

Supplementary Table 1. Platforms, datasets, meta-analysis methods and imputation methods

Disease/Trait	Genotyping Platform	SNPs passing quality control	Datasets	Meta-analysis methods	SNPs ^a	Imputed SNPs ^{b, c}
Bone mineral density- Femoral neck (S19)	Affymetrix, Illumina	~2.5 million	17	F	22	~2.5 M
Bone mineral density- Lumbar spine (S19)	Affymetrix, Illumina	~2.5 million	16	F	27	~2.5 M
Head circumference (infant) (S77)	Affymetrix, Illumina	~2.4 million	7	F	3	~2.4 M
Obesity (childhood) (S9)	Affymetrix, Illumina	~2.7 million	14	F	7	~2.54 M
Brachial circumference (S7)	Affymetrix, Illumina	2,238,430	14	F	0	NR
Adiponectin levels (S12)	Affymetrix, Illumina	NR	18	F; R; Bayesian	10	NR
Creatinine-based estimated GFR (S55)	Affymetrix, Illumina	~2.5 million	26	F	27	~2.5 M
Cystatin-based estimated GFR (S55)	Affymetrix, Illumina	~2.5 million	26	F	3	~2.5 M
Chronic kidney disease (S55)	Affymetrix, Illumina	~2.5 million	25	F	2	~2.5 M
Rheumatoid arthritis (S52)	Affymetrix, Illumina	1,948,139	3	F	7	~2 M
Platelet count (S59)	Affymetrix, Illumina	~2.2 million	7	F	15	~2.2 M
Metabolic syndrome (S40)	Illumina	1,257,079	4	F	1	~0.9 M
Body mass index (S85)	Affymetrix, Illumina	2,474,474	8	F; P-value-based	2	NR
Menopause (age at onset) (S75)	Affymetrix, Illumina	2,551,160	22	F	20	~2.5 M
Atopic dermatitis (S53)	Affymetrix, Illumina	~2.5 million	16	F; R	2	NR
Ankle-brachial index (S48)	Affymetrix, Illumina, Perlegen	~2.5 million	21	F	1	~2.5 M
Multiple sclerosis (S54)	Affymetrix, Illumina	2,529,394	7	F; R	9	~2.5 M
Mean platelet volume (S25)	Affymetrix, Illumina	~2.7 million	13	F	26	NR
Platelet count (S25)	Affymetrix, Illumina	~2.7 million	23	F	39	NR
Aortic stiffness (carotid-femoral pulse wave velocity) (S46)	Affymetrix, Illumina	~2.5 million	9	F	1	~2.5 M
Allergic rhinitis (S60)	Affymetrix, Illumina	2,217,510	6	F	1	~2.2 M
IgE sensitization to grass (S60)	Affymetrix, Illumina	2,217,510	6	F	3	~2.2 M
Alanine aminotransferase (ALT) (S10)	Affymetrix, Illumina, Perlegen	~2.6 million	14	F	4	NR
Alkaline phosphatase (ALP) (S10)	Affymetrix, Illumina, Perlegen	~2.6 million	19	F	14	NR
Gamma glutamyl transpeptidase (γ -GT) (S10)	Affymetrix, Illumina, Perlegen	~2.6 million	21	F	26	NR

Lp-PLA2 mass (S26)	Affymetrix, Illumina	2,661,766	4 F	2	~2.5 M
Lp-PLA2 activity (S26)	Affymetrix, Illumina	2,661,766	3 F	6	~2.5 M
Height (S49)	Affymetrix, Illumina	3,310,998	9 F	2	NR
Type 1 diabetes (S8)	Affymetrix, Illumina	~2.54 million	5 F	19	~2.5 M
Pulmonary function (S70)	Affymetrix, Illumina	~2.5 million	23 F	8	NR
Bipolar disorder (S64)	Affymetrix, Illumina	2,415,422	11 F; R	4	~2.5 M
Common carotid intima media thickness (S5)	Affymetrix, Illumina	~2.5 million	9 F	1	~2.5 M
Internal carotid intima media thickness (S5)	Affymetrix, Illumina	~2.5 million	3 F	0	~2.5 M
Plaque (S5)	Affymetrix, Illumina	~2.5 million	7 F	3	~2.5 M
Diastolic blood pressure (S31)	Affymetrix, Illumina	~2.5 million	29 F	9	NR
Systolic blood pressure (S31)	Affymetrix, Illumina	~2.5 million	29 F	8	NR
Pulse pressure (S82)	Affymetrix, Illumina, Perlegen	NR	35 F	6	~0.5 M
Mean arterial pressure (S82)	Affymetrix, Illumina, Perlegen	NR	35 F	9	~0.5 M
Coffee consumption (S1)	Affymetrix, Illumina, Perlegen	~2.6 million	10 F	1	NR
Type 2 diabetes (S39)	Illumina	568,976	3 F	1	NA
Proinsulin levels (S76)	Affymetrix, Illumina	~2.5 million	4 F	7	~2.5 M
Aging (time to death) (S83)	Affymetrix, Illumina	~2.5 million	9 F	0	~2.5 M
Aging (time to event) (S83)	Affymetrix, Illumina	~2.5 million	9 F	0	~2.5 M
Ankylosing spondylitis (S21)	Illumina	2,223,620	2 F	7	NR
Sudden cardiac arrest (S3)	Affymetrix, Illumina	~2.5 million	5 F	2	~2.5 M
White blood cell count (S61)	Affymetrix, Illumina	2,489,215	7 F	3	~2.2 M
Adiposity (% body fat) (S38)	Affymetrix, Illumina, Perlegen	~2.5 million	15 F	2	NR
Diastolic blood pressure (S35)	Affymetrix, Illumina	~1.7 million	8 F	1	NR
Systolic blood pressure (S35)	Affymetrix, Illumina	~1.7 million	8 F	2	NR
Glioma (S62)	Illumina	424,460	4 F	6	
D-dimer levels (S69)	Affymetrix, Illumina	2,522,393	13 F	3	~2.6 M
Dehydroepiandrosterone sulphate (S88)	Affymetrix, Illumina	~2.5 million	7 F	5	~2.5 M
Caffeine consumption (S11)	Affymetrix, Illumina	~2.5 million	10 F	2	~2.5 M
Alcohol consumption (S65)	Affymetrix, Illumina, Perlegen	~2.5 million	12 F	0	NR

Alzheimer's disease (S28)	Affymetrix, Illumina	496,763	4	F; R	6	0.5 M
Migraine (S42)	Affymetrix, Illumina, Perlegen	~2.5 million	6	F	0	~2.5 M
Coronary heart disease (S66)	Affymetrix, Illumina	~2.3 million	14	F; R	13	~2.3 M
Urinary albumin excretion (S6)	Affymetrix, Illumina	~2.5 million	12	F	0	~2.5 M
C-reactive protein (S14)	Affymetrix, Illumina	~2.5 million	15	F	17	~2.5 M
Ulcerative colitis (S2)	Affymetrix, Illumina	~1.1 million	6	F	33	NR
Parkinson's disease (S32)	Illumina	7,689,524	5	F; R	11	NR
IGF-1 (S34)	Affymetrix, Illumina	~2.5 million	4	F	1	~2.5 M
IGFBP-3 (S34)	Affymetrix, Illumina	~2.5 million	4	F	4	~2.5 M
Personality dimensions (S13)	Affymetrix, Illumina, Perlegen	~2.5 million	10	F	2	~2.5 M
Renal cell carcinoma (S58)	Illumina	586,069	2	F	6	NR
Menarche (age at onset) (S18)	Affymetrix, Illumina	~2.5 million	32	F	42	~2.5 M
Crohn's disease (S22)	Affymetrix, Illumina	953,241	6	F	52	~1 M
QRS duration (S72)	Affymetrix, Illumina	~2.5 million	14	F	25	~2.5 M
Osteoarthritis (knee) (S20)	Affymetrix, Illumina	2,335,627	4	F	0	NR
Retinal venular caliber (S30)	Affymetrix, Illumina	~2.2 million	4	F	5	~2.2 M
Retinal arteriolar caliber (S30)	Affymetrix, Illumina	~2.2 million	4	F	0	~2.2 M
Waist-hip ratio (S27)	Affymetrix, Illumina, Perlegen	2,850,269	32	F; R	12	~2.8 M
Body mass index (S73)	Affymetrix, Illumina, Perlegen	~2.8 million	46	F	19	NR
Urate levels (S86)	Affymetrix, Illumina	~2.5 million	5	F	8	~2.5 M
Gout (S86)	Affymetrix, Illumina	~2.5 million	5	F	2	~2.5 M
Height (S41)	Affymetrix, Illumina, Perlegen	2,834,208	46	F	115	~2.8 M
Asthma (S47)	Illumina	582,892	23	F; R	6	NR
Glycated hemoglobin (S71)	Affymetrix, Illumina	~2.5 million	23	F	10	NR
Calcium levels (S50)	Affymetrix, Illumina	~2.5 million	6	F	1	~2.5 M
Magnesium levels (S45)	Affymetrix, Illumina	~2.5 million	3	F	6	~2.5 M
Sodium (S45)	Affymetrix, Illumina	~2.5 million	3	F	0	~2.5 M
Potassium (S45)	Affymetrix, Illumina	~2.5 million	4	F	0	~2.5 M
Triglycerides (S78)	Affymetrix, Illumina, Perlegen	~2.6 million	46	F	32	NR

HDL cholesterol (S78)	Affymetrix, Illumina, Perlegen	~2.6 million	46	F	47	NR
LDL total (S78)	Affymetrix, Illumina, Perlegen	~2.6 million	46	F	37	NR
Total cholesterol (S78)	Affymetrix, Illumina, Perlegen	~2.6 million	46	F	52	NR
Resting heart rate (RR interval) (S17)	Affymetrix, Illumina	~2.5 million	15	F	9	~2.5 M
Type 2 diabetes (S81)	Affymetrix, Illumina	2,426,886	8	F	10	NR
Phosphorus levels (S36)	Affymetrix, Illumina	~2.5 million	4	F	7	~2.5 M
Vitamin D insufficiency (S84)	Affymetrix, Illumina	2,548,976	5	F	3	NR
Rheumatoid arthritis (S74)	Affymetrix, Illumina	~2,716,259	6	F	6	NR
Heart failure (S68)	Affymetrix, Illumina	2,478,304	4	F	1	~2.5 M
Cigarettes per day (S79)	Affymetrix, Illumina, Perlegen	~2.5 million	13	F; R	1	~2.5 M
Ever vs never smoker (S79)	Affymetrix, Illumina, Perlegen	~2.5 million	16	F; R	0	~2.5 M
Former vs current smokers (S79)	Affymetrix, Illumina, Perlegen	~2.5 million	14	F; R	0	~2.5 M
Age of smoking initiation (S79)	Affymetrix, Illumina, Perlegen	~2.5 million	13	F; R	0	~2.5 M
Birth weight (S23)	Affymetrix, Illumina	~2.4 million	6	F	2	~2.4 M
Intracranial aneurysm (S87)	Illumina	831,534	4	F; Bayesian	6	NR
Urinary bladder cancer (S37)	Illumina	304,703	2	F	0	NA
Coagulation factor VII (S67)	Affymetrix, Illumina	~2.6 million	4	F	5	~2.6 M
Von Wilenbrand factor (S67)	Affymetrix, Illumina	~2.6 million	5	F	8	~2.6 M
Coagulation factor VIII (S67)	Affymetrix, Illumina	~2.6 million	3	F	5	~2.6 M
Height (S51)	Illumina	420,885	23	F	8	NR
White blood cell count (S33)	Illumina	566,430	10	F	5	NR
Red blood cell count (S33)	Illumina	566,430	10	F	8	NR
Hemoglobin (S33)	Illumina	566,430	10	F	2	NR
Hematocrit (S33)	Illumina	566,430	10	F	2	NR
Mean corpuscular volume (S33)	Illumina	566,430	10	F	15	NR
Mean corpuscular hemoglobin (S33)	Illumina	566,430	10	F	15	NR
Mean corpuscular hemoglobin concentration (S33)	Illumina	566,430	10	F	7	NR
Platelet count (S33)	Illumina	566,430	10	F	6	NR
Gamma glutamyl transpeptidase (γ -GT) (S33)	Illumina	566,430	10	F	2	NR

Aspartate aminotransferase (AST) (S33)	Illumina	566,430	10 F	2	NR
Alanine aminotransferase (ALT) (S33)	Illumina	566,430	10 F	2	NR
Total protein (S33)	Illumina	566,430	10 F	2	NR
Blood urea nitrogen (S33)	Illumina	566,430	10 F	3	NR
Serum creatinine (S33)	Illumina	566,430	10 F	1	NR
Fasting glucose (S16)	Affymetrix, Illumina	~2.5 million	21 F	12	NR
Fasting insulin (S16)	Affymetrix, Illumina	~2.5 million	21 F	0	NR
HOMA-B (S16)	Affymetrix, Illumina	~2.5 million	21 F	3	NR
HOMA-IR (S16)	Affymetrix, Illumina	~2.5 million	21 F	0	NR
Major mood disorders (S44)	Affymetrix, Illumina, Perlegen	~2.1 million	5 F; R	1	~2.1 M
2h glucose challenge (S63)	Affymetrix, Illumina	NR	9 F	3	NR
PR interval (S57)	Affymetrix, Illumina	~2.5 million	8 F	9	~2.5 M
Hemoglobin (S24)	Affymetrix, Illumina	~2.5 million	6 F	7	~2.5 M
Hematocrit (S24)	Affymetrix, Illumina	~2.5 million	6 F	8	~2.5 M
Mean corpuscular volume (S24)	Affymetrix, Illumina	~2.5 million	5 F	16	~2.5 M
Mean corpuscular hemoglobin (S24)	Affymetrix, Illumina	~2.5 million	4 F	9	~2.5 M
Mean corpuscular hemoglobin concentration (S24)	Affymetrix, Illumina	~2.5 million	4 F	2	~2.5 M
Red blood cell count (S24)	Affymetrix, Illumina	~2.5 million	4 F	2	~2.5 M
Atrial fibrillation (S4)	Affymetrix, Illumina	~2.5 million	5 F	2	~2.5 M
Left ventricular mass (S80)	Affymetrix, Illumina	~2.5 million	5 F	3	~2.5 M
Left ventricle internal diastolic dimensions (S80)	Affymetrix, Illumina	~2.5 million	5 F	1	~2.5 M
Left ventricle wall thickness (S80)	Affymetrix, Illumina	~2.5 million	5 F	3	~2.5 M
Left ventricle systolic dysfunction (S80)	Affymetrix, Illumina	~2.5 million	5 F	1	~2.5 M
Adiposity- waist circumference (S43)	Affymetrix, Illumina	2,573,738	16 F	0	~2.5 M
Stroke (S29)	Affymetrix, Illumina	2,194,468	4 F	2	~2.5 M
Fibrinogen (S15)	Affymetrix, Illumina	~2,661,766	6 F	4	~2.5 M
QT interval (S56)	Affymetrix, Illumina	NR	5 F	12	~2.5 M

HOMA-B, homeostatic model assessment beta cell function; HOMA-IR, homeostatic model assessment insulin resistance; Lp-PLA2, lipoprotein-associated phospholipase A2

^aThis column lists the number of SNPs passing the significance threshold used in each GWA meta-analyses.

^bAll studies performed imputations based on HapMap data, except for (S62) that used both HapMap and 1000 Genomes Project data, and (S32) and (S58) that used 1000 Genomes Project data.

^cAll studies performed imputations using some type of hidden Markov model, depending on the specific software used (IMPUTE, MACH, BIMBAM, BEAGLE).

NA, not applicable because no imputation was performed

NR, data not reported

Supplementary Table 2. Quality control processed for meta-analyses and for constituent studies

GWA Report	Eligible meta-analyses, N	QC criteria across individual studies	QC criteria used for including SNPs in the meta-analysis				Imputation quality
			MAF	Call rate	HWE	Other	
(S19)	2	Different	≥ 1%	NS	NS	NS	Quality metrics ≥0.3 or 0.4 depending on software
(S77)	1	Different	≥1%	NS	NS	SNPs available in ≥4 datasets	Quality metrics ≥0.3 or 0.4 depending on software
(S9)	1	Common	≥1%	≥95%	10 ⁻⁶	None	Quality metrics ≥0.3 or 0.4 depending on software
(S7)	1	Different	≥1%	NS	NS	NS	Quality metrics ≥0.3 or 0.5 depending on software
(S12)	1	Common	>1%	>95%	10 ⁻⁶	None	Quality metrics ≥0.3 or 0.5 depending on software
(S55)	3	Different	≥1%	NS	NS	NS	NS
(S52)	2	Different	≥1%	NS	NS	NS	Quality metrics ≥0.5
(S59)	1	Different	>1%	>90%	NS	Polymorphic SNPs; SNPs mapped to one genomic location	Quality metrics ≥ 0.5
(S40)	1	Common	≥2%	≥95%	10 ⁻⁴	None	NR
(S85)	1	Different	≥1%	≥90%	10 ⁻⁶	None	Quality metrics ≥0.3 or 0.5 depending on software
(S75)	1	Different	≥1%	NS	NS	NS	Quality score ≥0.2
(S53)	1	Different	≥1%	NS	NS	None	Quality metrics ≥0.4 or 0.5 depending on software
(S48)	1	Different	NS	NS	NS	NS	NR
(S54)	1	Common	>1%	>95%	10 ⁻⁶	None	Quality score ≥0.1
(S25)	2	Different	≥1%	≥90%	10 ⁻⁶	None	Quality metrics ≥0.4
(S46)	1	Different	≥1%	NS	NS	NS	Quality metrics ≥0.3
(S60)	2	Different	NS	NS	NS	NS	Quality metrics ≥0.4
(S10)	3	Different	≥1%	NS	NS	NS	Quality metrics ≥0.3
(S26)	2	Different	≥1%	NS	NS	NS	NR
(S49)	1	Different	≥1%	NS	NS	MAC (sample size × MAF) ≥ 5	Quality metrics ≥0.3
(S8)	1	Common	≥1%	≥95%	10 ⁻⁵	None	Quality metrics ≥0.3
(S70)	1	Different	NS	NS	NS	NS	Quality metrics ≥0.3
(S64)	1	Common	≥1%	≥98%	10 ⁻⁶	Frequency difference to HapMap <0.15; Missing genotype rate between cases	Quality metrics ≥0.3

						and controls per SNP <0.02	
(S5)	3	Different	≥1%	NS	NS	SNPs available in ≥2 datasets	Quality metrics ≥0.3
(S31)	2	Different	NS	NS	NS	SNPs available in HapMap; SNPs with frequencies similar to HapMap	Quality metrics ≥0.3
(S82)	2	Different	NS	NS	NS	NS	Quality metrics ≥0.3
(S1)	1	Different	NS	NS	NS	NS	Quality metrics ≥0.3
(S39)	1	Common	>1%	>97%	10 ⁻⁶	None	NA
(S76)	1	Common	>1%	>95%	10 ⁻⁶	None	Quality metrics ≥0.3 or 0.4 depending on software
(S83)	2	Different	≥1%	NS	NS	NS	Quality metrics ≥0.3
(S21)	1	Common	≥0.1%	≥98%	5×10 ⁻²⁰	Fisher information ≥ 0.975	Quality metrics ≥0.3
(S3)	1	Different	NS	NS	NS	NS	NR
(S61)	1	Common	≥1%	≥95%	NR	Polymorphic SNPs; SNPs mapping in one genomic location	Quality metrics ≥0.5
(S38)	1	Different	NS	NS	NS	NS	Quality metrics ≥0.3 or 0.4 depending on software
(S35)	1	Different	≥5%	NS	NS	Effective sample size >10,000	Quality metrics ≥0.5
(S62)	1	Common	>5%	>98%	10 ⁻⁵	None	NR
(S69)	1	Different	NS	NS	NS	NS	NR
(S88)	1	Different	≥1%	NS	NS	NS	Quality score ≥0.2
(S11)	1	Different	≥2%	NS	NS	SNPs available in ≥2 datasets	Quality metrics ≥0.7 or 0.8 depending on software
(S65)	1	Different	≥1%	NS	NS	NS	Quality metrics ≥0.5
(S28)	1	NR	NR	NR	NR	NR	NR
(S42)	1	Different	NS	NS	NS	SNPs available in ≥70% of subjects	NS
(S66)	1	Different	≥1%	≥98%	10 ⁻⁴	None	Quality metrics ≥0.5
(S6)	1	Different	>1%	NS	NS	NS	NS
(S14)	1	Different	NS	NS	NS	NS	NS
(S2)	1	Different	NS	NS	NS	NS	NS
(S32)	1	Different	NS	NS	NS	NS	Quality metrics ≥0.3
(S34)	2	Different	NS	NS	NS	NS	NR
(S13)	1	Different	≥1%	NS	NS	NS	Quality metrics ≥0.3
(S58)	1	Common	>5%	>90%	10 ⁻⁷	None	Quality metrics ≥0.3

(S18)	1	Different	NS	NS	NS	NS	Quality metrics ≥0.3 or 0.4 depending on software
(S22)	1	Different	NR	NR	NR	NR	NR
(S72)	1	Different	NS	NS	NS	NS	NR
(S20)	1	Different	NS	NS	NS	NS	NR
(S30)	2	Different	NS	NS	NS	NS	NR
(S27)	1	Different	NS	NS	NS	MAC (sample size × MAF) ≥ 3	Quality metrics ≥0.4
(S73)	1	Different	NS	NS	NS	MAC (sample size × MAF) ≥ 6	Quality metrics ≥0.3 or 0.4 depending on software
(S86)	2	Different	≥2%	NS	NS	NS	None
(S41)	1	Different	None	NS	NS	MAC (sample size × MAF) ≥ 3	Quality metrics ≥0.3 or 0.4 depending on software
(S47)	1	Common	≥1%	NS	10 ⁻⁴	Genotype missing rate <3%	NR
(S71)	1	Different	NS	NS	NS	NS	NR
(S50)	1	Different	NS	NS	NS	NS	None
(S45)	3	Different	NS	NS	NS	NS	NS
(S78)	4	Different	≥1%	NS	NS	NS	NR
(S17)	1	Different	NS	NS	NS	NS	NR
(S81)	1	Different	NS	NS	NS	NS	NR
(S36)	1	Different	NS	NS	NS	NS	NR
(S84)	1	Different	NS	NS	NS	NS	NR
(S74)	1	Common	≥1%	≥95%	10 ⁻⁶	None	NR
(S68)	1	Different	NS	NS	NS	Post meta-analysis population size-weighted MAF >0.015	NR
(S79)	4	Different	≥1%	NS	NS	NS	Quality metrics ≥0.7
(S23)	1	Different	≥1%	NS	NS	NS	Quality metrics ≥0.3 or 0.4 depending on software
(S87)	1	Common	≥1%	≥95%	10 ⁻⁵	None	Posterior probability ≥0.9
(S37)	1	Different	NS	NS	NS	≥99.5% consistency between arrays	NA
(S67)	3	Different	NS	NS	NS	NS	NR
(S51)	1	Common	≥1%	≥99%	10 ⁻⁷	Unambiguous clustering of the intensity plots in visual inspection	Quality metrics >0.3
(S33)	14	Common	≥1%	≥99%	10 ⁻⁷	Unambiguous clustering of the intensity plots in visual inspection	Quality metrics >0.3

(S16)	4	Common	$\geq 1\%$	$\geq 95\%$	$10^{-4} - 10^{-6}$	None	Quality metrics ≥ 0.3 or 0.4 depending on software
(S44)	1	Different	$\geq 5\%$	NS	NS	NS	Error rate < 0.01
(S63)	1	Different	$> 1\%$	$> 95\%$	10^{-6}	None	Quality metrics ≥ 0.3 or 0.4 depending on software
(S57)	1	Different	NS	NS	NS	NS	Quality metrics ≥ 0.3
(S24)	6	Different	$\geq 1\%$	NS	NS	NS	Observed to expected variance > 1.1
(S4)	1	Different	NS	NS	NS	NS	NR
(S80)	4	Different	NS	NS	NS	NS	NR
(S43)	1	Different	$\geq 1\%$	NS	NS	NS	Quality metrics ≥ 0.3 or 0.4 depending on software; Imputed genotypes with posterior probability > 0.9
(S29)	1	Different	NS	NS	NS	SNPs common in all studies	NR
(S15)	1	Different	NS	NS	NS	NS	NR
(S56)	1	Different	NS	NS	NS	NS	Quality metrics ≥ 0.3

^a In this GWA report, all GWA studies applied common quality control steps except for 1 GWA study (WTCCC) which used an older genotyping platform and which applied MAF $\geq 1\%$, call rate $\geq 99\%$ and HWE P $> 10^{-5}$ as filtering criteria.

QC, quality control; HWE, Hardy-Weinberg equilibrium, NS, not specified; NR, not reported

Supplementary Table 3. Genome-wide significance threshold, heterogeneity testing, and replication process

Disease/Trait	Genome-wide significance	Heterogeneity testing	Replication Process
Bone mineral density- Femoral neck (S19)	$P=5\times10^{-8}$	Q, I ²	Independent SNPs from discovery stage
Bone mineral density- Lumbar spine (S19)	$P=5\times10^{-8}$	Q, I ²	Independent SNPs from discovery stage
Head circumference (infant) (S77)	$P=5\times10^{-8}$	Q, I ²	Strongest SNP per locus or a closely correlated proxy SNP
Obesity (childhood) (S9)	$P=5\times10^{-8}$	Q	All new signals reaching a specified significance threshold
Brachial circumference (S7)	$P=5\times10^{-8}$	I ²	All new signals reaching a specified significance threshold plus biologically plausible SNPs
Adiponectin levels (S12)	$P=5\times10^{-7}$; BF	Q, I ²	NA
Creatinine-based estimated GFR (S55)	$P=5\times10^{-8}$	I ²	SNPs reaching genome-wide significance plus new SNPs plus SNPs based on “direction test”
Cystatine-based estimated GFR (S55)	$P=5\times10^{-8}$	I ²	SNPs reaching genome-wide significance plus new SNPs plus SNPs based on “direction test”
Chronic kidney disease (S55)	$P=5\times10^{-8}$	I ²	SNPs reaching genome-wide significance plus new SNPs plus SNPs based on “direction test”
Rheumatoid arthritis (S52)	$P=5\times10^{-8}$	NR	All new signals reaching a specified significance threshold
Platelet count (S59)	$P=5\times10^{-8}$	Q, I ²	All new signals reaching a specified significance threshold
Metabolic syndrome (S40)	$P=5\times10^{-8}$	I ²	NA
Body mass index (S85)	$P=5\times10^{-8}$	Q	SNP reaching a specified significance threshold for the same trait and previously reported SNPs regardless of significance for a correlated trait
Menopause (age at onset) (S75)	$P=5\times10^{-8}$	Q	Independent SNPs from discovery stage
Atopic dermatitis (S53)	$P=5\times10^{-8}$	Q	Independent SNPs reaching a predetermined significance threshold
Ankle-brachial index (S48)	$P=5\times10^{-8}$	Q	Independent SNPs reaching genome-wide significance plus independent SNPs reaching a lower significance threshold plus SNPs with bioinformatics support.
Multiple sclerosis (S54)	$P=5\times10^{-8}$	Q, I ²	NA
Mean platelet volume (S25)	$P=5\times10^{-8}$	Q	Strongest SNPs per locus
Platelet count (S25)	$P=5\times10^{-8}$	Q	Strongest SNPs per locus
Aortic stiffness (carotid-femoral pulse wave velocity) (S46)	$P=5\times10^{-8}$	NR	SNPs reaching a predetermined significance threshold
Allergic rhinitis (S60)	$P=5\times10^{-8}$	Q	NA
IgE sensitization to grass (S60)	$P=5\times10^{-8}$	Q	NA
Alanine aminotransferase (ALT) (S10)	$P=1\times10^{-8}$	Q	All independent SNPs reaching a predetermined significance threshold

Alkaline phosphatase (ALP) (S10)	P=1×10 ⁻⁰⁸	Q	All independent SNPs reaching a predetermined significance threshold
Gamma glutamyl transpeptidase (γ -GT) (S10)	P=1×10 ⁻⁰⁸	Q	All independent SNPs reaching a predetermined significance threshold
Lp-PLA2 mass (S26)	P=5×10 ⁻⁰⁸	I ²	NA
Lp-PLA2 activity (S26)	P=5×10 ⁻⁰⁸	I ²	NA
Height (S49)	P=5×10 ⁻⁰⁸	Q, I ²	SNP reaching a specified significance threshold
Type 1 diabetes (S8)	P=5×10 ⁻⁰⁸	Q	Independent SNPs reaching a predetermined significance threshold and with no evidence of heterogeneity from previously unreported loci.
Pulmonary function (S70)	P=5×10 ⁻⁰⁸	Q	All new signals reaching a specified significance threshold
Bipolar disorder (S64)	P=5×10 ⁻⁰⁸	Q, I ²	SNP reaching a specified significance threshold
Common cIMT (S5)	P=5×10 ⁻⁰⁸	Q, I ²	SNP reaching a specified significance threshold
Internal cIMT (S5)	P=5×10 ⁻⁰⁸	Q, I ²	No SNPs eligible for replication
Plaque (S5)	P=5×10 ⁻⁰⁸	Q, I ²	SNPs reaching a specified significance threshold
Diastolic blood pressure (S31)	P=5×10 ⁻⁰⁸	NR	Independent SNPs reaching a specified significance threshold
Systolic blood pressure (S31)	P=5×10 ⁻⁰⁸	NR	Independent SNPs reaching a specified significance threshold
Pulse pressure (S82)	P=5×10 ⁻⁰⁸	NR	SNPs reaching a specified significance threshold for a correlated trait
Mean arterial pressure (S82)	P=5×10 ⁻⁰⁸	NR	SNPs reaching a specified significance threshold for a correlated trait
Coffee consumption (S1)	P=5×10 ⁻⁰⁸	Q	SNPs reaching a specified significance threshold
Type 2 diabetes (S39)	P=5×10 ⁻⁰⁸	Q	SNPs reaching a specified significance threshold
Proinsulin levels (S76)	P=5×10 ⁻⁰⁸	Q, I ²	Independent SNPs reaching a predetermined significance threshold plus biologically plausible SNPs
Aging (time to death) (S83)	P=5×10 ⁻⁰⁸	NR	A subset of the strongest SNPs from discovery stage
Aging (time to event) (S83)	P=5×10 ⁻⁰⁸	NR	No SNPs eligible for replication
Ankylosing spondylitis (S21)	P=5×10 ⁻⁰⁸	Q	Criteria not specified
Sudden cardiac arrest (S3)	P=5×10 ⁻⁰⁸	Q, I ²	Independent SNPs reaching a predetermined significance threshold
White blood cell count (S61)	P=2.5×10 ⁻⁰⁸	Q, I ²	Newly identified SNPs
Adiposity (% body fat) (S38)	P=5×10 ⁻⁰⁸	I ²	SNPs reaching a predetermined significance threshold
Diastolic blood pressure (S35)	P=5×10 ⁻⁰⁸	Q	Independent SNPs reaching a predetermined significance threshold plus independent SNPs reaching a lower threshold but with consistent association signals across the individual datasets
Systolic blood pressure (S35)	P=5×10 ⁻⁰⁸	Q	Independent SNPs reaching a predetermined significance threshold plus independent SNPs reaching a lower threshold but with consistent association signals across the individual datasets

Glioma (S62)	P=5×10 ⁻⁰⁷	Q, I ²	NA
D-dimer levels (S69)	P=5×10 ⁻⁰⁸	NR	NA
Dehydroepiandrosterone sulphate (S88)	P=5×10 ⁻⁰⁸	I ²	NA
Caffeine consumption (S11)	P=5×10 ⁻⁰⁸	Q, I ²	NA
Alcohol consumption (S65)	P=5×10 ⁻⁰⁸	NR	SNPs reaching a predetermined significance threshold plus biologically plausible SNPs
Alzheimer's disease (S28)	P=5×10 ⁻⁰⁸	Q, I ²	SNPs reaching a predetermined significance threshold
Migraine (S42)	P=5×10 ⁻⁰⁸	NR	A subset of SNPs reaching a predetermined significance threshold and selected to be maximally informative given the LD between them
Coronary heart disease (S66)	P=5×10 ⁻⁰⁸	Q, I ²	New SNPs reaching a predetermined significance threshold
Urinary albumin excretion (S6)	P=5×10 ⁻⁰⁸	Q, I ²	Strongest independent SNPs reaching a predetermined significance and MAF threshold
C-reactive protein (S14)	P=5×10 ⁻⁰⁸	Q	SNPs reaching genome-wide significance plus SNPs a lower significance threshold
Ulcerative colitis (S2)	P=5×10 ⁻⁰⁸	NR	SNPs reaching a predetermined significance threshold and not previously replicated
Parkinson's disease (S32)	P=5×10 ⁻⁰⁸	Q, I ²	SNPs reaching genome-wide significance and quality control in a custom array
IGF-1 (S34)	P=5×10 ⁻⁰⁸	NR	NA
IGFBP-3 (S34)	P=5×10 ⁻⁰⁸	NR	NA
Personality dimensions (S13)	P=5×10 ⁻⁰⁸	Q	Replication of the SNPs that turned out genome-wide significant was performed in five independent samples
Renal cell carcinoma (S58)	P=5×10 ⁻⁰⁷	Q	Independent SNPs reaching genome-wide significance
Menarche (age at onset) (S18)	P=5×10 ⁻⁰⁸	Q	All newly identified independent SNPs reaching a predetermined significance threshold
Crohn's disease (S22)	P=5×10 ⁻⁰⁸	Breslow-Day	SNPs reaching a specified significance threshold
QRS duration (S72)	P=5×10 ⁻⁰⁸	Q, I ²	SNPs reaching genome-wide significance in the discovery stage and SNPs reaching a specified significance threshold
Osteoarthritis (knee) (S20)	P=5×10 ⁻⁰⁸	Q, I ²	SNPs reaching a predetermined significance threshold
Retinal venular caliber (S30)	P=5×10 ⁻⁰⁸	NR	Independent genome-wide significant SNPs
Retinal arteriolar caliber (S30)	P=5×10 ⁻⁰⁸	NR	Independent genome-wide significant SNPs
Waist-hip ratio (S27)	P=5×10 ⁻⁰⁸	Q, I ²	Independent SNPs reaching a specified significance threshold
Body mass index (S73)	P=5×10 ⁻⁰⁸	Q	Independent SNPs reaching genome-wide significance or a predetermined significance threshold
Urate levels (S86)	P=5×10 ⁻⁰⁸	NR	NA
Gout (S86)	P=5×10 ⁻⁰⁸	NR	NA
Height (S41)	P=5×10 ⁻⁰⁸	Q, I ²	All new signals reaching a specified significance threshold

Asthma (S47)	$P=7.2 \times 10^{-8}$	Q, I ²	NA
Glycated hemoglobin (S71)	$P=5 \times 10^{-8}$	Q, I ²	SNPs previously selected by interim analysis
Calcium levels (S50)	$P=5 \times 10^{-8}$	NR	NA
Magnesium levels (S45)	$P=5 \times 10^{-8}$	Q	SNPs reaching genome-wide significance plus SNPs reaching a predetermined significance threshold
Sodium (S45)	$P=5 \times 10^{-8}$	Q	SNPs reaching genome-wide significance plus SNPs reaching a predetermined significance threshold
Potassium (S45)	$P=5 \times 10^{-8}$	Q	SNPs reaching genome-wide significance plus SNPs reaching a predetermined significance threshold
Triglycerides (S78)	$P=5 \times 10^{-8}$	Q	Lead SNPs were tested in European and non-European samples
HDL cholesterol (S78)	$P=5 \times 10^{-8}$	Q	Lead SNPs were tested in European and non-European samples
LDL cholesterol (S78)	$P=5 \times 10^{-8}$	Q	Lead SNPs were tested in European and non-European samples
Total cholesterol (S78)	$P=5 \times 10^{-8}$	Q	Lead SNPs were tested in European and non-European samples
Resting heart rate (RR interval) (S17)	$P=5 \times 10^{-8}$	NR	NA
Type 2 diabetes (S81)	$P=5 \times 10^{-8}$	Q, I ²	All SNPs reaching a specified significance threshold
Phosphorus levels (S36)	$P=4 \times 10^{-7}$	NR	Top signals
Vitamin D insufficiency (S84)	$P=5 \times 10^{-8}$	NR	SNPs reaching a specified significance threshold
Rheumatoid arthritis (S74)	$P=5 \times 10^{-8}$	Q	SNPs reaching a specified significance threshold plus previously reported SNPs associated with correlated traits plus biologically/functionally plausible SNPs
Heart failure (S68)	$P=5 \times 10^{-7}$	NR	NA
Cigarettes per day (S79)	$P=5 \times 10^{-8}$	I ²	A subset of the most significant SNPs
Ever vs. never smoker (S79)	$P=5 \times 10^{-8}$	I ²	A subset of the most significant SNPs
Former vs. current smokers (S79)	$P=5 \times 10^{-8}$	I ²	A subset of the most significant SNPs
Age of smoking initiation (S79)	$P=5 \times 10^{-8}$	I ²	No SNPs eligible for replication
Birth weight (S23)	$P=5 \times 10^{-8}$	Q, I ²	Strongest SNP per locus or a closely correlated proxy SNP
Intracranial aneurysm (S87)	$P=5 \times 10^{-8};$ PPA; BF	Q, I ² , τ ²	The genotyped SNP with the highest PPA plus two additional SNPs per locus for each independent signal
Urinary bladder cancer (S37)	$P=1.6 \times 10^{-7}$	Q, I ²	Not previously replicated SNPs
Coagulation factor VII (S67)	$P=5 \times 10^{-8}$	Q	All new signals reaching genome-wide significance
Von Wilenbrand factor (S67)	$P=5 \times 10^{-8}$	Q	All new signals reaching genome-wide significance
Coagulation factor VIII (S67)	$P=5 \times 10^{-8}$	Q	No SNPs eligible for replication

Height (S51)	P=5×10 ⁻⁰⁸	Q, I ²	NA
White blood cell count (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Red blood cell count (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Hemoglobin (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Hematocrit (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Mean corpuscular volume (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Mean corpuscular hemoglobin (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Mean corpuscular hemoglobin concentration (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Platelet count (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Gamma glutamyl transpeptidase (γ -GT) (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Aspartate aminotransferase (AST) (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Alanine aminotransferase (ALT) (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Total protein (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Blood urea nitrogen (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Serum creatinine (S33)	P=5×10 ⁻⁰⁸	I ²	NA
Fasting glucose (S16)	P=5×10 ⁻⁰⁸	Q, I ²	All independent SNPs reaching a specified significance threshold plus biologically plausible SNPs
Fasting insulin (S16)	P=5×10 ⁻⁰⁸	Q, I ²	All independent SNPs reaching a specified significance threshold plus biologically plausible SNPs
HOMA-B (S16)	P=5×10 ⁻⁰⁸	Q, I ²	All independent SNPs reaching a specified significance threshold plus biologically plausible SNPs
HOMA-IR (S16)	P=5×10 ⁻⁰⁸	Q, I ²	All independent SNPs reaching a specified significance threshold plus biologically plausible SNPs
Major mood disorders (S44)	P=7.2×10 ⁻⁰⁸	Q, I ²	No details on which SNPs were followed-up
2h glucose challenge (S63)	P=5×10 ⁻⁰⁸	Q	Independent SNPs reaching a specified significance threshold and SNPs with biological plausibility
PR interval (S57)	P=5×10 ⁻⁰⁸	Q, I ²	NA
Hemoglobin (S24)	P=5×10 ⁻⁰⁸	NR	SNPs reaching genome-wide significance in the discovery meta-analysis
Hematocrit (S24)	P=5×10 ⁻⁰⁸	NR	SNPs reaching genome-wide significance in the discovery meta-analysis
Mean corpuscular volume (S24)	P=5×10 ⁻⁰⁸	NR	SNPs reaching genome-wide significance in the discovery meta-analysis
Mean corpuscular hemoglobin (S24)	P=5×10 ⁻⁰⁸	NR	SNPs reaching genome-wide significance in the discovery meta-analysis
Mean corpuscular hemoglobin	P=5×10 ⁻⁰⁸	NR	SNPs reaching genome-wide significance in the discovery meta-analysis

concentration (S24)			
Red blood cell count (S24)	P=5×10 ⁻⁰⁸	NR	SNPs reaching genome-wide significance in the discovery meta-analysis
Atrial fibrillation (S4)	P=5×10 ⁻⁰⁸	Q	SNPs reaching a predetermined significance threshold and available at a minimum number of datasets
Left ventricular mass (S80)	P=5×10 ⁻⁰⁷	NR	Strongest SNP per locus reaching genome-wide significance
Left ventricle internal diastolic dimensions (S80)	P=5×10 ⁻⁰⁷	NR	Strongest SNP per locus reaching genome-wide significance
Left ventricle wall thickness (S80)	P=5×10 ⁻⁰⁷	NR	Strongest SNP per locus reaching genome-wide significance
Left ventricle systolic dysfunction (S80)	P=5×10 ⁻⁰⁷	NR	Strongest SNP per locus reaching genome-wide significance
Adiposity- waist circumference (S43)	P=5×10 ⁻⁰⁸	Q, I ²	Independent SNPs reaching a predetermined significance threshold for the same or a correlated trait plus biologically plausible SNPs
Stroke (S29)	P=5×10 ⁻⁰⁸	NR	Independent SNPs reaching genome-wide significance
Fibrinogen (S15)	P=5×10 ⁻⁰⁸	NR	Independent SNPs reaching genome-wide significance
QT interval (S56)	P=5×10 ⁻⁰⁸	NR	Strongest SNP per locus reaching a predetermined significance threshold

BF, Bayes factor; HOMA-B, homeostatic model assessment beta cell function; HOMA-IR, homeostatic model assessment insulin resistance; Lp-PLA2, lipoprotein-associated phospholipase A2; PPA, posterior probability of association; SNP, single nucleotide polymorphism

NR, not reported

Q: Cochran's Q-statistic

Supplementary Table 4. Diversity in ancestry and phenotypes and cross-phenotype checks

Disease/Trait	Diverse ancestries	Diverse phenotypes	Phenotype cross-checks
Bone mineral density- Femoral neck (S19)	Yes	No	Fractures
Bone mineral density- Lumbar spine (S19)	Yes	No	Fractures
Head circumference (infant) (S77)	No	No	Intracranial volume in adulthood; trimester fetal head circumference and head circumference at birth; height
Obesity (childhood) (S9)	No	No	BMI
Brachial circumference (S7)	No	No	BMI, WHR, weight, T2D, fasting glucose, fasting insulin, HbA1c, 2h glucose test
Adiponectin levels (S12)	Yes	No	Type 2 diabetes; total cholesterol; LDL; HDL; triglycerides; waist to hip ratio
Creatinine-based estimated GFR (S55)	Yes	No	Urinary albumin-to-creatinine ratio; microalbuminuria; BP; MI
Cystatine-based estimated GFR (S55)	No	No	Urinary albumin-to-creatinine ratio; microalbuminuria; BP; MI
Chronic kidney disease (S55)	Yes	No	Urinary albumin-to-creatinine ratio; microalbuminuria; BP; MI
Rheumatoid arthritis (S52)	Yes	No	Systemic lupus erythematosus; Grave's disease
Platelet count (S59)	Yes	No	Platelet aggregation
Metabolic syndrome (S40)	No	MetS component traits	Serum metabolites
Body mass index (S85)	No	No	No
Menopause (age at onset) (S75)	No	No	No
Atopic dermatitis (S53)	No	No	Asthma; total serum IgE levels
Ankle-brachial index (S48)	No	PAD	CAD; MI
Multiple sclerosis (S54)	NR	No	Crohn's disease, ulcerative colitis, celiac disease, type 1 diabetes, rheumatoid arthritis, systemic lupus erythematosus, psoriasis
Mean platelet volume (S25)	Yes	No	Hb, MCV, RBC
Platelet count (S25)	Yes	No	Hb, MCV, RBC
Aortic stiffness (carotid-femoral pulse wave velocity) (S46)	No	No	CAD, heart failure, pulse rate, chronic kidney disease, GFR
Allergic rhinitis (S60)	No	No	Birth order
IgE sensitization to grass (S60)	No	No	Birth order

Alanine aminotransferase (ALT) (S10)	Yes	No	Hepatic steatosis
Alkaline phosphatase (ALP) (S10)	Yes	No	Hepatic steatosis
Gamma glutamyl transpeptidase (γ -GT) (S10)	Yes	No	Hepatic steatosis
Lp-PLA2 mass (S26)	No	No	CAD/CHD
Lp-PLA2 activity (S26)	No	No	CAD/CHD
Height (S49)	Yes	No	No
Type 1 diabetes (S8)	No	No	No
Pulmonary function (S70)	No	FEV1, FEV1/FVC	Smoking amount; ever smoking versus never smoking; height; lung cancer
Bipolar disorder (S64)	No	No	Schizophrenia
Common cIMT (S5)	No	Internal cIMT; plaque	CAD
Internal cIMT (S5)	No	No	No
Plaque (S5)	No	Common cIMT; internal cIMT	Coronary artery disease
Diastolic blood pressure (S31)	Yes	Hypertension	Levels of circulating serum metabolites, left ventricular mass, left ventricular wall thickness, incident heart failure, incident and prevalent stroke, prevalent CAD, kidney disease and measures of kidney function
Systolic blood pressure (S31)	Yes	Hypertension	Levels of circulating serum metabolites, left ventricular mass, left ventricular wall thickness, incident heart failure, incident and prevalent stroke, prevalent CAD, kidney disease and measures of kidney function
Pulse pressure (S82)	No	No	SBP, DBP
Mean arterial pressure (S82)	No	No	No
Coffee consumption (S1)	No	No	No
Type 2 diabetes (S39)	Yes	No	No
Proinsulin levels (S76)	No	32,33-split proinsulin; insulinogenic index; C-peptide	Fasting and 2h glucose and insulin, HOMA-B, HOMA-IR, HbA1c, type 2 diabetes, BMI, CAD
Aging (time to death) (S83)	No	Aging (time to event)	No
Aging (time to event) (S83)	NR	Aging (time to death)	No
Ankylosing spondylitis (S21)	No	No	No
Sudden cardiac arrest (S3)	No	No	QRS interval, QT interval, RR interval
White blood cell count (S61)	Yes	WBC subtypes	No

Adiposity (% body fat) (S38)	Yes	No	Lipid profiles, indices of insulin sensitivity, fat distribution, leptin, adiponectin
Diastolic blood pressure (S35)	No	Hypertension	BMI, fasting plasma glucose and lipids, CAD
Systolic blood pressure (S35)	No	Hypertension	BMI, fasting plasma glucose and lipids, CAD
Glioma (S62)	No	No	No
D-dimer levels (S69)	NR	No	No
Dehydroepiandrosterone sulphate (S88)	No	No	No
Caffeine consumption (S11)	No	No	No
Alcohol consumption (S65)	No	No	No
Alzheimer's disease (S28)	No	Alzheimer's disease age at onset	No
Migraine (S42)	No	No	No
Coronary heart disease (S66)	No	No	LDL, HDL, total cholesterol, HTN, BMI, type 2 diabetes, smoking
Urinary albumin excretion (S6)	Yes	Microalbuminuria, urinary albumin to creatinine ratio	Time to persistent microalbuminuria
C-reactive protein (S14)	No	No	MI, CHD
Ulcerative colitis (S2)	No	No	Crohn's disease
Parkinson's disease (S32)	No	No	No
IGF-1 (S34)	NR	No	No
IGFBP-3 (S34)	NR	No	No
Personality dimensions (S13)	No	Types of personality dimension	No
Renal cell carcinoma (S58)	No	No	No
Menarche (age at onset) (S18)	No	No	BMI, WHR, obesity, height
Crohn's disease (S22)	No	No	No
QRS duration (S72)	No	No	Conduction defect, PR interval, QT interval
Osteoarthritis (knee) (S20)	Yes	No	No
Retinal venular caliber (S30)	No	No	Central retinal venular equivalent; CAD; stroke; MI, HTN, type 2 diabetes
Retinal arteriolar caliber (S30)	No	No	Central retinal venular equivalent; CAD; stroke; MI, HTN, type 2 diabetes

Waist-hip ratio (S27)	No	No	BMI, WC, hip circumference, TGs, LDL, HDL, fasting glucose, fasting insulin, HOMA-IR, 2h glucose, T2D
Body mass index (S73)	No	Overweihgt; obseese	Weight, body fat percentage, type 2 diabetes, 2h glucose, fasting glucose, fasting insulin, HOMA-B, HOMA-IR, HDL, LDL, TGs, height
Urate levels (S86)	No	No	SBP, DBP, glucose, Insulin, GFR, CKD, CHD
Gout (S86)	No	No	SBP, DBP, glucose, Insulin, GFR, CKD, CHD
Height (S41)	No	No	No
Asthma (S47)	No	No	Serum IgE
Glycated hemoglobin (S71)	No	No	Type 2 diabetes, CAD, fasting glucose, 2h glucose, fasting insulin, HOMA-IR, HOMA-B, 2h-insulin, BMI, Hb, MCH, MCV, transferin, iron
Calcium levels (S50)	No	No	Serum magnesium, phosphorus, PTH; LS-BMD, FN-BMD; kidney stone disease
Magnesium levels (S45)	No	No	GFR, SBP, DBP, fasting glucose, BMD
Sodium (S45)	No	No	GFR, SBP, DBP, fasting glucose, BMD
Potassium (S45)	No	No	GFR, SBP, DBP, fasting glucose, BMD
Triglycerides (S78)	Yes	No	CAD, hyperlipidemia, extreme lipid levels
HDL cholesterol (S78)	Yes	No	CAD, hyperlipidemia, extreme lipid levels
LDL cholesterol (S78)	Yes	No	CAD, hyperlipidemia, extreme lipid levels
Total cholesterol (S78)	Yes	No	CAD, hyperlipidemia, extreme lipid levels
Resting heart rate (RR interval) (S17)	No	No	No
Type 2 diabetes (S81)	No	No	Fasting glucose, fasting insulin, HOMA-B, HOMA-IR, BMI
Phosphorus levels (S36)	No	No	No
Vitamin D insufficiency (S84)	No	No	Clinical vitamin D insufficiency; serum concentrations of vitamin D binding protein
Rheumatoid arthritis (S74)	No	No	No
Heart failure (S68)	No	No	No
Cigarettes per day (S79)	No	No	No
Ever vs never smoker (S79)	No	No	No
Former vs current smokers (S79)	No	No	No
Age of smoking initiation (S79)	No	No	No

Birth weight (S23)	Yes	No	Birth length, birth head circumference, ponderal index, T2D, FPG
Intracranial aneurysm (S87)	Yes	No	No
Urinary bladder cancer (S37)	No	No	Recurrence-free survival; smoking behavior
Coagulation factor VII (S67)	No	No	No
Von Wilenbrand factor (S67)	No	No	No
Coagulation factor VIII (S67)	No	No	No
Height (S51)	No	No	No
White blood cell count (S33)	No	No	No
Red blood cell count (S33)	No	No	No
Hemoglobin (S33)	No	No	No
Hematocrit (S33)	No	No	No
Mean corpuscular volume (S33)	No	No	No
Mean corpuscular hemoglobin (S33)	No	No	No
Mean corpuscular hemoglobin concentration (S33)	No	No	No
Platelet count (S33)	No	No	No
Gamma glutamyl transpeptidase (γ -GT) (S33)	No	No	No
Aspartate aminotransferase (AST) (S33)	No	No	No
Alanine aminotransferase (ALT) (S33)	No	No	No
Total protein (S33)	No	No	No
Blood urea nitrogen (S33)	No	No	No
Serum creatinine (S33)	No	No	No
Fasting glucose (S16)	No	No	Fasting insulin, HOMA-B, HOMA-IR, HbA1c, 2h glucose test, 2h insulin test, type 2 diabetes, DBP, SBP, hypertension, LDL, HDL, total cholesterol, triglycerides
Fasting insulin (S16)	No	No	Fasting insulin, HOMA-B, HOMA-IR, HbA1c, 2h glucose test, 2h insulin test, type 2 diabetes, DBP, SBP, hypertension, LDL, HDL, total cholesterol, triglycerides
HOMA-B (S16)	No	No	Fasting insulin, HOMA-B, HOMA-IR, HbA1c, 2h glucose test, 2h insulin test, type 2 diabetes, DBP, SBP, hypertension, LDL, HDL, total cholesterol, triglycerides
HOMA-IR (S16)	No	No	Fasting insulin, HOMA-B, HOMA-IR, HbA1c, 2h glucose test, 2h insulin test, type 2 diabetes, DBP, SBP, hypertension, LDL, HDL, total cholesterol, triglycerides

			2 diabetes, DBP, SBP, hypertension, LDL, HDL, total cholesterol, triglycerides
Major mood disorders (S44)	No	No	No
2h glucose challenge (S63)	No	No	Insulin secretion indices, T2D
PR interval (S57)	No	No	Atrial fibrillation
Hemoglobin (S24)	No	No	SBP, DBP, HTN
Hematocrit (S24)	No	No	SBP, DBP, HTN
Mean corpuscular volume (S24)	No	No	SBP, DBP, HTN
Mean corpuscular hemoglobin (S24)	No	No	SBP, DBP, HTN
Mean corpuscular hemoglobin concertation (S24)	No	No	SBP, DBP, HTN
Red blood cell count (S24)	No	No	SBP, DBP, HTN
Atrial fibrillation (S4)	No	No	No
Left ventricular mass (S80)	No	No	No
Left ventricle internal diastolic dimensions (S80)	No	No	No
Left ventricle wall thickness (S80)	No	No	No
Left ventricle systolic dysfunction (S80)	No	No	No
Adiposity- waist circumference (S43)	No	WHR	BMI, weight, height, bioimpedance data, DXA, hyperlipidemia, type 2 diabetes
Stroke (S29)	Yes	Stroke subtypes	No
Fibrinogen (S15)	No	No	No
QT interval (S56)	No	No	No

BMD, bone mineral density; BMI, body mass index; CAD, cIMT, carotid intima media thickness; coronary artery disease; CHD, coronary heart disease; DBP, diastolic blood pressure; FEV1, forced expiratory volume in 1 second; FN, femoral neck; FVC, forced vital capacity; GFR, glomerular filtration rate; HbA1c, glycated hemoglobin; HDL, LDL, high density lipoprotein cholesterol; HOMA-B, homeostatic

model assessment beta cell function; HOMA-IR, homeostatic model assessment insulin resistance; HTN, hypertension; LDL, low density lipoprotein cholesterol; Lp-PLA₂, lipoprotein-associated phospholipase A2; LS, lumbar spine; MCV, mean corpuscular volume; MetS, metabolic syndrome; MI, myocardial infarction; PTH, parathormone; SBP, systolic blood pressure; TGs, triglycerides; WC, waist circumference; WHR, waist to hip ratio

Eligible reports of GWA meta-analyses:

- S1. Amin N, Byrne E, Johnson J, Chenevix-Trench G, Walter S, et al. 2012. Genome-wide association analysis of coffee drinking suggests association with CYP1A1/CYP1A2 and NRCCAM. *Mol Psychiatry* 17: 1116-29
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