

Supplementary Information

No Genetic Causal Relationship between HIV Infection and Insulin Resistance , Diabetes: A Bidirectional Mendelian Randomization Analysis

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Table of contents

Table S1	Characteristics of GWAS Data in This Study
Table S2	IVs in This Study
Table S3	Heterogeneity in This Study
Table S4	MR-PRESSOs in This Study
Table S5	Pleiotropy in This Study

Figure of contents

Figure S1	MR Funnel Plots: HIV Infection to Insulin Resistance and Diabetes
Figure S2	MR Forest Plots: HIV Infection to Insulin Resistance and Diabetes
Figure S3	MR Leave-one-out plots : HIV Infection to Insulin Resistance and Diabetes
Figure S4	MR Funnel Plots: Insulin Resistance and Diabetes to HIV Infection
Figure S5	MR Forest Plots: Insulin Resistance and Diabetes to HIV Infection
Figure S6	MR Leave-one-out plots : Insulin Resistance and Diabetes to HIV Infections
Figure S7	MR Funnel, Forest and Leave-one-out plots:HIV Infection to Glycated hemoglobin
Figure S8	MR Funnel, Forest and Leave-one-out plots: Glycated hemoglobin to HIV Infection

Supplementary Information of Table

Table S1. Characteristics of GWAS Data for HIV Exposure and Related Outcomes

Variable	GWAS ID	Year	Author	Population	Sample Size (N)	SNP Count (N)	Data Source
Exposure	HIV	2021	NA	European	N_case: 333, N_control: 218,435	16,380,466	Finnish Database
Outcome	Insulin Resistance	2010	Dupuis J	European	37,037	2,435,028	GWAS Summary Data
	Type1 Diabetes	2021	Chiou J	European	N_case:18,942, N_control: 501,638	59,999,551	GWAS Summary Data
	Type 2 Diabetes	2018	Xue A	European	N_case: 61,714, N_control: 1,178, Sample Size: 655,666	5,030,727	GWAS Summary Data
	Gestational Diabetes	2021	NA	European	N_case: 5,687, N_control: 117,892	16,379,784	Finnish Database
	Glycated hemoglobin	2021	Sakaue S	European	344,182	19,047,034	GWAS Summary Data

Table S2. IVs**Table S2.1 HIV to Insulin resistance**

SNP	effect_allele	other_allele	beta.exposure	beta.outcome	eaf.exposure	eaf.outcome	pval.exposure	pval.outcome	se.exposure	se.outcome
rs10483438	C	T	-0.346676	-0.0036	0.228859	0.668	0.0000215	0.41970003	0.0815865	0.0045
rs1532480	T	G	-0.286738	-0.0026	0.639061	0.427	0.0000123	0.558399473	0.0655862	0.0045
rs17269691	A	G	-0.579216	-0.013	0.0809933	0.049	0.0000282	0.310900199	0.138328	0.013
rs2412693	G	A	0.29924	0.0021	0.229913	0.792	0.0000386	0.671499974	0.0727046	0.005
rs3814845	G	C	-0.523701	0.014	0.094333	0.059	0.0000263	0.076190356	0.124594	0.0077
rs7773195	G	A	-0.394714	-0.0062	0.870358	0.905	0.00000496	0.31629986	0.0864338	0.0062

Table S2.2 HIV to Type 1 diabetes

SNP	effect_allele	other_allele	beta.exposure	beta.outcome	eaf.exposure	eaf.outcome	pval.exposure	pval.outcome	se.exposure	se.outcome
rs10483438	C	T	-0.346676	-0.010766	0.228859	0.287127	0.0000215	0.520453271	0.0815865	0.016753
rs11229056	T	G	0.648557	-0.045438	0.0291343	0.025434	0.0000394	0.371952646	0.157768	0.050892
rs112847906	T	C	1.23293	-0.110781	0.00536824	0.022964	0.0000269	0.031582724	0.293678	0.051534
rs113042452	A	G	0.541512	0.03029	0.0437173	0.036964	0.000049	0.477892774	0.133366	0.04268
rs113730997	G	A	-1.02842	-0.034696	0.0325033	0.030573	0.0000406	0.453569782	0.250599	0.046294
rs114739803	T	C	0.949324	-0.04648	0.0104438	0.021581	0.0000483	0.414451252	0.233599	0.056954
rs115495781	A	G	0.462521	-0.02783	0.0691068	0.058849	0.0000269	0.425109001	0.110176	0.034892
rs117080829	T	C	-0.6626	-0.005306	0.0609806	0.069396	0.000043	0.859033414	0.16198	0.029873
rs1269355	G	A	0.3553	0.010668	0.799566	0.797063	0.0000323	0.575474825	0.0854791	0.01905
rs139924614	G	A	1.03417	0.010168	0.00814016	0.033681	0.0000394	0.813386223	0.251569	0.043073
rs140234654	T	G	0.815413	-0.164849	0.0218436	0.014393	0.00000376	0.020201479	0.176344	0.070976
rs140494927	C	T	1.33385	-0.055579	0.0050634	0.020067	0.0000102	0.285106285	0.302286	0.051996
rs142210987	T	G	0.620235	0.022649	0.0383448	0.033387	0.0000129	0.625713008	0.142171	0.046434
rs147007683	G	A	0.758806	0.063978	0.0203312	0.020789	0.0000364	0.283476058	0.183774	0.05965
rs150909589	C	T	1.03731	0.058168	0.00982863	0.011116	0.00000479	0.431612383	0.226791	0.073964
rs1532480	T	G	-0.286738	0.011885	0.639061	0.563829	0.0000123	0.446946133	0.0655862	0.015628
rs17269691	A	G	-0.579216	-0.013626	0.0809933	0.062482	0.0000282	0.677743509	0.138328	0.032792
rs17453643	A	G	-0.879171	-0.000652	0.04056	0.040169	0.0000428	0.987337376	0.214874	0.041099
rs184889799	A	G	1.45617	-0.047506	0.00345243	0.01119	0.0000085	0.508186221	0.327066	0.071798
rs192920181	A	G	1.11738	0.009979	0.00718895	0.011384	0.0000309	0.88887286	0.268164	0.071418

rs2412693	G	A	0.29924	-0.014991	0.229913	0.239466	0.0000386	0.403219036	0.0727046	0.017934
rs260650	C	T	0.261992	0.040046	0.452969	0.463383	0.0000424	0.009097807	0.0639943	0.015353
rs35124027	T	C	-0.343262	-0.0227	0.214534	0.149615	0.0000471	0.345267125	0.0843488	0.024052
rs6007065	C	A	0.902825	1.66E-02	0.0118176	0.033704	0.0000397	0.701547181	0.219707	0.043256
rs61754819	T	C	1.84956	0.07243	0.00174539	0.010049	0.00000579	0.388415475	0.407936	0.083978
rs62130114	A	G	0.360075	-0.008682	0.156419	0.180313	0.000022	0.740546885	0.0848467	0.026219
rs73094200	A	C	0.784236	0.037296	0.0189967	0.031721	0.0000304	0.408879119	0.18806	0.04516
rs75697108	G	T	-0.578206	-0.033966	0.0846829	0.112686	0.0000169	0.179048431	0.134396	0.025278
rs77097822	C	T	0.336696	-0.000376	0.162433	0.118835	0.0000319	0.988151121	0.0809455	0.025317
rs7773195	G	A	-0.394714	-0.005662	0.870358	0.887881	0.00000496	0.817782854	0.0864338	0.024577
rs782082	G	A	-0.289045	-0.018048	0.720911	0.744092	0.0000325	0.316375645	0.0695615	0.018013
rs80199944	T	C	0.974791	0.089418	0.0111053	0.012966	0.000016	0.166398692	0.22595	0.064615
rs9814925	C	T	-0.265374	-0.020091	0.566191	0.563576	0.0000354	0.194328046	0.0641716	0.01548

Table S2.3 HIV to Type 2 diabetes

SNP	effect_allele	other_allele	beta.exposure	beta.outcome	eaf.exposure	eaf.outcome	pval.exposure	pval.outcome	se.exposure	se.outcome
rs10483438	C	T	-0.346676	0.008	0.228859	0.300728	0.0000215	0.344899846	0.0815865	0.0084
rs2412693	G	A	0.29924	0.0088	0.229913	0.24091	0.0000386	0.337800276	0.0727046	0.0092
rs260650	C	T	0.261992	0.0082	0.452969	0.467277	0.0000424	0.305899664	0.0639943	0.008
rs3814845	G	C	-0.523701	0.0296	0.094333	0.0628996	0.0000263	0.061469545	0.124594	0.0158
rs7773195	G	A	-0.394714	0.0034	0.870358	0.893197	0.00000496	0.788700289	0.0864338	0.0126
rs9814925	C	T	-0.265374	-0.0013	0.566191	0.569311	0.0000354	0.866799995	0.0641716	0.008

Table S2.4 HIV to Gestational diabetes

SNP	effect_allele	other_allele	beta.exposure	beta.outcome	eaf.exposure	eaf.outcome	pval.exposure	pval.outcome	se.exposure	se.outcome
rs10483438	C	T	-0.346676	-0.00717025	0.228859	0.227999	0.0000215	0.629787	0.0815865	0.0148753
rs11229056	T	G	0.648557	-0.00848615	0.0291343	0.02925	0.0000394	0.816766	0.157768	0.0366245
rs112847906	T	C	1.23293	0.0105762	0.00536824	0.00539167	0.0000269	0.902098	0.293678	0.0859772
rs113042452	A	G	0.541512	-0.00130401	0.0437173	0.043877	0.000049	0.965802	0.133366	0.0304147
rs113730997	G	A	-1.02842	0.0200478	0.0325033	0.0325433	0.0000406	0.57383	0.250599	0.0356456
rs114739803	T	C	0.949324	-0.105038	0.0104438	0.0102926	0.0000483	0.0907465	0.233599	0.0620985
rs115495781	A	G	0.462521	0.00208885	0.0691068	0.0693497	0.0000269	0.931769	0.110176	0.0243968
rs117080829	T	C	-0.6626	-0.017659	0.0609806	0.0608727	0.000043	0.49579	0.16198	0.0259261

rs1269355	G	A	0.3553	0.00342743	0.799566	0.7994	0.0000323	0.825365	0.0854791	0.0155333
rs139924614	G	A	1.03417	-0.0247916	0.00814016	0.00808687	0.0000394	0.720293	0.251569	0.0692372
rs140234654	T	G	0.815413	-0.0355532	0.0218436	0.0221011	0.00000376	0.403724	0.176344	0.0425793
rs140494927	C	T	1.33385	-0.0680551	0.0050634	0.00494321	0.0000102	0.440945	0.302286	0.0883147
rs142210987	T	G	0.620235	0.0480191	0.0383448	0.0384234	0.0000129	0.147779	0.142171	0.0331756
rs147007683	G	A	0.758806	-0.0597454	0.0203312	0.020288	0.0000364	0.186315	0.183774	0.0452083
rs150909589	C	T	1.03731	-0.0369937	0.00982863	0.00996573	0.00000479	0.559992	0.226791	0.0634701
rs1532480	T	G	-0.286738	-0.0169689	0.639061	0.638761	0.0000123	0.190598	0.0655862	0.0129651
rs17269691	A	G	-0.579216	0.0105257	0.0809933	0.0810595	0.0000282	0.64203	0.138328	0.0226426
rs184889799	A	G	1.45617	0.211811	0.00345243	0.0034478	0.0000085	0.0518609	0.327066	0.10894
rs192920181	A	G	1.11738	0.0327632	0.00718895	0.00701357	0.0000309	0.66523	0.268164	0.0757176
rs2412693	G	A	0.29924	0.0492729	0.229913	0.229266	0.0000386	0.000784964	0.0727046	0.0146731
rs260650	C	T	0.261992	-0.000289263	0.452969	0.452719	0.0000424	0.98146	0.0639943	0.0124475
rs35124027	T	C	-0.343262	-0.0118737	0.214534	0.21455	0.0000471	0.439039	0.0843488	0.0153443
rs6007065	C	A	0.902825	-0.0123357	0.0118176	0.01161	0.0000397	0.832556	0.219707	0.0583455
rs61754819	T	C	1.84956	0.0825082	0.00174539	0.00170495	0.00000579	0.590317	0.407936	0.153254
rs62130114	A	G	0.360075	-0.0214477	0.156419	0.156394	0.000022	0.229404	0.0848467	0.0178449
rs73094200	A	C	0.784236	0.00915116	0.0189967	0.018703	0.0000304	0.841236	0.18806	0.0456843
rs75697108	G	T	-0.578206	0.037597	0.0846829	0.0837368	0.0000169	0.0972098	0.134396	0.0226688
rs77097822	C	T	0.336696	-0.0163171	0.162433	0.162306	0.0000319	0.338912	0.0809455	0.0170624
rs7773195	G	A	-0.394714	0.000489584	0.870358	0.870484	0.00000496	0.978867	0.0864338	0.0184822
rs782082	G	A	-0.289045	-0.0240078	0.720911	0.720728	0.0000325	0.0869401	0.0695615	0.0140252
rs78431500	C	G	0.775123	0.0262372	0.0191092	0.0192178	0.0000283	0.566256	0.185133	0.0457434
rs79588892	T	A	0.475928	0.00876096	0.0781947	0.0783832	0.00000527	0.705347	0.104516	0.0231702
rs80199944	T	C	0.974791	-3.77E-05	0.0111053	0.0112362	0.000016	0.999497	0.22595	0.0597134
rs9814925	C	T	-0.265374	-0.0134862	0.566191	0.565885	0.0000354	0.281041	0.0641716	0.0125106

Table S2.5 Insulin resistance to HIV

SNP	effect_allele	other_allele	beta.exposure	beta.outcome	eaf.exposure	eaf.outcome	pval.exposure	pval.outcome	se.exposure	se.outcome
rs1015497	C	A	0.021	0.054342	0.75	0.279683	0.00000499	0.459436	0.0046	0.073457
rs10426583	C	T	-0.025	-0.14246	0.875	0.213312	0.0000416	0.080281	0.0061	0.08145
rs10510969	C	A	-0.018	-0.05268	0.725	0.333957	0.0000182	0.449407	0.0042	0.069645
rs10763949	G	A	-0.082	0.185567	0.992	0.951335	0.0000413	0.230136	0.02	0.154638

rs1078310	G	C	0.038	-0.22367	0.92	0.963412	0.0000362	0.204769	0.0092	0.176388
rs10954928	A	G	-0.017	0.016036	0.348	0.385726	0.0000338	0.812942	0.0041	0.067765
rs11167682	T	G	0.021	0.001065	0.199	0.257597	0.00000789	0.988818	0.0047	0.076008
rs11206236	A	G	-0.022	-0.12633	0.177	0.116686	0.0000462	0.219257	0.0054	0.102834
rs12206631	T	C	-0.02	-0.03835	0.281	0.204673	0.0000209	0.638084	0.0047	0.081522
rs12430073	A	G	-0.024	-0.03787	0.138	0.119728	0.000035	0.709795	0.0058	0.101768
rs12759838	T	A	-0.026	0.046134	0.808	0.78003	0.00000147	0.566148	0.0054	0.080411
rs12765415	T	C	0.034	0.145006	0.065	0.066562	0.000042	0.2723	0.0083	0.132091
rs12867349	C	T	0.017	-0.0952	0.683	0.330153	0.0000517	0.173362	0.0042	0.069922
rs1475447	C	T	0.022	0.057227	0.743	0.804074	0.00000713	0.49231	0.0049	0.083344
rs158805	T	G	-0.019	0.027261	0.217	0.714982	0.0000362	0.708021	0.0046	0.07279
rs17072350	C	A	0.023	-0.15062	0.883	0.188211	0.0000289	0.072721	0.0055	0.083929
rs17120908	G	T	-0.025	0.067182	0.889	0.103902	0.0000416	0.539631	0.0061	0.109529
rs17212430	T	C	-0.039	0.036978	0.053	0.051548	0.0000224	0.805846	0.0092	0.150445
rs17445157	C	G	0.032	0.132245	0.058	0.075091	0.0000324	0.291135	0.0077	0.125275
rs17809779	C	T	-0.064	0.076674	0.983	0.034303	0.0000633	0.674778	0.016	0.182732
rs2074396	A	C	0.018	-0.00807	0.283	0.66132	0.0000284	0.907724	0.0043	0.069651
rs2108349	A	G	-0.018	-0.03231	0.288	0.529808	0.0000182	0.626978	0.0042	0.066477
rs2142136	G	C	0.026	-0.12445	0.733	0.888105	0.0000105	0.230979	0.0059	0.103897
rs2414736	C	T	-0.018	0.116888	0.575	0.50772	0.0000068	0.07714	0.004	0.066131
rs2513319	A	C	0.02	0.021614	0.239	0.201776	0.0000309	0.79285	0.0048	0.082304
rs2652616	A	C	0.029	-0.00673	0.119	0.112671	0.0000563	0.948962	0.0072	0.105142
rs2714559	C	T	0.021	-0.0735	0.792	0.147194	0.0000182	0.432969	0.0049	0.093736
rs2782527	T	C	0.036	0.034967	0.058	0.927805	0.0000284	0.781655	0.0086	0.126159
rs2820232	T	G	0.018	-0.00031	0.429	0.523351	0.0000068	0.996286	0.004	0.066435
rs293540	A	G	0.03	-0.07534	0.066	0.099099	0.0000503	0.495224	0.0074	0.110464
rs35767	G	A	0.029	-0.02388	0.885	0.783688	7.86E-08	0.766563	0.0054	0.080432
rs4349616	A	G	0.018	-0.02811	0.408	0.445728	0.0000113	0.673206	0.0041	0.06666
rs4486414	T	C	-0.04	0.037614	0.146	0.158244	0.00000881	0.676005	0.009	0.090003
rs4782281	C	T	-0.023	0.009837	0.823	0.142494	0.0000205	0.916872	0.0054	0.09425
rs588262	C	T	0.065	0.266247	0.956	0.018183	0.00000344	0.304955	0.014	0.259534
rs6061052	G	A	0.018	-0.07225	0.655	0.325608	0.0000633	0.305178	0.0045	0.070459
rs6479526	T	C	0.022	0.124009	0.204	0.183968	0.00000458	0.144896	0.0048	0.085066
rs7006908	T	C	-0.028	-0.07032	0.084	0.084228	0.0000293	0.558393	0.0067	0.120163
rs7116432	G	A	0.019	-0.06034	0.676	0.348029	0.00000993	0.383666	0.0043	0.06926

rs7549953	T	C	-0.032	-0.05276	0.248	0.333271	0.0000409	0.452672	0.0078	0.070258
rs7708079	T	C	-0.042	-0.16343	0.071	0.963286	0.00000392	0.348654	0.0091	0.174381
rs780094	C	T	0.02	-0.15254	0.606	0.644155	0.00000107	0.026545	0.0041	0.068767
rs8047573	T	G	-0.03	-0.08265	0.124	0.08694	0.00000548	0.484385	0.0066	0.118199
rs9394179	C	T	-0.02	-0.01958	0.615	0.541466	0.0000447	0.766426	0.0049	0.065922
rs9516955	A	G	-0.15	-0.04898	0.008	0.009691	0.0000309	0.882947	0.036	0.332697
rs960662	T	C	0.05	0.2532	0.054	0.027874	0.0000309	0.212094	0.012	0.202913
rs9822959	G	T	-0.02	0.036694	0.71	0.640115	0.00000192	0.5936	0.0042	0.068763

Table S2.6 Type 1 diabetes to HIV

SNP	effect_allele	other_allele	beta.exposure	beta.outcome	eaf.exposure	eaf.outcome	pval.exposure	pval.outcome	se.exposure	se.outcome
rs10224046	G	T	0.085811	0.061371	0.324266	0.378407	2.71E-08	0.365638	0.015436	0.067838
rs1050979	G	A	0.106196	0.102929	0.515138	0.47465	5.64E-14	0.117397	0.014129	0.065736
rs10751776	C	A	0.078145	-0.02912	0.509915	0.551725	2.67E-08	0.659427	0.01405	0.066066
rs10801128	G	A	0.096073	0.145097	0.717441	0.745567	8.97E-10	0.054948	0.015681	0.0756
rs11203203	A	G	0.143803	-0.02063	0.348548	0.279768	1.81E-23	0.778019	0.014405	0.073178
rs112647257	T	A	-0.72188	-0.07193	0.052653	0.056375	1.51E-79	0.614765	0.038225	0.142912
rs114278107	G	T	-0.14616	-0.12772	0.173912	0.143228	1.85E-13	0.176797	0.019861	0.09456
rs114378220	T	C	0.177902	-0.23086	0.070292	0.058088	5.11E-09	0.103909	0.030444	0.141963
rs12128789	C	T	0.126969	-0.02517	0.131779	0.114208	3.73E-09	0.80792	0.021535	0.103513
rs12257077	T	C	0.231245	0.459473	0.031887	0.018013	3.91E-10	0.058513	0.036955	0.242871
rs12464462	G	A	-0.08796	-0.01673	0.410445	0.386469	8.62E-10	0.805382	0.014341	0.067895
rs12644686	G	C	-0.10775	-0.04622	0.193778	0.252099	2.45E-08	0.544345	0.01932	0.076236
rs12665124	T	G	-0.49498	-0.01321	0.013205	0.025544	2.82E-12	0.949665	0.070847	0.209271
rs12742756	G	A	-0.08311	-0.07567	0.428204	0.452514	3.54E-08	0.253574	0.015077	0.066277
rs12927355	T	C	-0.20388	0.056929	0.316184	0.302576	4.39E-41	0.427621	0.015188	0.071765
rs13147049	G	A	-0.10952	-0.05631	0.640501	0.546572	8.92E-14	0.394248	0.014689	0.066097
rs13259300	C	A	-0.09219	0.005703	0.598278	0.573728	3.28E-10	0.93191	0.014669	0.066749
rs1350275	G	T	-0.09367	0.051215	0.69842	0.615058	8.86E-10	0.449831	0.015283	0.067772
rs1574285	T	G	-0.12655	-0.11283	0.591106	0.559723	4.26E-19	0.089768	0.014171	0.0665
rs1701704	G	T	0.244048	0.02407	0.339425	0.31947	4.49E-63	0.733	0.014558	0.070558
rs17106304	G	C	0.115351	0.017206	0.655978	0.655557	6.83E-15	0.804323	0.014812	0.069447
rs17323934	G	C	-0.12966	0.030628	0.223075	0.184487	1.26E-14	0.719121	0.016818	0.085164
rs17623914	C	T	-0.13489	0.013317	0.099705	0.07085	7.97E-09	0.919	0.023381	0.130952

rs1881146	T	A	-0.09517	-0.03345	0.310529	0.275577	4.57E-08	0.649723	0.017407	0.07366
rs1947178	G	A	-0.10327	-0.03395	0.791944	0.851322	1.67E-09	0.717589	0.017134	0.093854
rs202535	A	C	-0.14144	-0.12306	0.827931	0.786378	1.79E-14	0.123898	0.018453	0.079982
rs2111485	G	A	0.127631	0.075902	0.604162	0.582732	1.05E-18	0.256356	0.014455	0.066871
rs2188962	T	C	0.07946	0.059507	0.403956	0.31761	1.73E-08	0.400737	0.014096	0.070816
rs229527	A	C	0.104077	0.018447	0.416388	0.394066	1.82E-13	0.784208	0.014138	0.067366
rs231972	C	A	0.170939	0.037476	0.118029	0.090676	5.12E-16	0.744286	0.021081	0.114894
rs238265	G	T	-0.09083	0.013388	0.695162	0.677953	2.07E-09	0.849918	0.015158	0.070751
rs2395471	A	G	-0.52212	0.015366	0.365798	0.427893	9.53E-224	0.817723	0.016351	0.066673
rs2493411	C	T	0.127063	-0.00976	0.13231	0.168138	1.28E-08	0.912539	0.022335	0.088874
rs2523679	T	C	0.711041	0.027875	0.096365	0.138792	6.43E-211	0.766581	0.022941	0.093901
rs2543537	T	C	-0.08344	-0.05131	0.459649	0.510233	5.59E-09	0.438802	0.014316	0.066275
rs2611211	T	C	-0.14385	0.082077	0.823656	0.761472	1.39E-14	0.290727	0.018689	0.077685
rs3024493	A	C	-0.16386	-0.02485	0.154343	0.156136	7.27E-17	0.7848	0.019641	0.091018
rs3087243	A	G	-0.19913	0.028005	0.422477	0.329685	1.16E-44	0.690154	0.014202	0.070251
rs3184504	C	T	-0.2315	0.014043	0.53291	0.592373	1.08E-60	0.833941	0.014086	0.066982
rs34536443	C	G	-0.38533	0.12721	0.042706	0.030225	1.47E-23	0.511555	0.038519	0.193795
rs34593439	A	G	-0.21807	-0.08077	0.108188	0.12722	1.55E-19	0.416938	0.024119	0.099507
rs35327136	A	C	-0.1192	-0.13103	0.155548	0.052815	3.37E-10	0.386825	0.018978	0.151411
rs3802214	C	T	-0.10661	0.116969	0.798827	0.73365	2.96E-08	0.114579	0.01923	0.074128
rs41295159	G	C	-0.69955	-0.30135	0.008954	0.001769	9.11E-15	0.723123	0.090252	0.850573
rs4548024	C	T	-0.09574	-0.03729	0.233601	0.222624	9.94E-09	0.640175	0.016703	0.079783
rs4820827	C	T	-0.12966	0.117471	0.620943	0.684461	1.01E-19	0.096832	0.014267	0.070748
rs55893453	G	A	0.094653	-0.00013	0.201792	0.160045	4.63E-08	0.998888	0.01732	0.091121
rs55969931	G	T	-0.45999	-0.21574	0.042147	0.016901	1.53E-33	0.408835	0.038112	0.261198
rs55993634	G	C	0.219371	-0.03027	0.084897	0.087239	2.29E-19	0.794622	0.024379	0.116271
rs56994090	C	T	-0.13426	0.167436	0.431066	0.49402	3.6E-20	0.011427	0.014594	0.066197
rs57209021	T	C	0.100693	0.00337	0.225582	0.21057	3.73E-08	0.967013	0.018297	0.08149
rs574384	A	C	-0.1336	-0.01061	0.894668	0.873052	0.000000022	0.915261	0.023876	0.099686
rs601338	A	G	0.127096	0.05528	0.478792	0.374783	1.2E-18	0.417437	0.014419	0.068173
rs607703	T	C	0.092015	0.043955	0.484409	0.527545	1.17E-10	0.506818	0.01428	0.066217
rs61759532	T	C	0.118379	-0.02407	0.234556	0.189212	1.9E-10	0.774367	0.018587	0.083955
rs61839660	T	C	-0.35744	-0.1026	0.08512	0.040882	5.26E-43	0.53945	0.026	0.167204
rs6434435	A	G	-0.12286	0.102176	0.159884	0.106389	1.23E-10	0.341048	0.019089	0.107317
rs663743	A	G	-0.09996	0.006148	0.349007	0.375779	3.5E-11	0.92826	0.015092	0.068281

rs6679677	A	C	0.64172	-0.13234	0.113692	0.146426	2.76E-206	0.153883	0.020938	0.09281
rs6908626	T	G	0.202923	0.006261	0.165571	0.115162	6.15E-28	0.951489	0.01852	0.102917
rs7068821	T	G	-0.1651	0.045833	0.251126	0.229852	5.06E-24	0.559187	0.016333	0.078474
rs7110099	G	A	0.662564	0.133256	0.786548	0.838793	2.92E-236	0.141362	0.020187	0.090605
rs722988	C	T	0.082649	-0.07432	0.353008	0.306907	9.77E-09	0.300097	0.014412	0.071717
rs7237497	C	T	-0.22047	0.009433	0.839298	0.858635	2.71E-32	0.919934	0.018635	0.093849
rs72838204	T	C	0.376892	0.075337	0.062339	0.079643	4.26E-41	0.531769	0.028072	0.120479
rs7668577	C	A	0.093652	0.104491	0.311698	0.310454	7.27E-10	0.140769	0.015203	0.070941
rs7776597	G	A	0.244413	0.120465	0.959079	0.975135	1.82E-11	0.574434	0.036372	0.214528
rs7795896	T	C	-0.13544	0.075032	0.691577	0.65005	1.58E-16	0.27707	0.016416	0.069031
rs78325861	G	C	-0.28208	-0.20657	0.039037	0.03386	2.31E-11	0.259253	0.042195	0.183107
rs8046043	C	G	-0.08459	0.075293	0.391629	0.314352	2.49E-08	0.290926	0.015175	0.071294
rs855330	C	T	0.111208	0.053809	0.259422	0.357543	4.89E-11	0.435066	0.016916	0.068937
rs9517712	C	T	-0.10206	0.009862	0.740981	0.717471	1.06E-10	0.892763	0.015805	0.073154

Table S2.7 Type 2 diabetes to HIV

SNP	effect_allele	other_allele	beta.exposure	beta.outcome	eaf.exposure	eaf.outcome	pval.exposure	pval.outcome	se.exposure	se.outcome
rs10077431	A	C	-0.0487	-0.04052	0.214668	0.17605	4.45E-08	0.640077	0.0089	0.08666
rs10087241	A	G	-0.0475	0.128772	0.594893	0.63883	2.89E-09	0.063269	0.008	0.069333
rs10100265	C	A	-0.0491	0.015921	0.61049	0.542346	5.13E-10	0.810391	0.0079	0.06636
rs10114341	C	T	-0.0409	-0.08417	0.440754	0.42426	1.34E-08	0.208851	0.0072	0.066976
rs10401969	C	T	0.0921	0.153703	0.076586	0.063531	4.37E-12	0.25725	0.0133	0.13567
rs1050226	G	A	-0.0491	-0.02714	0.406792	0.376573	3.24E-11	0.689579	0.0074	0.067953
rs1061813	A	G	-0.0429	-0.01401	0.537119	0.620138	4.18E-09	0.836861	0.0073	0.068035
rs1063355	G	T	0.0709	-0.01927	0.602436	0.523192	2.84E-19	0.770896	0.0079	0.066169
rs10740322	A	G	0.0477	0.027902	0.687104	0.741355	0.00000002	0.712672	0.0085	0.075765
rs10811661	C	T	-0.1569	-0.08677	0.173605	0.142596	1.08E-57	0.359754	0.0098	0.094747
rs10830963	G	C	0.0909	0.116021	0.275768	0.35704	6.43E-30	0.091893	0.008	0.068835
rs10842994	T	C	-0.0755	0.041565	0.197025	0.172891	1.07E-16	0.631863	0.0091	0.086756
rs10974438	C	A	0.0591	0.069227	0.351215	0.375409	3.27E-15	0.308742	0.0075	0.068012
rs11098676	C	T	0.054	0.003586	0.787639	0.821355	1.86E-08	0.966549	0.0096	0.085517
rs11107116	T	G	0.0467	-0.13784	0.219714	0.25083	3.93E-08	0.070346	0.0085	0.076169
rs11257655	T	C	0.0737	-0.13568	0.206773	0.264877	2.43E-17	0.07133	0.0087	0.075238
rs1127655	T	C	-0.0438	-0.03541	0.529064	0.534842	2.95E-08	0.592253	0.0079	0.066118

rs11708067	G	A	-0.0965	0.07286	0.23899	0.169691	3.22E-29	0.405832	0.0086	0.087651
rs11925227	A	G	-0.0534	-0.11347	0.183439	0.195617	0.000000019	0.171707	0.0095	0.083024
rs11926707	C	T	0.0463	-0.09867	0.625556	0.652225	1.64E-08	0.157122	0.0082	0.069737
rs12088739	G	A	-0.0884	-0.08888	0.089848	0.059167	1.05E-11	0.529387	0.013	0.14131
rs12299509	G	A	0.0467	0.017215	0.478622	0.509798	1.58E-10	0.796531	0.0073	0.066765
rs12617659	T	C	-0.0685	-0.02067	0.147238	0.149512	2.92E-11	0.823992	0.0103	0.092948
rs12910825	G	A	0.0517	-0.02705	0.360391	0.369	2.82E-12	0.691156	0.0074	0.068087
rs12945601	C	T	-0.048	0.045155	0.613603	0.563155	1.97E-09	0.495536	0.008	0.066256
rs12970134	A	G	0.0555	0.09996	0.26512	0.196159	3.99E-12	0.227313	0.008	0.082795
rs13239186	T	C	0.0539	-0.05156	0.302029	0.365697	2.28E-10	0.452549	0.0085	0.068644
rs1333039	C	G	0.0534	0.018673	0.598788	0.602947	5.35E-13	0.782108	0.0074	0.067517
rs13330951	G	A	-0.0456	-0.025	0.488314	0.499099	1.81E-08	0.706399	0.0081	0.066359
rs13389219	T	C	-0.0722	0.030203	0.394368	0.349159	1.73E-22	0.663043	0.0074	0.069318
rs1359790	A	G	-0.0796	-0.00089	0.2867	0.293988	2.52E-23	0.990177	0.008	0.072679
rs1496653	G	A	-0.0769	0.084638	0.204782	0.311024	2.36E-18	0.234911	0.0088	0.071256
rs1552224	C	A	-0.1034	0.007807	0.15421	0.236928	1.34E-24	0.91978	0.0101	0.07752
rs16988333	G	A	-0.0745	0.027643	0.090404	0.085039	0.00000001	0.816742	0.013	0.119287
rs17086692	T	G	-0.0467	-0.00431	0.313426	0.312509	2.71E-08	0.95158	0.0084	0.071036
rs17168486	T	C	0.0742	-0.04744	0.173603	0.198118	2.94E-15	0.565094	0.0094	0.082461
rs17334919	T	C	-0.1398	0.008962	0.100218	0.048506	9.06E-28	0.954236	0.0128	0.156164
rs17405722	A	G	0.087	-0.0913	0.074153	0.10079	2.54E-09	0.397191	0.0146	0.107839
rs17411031	G	C	-0.045	-0.02724	0.261729	0.245537	2.77E-08	0.721029	0.0081	0.076297
rs17631783	T	C	-0.0487	-0.04896	0.26346	0.228258	4.45E-08	0.53313	0.0089	0.078565
rs17791483	G	A	-0.102	-0.07536	0.062588	0.120947	3.96E-12	0.455134	0.0147	0.1009
rs1801214	T	C	0.0903	0.023812	0.599585	0.577087	3.01E-34	0.720961	0.0074	0.066668
rs1899951	T	C	-0.1118	-0.0204	0.123288	0.170418	1.1E-24	0.816449	0.0109	0.087887
rs2191348	T	G	0.0652	-0.06188	0.546935	0.458856	4.2E-19	0.349001	0.0073	0.066078
rs2237892	T	C	-0.096	-0.02249	0.06249	0.051684	9.68E-10	0.879739	0.0157	0.148665
rs2246618	T	C	0.0513	-0.06391	0.307253	0.294605	1.01E-09	0.372031	0.0084	0.071589
rs2261181	T	C	0.0985	-0.0145	0.09647	0.072995	6.97E-17	0.908186	0.0118	0.125752
rs2292662	T	C	-0.0629	-0.02826	0.151272	0.217231	1.46E-08	0.723617	0.0111	0.079926
rs2294120	G	A	-0.0443	-0.06335	0.455879	0.465134	2.05E-08	0.338792	0.0079	0.066228
rs2296173	G	A	0.065	0.004958	0.212011	0.190255	7.94E-14	0.952805	0.0087	0.083773
rs2299383	T	C	0.0412	-0.04064	0.423455	0.465348	1.66E-08	0.54008	0.0073	0.066326
rs243019	C	T	0.0566	-0.04987	0.455831	0.448757	1.56E-15	0.451278	0.0071	0.066203

rs2493394	G	A	0.073	0.00081	0.107338	0.136931	1.05E-10	0.993308	0.0113	0.096621
rs2796441	A	G	-0.0715	-0.02909	0.416458	0.417263	1.19E-22	0.663239	0.0073	0.066802
rs2820426	G	A	0.0521	0.015339	0.610058	0.613435	9.54E-13	0.820828	0.0073	0.067729
rs2867125	C	T	0.0601	0.001184	0.827825	0.835224	3.84E-10	0.989377	0.0096	0.088911
rs2908282	A	G	0.0552	-0.06257	0.177395	0.106373	4.3E-09	0.560178	0.0094	0.1074
rs2925979	C	T	-0.0534	-0.11539	0.70085	0.677185	7.59E-12	0.102112	0.0078	0.070588
rs2972144	G	A	0.0913	-0.07343	0.645367	0.639936	4.31E-34	0.287142	0.0075	0.068984
rs340874	C	T	0.0626	-0.11284	0.563904	0.43159	9.88E-18	0.089977	0.0073	0.066551
rs348330	A	G	-0.0487	-0.00241	0.633451	0.644812	1.83E-09	0.972218	0.0081	0.069183
rs35011184	A	G	0.2796	-0.10158	0.227133	0.168541	1.54E-221	0.254333	0.0088	0.089115
rs3756784	G	T	0.0505	0.026285	0.185838	0.220552	2.87E-08	0.7416	0.0091	0.079715
rs3802177	A	G	-0.1217	-0.01962	0.311281	0.3754	2.92E-52	0.772981	0.008	0.068021
rs459193	G	A	0.0711	-0.05453	0.745338	0.682928	1.07E-17	0.440691	0.0083	0.070725
rs4686471	C	T	0.0534	-0.02672	0.609775	0.609952	4.32E-11	0.69298	0.0081	0.067676
rs4810426	T	C	0.0726	0.018641	0.096789	0.144944	2.34E-08	0.84178	0.013	0.093385
rs4823182	G	A	0.0482	-0.05008	0.335748	0.443026	3.86E-10	0.450496	0.0077	0.066365
rs4865796	A	G	0.053	0.062447	0.69309	0.668753	1.08E-11	0.37107	0.0078	0.069815
rs516946	C	T	0.0824	0.042172	0.760633	0.795665	3.19E-22	0.606672	0.0085	0.081914
rs5215	T	C	-0.0678	0.115068	0.639941	0.526923	1.58E-20	0.080831	0.0073	0.065908
rs576674	A	G	-0.0654	-0.09486	0.832515	0.905637	1.56E-11	0.408905	0.0097	0.114869
rs6059662	G	A	0.0446	-0.0262	0.663176	0.770891	1.65E-08	0.739249	0.0079	0.078725
rs6066138	A	G	-0.049	0.018984	0.278362	0.213758	2.29E-09	0.813654	0.0082	0.080538
rs61953351	T	G	-0.07	-0.08764	0.249902	0.283947	1.45E-14	0.234264	0.0091	0.073681
rs622217	C	T	-0.0485	-0.00861	0.483932	0.502584	3E-10	0.895631	0.0077	0.065627
rs6515236	C	A	-0.0504	-0.20681	0.24933	0.209059	3.05E-08	0.011161	0.0091	0.081498
rs67232546	T	C	0.0596	-0.01144	0.209222	0.151655	5.35E-10	0.901352	0.0096	0.092293
rs6795735	T	C	-0.0558	0.042003	0.410912	0.359758	2.11E-14	0.539658	0.0073	0.068484
rs6878122	A	G	-0.0564	0.02049	0.681791	0.771809	9.38E-13	0.79501	0.0079	0.078865
rs7138300	T	C	-0.0443	0.027631	0.556835	0.629536	7.61E-10	0.684977	0.0072	0.068109
rs7144011	T	G	0.0482	0.037091	0.221063	0.241166	1.42E-08	0.631568	0.0085	0.077349
rs7177055	A	G	0.0647	0.004748	0.718289	0.693277	2.62E-16	0.946906	0.0079	0.071297
rs7185735	G	A	0.1056	-0.01697	0.397306	0.40213	1.99E-47	0.800088	0.0073	0.067032
rs7240767	C	T	0.0451	0.082733	0.383677	0.394622	2.58E-08	0.220366	0.0081	0.067506
rs72892910	T	G	0.0648	-0.01826	0.172394	0.203454	5.93E-11	0.824063	0.0099	0.08212
rs735949	C	T	-0.0711	-0.12609	0.14115	0.102577	1.98E-11	0.248093	0.0106	0.10917

rs753270	C	T	0.0528	0.06366	0.583535	0.578149	2.33E-11	0.341257	0.0079	0.066892
rs7561798	G	A	0.04	0.014027	0.482171	0.451178	2.77E-08	0.833147	0.0072	0.066582
rs7572970	G	A	0.059	0.010258	0.722047	0.795966	1.19E-11	0.900016	0.0087	0.081644
rs7651090	G	A	0.1204	0.081786	0.313377	0.307752	1.59E-56	0.252597	0.0076	0.071488
rs7674212	T	G	-0.0465	-0.06392	0.408864	0.424876	5.65E-10	0.338788	0.0075	0.066822
rs7685296	T	C	-0.0511	-0.00889	0.279365	0.293024	2.81E-10	0.902386	0.0081	0.072493
rs77258096	A	C	-0.1171	0.088635	0.101383	0.096907	2.36E-18	0.424968	0.0134	0.111094
rs7729395	T	C	0.1373	-0.09357	0.050941	0.056246	9.38E-18	0.515788	0.016	0.143987
rs7756992	G	A	0.1297	0.010775	0.266896	0.333692	4.35E-62	0.877541	0.0078	0.069926
rs7786095	G	A	-0.0743	0.124982	0.10386	0.057158	8.43E-09	0.375245	0.0129	0.140953
rs780094	C	T	0.0692	-0.15254	0.612845	0.644155	8.65E-21	0.026545	0.0074	0.068767
rs7845219	C	T	-0.0422	0.083959	0.492786	0.508434	4.6E-09	0.201474	0.0072	0.065728
rs7923866	T	C	-0.0972	-0.10038	0.378775	0.397197	2.07E-39	0.135384	0.0074	0.067225
rs7929543	C	A	0.0828	0.023167	0.08316	0.074665	1.97E-09	0.853007	0.0138	0.125035
rs8068804	A	G	0.0587	-0.00931	0.325097	0.298791	5.25E-14	0.896812	0.0078	0.071774
rs8108269	G	T	0.0644	0.039474	0.281015	0.312889	3.58E-16	0.580759	0.0079	0.071475
rs825476	T	C	0.0524	0.045758	0.580549	0.595432	7.07E-13	0.494821	0.0073	0.067029
rs840967	A	C	-0.0497	0.071661	0.605922	0.481239	5.21E-10	0.279413	0.008	0.066252
rs849135	A	G	-0.0999	-0.07312	0.499052	0.464349	8.98E-44	0.270115	0.0072	0.0663
rs853974	C	T	-0.0601	0.027202	0.737586	0.730765	8.52E-12	0.714493	0.0088	0.074356
rs9369425	A	G	-0.0546	0.068021	0.708185	0.688789	1.33E-10	0.339197	0.0085	0.07117
rs963740	T	A	-0.0479	0.02189	0.294299	0.211958	2.55E-08	0.785827	0.0086	0.080558
rs982077	G	A	-0.0453	0.034391	0.565521	0.431619	3.14E-10	0.604778	0.0072	0.066451
rs9844972	C	G	0.0956	0.161238	0.069723	0.054145	1.05E-10	0.272043	0.0148	0.146797
rs9894220	G	A	-0.0585	-0.10059	0.43374	0.411543	1.31E-13	0.13341	0.0079	0.067025
rs993380	G	A	-0.0507	-0.00047	0.66555	0.598371	3.87E-10	0.994495	0.0081	0.067518
rs9940149	A	G	-0.058	0.090847	0.178556	0.106519	1.03E-09	0.399341	0.0095	0.107792

Table S2.8 Gestational diabetes to HIV

SNP	effect_allele	other_allele	beta.exposure	beta.outcome	eaf.exposure	eaf.outcome	pval.exposure	pval.outcome	se.exposure	se.outcome
rs10830963	G	C	0.36289	0.116021	0.357621	0.35704	6.3309E-186	0.091893	0.012479	0.068835
rs117195181	T	G	0.215808	0.342944	0.024815	0.024715	1.25E-08	0.09888	0.037907	0.207807
rs12272160	T	A	0.274317	0.350378	0.019789	0.019551	2.67E-11	0.135992	0.041167	0.235014
rs13266634	T	C	-0.07624	-0.02125	0.375005	0.375655	3.02E-09	0.754529	0.012855	0.067963

rs1333051	T	A	-0.10919	-0.05417	0.114757	0.114836	4.82E-08	0.60314	0.020005	0.104189
rs1402837	T	C	0.097497	0.013437	0.170215	0.170702	1.98E-09	0.878475	0.016251	0.087881
rs1574285	T	G	-0.071	-0.11283	0.559404	0.559723	1.17E-08	0.089768	0.012448	0.0665
rs28624681	T	C	-0.07776	0.111274	0.292874	0.293005	1.74E-08	0.125327	0.013797	0.072596
rs34872471	C	T	0.163438	-0.06184	0.202374	0.202337	3.11E-27	0.454972	0.01512	0.082772
rs3806155	T	A	0.18212	-0.02179	0.054226	0.054663	4.2E-12	0.879803	0.026279	0.144106
rs6538804	G	C	-0.08072	-0.06417	0.355542	0.354986	6.55E-10	0.353475	0.01307	0.069163
rs76349839	C	A	-0.20829	0.205629	0.034094	0.033593	7.37E-09	0.257728	0.036024	0.181687
rs76895963	G	T	-0.26305	-0.0808	0.030217	0.030254	3.95E-11	0.677524	0.039822	0.194293
rs7766070	A	C	0.099297	0.013468	0.333012	0.33302	2.19E-14	0.847354	0.012999	0.069967
rs780094	C	T	0.10462	-0.15254	0.644949	0.644155	1.29E-15	0.026545	0.013085	0.068767
rs7953129	G	T	0.075586	0.007127	0.341983	0.341887	6.5E-09	0.918719	0.013024	0.069843
rs9285019	T	C	-0.14666	-0.02692	0.316265	0.315254	1.57E-27	0.702825	0.01349	0.070552

Table S2.9 HIV to Glycated hemoglobin

SNP	effect_allele	other_allele	beta.exposure	beta.outcome	eaf.exposure	eaf.outcome	pval.exposure	pval.outcome	se.exposure	se.outcome
rs10483438	C	T	-0.346676	0.0027	0.228859	0.30472	0.0000215	0.0025	0.0815865	0.2844
rs11229056	T	G	0.648557	0.0053	0.0291343	0.024647	0.0000394	0.0077	0.157768	0.4929
rs112847906	T	C	1.23293	0.0056	0.00536824	0.02778	0.0000269	0.0072	0.293678	0.4342
rs113042452	A	G	0.541512	-0.006	0.0437173	0.034891	0.000049	0.0064	0.133366	0.3482
rs113730997	G	A	-1.02842	-0.0072	0.0325033	0.030318	0.0000406	0.0069	0.250599	0.2967
rs114739803	T	C	0.949324	-0.0118	0.0104438	0.025361	0.0000483	0.0077	0.233599	0.1281
rs115495781	A	G	0.462521	-0.0023	0.0691068	0.055668	0.0000269	0.005	0.110176	0.6483
rs117080829	T	C	-0.6626	0.0061	0.0609806	0.072436	0.000043	0.0044	0.16198	0.1716
rs1269355	G	A	0.3553	0.003	0.799566	0.774168228	0.0000323	0.0024	0.0854791	0.2141
rs139924614	G	A	1.03417	-0.0051	0.00814016	0.041378	0.0000394	0.0058	0.251569	0.3756
rs140234654	T	G	0.815413	-0.006	0.0218436	0.012332	0.00000376	0.0109	0.176344	0.5831
rs140494927	C	T	1.33385	-0.0097	0.0050634	0.02462	0.0000102	0.0075	0.302286	0.1937
rs142210987	T	G	0.620235	0.0037	0.0383448	0.032019	0.0000129	0.0071	0.142171	0.6068
rs147007683	G	A	0.758806	0.0302	0.0203312	0.020759	0.0000364	0.0085	0.183774	0.0004122
rs150909589	C	T	1.03731	-0.0208	0.00982863	0.011434	0.00000479	0.0115	0.226791	0.06976
rs1532480	T	G	-0.286738	1.00E-04	0.639061	0.596892062	0.0000123	0.0022	0.0655862	0.9592
rs17269691	A	G	-0.579216	0.0047	0.0809933	0.057244	0.0000282	0.0049	0.138328	0.3419
rs17453643	A	G	-0.879171	-0.0024	0.04056	0.039972	0.0000428	0.0059	0.214874	0.6816

rs192920181	A	G	1.11738	0.0063	0.00718895	0.012719	0.0000309	0.0111	0.268164	0.571
rs2412693	G	A	0.29924	-5.00E-04	0.229913	0.226151963	0.0000386	0.0025	0.0727046	0.8345
rs260650	C	T	0.261992	0.0012	0.452969	0.432415932	0.0000424	0.0021	0.0639943	0.5474
rs35124027	T	C	-0.343262	-0.0082	0.214534	0.13212	0.0000471	0.0037	0.0843488	0.02759
rs3814845	G	C	-0.523701	1.00E-04	0.094333	0.077282508	0.0000263	0.0037	0.124594	0.9883
rs6007065	C	A	0.902825	0.0023	0.0118176	0.040223	0.0000397	0.0058	0.219707	0.691
rs61754819	T	C	1.84956	0.0119	0.00174539	0.012492	0.00000579	0.0106	0.407936	0.2604
rs73094200	A	C	0.784236	-0.001	0.0189967	0.035499	0.0000304	0.0063	0.18806	0.8692
rs75697108	G	T	-0.578206	-4.00E-04	0.0846829	0.12121	0.0000169	0.0036	0.134396	0.9164
rs77097822	C	T	0.336696	0.004	0.162433	0.10578	0.0000319	0.0039	0.0809455	0.314
rs7773195	G	A	-0.394714	-0.001	0.870358	0.89274	0.00000496	0.0037	0.0864338	0.7919
rs782082	G	A	-0.289045	-0.0035	0.720911	0.740997995	0.0000325	0.0024	0.0695615	0.1327
rs78431500	C	G	0.775123	-0.0059	0.0191092	0.018017	0.0000283	0.009	0.185133	0.5122
rs79588892	T	A	0.475928	8.00E-04	0.0781947	0.07990836	0.00000527	0.0039	0.104516	0.834
rs80199944	T	C	0.974791	-0.0047	0.0111053	0.013612	0.000016	0.0101	0.22595	0.6401
rs9814925	C	T	-0.265374	-0.0021	0.566191	0.569856495	0.0000354	0.002	0.0641716	0.3133

Table S2.10 Glycated hemoglobin to HIV

SNP	effect_allele	other_allele	beta.exposure	beta.outcome	eaf.exposure	eaf.outcome	pval.exposure	pval.outcome	se.exposure	se.outcome
rs10021157	A	G	-0.0179	-0.14374	0.447155	0.351628	1.54E-17	0.037553	0.0021	0.069113
rs10047488	C	G	0.0262	-0.12408	0.081739	0.103428	4.43E-10	0.252294	0.0042	0.108384
rs10053046	G	A	0.0164	-0.06225	0.32885	0.330758	9.02E-14	0.373981	0.0022	0.07002
rs10169613	T	C	-0.0138	0.072467	0.461234	0.446764	5.2E-12	0.273758	0.002	0.066214
rs10184004	T	C	-0.014	0.025538	0.350666	0.359405	1.97E-10	0.710284	0.0022	0.068749
rs10205222	G	A	0.0241	-0.07953	0.138488	0.139268	9.54E-17	0.399957	0.0029	0.094483
rs10278905	A	G	-0.0131	0.05175	0.632641	0.635774	4.43E-10	0.45098	0.0021	0.068654
rs10407429	A	G	-0.0233	-0.12105	0.392504	0.439816	1.32E-28	0.068217	0.0021	0.066381
rs10476553	C	G	-0.0175	-0.02645	0.28524	0.315133	2.56E-12	0.707736	0.0025	0.070557
rs10501320	C	G	-0.0269	0.138818	0.21937	0.181322	4.36E-25	0.10527	0.0026	0.0857
rs1051470	C	T	-0.0151	-0.04578	0.601394	0.593947	6.46E-13	0.497475	0.0021	0.067473
rs10736269	C	T	-0.013	0.017686	0.460421	0.444671	8.03E-11	0.790524	0.002	0.066582
rs10771369	C	G	-0.0234	0.041449	0.21543	0.173743	1.84E-22	0.632986	0.0024	0.086799
rs1078308	C	A	-0.018	-0.08393	0.77265	0.73019	4.42E-12	0.258705	0.0026	0.074307

rs10786728	G	C	0.0163	-0.06199	0.146818	0.079549	0.000000019	0.615375	0.0029	0.123387
rs10811660	A	G	-0.048	-0.08677	0.217241	0.14259	3.7E-82	0.359773	0.0025	0.094746
rs10828964	T	C	-0.0157	-0.01585	0.28358	0.229195	1.56E-09	0.839418	0.0026	0.078231
rs10830963	G	C	0.0528	0.116021	0.300661	0.35704	2.7808E-127	0.091893	0.0022	0.068835
rs10873398	A	G	-0.0216	0.098825	0.553804	0.63371	5.93E-21	0.149754	0.0023	0.068609
rs10890333	C	T	-0.0193	-0.05564	0.30286	0.274683	1.16E-14	0.451596	0.0025	0.073915
rs10998673	C	G	0.0586	0.139469	0.053603	0.031318	1.48E-30	0.466775	0.0051	0.191648
rs11042852	G	A	0.0399	-0.03042	0.086798	0.104534	2.21E-22	0.775915	0.0041	0.106852
rs11046171	C	T	-0.0143	0.065995	0.216844	0.345521	1.07E-08	0.342317	0.0025	0.069498
rs1108646	G	A	-0.0299	0.031617	0.594387	0.639509	1.22E-38	0.645885	0.0023	0.06881
rs11130982	G	T	0.0163	0.024407	0.70908	0.701587	7.03E-11	0.734522	0.0025	0.071973
rs11145377	A	T	0.0338	-0.01285	0.21151	0.192144	1.5E-33	0.878504	0.0028	0.084046
rs111631066	A	G	-0.071	-0.11066	0.015506	0.064284	1.41E-13	0.408563	0.0096	0.133902
rs11166458	T	A	-0.0124	-0.00564	0.355425	0.337244	1.74E-08	0.936147	0.0022	0.0704
rs11187138	G	A	-0.0284	-0.09421	0.460569	0.476552	1.13E-41	0.152511	0.0021	0.065848
rs111934043	C	G	0.0166	-0.02394	0.141451	0.240255	3.14E-08	0.755442	0.003	0.076862
rs11195508	G	C	-0.0177	0.074122	0.14979	0.14885	3.18E-08	0.42751	0.0032	0.093416
rs111978523	G	A	0.0167	-0.00281	0.13609	0.112636	0.000000026	0.97843	0.003	0.103919
rs1121980	A	G	0.0233	-0.02573	0.390088	0.42879	1.32E-28	0.699045	0.0021	0.06654
rs112414002	T	C	0.0417	0.236769	0.025648	0.030232	1.11E-08	0.223329	0.0073	0.194435
rs11257655	T	C	0.0341	-0.13568	0.250344	0.264877	8.13E-46	0.07133	0.0024	0.075238
rs113080138	G	C	-0.0153	-0.07304	0.24351	0.219921	1.46E-08	0.361057	0.0027	0.079969
rs113809617	G	C	-0.0379	-0.05786	0.134677	0.116298	1.38E-36	0.591579	0.003	0.107845
rs114322470	G	T	-0.0538	-0.53712	0.019319	0.023424	2.46E-10	0.012454	0.0085	0.214933
rs114526150	G	T	0.0527	0.148024	0.02115	0.042275	4.47E-11	0.361518	0.008	0.162222
rs11512059	T	C	0.0273	0.307039	0.082987	0.068431	8.03E-11	0.018552	0.0042	0.13041
rs11602873	T	A	-0.0353	0.000796	0.136964	0.23816	5.8E-32	0.991799	0.003	0.077474
rs11616380	T	G	-0.0173	-0.00207	0.284921	0.293964	3.73E-15	0.977264	0.0022	0.072543
rs11657180	A	G	-0.0248	-0.13825	0.099589	0.106093	5.68E-14	0.197343	0.0033	0.107242
rs11708067	G	A	-0.0524	0.07286	0.203418	0.169691	6.68E-84	0.405832	0.0027	0.087651
rs11728350	G	A	0.0279	0.07065	0.105557	0.158208	2.29E-16	0.431857	0.0034	0.089883
rs117370443	C	T	0.0553	0.052516	0.039128	0.062853	7.06E-21	0.701103	0.0059	0.13682
rs1175550	G	A	-0.0422	0.005777	0.23081	0.277047	2.5E-51	0.937473	0.0028	0.073638
rs117679105	T	C	-0.1311	-0.01856	0.027085	0.012607	3.97E-76	0.950629	0.0071	0.29979
rs117709065	T	C	-0.0805	0.006991	0.017646	0.008286	9.06E-19	0.98497	0.0091	0.371083

rs11917973	T	C	-0.0153	-0.05861	0.403915	0.423645	3.54E-12	0.382092	0.0022	0.067054
rs12147688	T	G	0.0215	0.080115	0.25723	0.232225	1.35E-16	0.306958	0.0026	0.078419
rs1234212	T	C	0.0125	-0.02903	0.370691	0.336854	2.64E-09	0.677044	0.0021	0.069711
rs12365580	A	G	-0.0257	-0.12478	0.170789	0.107287	1.76E-21	0.244684	0.0027	0.107262
rs12426239	T	C	-0.0186	0.046095	0.141002	0.144699	5.65E-10	0.622742	0.003	0.093694
rs12450826	T	A	-0.0276	-0.06485	0.29219	0.317078	2.53E-26	0.360548	0.0026	0.070924
rs12492391	A	C	0.0142	0.047616	0.35379	0.358686	3.29E-09	0.488812	0.0024	0.068789
rs12600858	A	G	-0.0226	0.044303	0.305598	0.260164	4.66E-21	0.55589	0.0024	0.075222
rs1260326	C	T	0.0223	-0.11301	0.578888	0.650295	2.43E-26	0.101945	0.0021	0.069096
rs12670684	G	A	-0.0461	0.040478	0.080097	0.120318	4.97E-28	0.687836	0.0042	0.100743
rs1271040	G	A	0.0258	0.08297	0.35081	0.34684	5.93E-27	0.230529	0.0024	0.069199
rs12748814	T	C	0.0258	0.128919	0.085378	0.125918	3.12E-10	0.190614	0.0041	0.098504
rs12768808	G	A	0.0117	0.037078	0.373171	0.302136	2.53E-08	0.607276	0.0021	0.072141
rs12775642	A	G	0.0125	-0.0838	0.301273	0.320708	5.49E-08	0.238105	0.0023	0.071029
rs12780892	G	C	-0.0334	-0.0177	0.23645	0.139719	3.78E-35	0.853302	0.0027	0.095733
rs1278769	G	A	0.0152	-0.05192	0.760367	0.759453	2.4E-10	0.503607	0.0024	0.077621
rs12876143	C	T	0.0809	-0.00422	0.07549	0.046524	5.9E-91	0.978614	0.004	0.157492
rs12912777	T	C	0.0214	0.021562	0.12668	0.103317	9.7E-10	0.841913	0.0035	0.108111
rs13167071	C	G	0.0194	0.00361	0.686963	0.668176	3.32E-17	0.958985	0.0023	0.070196
rs13192435	C	T	0.0522	-0.26183	0.025466	0.019209	8.63E-13	0.282681	0.0073	0.243713
rs13199088	T	C	-0.022	-0.00809	0.26649	0.291527	2.64E-17	0.910911	0.0026	0.072326
rs13266634	T	C	-0.0527	-0.02125	0.325994	0.375655	5.6057E-139	0.754529	0.0021	0.067963
rs13431652	C	T	-0.0853	0.004089	0.272117	0.310645	1.1176E-276	0.954488	0.0024	0.071649
rs1399627	G	A	0.022	-0.07625	0.697733	0.640295	1.12E-21	0.26913	0.0023	0.068996
rs142513102	G	A	-0.0718	-0.03164	0.026358	0.003064	2.02E-23	0.956114	0.0072	0.574968
rs1434602	C	T	0.0204	-0.17136	0.88246	0.897051	1.46E-08	0.117057	0.0036	0.109336
rs145496147	T	C	-0.0731	-0.05745	0.012021	0.020419	5.34E-12	0.805139	0.0106	0.23289
rs145892119	T	C	-0.03	-0.0704	0.074451	0.028134	9.22E-12	0.727405	0.0044	0.201963
rs1481012	G	A	0.0235	0.057854	0.143817	0.074877	5.34E-16	0.641682	0.0029	0.124323
rs148303016	T	C	0.0368	0.095615	0.052972	0.044971	1.47E-12	0.553135	0.0052	0.16122
rs1490384	T	C	0.0179	-0.04521	0.582663	0.477651	7.1E-15	0.49414	0.0023	0.066122
rs149142833	T	C	0.0246	-0.0584	0.133427	0.16254	2.1E-15	0.513516	0.0031	0.089383
rs149336329	T	G	-0.0444	0.243971	0.048623	0.024415	3.49E-21	0.247155	0.0047	0.210813
rs1496653	G	A	-0.0194	0.084638	0.195708	0.311024	8.55E-14	0.234911	0.0026	0.071256
rs150705486	A	G	-0.2964	0.344173	0.015663	0.008361	1.0654E-213	0.35515	0.0095	0.372221

rs1524518	A	G	0.0172	-0.07233	0.250974	0.257647	7.53E-14	0.34043	0.0023	0.075868
rs1560980	C	G	0.0468	0.07236	0.041462	0.016824	7.09E-16	0.775686	0.0058	0.253943
rs1564648	A	G	0.0116	0.045688	0.451296	0.512396	3.32E-08	0.487884	0.0021	0.065863
rs1641523	T	C	-0.0245	-0.00735	0.535411	0.593083	1.89E-31	0.912846	0.0021	0.067166
rs165975	C	T	0.0162	-0.04352	0.26198	0.301602	1.87E-12	0.544377	0.0023	0.07179
rs16829945	T	C	-0.0143	0.086814	0.286873	0.280945	5.05E-10	0.233456	0.0023	0.072861
rs17080069	G	A	0.0238	0.044863	0.065946	0.076694	1.46E-08	0.715502	0.0042	0.12309
rs1708302	T	C	-0.0265	-0.07344	0.415368	0.464311	1.03E-30	0.267937	0.0023	0.06629
rs17101394	A	G	0.0206	0.071455	0.1429	0.134423	6.57E-12	0.466044	0.003	0.098027
rs17168486	T	C	0.0239	-0.04744	0.213054	0.198118	1.18E-21	0.565094	0.0025	0.082461
rs17419291	C	T	-0.0245	0.04689	0.087057	0.045601	2.29E-09	0.769269	0.0041	0.159852
rs17462188	T	C	0.0146	-0.12827	0.66393	0.69308	3.22E-11	0.073819	0.0022	0.071749
rs17850433	C	T	0.0938	0.169035	0.011927	0.005149	8.83E-19	0.704116	0.0106	0.445095
rs1787663	A	C	0.0141	-0.10285	0.279923	0.143448	8.76E-10	0.279196	0.0023	0.095042
rs1800562	A	G	-0.1248	0.088827	0.078843	0.03711	3.3484E-185	0.616071	0.0043	0.177149
rs182969725	G	A	-0.0734	0.370054	0.011294	0.006591	3.78E-11	0.345799	0.0111	0.392519
rs1831382	C	T	-0.0249	-0.14266	0.676751	0.594055	1.07E-29	0.033578	0.0022	0.067131
rs183794109	T	C	0.017	0.018488	0.29894	0.238964	1.05E-11	0.812061	0.0025	0.077755
rs1838931	T	C	0.0139	0.047526	0.350528	0.301296	2.65E-10	0.507126	0.0022	0.071649
rs1975283	C	A	-0.0236	0.103115	0.708937	0.637938	1.06E-24	0.135878	0.0023	0.069143
rs198325	T	C	-0.025	-0.00329	0.191086	0.192827	2.06E-20	0.968701	0.0027	0.083928
rs2044341	C	T	-0.0527	-0.10544	0.68405	0.671225	1.21E-98	0.133309	0.0025	0.070239
rs2060985	G	A	-0.0159	0.160628	0.548997	0.434472	1.87E-15	0.015714	0.002	0.0665
rs2068888	A	G	-0.0141	0.010564	0.477685	0.469827	1.79E-12	0.872519	0.002	0.065833
rs2106844	A	T	0.0123	-0.04148	0.656985	0.629389	2.26E-08	0.544717	0.0022	0.068475
rs2113260	C	T	-0.018	0.04879	0.707436	0.719855	5.03E-15	0.509252	0.0023	0.073925
rs2143923	G	A	-0.0229	0.052394	0.566021	0.557609	1.09E-27	0.429145	0.0021	0.066266
rs2236498	C	A	-0.0217	-0.0559	0.251818	0.217174	1.54E-19	0.479961	0.0024	0.079137
rs2237895	C	A	0.0311	0.016665	0.407846	0.511592	1.27E-49	0.802389	0.0021	0.066592
rs2240716	T	C	0.0122	0.069426	0.291594	0.379347	2.93E-08	0.305497	0.0022	0.067752
rs2267716	C	T	-0.0145	-0.03944	0.227714	0.221539	1.53E-09	0.620216	0.0024	0.079587
rs2293476	C	G	0.0217	0.018934	0.215285	0.2127	3.96E-18	0.812796	0.0025	0.079952
rs2299421	G	C	-0.0124	-0.03268	0.325566	0.303376	1.74E-08	0.64698	0.0022	0.071369
rs2304442	A	T	0.0365	-0.09507	0.149415	0.205091	2.51E-36	0.245229	0.0029	0.081816
rs2305196	A	G	-0.0267	-0.00978	0.324952	0.21982	6.78E-34	0.90291	0.0022	0.080169

rs2325747	T	C	-0.0124	0.055298	0.476515	0.406849	3.53E-09	0.40984	0.0021	0.067095
rs235924	C	T	0.0317	-0.06003	0.696345	0.554069	3.24E-43	0.364956	0.0023	0.066262
rs247826	T	C	0.0226	-0.10247	0.212027	0.289922	1.57E-19	0.159603	0.0025	0.072856
rs2512539	T	G	-0.0194	-0.04908	0.13912	0.196091	4.13E-09	0.556937	0.0033	0.083557
rs2546197	G	T	0.0238	-0.14714	0.077777	0.07996	3.11E-08	0.223576	0.0043	0.120899
rs2612059	C	A	0.024	-0.01119	0.174305	0.136159	6.17E-19	0.907041	0.0027	0.095789
rs2641443	A	G	-0.0139	0.105927	0.274765	0.321328	1.51E-09	0.133258	0.0023	0.070553
rs2748427	G	A	0.0718	0.051005	0.213709	0.20299	2.1471E-181	0.535856	0.0025	0.082387
rs28413704	G	A	-0.0201	-0.00727	0.116351	0.042984	8.94E-11	0.96444	0.0031	0.163052
rs28526689	A	G	0.0142	-0.00189	0.312914	0.385376	1.09E-10	0.977739	0.0022	0.067699
rs2858010	C	T	-0.0218	-0.06046	0.385281	0.263762	3.03E-25	0.424406	0.0021	0.075685
rs28628339	G	A	0.023	0.054643	0.29155	0.247051	3.58E-20	0.475566	0.0025	0.07659
rs28641468	C	T	0.033	-0.09197	0.776288	0.699448	8.77E-40	0.200092	0.0025	0.07178
rs28695210	A	G	0.0395	0.140669	0.082338	0.075464	4.08E-20	0.263693	0.0043	0.125855
rs2954032	G	A	0.0146	-0.0288	0.6903	0.735283	3.22E-11	0.698807	0.0022	0.074438
rs33978622	C	G	-0.025	0.061063	0.33313	0.364063	1.52E-23	0.372727	0.0025	0.068504
rs34811474	A	G	-0.0159	0.014501	0.23194	0.229378	3.89E-09	0.853214	0.0027	0.078374
rs348330	A	G	-0.0193	-0.00241	0.574124	0.644812	1.74E-18	0.972218	0.0022	0.069183
rs34872471	C	T	0.0709	-0.06184	0.24946	0.202337	6.3013E-177	0.454972	0.0025	0.082772
rs34878143	C	T	-0.0579	0.020886	0.020365	0.048699	1.16E-14	0.890418	0.0075	0.151593
rs35018839	G	A	-0.0194	0.158093	0.105758	0.132716	4.13E-09	0.10366	0.0033	0.097147
rs35188965	T	C	0.0153	0.021619	0.521328	0.622424	3.2E-13	0.750577	0.0021	0.068009
rs351978	G	A	-0.0138	0.079515	0.563672	0.658426	4.98E-11	0.254114	0.0021	0.069725
rs35585881	A	G	0.0201	0.096455	0.090454	0.053796	9.31E-09	0.510438	0.0035	0.146553
rs35662301	C	T	0.021	-0.15605	0.115998	0.117648	1.25E-11	0.12519	0.0031	0.101771
rs35895680	A	C	-0.0145	-0.07011	0.275594	0.309826	1.53E-09	0.327456	0.0024	0.071594
rs3748059	G	A	-0.0204	0.086253	0.804083	0.759265	4.29E-15	0.265532	0.0026	0.077467
rs3757972	T	C	0.0182	0.007252	0.387452	0.282994	4.45E-18	0.922311	0.0021	0.074356
rs3810027	G	C	0.0128	0.032255	0.356272	0.38337	1.09E-09	0.633662	0.0021	0.06768
rs3811444	T	C	0.0222	0.034503	0.30854	0.346384	6.06E-24	0.620189	0.0022	0.069621
rs3827181	T	C	0.0163	0.011181	0.387618	0.259356	8.37E-15	0.88226	0.0021	0.075495
rs3857286	T	C	-0.0133	-0.03043	0.695215	0.708535	1.49E-09	0.676578	0.0022	0.072957
rs3918296	G	C	-0.0476	-0.20529	0.024434	0.005471	1.21E-12	0.649847	0.0067	0.452212
rs4133213	A	C	-0.0116	0.015033	0.442993	0.312781	3.32E-08	0.833876	0.0021	0.071675
rs4238013	T	C	-0.0173	0.093173	0.826007	0.777593	6.47E-10	0.242303	0.0028	0.079686

rs4325403	A	T	0.0304	-0.01483	0.262591	0.252623	9.05E-37	0.845506	0.0024	0.076112
rs4335852	A	G	-0.0239	0.043443	0.25155	0.204067	8.61E-19	0.594918	0.0027	0.081702
rs4379994	G	A	-0.0163	0.051455	0.198479	0.217211	3.63E-10	0.521287	0.0026	0.080227
rs4435501	C	A	0.0209	0.123126	0.10638	0.209765	0.000000038	0.130256	0.0038	0.081373
rs4499344	A	G	-0.027	-0.04079	0.397424	0.300413	2.32E-29	0.571725	0.0024	0.072121
rs45607834	T	C	0.0228	0.348983	0.10266	0.06309	1.97E-09	0.010949	0.0038	0.137161
rs4678408	G	A	-0.0187	-0.09477	0.638295	0.637745	5.35E-19	0.168444	0.0021	0.068814
rs4679997	G	C	-0.0174	-0.01909	0.652693	0.685773	1.17E-16	0.787178	0.0021	0.070721
rs4689394	G	C	0.018	0.021864	0.665062	0.582609	5.03E-15	0.743163	0.0023	0.066725
rs4737010	A	G	0.0628	-0.07996	0.267535	0.250443	3.7662E-164	0.296187	0.0023	0.076546
rs4746838	A	T	0.1336	-0.02657	0.926457	0.933835	1.6601E-202	0.843016	0.0044	0.134148
rs4755309	T	G	-0.0253	0.084958	0.11369	0.118548	2.1E-12	0.404268	0.0036	0.101866
rs4760682	A	C	0.0785	-0.00438	0.81301	0.84023	2.2847E-161	0.961231	0.0029	0.090093
rs477777	C	T	0.0148	0.078915	0.717988	0.763895	1.24E-10	0.312401	0.0023	0.078118
rs4792687	C	T	-0.0219	0.135703	0.50569	0.597058	1.7E-21	0.043864	0.0023	0.067334
rs4807455	A	G	0.0126	-0.02393	0.276693	0.267557	0.000000043	0.749425	0.0023	0.074925
rs4809329	T	C	0.0145	0.125357	0.66634	0.738094	1.53E-09	0.093784	0.0024	0.074806
rs4809556	A	G	-0.0165	0.020119	0.610809	0.55828	3.93E-15	0.762011	0.0021	0.066435
rs4821030	A	C	-0.0332	0.034391	0.067757	0.059294	2.68E-15	0.808108	0.0042	0.141605
rs4864730	T	C	0.0186	-0.07297	0.28543	0.289781	8.44E-13	0.314699	0.0026	0.07258
rs4889490	T	G	-0.0146	-0.02164	0.479502	0.407364	3.22E-11	0.748252	0.0022	0.067416
rs4901844	T	C	-0.0237	-0.02492	0.24892	0.279064	1.67E-18	0.736134	0.0027	0.073955
rs4910498	T	A	-0.0297	-0.15655	0.59909	0.732952	2.07E-45	0.036209	0.0021	0.074741
rs4955744	C	A	0.0153	-0.02046	0.166374	0.118768	1.46E-08	0.840768	0.0027	0.101813
rs5026475	C	T	-0.012	0.011763	0.56123	0.53833	1.97E-09	0.858948	0.002	0.066191
rs55770587	T	C	-0.0455	0.102046	0.041923	0.035972	1.43E-15	0.559752	0.0057	0.174974
rs55881843	A	G	-0.0334	-0.12609	0.13875	0.102577	4.45E-24	0.248088	0.0033	0.10917
rs56317699	C	T	0.0151	0.072292	0.25987	0.286181	5.2E-11	0.321002	0.0023	0.072846
rs563437995	C	G	-0.1595	0.075133	0.007931	0.015	9.17E-32	0.78109	0.0136	0.27036
rs56395926	A	G	-0.016	-0.02497	0.22883	0.355511	3.11E-09	0.718398	0.0027	0.069237
rs56397034	C	G	-0.0202	-0.13608	0.34472	0.309476	4.24E-20	0.057232	0.0022	0.071565
rs57891429	C	T	0.0188	0.090626	0.13181	0.071566	3.21E-08	0.482421	0.0034	0.129021
rs59153558	G	A	0.0281	0.01067	0.666635	0.693046	2.33E-37	0.881077	0.0022	0.071319
rs592423	C	A	-0.016	0.052296	0.499297	0.497898	2.56E-14	0.426184	0.0021	0.06572
rs6066141	C	T	-0.0221	0.03062	0.235542	0.21398	9.57E-19	0.703932	0.0025	0.080576

rs6077396	A	G	-0.0185	-0.10342	0.488992	0.485361	2.24E-20	0.117861	0.002	0.066131
rs61215894	C	T	-0.0142	0.185555	0.55231	0.533826	3.29E-09	0.004322	0.0024	0.065023
rs61963209	A	G	-0.0153	0.005398	0.184949	0.20053	1.46E-08	0.947761	0.0027	0.08239
rs62076542	T	C	0.0152	0.105873	0.48982	0.472357	3.88E-11	0.109128	0.0023	0.066083
rs62084234	G	A	0.0167	0.06809	0.281359	0.239256	2.39E-11	0.377279	0.0025	0.077119
rs62136856	G	A	0.0188	0.015162	0.71661	0.659045	5.48E-14	0.826946	0.0025	0.069351
rs62523081	A	G	0.0148	-0.07847	0.330763	0.394451	1.73E-11	0.244918	0.0022	0.067483
rs62550975	G	A	-0.0935	0.131728	0.062659	0.031846	4.62E-88	0.488198	0.0047	0.190035
rs636089	C	T	0.0126	-0.06366	0.387388	0.32884	1.97E-09	0.364564	0.0021	0.070209
rs637614	C	T	-0.0171	0.01221	0.47456	0.496856	1.05E-13	0.852588	0.0023	0.065708
rs6459737	A	G	-0.016	0.04328	0.380185	0.314964	2.56E-14	0.541755	0.0021	0.070932
rs6494529	A	G	0.0194	-0.05516	0.483007	0.450379	2.51E-20	0.40424	0.0021	0.066128
rs6518681	G	A	0.0326	-0.00086	0.907019	0.914218	3.64E-16	0.994222	0.004	0.119172
rs6565922	T	C	0.0138	-0.05076	0.403852	0.39893	4.98E-11	0.45128	0.0021	0.06738
rs67131976	T	C	0.047	-0.08582	0.215514	0.17224	7.55E-79	0.324334	0.0025	0.087074
rs6731171	A	T	0.0154	0.031221	0.6205	0.620432	1.39E-10	0.645167	0.0024	0.0678
rs6777684	G	A	0.0259	-0.02585	0.60967	0.609528	3.77E-27	0.702724	0.0024	0.067727
rs6808166	A	G	0.0253	0.073742	0.545587	0.594873	1.12E-36	0.270258	0.002	0.066888
rs6810158	C	T	-0.0288	-0.05738	0.08701	0.085608	2.15E-12	0.627343	0.0041	0.118187
rs6878122	A	G	-0.0262	0.02049	0.73181	0.771809	9.6E-28	0.79501	0.0024	0.078865
rs689	T	A	-0.0218	0.161712	0.753534	0.789061	2.78E-18	0.047979	0.0025	0.081773
rs6893283	T	C	-0.0559	0.357921	0.01453	0.010321	5.78E-09	0.292563	0.0096	0.340063
rs6920313	C	T	0.0146	0.030561	0.317744	0.327682	3.22E-11	0.664167	0.0022	0.07039
rs6947830	A	G	0.0244	-0.06188	0.573881	0.45885	3.3E-31	0.349058	0.0021	0.066078
rs6973494	A	C	0.0164	-0.05376	0.480692	0.574873	5.74E-15	0.420824	0.0021	0.066782
rs700083	C	T	0.0158	-0.11667	0.739449	0.830433	5.09E-08	0.180081	0.0029	0.087038
rs7124355	G	A	-0.019	0.053697	0.667134	0.564126	1.46E-19	0.418991	0.0021	0.066442
rs7166540	G	A	-0.0188	0.037187	0.23753	0.193427	3.33E-12	0.656236	0.0027	0.083544
rs7195055	T	C	-0.058	0.496873	0.015239	0.021409	2.24E-09	0.026555	0.0097	0.224019
rs72638978	C	T	-0.1419	0.366675	0.023513	0.007096	7.75E-76	0.328225	0.0077	0.375039
rs72681698	C	T	-0.0736	-0.90331	0.011004	0.00185	2.22E-11	0.286965	0.011	0.84833
rs72781680	T	C	0.0512	-0.06792	0.114034	0.096304	2.74E-54	0.548035	0.0033	0.113067
rs72802365	C	G	-0.0281	-0.01869	0.067706	0.079717	2.22E-11	0.877304	0.0042	0.121086
rs72811487	A	G	-0.0573	0.068519	0.035128	0.02972	2.42E-20	0.722454	0.0062	0.192913
rs72900998	C	T	-0.0337	-0.2014	0.089458	0.055884	6.06E-22	0.164294	0.0035	0.144811

rs72939920	T	A	-0.0287	0.064436	0.195143	0.161406	2.17E-26	0.471901	0.0027	0.08957
rs72973028	C	A	0.02	0.020222	0.17238	0.201182	1.11E-10	0.8057	0.0031	0.082212
rs7298690	C	T	0.014	0.035775	0.213307	0.296275	2.14E-08	0.619866	0.0025	0.072122
rs730497	A	G	0.0902	-0.07516	0.177903	0.106486	1.029E-263	0.484062	0.0026	0.107407
rs73061095	G	T	0.024	0.080357	0.319301	0.308026	1.04E-27	0.260981	0.0022	0.071487
rs73221116	A	G	0.0327	-0.24754	0.035638	0.051786	2.76E-09	0.096254	0.0055	0.148826
rs73226260	A	G	-0.0424	0.080082	0.034445	0.024414	3.47E-11	0.712361	0.0064	0.217209
rs737092	C	T	0.0245	-0.00871	0.48702	0.507417	1.68E-34	0.895109	0.002	0.066074
rs74111616	T	C	0.0218	0.06446	0.067881	0.057755	5.04E-08	0.651817	0.004	0.142852
rs75134025	C	T	-0.0484	-0.01235	0.023524	0.02814	1.91E-10	0.950333	0.0076	0.198245
rs7513688	A	G	0.0172	0.116759	0.333601	0.340873	5.36E-15	0.094402	0.0022	0.069806
rs7528296	C	T	-0.0134	0.04633	0.404514	0.392034	1.76E-10	0.495633	0.0021	0.067995
rs75629141	A	T	-0.0309	-0.09593	0.82757	0.905699	2.11E-23	0.40377	0.0031	0.114895
rs75636043	A	G	-0.0254	0.09678	0.078182	0.051543	3.48E-09	0.518343	0.0043	0.149837
rs7572278	A	T	0.0234	0.154865	0.197136	0.220445	2.26E-19	0.052006	0.0026	0.0797
rs7606173	C	G	-0.024	0.026183	0.358606	0.373556	1.72E-25	0.701528	0.0023	0.068316
rs76505278	C	T	-0.0277	0.076881	0.10326	0.088397	3.11E-13	0.509564	0.0038	0.116572
rs76895963	G	T	-0.1889	-0.0808	0.021026	0.030254	3.2434E-102	0.677524	0.0088	0.194293
rs7720275	C	T	0.0233	0.040235	0.147638	0.117682	9.4E-16	0.69274	0.0029	0.101825
rs7797401	A	G	-0.0136	-0.00015	0.440081	0.458486	9.41E-11	0.998195	0.0021	0.066595
rs77981966	T	C	-0.0726	-0.0974	0.076555	0.032966	5.93E-64	0.602375	0.0043	0.186955
rs7817540	C	T	0.0202	0.17575	0.39829	0.353757	6.64E-22	0.010822	0.0021	0.068965
rs7820334	T	C	-0.0218	0.075289	0.271713	0.295704	1.05E-19	0.301418	0.0024	0.072855
rs78583604	T	G	0.0266	0.005176	0.13668	0.201896	2.96E-14	0.950109	0.0035	0.082728
rs78588343	A	G	-0.0321	-0.01323	0.15054	0.218517	1.02E-26	0.868222	0.003	0.079747
rs7864655	G	T	0.0134	0.069565	0.253724	0.237269	5.67E-09	0.372677	0.0023	0.078035
rs79121130	T	C	0.0296	0.084117	0.178799	0.145946	4.99E-30	0.369357	0.0026	0.093705
rs7944748	G	T	0.015	-0.0269	0.339554	0.375853	9.22E-12	0.694368	0.0022	0.068468
rs79621919	A	G	-0.0384	-0.13429	0.04856	0.080542	4.62E-15	0.269294	0.0049	0.121558
rs79880068	T	C	-0.0315	0.147427	0.10308	0.094987	1.14E-16	0.193072	0.0038	0.113271
rs8013143	G	A	0.02	0.081597	0.23665	0.303975	1.24E-15	0.254114	0.0025	0.07155
rs8050500	C	T	-0.0226	-0.03108	0.467568	0.480943	1.31E-29	0.637221	0.002	0.065896
rs8067342	T	C	-0.0186	-0.15953	0.290883	0.260712	6.12E-16	0.034882	0.0023	0.075618
rs8070401	T	C	0.0142	0.0218	0.715662	0.679865	3.29E-09	0.757583	0.0024	0.070627
rs8176059	A	G	-0.0651	0.091825	0.011311	0.005675	2.34E-09	0.831019	0.0109	0.430307

rs8193004	T	C	-0.0112	-0.0306	0.58056	0.596525	2.14E-08	0.649208	0.002	0.067263
rs833058	T	C	0.0161	0.005094	0.421888	0.384799	1.77E-14	0.939915	0.0021	0.067587
rs838717	A	G	0.016	0.011705	0.569843	0.585687	1.24E-15	0.861393	0.002	0.067036
rs857725	G	T	0.0657	-0.07305	0.286586	0.338518	5.84E-196	0.294573	0.0022	0.069691
rs879253	T	C	-0.018	0.025196	0.612114	0.631246	2.8E-16	0.712152	0.0022	0.068288
rs888083	T	C	-0.0146	-0.08944	0.440554	0.476435	2.88E-13	0.175166	0.002	0.065969
rs892448	G	A	0.0151	-0.02092	0.815856	0.802761	2.24E-08	0.801563	0.0027	0.083226
rs924150	C	A	-0.0129	-0.05713	0.403006	0.475323	8.11E-10	0.389017	0.0021	0.066326
rs9376091	T	C	-0.0411	0.009629	0.275425	0.340145	2.04E-71	0.890237	0.0023	0.069776
rs9604497	C	T	0.0204	0.042108	0.112606	0.097861	1.83E-10	0.707164	0.0032	0.112087
rs9840088	C	A	-0.0154	0.150919	0.280811	0.183118	1.39E-10	0.0766	0.0024	0.085229
rs9845017	T	A	-0.0246	-0.13557	0.11016	0.092995	2.96E-11	0.23545	0.0037	0.114265
rs9873618	A	G	-0.0392	-0.06426	0.27337	0.268598	3.91E-65	0.385028	0.0023	0.073981
rs9892222	C	T	0.0274	0.013985	0.073021	0.072897	2.13E-12	0.912135	0.0039	0.126736
rs9901806	T	C	-0.0153	-0.0103	0.531141	0.587294	3.2E-13	0.87781	0.0021	0.067002
rs9909940	T	C	0.0589	-0.09067	0.332503	0.264342	4.2708E-173	0.228488	0.0021	0.075294
rs998584	A	C	0.0196	0.007702	0.493075	0.48223	1.13E-22	0.907644	0.002	0.066391

Table S3 Heterogeneity

Table S3.1 HIV to Insulin resistance

exposure	outcome	method	Q	Q_df	Q_pval
HIV	IR	MR Egger	4.89764	4	0.297962
HIV	IR	Inverse variance weighted	5.973581	5	0.308798

Table S3.2 HIV to Type 1 diabetes

exposure	outcome	method	Q	Q_df	Q_pval
HIV	D1M	MR Egger	30.6195	31	0.485499
HIV	D1M	Inverse variance weighted	33.84215	32	0.378639

Table S3.3 HIV to Type 2 diabetes

exposure	outcome	method	Q	Q_df	Q_pval
HIV	T2D	MR Egger	1.517522	4	0.823533
HIV	T2D	Inverse variance weighted	6.255842	5	0.282114

Table S3.4 HIV to Gestational diabetes

exposure	outcome	method	Q	Q_df	Q_pval
HIV	GDM	MR Egger	31.66141	32	0.483626
HIV	GDM	Inverse variance weighted	36.88717	33	0.29381

Table S3.5 Insulin resistance to HIV

exposure	outcome	method	Q	Q_df	Q_pval
IR	HIV	MR Egger	37.86977	45	0.765498
IR	HIV	Inverse variance weighted	38.49505	46	0.776075

Table S3.6 Type 1 diabetes to HIV

exposure	outcome	method	Q	Q_df	Q_pval
T1D	HIV	MR Egger	58.25184	70	0.840715
T1D	HIV	Inverse variance weighted	58.65333	71	0.852282

Table S3.7 Type 2 diabetes to HIV

exposure	outcome	method	Q	Q_df	Q_pval
T2D	HIV	MR Egger	83.74291	112	0.978804
T2D	HIV	Inverse variance weighted	83.74837	113	0.982106

Table S3.8 Gestational diabetes to HIV

exposure	outcome	method	Q	Q_df	Q_pval
GDM	HIV	MR Egger	18.78861	15	0.223473
GDM	HIV	Inverse variance weighted	19.60669	16	0.23846

Table S3.9 HIV to Glycated hemoglobin

exposure	outcome	method	Q	Q_df	Q_pval
HIV	HbA1c	MR Egger	39.88226	32	0.159576
HIV	HbA1c	Inverse variance weighted	41.9138	33	0.137408

Table S3.10 Glycated hemoglobin to HIV

exposure	outcome	method	Q	Q_df	Q_pval
HbA1c	HIV	MR Egger	250.5205	274	0.842426
HbA1c	HIV	Inverse variance weighted	250.566	275	0.85217

Table S4 MR-PRESSO

Table S4.1 HIV to Insulin resistance

SNP	RSSobs	Pvalue
NA		

Table S4.2 HIV to Type 1 diabetes

SNP	RSSobs	Pvalue
NA		

Table S4.3 HIV to Type 2 diabetes

SNP	RSSobs	Pvalue
NA		

Table S4.4 HIV to Gestational diabetes

SNP	RSSobs	Pvalue
rs17453643	0.009006	0.036
rs3814845	0.003632	0.036

***After excluding the above 2 outliers, analyse again without outliers.**

Table S4.5 Insulin resistance to HIV

SNP	RSSobs	Pvalue
NA		

Table S4.6 Type 1 diabetes to HIV

SNP	RSSobs	Pvalue
NA		

Table S4.7 Type 2 diabetes to HIV

SNP	RSSobs	Pvalue
NA		

Table S4.8 Gestational diabetes to HIV

SNP	RSSobs	Pvalue
NA		

Table S4.9 HIV to Glycated hemoglobin

SNP	RSSobs	Pvalue
NA		

Table S4.10 Glycated hemoglobin to HIV

SNP	RSSobs	Pvalue
NA		

Table S5 Pleiotropy

Table S5.1 HIV to Insulin resistance

exposure	outcome	egger_intercept	se	pval
HIV	IR	0.010888	0.011615	0.401619

Table S5.2 HIV to Type 1 diabetes

exposure	outcome	egger_intercept	se	pval
HIV	D1M	0.017238	0.009602	0.082382

Table S5.3 HIV to Type 2 diabetes

exposure	outcome	egger_intercept	se	pval
HIV	T2D	0.039584	0.018185	0.095087

Table S5.4 HIV to Gestational diabetes

exposure	outcome	egger_intercept	se	pval
HIV	GDM	0.020758	0.009081	0.02902

Table S5.5 Insulin resistance to HIV

exposure	outcome	egger_intercept	se	pval
IR	HIV	-0.02622	0.033156	0.433241

Table S5.6 Type 1 diabetes to HIV

exposure	outcome	egger_intercept	se	pval
T1D	HIV	0.009665	0.015253	0.528385

Table S5.7 Type 2 diabetes to HIV

exposure	outcome	egger_intercept	se	pval
T2D	HIV	0.001336	0.018083	0.941251

Table S5.8 Gestational diabetes to HIV

exposure	outcome	egger_intercept	se	pval
GDM	HIV	-0.03403	0.042114	0.431632

Table S5.9 HIV to Glycated hemoglobin

exposure	outcome	egger_intercept	se	pval
HIV	HbA1c	0.001941	0.00152	0.210886

Table S5.10 Glycated hemoglobin to HIV

exposure	outcome	egger_intercept	se	pval
HbA1c	HIV	0.001928	0.009039	0.831234

Supplementary Information of Figure

Figure S1. The funnel plots of MR analysis for HIV infection on insulin resistance and diabetes mellitus

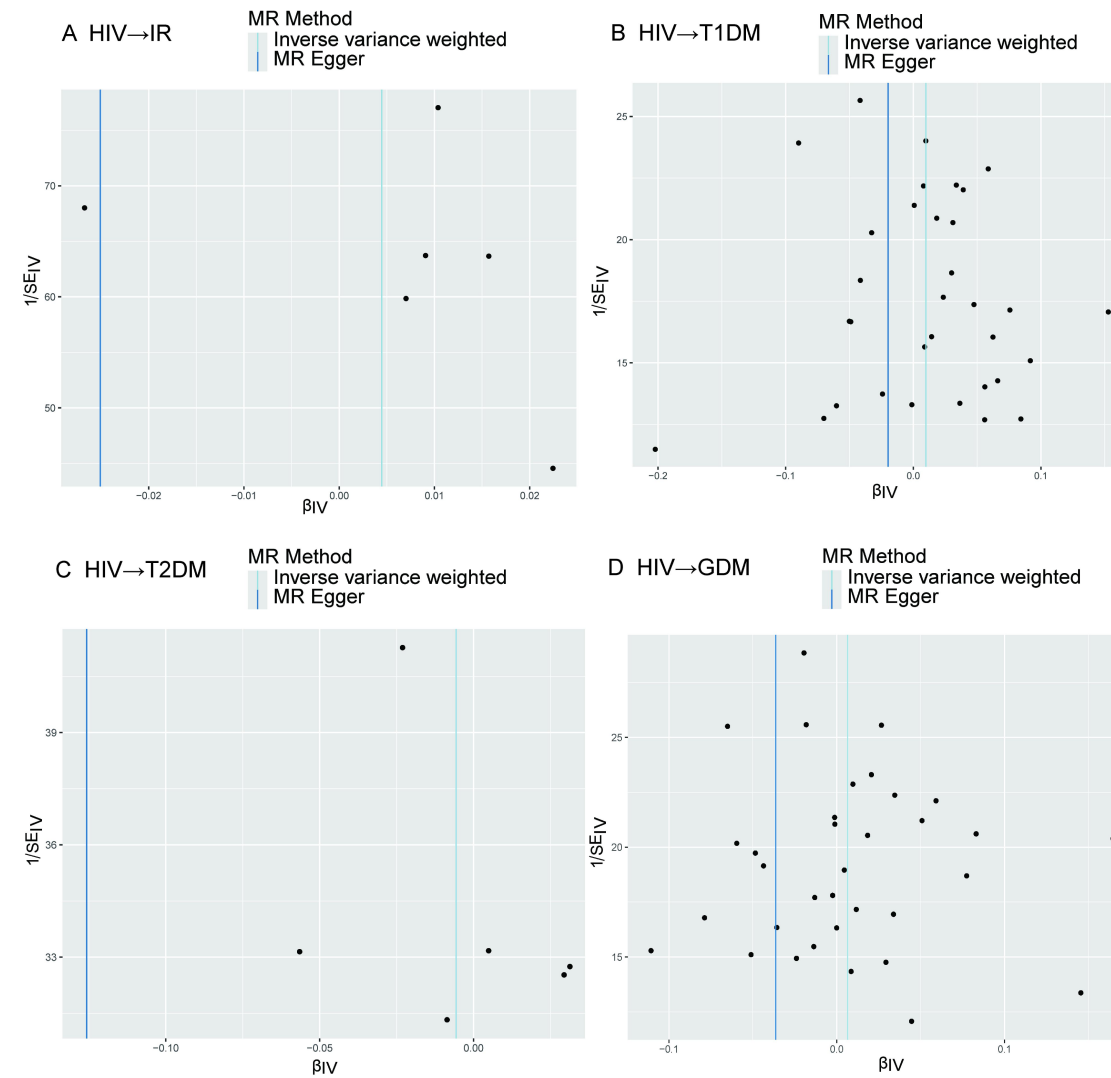


Figure S1: A shows the funnel plot of MR analysis of HIV infection with IR; B shows the funnel plot of MR analysis of HIV infection with T1D; C shows the funnel plot of MR analysis of HIV infection with T2D; D shows the funnel plot of MR analysis of HIV infection with GDM.

Figure S2. The forest plots of MR analysis for HIV infection on insulin resistance and diabetes mellitus

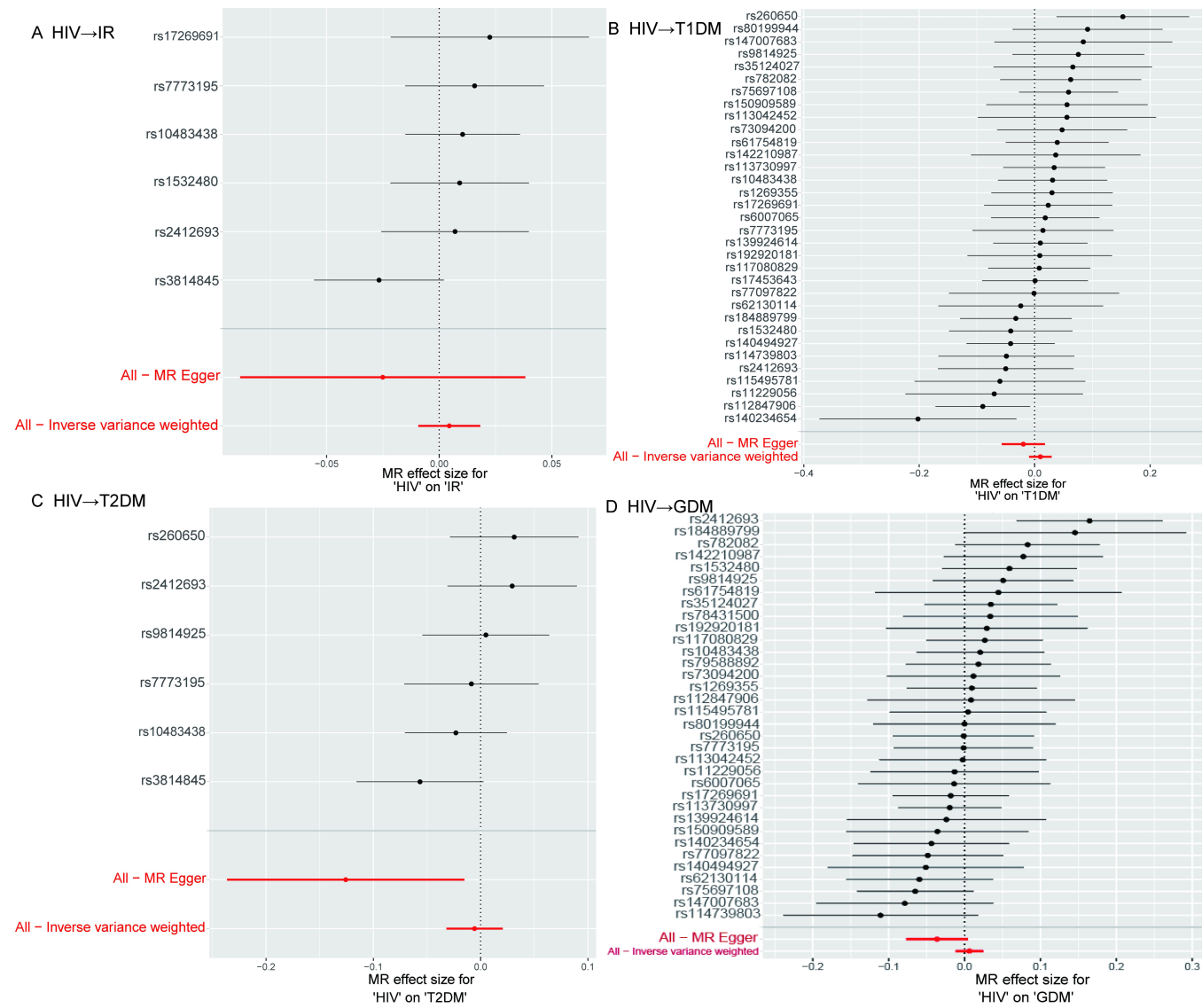


Figure S2: A shows the forest plot of MR analysis of HIV infection with IR; B shows the forest plot of MR analysis of HIV infection with T1D; C shows the forest plot of MR analysis of HIV infection with T2D; D shows the forest plot of MR analysis of HIV infection with GDM.

Figure S3. The leave-one-out plots of MR analysis for HIV infection on insulin resistance and diabetes mellitus

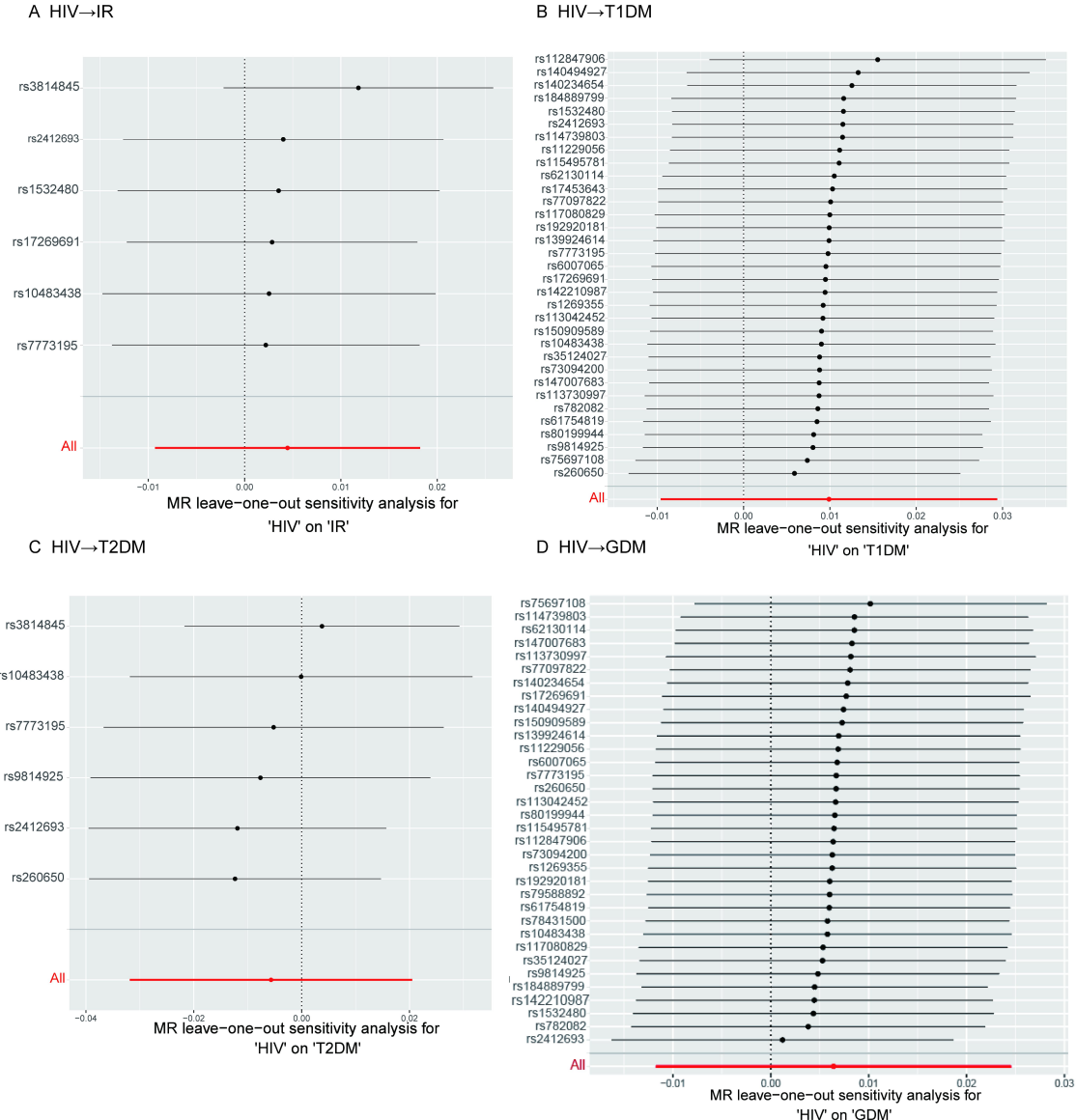


Figure S3: A shows the leave-one-out plot of MR analysis of HIV infection with IR; B shows the leave-one-out plot of MR analysis of HIV infection with T1D; C shows the leave-one-out plot of MR analysis of HIV infection with T2D; D shows the leave-one-out plot of MR analysis of HIV infection with GDM.

Figure S4. The funnel plots of MR analysis for insulin resistance and diabetes mellitus on HIV infection

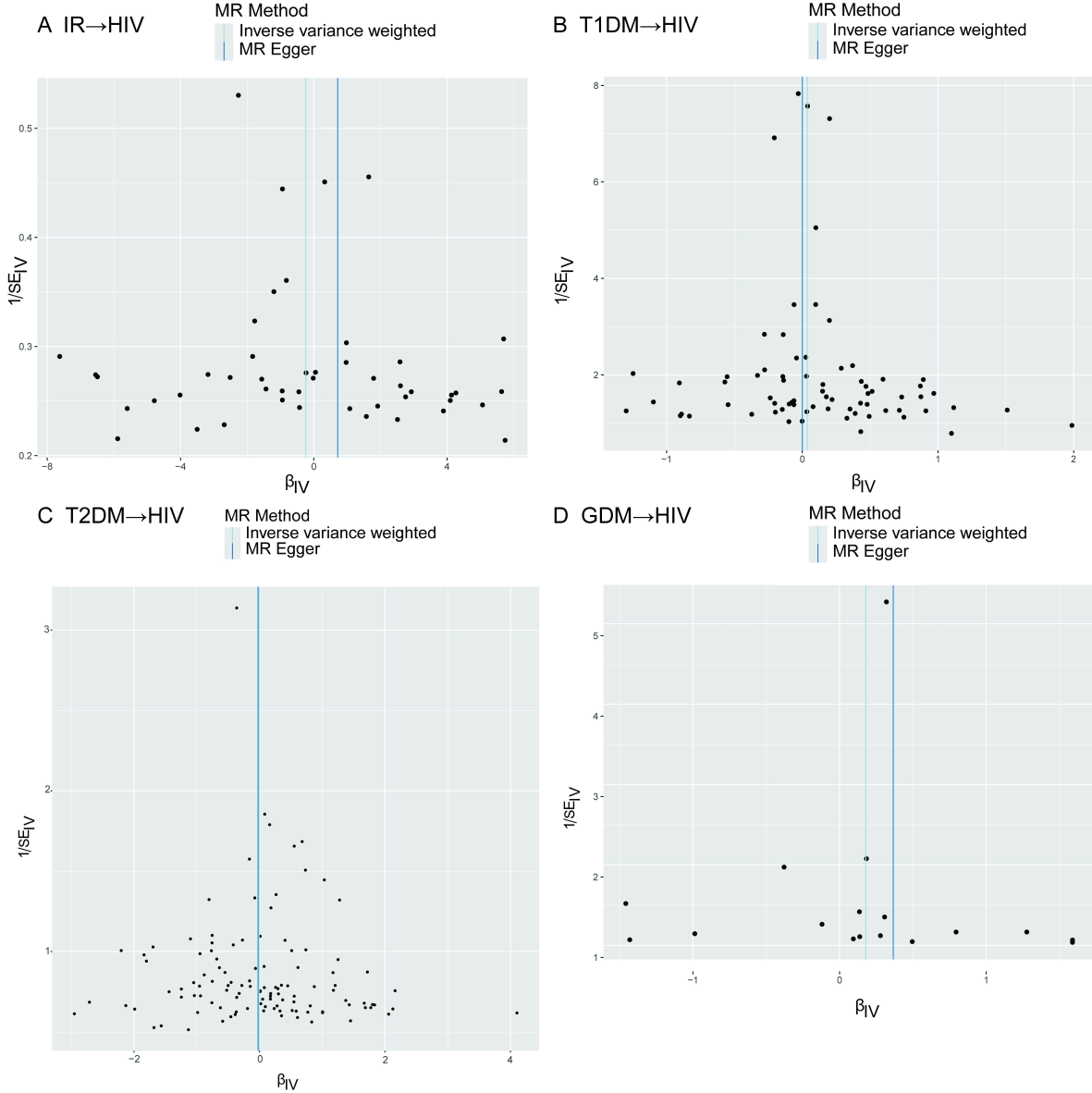


Figure S4: A shows the funnel plot of MR analysis of IR and HIV infection; B shows the funnel plot of MR analysis of T1D and HIV infection; C shows the funnel plot of MR analysis of T2D and HIV infection; and D shows the funnel plot of MR analysis of GDM and HIV infection.

Figure S5. The forest plots of MR analysis for insulin resistance and diabetes mellitus on HIV infection

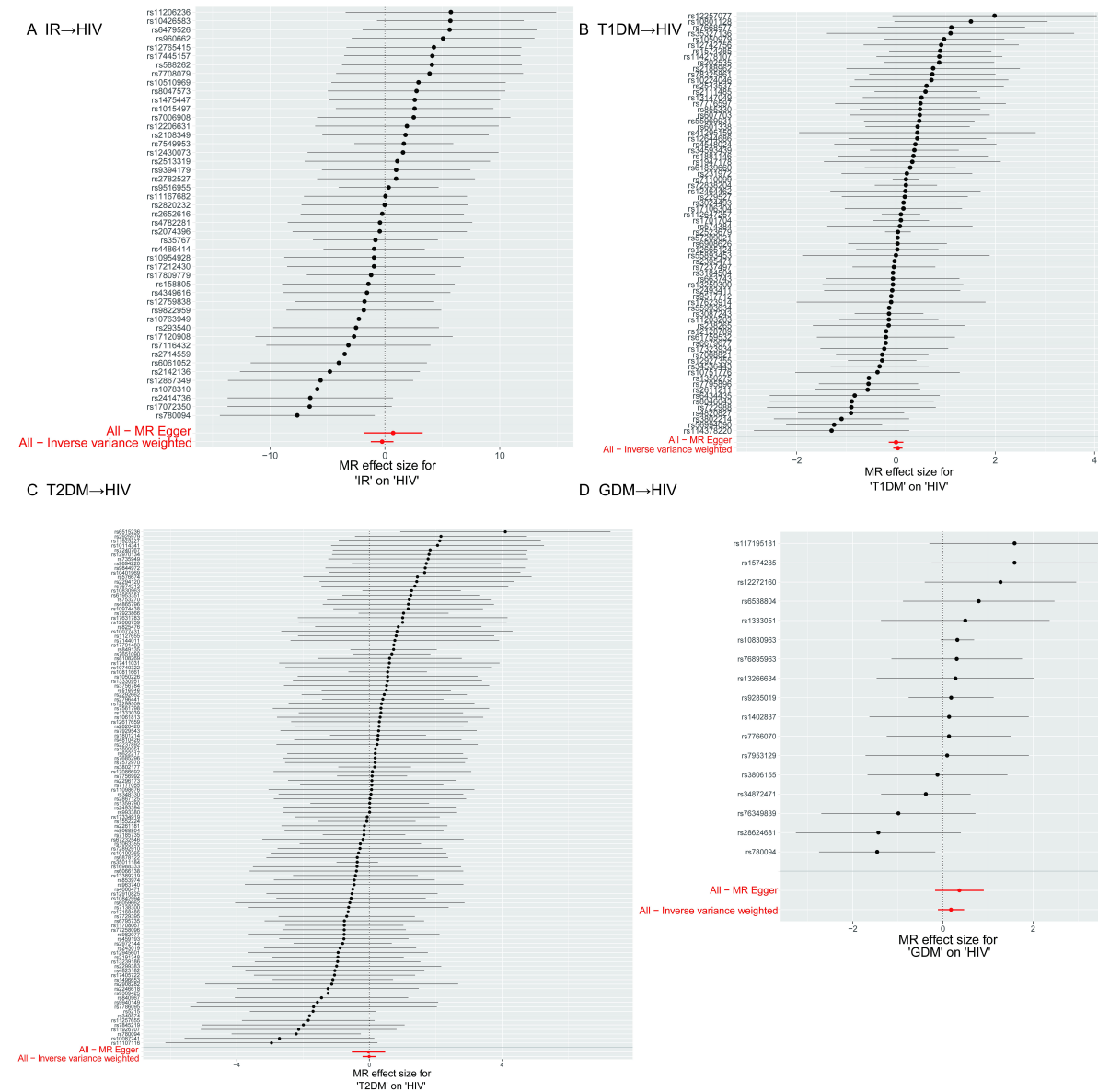


Figure S5: A shows the forest plot of MR analysis of IR and HIV infection; B shows the forest plot of MR analysis of T1D and HIV infection; C shows the forest plot of MR analysis of T2D and HIV infection; and D shows the forest plot of MR analysis of GDM and HIV infection.

Figure S6. The leave-one-out plots of MR analysis for insulin resistance and diabetes mellitus on HIV infection

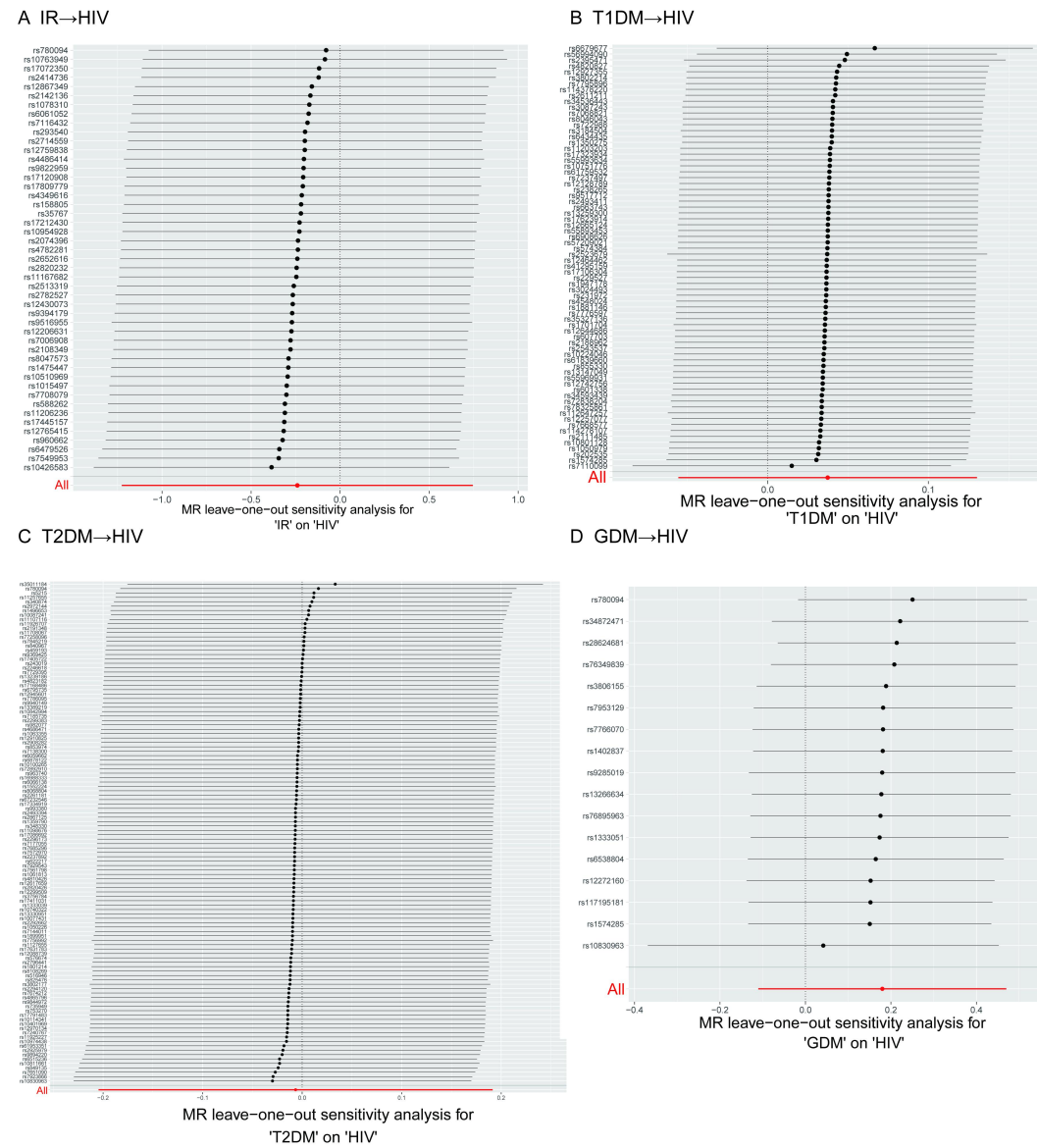


Figure S6: A shows the leave-one-out plot of MR analysis of IR and HIV infection; B shows the leave-one-out plot of MR analysis of T1D and HIV infection; C shows the leave-one-out plot of MR analysis of T2D and HIV infection; and D shows the leave-one-out plot of MR analysis of GDM and HIV infection.

Figure S7: The Funnel, Forest and Leave-one-out plots of MR analysis for HIV infection on glycated hemoglobin

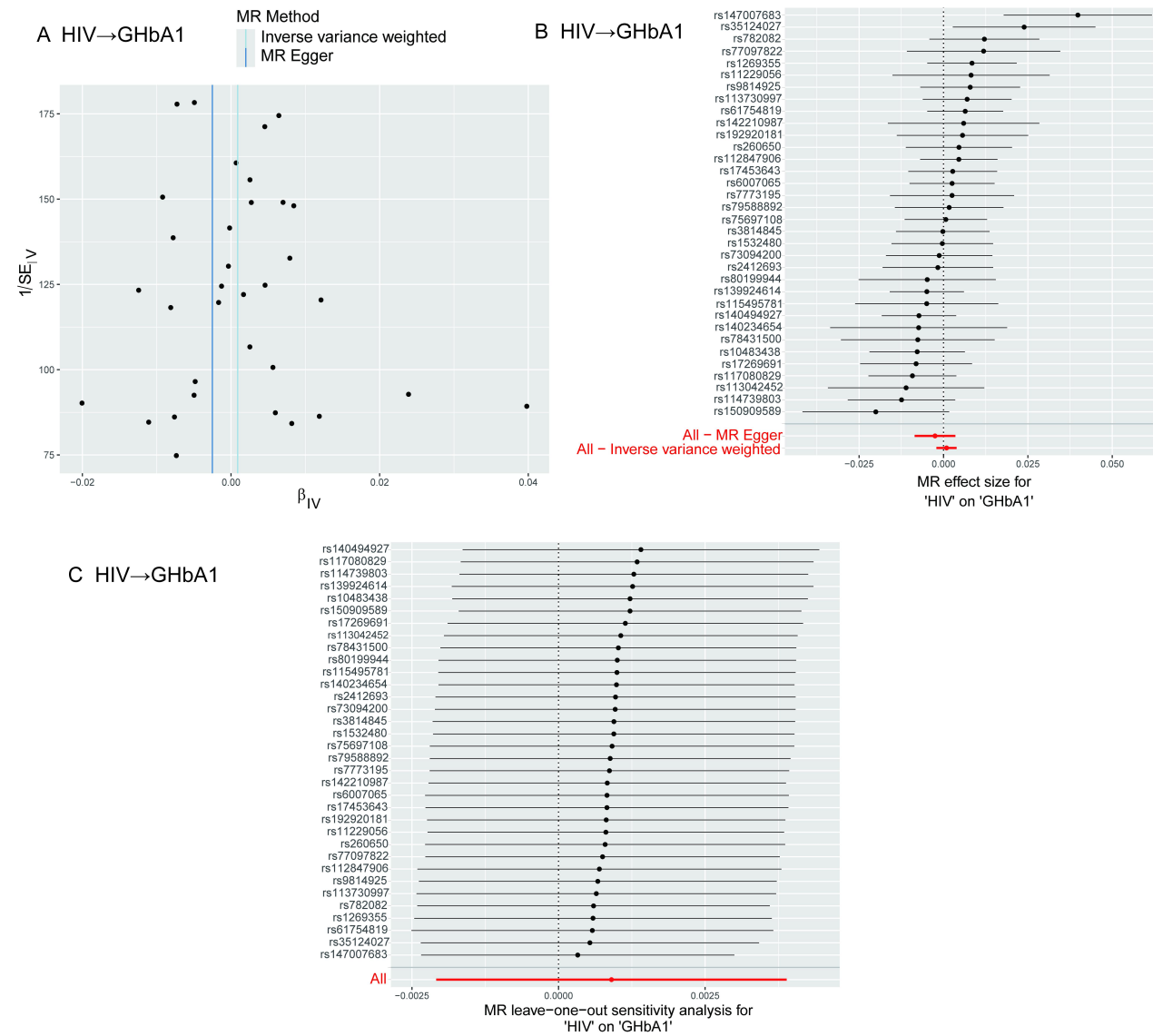


Figure S7: A shows the funnel plot of MR analysis of HIV infection with glycated hemoglobin; B shows the forest plot of MR analysis of HIV infection with glycated hemoglobin; C shows the leave-one-out plot of MR analysis of HIV infection with glycated hemoglobin.

Figure S8: The Funnel, Forest and Leave-one-out plots of MR analysis for glyated hemoglobin on HIV infection

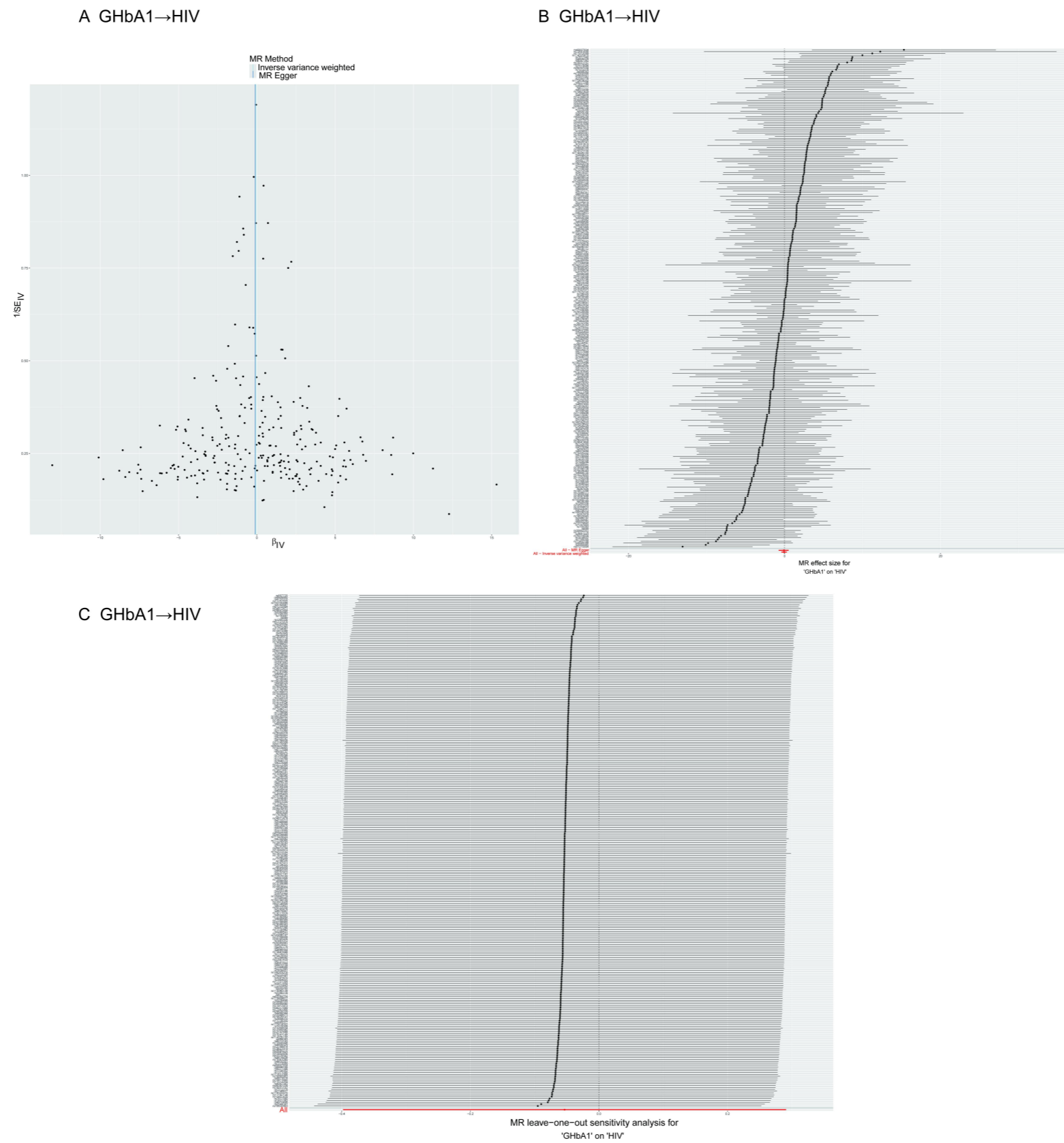


Figure S8: A shows the funnel plot of MR analysis of glyated hemoglobin and HIV infection; B shows the forest plot of MR analysis of glyated hemoglobin and HIV infection; C shows the leave-one-out plot of MR analysis of glyated hemoglobin and HIV infection.