

Table 1. Summary Statistics for Non-Hispanic white Individuals used in analysis from COPDGene

Variable	Value
n	6678
Final Gold (%)	
	0 2534 (37.9)
	1 607 (9.1)
	2 1424 (21.3)
	3 909 (13.6)
	4 487 (7.3)
	-1 698 (10.5)
NA	19 (0.3)
Gender	
Male (%)	3180 (47.6)
ATS Pack Years (mean (sd))	47.27 (26.02)
Height CM (mean (sd))	169.72 (9.46)
Age Enroll (mean (sd))	62.09 (8.84)
FEV1 (mean (sd))	2.18 (1.12)
FVC (mean (sd))	3.34 (1.22)
FEV1 FVC ratio (mean (sd))	0.61 (0.54)
FEV1 Percent Predicted (mean (sd))	73.30 (26.29)

Table 2. UK Biobank Baseline Characteristics

Variable	Value
n	185565
age (mean (SD))	56.50 (8.06)
age2 (mean (SD))	3256.89 (892.71)
bmi (mean (SD))	27.12 (4.58)
Average SBP (mean (SD))	137.21 (18.46)
Average DBP (mean (SD))	81.84 (10.05)
Sex = male (%)	85125 (45.9)
hypertension (%)	
	0 30822 (16.6)
	1 25242 (13.6)
	2 50461 (27.2)
	3 75286 (40.6)
	4 3754 (2.0)

Table 3. Results of OrdinalGWAS on UK Biobank data for hypertension variable for pvalue <= 1e-8

chr	pos	snpid	maf	hwepval	effect size (OR)	pval	loci
1	3328659	rs2493292	0.1388011	0.257734702	-0.0535559	1.50E-09	PRDM16
1	3330884	rs2493288	0.136696791	0.119333083	-0.0524299	4.38E-09	PRDM16
1	11834709	rs72638696	0.107304605	0.004191509	0.08347266	3.59E-17	C1orf167
1	11835070	rs113980419	0.108177526	0.600608631	0.08422268	1.19E-17	C1orf167
1	11835556	rs41275456	0.108078744	0.710947962	0.08237138	5.88E-17	C1orf167
1	11854476	rs1801131	0.312986578	0.73322249	0.06461639	9.54E-23	MTHFR
1	11859636	rs74683406	0.056506275	0.871246314	0.10685977	6.24E-16	MTHFR
1	11862778	rs17367504	0.163977132	0.275304838	0.1006982	3.94E-34	MTHFR
1	11863057	rs2066470	0.107444187	0.477940696	0.08401135	1.78E-17	MTHFR
1	11869230	rs4846054	0.403583899	0.763474415	0.04873546	5.76E-15	CLCN6
1	11895667	rs74053327	0.056210768	0.898537694	0.10474914	2.52E-15	CLCN6
1	11899033	rs1023252	0.267754774	0.980067585	0.04612395	2.20E-11	CLCN6
1	11913757	rs198375	0.397594335	0.342071491	0.05889991	4.82E-21	No gene listed
1	11927825	rs34241762	0.108856917	0.980144888	0.06542388	2.72E-11	No gene listed
1	11973523	rs34550591	0.04966722	0.12107713	0.09427968	2.15E-11	No gene listed
2	26932031	rs2586886	0.386963941	0.278137157	-0.037121	3.56E-09	KCNK3
2	26932887	rs1275922	0.251821469	0.529365311	-0.0408771	6.48E-09	KCNK3
2	164915208	rs13002573	0.237836694	4.18E-05	0.04239325	4.43E-09	No gene listed
2	164950456	rs2675149	0.429425263	0.963937064	0.04366255	1.61E-12	No gene listed
2	164999883	rs1374264	0.450608059	0.627890351	0.0500508	3.76E-16	No gene listed
2	165070207	rs1898841	0.273982114	0.271347804	0.05697489	1.02E-16	No gene listed
2	165129299	rs1561468	0.457932198	0.605022238	0.04419799	6.29E-13	No gene listed
4	81158221	rs17004846	0.356381052	0.185873037	-0.0553362	4.00E-18	No gene listed
4	81184341	rs16998073	0.291168659	0.784186985	-0.0773208	1.79E-30	No gene listed
4	81205868	rs7681907	0.41430507	0.766975322	-0.0379548	9.93E-10	FGF5
4	102926923	rs34592089	0.062265913	0.044965611	0.07719143	1.02E-09	BANK1
4	103188709	rs13107325	0.075552799	0.093654571	0.07963385	5.38E-12	SLC39A8
4	156393641	rs4690974	0.469562044	0.644999868	-0.0365988	2.47E-09	No gene listed
5	32688090	rs10755252	0.217489891	0.011287398	0.04541701	9.51E-10	NPR3
5	32690199	rs7715779	0.366150072	0.841520117	0.05606038	1.09E-18	NPR3
5	32789852	rs1173756	0.470696534	0.530800486	0.04889013	1.26E-15	NPR3
5	32815028	rs1173771	0.400677128	0.611805305	0.06280432	7.93E-24	No gene listed
5	32830521	rs1173727	0.403825048	0.338481364	0.0632106	4.10E-24	No gene listed

6	31253878	rs2853935	0.426192712	0.662922017	0.03752123	3.82E-09	No gene listed
6	31254088	rs2853933	0.426035599	0.79962329	0.03665377	8.65E-09	No gene listed
6	31259579	rs2524163	0.426594591	0.86832754	0.03726089	4.96E-09	No gene listed
6	31260397	rs2524156	0.425475535	0.153947073	0.03790826	3.18E-09	No gene listed
6	31261276	rs2243868	0.425790097	0.596913113	0.03672202	8.72E-09	LINC02571
6	31266117	rs2524095	0.432209762	8.34E-39	0.03838402	1.01E-09	LINC02571
6	31266522	rs2524089	0.425181368	0.863895992	0.03770915	3.43E-09	LINC02571
6	31269154	rs2524066	0.426357008	0.60847137	0.03823433	1.95E-09	LINC02571
6	31430799	rs2596473	0.471069987	0.559576552	-0.0382034	8.45E-10	HCP5
6	31432125	rs2284178	0.470935947	0.911559691	-0.0381165	9.07E-10	HCP5
6	31605199	rs2736155	0.473989457	0.000213252	-0.0360603	6.06E-09	PRRC2A
6	31610529	rs1077393	0.47597034	0.978964004	-0.0361842	4.35E-09	BAG6
6	31610686	rs1052486	0.47651212	0.109356676	-0.0373984	1.46E-09	BAG6
6	31688518	rs805293	0.45277075	0.971841306	-0.0433015	2.61E-12	MPIG6B
6	31837250	rs660594	0.473319737	0.898542353	0.03772237	1.18E-09	SLC44A4
6	31837277	rs660550	0.473724371	0.852421162	0.0380239	8.44E-10	SLC44A4
6	31837963	rs577272	0.473917599	0.550488658	0.03764648	1.24E-09	SLC44A4
6	31838441	rs644827	0.473914263	0.815339091	0.03769961	1.17E-09	SLC44A4
6	31838490	rs644774	0.474158952	0.879887991	0.0379615	9.04E-10	SLC44A4
6	31839309	rs2242665	0.474433474	0.945389219	0.03797536	8.98E-10	SLC44A4
6	31839494	rs3132442	0.491356379	0.598875858	0.03935719	2.04E-10	SLC44A4
6	31839782	rs3130482	0.492118655	0.578597351	0.03993774	1.10E-10	SLC44A4
6	127108920	rs2021708	0.433261185	0.183908062	-0.0481141	7.30E-15	No gene listed
6	127116727	rs35211576	0.491028828	0.229270646	-0.036589	2.50E-09	No gene listed
6	127141068	rs35772466	0.490277755	0.746569264	-0.0354798	6.89E-09	No gene listed
6	127147704	rs9375459	0.43268461	0.215450123	-0.0483083	6.16E-15	No gene listed
6	127177719	rs11754682	0.433624303	0.196035793	-0.04883	2.98E-15	No gene listed
6	127181089	rs1361831	0.433220352	0.469099373	-0.0483717	5.00E-15	No gene listed
6	127227414	rs2068408	0.382348319	0.381515938	-0.041335	5.90E-11	LOC105377989
7	27220831	rs6461992	0.073784122	0.555620596	0.06762078	6.89E-09	HOXA10
7	106409452	rs17398575	0.239666568	0.866094626	-0.0554819	9.52E-15	No gene listed
7	106414069	rs2392929	0.197207316	0.526884612	-0.0652155	2.09E-17	No gene listed
10	18711195	rs11014171	0.335224941	0.033896959	0.05613511	5.41E-18	CACNB2
10	18725053	rs6482423	0.337082052	0.007943536	0.05832436	2.58E-19	CACNB2
10	18727959	rs12258967	0.299335758	0.154624029	0.06391272	1.26E-21	CACNB2

10	63467553	rs4590817	0.172142583	0.75744419	0.05329626	4.61E-11	CABCOCO1
10	63524591	rs1530440	0.188884932	0.165006143	0.05447183	3.10E-12	CABCOCO1
10	96039597	rs2274224	0.433131602	0.340175948	0.04650402	4.59E-14	PLCE1
10	104591393	rs17115100	0.083450241	0.306931707	0.08954171	5.45E-16	CYP17A1
10	104594507	rs1004467	0.084522917	0.215475681	0.08905793	4.21E-16	CYP17A1
10	104719096	rs12413409	0.076911465	0.024483095	0.09777913	1.09E-17	CNNM2
10	104846178	rs11191548	0.07536728	0.002706961	0.10451634	1.14E-19	CNNM2
10	104897901	rs732998	0.076324493	0.129377247	0.10547556	3.82E-20	NT5C2
10	104906211	rs11191580	0.077281323	0.025414519	0.10523462	2.69E-20	NT5C2
11	10259378	rs4910109	0.49293838	0.699689073	-0.0367044	2.08E-09	SBF2
11	10268593	rs56352102	0.18276811	0.260377108	-0.0550159	3.32E-12	SBF2
11	10350538	rs7129220	0.116204806	0.418629672	-0.0548072	8.80E-09	CAND1.11
11	10357572	rs2923089	0.47215034	0.838782378	-0.0418692	8.71E-12	CAND1.11
11	10370420	rs1580004	0.487333427	0.902321278	0.03915954	1.66E-10	CAND1.11
11	47276675	rs11039149	0.27543907	0.371686036	-0.0468791	8.07E-12	NR1H3
11	47293799	rs10501320	0.263079953	0.746673274	-0.0458689	4.16E-11	MADD
11	47346723	rs11039182	0.275279596	0.441264741	-0.0467261	9.44E-12	MADD
11	47440758	rs2293579	0.387322424	0.859441604	-0.0453465	5.05E-13	PSMC3
11	47474146	rs12361415	0.2870175	0.336058015	-0.0412052	1.16E-09	No gene listed
11	47500267	rs2242081	0.445944706	0.948742127	-0.03939	1.58E-10	CELF1
11	47662932	rs7120548	0.300546522	0.581700506	-0.0448821	1.73E-11	MTCH2
11	47701528	rs12286721	0.449115619	0.06616798	-0.0381094	6.66E-10	AGBL2
11	47857253	rs3816605	0.453724404	0.377859376	-0.037463	1.14E-09	NUP160
11	47901269	rs1872167	0.140817912	0.57246681	0.05387594	8.51E-10	No gene listed
11	48115089	rs3942852	0.211680919	0.387447926	0.04496659	1.85E-09	PTPRJ
11	48285906	rs16905753	0.143761697	0.571804517	0.05041853	7.23E-09	OR4X1
11	48382471	rs1351696	0.143649822	0.497962995	0.05032647	7.90E-09	No gene listed
11	49258171	rs663877	0.145153184	0.045667931	0.0503544	6.83E-09	No gene listed
11	49267146	rs7924431	0.145234068	0.035457927	0.05045032	6.79E-09	No gene listed
11	88741660	rs5016282	0.146599708	0.067616101	0.05169951	2.61E-09	GRM5
11	100499866	rs7932851	0.458277705	0.288657156	-0.0354299	8.11E-09	No gene listed
11	100533021	rs10895001	0.280158015	0.097527543	0.06575096	4.76E-22	No gene listed
11	100559527	rs77802037	0.035423374	0.140056873	0.11076346	2.03E-11	ARHGAP42
11	100692566	rs35473622	0.249676006	0.410532749	0.05736285	5.60E-16	ARHGAP42
12	90008959	rs2681472	0.170884028	0.009319801	0.06369288	5.03E-15	ATP2B1

12	90013089	rs2681492	0.170794817	0.000617332	0.06472751	1.96E-15	ATP2B1
12	90060586	rs17249754	0.170673064	0.001892279	0.06306934	1.02E-14	ATP2B1
12	90081188	rs7136259	0.417892726	0.212307485	0.03928554	2.36E-10	ATP2B1
12	111792427	rs10849937	0.203266714	0.75551282	0.05191228	7.49E-12	No gene listed
12	111833348	rs10774622	0.212975703	0.307507964	0.0492524	3.85E-11	LINC02356
12	111884608	rs3184504	0.480660584	0.363939174	-0.044282	4.95E-13	SH2B3
12	111910219	rs10774625	0.494067444	0.203636918	-0.0449492	2.21E-13	ATXN2
12	112007756	rs653178	0.480832938	0.335096741	-0.0432376	1.71E-12	ATXN2
14	23409909	rs35085068	0.428217755	0.151779839	-0.036399	3.99E-09	LOC101926933
15	74716609	rs8036030	0.377657852	0.315766528	-0.041086	7.66E-11	SEMA7A
15	75033400	rs2472299	0.270065649	0.151606118	-0.0522844	3.54E-14	No gene listed
15	75041917	rs762551	0.270185783	0.095203004	-0.0527077	2.24E-14	CYP1A2
15	75044238	rs2472304	0.328362355	0.189518114	-0.0439261	1.65E-11	CYP1A2
15	75047426	rs2470890	0.328383684	0.172934159	-0.0444173	9.72E-12	CYP1A2
15	75069282	rs936226	0.257517047	0.082544433	-0.0544424	9.31E-15	No gene listed
15	75077367	rs1378942	0.318229383	0.188888425	-0.0451228	6.63E-12	CSK
15	75101530	rs34862454	0.326067681	0.010883177	-0.0433474	3.64E-11	No gene listed
15	75131661	rs4886615	0.271892111	0.260505562	-0.0494105	6.92E-13	ULK3
15	75136261	rs6938	0.296117427	0.006583163	-0.0458946	9.68E-12	SCAMP2
15	75194490	rs6495127	0.284755953	0.461365907	-0.0419321	6.21E-10	FAM219B
15	91404705	rs4932370	0.336191438	0.560249818	-0.049114	3.39E-14	No gene listed
15	91426560	rs4702	0.443534204	0.525283772	0.04028794	5.52E-11	FES
15	91428521	rs11330240	0.327030298	0.737000172	-0.056264	7.26E-18	FES
15	91429176	rs7497304	0.325763994	0.549389534	-0.0572501	1.74E-18	FES
15	91441673	rs2677738	0.352598639	0.000976581	0.05067651	3.17E-15	No gene listed
16	75313485	rs4888372	0.410807383	0.495330339	0.03632925	5.16E-09	LOC105371345
16	75388731	rs8050059	0.404542532	0.204580477	0.03615101	6.97E-09	CFDP1
17	43131480	rs4793172	0.370529324	0.492327736	-0.0496783	4.69E-15	DCAKD
17	43136303	rs55897749	0.370970963	0.529653667	-0.0488207	1.31E-14	DCAKD
17	43141634	rs6503415	0.449655262	0.178786587	-0.0434051	1.85E-12	NMT1
17	43165185	rs2239916	0.416180577	0.049798073	-0.0503859	6.16E-16	NMT1
17	43183108	rs1053739	0.347046089	0.066199423	-0.0543273	3.38E-17	NMT1
17	43195981	rs3744760	0.267629995	0.394079019	-0.0609742	1.30E-18	PLCD3
17	43208121	rs12946454	0.268051966	0.676994002	-0.0519641	5.74E-14	ACBD4
17	43216281	rs4986172	0.338903231	0.325170223	-0.0434869	1.81E-11	ACBD4

17	43226887	rs12051846	0.253132575	0.564509061	-0.0483902	6.45E-12	HEXIM1
17	43227214	rs1044977	0.253416186	0.757271482	-0.0475819	1.41E-11	HEXIM1
17	46666483	rs117470167	0.04120212	0.334208144	0.09233599	1.60E-09	HOXB3
19	7252756	rs4247374	0.142088459	0.759310819	0.06242757	9.88E-13	INSR
19	7253184	rs34328549	0.122118871	0.269521271	0.07281571	4.79E-15	INSR
19	11526765	rs167479	0.472352928	0.470953034	0.04913276	8.35E-16	RGL3
20	10969030	rs1327235	0.476736403	0.266674151	-0.0426419	3.45E-12	No gene listed
20	57698020	rs1465537	0.129338604	0.015234315	-0.0581386	2.13E-10	No gene listed
20	57702611	rs236720	0.120903376	0.02339369	-0.0646425	6.48E-12	No gene listed
20	57758720	rs16982520	0.120375067	0.021209887	-0.0736275	5.99E-15	ZNF831

Table 4. Results of Sex*Snps OrdinalGWAS on UK Biobank data for hypertension variable for SNPs that had pvalue <= 1e-8 in original GWAS.

chr	pos	snpid	maf	hwepval	snpeffectnull	snpeffectfull	GxEeffect	pval	loci
1	3328659	rs2493292	0.1388011	0.257734702	-0.053555931	-0.052934951	-0.001315046	0.905686897	PRDM16
1	3330884	rs2493288	0.136696791	0.119333083	-0.052429877	-0.04995382	-0.005456952	0.757022228	PRDM16
1	11834709	rs72638696	0.107304605	0.004191509	0.083472662	0.095714068	-0.02713332	0.17133243	C1orf167
1	11835070	rs113980419	0.108177526	0.600608631	0.084222682	0.094294039	-0.022405086	0.257369253	C1orf167
1	11835556	rs41275456	0.108078744	0.710947962	0.082371385	0.093114371	-0.02378139	0.22534915	C1orf167
1	11854476	rs1801131	0.312986578	0.73322249	0.064616389	0.067609285	-0.006519977	0.645738518	MTHFR
1	11859636	rs74683406	0.056506275	0.871246314	0.106859774	0.106956262	4.72E-05	1	MTHFR
1	11862778	rs17367504	0.163977132	0.275304838	0.100698199	0.108869863	-0.018055714	0.27780763	MTHFR
1	11863057	rs2066470	0.107444187	0.477940696	0.084011354	0.0956832	-0.025872266	0.191314623	MTHFR
1	11869230	rs4846054	0.403583899	0.763474415	0.048735456	0.048424076	0.000281895	1	CLCN6
1	11895667	rs74053327	0.056210768	0.898537694	0.104749137	0.108874176	-0.008885777	0.733283531	CLCN6
1	11899033	rs1023252	0.267754774	0.980067585	0.046123954	0.05075529	-0.010121065	0.464112166	CLCN6
1	11913757	rs198375	0.397594335	0.342071491	0.058899911	0.062671292	-0.008328608	0.512946274	No gene listed
1	11927825	rs34241762	0.108856917	0.980144888	0.065423876	0.07812984	-0.027925168	0.156185196	No gene listed
1	11973523	rs34550591	0.04966722	0.12107713	0.094279682	0.098520915	-0.009358058	0.73957201	No gene listed
2	26932031	rs2586886	0.386963941	0.278137157	-0.037120977	-0.042120765	0.011174331	0.375241447	KCNK3
2	26932887	rs1275922	0.251821469	0.529365311	-0.040877107	-0.047740624	0.014815888	0.304142353	KCNK3
2	164915208	rs13002573	0.237836694	4.18E-05	0.042393254	0.042997887	-0.001414912	1	No gene listed
2	164950456	rs2675149	0.429425263	0.963937064	0.043662549	0.05437284	-0.023573752	0.056970528	No gene listed
2	164999883	rs1374264	0.450608059	0.627890351	0.050050802	0.060968284	-0.023954812	0.052262393	No gene listed
2	165070207	rs1898841	0.273982114	0.271347804	0.056974894	0.063794899	-0.015092206	0.272906464	No gene listed
2	165129299	rs1561468	0.457932198	0.605022238	0.044197993	0.053560109	-0.020468551	0.096277132	No gene listed
4	81158221	rs17004846	0.356381052	0.185873037	-0.055336229	-0.069641948	0.031551115	0.013793189	No gene listed
4	81184341	rs16998073	0.291168659	0.784186985	-0.077320785	-0.089021125	0.025980096	0.053729727	No gene listed
4	81205868	rs7681907	0.41430507	0.766975322	-0.037954779	-0.048873586	0.024034744	0.054138134	FGF5
4	102926923	rs34592089	0.062265913	0.044965611	0.077191428	0.073192909	0.00873427	0.726244032	BANK1
4	103188709	rs13107325	0.075552799	0.093654571	0.079633845	0.086350906	-0.014711064	0.560000547	SLC39A8
4	156393641	rs4690974	0.469562044	0.644999868	-0.036598815	-0.039935574	0.007545391	0.548310494	No gene listed
5	32688090	rs10755252	0.217489891	0.011287398	0.045417005	0.060663064	-0.033559304	0.024800901	NPR3
5	32690199	rs7715779	0.366150072	0.841520117	0.056060376	0.064329841	-0.01824248	0.155687768	NPR3
5	32789852	rs1173756	0.470696534	0.530800486	0.048890129	0.055131254	-0.013677893	0.260074757	NPR3
5	32815028	rs1173771	0.400677128	0.611805305	0.062804319	0.066257238	-0.007905949	0.554509271	No gene listed
5	32830521	rs1173727	0.403825048	0.338481364	0.063210602	0.067020663	-0.008654623	0.492284835	No gene listed
6	31253878	rs2853935	0.426192712	0.662922017	0.037521226	0.053320645	-0.034805646	0.005099484	No gene listed
6	31254088	rs2853933	0.426035599	0.79962329	0.036653773	0.052494022	-0.034948567	0.004984711	No gene listed
6	31259579	rs2524163	0.426594591	0.86832754	0.037260891	0.052757389	-0.034336634	0.005934974	No gene listed
6	31260397	rs2524156	0.425475535	0.153947073	0.037908256	0.053065974	-0.033562277	0.007134382	No gene listed
6	31261276	rs2243868	0.425790097	0.596913113	0.036722024	0.05222975	-0.034244167	0.005868477	LINC02571
6	31266117	rs2524095	0.432209762	8.34E-39	0.038384017	0.053713652	-0.034124539	0.005258649	LINC02571
6	31266522	rs2524089	0.425181368	0.863895992	0.037709154	0.05350303	-0.034962295	0.004846167	LINC02571
6	31269154	rs2524066	0.426357008	0.60847137	0.038234326	0.053750468	-0.034199666	0.005927251	LINC02571
6	31430799	rs2596473	0.471069987	0.559576552	-0.038203438	-0.048518613	0.022541315	0.067337943	HCP5
6	31432125	rs2284178	0.470935947	0.911559691	-0.03811652	-0.047694459	0.020995133	0.092627441	HCP5
6	31605199	rs2736155	0.473989457	0.000213252	-0.036060268	-0.036928825	0.002026111	0.874799601	PRRC2A
6	31610529	rs1077393	0.47597034	0.978964004	-0.036184206	-0.036545177	0.000828671	1	BAG6
6	31610686	rs1052486	0.47651212	0.109356676	-0.03739841	-0.03923546	0.004186015	0.741726198	BAG6
6	31688518	rs805293	0.45277075	0.971841306	-0.043301535	-0.048480993	0.01142491	0.373695966	MPIG6B
6	31837250	rs660594	0.473319737	0.898542353	0.037722369	0.043583964	-0.012925227	0.286188481	SLC44A4

6	31837277	rs660550	0.473724371	0.852421162	0.038023898	0.044168205	-0.013584995	0.263198849	SLC44A4
6	31837963	rs577272	0.473917599	0.550488658	0.037646482	0.0439409	-0.013848869	0.25387519	SLC44A4
6	31838441	rs644827	0.473914263	0.815339091	0.037699607	0.044056281	-0.013984858	0.249201409	SLC44A4
6	31838490	rs644774	0.474158952	0.879887991	0.037961495	0.043948253	-0.013241934	0.275254312	SLC44A4
6	31839309	rs2242665	0.474433474	0.945389219	0.037975364	0.044192803	-0.013673385	0.259825538	SLC44A4
6	31839494	rs3132442	0.491356379	0.598875858	0.039357188	0.045318067	-0.013095227	0.282934129	SLC44A4
6	31839782	rs3130482	0.492118655	0.578597351	0.039937742	0.046008331	-0.013362597	0.273782409	SLC44A4
6	127108920	rs2021708	0.433261185	0.183908062	-0.048114067	-0.061033701	0.028446028	0.021923853	No gene listed
6	127116727	rs35211576	0.491028828	0.229270646	-0.036589007	-0.047417387	0.023889409	0.052839964	No gene listed
6	127141068	rs35772466	0.490277755	0.746569264	-0.035479827	-0.045954563	0.023020872	0.061375007	No gene listed
6	127147704	rs9375459	0.43268461	0.215450123	-0.048308283	-0.060449001	0.026724434	0.031162515	No gene listed
6	127177719	rs11754682	0.433624303	0.196035793	-0.048830048	-0.061862993	0.028728607	0.020425829	No gene listed
6	127181089	rs1361831	0.433220352	0.469099373	-0.04837169	-0.061433899	0.028704454	0.020004273	No gene listed
6	127227414	rs2068408	0.382348319	0.381515938	-0.041334988	-0.051421809	0.022280122	0.079141425	LOC105377989
7	27220831	rs6461992	0.073784122	0.555620596	0.067620783	0.079909877	-0.027210983	0.256976848	HOXA10
7	106409452	rs17398575	0.239666568	0.866094626	-0.055481866	-0.061048668	0.01227703	0.392563755	No gene listed
7	106414069	rs2392929	0.197207316	0.526884612	-0.065215483	-0.075428699	0.022458558	0.145227699	No gene listed
10	18711195	rs11014171	0.335224941	0.033896959	0.056135111	0.053069841	0.006821782	0.614800207	CACNB2
10	18725053	rs6482423	0.337082052	0.007943536	0.058324357	0.052645805	0.012776915	0.334085467	CACNB2
10	18727959	rs12258967	0.299335758	0.154624029	0.063912719	0.056510536	0.016396913	0.231911092	CACNB2
10	63467553	rs4590817	0.172142583	0.75744419	0.053296255	0.06755773	-0.031331052	0.052509885	CABCOC01
10	63524591	rs1530440	0.188884932	0.165006143	0.054471827	0.061331283	-0.015145782	0.335953849	CABCOC01
10	96039597	rs2274224	0.433131602	0.340175948	0.046504018	0.043806107	0.006140856	0.580979791	PLCE1
10	104591393	rs17115100	0.083450241	0.306931707	0.089541712	0.122168703	-0.071085231	0.001334988	CYP17A1
10	104594507	rs1004467	0.084522917	0.215475681	0.089057931	0.121652257	-0.070844131	0.001247915	CYP17A1
10	104719096	rs12413409	0.076911465	0.024483095	0.097779132	0.133404517	-0.078028029	0.000655432	CNNM2
10	104846178	rs11191548	0.07536728	0.002706961	0.104516336	0.139918178	-0.077439543	0.000769287	CNNM2
10	104897901	rs732998	0.076324493	0.129377247	0.105475555	0.142382331	-0.080757412	0.000441177	NT5C2
10	104906211	rs11191580	0.077281323	0.025414519	0.105234619	0.141801297	-0.080100183	0.000466921	NT5C2
11	10259378	rs4910109	0.49293838	0.699689073	-0.036704359	-0.032285741	-0.00965664	0.433904893	SBF2
11	10268593	rs56352102	0.18276811	0.260377108	-0.055015864	-0.056653627	0.003574962	0.823398638	SBF2
11	10350538	rs7129220	0.116204806	0.418629672	-0.054807222	-0.05243735	-0.005190457	0.752839494	CAND1.11
11	10357572	rs2923089	0.47215034	0.838782378	-0.041869206	-0.040982886	-0.00190417	0.96028543	CAND1.11
11	10370420	rs1580004	0.487333427	0.902321278	0.039159541	0.037099109	0.004582513	0.720088307	CAND1.11
11	47276675	rs11039149	0.27543907	0.371686036	-0.046879075	-0.060470938	0.030004746	0.029189541	NR1H3
11	47293799	rs10501320	0.263079953	0.746673274	-0.045868866	-0.06162082	0.034604428	0.01280941	MADD
11	47346723	rs11039182	0.275279596	0.441264741	-0.046726128	-0.061046806	0.032106715	0.020013807	MADD
11	47440758	rs2293579	0.387322424	0.859441604	-0.045346525	-0.052567773	0.015883316	0.216921641	PSMC3
11	47474146	rs12361415	0.2870175	0.336058015	-0.041205193	-0.047124303	0.01295581	0.338674704	No gene listed
11	47500267	rs2242081	0.445944706	0.948742127	-0.039390022	-0.04222089	0.006249153	0.609671993	CELF1
11	47662932	rs7120548	0.300546522	0.581700506	-0.044882137	-0.054719082	0.021625299	0.10609868	MTCH2
11	47701528	rs12286721	0.449115619	0.06616798	-0.038109433	-0.040056496	0.004305539	0.731399101	AGBL2
11	47857253	rs3816605	0.453724404	0.377859376	-0.037463047	-0.039687644	0.004879985	0.713015678	NUP160
11	47901269	rs1872167	0.140817912	0.57246681	0.053875938	0.06038592	-0.014418396	0.414621348	No gene listed
11	48115089	rs3942852	0.211680919	0.387447926	0.044966585	0.052667758	-0.017078836	0.255757853	PTPRJ
11	48285906	rs16905753	0.143761697	0.571804517	0.050418526	0.056129932	-0.012565222	0.46869684	OR4X1
11	48382471	rs1351696	0.143649822	0.497962995	0.050326474	0.05555666	-0.011490793	0.500112451	No gene listed
11	49258171	rs663877	0.145153184	0.045667931	0.050354403	0.054291478	-0.00846372	0.622018785	No gene listed
11	49267146	rs7924431	0.145234068	0.035457927	0.050450325	0.056456463	-0.013237006	0.435078767	No gene listed
11	88741660	rs5016282	0.146599708	0.067616101	0.051699508	0.057008022	-0.011718705	0.472604283	GRM5

11	100499866	rs7932851	0.458277705	0.288657156	-0.035429869	-0.038589346	0.006997792	0.575518971	No gene listed
11	100533021	rs10895001	0.280158015	0.097527543	0.065750963	0.070712879	-0.011116959	0.439408847	No gene listed
11	100559527	rs77802037	0.035423374	0.140056873	0.110763464	0.145232259	-0.075573773	0.023424576	ARHGAP42
11	100692566	rs35473622	0.249676006	0.410532749	0.057362852	0.061769377	-0.009715035	0.494398486	ARHGAP42
12	90008959	rs2681472	0.170884028	0.009319801	0.063692877	0.075524603	-0.025985041	0.111770893	ATP2B1
12	90013089	rs2681492	0.170794817	0.000617332	0.06472751	0.077202521	-0.027328199	0.094486236	ATP2B1
12	90060586	rs17249754	0.170673064	0.001892279	0.063069336	0.075499334	-0.027257357	0.09567721	ATP2B1
12	90081188	rs7136259	0.417892726	0.212307485	0.039285538	0.056947407	-0.038604507	0.001943759	ATP2B1
12	111792427	rs10849937	0.203266714	0.75551282	0.051912277	0.061906059	-0.022215203	0.14580756	No gene listed
12	111833348	rs10774622	0.212975703	0.307507964	0.049252405	0.050264296	-0.002263439	0.906429516	LINC02356
12	111884608	rs3184504	0.480660584	0.363939174	-0.044282026	-0.058210411	0.03078648	0.012362229	SH2B3
12	111910219	rs10774625	0.494067444	0.203636918	-0.044949189	-0.058355383	0.02960162	0.016128114	ATXN2
12	112007756	rs653178	0.480832938	0.335096741	-0.043237556	-0.057267912	0.03102536	0.011696114	ATXN2
14	23409909	rs35085068	0.428217755	0.151779839	-0.036398976	-0.02499227	-0.02548188	0.042453988	LOC101926933
15	74716609	rs8036030	0.377657852	0.315766528	-0.041085993	-0.045072935	0.00888955	0.529992412	SEMA7A
15	75033400	rs2472299	0.270065649	0.151606118	-0.052284417	-0.063952444	0.025798217	0.06230996	No gene listed
15	75041917	rs762551	0.270185783	0.095203004	-0.052707652	-0.064235779	0.025446169	0.065829361	CYP1A2
15	75044238	rs2472304	0.328362355	0.189518114	-0.04392608	-0.054631558	0.023574241	0.071310126	CYP1A2
15	75047426	rs2470890	0.328383684	0.172934159	-0.044417254	-0.055669893	0.0248407	0.057870174	CYP1A2
15	75069282	rs936226	0.257517047	0.082544433	-0.05442378	-0.066704713	0.026961141	0.053710736	No gene listed
15	75077367	rs1378942	0.318229383	0.188888425	-0.045122804	-0.05496803	0.021688661	0.10011643	CSK
15	75101530	rs34862454	0.326067681	0.010883177	-0.04334736	-0.053434236	0.022222809	0.091163336	No gene listed
15	75131661	rs4886615	0.271892111	0.260505562	-0.049410523	-0.061949457	0.027622606	0.045524462	ULK3
15	75136261	rs6938	0.296117427	0.006583163	-0.045894637	-0.057465342	0.025482906	0.05865969	SCAMP2
15	75194490	rs6495127	0.284755953	0.461365907	-0.041932101	-0.051170447	0.0202535	0.136981899	FAM219B
15	91404705	rs4932370	0.336191438	0.560249818	-0.049113968	-0.050271487	0.00272019	0.870034858	No gene listed
15	91426560	rs4702	0.443534204	0.525283772	0.040287944	0.043231974	-0.006358811	0.583727148	FES
15	91428521	rs11330240	0.327030298	0.737000172	-0.056264033	-0.061267655	0.011086567	0.385277459	FES
15	91429176	rs7497304	0.325763994	0.549389534	-0.057250091	-0.06333245	0.013323907	0.32278663	FES
15	91441673	rs2677738	0.352598639	0.000976581	0.050676512	0.051132705	-0.000986981	0.907792248	No gene listed
16	75313485	rs4888372	0.410807383	0.495330339	0.03632925	0.037101017	-0.001737951	0.911276135	LOC105371345
16	75388731	rs8050059	0.404542532	0.204580477	0.036151007	0.038516608	-0.005087854	0.691716479	CFDP1
17	43131480	rs4793172	0.370529324	0.492327736	-0.049678283	-0.050535908	0.001936147	0.879104107	DCAKD
17	43136303	rs55897749	0.370970963	0.529653667	-0.048820686	-0.049413278	0.001335532	0.919952747	DCAKD
17	43141634	rs6503415	0.449655262	0.178786587	-0.043405051	-0.040590219	-0.006141362	0.619062115	NMT1
17	43165185	rs2239916	0.416180577	0.049798073	-0.050385896	-0.049695643	-0.001805233	0.955270632	NMT1
17	43183108	rs1053739	0.347046089	0.066199423	-0.054327277	-0.054613956	0.000643655	0.966582331	NMT1
17	43195981	rs3744760	0.267629995	0.394079019	-0.060974203	-0.063036348	0.004760947	0.714952664	PLCD3
17	43208121	rs12946454	0.268051966	0.676994002	-0.051964067	-0.052029852	0.000122154	0.991671179	ACBD4
17	43216281	rs4986172	0.338903231	0.325170223	-0.043486897	-0.043164541	-0.000534643	1	ACBD4
17	43226887	rs12051846	0.253132575	0.564509061	-0.048390214	-0.049124204	0.001657487	0.910065066	HEXIM1
17	43227214	rs1044977	0.253416186	0.757271482	-0.047581866	-0.048390113	0.001818102	0.910515876	HEXIM1
17	46666483	rs117470167	0.04120212	0.334208144	0.092335995	0.129496986	-0.082421782	0.007407771	HOXB3
19	7252756	rs4247374	0.142088459	0.759310819	-0.062427572	0.052641939	0.021355071	0.218319986	INSR
19	7253184	rs34328549	0.122118871	0.269521271	0.072815706	0.064540739	0.018157112	0.332728589	INSR
19	11526765	rs167479	0.472352928	0.470953034	0.049132762	0.052391484	-0.007125653	0.544344087	RGL3
20	10969030	rs1327235	0.476736403	0.266674151	-0.042641897	-0.042661222	-7.04E-05	1	No gene listed
20	57698020	rs1465537	0.129338604	0.015234315	-0.058138596	-0.054463762	-0.008087774	0.630093411	No gene listed
20	57702611	rs236720	0.120903376	0.02339369	-0.064642505	-0.066751446	0.004661922	0.806647882	No gene listed
20	57758720	rs16982520	0.120375067	0.021209887	-0.07362753	-0.076843224	0.007223546	0.694054742	ZNF831