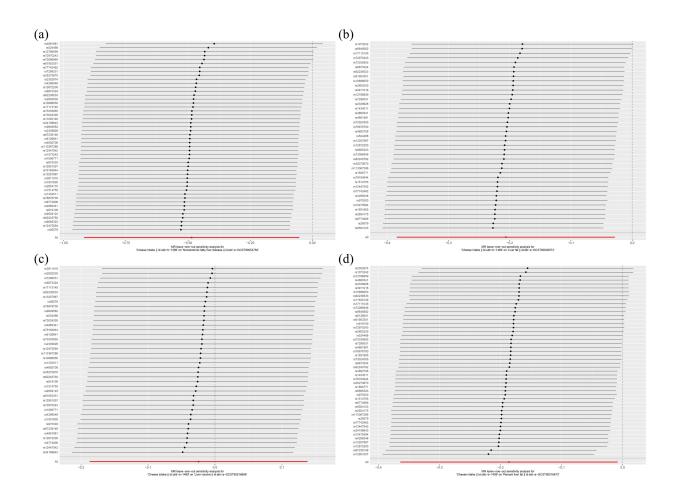
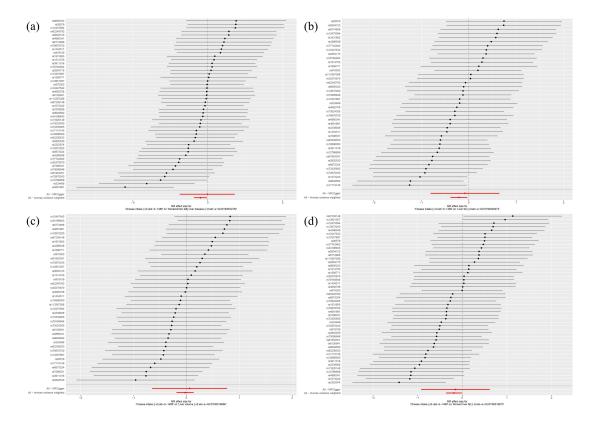
## **Supplementary Material**

## 1 Supplementary Figures

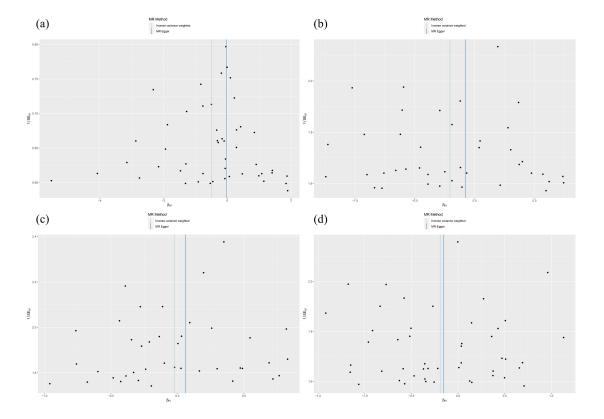
1



- 2 **Supplementary Figure 1.** Leave-one-out plots.
- 3 (a) NAFLD; (b) Liver fat; (c) Liver volume; (d) Percent liver fat



- 4 **Supplementary Figure 2.** Visual SNPs plots.
- 5 (a) NAFLD; (b) Liver fat; (c) Liver volume; (d) Percent liver fat



**Supplementary Figure 3.** Funnel plots.

(a) NAFLD; (b) Liver fat; (c) Liver volume; (d) Percent liver fat

## 2 Supplementary Tables

(Supplementary Table 1 and 2 are too large to be displayed completely in this document. For details, please refer to the editable CSV files uploaded.)

Supplementary Table 1. Characteristics of instrumental variables.

**Supplementary Table 2.** The LDlink results of the instrumental variables used in this study.

Exposures	Method	Number of SNPs	Beta	Standard Error	Odds Ratio (95% CI)	P Value
NAFLD	Maximum likelihood	48	-0.463967	0.223657	0.629 (0.406-0.975)	0.008
	Inverse variance weighted (multiplicative random effects)		-0.485429	0.210499	0.615 (0.407-0.930)	0.014
	Inverse variance weighted (fixed effects)		-0.485429	0.220718	0.615 (0.399-0.949)	0.008
	Simple mode		-0.122021	0.631962	0.885 (0.256-3.055)	0.886
	Weighted median		-0.166575	0.298209	0.847 (0.472-1.519)	0.576
	Weighted mode		-0.122021	0.596092	0.885 (0.275-2.847)	0.889
	MR Egger		-0.033049	0.937294	0.967 (0.154-6.074)	0.873
	MRPRESSO		-0.485430	0.210500	0.615 (0.407-0.930)	0.026
	MR RAPS		-0.497686	0.227794	0.608 (0.389-0.950)	0.029
Liver fat	Maximum likelihood	41	-0.210748	0.092076	0.81 (0.676-0.970)	0.022
	Inverse variance weighted (multiplicative random effects)		-0.206379	0.084711	0.814 (0.689-0.960)	0.015
	Inverse variance weighted (fixed effects)		-0.206379	0.090819	0.814 (0.681-0.972)	0.023
	Simple mode		-0.320248	0.311756	0.726 (0.394-1.337)	0.31
	Weighted median		-0.189863	0.128907	0.827 (0.642-1.065)	0.141
	Weighted mode		-0.300286	0.305748	0.741 (0.407-1.348)	0.332
	MR Egger		-0.079141	0.370274	0.924 (0.447-1.909)	0.832
	MRPRESSO		-0.206379	0.084711	0.814 (0.689-0.960)	0.019
	MR RAPS		-0.211415	0.093847	0.809 (0.673-0.973)	0.024
Liver volume	Maximum likelihood	40	-0.024853	0.083893	0.975 (0.828-1.150)	0.767
	Inverse variance weighted (multiplicative random effects)		-0.024464	0.072902	0.976 (0.846-1.126)	0.737
	Inverse variance weighted (fixed effects)		-0.024464	0.082985	0.976 (0.829-1.148)	0.768
	Simple mode		-0.231707	0.257831	0.793 (0.479-1.315)	0.374
	Weighted median		-0.100479	0.119945	0.904 (0.715-1.144)	0.402
	Weighted mode		-0.220041	0.254964	0.802 (0.487-1.323)	0.393
	MR Egger		0.060804	0.361460	1.063 (0.523-2.158)	0.867
	MRPRESSO		-0.024464	0.072902	0.976 (0.846-1.126)	0.739
	MR RAPS		-0.024995	0.085719	0.975 (0.824-1.154)	0.771
Percent liver fat	Maximum likelihood	48	-0.192275	0.084439	0.825 (0.699-0.974)	0.023
	Inverse variance weighted (multiplicative random effects)		-0.186135	0.090812	0.830 (0.695-0.992)	0.04
	Inverse variance weighted (fixed effects)		-0.186135	0.082925	0.830 (0.706-0.977)	0.025
	Simple mode		-0.426574	0.312518	0.653 (0.354-1.204)	0.179
	Weighted median		-0.257410	0.119576	0.773 (0.612-0.977)	0.031
	Weighted mode		-0.426574	0.321573	0.653 (0.348-1.226)	0.191
	MR Egger		-0.152748	0.392633	0.858 (0.398-1.853)	0.699
	MRPRESSO		-0.186135	0.090812	0.830 (0.695-0.992)	0.046
	MR RAPS		-0.192440	0.085227	0.825 (0.698-0.975)	0.024

Supplementary Table 3. Feature Variable Selection Table.