	Not a case-control study
1	Prognostic role of serum ACE activity on outcome of type 2 diabetic patients on chronic ambulatory peritoneal dialysis	Wong TYH et al.	11979350	Not a case-control study
1	Novel mutations in the inverted formin 2 gene of Chinese families contribute to focal segmental glomerulosclerosis.	Xie J et al.	26039629	Not a case-control study
1	Role Of The Deletion Polymorphism Of The Angiotensin-Converting Enzyme Gene In The Progression And Therapeutic Responsiveness Of Iga Nephropathy	Yoshida H et al.	7593601	Not a case-control study
1	Gene Polymorphisms of the Renin-AngiotensinAldosterone system and angiotensin 11 type I-Receptor activating antibodies in renal rejection	Zhang G et al.	17984617	Not a case-control study

1	Rapid detection and quantification of apolipoprotein L1 genetic variants and total levels in plasma by ultra-performance liquid chromatography/tandem mass spectrometry.	Zhou H et al.	24591025	Not a case-control study	
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6	1	Pharmacogenetic association of the angiotensin-converting enzyme insertion/deletion polymorphism on blood pressure and cardiovascular risk in relation to antihypertensive treatment - The genetics of hypertension-associated treatment (GenHAT) study	Arnett DK et al.	15967849	Not a renal disease focus
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10	1	A role for CETP TaqIB polymorphism in determining susceptibility to atrial fibrillation: a nested case control study	Asselbergs FW et al.	16623947	Not a renal disease focus
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13	1	Serum paraoxonase-1 gene polymorphism and enzyme activity in patients with urolithiasis.	Atar A et al.	26795139	Not a renal disease focus
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15	1	Association of ACE gene D polymorphism with left ventricular hypertrophy in patients with diastolic heart failure: a case-control study	Bahramali E et al.	26861937	Not a renal disease focus
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17	1	Amiloride, a specific drug for hypertension in black people with T594M variant?	Baker EH et al.	12105131	Not a renal disease focus
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19	1	Association of hypertension with T594M mutation in beta subunit of epithelial sodium channels in black people resident in London	Baker EH et al.	9593408	Not a renal disease focus
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21	1	Alpha-adducin polymorphism in hypertensives of South African ancestry.	Barlassina C et al.	10912759	Not a renal disease focus
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23	1	Common genetic variants and haplotypes in renal CLCNKA gene are associated to salt-sensitive hypertension	Barlassina C et al.	17510212	Not a renal disease focus
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25	1	Synergistic effect of alpha-adducin and ACE genes causes blood pressure changes with body sodium and volume expansion	Barlassina C et al.	10720960	Not a renal disease focus
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27	1	Evaluation of risk factors for the development of nephropathy in patients with IDDM: Insertion/deletion angiotensin converting enzyme gene polymorphism, hypertension and metabolic control	Barnas U et al.	9084972	Not a renal disease focus
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29	1	Polymorphism in angiotensin II receptor genes and hypertension	Baudin B et al.	15640279	Not a renal disease focus
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31	1	Higher thrombin activatable fibrinolysis inhibitor levels are associated with inflammation in attack-free familial Mediterranean fever patients.	Bavbek N et al.	24580410	Not a renal disease focus
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1	Insertion-deletion polymorphism in the angiotensin-converting enzyme (ACE) gene among Sudanese, Somalis, Emiratis, and Omanis	Bayoumi RA et al.	16900885	Not a renal disease focus	
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4	1	Single Strand Conformation Polymorphism (SSCP) as a quick and reliable method to genotype M235T polymorphism of angiotensinogen gene	Bettinaglio P et al.	12270765	Not a renal disease focus
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6	1	CYP3A5 and ABCB1 genes and hypertension	Bochud M et al.	19290795	Not a renal disease focus
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8	1	Polymorphisms of the renin-angiotensin system in patients with multifocal renal arterial fibromuscular dysplasia	Bofinger A et al.	11317203	Not a renal disease focus
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10	1	Association between plasma activities of semicarbazide-sensitive amine oxidase and angiotensin-converting enzyme in patients with type 1 diabetes mellitus.	Boomsma F et al.	15830186	Not a renal disease focus
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12	1	Structure-Based Analysis of Single Nucleotide Variants in the Renin-Angiotensinogen Complex	Brown DK et al.	28302554	Not a renal disease focus
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14	1	Renin-angiotensin system gene polymorphisms: assessment of the risk of coronary heart disease.	Buraczynska M et al.	14502296	Not a renal disease focus
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16	1	Oxidative stress-related factors in Bartter's and Gitelman's syndromes: relevance for angiotensin II signalling.	Calo LA et al.	12897089	Not a renal disease focus
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18	1	Efficacy of large doses of IL-2-activated human leukocyte antigen haploidentical peripheral blood stem cells on refractory metastatic renal cell carcinoma.	Cao S et al.	21812652	Not a renal disease focus
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20	1	Biochemical and genetic characterization of 11 beta-hydroxysteroid dehydrogenase type 2 in low-renin essential hypertensives.	Carvajal CA et al.	15643127	Not a renal disease focus
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22	1	Role of GRK4 in the Regulation of Arterial AT(1) Receptor in Hypertension	Chen K et al.	24218433	Not a renal disease focus
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24	1	CARD8 rs2043211 polymorphism is associated with gout in a Chinese male population.	Chen Y et al.	25790751	Not a renal disease focus
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26	1	Association of renin-angiotensin and endothelial nitric oxide synthase gene polymorphisms with blood pressure progression and incident hypertension: prospective cohort study.	Conen D et al.	18698212	Not a renal disease focus
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28	1	Role of ACE inhibitors in patients with diabetes mellitus	Cordonnier DJ et al.	11708761	Not a renal disease focus
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1	1	Molecular genetics of the renin-angiotensin-aldosterone system in human hypertension	Corvol P et al.	9296068	Not a renal disease focus
2	1	Vitamin D receptor gene polymorphisms and plasma renin activity in essential hypertensive individuals.	Cottone S et al.	25500899	Not a renal disease focus
3	1	Genetic polymorphism of Na-K cotransport in essential hypertension.	Cusi D et al.	2258861	Not a renal disease focus
4	1	Extensive personal experience - Examination of genotype and phenotype relationships in 14 patients with apparent mineralocorticoid excess	Dave-Sharma S et al.	9661590	Not a renal disease focus
5	1	ACE and PC-1 gene polymorphisms in normoalbuminuric Type 1 diabetic patients - A 10-year prospective study	de Azevedo MJ et al.	12126783	Not a renal disease focus
6	1	Polymorphisms in genes of the renin-angiotensin-aldosterone system and renal cell cancer risk: Interplay with hypertension and intakes of sodium, potassium and fluid	Deckers IA et al.	24978482	Not a renal disease focus
7	1	Adsorption of cytotoxic anti-HLA antibodies with HLA class I immunosorbant beads.	DeVito LD et al.	2186524	Not a renal disease focus
8	1	Clinical and laboratory characterization of 114 cases of Castleman disease patients from a single centre: paraneoplastic pemphigus is an unfavourable prognostic factor.	Dong Y et al.	25824806	Not a renal disease focus
9	1	CYP2C9 genotype modifies activity of the renin-angiotensin-aldosterone system in hypertensive men	Donner KM et al.	19593208	Not a renal disease focus
10	1	TGF-beta1 gene polymorphisms and peritoneal equilibration test results in CAPD patients.	Ebinc FA et al.	18197538	Not a renal disease focus
11	1	A new theory of essential hypertension based on analysis of the association between a polymorphism of the alpha(2)-adrenoceptor at the 10q24-q26 locus and hypertension in African-Americans	Eggers AE	26243176	Not a renal disease focus
12	1	High aldosterone-to-renin variants of CYP11B2 and pregnancy outcome.	Escher G et al.	19151144	Not a renal disease focus
13	1	Cardiovascular effects of aldosterone: insight from adult carriers of mineralocorticoid receptor mutations.	Escoubet B et al.	23852419	Not a renal disease focus

1	Genetic polymorphisms of the renin-angiotensin-aldosterone system and renal insufficiency in essential hypertension	Fabris B et al.	15662219	Not a renal disease focus
1	Recurrence of the R947X mutation in unrelated families with autosomal dominant pseudohypoaldosteronism type 1: evidence for a mutational hot spot in the mineralocorticoid receptor gene.	Fernandes-Rosa FL et al.	16757525	Not a renal disease focus
1	Angiotensin converting enzyme gene I/D polymorphism in essential hypertension and nephroangiosclerosis	Fernandez-Llama P et al.	9607207	Not a renal disease focus
1	Renin-Angiotensin System Polymorphisms and Risk of Hypertension: Influence of Environmental Factors	Forman JP et al.	18550936	Not a renal disease focus
1	CYP3A5 genotype is associated with elevated blood pressure.	Fromm MF et al.	16141800	Not a renal disease focus
1	Associations between the human insulin gene 5' VNTR and clinical variables of the renin-angiotensin system.	Frossard PM et al.	14647005	Not a renal disease focus
1	The interaction of AGT and NOS3 gene polymorphisms with conventional risk factors increases predisposition to hypertension	Gatti RR et al.	22791701	Not a renal disease focus
1	Connexin 43 is not essential for the control of renin synthesis and secretion	Gerl M et al.	24062052	Not a renal disease focus
1	Deletion polymorphism of the angiotensin-converting enzyme gene is independently associated with left ventricular mass and geometric remodeling in systemic hypertension.	Gharavi AG et al.	8677872	Not a renal disease focus
1	A Computational Model of the Circulating Renin-Angiotensin System and Blood Pressure Regulation	Guillaud F et al.	20683640	Not a renal disease focus
1	The presence of PAI-1 4G/5G and ACE DD genotypes increases the risk of early-stage AVF thrombosis in hemodialysis patients.	Gungor Y et al.	21332339	Not a renal disease focus
1	ADAM33: a newly identified gene in the pathogenesis of asthma.	Holgate ST et al.	16257631	Not a renal disease focus
1	Nonmodulation and essential hypertension	Hollenberg NK et al.	16672145	Not a renal disease focus

1	1	Angiotensinogen genotype affects renal and adrenal responses to angiotensin II in essential hypertension	Hopkins PN et al.	11997278	Not a renal disease focus
2	1	Blunted renal vascular response to angiotensin II is associated with a common Variant of the angiotensinogen gene and obesity	Hopkins PN et al.	8728297	Not a renal disease focus
3	1	Genetic variation of the renin-angiotensin system and chronic kidney disease progression in black individuals in the atherosclerosis risk in communities study	Hsu CCC et al.	16396964	Not a renal disease focus
4	1	Unclassified renal cell carcinoma: a clinicopathological, comparative genomic hybridization, and whole-genome exon sequencing study.	Hu ZY et al.	25120763	Not a renal disease focus
5	1	A case control association study of ACE gene polymorphism (I/D) with hypertension in Punjabi population from Faisalabad, Pakistan	Hussain M et al.	29058472	Not a renal disease focus
6	1	Genetic variant of the renin-angiotensin system and prevalence of type 2 diabetes mellitus: a modest but significant effect of aldosterone synthase	Ichikawa M et al.	24549414	Not a renal disease focus
7	1	The cardiovascular system in familial hypocalciuric hypercalcemia: a cross-sectional study on physiological effects of inactivating variants in the calcium-sensing receptor gene	Jakobsen NFB et al.	27418061	Not a renal disease focus
8	1	Genetic variants in five novel loci including CFB and CD40 predispose to chronic hepatitis B.	Jiang DK et al.	25802187	Not a renal disease focus
9	1	The association of the R563Q genotype of the ENaC with phenotypic variation in Southern Africa.	Jones ES et al.	22895453	Not a renal disease focus
10	1	Renin-Angiotensin System Gene Variants and Type 2 Diabetes Mellitus: Influence of Angiotensinogen	Joyce-Tan SM et al.	26682227	Not a renal disease focus
11	1	Comprehensive analysis of the renin-angiotensin gene polymorphisms with relation to hypertension in the Japanese	Kato N et al.	10953993	Not a renal disease focus
12	1	Genetic-Control Of Blood-Pressure And The Angiotensinogen Locus	Kim HS et al.	7708716	Not a renal disease focus
13	1	Effect of the plasminogen-plasmin system on hypertensive renal and cardiac damage	Knier B et al.	21610512	Not a renal disease focus

1	Polymorphism of the aldosterone synthase gene is not associated with progression of diabetic nephropathy, but associated with hypertension in type 2 diabetic patients	Ko GJ et al.	18771471	Not a renal disease focus
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7	1 Haplotype-based case-control study revealing an association between the adrenomedullin gene and proteinuria in subjects with essential hypertension	Kobayashi Y et al.	16097366	Not a renal disease focus
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10	1 Lys(173)Arg and -344T/C variants of CYP11B2 in Japanese patients with low-renin hypertension.	Komiya I et al.	10720581	Not a renal disease focus
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13	1 Molecular-Biology Of Hypertension	Krieger JE et al.	1832415	Not a renal disease focus
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15	1 Beneficial role of D allele in controlling ACE levels: a study among Brahmins of north India	Kumari S et al.	27350671	Not a renal disease focus
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17	1 Juxtaglomerular cell tumor: A morphological, immunohistochemical and genetic study of six cases	Kuroda N et al.	22939575	Not a renal disease focus
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20	1 Angiotensin-converting enzyme gene polymorphism has no influence on the circulating renin-angiotensin-aldosterone system or blood pressure in normotensive subjects	Lachurie ML et al.	7796503	Not a renal disease focus
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23	1 Angiotensinogen and angiotensin II type 1 receptor gene polymorphism in patients with autosomal dominant polycystic kidney disease: Effect on hypertension and ESRD	Lee KB et al.	12950120	Not a renal disease focus
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26	1 ACE gene insertion/deletion polymorphism associated with 1998 World Health Organization definition of metabolic syndrome in Chinese type 2 diabetic patients	Lee YJ et al.	12032106	Not a renal disease focus
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29	1 The brain and salt-sensitive hypertension	Leenen FHH et al.	11884268	Not a renal disease focus
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32	1 Risk given by AGT polymorphisms in inducing susceptibility to essential hypertension among isolated populations from a remote region of China: A case-control study among the isolated populations	Li Q et al.	26391364	Not a renal disease focus
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35	1 Association Between Polymorphisms of ADRBK1 Gene and Plasma Renin Activity in Hypertensive Patients: A Case-Control Study	Li Y et al.	27555048	Not a renal disease focus
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38	1 No Evidence for the Expression of Renin-Angiotensin-Aldosterone System in Otosclerotic Stapes Footplates	Liktor B et al.	23370555	Not a renal disease focus
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1	Papillary renal cell carcinoma: a clinicopathological and whole-genome exon sequencing study.	Liu K et al.	26339402	Not a renal disease focus	
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6	1	Common variation in KLKB1 and essential hypertension risk: tagging-SNP haplotype analysis in a case-control study	Lu XF et al.	17318641	Not a renal disease focus
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11	1	The Connexin40 A96S Mutation Causes Renin-Dependent Hypertension	Lubkemeier I et al.	21597036	Not a renal disease focus
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13	1	Connexin 40 is dispensable for vascular renin cell recruitment but is indispensable for vascular baroreceptor control of renin secretion	Machura K et al.	25241776	Not a renal disease focus
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15	1	The association between vitamin D receptor gene polymorphisms (TaqI and FokI), Type 2 diabetes, and micro-/macrovascular complications in postmenopausal women	Maia J et al.	27536155	Not a renal disease focus
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18	1	Angiotensin-converting enzyme (ACE) gene II genotype protects against the development of diabetic peripheral neuropathy in type 2 diabetes mellitus.	Mansoor Q et al.	22607040	Not a renal disease focus
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20	1	Apparent mineralocorticoid excess: Type I and type II	Mantero F et al.	8732999	Not a renal disease focus
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22	1	Low-salt diet and diuretic effect on blood pressure and organ damage	Manunta P et al.	14684671	Not a renal disease focus
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24	1	Renal genetic mechanisms of essential hypertension	Manunta P et al.	9377722	Not a renal disease focus
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26	1	alpha-Adducin polymorphisms and renal sodium handling in essential hypertensive patients	Manunta P et al.	9607177	Not a renal disease focus
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28	1	Is angiotensin-converting enzyme inhibitors/angiotensin receptor blockers therapy protective against prostate cancer?	Mao YQ et al.	26760503	Not a renal disease focus
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30	1	Detection of the association between a deletion polymorphism in the gene encoding angiotensin I-converting enzyme and advanced diabetic retinopathy	Matsumoto A et al.	11106834	Not a renal disease focus
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32	1	Genotypic interactions of renin-angiotensin system genes with diabetes type 2 in a Tunisian population	Mehri S et al.	20580725	Not a renal disease focus
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1	1	Angiotensin II type 1 receptor gene polymorphism and the response to hyperglycemia in early type 1 diabetes	Miller JA et al.	10969844	Not a renal disease focus
2	1	Renal ACE immunohistochemical localization in NIDDM patients with nephropathy	Mizuiru S et al.	9469501	Not a renal disease focus
3	1	Randomised controlled trial of dual blockade of renin-angiotensin system in patients with hypertension, microalbuminuria, and non-insulin dependent diabetes: the candesartan and Lisinopril microalbuminuria (CALM) study	Mogensen CE et al.	11110735	Not a renal disease focus
4	1	Association of Polymorphisms in Endothelial Nitric Oxide Synthesis and Renin-Angiotensin-Aldosterone System with Developing of Coronary Artery Disease in Bulgarian Patients	Mokretar K et al.	26670794	Not a renal disease focus
5	1	Contribution of angiotensin I converting enzyme gene polymorphism and angiotensinogen gene polymorphism to blood pressure regulation in essential hypertension.	Mondorf UF et al.	9524045	Not a renal disease focus
6	1	Inhibition of tissue angiotensin converting enzyme activity prevents malignant hypertension in TGR(mREN2)27.	Montgomery HE et al.	9797175	Not a renal disease focus
7	1	[Possible pathogenetic role of 11 beta-hydroxysteroid dehydrogenase type 1 (11betaHSD1) gene polymorphisms in arterial hypertension].	Morales MA et al.	18769825	Not a renal disease focus
8	1	Inefficient arterial hypertension control in patients with metabolic syndrome and its link to renin-angiotensin-aldosterone system polymorphisms	Morales-Suarez-Varela MM et al.	21471972	Not a renal disease focus
9	1	Trientine and renin-angiotensin system blockade ameliorate progression of glomerular morphology in hypertensive experimental diabetic nephropathy.	Moya-Olano L et al.	22029676	Not a renal disease focus
10	1	Is the influence of variation in the ACE gene on the prospective risk of Type 2 diabetes in middle-aged men modified by obesity?	Muthumala A et al.	17624939	Not a renal disease focus
11	1	Evaluation Of The Sa Locus In Human Hypertension	Nabika T et al.	7843754	Not a renal disease focus
12	1	Atrial Natriuretic Peptide Locally Counteracts the Deleterious Effects of Cardiomyocyte Mineralocorticoid Receptor Activation	Nakagawa H et al.	25027872	Not a renal disease focus

1	Association between RAS gene polymorphisms (ACE I/D, AGT M235T) and Henoch-Schonlein purpura in a Turkish population	Nalbantoglu S et al.	23151617	Not a renal disease focus
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1	A new mutation, R563Q, of the beta subunit of the epithelial sodium channel associated with low-renin, low-aldosterone hypertension	Rayner BL et al.	12714866	Not a renal disease focus	
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5	1	Network-based regularization for high dimensional SNP data in the case-control study of Type 2 diabetes.	Ren J et al.	28511641	Not a renal disease focus
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10	1	Pigsties near dwellings as a potential risk factor for the prevalence of Japanese encephalitis virus in adult in Shanxi, China.	Ren X et al.	28592296	Not a renal disease focus
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13	1	Association of angiotensinogen M235T and A(-6)G gene polymorphisms with coronary heart disease with independence of essential hypertension: the PROCAGENE study. Prospective Cardiac Gene.	Rodriquez-Perez JC et al.	11345362	Not a renal disease focus
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16	1	A clinical phenotype mimicking essential hypertension in a newly discovered family with Liddle's syndrome.	Rossi E et al.	21525970	Not a renal disease focus
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18	1	Vitamin D Deficiency in the Pathogenesis of Hypertension: Still an Unsettled Question	Rostand SG et al.	24929953	Not a renal disease focus
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20	1	Amelioration of genetic hypertension by suppression of renal G protein-coupled receptor kinase type 4 expression	Sanada H et al.	16636192	Not a renal disease focus
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23	1	Prevalence of angiotensin converting enzyme (ACE) gene insertion/deletion polymorphism in South Indian population with hypertension and chronic kidney disease.	Shanmuganathan R et al.	26440392	Not a renal disease focus
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27	1	Novel SLC12A3 mutations in Chinese patients with Gitelman's syndrome.	Shao L et al.	18287808	Not a renal disease focus
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29	1	Mechanisms of suppression of renal kallikrein activity in low renin essential hypertension and renoparenchymal hypertension.	Shimamoto K et al.	2676859	Not a renal disease focus
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31	1	Systemic nitric oxide clamping in normal humans guided by total peripheral resistance	Simonsen JA et al.	19785629	Not a renal disease focus
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34	1	Exaggerated natriuresis during clamping of systemic NO supply in healthy young men	Simonsen JA et al.	21749320	Not a renal disease focus
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1	Angiotensin-converting enzyme gene I/D polymorphism increases the susceptibility to hypertension and additive diseases: A study on North Indian patients.	Singh M et al.	27030424	Not a renal disease focus	
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6	1	Renal haemodynamics are not related to genotypes in offspring of parents with essential hypertension	Skov K et al.	17083073	Not a renal disease focus
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11	1	Association between renin-angiotensin-aldosterone system-related genes and blood pressure in a Korean population.	Song SB et al.	21342026	Not a renal disease focus
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13	1	Phenotype-genotype interactions on renal function in type 2 diabetes: an analysis using structural equation modelling	Song XY et al.	19479237	Not a renal disease focus
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15	1	Alpha Adducin G460T Variant is a Risk Factor for Hypertension in Tunisian Population	Soualmia H et al.	27349000	Not a renal disease focus
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17	1	Angiotensin II sensitivity in nonpregnant formerly preeclamptic women and healthy parous controls	Spaanderman MEA et al.	15350256	Not a renal disease focus
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19	1	Angiotensin II Type 1A Receptors in Vascular Smooth Muscle Cells Do Not Influence Aortic Remodeling in Hypertension	Sparks MA et al.	21242463	Not a renal disease focus
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21	1	Association between polymorphisms of the renin-angiotensin system and more severe histological forms of lupus nephritis	Sprovieri SRS et al.	16047641	Not a renal disease focus
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23	1	Wilms' tumor protein (-KTS) modulates renin gene transcription	Steege A et al.	18496514	Not a renal disease focus
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27	1	Angiotensin-converting enzyme gene I/D polymorphism in malignant hypertension	Stefansson B et al.	10855732	Not a renal disease focus
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29	1	Transforming growth factor-beta(1) hyperexpression in African-American hypertensives: A novel mediator of hypertension and/or target organ damage	Suthanthiran M et al.	10725360	Not a renal disease focus
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31	1	A functional variant of the NEDD4L gene is associated with beneficial treatment response with β -blockers and diuretics in hypertensive patients.	Svensson-Farbom P et al.	21052022	Not a renal disease focus
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34	1	Genetic variants in hypertensive patients with coronary artery disease and coexisting atheromatous renal artery stenosis	Szperl M et al.	19043368	Not a renal disease focus
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1	Melatonin prevents maternal fructose intake-induced programmed hypertension in the offspring: roles of nitric oxide and arachidonic acid metabolites	Tain YL et al.	24867192	Not a renal disease focus	
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6	1	Genetic variants in the inositol phosphate metabolism pathway and risk of different types of cancer.	Tan J et al.	25683757	Not a renal disease focus
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10	1	Renin in blood vessels in human pulmonary tumors. An immunohistochemical and biochemical study.	Taylor GM et al.	2450464	Not a renal disease focus
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13	1	Incidence of renal failure and nephroprotection by RAAS inhibition in heterozygous carriers of X-chromosomal and autosomal recessive Alport mutations.	Temme J et al.	22237748	Not a renal disease focus
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16	1	Peripheral vascular disease in type 2 diabetic Chinese patients: associations with metabolic indices, concomitant vascular disease and genetic factors	Thomas GN et al.	14632699	Not a renal disease focus
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19	1	Albuminuria and the renin-angiotensin system gene polymorphisms in type-2-diabetic and in normoglycemic hypertensive Chinese	Thomas GN et al.	11200871	Not a renal disease focus
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22	1	Middle cerebral artery stenosis in type II diabetic Chinese patients is associated with conventional risk factors but not with polymorphisms of the renin-angiotensin system genes	Thomas GN et al.	12865608	Not a renal disease focus
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25	1	Genetic variation in the KCNMA1 potassium channel alpha subunit as risk factor for severe essential hypertension and myocardial infarction	Tomas M et al.	18854754	Not a renal disease focus
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28	1	Renal Mechanisms of Association between Fibroblast Growth Factor 1 and Blood Pressure	Tomaszewski M et al.	25918036	Not a renal disease focus
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31	1	Angiotensin II-dependent chronic hypertension and cardiac hypertrophy are unaffected by gp91phox-containing NADPH oxidase	Touyz RM et al.	15753233	Not a renal disease focus
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34	1	Renin Production In Congenital Mesoblastic Nephroma In Comparison With That In Wilms-Tumor	Tsuchida Y et al.	8385325	Not a renal disease focus
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37	1	Genomic association analysis identifies multiple loci influencing antihypertensive response to an angiotensin II receptor blocker.	Turner ST et al.	22566498	Not a renal disease focus
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1	1	Angiotensin-converting enzyme gene polymorphism and vascular manifestations in Korean patients with SLE	Uhm WS et al.	12043886	Not a renal disease focus
2	1	The M235T polymorphism in the angiotensinogen gene is associated with the risk of malignant hypertension in white patients	van den Born BJH et al.	17921816	Not a renal disease focus
3	1	Genetic risk of atherosclerotic renal artery disease - The candidate gene approach in a renal angiography cohort	van Onna M et al.	15326089	Not a renal disease focus
4	1	Activation of the hypothalamic-pituitary-adrenal axis in adults with mineralocorticoid receptor haploinsufficiency.	Walker BR et al.	24712576	Not a renal disease focus
5	1	Liver pyruvate kinase polymorphisms are associated with type 2 diabetes in northern European Caucasians.	Wang H et al.	12196482	Not a renal disease focus
6	1	miR149 rs71428439 polymorphism and risk of clear cell renal cell carcinoma: a case-control study.	Wang Z et al.	25213695	Not a renal disease focus
7	1	Genotype-phenotype analysis of angiotensinogen polymorphisms and essential hypertension: the importance of haplotypes	Watkins WS et al.	19770777	Not a renal disease focus
8	1	Angiotensin-converting enzyme gene does not contribute to genetic susceptibility to systemic sclerosis in European Caucasians.	Wipff J et al.	19132786	Not a renal disease focus
9	1	Androgen-Sensitive Hypertension Associates with Upregulated Vascular CYP4A12-20-HETE Synthase	Wu CC et al.	23641057	Not a renal disease focus
10	1	Urinary UMOD excretion and chronic kidney disease in gout patients: cross-sectional case-control study.	Wu CH et al.	21332338	Not a renal disease focus
11	1	Unknown face of known drugs - what else can we expect from angiotensin converting enzyme inhibitors?	Wzgarda A et al.	28087255	Not a renal disease focus
12	1	Malignant Nephrosclerosis in a Patient with Familial Mediterranean Fever	Yamanouchi M et al.	26466703	Not a renal disease focus
13	1	Gene polymorphism of vascular endothelial growth factor-1154 G > A is associated with hypertensive nephropathy in a Hispanic population	Yang JW et al.	21080079	Not a renal disease focus
14	1	TBX6 compound inheritance leads to congenital vertebral malformations in humans and mice.	Yang N et al.	30307510	Not a renal disease focus

1	Identification of diuretic non-responders with poor long-term clinical outcomes: a 1-year follow-up of 176 non-azotaemic cirrhotic patients with moderate ascites	Yang YY et al.	21692745	Not a renal disease focus
1	Renal redox-sensitive signaling, but not blood pressure, is attenuated by Nox1 knockout in angiotensin II-dependent chronic hypertension	Yogi A et al.	18195161	Not a renal disease focus
1	Angiotensin II type 2 receptor gene is not responsible for familial vesicoureteral reflux	Yoneda A et al.	12187255	Not a renal disease focus
1	Angiotensinogen T235 and ACE insertion/deletion polymorphisms associated with albuminuria in Chinese type 2 diabetic patients	Young RP et al.	9540028	Not a renal disease focus
1	Common genetic variants in the chromogranin a promoter are associated with renal injury in IgA nephropathy patients with malignant hypertension.	Yu L et al.	20113265	Not a renal disease focus
1	Frequencies Of Variants Of Candidate Genes In Different Age-Groups Of Hypertensives	Zee RY et al.	7882587	Not a renal disease focus
1	Association of angiotensin-converting enzyme gene polymorphisms with Crohn's disease in a Chinese Han population	Zhou J et al.	26823847	Not a renal disease focus
1	Molecular variants of the sodium/hydrogen exchanger type 3 gene and essential hypertension	Zhu HD et al.	15201541	Not a renal disease focus
1	[Renin-angiotensin system genes in chronic glomerulonephritis].	Buraczynska M et al.	11865575	Not English or Spanish
1	[Association of the renin-angiotensin system gene polymorphism with nephropathy in type II diabetes].	Buraczynska M et al.	12476891	Not English or Spanish
1	[Genetic predisposition to systemic complications of arterial hypertension in maintenance haemodialysis patients].	Bzoma B et al.	19112833	Not English or Spanish
1	[Arterial hypertension and chronic hemodialysis].	Ermolenko VM et al.	7700	Not English or Spanish
1	[Mutations in NPHS2 in familial steroid-resistant nephrotic syndrome in Southern Chinese Han ethnic group].	Fu R et al.	19099831	Not English or Spanish

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1	[Is PstI polymorphism of the angiotensin I converting enzyme gene associated with nephropathy development in non-insulin-dependent diabetes mellitus (preliminary study)].	Grzeszczak W et al.	9499204	Not English or Spanish
1	[Angiotensin-converting enzyme gene polymorphism and the clinical pathological features and progression in lupus nephritis].	Guan T et al.	10436947	Not English or Spanish
1	[Angiotensin-converting enzyme insertion/deletion polymorphism and blood pressure regulation in type 2 diabetic patients].	Krajina-Andricevic M et al.	23120809	Not English or Spanish
1	[Relationship between I/D polymorphism of angiotensin I converting enzyme gene and microvascular complications in type 2 diabetic patients].	Moleda P et al.	17941464	Not English or Spanish
1	[Genomics of type 1 diabetes mellitus and its late complications]	Nosikov VV	15042845	Not English or Spanish
1	[Correlation between HLA-DQA1 allele and anaphylactoid purpura in juvenile Hans residing in Inner Mongolia].	Ren S et al.	11836690	Not English or Spanish
1	[Correlation of cyclin D1 overexpression to mutations of von hippel-lindau gene in renal clear cell carcinoma].	Ren YY et al.	16480581	Not English or Spanish
1	[Morphofunctional characteristics of endocrine nephropathy in primary aldosteronism].	Sokolova RI et al.	2678677	Not English or Spanish
1	[Gene mutation analysis of X-linked hypophosphatemic rickets].	Song Y et al.	24229582	Not English or Spanish
1	[A novel COL4A5 splicing mutation causing Alport syndrome in a Chinese family].	Tang Z et al.	19065523	Not English or Spanish
1	[Association of single nucleotide polymorphism of megsin gene with IgA nephropathy].	Wang ZH et al.	16796905	Not English or Spanish
1	[Study on the association between the polymorphism of HLA-DQA1 alleles and type 2 diabetes in Yunnan Han nationality].	Yang HY et al.	15192842	Not English or Spanish
1	DD Genotype of ACE Gene in Boys: May it be a Risk Factor for Minimal Change Nephrotic Syndrome?	Alasehirli B et al.	22017506	Paediatric individuals
1	Angiotensin-converting enzyme gene insertion/deletion polymorphism and renal damage in childhood uropathies	Al-Eisa A et al.	10986863	Paediatric individuals

1	Angiotensin converting enzyme gene polymorphism in Asian Indian children with congenital uropathies	Bajpai M et al.	14713838	Paediatric individuals
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6	1 Posterior urethral valves: Preliminary observations on the significance of plasma renin activity as a prognostic marker	Bajpai M et al.	15643266	Paediatric individuals
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9	1 Nitric oxide synthase gene polymorphisms in children with primary nocturnal enuresis: a preliminary study.	Balat A et al.	17365914	Paediatric individuals
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11	1 MCP1 2518 A/G polymorphism affects progression of childhood focal segmental glomerulosclerosis.	Besbas N et al.	26335292	Paediatric individuals
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13	1 Heterozygous Loss-of-Function SEC61A1 Mutations Cause Autosomal-Dominant Tubulo-Interstitial and Glomerulocystic Kidney Disease with Anemia	Bolar NA et al.	27392076	Paediatric individuals
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15	1 Donor and recipient ACE I/D genotype are associated with loss of renal function in children following renal transplantation	Buscher R et al.	21309964	Paediatric individuals
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17	1 ACE gene polymorphism in Turkish children with nephrotic syndrome.	Celik US et al.	16825089	Paediatric individuals
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19	1 Increased HLA- A*11 in Chinese children with steroid-responsive nephrotic syndrome.	Cheung W et al.	11956863	Paediatric individuals
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21	1 Liddle syndrome: clinical and genetic profiles.	Cui Y et al.	27896928	Paediatric individuals
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23	1 NPHS2 variation in Chinese southern infants with late steroid-resistant nephrotic syndrome.	Dai Y et al.	25112471	Paediatric individuals
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25	1 Earlier Onset of Complications in Youth With Type 2 Diabetes	Dart AB et al.	24130346	Paediatric individuals
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27	1 ACE gene polymorphism in Egyptian children with idiopathic nephrotic syndrome	Fahmy ME et al.	18792483	Paediatric individuals
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29	1 Genetic polymorphisms of the renin-angiotensin system and the outcome of focal segmental glomerulosclerosis in children	Frishberg Y et al.	9853248	Paediatric individuals
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31	1 Angiotensinogen gene T235 variant: a marker for the development of persistent microalbuminuria in children and adolescents with type 1 diabetes mellitus	Gallego PH et al.	18413222	Paediatric individuals
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1	Autosomal dominant pseudohypoaldosteronism type 1: Mechanisms, evidence for neonatal lethality, and phenotypic expression in adults	Geller DS et al.	16611713	Paediatric individuals	
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4	1	The role of vitamin D receptor gene polymorphisms in Turkish infants with urolithiasis.	Goknar N et al.	26908058	Paediatric individuals
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6	1	Risk factors for loss of residual renal function in children treated with chronic peritoneal dialysis	Ha IS et al.	25874598	Paediatric individuals
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8	1	Implication of genetic variations in congenital obstructive nephropathy	Hahn H et al.	16133060	Paediatric individuals
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10	1	ACE gene polymorphism and renal scarring in primary vesicoureteric reflux	Haszon I et al.	12478352	Paediatric individuals
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12	1	Impact of ACE I/D gene polymorphism on congenital renal malformations	Hohenfellner K et al.	11354781	Paediatric individuals
13					
14	1	Impact of common functional polymorphisms in renin angiotensin system genes on the risk of renal parenchymal scarring following childhood urinary tract infection	Hussein A et al.	25939993	Paediatric individuals
15					
16	1	An insertion/deletion ACE polymorphism and kidney size in Polish full-term newborns	Kaczmarczyk M et al.	22674971	Paediatric individuals
17					
18	1	ACE and AT1 receptor gene polymorphisms and renal scarring in urinary bladder dysfunction	Kostic M et al.	15179569	Paediatric individuals
19					
20	1	Renal tubular dysgenesis, a not uncommon autosomal recessive disorder leading to oligohydramnios: Role of the Renin-Angiotensin system.	Lacoste M et al.	16790508	Paediatric individuals
21					
22	1	Renin-angiotensin system gene polymorphisms in children with Henoch-Schonlein purpura in West China	Liu DS et al.	20702504	Paediatric individuals
23					
24	1	Renin-angiotensin system polymorphisms in Taiwanese primary vesicoureteral reflux	Liu KP et al.	15045574	Paediatric individuals
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26	1	Polymorphisms of renin-angiotensin system genes in childhood IgA nephropathy	Maruyama K et al.	11354780	Paediatric individuals
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28	1	Association of angiotensin type 2 receptor gene polymorphisms with ureteropelvic junction obstruction in Brazilian patients	Miranda DM et al.	24995698	Paediatric individuals
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1	Association of angiotensin converting enzyme and angiotensin type 2 receptor gene polymorphisms with renal damage in posterior urethral valves	Narasimhan KL et al.	WOS:000290840100006	Paediatric individuals	
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8	1	Prioritization and burden analysis of rare variants in 208 candidate genes suggest they do not play a major role in CAKUT	Nicolaou N et al.	26489027	Paediatric individuals
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10	1	ACE I/D gene polymorphism in primary FSGS and steroid-sensitive nephrotic syndrome	Oktem F et al.	14986085	Paediatric individuals
11					
12	1	Implications of certain genetic polymorphisms in scarring in vesicoureteric reflux: importance of ACE polymorphism.	Ozen S et al.	10401028	Paediatric individuals
13					
14	1	Renin-angiotensin system gene polymorphisms: association with susceptibility to Henoch-Schonlein purpura and renal involvement	Ozkaya O et al.	16521052	Paediatric individuals
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16	1	Renin-angiotensin gene polymorphism in children with uremia and essential hypertension	Papp F et al.	12579405	Paediatric individuals
17					
18	1	A rare case of juvenile hypertension: coexistence of type 2 multiple endocrine neoplasia -related bilateral pheochromocytoma and reninoma in a young patient with ACE gene polymorphism	Paragliola RM et al.	26084817	Paediatric individuals
19					
20	1	Renin-angiotensin system polymorphisms and renal scarring	Pardo R et al.	12579398	Paediatric individuals
21					
22	1	Low renin-angiotensin system activity gene polymorphism and dysplasia associated with posterior urethral valves	Peruzzi L et al.	16006956	Paediatric individuals
23					
24	1	Effect of angiotensin-converting enzyme gene insertion/deletion polymorphism on steroid resistance in Egyptian children with idiopathic nephrotic syndrome.	Saber-Ayad M et al.	20418353	Paediatric individuals
25					
26	1	ACE gene insertion/deletion polymorphism in childhood idiopathic nephrotic syndrome	Serdaroglu E et al.	16208534	Paediatric individuals
27					
28	1	Effects of genetic polymorphisms of the renin-angiotensin system in children with nephrotic syndrome	Tabel Y et al.	16525944	Paediatric individuals
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30	1	Genetic risk factors in typical haemolytic uraemic syndrome	Taranta A et al.	19110485	Paediatric individuals
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1	1	The juxtaglomerular apparatus in Bartter's syndrome and related tubulopathies. An immunocytochemical and electron microscopic study.	Taugner R et al.	3128915	Paediatric individuals
2	1	Mapping candidate regions and genes for congenital anomalies of the kidneys and urinary tract (CAKUT) by array-based comparative genomic hybridization	Weber S et al.	20605837	Paediatric individuals
3	1	Genetic polymorphism of the renin-angiotensin system on the development of primary vesicoureteral reflux	Yim HE et al.	14764974	Paediatric individuals
4	1	The association of endothelial nitric oxide synthase gene single nucleotide polymorphisms with paediatric systemic lupus erythematosus	Zhu J et al.	29465350	Paediatric individuals
5	1	Add-on angiotensin receptor blockade with maximized ACE inhibition	Agarwal R	11380832	Pharmaceutical drug focus
6	1	DPP-4 Inhibition on Top of Angiotensin Receptor Blockade Offers a New Therapeutic Approach for Diabetic Nephropathy	Alter ML et al.	23171828	Pharmaceutical drug focus
7	1	Effects of losartan and enalapril on high-sensitivity C-reactive protein and total antioxidant in renal transplant recipients with renin-angiotensin system polymorphisms	Argani H et al.	18261537	Pharmaceutical drug focus
8	1	Losartan decreases plasma levels of TGF-beta 1 in transplant patients with chronic allograft nephropathy	Campistol JM et al.	10432413	Pharmaceutical drug focus
9	1	Captopril enhances transforming growth factor (TGF)-beta1 expression in peripheral blood mononuclear cells: a mechanism independent from angiotensin converting enzyme inhibition? A study in cyclosporine-treated kidney-transplanted patients.	Di Paolo S et al.	12499886	Pharmaceutical drug focus
10	1	Thiazolidinediones and the renal and hormonal response to water immersion-induced volume expansion in type 2 diabetes mellitus	Goenka N et al.	18230694	Pharmaceutical drug focus
11	1	The influence of renin-angiotensin system genotypes on the antiproteinuric response to high doses of olmesartan in non-diabetic protein uric nephropathies	Goyache-Goni B et al.	24241364	Pharmaceutical drug focus
12	1	Antiproteinuric effect of candesartan cilexetil in Japanese subjects with type 2 diabetes and nephropathy	Haneda M et al.	15364166	Pharmaceutical drug focus

1	Renal implications of angiotensin receptor blockers	Hollenberg NK	11459212	Pharmaceutical drug focus
1	The influence of the ACE (I/D) polymorphism on systemic and renal vascular responses to angiotensins in normotensive, normoalbuminuric Type 1 diabetes mellitus	Luik PT et al.	12856080	Pharmaceutical drug focus
1	Application of Direct Renin Inhibition to Chronic Kidney Disease	Mende CW	20490905	Pharmaceutical drug focus
1	Pentoxifylline for Renoprotection in Diabetic Nephropathy: the PREDIAN study. Rationale and basal results	Navarro-Gonzalez JF et al.	21144773	Pharmaceutical drug focus
1	Renin-angiotensin system polymorphisms and hemoglobin level in renal allografts: A comparative study between losartan and enalapril	Noroozianavval M et al.	17524880	Pharmaceutical drug focus
1	Enalapril and losartan affect lipid peroxidation in renal transplant recipients with renin-angiotensin system polymorphisms	Rashtchizadeh N et al.	17222813	Pharmaceutical drug focus
2	Relationship between the renin-angiotensin system genes and diabetic nephropathy in the Chinese.	Wu S et al.	11776100	No data
3	Plasma renin and prorenin and renin gene variation in patients with insulin-dependent diabetes mellitus and nephropathy.	Deinum J et al.	10462269	< 3 populations reported per SNP
3	Renin-angiotensin-aldosterone system genotypes and haplotypes affect the susceptibility to nephropathy in type 2 diabetes patients	Mtiraoui N et al.	21421655	< 3 populations reported per SNP
3	Chronic renal insufficiency among Asian Indians with type 2 diabetes: I. Role of RAAS gene polymorphisms	Prasad P et al.	16672053	< 3 populations reported per SNP
3	Renin gene rs1464816 polymorphism contributes to chronic kidney disease progression in ADPKD.	Ramanathan G et al.	26753721	< 3 populations reported per SNP
3	M235T polymorphism in the AGT gene and A/G(I8-83) substitution in the REN gene correlate with end-stage renal disease	Sarkar S et al.	25660845	< 3 populations reported per SNP

Supplementary Table S4: Data included in quantitative analysis for ACE

Author	PMID/ WOS ID	Ethnicity	SNP	Cases				Controls			
				Definition	N	I Frequency	D Frequency	Definition	N	I Frequency	D Frequency
Anbazhagan K et al.	19520069	SAS	Ins/Del	CKD	118	124	112	Healthy	98	99	97
Chen WJ et al.	24907556	SAS	Ins/Del	CKD	233	314	152	Healthy	449	617	281
Nagamani S et al.	None	SAS	Ins/Del	CKD	147	152	142	Healthy	221	195	227
Shanmuganathan R et al.	26440392	SAS	Ins/Del	CKD	30	10	50	Healthy	30	55	5
Ali A et al.	21421653	EAS	Ins/Del	ESRD	190	219	161	Healthy	190	262	118
Kawada N et al.	00007188 0400005	EAS	Ins/Del	ESRD	216	280	152	Healthy	208	264	152
Su SL et al.	24977181	EAS	Ins/Del	ESRD	647	792	502	Healthy	644	859	429
Tang FY et al.	18629615	EAS	Ins/Del	ESRD	153	100	206	Healthy	148	138	158
Wang AY et al.	12675870	EAS	Ins/Del	ESRD	246	316	176	Healthy	183	230	136
Yang HY et al.	23477970	EAS	Ins/Del	ESRD	683	833	533	Healthy	653	867	439
Buraczynska M et al.	16384824	EUR	Ins/Del	ESRD	745	688	802	Healthy	520	492	548
Dixit M et al.	12571380	EUR	Ins/Del	ESRD	26	32	20	Healthy	22	17	27
Losito A et al.	12454231	EUR	Ins/Del	ESRD	160	135	185	Healthy	169	128	210
McLaughlin KJ et al.	8901844	EUR	Ins/Del	ESRD	460	654	990	Healthy	371	353	389
Nicod J et al.	11918733	EUR	Ins/Del	ESRD	260	282	238	Healthy	260	261	259
Ortiz MA et al.	15012717	EUR	Ins/Del	ESRD	117	68	166	Healthy	129	80	178
Schmidt A et al.	8785402	EUR	Ins/Del	ESRD	106	105	107	Healthy	95	80	110
van der Sman-de Beer F et al.	16221224	EUR	Ins/Del	ESRD	415	400	430	Healthy	472	459	485
Aucella F et al.	12748347	EUR	Ins/Del	ESRD	461	315	607	Healthy	1307	916	1698
Abuaisha AM et al.	00043304 9000003	ME	Ins/Del	ESRD	86	37	135	Healthy	100	50	150
Rahimi Z et al.	28447048	ME	Ins/Del	ESRD	99	64	126	Healthy	117	89	145
Zaare Nahandi et al.	28270648	ME	Ins/Del	ESRD	30	23	37	Healthy	27	21	33

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4	Guo Y et al.	00038665 3400063	EAS	Ins/Del	IgAN	45	54	36	Healthy	45	42	48
5	Huang HD et al.	21163122	EAS	Ins/Del	IgAN	130	155	105	Healthy	120	168	72
6	Jung ES et al.	21150220	EAS	Ins/Del	IgAN	261	298	224	Healthy	300	360	240
7	Lau YK et al.	15153745	EAS	Ins/Del	IgAN	118	154	82	Healthy	94	137	51
8	Suzuki H et al.	15481848	EAS	Ins/Del	IgAN	319	378	260	Healthy	270	328	212
9	Yoon HJ et al.	12220450	EAS	Ins/Del	IgAN	191	204	178	Healthy	233	268	198
10	Yorioka T et al.	8529313	EAS	Ins/Del	IgAN	48	67	29	Healthy	104	139	67
11	Yoshida H et al.	7593601	EAS	Ins/Del	IgAN	53	57	49	Healthy	46	62	30
12	Burg M et al.*	9352153	EUR	Ins/Del	IgAN	70	26	28	Healthy	60	60	60
13	Drouet M et al.	12005241	EUR	Ins/Del	IgAN	125	78	172	Healthy	83	54	100
14	Harden PN et al.	7791440	EUR	Ins/Del	IgAN	100	79	121	Healthy	98	76	120
15	Pawlik M et al.*	23681285	EUR	Ins/Del	IgAN	31	25	37	Healthy	187	180	194
16	Pei Y et al.	9259580	EUR	Ins/Del	IgAN	168	145	191	Healthy	100	91	109
17	Schmidt S et al. (B)	7485124	EUR	Ins/Del	IgAN	204	168	240	Healthy	234	197	271
18	Stratta P et al.	10352195	EUR	Ins/Del	IgAN	81	62	100	Healthy	50	38	62
19	Burg M et al.*	9352153	EUR	Ins/Del	Primary GN	46	44	48	Healthy	60	60	60
20	Pawlik M et al.*	23681285	EUR	Ins/Del	Primary GN	109	101	117	Healthy	187	180	194
21	Stratta P et al.	14767013	EUR	Ins/Del	Primary GN	117	96	138	Organ donors	171	134	208
22	Zsom M et al.	22111818	EUR	Ins/Del	Primary GN	73	62	84	Healthy	200	198	202
23	Beige J et al.	9259361	EUR	Ins/Del	RTx recipients	269	251	287	Kidney Donor	269	244	294
24	El-Essawy AB et al.	11926202	EUR	Ins/Del	RTx recipients	294	246	342	Healthy	181	170	192
25	Hueso M et al.	15284309	EUR	Ins/Del	RTx recipients	180			Healthy & cadaveric renal	113		
26							122	238		96		130
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Stratta P et al.	19034872	EUR	Ins/Del	RTx recipients	169	122	216	Healthy	169	112	226
Viklický O et al.	11239522	EUR	Ins/Del	RTx recipients	30	28	32	Healthy	653	599	707
Barnas U et al.	9084972	EUR	Ins/Del	T1DN	63	45	55	T1DM	59	51	29
Chowdhury TA et al.	8877296	EUR	Ins/Del	T1DN	242	204	280	T1DM	166	143	189
Currie D et al.	20854388	EUR	Ins/Del	T1DN	718	603	777	T1DM	749	696	764
De Cosmo S et al.	10495473	EUR	Ins/Del	T1DN	175	125	225	T1DM	136	89	183
Demurov LM et al.	A1997XE9 8500008	EUR	Ins/Del	T1DN	56	35	77	T1DM	76	72	80
Hadjadj S et al.	11181802	EUR	Ins/Del	T1DN	6	4	8	T1DM	251	208	294
Hibberd ML et al.	9025006	EUR	Ins/Del	T1DN	72	60	84	T1DM	86	57	115
Marre M et al.	8314010	EUR	Ins/Del	T1DN	62	43	81	T1DM	62	58	66
Ringel J et al.*	9049480	EUR	Ins/Del	T1DN	134	130	138	T1DM	226	208	244
Schmidt S et al. (A)	7783416	EUR	Ins/Del	T1DN	114	86	142	T1DM	133	101	165
Shestakova MV et al.	00024241 0600010	EUR	Ins/Del	T1DN	63	65	61	T1DM	66	78	54
Tarnow L et al.	7729604	EUR	Ins/Del	T1DN	198	175	221	T1DM	190	169	211
van Ittersum FJ et al.	10862638	EUR	Ins/Del	T1DN	30	33	27	T1DM	188	192	184
Walder B et al.	None	EUR	Ins/Del	T1DN	55	49	61	T1DM	44	40	48
Fujisawa T et al.	7555560	EAS	Ins/Del	T2DN	54	71	37	T2DM	35	46	24
Ha SK et al.	12722028	EAS	Ins/Del	T2DN	140	132	148	T2DM	99	123	75
Hsieh MC et al.	10862639	EAS	Ins/Del	T2DN	179	219	139	T2DM	157	222	92
Mizuri S et al.	7477652	EAS	Ins/Del	T2DN	80	72	88	T2DM	31	33	29
Nakajima S et al.	8941475	EAS	Ins/Del	T2DN	54	67	41	T2DM	41	55	27
Ohno T et al.	8596493	EAS	Ins/Del	T2DN	25	28	22	T2DM	53	81	25
Shin Shin Y et al.	15331206	EAS	Ins/Del	T2DN	82	112	52	T2DM	59	70	48
Thomas GN et al.	11200871	EAS	Ins/Del	T2DN	51	72	30	T2DM	255	346	164
Wang M et al.	26973293	EAS	Ins/Del	T2DN	106	78	56	T2DM	741	1020	438
Wu SH et al.	11776100	EAS	Ins/Del	T2DN	71	75	67	T2DM	41	58	24

Young RP et al.	9540028	EAS	Ins/Del	T2DN	20	27	13	T2DM	54	72	36
Dudley CR et al.	8587251	EUR	Ins/Del	T2DN	163	246	288	T2DM	267	246	288
Fradin S et al.	11938025	EUR	Ins/Del	T2DN	39	94	142	T2DM	118	94	142
Ng DP et al.	16936219	EUR	Ins/Del	T2DN	291	147	187	T2DM	167	147	187
Nikzamid A et al.	19502259	EUR	Ins/Del	T2DN	48	159	131	T2DM	145	159	131
Schmidt S et al. (B)	9269698	EUR	Ins/Del	T2DN	311	278	416	T2DM	347	278	416
Al-Harbi EM et al.	21207118	ME	Ins/Del	T2DN	110	63	157	T2DM	196	125	267
Alharbi SA et al.	00041506 3100003	ME	Ins/Del	T2DN	61	31	91	T2DM	61	47	75
Araz M et al.	11640993	ME	Ins/Del	T2DN	62	52	72	T2DM	123	103	143
El-Baz R et al.	22554825	ME	Ins/Del	T2DN	102	66	138	T2DM	100	82	118
Ergen HA et al.	15365253	ME	Ins/Del	T2DN	25	21	29	T2DM	50	31	69
Eroglu Z et al.	18413162	ME	Ins/Del	T2DN	46	43	49	T2DM	56	50	62
Felehgari V et al.	20830509	ME	Ins/Del	T2DN	68	42	94	T2DM	72	60	84
Sancakdar E et al.	00036754 1400005	ME	Ins/Del	T2DN	194	180	208	T2DM	100	62	138
Ahluwalia TS et al.	19108684	SAS	Ins/Del	T2DN	240	152	328	T2DM	200	215	
Kumar R et al.	23846111	SAS	Ins/Del	T2DN	407	448	366	T2DM	185	190	
Movva S et al.	17616353	SAS	Ins/Del	T2DN	174	182	166	T2DM	175	222	
Naresh VV et al.	20535249	SAS	Ins/Del	T2DN	30	19	41	T2DM	30	35	
Shaikh R et al.	00031205 3000001	SAS	Ins/Del	T2DN	168	134	202	T2DM	296	394	
Vishwanathan V et al.	11867868	SAS	Ins/Del	T2DN	86	79	93	T2DM	23	28	
Doi Y et al.	8720609	EAS	Ins/Del	T2DN- ESRD	100	115	85	T2DM	124	168	
Jayapalan JJ et al.	21031056	EAS	Ins/Del	T2DN- ESRD	127	163	91	T2DM	81	93	
Lu M et al.	27633502	EAS	Ins/Del	T2DN- ESRD	210	238	182	T2DM	222	307	
Park HC et al.	16385653	EAS	Ins/Del	T2DN- ESRD	103	103	103	T2DM	88	111	

Taniwaki H et al.	11522715	EAS	Ins/Del	T2DN-ESRD	42	53	31	T2DM	69	88	
Grzeszczak W et al.	9727375	EUR	Ins/Del	T2DN-ESRD	127	128	126	T2DM	254	244	
Ringel J et al.*	9049480	EUR	Ins/Del	T2DN-ESRD	161	150	172	T2DM	140	141	
Schmidt S et al. (A)	9075119	EUR	Ins/Del	T2DN-ESRD	61	29	93	T2DM	347	416	

*Burg M et al., Pawlik M et al., and Ringel J et al., are included twice as these articles contained two phenotypic comparisons

Abbreviations: EAS, East Asian; EUR, European; ME, Middle Eastern; SAS, South Asian; CKD, Chronic Kidney Disease; ESRD, End-Stage Renal Disease; IgAN, IgA Nephropathy; GN, Glomerulonephritis; RTx, Renal Transplant; T1DM, Type 1 Diabetes Mellitus; T1DN, Type 1 Diabetic Nephropathy; T2DM, Type 2 Diabetes Mellitus; T2DN, Type 2 Diabetic Nephropathy.

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Supplementary Table S5: Data included in quantitative analysis for *AGT*

Author	PMID/ WOS ID	Ethnicity	SNP	Cases				Controls			
				Definition	N	T Allele Frequency	C Allele Frequency	Definition	N	T Allele Frequency	C Allele Frequency
Beige J et al.	8856207	EUR	rs699	ESRD	269	285	253	Healthy	269	307	229
Buraczynska M et al.	16384824	EUR	rs699	ESRD	745	734	756	Healthy	520	564	476
Losito A et al.	12454231	EUR	rs699	ESRD	160	165	155	Healthy	169	190	148
Lovati E et al.	11422735	EUR	rs699	ESRD	260	299	221	Healthy	327	393	261
Doria A et al.	8621207	EUR	rs699	T1DN	139	158	120	T1DM	75	96	54
Fogarty DG et al.	8772723	EUR	rs699	T1DN	95	114	76	T1DM	100	129	71
Möllsten A et al.	18413189	EUR	rs699	T1DN	73	62	34	T1DM	197	220	174
Ringel J et al.	9049480	EUR	rs699	T1DN	134	145	123	T1DM	226	257	195
Schmidt S et al.*	8918618	EUR	rs699	T1DN	108	121	95	T1DM	120	132	108
van Ittersum FJ et al.	10862638	EUR	rs699	T1DN	30	31	29	T1DM	188	238	138
Walder B et al.	None	EUR	rs699	T1DN	55	60	50	T1DM	44	63	25
Ohno T et al.	8596493	EAS	rs699	T2DN	25	16	34	T2DM	53	25	81
Oue T et al.	10580616	EAS	rs699	T2DN	27	6	36	T2DM	40	13	47
Thomas GN et al.	11200871	EAS	rs699	T2DN	51	18	84	T2DM	255	79	431
Wang M et al.	26973293	EAS	rs699	T2DN	189	19	175	T2DM	473	154	792
Wu SH et al.	11776100	EAS	rs699	T2DN	71	21	121	T2DM	41	26	56
Young RP et al.	9540028	EAS	rs699	T2DN	20	4	36	T2DM	54	25	83
Fradin S et al.	11938025	EUR	rs699	T2DN	39	45	33	T2DM	118	139	97
Freire MB et al.	9535411	EUR	rs699	T2DN	117	134	96	T2DM	125	148	88
Makuc J et al.	28488548	EUR	rs699	T2DN	276	294	258	T2DM	375	394	356
Schmidt S et al.*	8918618	EUR	rs699	T2DN	127	149	105	T2DM	107	117	97
Zychma MJ et al.	11096141	EUR	rs699	T2DN	127	133	121	T2DM	243	242	244
Eroglu Z et al.	18413162	ME	rs699	T2DN	46	48	44	T2DM	56	62	50
Reis KA et al.	21500980	ME	rs699	T2DN	108	114	102	T2DM	111	89	133
Sancakdar E et al.	000367541 400005	ME	rs699	T2DN	194	189	199	T2DM	100	95	105

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Gao J et al.	26588355	EAS	rs699	IgAN	351	144	556	Healthy	310	125	495
Guo Y et al.	000386653 400063	EAS	rs699	IgAN	45	19	71	Healthy	45	16	74
Huang HD et al.	21163122	EAS	rs699	IgAN	130	35	225	Healthy	120	40	200
Kim SM et al.	19729965	EAS	rs699	IgAN	238	89	387	Healthy	300	115	485
Lau YK et al.	15153745	EAS	rs699	IgAN	118	27	209	Healthy	94	31	157
Kawada N et al.	000071880 400005	EAS	rs699	ESRD	216	91	333	Healthy	208	64	340
Su SL et al.	29296205	EAS	rs699	ESRD	634	194	1074	Healthy	739	279	1478
Wang AY et al.	12675870	EAS	rs699	ESRD	246	76	416	Healthy	183	64	302

*Schmidt S et al., is included twice as the article contained two phenotypic comparisons.

Abbreviations: EAS, East Asian; EUR, European; ME, Middle Eastern; ESRD, End-Stage Renal Disease; IgAN, IgA Nephropathy; T1DM, Type 1 Diabetes Mellitus; T1DN, Type 1 Diabetic Nephropathy; T2DM, Type 2 Diabetes Mellitus; T2DN, Type 2 Diabetic Nephropathy.

Supplementary Table S6: Data included in quantitative analysis for *AGTR1*

Author	PMID	Ethnicity	SNP	Definition	Cases			Controls			
					N	A Allele Frequency	C Allele Frequency	Definition	N	A Allele Frequency	C Allele Frequency
Gao J et al.	26588355	EAS	rs5186	IgAN	351	659	43	Healthy	310	577	43
Huang HD et al.	21163122	EAS	rs5186	IgAN	130	243	17	Healthy	120	220	20
Kim SM et al.	19729965	EAS	rs5186	IgAN	238	452	24	Healthy	300	576	24
Lau YK et al.	15153745	EAS	rs5186	IgAN	118	227	9	Healthy	94	178	10
Currie D et al.	20854388	EUR	rs5186	T1DN	718	1029	385	T1DM	749	1052	418
Doria A et al.	9389421	EUR	rs5186	T1DN	73	99	47	T1DM	79	119	39
Möllsten A et al.	18413189	EUR	rs5186	T1DN	72	78	18	T1DM	197	290	104
Savage DA et al.	10328465	EUR	rs5186	T1DN	95	136	54	T1DM	97	137	57
Tarnow L et al.	8671962	EUR	rs5186	T1DN	198	287	109	T1DM	190	274	106
van Ittersum FJ et al.	10862638	EUR	rs5186	T1DN	30	47	13	T1DM	188	238	138
Thomas GN et al.	11200871	EAS	rs5186	T2DN	51	99	3	T2DM	255	483	27
Wu SH et al.	11776100	EAS	rs5186	T2DN	71	127	15	T2DM	41	74	8
Young RP et al.	9540028	EAS	rs5186	T2DN	20	38	2	T2DM	54	103	5
Ahluwalia TS et al.	19108684	SAS	rs5186	T2DN	240	320	160	T2DM	255	381	129
Prasad P et al.	16672053	SAS	rs5186	T2DN	196	360	26	T2DM	225	417	33
Shah VN et al.	23081748	SAS	rs5186	T2DN	596	789	403	T2DM	566	840	282

Abbreviations: EAS, East Asian; EUR, European; SAS, South Asian; IgAN, IgA Nephropathy; T1DM, Type 1 Diabetes Mellitus; T1DN, Type 1 Diabetic Nephropathy; T2DM, Type 2 Diabetes Mellitus; T2DN, Type 2 Diabetic Nephropathy.

Supplementary Table S7. Included studies not complying with Hardy Weinberg equilibrium in cases or controls

Gene	Author	PMID/ WODS ID	Ethnicity	SNP	Cases		Controls	
					Definition	P value (where significant)	Definition	P value (where significant)
ACE	Jung ES et al.	21150220	EAS	Ins/Del	IgAN		Healthy	0.016
	Shanmuganathan R et al.	26440392	SAS	Ins/Del	CKD	1.31x10 ⁻⁰⁴	Healthy	1.9x10 ⁻⁰⁵
	Tang FY et al.	18629615	EAS	Ins/Del	ESRD	1.8x10 ⁻⁰⁵	Healthy	1x10 ⁻⁰⁶
	Nicod J et al.	11918733	EUR	Ins/Del	ESRD	0.0008	Healthy	0.004
	McLaughlin KJ et al.	8901844	EUR	Ins/Del	ESRD	0.04	Healthy	
	Yorioka T et al.	8529313	EAS	Ins/Del	IgAN	0.013	Healthy	
	Yoshida H et al.	7593601	EAS	Ins/Del	IgAN	0.01	Healthy	
	Yoon HJ et al.	12220450	EAS	Ins/Del	IgAN	0.002	Healthy	
	Schmidt S et al.	7485124	EUR	Ins/Del	IgAN	0.007	Healthy	
	Suzuki H et al.	15481848	EAS	Ins/Del	IgAN	0.036	Healthy	0.004
	Zsom M et al.	22111818	EUR	Ins/Del	Primary GN	0.005	Healthy	
	Currie D et al.	20854388	EUR	Ins/Del	T1DN		T1DM	0.005
	Ringel J et al.	9049480	EUR	Ins/Del	T1DN		T1DM	0.018
	Tarnow L et al.	7729604	EUR	Ins/Del	T1DN		T1DM	0.013
	Schmidt S et al.	7783416	EUR	Ins/Del	T1DN	0.002	T1DM	
	Mizuiru S et al.	7477652	EAS	Ins/Del	T2DN	0.019	T2DM	
	Hsieh MC et al.	10862639	EAS	Ins/Del	T2DN	4.2x10 ⁻⁰⁵	T2DM	0.004
	Ha SK et al.	12722028	EAS	Ins/Del	T2DN		T2DM	0.026
	Schmidt S et al.	9269698	EUR	Ins/Del	T2DN	0.0147	T2DM	
	El-Baz R et al.	22554825	ME	Ins/Del	T2DN	0.0025	T2DM	1x10 ⁻⁰⁶
Sancakdar E et al.	000367541400005	ME	Ins/Del	T2DN	0.0076	T2DM	0.003	
Kumar R et al.	23846111	SAS	Ins/Del	T2DN	0.0016	T2DM	0.0003	
Park HC et al.	16385653	EAS	Ins/Del	T2DN-ESRD		T2DM	0.022	
AGT	Fogarty DG et al.	8772723	EUR	rs699	T1DN		T1DM	0.044
	Wu SH et al.	11776100	EAS	rs699	T2DN	0.0008	T2DM	
	Freire MB et al.	9535411	EUR	rs699	T2DN	0.022	T2DM	
	Reis KA et al.	21500980	ME	rs699	T2DN	0.006	T2DM	

	Fradin S et al.	11938025	EUR	rs699	T2DN	0.008	T2DM	
	Su SL et al.	29296205	EAS	rs699	ESRD		Healthy	0.010
<i>AGTR1</i>	Ahluwalia TS et al.	19108684	SAS	rs5186	T2DN		T2DM	0.0002
	Shah VN et al.	23081748	SAS	rs5186	T2DN		T2DM	4.2x10 ⁻⁰⁸
	Lau YK et al.	15153745	EAS	rs5186	IgAN	0.038	Healthy	
	Möllsten A et al.	8856207	EUR	rs5186	T1DN	0.029	T1DM	

Abbreviations: EAS, East Asian; EUR, European; ME, Middle Eastern; SAS, South Asian; CKD, Chronic Kidney Disease; ESRD, End-Stage Renal Disease; GN, Glomerulonephritis; IgAN, IgA Nephropathy; T1DM, Type 1 Diabetes Mellitus; T1DN, Type 1 Diabetic Nephropathy; T2DM, Type 2 Diabetes Mellitus; T2DN, Type 2 Diabetic Nephropathy.

Supplementary Data File S1. Allele frequencies for all control populations which consisted of healthy individuals alongside the dbSNP reported frequencies

AGT rs699 – East Asian populations included in meta-analysis

- IgAN vs healthy controls
 - Five populations included in analysis
 - Allele frequencies are as follows:

AGT	Study	Population	Sample Size	Reference allele frequency	Alternative allele frequency
rs699	Gao J et al.(49)	East Asian	538	A=0.202	G=0.798
rs699	Guo Y et al.(77)	East Asian	1265	A=0.178	G=0.822
rs699	Huang HD et al.(50)	East Asian	329	A=0.167	G=0.833
rs699	Kim SM et al.(51)	East Asian	587	A=0.192	G=0.808
rs699	Lau YK et al.(25)	East Asian	212	A=0.165	G=0.835

- ESRD vs healthy controls
 - Three populations included in analysis
 - Allele frequencies:

AGT	Study	Population	Sample Size	Reference allele frequency	Alternative allele frequency
rs699	Kawada N et al.(22)	East Asian	424	A=0.158	G=0.841
rs699	Su SL et al.(157)	East Asian	1373	A=0.189	G=0.811
rs699	Wang AY et al.(63)	East Asian	429	A=0.175	G=0.825

- dbSNP frequencies:

AGT	Study	Population	Sample Size	Reference allele frequency	Alternative allele frequency
rs699	gnomAD - Genomes	East Asian	1622	A=0.156	G=0.844
rs699	1000Genomes	East Asian	1008	A=0.147	G=0.853

- Chi-square calculations for reference allele frequency comparing meta-analysed data with dbSNP data:

Group	gnomAD - Genomes	1000Genomes
AGT rs699 – East Asian populations IgAN vs Healthy Controls	0.999516	0.999582
AGT rs699 – East Asian populations ESRD vs Healthy Controls	0.984359	0.985654

AGT rs699 – European populations included in meta-analysis

- ESRD vs healthy controls
 - Four populations included in analysis
 - Allele frequencies are as follows:

AGT	Study	Population	Sample Size	Reference allele frequency	Alternative allele frequency
rs699	Beige J et al. (146)	European	538	A=0.573	G=0.427
rs699	Buraczynska M et al.(65)	European	1265	A=0.542	G=0.458
rs699	Losito A et al.(67)	European	329	A=0.562	G=0.438
rs699	Lovati E et al.(147)	European	587	A=0.601	G=0.399

- dbSNP frequencies:

AGT	Study	Population	Sample Size	Reference allele frequency	Alternative allele frequency
rs699	gnomAD - Genomes	European	18440	A=0.5616	G=0.4384
rs699	gnomAD - Exomes	European	133914	A=0.57665	G=0.42335
rs699	1000Genomes	European	1006	A=0.588	G=0.412
rs699	ExAC	European	73258	A=0.5747	G=0.4253

- Chi-square calculations for alternative allele frequency comparing meta-analysed data with dbSNP data:

Group	gnomAD - Genomes	gnomAD - Exomes	1000Genomes	ExAC
AGT rs699 – European populations ESRD vs Healthy Controls	0.979214	0.980521	0.981483	0.980354

AGTR1 rs5186 – East Asian populations included in meta-analysis

- IgAN vs healthy controls
 - Four populations included in analysis
 - Allele frequencies are as follows:

AGTR1	Study	Population	Sample Size	Reference allele frequency	Alternative allele frequency
rs5186	Gao J et al.(49)	East Asian	661	A=0.931	G=0.069
rs5186	Huang HD et al.(50)	East Asian	250	A=0.917	G=0.083
rs5186	Kim SM et al.(51)	East Asian	538	A=0.960	G=0.04
rs5186	Lau YK et al.(25)	East Asian	212	A=0.947	G=0.053

- dbSNP frequencies:

AGTR1	Study	Population	Sample Size	Reference allele frequency	Alternative allele frequency
rs5186	gnomAD - Genomes	East Asian	1618	A=0.944	C=0.056
rs5186	1000Genomes	East Asian	1008	A=0.940	C=0.060

- Chi-square calculations for alternative allele frequency comparing meta-analysed data with dbSNP data:

Group	gnomAD - Genomes	1000Genomes
AGTR1 rs5186 – East Asian populations IgAN vs Healthy Controls	0.999615	0.999559

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3 **ACE insertion/deletion – European, East Asian, South Asian and Middle Eastern populations**
4 **included in meta-analysis**
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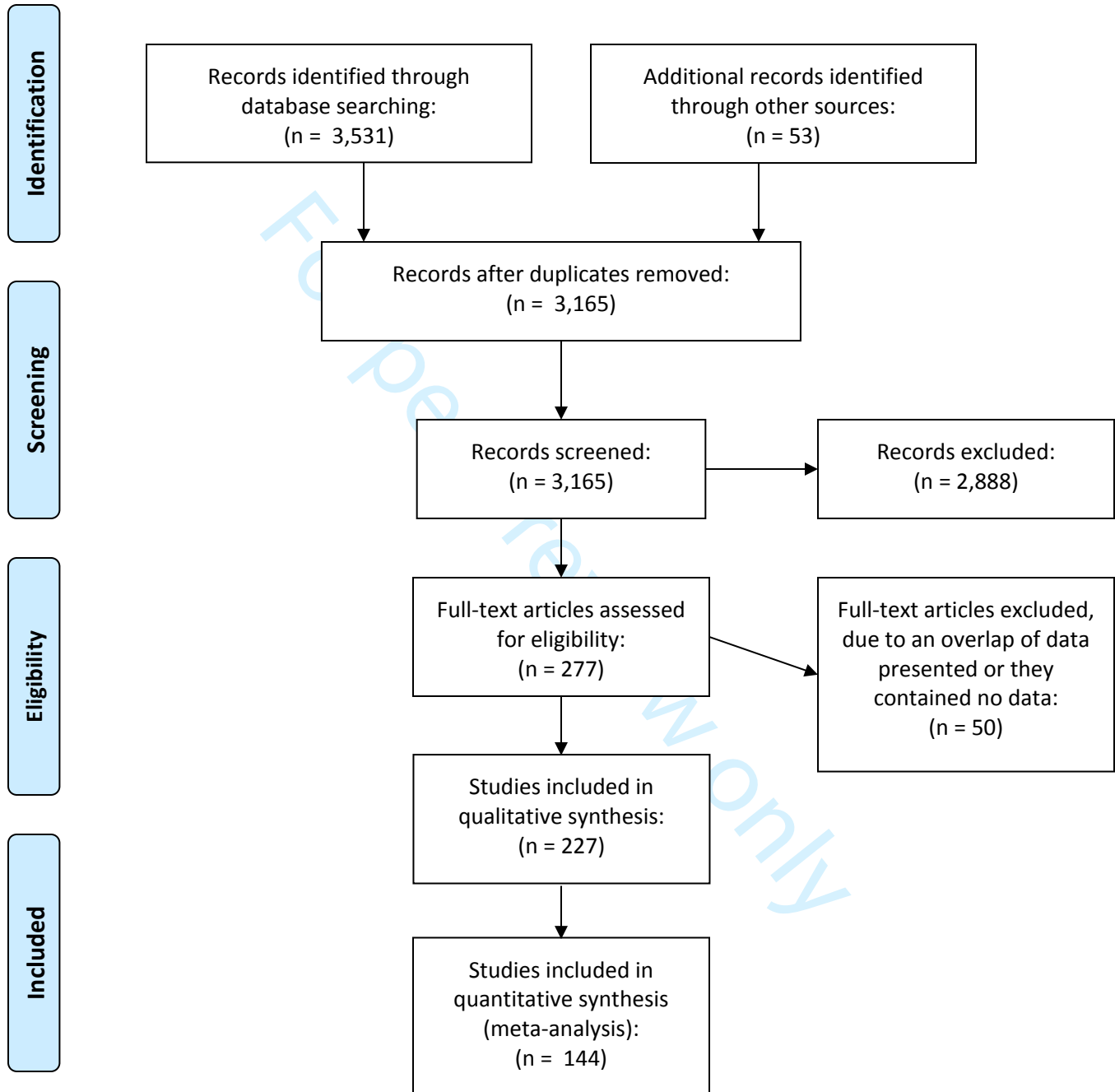
- 6 • Four reported rs numbers for this SNP rs numbers (rs13447447, rs1799752, rs4340,
7 rs4646994) were not found in dbSNP and therefore no reported allele frequencies
8 were available for comparison.
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PRISMA 2009 Flow Diagram



From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

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PRISMA 2009 Checklist

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Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	1&2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	2&3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	1-3
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	5
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	4
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	3-5
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	3 and STS1
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	3-4
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	4-5
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	4-5
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	4-5
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	4-5
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I ²) for each meta-analysis.	4-5



PRISMA 2009 Checklist

Page 1 of 2

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	4-5
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	5
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	5 and SFS1
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	4&5
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	4-6
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	7&8
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	7&8
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	7&8
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	NA
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	7-10
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	2, 9&10
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	7-10
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	12

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

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Reporting checklist for meta-analysis of observational studies.

Based on the MOOSE guidelines.

Instructions to authors

Complete this checklist by entering the page numbers from your manuscript where readers will find each of the items listed below.

Your article may not currently address all the items on the checklist. Please modify your text to include the missing information. If you are certain that an item does not apply, please write "n/a" and provide a short explanation.

Upload your completed checklist as an extra file when you submit to a journal.

In your methods section, say that you used the MOOSE reporting guidelines, and cite them as:

Stroup DF, Berlin JA, Morton SC, Olkin I, Williamson GD, Rennie D, Moher D, Becker BJ, Sipe TA, Thacker SB. Meta-analysis of observational studies in epidemiology: a proposal for reporting. Meta-analysis Of Observational Studies in Epidemiology (MOOSE) group. JAMA. 2000; 283(15):2008-2012.

	Reporting Item	Page Number
#1	Identify the study as a meta-analysis of observational research	1
#2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility	1&2

1 criteria, participants, and interventions; study appraisal and
 2 synthesis methods; results; limitations; conclusions and
 3 implications of key findings; systematic review registration
 4 number (From PRISMA checklist)
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10		#3a	Problem definition	3
11				
12		#3b	Hypothesis statement	2
13				
14		#3c	Description of study outcomes	3-5
15				
16		#3d	Type of exposure or intervention used	3-4
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18		#3e	Type of study designs used	3-4
19				
20		#3f	Study population	3-4
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28				
29	Search	#4a	Qualifications of searchers (eg, librarians and investigators)	3-4
30				
31	strategy			
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34		#4b	Search strategy, including time period included in the	3-4
35			synthesis and keywords	
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39		#4c	Effort to include all available studies, including contact with	4
40			authors	
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45		#4d	Databases and registries searched	3-4
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48		#4e	Search software used, name and version, including special	4
49			features used (eg, explosion)	
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53		#4f	Use of hand searching (eg, reference lists of obtained	3
54			articles)	
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1	#4g	List of citations located and those excluded, including	5&Supplementary
2		justification	Tables
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6	#4h	Method of addressing articles published in languages other	4
7		than English	
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11			
12	#4i	Method of handling abstracts and unpublished studies	3-4
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15	#4j	Description of any contact with authors	NA
16			
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18	#5a	Description of relevance or appropriateness of studies	3&4
19		gathered for assessing the hypothesis to be tested	
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23	#5b	Rationale for the selection and coding of data (eg, sound	3&4
24		clinical principles or convenience)	
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29	#5c	Documentation of how data were classified and coded (eg,	3&4
30		multiple raters, blinding, and interrater reliability)	
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34	#5d	Assessment of confounding (eg, comparability of cases and	4&5
35		controls in studies where appropriate)	
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40	#5e	Assessment of study quality, including blinding of quality	4&5
41		assessors; stratification or regression on possible predictors	
42		of study results	
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47	#5f	Assessment of heterogeneity	4&5
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50	#5g	Description of statistical methods (eg, complete description	4&5
51		of fixed or random effects models, justification of whether	
52		the chosen models account for predictors of study results,	
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dose-response models, or cumulative meta-analysis) in

sufficient detail to be replicated

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6	#5h	Provision of appropriate tables and graphics
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11	#6a	Graphic summarizing individual study estimates and overall
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19	#6b	Table giving descriptive information for each study included
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22	#6c	Results of sensitivity testing (eg, subgroup analysis)
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25	#6d	Indication of statistical uncertainty of findings
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28	#7a	Quantitative assessment of bias (eg. publication bias)
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31	#7b	Justification for exclusion (eg, exclusion of non-English-
32		language citations)
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36	#7c	Assessment of quality of included studies
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39	#8a	Consideration of alternative explanations for observed
40		results
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45	#8b	Generalization of the conclusions (ie, appropriate for the
46		data presented and within the domain of the literature
47		review)
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53	#8c	Guidelines for future research
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56	#8d	Disclosure of funding source
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3 Medical Association. All rights reserved. This checklist can be completed online using
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5 <https://www.goodreports.org/>, a tool made by the [EQUATOR Network](#) in collaboration with
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