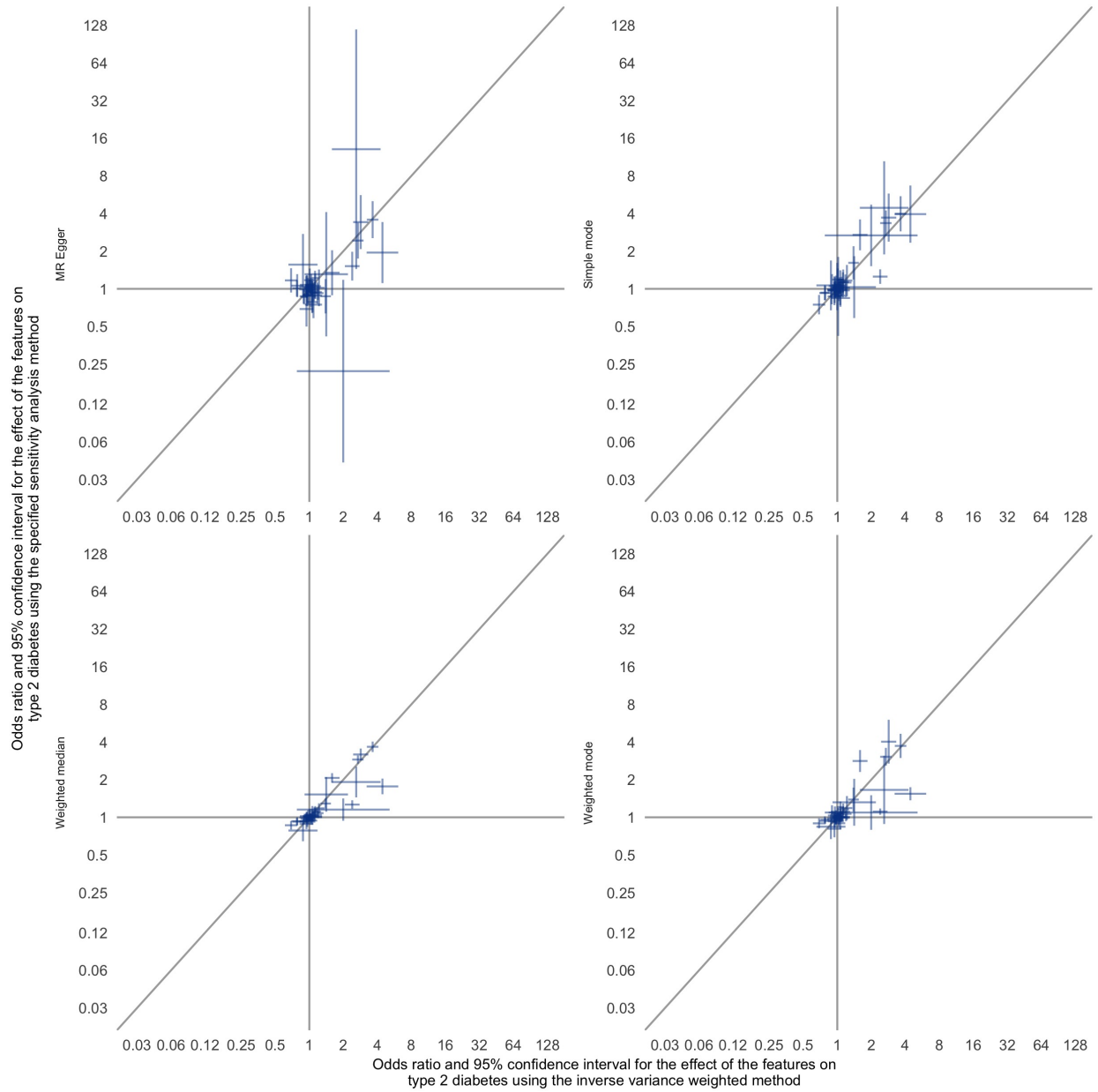# Separating the effects of cardiometabolic traits from type 2 diabetes on coronary and peripheral artery disease
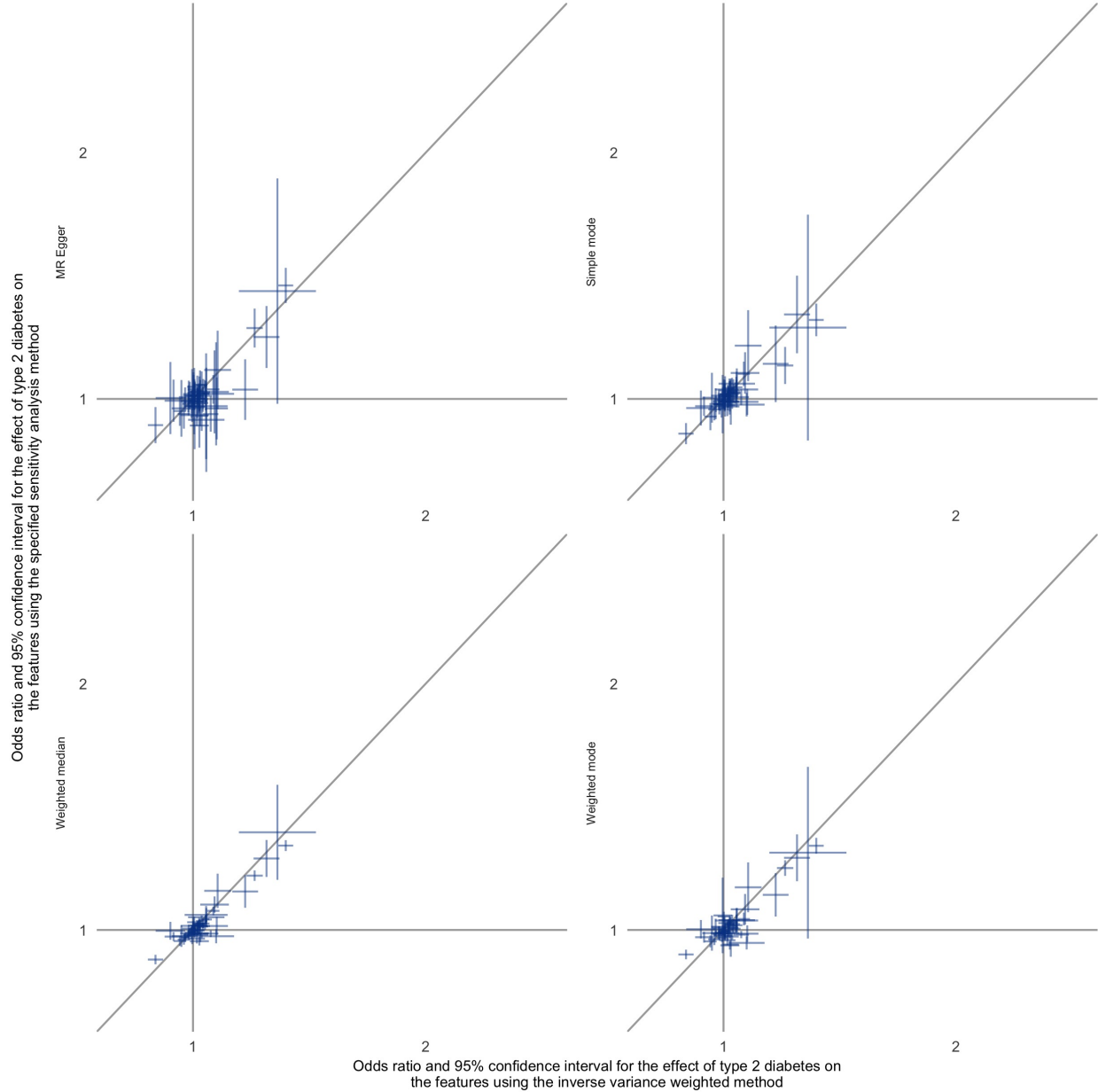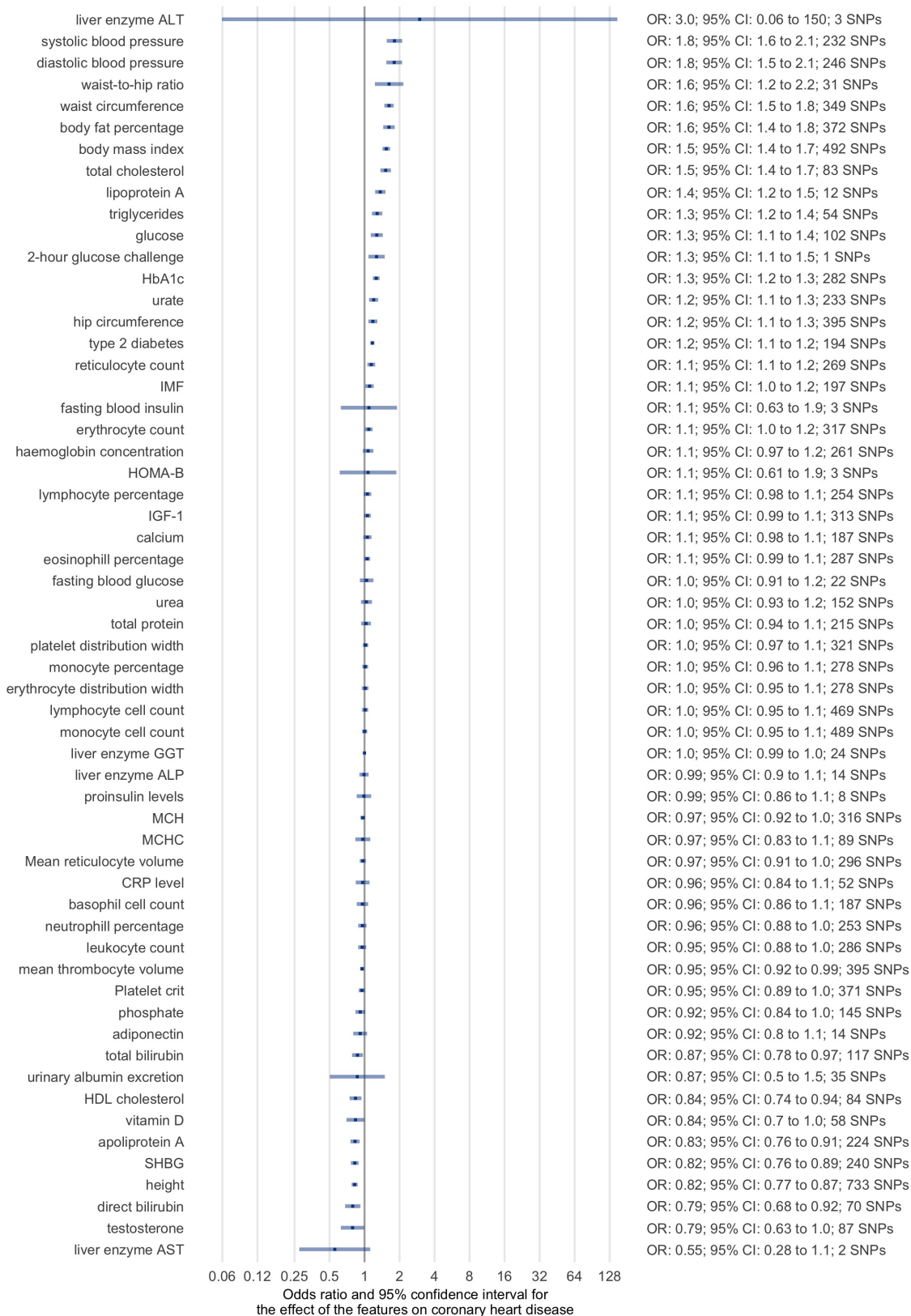
Supplementary Figures

Supplementary Figure 1: Univariate Mendelian randomization estimates for the effect of the features on type 2 diabetes using alternative methods
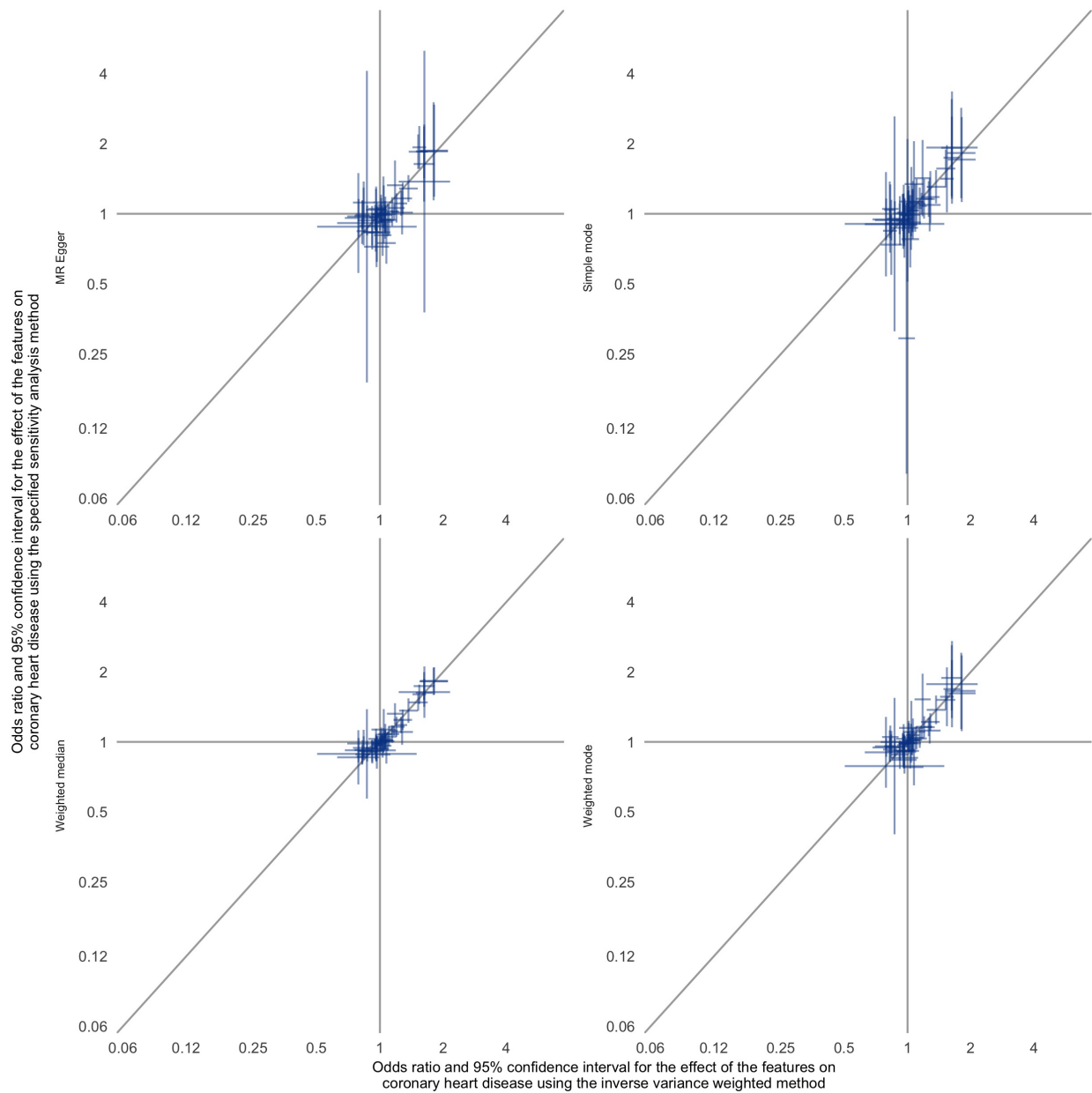
Supplementary Figure 2: Univariate Mendelian randomization estimates for the effect of type 2 diabetes on the features using alternative methods

Supplementary Figure 3: Univariate Mendelian randomization estimates for the effect of the features on coronary artery disease

Feature	Estimate
liver enzyme ALT	OR: 3.0; 95% CI: 0.06 to 150; 3 SNPs
systolic blood pressure	OR: 1.8; 95% CI: 1.6 to 2.1; 232 SNPs
diastolic blood pressure	OR: 1.8; 95% CI: 1.5 to 2.1; 246 SNPs
waist-to-hip ratio	OR: 1.6; 95% CI: 1.2 to 2.2; 31 SNPs
waist circumference	OR: 1.6; 95% CI: 1.5 to 1.8; 349 SNPs
body fat percentage	OR: 1.6; 95% CI: 1.4 to 1.8; 372 SNPs
body mass index	OR: 1.5; 95% CI: 1.4 to 1.7; 492 SNPs
total cholesterol	OR: 1.5; 95% CI: 1.4 to 1.7; 83 SNPs
lipoprotein A	OR: 1.4; 95% CI: 1.2 to 1.5; 12 SNPs
triglycerides	OR: 1.3; 95% CI: 1.2 to 1.4; 54 SNPs
glucose	OR: 1.3; 95% CI: 1.1 to 1.4; 102 SNPs
2-hour glucose challenge	OR: 1.3; 95% CI: 1.1 to 1.5; 1 SNPs
HbA1c	OR: 1.3; 95% CI: 1.2 to 1.3; 282 SNPs
urate	OR: 1.2; 95% CI: 1.1 to 1.3; 233 SNPs
hip circumference	OR: 1.2; 95% CI: 1.1 to 1.3; 395 SNPs
type 2 diabetes	OR: 1.2; 95% CI: 1.1 to 1.2; 194 SNPs
reticulocyte count	OR: 1.1; 95% CI: 1.1 to 1.2; 269 SNPs
IMF	OR: 1.1; 95% CI: 1.0 to 1.2; 197 SNPs
fasting blood insulin	OR: 1.1; 95% CI: 0.63 to 1.9; 3 SNPs
erythrocyte count	OR: 1.1; 95% CI: 1.0 to 1.2; 317 SNPs
haemoglobin concentration	OR: 1.1; 95% CI: 0.97 to 1.2; 261 SNPs
HOMA-B	OR: 1.1; 95% CI: 0.61 to 1.9; 3 SNPs
lymphocyte percentage	OR: 1.1; 95% CI: 0.98 to 1.1; 254 SNPs
IGF-1	OR: 1.1; 95% CI: 0.99 to 1.1; 313 SNPs
calcium	OR: 1.1; 95% CI: 0.98 to 1.1; 187 SNPs
eosinophill percentage	OR: 1.1; 95% CI: 0.99 to 1.1; 287 SNPs
fasting blood glucose	OR: 1.0; 95% CI: 0.91 to 1.2; 22 SNPs
urea	OR: 1.0; 95% CI: 0.93 to 1.2; 152 SNPs
total protein	OR: 1.0; 95% CI: 0.94 to 1.1; 215 SNPs
platelet distribution width	OR: 1.0; 95% CI: 0.97 to 1.1; 321 SNPs
monocyte percentage	OR: 1.0; 95% CI: 0.96 to 1.1; 278 SNPs
erythrocyte distribution width	OR: 1.0; 95% CI: 0.95 to 1.1; 278 SNPs
lymphocyte cell count	OR: 1.0; 95% CI: 0.95 to 1.1; 469 SNPs
monocyte cell count	OR: 1.0; 95% CI: 0.95 to 1.1; 489 SNPs
liver enzyme GGT	OR: 1.0; 95% CI: 0.99 to 1.0; 24 SNPs
liver enzyme ALP	OR: 0.99; 95% CI: 0.9 to 1.1; 14 SNPs
proinsulin levels	OR: 0.99; 95% CI: 0.86 to 1.1; 8 SNPs
MCH	OR: 0.97; 95% CI: 0.92 to 1.0; 316 SNPs
MCHC	OR: 0.97; 95% CI: 0.83 to 1.1; 89 SNPs
Mean reticulocyte volume	OR: 0.97; 95% CI: 0.91 to 1.0; 296 SNPs
CRP level	OR: 0.96; 95% CI: 0.84 to 1.1; 52 SNPs
basophil cell count	OR: 0.96; 95% CI: 0.86 to 1.1; 187 SNPs
neutrophill percentage	OR: 0.96; 95% CI: 0.88 to 1.0; 253 SNPs
leukocyte count	OR: 0.95; 95% CI: 0.88 to 1.0; 286 SNPs
mean thrombocyte volume	OR: 0.95; 95% CI: 0.92 to 0.99; 395 SNPs
Platelet crit	OR: 0.95; 95% CI: 0.89 to 1.0; 371 SNPs
phosphate	OR: 0.92; 95% CI: 0.84 to 1.0; 145 SNPs
adiponectin	OR: 0.92; 95% CI: 0.8 to 1.1; 14 SNPs
total bilirubin	OR: 0.87; 95% CI: 0.78 to 0.97; 117 SNPs
urinary albumin excretion	OR: 0.87; 95% CI: 0.5 to 1.5; 35 SNPs
HDL cholesterol	OR: 0.84; 95% CI: 0.74 to 0.94; 84 SNPs
vitamin D	OR: 0.84; 95% CI: 0.7 to 1.0; 58 SNPs
apoliprotein A	OR: 0.83; 95% CI: 0.76 to 0.91; 224 SNPs
SHBG	OR: 0.82; 95% CI: 0.76 to 0.89; 240 SNPs
height	OR: 0.82; 95% CI: 0.77 to 0.87; 733 SNPs
direct bilirubin	OR: 0.79; 95% CI: 0.68 to 0.92; 70 SNPs
testosterone	OR: 0.79; 95% CI: 0.63 to 1.0; 87 SNPs
liver enzyme AST	OR: 0.55; 95% CI: 0.28 to 1.1; 2 SNPs

0.06 0.12 0.25 0.5 1 2 4 8 16 32 64 128

Odds ratio and 95% confidence interval for
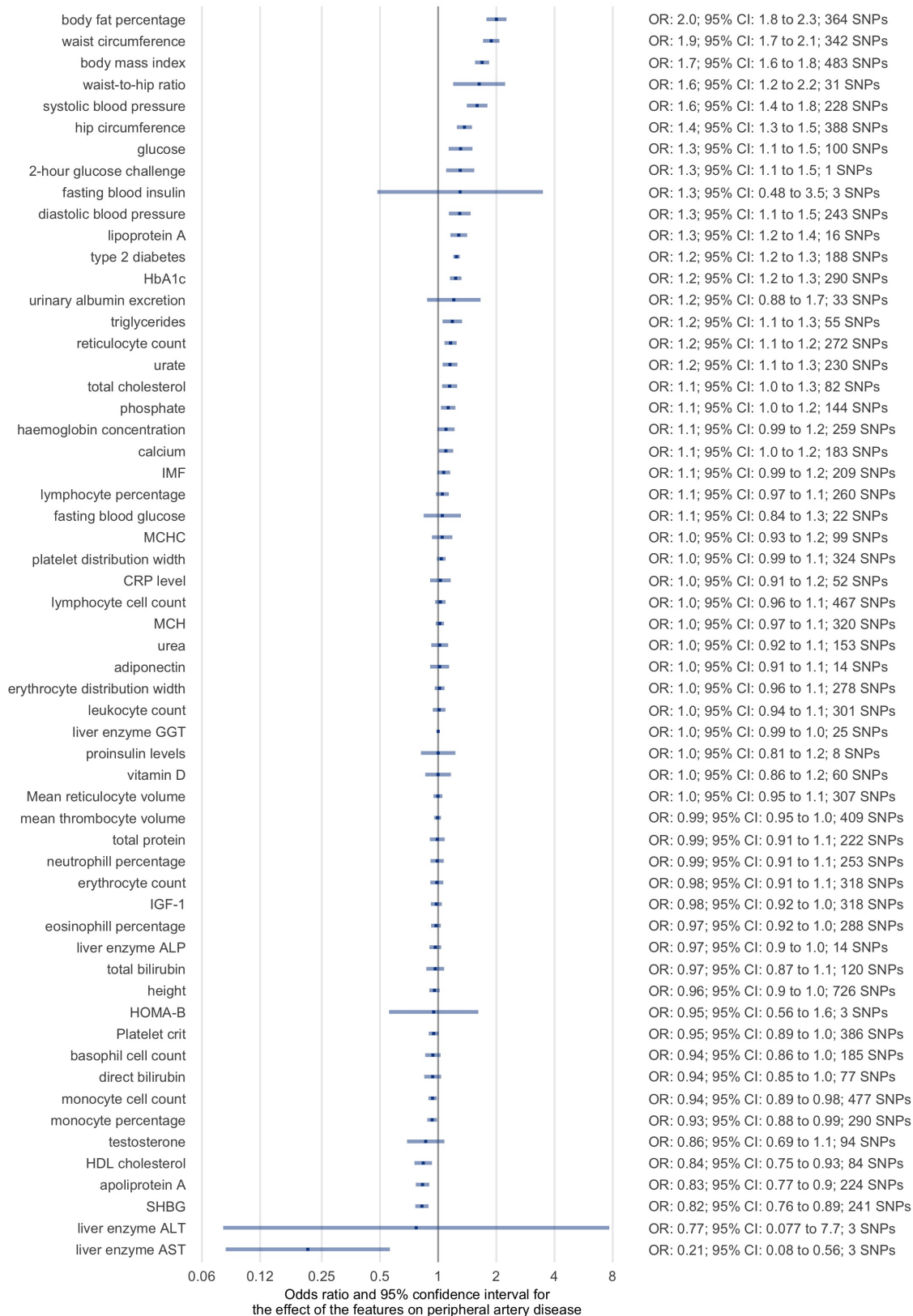the effect of the features on coronary heart disease

Supplementary Figure 4: Univariate Mendelian randomization estimates for the effect of the features on coronary artery disease using alternative methods

Supplementary Figure 5: Univariate Mendelian randomization estimates for the effect of the features on peripheral artery disease

Feature	Estimate
body fat percentage	OR: 2.0; 95% CI: 1.8 to 2.3; 364 SNPs
waist circumference	OR: 1.9; 95% CI: 1.7 to 2.1; 342 SNPs
body mass index	OR: 1.7; 95% CI: 1.6 to 1.8; 483 SNPs
waist-to-hip ratio	OR: 1.6; 95% CI: 1.2 to 2.2; 31 SNPs
systolic blood pressure	OR: 1.6; 95% CI: 1.4 to 1.8; 228 SNPs
hip circumference	OR: 1.4; 95% CI: 1.3 to 1.5; 388 SNPs
glucose	OR: 1.3; 95% CI: 1.1 to 1.5; 100 SNPs
2-hour glucose challenge	OR: 1.3; 95% CI: 1.1 to 1.5; 1 SNPs
fasting blood insulin	OR: 1.3; 95% CI: 0.48 to 3.5; 3 SNPs
diastolic blood pressure	OR: 1.3; 95% CI: 1.1 to 1.5; 243 SNPs
lipoprotein A	OR: 1.3; 95% CI: 1.2 to 1.4; 16 SNPs
type 2 diabetes	OR: 1.2; 95% CI: 1.2 to 1.3; 188 SNPs
HbA1c	OR: 1.2; 95% CI: 1.2 to 1.3; 290 SNPs
urinary albumin excretion	OR: 1.2; 95% CI: 0.88 to 1.7; 33 SNPs
triglycerides	OR: 1.2; 95% CI: 1.1 to 1.3; 55 SNPs
reticulocyte count	OR: 1.2; 95% CI: 1.1 to 1.2; 272 SNPs
urate	OR: 1.2; 95% CI: 1.1 to 1.3; 230 SNPs
total cholesterol	OR: 1.1; 95% CI: 1.0 to 1.3; 82 SNPs
phosphate	OR: 1.1; 95% CI: 1.0 to 1.2; 144 SNPs
haemoglobin concentration	OR: 1.1; 95% CI: 0.99 to 1.2; 259 SNPs
calcium	OR: 1.1; 95% CI: 1.0 to 1.2; 183 SNPs
IMF	OR: 1.1; 95% CI: 0.99 to 1.2; 209 SNPs
lymphocyte percentage	OR: 1.1; 95% CI: 0.97 to 1.1; 260 SNPs
fasting blood glucose	OR: 1.1; 95% CI: 0.84 to 1.3; 22 SNPs
MCHC	OR: 1.0; 95% CI: 0.93 to 1.2; 99 SNPs
platelet distribution width	OR: 1.0; 95% CI: 0.99 to 1.1; 324 SNPs
CRP level	OR: 1.0; 95% CI: 0.91 to 1.2; 52 SNPs
lymphocyte cell count	OR: 1.0; 95% CI: 0.96 to 1.1; 467 SNPs
MCH	OR: 1.0; 95% CI: 0.97 to 1.1; 320 SNPs
urea	OR: 1.0; 95% CI: 0.92 to 1.1; 153 SNPs
adiponectin	OR: 1.0; 95% CI: 0.91 to 1.1; 14 SNPs
erythrocyte distribution width	OR: 1.0; 95% CI: 0.96 to 1.1; 278 SNPs
leukocyte count	OR: 1.0; 95% CI: 0.94 to 1.1; 301 SNPs
liver enzyme GGT	OR: 1.0; 95% CI: 0.99 to 1.0; 25 SNPs
proinsulin levels	OR: 1.0; 95% CI: 0.81 to 1.2; 8 SNPs
vitamin D	OR: 1.0; 95% CI: 0.86 to 1.2; 60 SNPs
Mean reticulocyte volume	OR: 1.0; 95% CI: 0.95 to 1.1; 307 SNPs
mean thrombocyte volume	OR: 0.99; 95% CI: 0.95 to 1.0; 409 SNPs
total protein	OR: 0.99; 95% CI: 0.91 to 1.1; 222 SNPs
neutrophill percentage	OR: 0.99; 95% CI: 0.91 to 1.1; 253 SNPs
erythrocyte count	OR: 0.98; 95% CI: 0.91 to 1.1; 318 SNPs
IGF-1	OR: 0.98; 95% CI: 0.92 to 1.0; 318 SNPs
eosinophill percentage	OR: 0.97; 95% CI: 0.92 to 1.0; 288 SNPs
liver enzyme ALP	OR: 0.97; 95% CI: 0.9 to 1.0; 14 SNPs
total bilirubin	OR: 0.97; 95% CI: 0.87 to 1.1; 120 SNPs
height	OR: 0.96; 95% CI: 0.9 to 1.0; 726 SNPs
HOMA-B	OR: 0.95; 95% CI: 0.56 to 1.6; 3 SNPs
Platelet crit	OR: 0.95; 95% CI: 0.89 to 1.0; 386 SNPs
basophil cell count	OR: 0.94; 95% CI: 0.86 to 1.0; 185 SNPs
direct bilirubin	OR: 0.94; 95% CI: 0.85 to 1.0; 77 SNPs
monocyte cell count	OR: 0.94; 95% CI: 0.89 to 0.98; 477 SNPs
monocyte percentage	OR: 0.93; 95% CI: 0.88 to 0.99; 290 SNPs
testosterone	OR: 0.86; 95% CI: 0.69 to 1.1; 94 SNPs
HDL cholesterol	OR: 0.84; 95% CI: 0.75 to 0.93; 84 SNPs
apoliprotein A	OR: 0.83; 95% CI: 0.77 to 0.9; 224 SNPs
SHBG	OR: 0.82; 95% CI: 0.76 to 0.89; 241 SNPs
liver enzyme ALT	OR: 0.77; 95% CI: 0.077 to 7.7; 3 SNPs
liver enzyme AST	OR: 0.21; 95% CI: 0.08 to 0.56; 3 SNPs

Axis: 0.06 0.12 0.25 0.5 1 2 4 8

Odds ratio and 95% confidence interval for
the effect of the features on peripheral artery disease

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Supplementary Figure 6: Univariate Mendelian randomization estimates for the effect of the features on peripheral artery disease using alternative methods