

SUPPLEMENTAL MATERIAL

Supplemental Table I. Association of 185 lipid-associated single nucleotide polymorphisms with lipid traits in the Global Lipids Genetics Consortium genome-wide association meta-analysis

Supplemental Table II. Association of 185 lipid-associated single nucleotide polymorphisms with ischemic stroke subtypes in the Stroke Genetics Network genome-wide association meta-analysis

Supplemental Table III. Odds ratio thresholds of ischemic stroke and its subtypes at 80% power

Supplemental Table IV. Sensitivity Mendelian randomization analyses of LDL cholesterol with ischemic stroke and its subtypes

Supplemental Table V. Sensitivity Mendelian randomization analyses of HDL cholesterol with ischemic stroke and its subtypes

Supplemental Table VI. Sensitivity Mendelian randomization analyses of triglycerides with ischemic stroke and subtypes

Supplemental Figure I. Mendelian randomization analysis using SNPs in genes encoding targets of LDLC lowering or HDLC rising drugs

Members of the Stroke Genetics Network (SiGN)

References

Supplemental Table I. Association of 185 lipid-associated single nucleotide polymorphisms with lipid traits in the Global Lipids Genetics Consortium genome-wide association meta-analysis.

SNP	A1	A2	LDL cholesterol			HDL cholesterol			Triglycerides		
			beta	se	p	beta	se	p	beta	se	p
rs10019888	G	A	0.018	0.005	3.23E-04	-0.027	0.005	4.90E-08	0.023	0.005	2.28E-06
rs10029254	T	C	0.006	0.004	2.05E-01	-0.009	0.004	4.87E-02	0.027	0.004	7.55E-09
rs1010167	G	C	0.025	0.004	6.22E-11	-0.004	0.004	3.96E-01	0.002	0.004	8.08E-01
rs10102164	A	G	0.032	0.005	3.74E-11	-0.001	0.004	7.97E-01	0.011	0.004	6.87E-03
rs10282707	C	T	0.008	0.004	4.23E-02	0.025	0.004	1.03E-11	-0.009	0.003	6.52E-03
rs103294	T	C	0.007	0.005	1.23E-01	0.052	0.004	4.00E-30	-0.002	0.004	7.52E-01
rs1035744	T	C	0.007	0.004	1.58E-01	-0.006	0.004	1.55E-01	0.021	0.004	1.45E-07
rs10401969	T	C	0.118	0.007	2.65E-54	-0.013	0.007	1.02E-01	0.121	0.007	9.70E-70
rs10493326	A	G	0.021	0.004	1.91E-06	-0.001	0.004	6.73E-01	0.031	0.004	2.00E-15
rs10513688	A	G	0.022	0.006	2.18E-03	-0.005	0.006	6.08E-01	0.031	0.006	1.54E-07
rs10773105	T	C	0.006	0.004	1.22E-01	-0.036	0.004	3.20E-24	0.004	0.003	5.09E-01
rs10790162	A	G	0.076	0.007	1.09E-23	-0.095	0.007	9.91E-40	0.231	0.007	1.10E-249
rs10832962	T	C	0.032	0.004	6.62E-14	0.004	0.004	3.33E-01	0.011	0.004	5.18E-03
rs10861661	C	A	0.000	0.005	9.29E-01	-0.022	0.004	5.05E-07	0.023	0.004	2.60E-07
rs10903129	G	A	0.033	0.004	3.03E-17	0.001	0.003	8.59E-01	0.008	0.003	5.88E-03
rs11045163	A	G	0.006	0.004	1.63E-01	-0.022	0.004	3.20E-09	0.010	0.003	2.85E-03
rs11220462	A	G	0.059	0.006	6.61E-21	-0.016	0.006	8.75E-03	0.019	0.005	1.32E-03
rs11246602	C	T	0.002	0.006	5.26E-01	0.034	0.005	1.68E-10	-0.009	0.005	1.92E-01
rs11563251	T	C	0.035	0.006	4.50E-08	0.006	0.006	3.65E-01	0.008	0.006	8.26E-02
rs11660468	T	C	0.011	0.004	3.41E-03	0.039	0.003	3.60E-27	-0.001	0.003	8.80E-01
rs1169288	C	A	0.038	0.004	6.45E-21	0.010	0.004	9.13E-03	0.003	0.004	4.20E-01
rs1186380	C	T	0.024	0.004	8.46E-08	0.000	0.004	8.69E-01	-0.003	0.004	5.21E-01
rs12133576	A	G	0.010	0.004	3.83E-03	0.024	0.004	6.15E-11	-0.009	0.003	1.19E-02
rs12145743	T	G	0.004	0.004	3.38E-01	-0.020	0.004	1.80E-08	0.012	0.004	5.56E-04
rs12226802	G	A	0.000	0.005	6.19E-01	0.033	0.005	1.29E-09	-0.007	0.005	2.30E-01
rs1250229	C	T	0.024	0.004	3.13E-08	-0.003	0.004	4.04E-01	0.009	0.004	1.39E-02
rs12525163	T	C	0.004	0.004	2.56E-01	-0.022	0.004	1.52E-07	0.009	0.004	3.70E-02
rs1260326	T	C	0.021	0.004	1.51E-07	-0.011	0.004	1.74E-03	0.115	0.003	2.29E-239
rs12670798	C	T	0.034	0.004	4.81E-14	-0.001	0.004	7.33E-01	0.010	0.004	1.68E-02
rs12678919	A	G	0.008	0.006	5.05E-01	-0.155	0.006	1.38E-149	0.170	0.006	1.82E-199
rs12801636	A	G	0.008	0.005	1.45E-01	0.024	0.004	3.15E-08	-0.018	0.004	1.35E-05
rs13107325	C	T	0.016	0.008	5.74E-02	0.071	0.008	1.07E-15	-0.031	0.008	3.98E-05
rs13326165	G	A	0.004	0.005	2.67E-01	-0.029	0.004	9.04E-11	0.021	0.004	2.96E-06
rs1341267	A	C	0.002	0.004	8.87E-01	0.002	0.003	8.59E-01	-0.018	0.003	8.30E-07
rs1367117	A	G	0.119	0.004	9.48E-183	-0.022	0.004	7.59E-09	0.025	0.004	1.06E-11
rs1482852	A	G	0.003	0.004	5.75E-01	-0.021	0.004	6.34E-08	0.013	0.004	3.68E-04
rs1515110	T	G	0.006	0.004	9.36E-02	-0.032	0.004	8.04E-18	0.027	0.003	8.54E-14
rs1532085	A	G	0.003	0.004	6.47E-01	0.107	0.004	1.24E-188	0.031	0.003	2.32E-18

rs1535	A	G	0.053	0.004	7.77E-41	0.039	0.004	5.74E-27	-0.046	0.004	5.49E-40
rs1564348	C	T	0.048	0.005	2.76E-21	-0.008	0.005	1.68E-01	0.016	0.005	4.91E-04
rs16831243	T	C	0.038	0.006	9.06E-12	0.011	0.005	3.90E-02	-0.001	0.005	9.87E-01
rs1688030	C	T	0.016	0.008	3.73E-02	0.009	0.007	2.46E-01	0.038	0.007	1.99E-07
rs1689797	A	C	0.014	0.004	4.92E-04	-0.036	0.004	2.85E-21	0.011	0.004	2.42E-02
rs16942887	A	G	0.001	0.005	7.98E-01	0.083	0.005	8.28E-54	-0.012	0.005	2.96E-02
rs17145738	T	C	0.004	0.006	5.43E-01	0.041	0.005	4.95E-13	-0.115	0.005	9.42E-99
rs17173637	C	T	0.007	0.006	3.81E-01	-0.036	0.006	1.90E-08	0.021	0.006	1.04E-03
rs17286602	T	A	0.003	0.004	4.24E-01	-0.021	0.003	2.93E-07	0.006	0.003	1.62E-01
rs17345563	A	G	0.036	0.006	2.04E-09	-0.014	0.005	4.62E-03	0.015	0.005	3.90E-03
rs174532	A	G	0.035	0.004	3.13E-16	0.021	0.004	6.93E-08	-0.016	0.004	3.44E-05
rs17508045	T	C	0.049	0.007	4.91E-12	-0.009	0.006	4.66E-02	-0.008	0.006	4.00E-01
rs17695224	G	A	0.011	0.004	1.25E-02	0.029	0.004	2.42E-13	-0.012	0.004	1.13E-02
rs17788930	A	G	0.005	0.004	2.18E-01	0.036	0.004	1.53E-22	-0.011	0.004	2.80E-03
rs17789218	T	C	0.024	0.004	3.26E-07	-0.004	0.004	1.35E-01	0.006	0.004	6.65E-02
rs1781930	G	A	0.010	0.005	5.70E-02	0.002	0.005	6.25E-01	0.031	0.004	2.51E-11
rs1800562	G	A	0.062	0.008	8.25E-14	0.007	0.007	2.42E-01	-0.013	0.007	1.72E-01
rs1800961	C	T	0.069	0.011	6.03E-10	0.127	0.010	1.64E-34	0.002	0.009	7.02E-01
rs181362	C	T	0.007	0.005	7.93E-02	0.038	0.004	9.24E-18	0.009	0.004	2.81E-02
rs1883025	C	T	0.030	0.004	6.14E-11	0.070	0.004	1.50E-65	0.022	0.004	2.91E-07
rs1998013	C	T	0.381	0.022	3.02E-48	-0.035	0.020	4.13E-01	-0.009	0.020	6.57E-01
rs2000999	A	G	0.065	0.005	4.22E-41	0.002	0.004	9.52E-01	0.019	0.004	7.49E-07
rs2030746	T	C	0.021	0.004	8.61E-09	-0.003	0.004	3.06E-01	0.003	0.004	4.91E-01
rs205262	A	G	0.009	0.004	3.13E-02	0.028	0.004	3.88E-13	-0.003	0.004	8.03E-01
rs2068888	G	A	0.017	0.004	3.89E-05	-0.019	0.004	2.15E-06	0.024	0.003	1.68E-11
rs2073547	G	A	0.049	0.005	1.92E-21	-0.005	0.005	3.10E-01	0.015	0.004	3.39E-03
rs217386	G	A	0.036	0.004	1.20E-19	-0.001	0.004	4.99E-01	0.010	0.003	6.35E-03
rs2240327	G	A	0.001	0.004	9.71E-01	0.024	0.003	1.11E-11	-0.002	0.003	8.67E-01
rs2241210	G	A	0.008	0.004	8.55E-02	0.033	0.004	2.49E-20	0.003	0.003	2.47E-01
rs2247056	C	T	0.025	0.004	1.42E-08	0.012	0.004	3.79E-03	0.038	0.004	3.86E-21
rs2255141	A	G	0.030	0.004	1.32E-13	0.034	0.004	2.35E-17	-0.021	0.004	1.70E-09
rs2278236	A	G	0.007	0.004	1.27E-01	0.033	0.004	3.19E-18	-0.014	0.003	1.52E-04
rs2287623	G	A	0.022	0.004	5.40E-08	0.011	0.004	2.05E-03	-0.001	0.003	9.20E-01
rs2288002	G	A	0.029	0.004	1.26E-12	0.007	0.004	1.21E-01	0.009	0.003	1.69E-03
rs2290547	A	G	0.001	0.005	7.93E-01	-0.030	0.005	3.69E-09	0.010	0.004	2.21E-02
rs2293889	T	G	0.015	0.004	2.42E-04	-0.031	0.004	4.27E-17	0.006	0.003	1.51E-01
rs2294261	A	C	0.033	0.004	6.57E-17	-0.009	0.004	2.06E-02	0.002	0.003	5.87E-01
rs2297374	C	T	0.033	0.004	1.26E-15	-0.006	0.004	2.18E-01	0.009	0.003	4.74E-03
rs2303975	G	A	0.001	0.005	9.35E-01	-0.028	0.005	1.59E-07	0.012	0.005	2.68E-02
rs2326077	C	T	0.034	0.004	5.00E-17	0.004	0.004	2.18E-01	0.018	0.003	5.35E-07
rs2328223	C	A	0.030	0.005	5.63E-09	0.000	0.005	8.59E-01	-0.007	0.005	1.15E-01
rs2412710	G	A	0.002	0.015	6.40E-01	0.084	0.014	1.36E-09	-0.099	0.013	1.66E-11
rs2472509	G	T	0.000	0.004	7.08E-01	0.023	0.004	1.21E-09	-0.002	0.004	7.22E-01

rs2587534	A	G	0.039	0.004	8.06E-25	0.009	0.003	3.85E-03	0.004	0.003	2.71E-01
rs2602836	G	A	0.001	0.004	8.31E-01	-0.019	0.003	4.96E-08	0.009	0.003	2.12E-02
rs261342	C	G	0.003	0.007	7.36E-01	-0.107	0.006	1.47E-68	-0.045	0.006	2.53E-12
rs2642438	G	A	0.035	0.004	7.32E-16	0.030	0.004	7.78E-14	-0.017	0.004	5.27E-06
rs2652834	A	G	0.002	0.005	7.32E-01	-0.029	0.004	3.59E-11	0.025	0.004	1.92E-08
rs267733	A	G	0.033	0.005	5.29E-09	-0.016	0.005	3.58E-03	0.003	0.005	6.16E-01
rs2710642	A	G	0.024	0.004	6.09E-09	-0.010	0.004	7.69E-03	0.007	0.003	4.71E-02
rs2737252	G	A	0.031	0.004	7.04E-14	0.013	0.004	3.94E-03	0.009	0.004	1.07E-02
rs2923084	G	A	0.012	0.005	1.84E-02	-0.026	0.005	5.02E-08	0.012	0.004	5.97E-03
rs2925979	C	T	0.003	0.004	6.30E-01	0.035	0.004	1.32E-19	-0.021	0.004	2.14E-07
rs2954022	C	A	0.055	0.004	2.39E-47	-0.040	0.003	2.12E-29	0.078	0.003	2.23E-113
rs2980885	G	A	0.031	0.005	6.26E-11	-0.035	0.004	1.73E-14	0.058	0.004	3.00E-40
rs314253	T	C	0.024	0.004	3.44E-10	-0.003	0.004	3.53E-01	0.009	0.003	2.98E-02
rs3198697	T	C	0.010	0.004	6.86E-03	0.016	0.004	3.28E-05	-0.020	0.003	2.21E-08
rs326214	A	G	0.007	0.005	2.04E-01	-0.061	0.005	2.17E-36	0.024	0.004	3.79E-07
rs355838	T	G	0.018	0.004	3.05E-05	-0.019	0.004	4.10E-07	0.014	0.003	1.21E-04
rs364585	G	A	0.025	0.004	4.28E-10	0.001	0.004	8.22E-01	-0.002	0.003	4.40E-01
rs3741414	C	T	0.016	0.004	3.41E-04	-0.030	0.004	6.10E-14	0.028	0.004	1.44E-13
rs3761445	A	G	0.008	0.004	3.99E-02	-0.016	0.004	3.94E-06	0.023	0.003	8.06E-12
rs3780181	A	G	0.045	0.007	1.76E-09	0.004	0.007	5.42E-01	-0.007	0.007	4.91E-01
rs3817588	T	C	0.026	0.005	4.43E-07	-0.005	0.004	2.30E-01	0.067	0.004	1.30E-55
rs3822072	A	G	0.007	0.004	3.71E-02	-0.025	0.003	4.06E-12	0.018	0.003	5.74E-07
rs38855	A	G	0.001	0.004	9.73E-01	-0.015	0.003	9.05E-05	0.019	0.003	2.11E-08
rs3996352	A	G	0.005	0.004	1.21E-01	-0.030	0.003	3.59E-17	0.018	0.003	5.88E-08
rs4075205	C	T	0.012	0.004	8.21E-04	-0.022	0.004	3.54E-09	0.009	0.003	5.16E-02
rs4148005	G	T	0.015	0.004	1.49E-04	-0.028	0.004	5.74E-14	0.007	0.004	4.37E-02
rs4148218	G	A	0.044	0.005	6.76E-21	-0.003	0.004	4.56E-01	0.004	0.004	2.95E-01
rs4240624	A	G	0.067	0.006	2.62E-23	0.082	0.006	1.32E-45	-0.028	0.006	1.09E-06
rs4332136	C	G	-0.043	0.098	6.60E-01	0.480	0.065	1.00E-13	0.024	0.053	6.50E-01
rs442177	T	G	0.016	0.004	6.09E-05	-0.022	0.003	2.19E-09	0.031	0.003	1.32E-18
rs4465830	G	A	0.009	0.005	5.99E-02	-0.060	0.004	5.18E-40	0.053	0.004	2.98E-34
rs4530754	A	G	0.028	0.004	3.58E-12	0.001	0.003	9.34E-01	0.002	0.003	7.42E-01
rs4587594	G	A	0.049	0.004	1.63E-32	0.015	0.004	1.08E-04	0.069	0.004	3.50E-82
rs4650994	A	G	0.003	0.004	3.38E-01	-0.021	0.003	6.70E-09	0.002	0.003	3.98E-01
rs4660293	G	A	0.011	0.004	1.23E-02	-0.035	0.004	2.86E-18	0.020	0.004	2.87E-07
rs4722551	C	T	0.039	0.005	3.95E-14	0.010	0.005	2.47E-02	-0.027	0.004	1.58E-09
rs4791641	C	T	0.020	0.004	1.31E-07	0.004	0.003	9.51E-02	-0.003	0.003	4.59E-01
rs4846914	G	A	0.004	0.004	2.34E-01	-0.048	0.003	3.51E-41	0.040	0.003	7.20E-31
rs4871137	G	T	0.004	0.004	2.36E-01	0.021	0.004	1.93E-07	0.001	0.004	6.56E-01
rs4917014	G	T	0.005	0.004	2.46E-01	0.022	0.004	1.03E-08	-0.001	0.004	8.87E-01
rs4921914	C	T	0.023	0.004	1.92E-07	0.002	0.004	3.94E-01	0.035	0.004	4.87E-17
rs492571	T	C	0.003	0.010	4.72E-01	0.066	0.009	1.27E-12	-0.080	0.009	6.74E-17
rs492602	G	A	0.029	0.004	9.42E-14	-0.003	0.004	4.27E-01	0.014	0.004	2.48E-04

rs4939883	C	T	0.021	0.005	1.47E-05	0.080	0.005	1.80E-66	0.005	0.004	3.81E-01
rs4942486	T	C	0.024	0.004	2.26E-11	-0.014	0.003	1.16E-04	0.007	0.003	2.38E-02
rs4969178	G	A	0.011	0.004	8.20E-03	0.026	0.004	1.53E-12	-0.018	0.003	5.70E-06
rs4976033	A	G	0.001	0.004	8.75E-01	0.022	0.004	6.42E-08	-0.014	0.004	2.01E-04
rs4983559	G	A	0.003	0.004	5.83E-01	0.020	0.004	9.57E-09	0.000	0.004	9.71E-01
rs499974	A	C	0.001	0.005	8.26E-01	-0.026	0.004	1.12E-08	-0.009	0.004	5.41E-02
rs515135	C	T	0.139	0.005	1.09E-178	-0.011	0.004	9.01E-03	0.019	0.004	1.36E-04
rs5763662	T	C	0.077	0.012	1.19E-08	0.033	0.011	6.37E-03	0.000	0.011	8.88E-01
rs579459	C	T	0.067	0.005	2.42E-44	0.015	0.004	1.68E-03	-0.014	0.004	1.08E-03
rs5880	C	G	0.047	0.010	1.59E-06	-0.307	0.009	1.37E-233	0.048	0.009	4.71E-08
rs6016381	T	C	0.036	0.004	6.85E-20	-0.008	0.004	6.08E-02	0.014	0.003	1.99E-05
rs603446	C	T	0.009	0.004	1.14E-02	-0.002	0.004	8.73E-01	0.050	0.003	3.92E-43
rs6065311	C	T	0.042	0.004	1.66E-30	0.002	0.003	4.37E-01	0.006	0.003	2.27E-02
rs634869	T	C	0.013	0.004	8.37E-04	-0.023	0.003	1.00E-10	0.027	0.003	1.78E-14
rs6450176	A	G	0.010	0.004	1.18E-02	-0.025	0.004	6.88E-10	0.019	0.004	3.61E-07
rs646776	T	C	0.160	0.004	1.63E-272	-0.034	0.004	2.72E-15	0.003	0.004	3.73E-01
rs6489818	A	G	0.028	0.005	4.57E-09	0.000	0.005	9.28E-01	-0.004	0.004	5.40E-01
rs6511720	G	T	0.221	0.006	3.85E-262	-0.025	0.006	6.32E-05	0.008	0.006	1.04E-01
rs653178	T	C	0.023	0.004	3.88E-09	0.026	0.004	1.06E-12	-0.010	0.003	2.88E-02
rs6544713	T	C	0.081	0.004	4.84E-83	-0.003	0.004	3.88E-01	0.013	0.004	9.60E-04
rs6603981	T	C	0.034	0.004	3.10E-13	0.004	0.004	3.81E-01	0.007	0.004	1.74E-01
rs6680658	G	A	0.006	0.005	2.18E-01	-0.023	0.004	7.49E-08	0.017	0.004	1.44E-05
rs6805251	T	C	0.012	0.004	1.86E-03	0.020	0.004	1.33E-08	-0.001	0.003	9.94E-01
rs6831256	G	A	0.019	0.004	9.07E-07	-0.013	0.004	2.97E-03	0.026	0.004	1.60E-12
rs6859	A	G	0.084	0.004	4.65E-88	-0.018	0.004	7.73E-06	0.014	0.004	8.10E-05
rs686030	A	C	0.009	0.005	2.36E-01	0.055	0.005	4.29E-27	0.025	0.005	2.23E-07
rs687339	T	C	0.011	0.005	9.97E-03	-0.032	0.004	7.11E-13	0.029	0.004	2.51E-12
rs688	T	C	0.054	0.004	1.01E-43	-0.011	0.003	1.55E-03	0.004	0.003	2.18E-01
rs6882076	C	T	0.046	0.004	3.31E-31	0.002	0.004	6.85E-01	0.029	0.004	1.51E-15
rs702485	G	A	0.001	0.004	7.87E-01	0.024	0.003	6.45E-12	-0.002	0.003	4.75E-01
rs7033354	C	T	0.019	0.004	1.42E-06	-0.015	0.004	6.54E-05	0.019	0.003	4.44E-07
rs7117842	C	T	0.019	0.004	7.56E-07	0.027	0.004	1.06E-14	-0.002	0.003	5.43E-01
rs7225700	C	T	0.030	0.004	3.56E-13	0.010	0.004	2.35E-02	-0.005	0.004	2.36E-01
rs7254892	G	A	0.485	0.012	0.00E+00	-0.053	0.011	4.17E-05	-0.124	0.011	1.40E-24
rs7264396	C	T	0.025	0.005	4.41E-08	0.005	0.004	6.02E-02	0.011	0.004	2.58E-03
rs731839	A	G	0.002	0.004	5.17E-01	0.022	0.004	3.44E-09	-0.022	0.004	2.65E-09
rs7422339	A	C	0.008	0.004	1.42E-01	-0.027	0.004	8.73E-10	0.000	0.004	8.60E-01
rs749671	G	A	0.015	0.004	1.05E-04	-0.007	0.004	9.57E-02	0.021	0.003	6.11E-10
rs7607980	T	C	0.007	0.006	2.88E-01	-0.045	0.005	1.81E-15	0.036	0.005	2.41E-12
rs7640978	C	T	0.039	0.007	9.84E-09	0.000	0.006	7.22E-01	0.018	0.006	5.54E-03
rs7703051	A	C	0.073	0.004	1.40E-77	0.002	0.004	4.21E-01	0.006	0.003	1.63E-01
rs7832643	T	G	0.034	0.004	2.67E-17	-0.001	0.004	5.95E-01	0.002	0.003	4.72E-01
rs7897379	C	T	0.010	0.004	4.07E-03	0.019	0.003	1.31E-08	-0.027	0.003	1.27E-17

rs799160	T	C	0.005	0.004	2.86E-01	-0.013	0.004	2.94E-04	0.040	0.004	5.46E-30
rs8017377	A	G	0.030	0.004	2.52E-15	-0.004	0.004	4.34E-01	0.006	0.004	1.42E-01
rs8077889	C	A	0.001	0.005	9.15E-01	-0.021	0.004	1.50E-06	0.025	0.004	9.88E-09
rs8176720	T	C	0.033	0.004	1.59E-17	0.001	0.004	9.43E-01	-0.007	0.004	6.09E-02
rs838876	G	A	0.003	0.004	4.42E-01	-0.049	0.004	7.33E-33	0.005	0.004	3.77E-01
rs868943	G	A	0.026	0.004	8.44E-11	0.008	0.004	3.55E-02	0.014	0.003	3.18E-04
rs894210	G	A	0.007	0.004	1.22E-01	-0.069	0.003	1.68E-84	0.067	0.003	2.94E-89
rs903319	C	T	0.027	0.004	5.22E-11	0.010	0.004	1.22E-02	-0.005	0.004	1.38E-01
rs931992	T	G	0.002	0.006	7.03E-01	0.029	0.005	4.20E-07	-0.009	0.005	1.33E-01
rs9491696	G	C	0.006	0.004	2.64E-01	-0.020	0.003	5.21E-10	0.018	0.003	4.87E-07
rs952044	C	T	0.003	0.004	5.79E-01	0.023	0.004	1.19E-08	-0.010	0.004	2.45E-03
rs9686661	T	C	0.018	0.005	5.29E-04	-0.028	0.004	1.37E-08	0.038	0.004	2.54E-16
rs9693857	C	T	0.005	0.004	2.98E-01	0.004	0.004	5.27E-01	-0.020	0.003	1.69E-08
rs970548	C	A	0.016	0.004	6.65E-04	0.026	0.004	1.71E-10	0.003	0.004	4.59E-01
rs9875338	G	A	0.027	0.004	2.21E-11	0.007	0.004	2.10E-02	0.014	0.003	1.62E-05
rs9930333	T	G	0.000	0.004	7.18E-01	0.020	0.004	2.07E-08	-0.021	0.004	3.25E-08
rs998584	A	C	0.001	0.004	9.36E-01	-0.026	0.004	2.27E-11	0.029	0.004	3.42E-15
rs9989419	A	G	0.028	0.004	2.49E-12	-0.147	0.004	0.00E+00	0.024	0.004	1.05E-11

Reference: Global Lipids Genetics Consortium¹

Supplemental Table II. Association of 185 lipid-associated single nucleotide polymorphisms with ischemic stroke subtypes in the Stroke Genetics Network genome-wide association meta-analysis.

SNP	A1	A2	Ischemic Stroke			Large Artery Atherosclerosis			Small Artery Occlusion			Cardio-embolic		
			beta	se	p	beta	se	p	beta	se	p	beta	se	p
rs10019888	G	A	0.007	0.020	0.735	-0.002	0.044	0.962	0.032	0.038	0.398	-0.003	0.037	0.942
rs10029254	T	C	0.001	0.019	0.972	-0.007	0.040	0.857	-0.015	0.037	0.689	-0.002	0.034	0.950
rs1010167	G	C	0.026	0.016	0.095	0.001	0.034	0.981	-0.026	0.030	0.381	0.024	0.029	0.405
rs10102164	A	G	0.035	0.019	0.069	0.040	0.042	0.343	-0.002	0.037	0.964	0.010	0.036	0.773
rs10282707	C	T	-0.016	0.015	0.294	0.037	0.034	0.268	-0.017	0.030	0.554	-0.033	0.028	0.243
rs103294	T	C	0.023	0.019	0.237	0.010	0.042	0.819	0.026	0.037	0.474	0.036	0.035	0.304
rs1035744	T	C	0.013	0.017	0.417	-0.025	0.037	0.503	0.000	0.032	0.992	0.012	0.031	0.695
rs10401969	T	C	0.013	0.026	0.613	-0.053	0.060	0.376	-0.024	0.050	0.631	0.067	0.052	0.197
rs10493326	A	G	-0.017	0.018	0.348	-0.023	0.038	0.550	-0.056	0.035	0.113	-0.004	0.032	0.899
rs10513688	A	G	0.005	0.024	0.833	0.014	0.053	0.787	-0.008	0.046	0.870	0.091	0.043	0.034
rs10773105	T	C	0.014	0.016	0.372	0.028	0.035	0.423	0.025	0.031	0.409	-0.009	0.029	0.751
rs10790162	A	G	-0.006	0.030	0.836	-0.005	0.066	0.943	0.042	0.056	0.449	0.060	0.054	0.266
rs10832962	T	C	-0.017	0.017	0.323	-0.028	0.037	0.449	-0.008	0.033	0.800	-0.013	0.031	0.673
rs10861661	C	A	0.000	0.017	0.981	0.021	0.039	0.594	0.019	0.033	0.581	0.008	0.033	0.817
rs10903129	G	A	-0.021	0.015	0.160	-0.007	0.033	0.831	-0.019	0.029	0.511	-0.076	0.028	0.006
rs11045163	A	G	0.001	0.015	0.925	0.007	0.034	0.826	-0.005	0.029	0.867	-0.005	0.028	0.854
rs11220462	A	G	-0.038	0.023	0.092	0.050	0.048	0.298	-0.050	0.045	0.264	-0.122	0.043	0.004
rs11246602	C	T	0.040	0.024	0.095	-0.016	0.052	0.762	0.008	0.047	0.861	0.060	0.044	0.172
rs11563251	T	C	0.021	0.023	0.355	0.099	0.050	0.049	-0.035	0.044	0.424	-0.020	0.044	0.645
rs11660468	T	C	0.017	0.016	0.288	0.089	0.033	0.008	0.042	0.030	0.165	-0.036	0.028	0.205
rs1169288	C	A	0.027	0.017	0.103	-0.015	0.036	0.684	0.082	0.032	0.009	0.033	0.030	0.272
rs1186380	C	T	0.011	0.018	0.536	0.019	0.039	0.621	-0.004	0.036	0.922	0.031	0.032	0.335
rs12133576	A	G	-0.028	0.016	0.074	-0.058	0.035	0.094	-0.045	0.030	0.141	-0.009	0.029	0.760
rs12145743	T	G	0.000	0.016	0.994	0.003	0.035	0.925	0.040	0.032	0.213	0.019	0.030	0.529
rs12226802	G	A	0.044	0.024	0.068	-0.008	0.053	0.875	0.031	0.047	0.503	0.050	0.044	0.257
rs1250229	C	T	-0.026	0.018	0.139	-0.020	0.038	0.602	-0.040	0.035	0.257	-0.022	0.032	0.490
rs12525163	T	C	0.008	0.017	0.627	-0.016	0.037	0.666	-0.008	0.032	0.809	-0.013	0.031	0.668
rs1260326	T	C	0.011	0.016	0.484	0.007	0.034	0.826	0.014	0.030	0.647	-0.009	0.028	0.764
rs12670798	C	T	-0.013	0.018	0.458	-0.006	0.039	0.887	-0.002	0.033	0.954	-0.003	0.033	0.934
rs12678919	A	G	-0.014	0.025	0.573	-0.063	0.053	0.233	0.058	0.048	0.227	-0.029	0.045	0.517
rs12801636	A	G	-0.024	0.018	0.182	-0.131	0.040	0.001	-0.003	0.033	0.936	0.010	0.033	0.764
rs13107325	C	T	-0.013	0.030	0.665	-0.016	0.064	0.798	-0.013	0.059	0.819	-0.024	0.053	0.647
rs13326165	G	A	-0.008	0.019	0.657	-0.062	0.041	0.126	-0.007	0.036	0.849	0.007	0.035	0.851
rs1341267	A	C	0.008	0.016	0.639	0.030	0.035	0.381	0.008	0.033	0.806	0.029	0.029	0.321
rs1367117	A	G	-0.007	0.017	0.680	0.022	0.036	0.551	-0.032	0.033	0.330	-0.019	0.031	0.542
rs1482852	A	G	0.008	0.015	0.588	0.021	0.034	0.533	0.022	0.029	0.458	-0.019	0.028	0.513
rs1515110	T	G	0.017	0.016	0.284	0.040	0.034	0.248	0.044	0.030	0.146	0.023	0.029	0.422
rs1532085	A	G	-0.003	0.015	0.852	0.077	0.034	0.021	0.003	0.029	0.919	-0.029	0.028	0.308

rs1535	A	G	0.022	0.016	0.184	0.102	0.036	0.005	-0.019	0.031	0.550	0.011	0.030	0.706
rs1564348	C	T	-0.013	0.021	0.524	0.084	0.044	0.060	-0.019	0.040	0.638	0.004	0.039	0.921
rs16831243	T	C	-0.024	0.024	0.316	-0.031	0.053	0.554	-0.039	0.045	0.382	-0.053	0.044	0.229
rs1688030	C	T	0.027	0.028	0.341	0.000	0.064	0.998	0.071	0.054	0.186	0.006	0.054	0.916
rs1689797	A	C	-0.013	0.016	0.424	0.020	0.035	0.556	-0.004	0.031	0.885	0.010	0.029	0.727
rs16942887	A	G	-0.012	0.022	0.590	0.065	0.047	0.168	-0.003	0.041	0.946	-0.061	0.041	0.138
rs17145738	T	C	-0.043	0.024	0.074	-0.009	0.052	0.866	-0.001	0.047	0.980	-0.017	0.045	0.711
rs17173637	C	T	-0.001	0.026	0.965	-0.029	0.058	0.617	0.007	0.052	0.887	0.017	0.048	0.715
rs17286602	T	A	0.020	0.015	0.192	0.049	0.033	0.140	0.010	0.029	0.748	0.010	0.028	0.722
rs17345563	A	G	-0.006	0.024	0.804	-0.044	0.052	0.401	-0.019	0.048	0.694	-0.060	0.044	0.174
rs174532	A	G	0.006	0.017	0.732	0.041	0.037	0.261	0.013	0.034	0.700	-0.009	0.031	0.763
rs17508045	T	C	0.045	0.029	0.116	0.070	0.062	0.263	0.050	0.057	0.385	0.074	0.053	0.157
rs17695224	G	A	-0.025	0.017	0.146	-0.056	0.037	0.131	-0.012	0.033	0.707	-0.031	0.031	0.326
rs17788930	A	G	-0.008	0.016	0.639	0.022	0.035	0.527	-0.064	0.031	0.039	-0.017	0.030	0.573
rs17789218	T	C	-0.002	0.019	0.928	-0.062	0.041	0.124	0.005	0.037	0.895	-0.051	0.034	0.134
rs1781930	G	A	-0.015	0.021	0.480	0.009	0.045	0.843	0.004	0.041	0.921	-0.029	0.038	0.452
rs1800562	G	A	0.001	0.035	0.971	0.122	0.077	0.111	0.010	0.071	0.885	-0.117	0.061	0.054
rs1800961	C	T	-0.027	0.046	0.553	0.008	0.101	0.936	0.029	0.089	0.747	-0.151	0.082	0.066
rs181362	C	T	-0.025	0.018	0.165	-0.067	0.040	0.098	-0.038	0.034	0.256	-0.034	0.034	0.314
rs1883025	C	T	0.000	0.017	0.992	-0.021	0.037	0.572	-0.048	0.032	0.133	-0.035	0.031	0.268
rs1998013	C	T	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
rs2000999	A	G	0.027	0.019	0.156	-0.017	0.042	0.692	-0.031	0.038	0.412	0.029	0.035	0.404
rs2030746	T	C	0.020	0.015	0.194	0.008	0.033	0.811	0.037	0.029	0.208	0.008	0.028	0.787
rs205262	A	G	-0.020	0.016	0.223	-0.072	0.036	0.048	-0.010	0.032	0.755	-0.018	0.030	0.548
rs2068888	G	A	0.027	0.015	0.076	0.038	0.033	0.250	-0.016	0.029	0.572	0.050	0.028	0.076
rs2073547	G	A	0.014	0.019	0.459	0.069	0.041	0.094	0.083	0.035	0.018	-0.045	0.036	0.207
rs217386	G	A	0.023	0.016	0.137	0.062	0.034	0.071	0.052	0.031	0.089	-0.025	0.028	0.381
rs2240327	G	A	-0.011	0.015	0.463	-0.020	0.033	0.545	-0.018	0.029	0.527	0.018	0.028	0.510
rs2241210	G	A	0.010	0.015	0.492	0.035	0.033	0.288	-0.006	0.029	0.845	0.000	0.028	0.998
rs2247056	C	T	0.011	0.018	0.558	0.032	0.039	0.410	-0.004	0.035	0.917	0.014	0.033	0.666
rs2255141	A	G	0.016	0.017	0.341	0.000	0.037	0.999	0.043	0.033	0.188	0.011	0.031	0.730
rs2278236	A	G	-0.004	0.015	0.768	-0.005	0.033	0.890	-0.012	0.029	0.664	0.033	0.027	0.235
rs2287623	G	A	0.017	0.015	0.253	0.039	0.033	0.246	-0.012	0.029	0.671	0.065	0.028	0.021
rs2288002	G	A	0.021	0.015	0.170	0.053	0.033	0.110	-0.005	0.029	0.865	0.022	0.028	0.432
rs2290547	A	G	0.035	0.021	0.095	0.013	0.045	0.782	0.023	0.041	0.573	0.074	0.038	0.049
rs2293889	T	G	-0.018	0.016	0.241	-0.038	0.034	0.268	-0.033	0.031	0.277	-0.008	0.028	0.792
rs2294261	A	C	-0.005	0.015	0.727	-0.012	0.033	0.712	-0.006	0.030	0.835	-0.021	0.028	0.465
rs2297374	C	T	-0.014	0.015	0.354	0.022	0.034	0.507	-0.023	0.029	0.437	-0.012	0.028	0.671
rs2303975	G	A	0.012	0.023	0.598	-0.006	0.051	0.910	0.058	0.045	0.195	-0.023	0.043	0.595
rs2326077	C	T	0.003	0.016	0.830	-0.103	0.035	0.003	0.003	0.031	0.925	-0.010	0.029	0.738
rs2328223	C	A	0.011	0.019	0.551	0.020	0.042	0.638	0.014	0.037	0.701	0.069	0.035	0.046
rs2412710	G	A	-0.006	0.045	0.889	-0.069	0.102	0.496	-0.037	0.083	0.660	-0.018	0.085	0.836
rs2472509	G	T	0.000	0.016	0.979	-0.012	0.036	0.739	0.014	0.031	0.650	0.030	0.030	0.313

rs2587534	A	G	0.006	0.015	0.699	0.003	0.034	0.930	0.004	0.030	0.891	-0.003	0.028	0.925
rs2602836	G	A	0.006	0.015	0.711	-0.057	0.033	0.085	0.061	0.029	0.037	-0.024	0.028	0.386
rs261342	C	G	0.020	0.018	0.258	0.068	0.040	0.093	0.022	0.034	0.509	-0.015	0.033	0.646
rs2642438	G	A	-0.017	0.017	0.331	-0.032	0.037	0.398	-0.050	0.034	0.139	-0.028	0.031	0.371
rs2652834	A	G	0.013	0.018	0.476	0.062	0.040	0.120	0.009	0.035	0.797	0.026	0.034	0.443
rs267733	A	G	0.005	0.022	0.801	-0.085	0.045	0.060	0.100	0.044	0.022	0.025	0.040	0.522
rs2710642	A	G	0.013	0.016	0.432	-0.011	0.035	0.755	0.006	0.031	0.843	0.068	0.030	0.021
rs2737252	G	A	0.019	0.017	0.260	0.047	0.038	0.213	-0.013	0.033	0.705	0.036	0.032	0.255
rs2923084	G	A	0.019	0.019	0.299	0.075	0.041	0.068	0.011	0.035	0.742	0.026	0.035	0.466
rs2925979	C	T	-0.024	0.016	0.136	-0.056	0.036	0.119	-0.019	0.032	0.548	-0.010	0.030	0.741
rs2954022	C	A	0.003	0.015	0.860	0.015	0.033	0.652	-0.003	0.029	0.909	0.008	0.028	0.765
rs2980885	G	A	-0.003	0.018	0.849	0.017	0.040	0.670	-0.016	0.035	0.655	0.002	0.033	0.960
rs314253	T	C	-0.005	0.016	0.778	0.018	0.035	0.616	0.008	0.031	0.807	-0.050	0.030	0.093
rs3198697	T	C	0.001	0.016	0.930	-0.020	0.034	0.563	0.031	0.031	0.318	0.062	0.029	0.030
rs326214	A	G	-0.014	0.016	0.397	0.010	0.036	0.786	-0.029	0.031	0.347	-0.058	0.030	0.054
rs355838	T	G	0.005	0.016	0.779	0.084	0.034	0.013	0.034	0.031	0.270	-0.010	0.029	0.741
rs364585	G	A	-0.008	0.016	0.625	-0.040	0.034	0.243	0.014	0.031	0.642	-0.015	0.029	0.604
rs3741414	C	T	-0.028	0.019	0.138	-0.040	0.041	0.321	0.004	0.039	0.910	-0.039	0.034	0.255
rs3761445	A	G	0.025	0.016	0.112	0.018	0.034	0.591	0.028	0.031	0.368	-0.025	0.028	0.381
rs3780181	A	G	0.041	0.027	0.138	0.061	0.063	0.340	0.039	0.050	0.440	-0.005	0.053	0.928
rs3817588	T	C	-0.010	0.020	0.642	-0.013	0.044	0.761	-0.032	0.040	0.420	0.005	0.037	0.888
rs3822072	A	G	0.027	0.015	0.070	0.110	0.033	0.001	-0.007	0.029	0.813	0.021	0.028	0.453
rs38855	A	G	-0.007	0.015	0.657	-0.034	0.033	0.301	0.002	0.029	0.960	-0.055	0.028	0.051
rs3996352	A	G	-0.009	0.015	0.551	-0.019	0.033	0.571	0.015	0.029	0.609	-0.007	0.028	0.810
rs4075205	C	T	-0.016	0.015	0.298	-0.058	0.033	0.082	-0.024	0.029	0.408	-0.022	0.028	0.432
rs4148005	G	T	0.006	0.016	0.690	0.002	0.035	0.957	-0.019	0.031	0.542	-0.037	0.030	0.216
rs4148218	G	A	0.014	0.019	0.449	-0.013	0.042	0.759	-0.026	0.035	0.456	0.028	0.035	0.432
rs4240624	A	G	-0.073	0.025	0.003	-0.063	0.057	0.269	-0.069	0.046	0.135	-0.101	0.048	0.035
rs4332136	C	G	0.062	0.075	0.404	0.374	0.218	0.087	-0.072	0.106	0.496	0.347	0.212	0.102
rs442177	T	G	-0.018	0.015	0.233	-0.029	0.033	0.384	-0.073	0.029	0.013	0.060	0.028	0.032
rs4465830	G	A	-0.013	0.020	0.506	-0.022	0.043	0.615	0.029	0.039	0.459	-0.009	0.036	0.811
rs4530754	A	G	-0.020	0.015	0.188	-0.044	0.033	0.190	-0.071	0.029	0.016	-0.007	0.028	0.801
rs4587594	G	A	-0.024	0.016	0.130	-0.072	0.034	0.038	-0.034	0.030	0.255	-0.029	0.029	0.328
rs4650994	A	G	-0.019	0.015	0.204	-0.014	0.033	0.663	-0.006	0.029	0.828	-0.040	0.028	0.150
rs4660293	G	A	0.023	0.019	0.224	-0.009	0.040	0.823	0.039	0.038	0.307	0.054	0.033	0.106
rs4722551	C	T	0.056	0.022	0.009	0.039	0.047	0.402	0.081	0.041	0.050	-0.006	0.040	0.880
rs4791641	C	T	-0.003	0.015	0.860	-0.057	0.033	0.089	-0.025	0.030	0.399	-0.016	0.028	0.564
rs4846914	G	A	-0.018	0.016	0.265	0.045	0.034	0.186	-0.031	0.031	0.318	-0.005	0.029	0.874
rs4871137	G	T	0.002	0.016	0.915	-0.020	0.035	0.568	0.039	0.031	0.202	0.016	0.029	0.597
rs4917014	G	T	-0.040	0.016	0.014	-0.023	0.036	0.519	-0.059	0.032	0.064	-0.057	0.030	0.058
rs4921914	C	T	0.013	0.017	0.470	0.019	0.039	0.631	0.029	0.033	0.376	0.013	0.033	0.701
rs492571	T	C	-0.019	0.031	0.548	0.010	0.074	0.893	-0.065	0.058	0.264	-0.006	0.060	0.923
rs492602	G	A	0.004	0.015	0.787	0.032	0.033	0.330	0.003	0.029	0.916	-0.010	0.028	0.733

rs4939883	C	T	-0.016	0.019	0.392	0.018	0.043	0.676	-0.047	0.037	0.198	-0.022	0.036	0.543
rs4942486	T	C	-0.022	0.015	0.130	-0.061	0.033	0.064	-0.010	0.029	0.738	-0.074	0.028	0.007
rs4969178	G	A	-0.012	0.015	0.442	-0.028	0.034	0.400	-0.001	0.030	0.987	0.011	0.028	0.711
rs4976033	A	G	-0.003	0.016	0.840	-0.026	0.034	0.445	0.021	0.030	0.495	0.025	0.029	0.385
rs4983559	G	A	0.008	0.017	0.639	-0.011	0.037	0.770	0.045	0.031	0.151	-0.036	0.031	0.238
rs499974	A	C	0.041	0.019	0.035	0.082	0.042	0.051	0.120	0.036	0.001	-0.026	0.036	0.478
rs515135	C	T	0.041	0.019	0.031	-0.024	0.042	0.573	0.080	0.038	0.036	0.059	0.036	0.100
rs5763662	T	C	-0.034	0.054	0.528	-0.006	0.116	0.961	0.029	0.112	0.796	0.148	0.092	0.107
rs579459	C	T	0.052	0.018	0.004	0.053	0.039	0.183	0.031	0.036	0.390	0.093	0.033	0.005
rs5880	C	G	0.071	0.037	0.054	0.116	0.080	0.147	0.074	0.070	0.293	0.038	0.069	0.579
rs6016381	T	C	-0.025	0.016	0.108	0.039	0.035	0.270	-0.025	0.031	0.424	-0.070	0.029	0.015
rs603446	C	T	-0.021	0.016	0.186	0.028	0.034	0.407	-0.026	0.030	0.384	-0.032	0.028	0.265
rs6065311	C	T	0.031	0.015	0.040	0.087	0.033	0.008	0.023	0.029	0.435	0.005	0.028	0.847
rs634869	T	C	0.015	0.015	0.311	0.086	0.034	0.010	0.018	0.029	0.548	0.007	0.028	0.812
rs6450176	A	G	0.007	0.017	0.684	0.013	0.037	0.730	0.023	0.032	0.486	-0.018	0.032	0.582
rs646776	T	C	0.025	0.018	0.150	0.070	0.039	0.072	0.022	0.034	0.507	0.016	0.033	0.624
rs6489818	A	G	-0.076	0.019	0.000	-0.070	0.044	0.110	-0.115	0.036	0.002	-0.055	0.036	0.124
rs6511720	G	T	0.044	0.024	0.065	0.094	0.053	0.078	0.007	0.045	0.883	0.045	0.044	0.301
rs653178	T	C	-0.104	0.016	0.000	-0.109	0.034	0.001	-0.159	0.031	0.000	-0.062	0.029	0.030
rs6544713	T	C	0.010	0.017	0.560	0.041	0.037	0.271	-0.010	0.034	0.766	-0.033	0.031	0.294
rs6603981	T	C	-0.006	0.019	0.763	0.007	0.041	0.864	0.014	0.038	0.717	-0.018	0.035	0.606
rs6680658	G	A	-0.009	0.018	0.605	0.027	0.040	0.496	-0.003	0.035	0.944	-0.046	0.033	0.155
rs6805251	T	C	-0.016	0.016	0.326	-0.010	0.035	0.777	0.038	0.033	0.251	-0.051	0.029	0.084
rs6831256	G	A	-0.003	0.015	0.840	0.012	0.033	0.715	0.000	0.029	0.999	-0.024	0.028	0.384
rs6859	A	G	0.005	0.015	0.732	0.060	0.034	0.075	0.021	0.030	0.469	-0.021	0.028	0.452
rs686030	A	C	0.018	0.022	0.417	-0.042	0.046	0.359	0.022	0.043	0.607	0.038	0.040	0.333
rs687339	T	C	-0.020	0.018	0.256	-0.068	0.038	0.077	-0.012	0.034	0.734	-0.009	0.033	0.772
rs688	T	C	0.033	0.016	0.034	0.043	0.034	0.201	0.091	0.030	0.002	0.009	0.028	0.759
rs6882076	C	T	0.001	0.016	0.930	0.041	0.034	0.233	0.019	0.030	0.524	-0.002	0.029	0.950
rs702485	G	A	-0.004	0.015	0.790	0.002	0.033	0.959	0.012	0.030	0.685	0.005	0.028	0.868
rs7033354	C	T	0.014	0.016	0.373	-0.003	0.035	0.929	-0.019	0.030	0.530	0.092	0.029	0.001
rs7117842	C	T	0.016	0.016	0.293	0.027	0.034	0.429	0.026	0.030	0.382	-0.001	0.029	0.978
rs7225700	C	T	0.029	0.016	0.060	0.028	0.034	0.420	0.038	0.030	0.209	0.018	0.029	0.526
rs7254892	G	A	0.067	0.038	0.075	0.102	0.090	0.255	0.050	0.073	0.489	-0.029	0.070	0.684
rs7264396	C	T	-0.017	0.017	0.329	0.035	0.039	0.372	-0.013	0.033	0.688	-0.045	0.032	0.162
rs731839	A	G	-0.027	0.016	0.090	-0.092	0.034	0.007	-0.040	0.030	0.184	-0.028	0.029	0.346
rs7422339	A	C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
rs749671	G	A	0.007	0.016	0.648	0.031	0.035	0.374	-0.032	0.031	0.292	-0.034	0.029	0.246
rs7607980	T	C	-0.020	0.022	0.366	0.017	0.049	0.729	-0.028	0.042	0.499	-0.029	0.040	0.465
rs7640978	C	T	0.018	0.024	0.451	-0.077	0.055	0.159	-0.021	0.045	0.647	0.058	0.047	0.215
rs7703051	A	C	0.016	0.015	0.294	-0.014	0.034	0.686	0.063	0.029	0.031	0.029	0.028	0.307
rs7832643	T	G	0.009	0.015	0.577	0.054	0.034	0.110	-0.023	0.030	0.438	0.018	0.028	0.535
rs7897379	C	T	0.007	0.015	0.657	0.046	0.033	0.162	-0.067	0.029	0.021	0.045	0.027	0.097

rs799160	T	C	0.023	0.015	0.126	0.033	0.033	0.317	0.002	0.029	0.952	0.053	0.028	0.058
rs8017377	A	G	-0.007	0.015	0.635	0.011	0.033	0.731	0.024	0.030	0.421	-0.063	0.028	0.024
rs8077889	C	A	-0.013	0.018	0.488	0.033	0.040	0.402	0.021	0.035	0.544	0.011	0.033	0.733
rs8176720	T	C	0.018	0.016	0.258	-0.019	0.034	0.574	-0.009	0.030	0.752	0.084	0.029	0.004
rs838876	G	A	0.002	0.016	0.881	-0.020	0.035	0.577	0.001	0.031	0.987	0.031	0.030	0.297
rs868943	G	A	0.007	0.015	0.654	-0.030	0.033	0.361	0.007	0.029	0.811	-0.006	0.028	0.836
rs894210	G	A	-0.007	0.016	0.639	-0.010	0.034	0.762	0.000	0.030	0.993	-0.020	0.028	0.473
rs903319	C	T	-0.043	0.018	0.015	-0.005	0.038	0.901	0.003	0.035	0.934	-0.079	0.033	0.017
rs931992	T	G	-0.023	0.016	0.144	-0.030	0.035	0.386	-0.031	0.031	0.317	-0.030	0.029	0.295
rs9491696	G	C	0.015	0.015	0.312	0.061	0.033	0.062	-0.031	0.029	0.278	0.035	0.027	0.203
rs952044	C	T	-0.023	0.016	0.140	-0.032	0.035	0.355	-0.059	0.030	0.049	-0.008	0.029	0.785
rs9686661	T	C	0.030	0.019	0.114	0.013	0.042	0.765	-0.001	0.036	0.986	0.036	0.035	0.309
rs9693857	C	T	0.002	0.015	0.897	-0.003	0.033	0.936	0.033	0.029	0.260	-0.025	0.028	0.371
rs970548	C	A	0.002	0.017	0.904	0.018	0.038	0.633	-0.052	0.034	0.119	0.044	0.032	0.169
rs9875338	G	A	0.001	0.015	0.951	0.007	0.034	0.826	-0.003	0.029	0.910	-0.004	0.028	0.874
rs9930333	T	G	-0.011	0.015	0.464	-0.056	0.033	0.091	0.017	0.029	0.559	-0.007	0.028	0.805
rs998584	A	C	0.014	0.016	0.372	0.011	0.035	0.747	0.074	0.032	0.021	-0.005	0.029	0.874
rs9989419	A	G	0.002	0.016	0.892	0.004	0.035	0.912	0.034	0.031	0.277	0.019	0.029	0.506

Reference: NINDS Stroke Genetics Network²

Supplemental Table III. Odds ratios thresholds of ischemic stroke and subtypes at 80% power.

Instrument	N SNPs	Variance explained	Odds Ratio at 80% Power							
			IS		LAA		SAO		CE	
			positive	negative	positive	negative	positive	negative	positive	negative
LDL cholesterol										
GWAS threshold*	75	6.4	1.109	0.902	1.236	0.809	1.210	0.826	1.203	0.831
Steiger filter 1†	67	5.9	1.114	0.898	1.246	0.803	1.217	0.822	1.210	0.826
Steiger filter 2‡	61	5.6	1.117	0.895	1.253	0.798	1.225	0.816	1.216	0.822
GWAS restricted§	56	3.6	1.148	0.871	1.316	0.760	1.280	0.781	1.270	0.787
HDL cholesterol										
GWAS threshold	85	5.9	1.114	0.898	1.246	0.803	1.217	0.822	1.210	0.826
Steiger filter 1	77	5.0	1.124	0.890	1.268	0.789	1.237	0.808	1.230	0.813
Steiger filter 2	50	4.2	1.136	0.880	1.292	0.774	1.258	0.795	1.250	0.800
GWAS restricted	50	1.9	1.205	0.830	1.440	0.694	1.390	0.719	1.375	0.727
Triglycerides										
GWAS threshold	51	4.6	1.129	0.886	1.279	0.782	1.248	0.801	1.240	0.806
Steiger filter 1	39	4.0	1.139	0.878	1.300	0.769	1.265	0.791	1.255	0.797
Steiger filter 2	21	3.2	1.156	0.865	1.338	0.747	1.298	0.770	1.290	0.775
GWAS restricted	16	1.2	1.262	0.792	1.555	0.643	1.490	0.671	1.475	0.678

* Includes all SNPs that associates with a trait and have a $p < 5 \times 10^{-8}$

† Includes all SNPs with r^2 values with their traits higher than the other 2 traits

‡ Includes all SNPs with r^2 values with their traits higher and the difference is significant ($p < 0.05$) compared to each of the other 2 traits

§ Includes that associates with a trait and have a $p < 5 \times 10^{-8}$ and don't associate with any of the other 2 traits $p > 5 \times 10^{-8}$

GWAS, Genome-Wide Association Study; IS, Ischemic Stroke; SAO, Small Artery Occlusion Stroke; CE, Cardio-Embolic Stroke

Supplemental Table IV. Sensitivity Mendelian Randomization Analyses of LDL cholesterol with Ischemic Stroke and Subtypes

Trait	Instrument	N	Variance	Method	OR	95% CI		p	p-intercept
						lower limit	upper limit		
IS	GWAS threshold*	75	6.4	Conventional MR	1.122	1.015	1.240	0.0245	0.143
				MR-Egger	1.224	1.050	1.427	0.0098	
	GWAS threshold (MRPRESSO)	73	6.4	Conventional MR	1.143	1.056	1.237	0.0009	0.519
				MR-Egger	1.179	1.043	1.333	0.0085	
	Steiger filter 1†	67	5.9	Conventional MR	1.164	1.067	1.269	0.0006	0.466
				MR-Egger	1.207	1.059	1.376	0.0048	
	Steiger filter 1 (MRPRESSO)	66	5.9	Conventional MR	1.173	1.084	1.270	0.0001	0.693
				MR-Egger	1.195	1.060	1.347	0.0036	
	Steiger filter 2‡	61	5.6	Conventional MR	1.158	1.061	1.265	0.0010	0.412
				MR-Egger	1.206	1.058	1.375	0.0050	
	Steiger filter 2 (MRPRESSO)	60	5.6	Conventional MR	1.168	1.079	1.264	0.0001	0.638
				MR-Egger	1.193	1.059	1.343	0.0036	
	GWAS restricted§	56	3.6	Conventional MR	1.186	1.053	1.337	0.0050	0.134
				MR-Egger	1.363	1.098	1.693	0.0051	
	GWAS restricted (MRPRESSO)	55	3.6	Conventional MR	1.204	1.081	1.340	0.0007	0.218
				MR-Egger	1.335	1.097	1.625	0.0039	
LAA	GWAS threshold	75	6.4	Conventional MR	1.277	1.068	1.527	0.0070	0.393
				MR-Egger	1.405	1.060	1.862	0.0180	
	Steiger filter 1	67	5.9	Conventional MR	1.360	1.134	1.631	0.0010	0.544
				MR-Egger	1.452	1.098	1.920	0.009	
	Steiger filter 2	61	5.6	Conventional MR	1.324	1.101	1.591	0.003	0.355
				MR-Egger	1.462	1.105	1.933	0.008	

	GWAS restricted	56	3.6	Conventional MR	1.350	1.067	1.709	0.012	
				MR-Egger	1.558	1.005	2.416	0.047	0.447
SAO	GWAS threshold	75	6.4	Conventional MR	1.090	0.925	1.284	0.303	
				MR-Egger	1.211	0.940	1.559	0.138	0.285
	GWAS threshold(MRPRESSO)	74	6.4	Conventional MR	1.109	0.960	1.281	0.161	
				MR-Egger	1.164	0.930	1.456	0.185	0.581
	Steiger filter 1	67	5.9	Conventional MR	1.136	0.978	1.319	0.096	
				MR-Egger	1.203	0.960	1.506	0.108	0.502
	Steiger filter 2	61	5.6	Conventional MR	1.149	0.987	1.337	0.074	
				MR-Egger	1.194	0.951	1.498	0.126	0.653
	GWAS restricted	56	3.6	Conventional MR	1.216	0.992	1.490	0.060	
				MR-Egger	1.438	0.991	2.087	0.056	0.291
	GWAS restricted (MRPRESSO)	55	3.6	Conventional MR	1.243	1.030	1.502	0.024	
				MR-Egger	1.393	0.985	1.969	0.061	0.443
CE	GWAS threshold	75	6.4	Conventional MR	0.986	0.838	1.161	0.866	
				MR-Egger	1.160	0.904	1.490	0.244	0.095
	Steiger filter1	67	5.9	Conventional MR	1.001	0.842	1.190	0.995	
				MR-Egger	1.122	0.865	1.456	0.384	0.247
	Steiger filter 2	61	5.6	Conventional MR	1.000	0.837	1.195	0.999	
				MR-Egger	1.135	0.871	1.478	0.349	0.208
	GWAS restricted	56	3.6	Conventional MR	1.020	0.802	1.296	0.874	
				MR-Egger	1.437	0.931	2.217	0.101	0.065

* Includes all SNPs that associates with a trait and have a $p < 5 \times 10^{-8}$

† Includes all SNPs with r^2 values with their traits higher than the other 2 traits

‡ Includes all SNPs with r^2 values with their traits higher and the difference is significant ($p < 0.05$) compared to each of the other 2 traits

§ Includes that associates with a trait and have a $p < 5 \times 10^{-8}$ and don't associate with any of the other 2 traits $p > 5 \times 10^{-8}$

GWAS, Genome-Wide Association Study; IS, Ischemic Stroke; SAO, Small Artery Occlusion Stroke; CE, Cardio-Embollic Stroke

Supplemental Table V. Sensitivity Mendelian randomization analyses of HDL cholesterol with ischemic stroke and subtypes.

Trait	Instrument	N	Variance	Method	OR	95% CI		p	p-intercept
						lower limit	upper limit		
IS	GWAS threshold*	85	5.9	Conventional MR	0.915	0.831	1.007	0.0706	
				MR-Egger	1.013	0.869	1.181	0.8672	0.096
	GWAS threshold (MRPRESSO)	84	5.9	Conventional MR	0.930	0.857	1.008	0.0776	
				MR-Egger	0.994	0.874	1.132	0.9334	0.192
	Steiger filter 1†	77	5.0	Conventional MR	0.896	0.807	0.994	0.0388	
				MR-Egger	0.993	0.844	1.169	0.9325	0.110
	Steiger filter 1 (MRPRESSO)	76	4.9	Conventional MR	0.913	0.838	0.995	0.0372	
				MR-Egger	0.976	0.853	1.117	0.7217	0.210
	Steiger filter 2‡	50	4.2	Conventional MR	0.905	0.822	0.998	0.0447	
				MR-Egger	0.954	0.822	1.108	0.5389	0.365
	GWAS restricted§	50	1.9	Conventional MR	0.931	0.812	1.067	0.3053	
				MR-Egger	1.182	0.917	1.522	0.1962	0.031
LAA	GWAS threshold	85	5.9	Conventional MR	0.925	0.745	1.148	0.480	
				MR-Egger	1.240	0.878	1.751	0.221	0.035
	Steiger filter 1	77	5.0	Conventional MR	0.865	0.688	1.089	0.218	
				MR-Egger	1.217	0.850	1.741	0.283	0.017
	Steiger filter 2	50	4.2	Conventional MR	0.967	0.783	1.196	0.760	
				MR-Egger	1.063	0.762	1.482	0.720	0.471
	GWAS restricted	50	1.9	Conventional MR	0.988	0.690	1.413	0.947	
				MR-Egger	2.060	0.991	4.283	0.053	0.026
	GWAS restricted (MRPRESSO)	48	1.9	Conventional MR	1.090	0.799	1.487	0.586	
				MR-Egger	1.830	0.965	3.473	0.064	0.072

SAO	GWAS threshold	85	5.9	Conventional MR	0.788	0.670	0.927	0.004	0.330
				MR-Egger	0.868	0.674	1.119	0.276	
	GWAS threshold (MRPRESSO)	84	5.9	Conventional MR	0.806	0.698	0.931	0.003	0.577
				MR-Egger	0.847	0.675	1.061	0.149	
	Steiger filter 1	77	5.0	Conventional MR	0.803	0.678	0.952	0.011	0.385
				MR-Egger	0.876	0.676	1.136	0.320	
	Steiger filter 1 (MRPRESSO)	76	4.9	Conventional MR	0.824	0.707	0.961	0.014	0.679
				MR-Egger	0.856	0.677	1.082	0.193	
	Steiger filter 2	50	4.2	Conventional MR	0.807	0.685	0.951	0.010	0.422
				MR-Egger	0.869	0.680	1.111	0.263	
	GWAS restricted	50	1.9	Conventional MR	0.824	0.652	1.043	0.107	0.427
				MR-Egger	0.939	0.630	1.400	0.759	
CE	GWAS threshold	85	5.9	Conventional MR	0.901	0.782	1.038	0.150	0.612
				MR-Egger	0.945	0.749	1.194	0.637	
	Steiger filter 1	77	5.0	Conventional MR	0.901	0.772	1.052	0.186	0.766
				MR-Egger	0.875	0.681	1.123	0.294	
	Steiger filter 2	50	4.2	Conventional MR	0.892	0.749	1.062	0.201	0.672
				MR-Egger	0.852	0.645	1.125	0.258	
	GWAS restricted	50	1.9	Conventional MR	0.991	0.772	1.273	0.946	0.332
				MR-Egger	1.267	0.727	2.208	0.403	

* Includes all SNPs that associates with a trait and have a $p < 5 \times 10^{-8}$

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‡ Includes all SNPs with r^2 values with their traits higher and the difference is significant ($p < 0.05$) compared to each of the other 2 traits

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GWAS, Genome-Wide Association Study; IS, Ischemic Stroke; SAO, Small Artery Occlusion Stroke; CE, Cardio-Embolic Stroke

Supplemental Table VI. Sensitivity Mendelian randomization analyses of triglycerides with ischemic stroke and subtypes.

Trait	Instrument	N	Variance	Method	OR	95% CI		p	p-intercept
						lower limit	upper limit		
IS	GWAS threshold*	51	4.6	Conventional MR	0.978	0.887	1.079	0.659	0.921
				MR-Egger	0.972	0.824	1.146	0.733	
	Steiger filter 1†	39	4.0	Conventional MR	1.039	0.940	1.149	0.452	0.253
				MR-Egger	0.967	0.824	1.134	0.676	
	Steiger filter 2‡	21	3.2	Conventional MR	0.995	0.888	1.114	0.926	0.666
				MR-Egger	1.028	0.853	1.238	0.775	
	GWAS restricted§	16	1.2	Conventional MR	1.054	0.875	1.270	0.580	0.792
				MR-Egger	1.016	0.732	1.411	0.923	
LAA	GWAS threshold	51	4.6	Conventional MR	0.991	0.782	1.254	0.938	0.021
				MR-Egger	0.693	0.475	1.011	0.057	
	Steiger filter 1	39	4.0	Conventional MR	0.996	0.800	1.240	0.971	0.094
				MR-Egger	0.789	0.557	1.119	0.184	
	Steiger filter 2	21	3.2	Conventional MR	0.916	0.716	1.172	0.486	0.693
				MR-Egger	0.978	0.651	1.468	0.914	
	GWAS restricted	16	1.2	Conventional MR	1.239	0.826	1.857	0.300	0.420
				MR-Egger	0.974	0.479	1.983	0.943	
SAO	GWAS threshold	51	4.6	Conventional MR	1.024	0.856	1.224	0.794	0.401
				MR-Egger	1.134	0.842	1.526	0.408	
	Steiger filter 1	39	4.0	Conventional MR	1.052	0.869	1.275	0.602	0.525
				MR-Egger	1.137	0.838	1.543	0.411	
	Steiger filter 2	21	3.2	Conventional MR	1.019	0.807	1.288	0.872	0.151
				MR-Egger	1.268	0.871	1.845	0.215	

	GWAS restricted	16	1.2	Conventional MR	0.900	0.627	1.291	0.566	
				MR-Egger	1.194	0.633	2.250	0.585	0.288
CE	GWAS threshold	51	4.6	Conventional MR	1.017	0.857	1.207	0.846	
				MR-Egger	1.128	0.848	1.501	0.408	0.374
	Steiger filter 1	39	4.0	Conventional MR	1.062	0.857	1.315	0.584	
				MR-Egger	1.053	0.746	1.487	0.769	0.953
	Steiger filter 2	21	3.2	Conventional MR	1.032	0.838	1.269	0.769	
				MR-Egger	1.016	0.723	1.428	0.925	0.915
	GWAS restricted	16	1.2	Conventional MR	0.904	0.605	1.350	0.622	
				MR-Egger	1.141	0.558	2.330	0.718	0.438

* Includes all SNPs that associates with a trait and have a $p < 5 \times 10^{-8}$

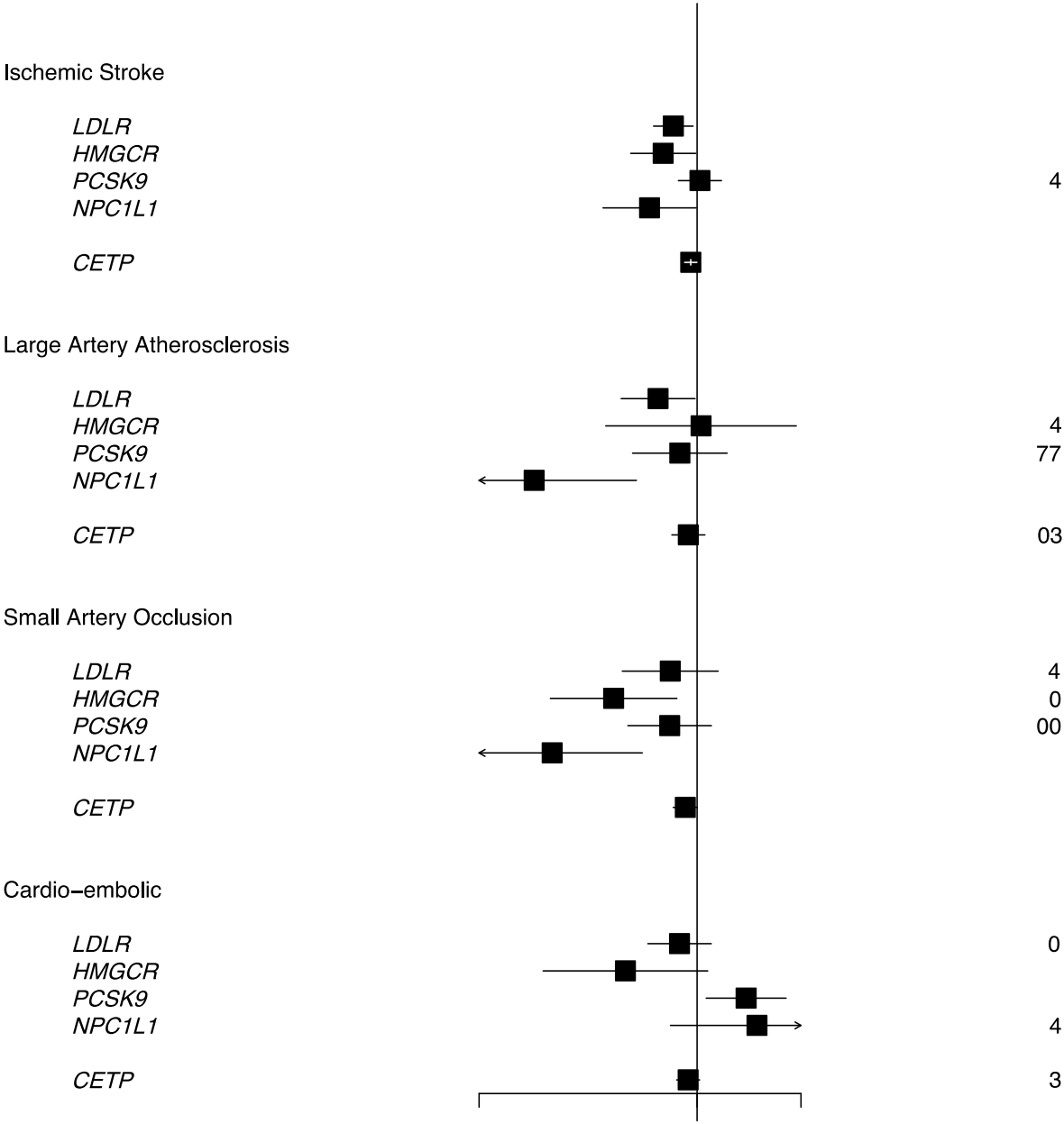
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GWAS, Genome-Wide Association Study; IS, Ischemic Stroke; SAO, Small Artery Occlusion Stroke; CE, Cardio-Embolic Stroke

Supplemental Figure I. Mendelian Randomization analysis using SNPs in genes encoding targets of LDLC lowering or HDLC raising drugs



Association per 1 mmol/L lower LDLC instrumented by variants in the *LDLR*, *HMGCR*, *PCSK9* and *NPC1L1* genes or 1 mmol/L higher HDLC instrumented by variants in the *CETP* gene with ischemic stroke subtypes.

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