Table S1 Clinical characteristics of patients enrolled in GCKD (n=5217)

Parameter	Value
Age, years, median (range)	63 (18-76)
Gender, male/female	3132/2085
Weight, kg, mean±SD	88±19
Height, cm, mean±SD	171±9
Body mass index, kg/m^2, median (range)	29 (16-70)
Office SBP, mmHg, mean±SD	140±20
Office DBP, mmHg, mean±SD)	79±12
Hypertension – (%)	96
Treatment resistant hypertension – (%)	24
Number of BP medications, mean	2.8
ACE-inhibitor – (%)	46
ARB – (%)	41
Betablocker – (%)	59
Calcium channel antagonist – (%)	36
Diuretic – (%)	52
Thiazide diuretic – (%)	13
Loop diuretic – (%)	41
Aldosterone antagonist – (%)	9
Diabetes mellitus – (%)	36
Coronary artery disease – (%)	20
Cerebrovascular disease – (%)	10
Peripheral vascular disease – (%)	9
Diabetic nephropathy (%)	27
Vascular nephropathy – (%)	41
Systemic disease affecting the kidney – (%)	12
Primary glomerulopathy – (%)	23
Serum creatinine, mg/dl, median (range)	1.5 (0.45-7.0)
eGFR, ml/min/1.73m^2, median (range)	46 (8-136)
UACR , mg/g creatinine, median (range)	52 (1-15,784)

Table S2 Clinical characteristics stratified according to skin water in RSI (1H-MRI)

Parameter	Skin water			
	<0.099 RSI N=29	0.099 to 0.14667 RSI N=32	>0.14667 RSI N=30	*P*-Value
Age, years, median (range)	54 (23-76)	68 (36-75)	69 (47-78)	<0.001
Gender, male/female	11/18	17/15	24/6	0.004
Weight, kg, mean (95%-CI)	80 (74-87)	83 (78-88)	95 (89-101)	0.002
Height, cm, mean (95%-CI)	172 (168-175)	170 (166-173)	174 (171-178)	0.155
Body mass index, kg/m^2, median (range)	26 (18-37)	28 (21-41)	30 (23-39)	0.007
Office SBP, mmHg, mean (95%-CI)	126 (121-131)	135 (129-140)	136 (131-142)	0.016
Office DBP, mmHg, mean (95%-CI)	80 (76-84)	82 (79-86)	78 (73-83)	0.330
24h-SBP, mmHg, mean (95%-CI)	121 (118-125)	126 (122-129)	131 (126-136)	0.005
24h-DBP, mmHg, mean (95%-CI)	76 (74-80)	77 (74-81)	76 (73-80)	0.893
Hypertension – (%)	86	87	100	0.114
Treatment resistant hypertension – (%)	7	13	23	0.184
Number of BP medications, median (range)	1 (0-4)	2 (0-5)	4 (0-6)	<0.001
ACE-inhibitor – (%)	38	25	37	0.490
ARB – (%)	35	47	57	0.231
Betablocker – (%)	31	13	63	<0.001
Calcium channel antagonist – (%)	14	34	70	<0.001
Diuretic – (%)	21	44	78	<0.001
Aldosterone antagonist – (%)	3	3	10	0.416
Diabetes mellitus – (%)	3	34	50	<0.001
Coronary artery disease – (%)	3	6	17	0.164
Cerebrovascular disease – (%)	0	0	13	0.014
Peripheral vascular disease – (%)	3	6	0	0.387
Diabetic nephropathy (%)	3	19	40	0.002
Vascular nephropathy – (%)	24	25	33	0.678
Systemic disease – (%)	14	9	23	0.301
Primary glomerulopathy – (%)	31	19	20	0.465
Serum creatinine, mg/dl, median (range)	1.2 (0.7-2.0)	1.3 (0.6-2.5)	1.5 (0.8-4.3)	0.066
eGFR, ml/min/1.73m^2, median (range)	53 (27-127)	55 (19-97)	48 (13-86)	0.078
UACR, mg/g creatinine, median (range)	37 (1-1147)	10 (2-1519)	63 (2-2670)	0.130

Table S3 Clinical characteristics stratified according to muscle sodium in mmol/L (^{23}Na-MRI)

Parameter	Muscle sodium			
	<15.2 mmol/L N=28	15.2 to 17.6 mmol/L N=33	>17.6 N=31	*P*-Value
Age, years, median (range)	57 (25-75)	67 (23-78)	69 (46-75)	<0.001
Gender, male/female	15/13	18/15	19/12	0.803
Weight, kg, mean (95%-CI)	78 (71-84)	87 (81-94)	92 (87-97)	0.003
Height, cm, mean (95%-CI)	171 (167-175)	171 (167-175)	173 (171-176)	0.598
Body mass index, kg/m^2, median (range)	26 (18-36)	29 (20-41)	32 (23-39)	0.004
Office SBP, mmHg, mean (95%-CI)	132 (126-137)	129 (124-134)	138 (132-143)	0.047
Office DBP, mmHg, mean (95%-CI)	83 (79-87)	78 (74-81)	81 (77-86)	0.134
24h-SBP, mmHg, mean (95%-CI)	124 (120-129)	124 (121-128)	129 (124-135)	0.136
24h-DBP, mmHg, mean (95%-CI)	78 (75-82)	75 (73-78)	78 (74-81)	0.382
Hypertension – (%)	89	88	97	0.407
Treatment resistant hypertension – (%)	11	6	26	0.063
Number of BP medications, median (range)	2 (0-5)	2 (0-5)	3 (0-6)	0.016
ACE-inhibitor – (%)	36	33	29	0.856
ARB – (%)	36	42	58	0.204
Betablocker – (%)	32	24	48	0.121
Calcium channel antagonist – (%)	25	33	58	0.024
Diuretic – (%)	32	46	65	0.043
Aldosterone antagonist – (%)	7	3	7	0.744
Diabetes mellitus – (%)	21	18	48	0.016
Coronary artery disease – (%)	4	12	10	0.484
Cerebrovascular disease – (%)	0	3	10	0.171
Peripheral vascular disease – (%)	0	0	10	0.047
Diabetic nephropathy (%)	11	21	29	0.221
Vascular nephropathy – (%)	25	24	36	0.547
Systemic disease – (%)	18	3	26	0.036
Primary glomerulopathy – (%)	18	30	19	0.438
Serum creatinine, mg/dl, median (range)	1.3 (0.8-2.0)	1.3 (0.6-2.4)	1.3 (0.8-4.3)	0.520
eGFR, ml/min/1.73m^2, median (range)	53 (34-100)	51 (25-127)	49 (13-86)	0.415
UACR, mg/g creatinine, median (range)	10 (2-1519)	63 (1-1319)	21 (2-2670)	0.297

Table S4 Clinical characteristics stratified according to muscle water in RSI (1H-MRI)

Parameter	Muscle water <0.48867 RSI N=30	0.48867 to 0.51133 RSI N=31	>0.51133 RSI N=30	P-Value
Age, years, median (range)	66 (28-76)	61 (23-76)	69 (25-78)	0.220
Gender, male/female	18/12	16/15	18/12	0.746
Weight, kg, mean (95%-CI)	91 (85-97)	83 (77-90)	84 (78-90)	0.136
Height, cm, mean (95%-CI)	172 (168-176)	170 (167-173)	174 (171-176)	0.395
Body mass index, kg/m^2, median (range)	30 (23-41)	28 (18-39)	26 (20-37)	0.050
Office SBP, mmHg, mean (95%-CI)	130 (125-135)	130 (126-135)	137 (131-144)	0.083
Office DBP, mmHg, mean (95%-CI)	80 (76-84)	81 (78-84)	80 (75-84)	0.930
24h-SBP, mmHg, mean (95%-CI)	128 (124-132)	123 (120-126)	128 (122-133)	0.116
24h-DBP, mmHg, mean (95%-CI)	77 (73-81)	76 (74-78)	78 (74-82)	0.766
Hypertension – (%)	100	84	90	0.081
Treatment resistant hypertension – (%)	10	10	23	0.224
Number of BP medications, median (range)	3 (0-6)	1 (0-5)	3 (0-5)	0.059
ACE-inhibitor – (%)	40	32	27	0.544
ARB – (%)	47	42	50	0.817
Betablocker – (%)	47	16	43	0.023
Calcium channel antagonist – (%)	37	32	50	0.339
Diuretic – (%)	57	36	50	0.237
Aldosterone antagonist – (%)	7	7	3	0.817
Diabetes mellitus – (%)	30	23	37	0.484
Coronary artery disease – (%)	13	7	7	0.562
Cerebrovascular disease – (%)	3	3	7	0.760
Peripheral vascular disease – (%)	7	3	0	0.351
Diabetic nephropathy (%)	27	13	23	0.385
Vascular nephropathy – (%)	30	26	27	0.928
Systemic disease – (%)	23	7	17	0.183
Primary glomerulopathy – (%)	20	32	17	0.312
Serum creatinine, mg/dl, median (range)	1.4 (0.6-2.5)	1.2 (0.7-2.4)	1.3 (0.8-4.3)	0.868
eGFR, ml/min/1.73m^2, median (range)	49 (19-94)	54 (25-127)	53 (13-100)	0.760
UACR, mg/g creatinine, median (range)	35 (1-994)	37 (2-1519)	25 (2-2670)	0.777