

Table S1 Characterizations of instrumental variables in the Mendelian randomization analysis

Exposure	SNP	CHR position	Effect alleles	Other alleles	Beta	SE	MAF	F statistic	P value
T2D	rs10114341	9	C	T	-0.0409	0.0072	0.440754	51.91	1.34E-08
	rs17168486	7	T	C	0.0742	0.0094	0.173603	99.51	2.94E-15
	rs17405722	17	A	G	0.087	0.0146	0.0741526	65.43	2.54E-09
	rs2261181	12	T	C	0.0985	0.0118	0.09647	106.55	6.97E-17
	rs3217992	9	T	C	0.0527	0.0073	0.369901	81.52	5.23E-13
	rs340874	1	C	T	0.0626	0.0073	0.563904	121.45	9.88E-18
	rs4812829	20	A	G	0.0532	0.0095	0.663176	48.09	2.14E-08
	rs576674	13	A	G	-0.0654	0.0097	0.832515	75.10	1.56E-11
	rs6795735	3	T	C	-0.0558	0.0073	0.410912	94.94	2.11E-14
	rs7674212	4	T	G	-0.0465	0.0075	0.408864	65.80	5.65E-10
	rs7929543	11	C	A	0.0828	0.0138	0.0831599	65.82	1.97E-09
	rs7955901	12	T	C	-0.0444	0.0072	0.556668	61.25	6.97E-10
	rs840967	2	A	C	-0.0497	0.008	0.605922	74.27	5.21E-10
	rs993380	4	G	A	-0.0507	0.0081	0.66555	72.05	3.87E-10
	AIF	rs11700855	21	G	A	-0.029795	0.00523292	0.093465	69.56
rs11750777		5	A	G	-0.020493	0.00372613	0.209454	64.31	3.80E-08
rs17690703		17	T	C	0.0250342	0.00343021	0.262687	112.27	2.92E-13
rs4916723		5	C	A	0.0239479	0.00309951	0.420617	129.27	1.11E-14
rs5022348		18	T	C	0.0202641	0.00357005	0.40703	91.66	1.38E-08
rs550942		11	T	C	0.022401	0.00398884	0.823865	67.34	1.96E-08
rs8614		17	A	C	0.0247806	0.00392537	0.182509	84.74	2.74E-10
rs9349379		6	G	A	-0.0193455	0.00308215	0.405493	83.44	3.46E-10
AAM	rs11031006	11	A	G	0.0209309	0.00296442	0.142341	26.10	1.66E-12
	rs11047473	12	A	G	0.0140596	0.00219213	0.335663	21.51	1.42E-10
	rs11130329	3	A	C	-0.0201635	0.00295881	0.858092	24.16	9.44E-12
	rs11228700	11	T	C	-0.0129536	0.00212409	0.389066	19.46	1.07E-09
	rs12040029	1	T	C	-0.0195567	0.00329083	0.122633	20.08	2.80E-09
	rs12211649	6	A	G	0.0350757	0.00370445	0.085437	46.91	2.84E-21
	rs1555406	14	T	C	-0.0194845	0.00321801	0.117349	19.19	1.41E-09
	rs1981405	11	T	C	0.0210751	0.00318393	0.120984	23.05	3.61E-11
	rs2254479	6	A	G	-0.015924	0.0020692	0.550438	30.62	1.41E-14
	rs2454055	10	C	T	0.0156285	0.00206421	0.500256	29.80	3.70E-14
	rs2613766	19	C	T	0.0115009	0.00206963	0.473411	16.09	2.74E-08
	rs2688325	8	C	T	-0.0151116	0.00225784	0.697961	23.49	2.19E-11
	rs3743266	15	C	T	-0.0201453	0.00219324	0.335744	44.16	4.11E-20
	rs3827103	20	A	G	0.0224695	0.00374531	0.08291	18.73	1.98E-09
	rs4073513	11	G	A	0.0137912	0.00226698	0.709481	19.13	1.18E-09
	rs4141153	7	G	A	0.0281279	0.00259589	0.196936	61.06	2.34E-27
	rs4857841	3	A	G	0.0176633	0.00232947	0.267883	29.86	3.39E-14
	rs6007594	22	A	G	0.0128885	0.00234641	0.260408	15.61	3.95E-08
	rs752278	15	A	G	-0.0211905	0.00212005	0.421367	53.43	1.60E-23
	rs913588	9	A	G	-0.0186095	0.0020634	0.51535	42.21	1.90E-19
rs9592952	13	C	A	0.0132879	0.00209635	0.41909	20.97	2.32E-10	

T2D, type 2 diabetes; AIF, alcohol intake frequency; AAM, age at menarche; SNP, single-nucleotide polymorphism; CHR, chromosome; SE, standard error; MAF, minor allele frequency.

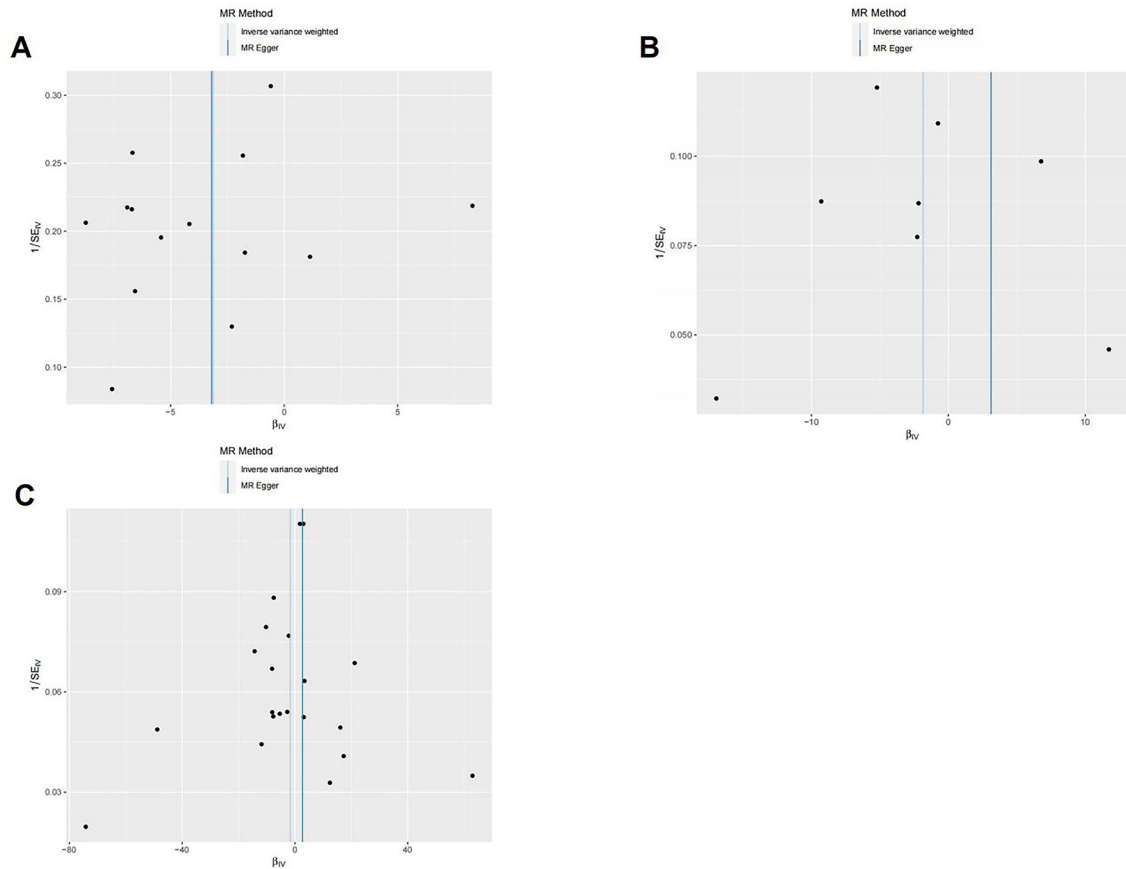


Figure S1 Funnel plots of the overall heterogeneity estimates for the effect of (A) type 2 diabetes, (B) alcohol intake frequency, and (C) age at menarche on the risk of gallbladder cancer.

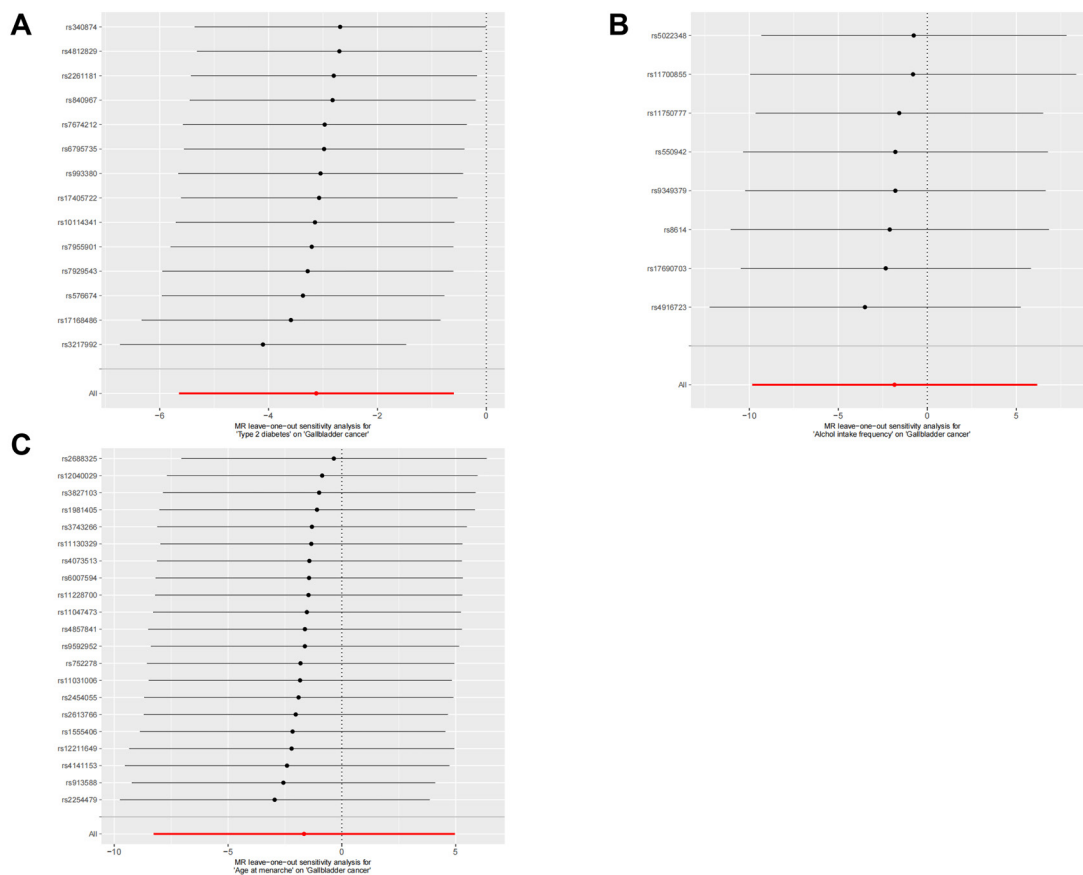


Figure S2 Results of the leave-one-out sensitivity analysis. No single SNP had driving effects on the total estimation. (A) Type 2 diabetes. (B) Alcohol intake frequency. (C) Age at menarche. SNP, single-nucleotide polymorphism.