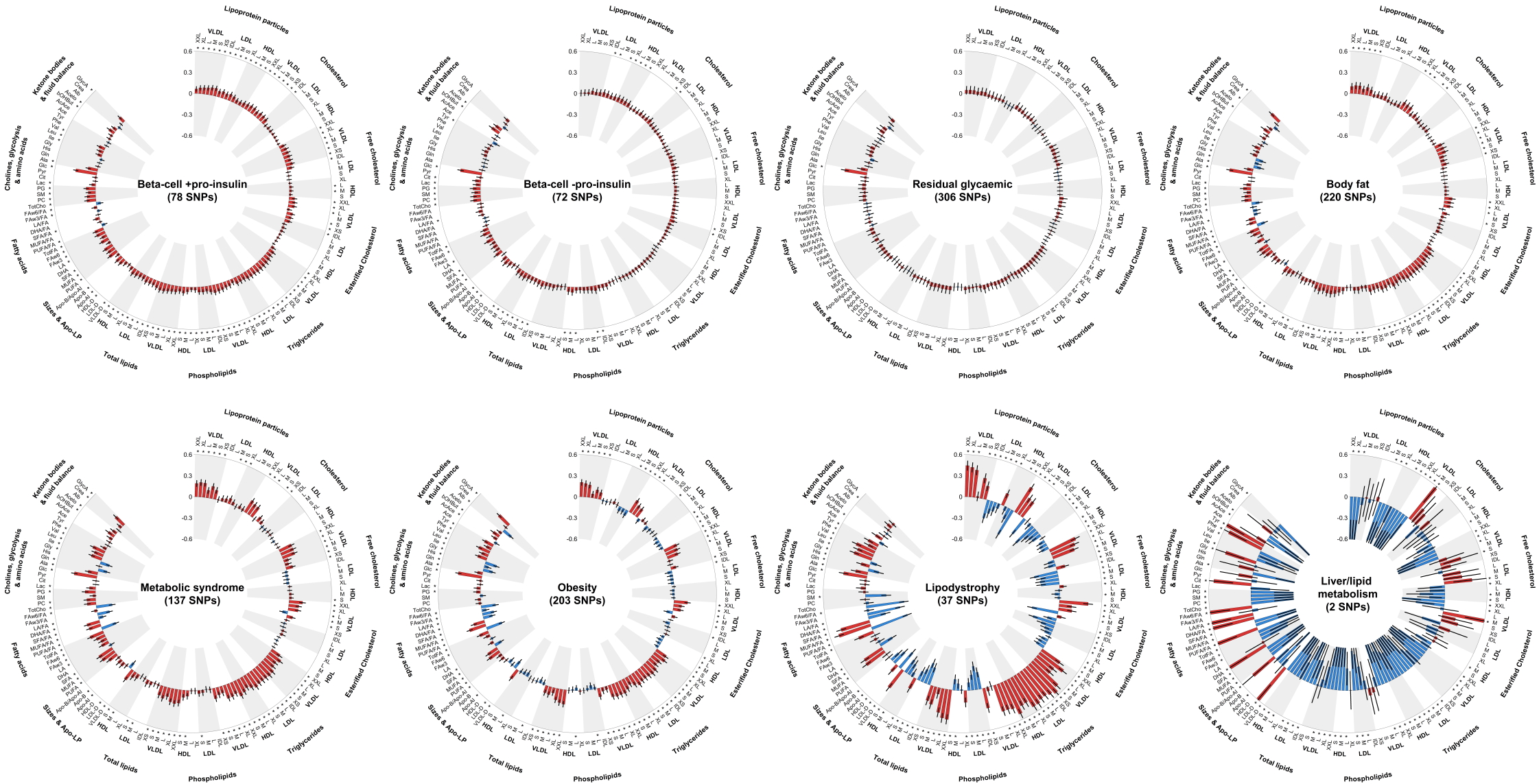


Figure 2: Associations of pathway-specific type 2 diabetes GRSs with circulating metabolic biomarkers among 125,587 participants aged 35–84 years at recruitment



Difference (in SD units) of each log-NMR biomarker are per trebling in the genetically-predicted odds of type 2 diabetes and are adjusted for age, sex, the first 7 genetic principal components and fasting time. *False discovery rate controlled $p < 0.05$. Findings based on 86,574 participants for bOHBut, 121,391 participants for citrate, 121,368 participants for creatinine, 120,576 participants for glutamine, 118,255 participants for pyruvate, 121,374 participants for valine. AcAce=acetoacetate; Ace=acetate; Aceto=acetone; Ala=alanine; Alb=albumin; Apo-A1=apolipoprotein A1; Apo-B=apolipoprotein B; bOHBut=beta-hydroxybutyrate; Cit=citrate; Crea=creatinine; DHA=docosahexaenoic acid; FA=fatty acids; Faw3=omega-3; fatty acids; Faw6=omega-6 fatty acids; Glc=glucose; Gln=glutamine; Gly=glycine; Glyc-A=glycoprotein acetyls; GRS=genetic risk score; HDL=high density lipoproteins; HDL-D=high density lipoprotein particle diameter; His=histidine; IDL=intermediate density lipoproteins; Ile=isoleucine; L=large; LA=linoleic acid; Lac=lactate; LDL=low density lipoproteins; LDL-D=low density lipoprotein particle diameter; Leu=leucine; LP=lipoprotein; M=medium; MUFA=monounsaturated fatty acids; PC=phosphatidylcholines; PG=phosphoglycerides; Phe=phenylalanine; PUFA=polyunsaturated fatty acids; Pyr=pyruvate; S=small; SFA=saturated fatty acids; SM=sphingomyelins; TotFA=total fatty acids; TotCho=total cholines; Tyr=tyrosine; Val=valine; VLDL=very low density lipoproteins; VLDL-D=very low density lipoprotein particle diameter; XL=very large; XS=very small; XXL=extremely large.