

Burden of Disease Variants in Participants of the Long Life Family Study

Supplemental Online Material

Note that in Tables S1-S3 the following scheme was used to denote each Genetic Risk Score (GRS)

- GRS1: LLFS data, LD threshold of $r^2 > 0.8$
- GRS2: LLFS data, LD threshold of $r^2 > 0.2$
- GRS3: LLFS data, Published GRS (note that this is absent in Table S4 for Cancer)
- GRS4: LLFS & NECS data, LD threshold of $r^2 > 0.8$
- GRS5: LLFS & NECS data, LD threshold of $r^2 > 0.2$
- GRS6: LLFS & NECS data, Published GRS (note that this is absent in Table S4 for Cancer)

Table S1

SNP	Risk Allele	Gene	Band	Alleles	In GRS1	In GRS2	In GRS3	In GRS4	In GRS5	In GRS6
rs10219670	C		12q23.3	A/C	1	1	0	1	1	0
rs10273775	G	CNTNAP2	7q35	A/G	1	1	0	1	1	0
rs1031261	C	TTC27	2p22.3	C/G	0	0	0	0	0	0
rs10498633	G	SLC24A4	14q32.12	G/T	1	1	0	1	1	0
rs10751667	T	AP2A2	11p15.5	A/T	0	0	0	0	0	0
rs10792832	G		11q14.2	A/G	0	0	0	0	0	0
rs10838725	C	CELF1	11p11.2	C/T	1	1	0	1	1	0
rs10948363	G	CD2AP	6p12.3	A/G	0	0	0	0	0	0
rs11136000	C	CLU	8p21.1	C/T	1	1	1	1	1	1
rs11139399	C		9q21.32	C/T	1	1	0	1	1	0
rs11218343	T	SORL1	11q24.1	C/T	1	1	0	1	1	0
rs113524839	T				1	1	0	1	1	0
rs115550680	G				0	0	0	0	0	0
rs11754661	A	MTHFD1L	6q25.1	A/G	1	1	0	1	1	0
rs11771145	G	EPHA1	7q35	A/G	1	1	0	1	1	0
rs11848070	C	PCNX	14q24.2	A/G	1	1	0	0	0	0
rs11889338	A		2p24.2	A/G	1	1	0	1	1	0
rs11983798	T	ATXN7L1	7q22.3	A/G	1	1	0	0	0	0
rs12361953	C	LUZP2	11p14.3	C/G	0	0	0	0	0	0
rs13037749	A	CHD6	20q12	A/G	1	1	0	1	1	0
rs1422438	G		5q21.3	A/C	1	1	0	1	1	0
rs145848414	A				0	0	0	0	0	0
rs1476679	T	ZCWPW1	7q22.1	C/T	1	1	0	1	1	0
rs17006206	G	SLC4A1AP	2p23.2	A/G	1	1	0	0	0	0
rs17125944	C	FERMT2	14q22.1	C/T	1	1	0	1	1	0
rs17178006	G	MSRB3	12q14.3	G/T	1	1	0	0	0	0
rs17189298	A		2q14.2	A/G	1	1	0	1	1	0
rs17511627	C		13q12.13	A/C	1	1	0	1	1	0
rs17767225	T		14q24.2	C/T	1	0	0	0	0	0
rs190982	A		5q14.3	A/G	1	1	0	1	1	0
rs1923775	T	POLN	4p16.3	C/T	1	1	0	1	1	0
rs1997111	T		12q24.23	G/T	1	1	0	1	1	0
rs2075650	G	TOMM40	19q13.32	A/G	1	1	0	1	1	0
rs2298948	C	C2orf3	2p12	A/G	1	1	0	1	1	0
rs2337406	C		14q32.33	A/G	0	0	0	0	0	0
rs2373115	G	GAB2	11q14.1	G/T	1	1	0	1	1	0
rs24449894	A				0	0	0	0	0	0
rs2718058	A		7p14.1	A/G	1	1	0	1	1	0
rs2838923	A	NCRNA00175	21q22.3	A/G	1	1	0	1	1	0
rs28834970	C	PTK2B	8p21.2	C/T	1	1	0	1	1	0
rs2935776	C		8q23.1	C/T	1	1	0	1	1	0
rs35349669	T	INPP5D	2q37.1	C/T	1	1	0	1	1	0
rs3752246	G	ABCA7	19p13.3	C/G	0	0	0	0	0	0
rs3764650	G	ABCA7	19p13.3	G/T	1	1	1	1	1	1
rs3820201	A	SLC1A7	1p32.3	A/G	1	1	0	1	1	0
rs3851179	G		11q14.2	A/G	1	1	1	1	1	1
rs3865444	C	CD33	19q13.41	G/T	1	1	1	1	1	1
rs4145462	T	MPZL1	1q24.2	A/G	1	1	0	1	1	0
rs41458646	G		2p24.1	A/G	1	1	0	1	1	0
rs4147929	A	ABCA7	19p13.3	A/G	1	0	0	1	0	0
rs429358	C	APOE	19q13.32	C/T	1	0	0	1	0	0
rs4298437	A	RELN	7q22.1	C/T	1	1	0	1	1	0

rs4667682	C		2q31.1	C/T	1	1	0	1	1	0
rs4676049	A		2q12.3	C/T	1	1	0	1	1	0
rs472926	C	CDON	11q24.2	A/G	1	1	0	0	0	0
rs4925189	G	CDH4	20q13.33	A/G	1	1	0	1	1	0
rs4937314	C		11q24.3	A/G	1	1	0	0	0	0
rs509208	G		3q26.1	C/G	0	0	0	0	0	0
rs514716	G	GLIS3	9p24.2	A/G	1	1	0	1	1	0
rs519113	G	PVRL2	19q13.32	C/G	0	0	0	0	0	0
rs56131196	A	APOC1	19q13.32	A/G	1	0	0	0	0	0
rs59007384	T	TOMM40	19q13.32	G/T	1	0	0	1	0	0
rs5998432	T	RFPL3	22q12.3	C/T	1	1	0	1	1	0
rs6085820	A		20p12.3	G/T	1	1	0	1	1	0
rs610932	G	MS4A6A	11q12.2	A/C	1	1	1	1	1	1
rs62209	C	LOC254312	10p14	G/T	1	1	0	1	1	0
rs6448799	T		4p15.33	C/T	1	1	0	1	1	0
rs6468852	G		8q22.3	A/G	1	1	0	1	1	0
rs6581612	C		12q14.3	A/C	1	0	0	1	0	0
rs6656401	A	CR1	1q32.2	A/G	1	1	0	1	1	0
rs6678275	C		1q31.2	C/G	0	0	0	0	0	0
rs668387	C	SORL1	11q24.1	A/G	1	1	0	1	1	0
rs6701713	A	CR1	1q32.2	A/G	0	0	0	0	0	0
rs6703865	A	SELP	1q24.2	A/G	1	1	0	1	1	0
rs6733839	T		2q14.3	C/T	1	0	0	1	0	0
rs6738181	A		2q33.3	A/G	1	1	0	1	1	0
rs6741949	G	DPP4	2q24.2	C/G	0	0	0	0	0	0
rs6857	T	TOMM40	19q13.32	A/G	1	1	0	1	1	0
rs6859	A	PVRL2	19q13.32	A/G	1	1	0	1	1	0
rs6922617	A		6p21.1	A/G	1	1	0	1	1	0
rs7039300	G		9p23	G/T	1	1	0	1	1	0
rs7225151	A	C17orf87	17p13.2	A/G	1	1	0	1	1	0
rs727153	C		4q32.1	A/G	1	1	0	1	1	0
rs7274581	T	CASS4	20q13.31	C/T	1	1	0	1	1	0
rs72807343	T	MGAT4B	5q35.3	C/T	1	1	0	1	1	0
rs7294919	T	HRK	12q24.22	C/T	1	1	0	0	0	0
rs7295246	G		12q12	G/T	1	1	0	1	1	0
rs7412	C	APOE	19q13.32	C/T	1	1	0	1	1	0
rs744373	C		2q14.3	C/T	1	1	1	1	1	1
rs74615166	C	TRIP4	15q22.31	C/T	1	1	0	0	0	0
rs7561528	A		2q14.3	A/G	1	0	0	1	0	0
rs75932628	T	TREM2	6p21.1	C/T	1	1	0	0	0	0
rs7638995	A	LMOD3	3p14.1	A/C	1	1	0	1	1	0
rs769449	A	APOE	19q13.32	A/G	1	0	0	1	0	0
rs7702276	T		5q11.2	C/T	1	1	0	1	1	0
rs7818382	T	C8orf38	8q22.1	C/T	1	1	0	1	1	0
rs7852872	C	ASTN2	9q33.1	C/G	0	0	0	0	0	0
rs7920721	G		10p14	A/G	1	1	0	1	1	0
rs8035452	T	SPPL2A	15q21.2	C/T	1	1	0	1	1	0
rs9271192	C				0	0	0	0	0	0
rs9315702	A	LHFP	13q14.11	A/C	1	1	0	1	1	0
rs9331896	T	CLU	8p21.1	A/G	0	0	0	0	0	0
rs9349407	C	CD2AP	6p12.3	C/G	0	0	0	0	0	0
rs9381040	C	TREML2	6p21.1	C/T	1	1	0	1	1	0
rs9384488	A		6q25.3	A/G	1	1	0	1	1	0
rs956225	A		8q24.13	A/G	1	1	0	1	1	0
rs959695	C	VPS13B	8q22.2	A/G	1	1	0	1	1	0
rs983392	A		11q12.2	A/G	1	0	0	1	0	0

rs9877502	A		3q28	A/G	1	1	0	0	0	0
rs9969729	A		9q31.2	A/G	1	1	0	1	1	0
rs597668	C	EXOC3L2	19q13.32	C/T	1	1	1	1	1	1
rs670139	T		11q12.2	A/C	1	1	1	1	1	1

Table S2

SNP	Risk Allele	Gene	Band	Alleles	In GRS1	In GRS2	In GRS3	In GRS4	In GRS5	In GRS6
rs10021303	A	BMPR1B	4q22.3	A/G	1	1	0	1	1	0
rs10026364	T		4q28.3	C/T	1	1	0	0	0	0
rs10033464	T		4q25	G/T	1	0	0	0	0	0
rs1005224	T	TTLL5	14q24.3	A/T	0	0	0	0	0	0
rs10057565	T	CDH9	5p14.1	C/T	1	1	0	1	1	0
rs10091374	A		8q13.3	A/T	0	0	0	0	0	0
rs10179686	T	LOC151162	2q21.3	C/T	1	1	0	1	1	0
rs10199768	T	APOB	2p24.1	G/T	1	1	0	1	1	0
rs10266254	A	DPY19L2P4	7q21.13	A/G	0	0	0	0	0	0
rs1028771	A	LAMC2	1q25.3	A/C	0	0	0	0	0	0
rs10428132	T	SCN10A	3p22.2	G/T	1	1	0	1	1	0
rs104623359	A				0	0	0	0	0	0
rs10498345	T		14q21.1	A/T	0	0	0	0	0	0
rs10502575	A	MCART2	18q12.1	A/G	1	1	0	1	1	0
rs10757274	G	CDKN2BAS	9p21.3	A/G	0	0	0	0	0	0
rs10757278	G	CDKN2BAS	9p21.3	A/G	0	0	0	0	0	0
rs10790162	A	BUD13	11q23.3	A/G	0	0	0	0	0	0
rs10803016	T	PLD5	1q43	G/T	1	1	0	1	1	0
rs10821415	A	C9orf3	9q22.32	A/C	1	1	0	1	1	0
rs10824026	A	SYNPO2L	10q22.2	A/G	1	1	0	1	1	0
rs10830956	C		11q14.3	C/T	0	0	0	0	0	0
rs10830962	G	MTNR1B	11q14.3	C/G	0	0	0	0	0	0
rs10838681	G	NR1H3	11p11.2	A/G	1	1	0	1	1	0
rs10861032	C		12q23.3	C/T	1	1	0	1	1	0
rs10895547	T	PDGFD	11q22.3	C/T	1	1	0	1	1	0
rs10911021	C		1q25.3	C/T	1	1	0	1	1	0
rs10933436	A	INPP5D	2q37.1	A/C	1	1	0	1	1	0
rs10953541	C	BCAP29	7q22.3	C/T	1	1	1	1	1	1
rs11014166	A	CACNB2	10p12.31	A/T	0	0	0	0	0	0
rs11046430	T		12p12.1	C/T	1	1	0	1	1	0
rs11054731	A	LRP6	12p13.2	A/G	1	1	0	1	1	0
rs11066015	A	ACAD10	12q24.12	A/G	0	0	0	0	0	0
rs11066280	A	C12orf51	12q24.13	A/T	0	0	0	0	0	0
rs11079321	A	MSI2	17q22	A/G	1	1	0	1	1	0
rs1110183	G		9p13.1	A/G	1	1	0	1	1	0
rs11206510	T	PCSK9	1p32.3	C/T	1	1	1	0	0	0
rs1152591	A	SYNE2	14q23.2	C/T	1	1	0	1	1	0
rs11646213	T		16q23.3	A/T	0	0	0	0	0	0
rs11651708	A	PRKCA	17q24.2	A/T	0	0	0	0	0	0
rs11669133	A	SMARCA4	19p13.2	A/G	1	1	0	1	1	0
rs11671653	A	MIR638	19p13.2	A/G	1	1	0	1	1	0
rs11684202	A	DTNB	2p23.3	A/G	1	1	0	1	1	0
rs11708996	C	SCN5A	3p22.2	C/G	0	0	0	0	0	0
rs1173771	G		5p13.3	C/T	1	1	0	1	1	0
rs11752643	T				0	0	0	0	0	0
rs11754288	A	SLC17A4	6p22.2	A/G	1	1	0	1	1	0
rs11760067	T		6q23.2	C/T	1	1	0	1	1	0
rs11775334	A	MSRA	8p23.1	A/G	1	1	0	1	1	0
rs11777747	T	FLJ43860	8q24.3	C/T	1	1	0	1	1	0
rs11781551	A		8q24.13	A/G	1	1	0	1	1	0

rs11820589	A	BUD13	11q23.3	A/G	1	0	0	1	0	0
rs11825259	A		11p13	A/G	1	1	0	0	0	0
rs11886999	T	STARD7	2q11.2	C/T	1	1	0	1	1	0
rs1190739	T		Xq26.3	C/T	0	0	0	0	0	0
rs11920719	A	TNIK	3q26.2	A/C	0	0	0	0	0	0
rs11921014	A		3q23	A/C	1	1	0	0	0	0
rs11953630	T		5q33.3	C/T	1	1	0	1	1	0
rs11984041	A	HDAC9	7p21.1	C/T	1	1	0	1	1	0
rs1198872	T	ATP6V1C2	2p25.1	C/T	1	1	0	1	1	0
rs12098973	G	NTM	11q25	A/G	1	1	0	1	1	0
rs12205331	T	ANKS1A	6p21.31	C/T	0	0	0	0	0	0
rs12239436	A		1p32.3	A/G	1	1	0	0	0	0
rs12269901	C	SIK3	11q23.3	C/G	0	0	0	0	0	0
rs12280753	T	BUD13	11q23.3	C/T	1	1	0	1	1	0
rs12286037	C	ZNF259	11q23.3	C/T	1	0	0	1	0	0
rs1231206	A	SMG6	17p13.3	C/T	0	0	0	0	0	0
rs12318506	T	CAPS2	12q21.2	G/T	1	1	0	1	1	0
rs12425791	A		12p13.33	A/G	1	1	0	0	0	0
rs12524865	C		6q23.2	A/C	1	1	0	1	1	0
rs12526453	C	PHACTR1	6p24.1	C/G	0	0	0	0	0	0
rs12541335	G	PHYHIP	8p21.3	A/G	1	1	0	1	1	0
rs12564445	A	TNNT2	1q32.1	A/G	1	1	0	1	1	0
rs12588287	T	ATXN3	14q32.12	C/T	1	1	0	1	1	0
rs12595292	A	PLEKHO2	15q22.31	A/G	1	1	0	1	1	0
rs1260326	T	GCKR	2p23.3	C/T	1	1	0	1	1	0
rs1263173	A		11q23.3	A/G	1	0	0	0	0	0
rs12638540	G	CMTM7	3p22.3	A/G	1	1	0	1	1	0
rs12646447	C		4q25	C/T	0	0	0	0	0	0
rs12725198	A	TMEM82	1p36.21	A/G	1	1	0	1	1	0
rs12733856	A		1q41	A/C	1	1	0	1	1	0
rs12740374	T	PSRC1	1p13.3	G/T	0	0	0	0	0	0
rs127430	G		20q13.32	A/G	1	1	0	1	1	0
rs13015955	A		2p24.1	A/G	1	1	0	1	1	0
rs13083990	T	CASR	3q21.1	C/T	1	1	0	1	1	0
rs13107325	T	SLC39A8	4q24	C/T	1	1	0	1	1	0
rs13161895	T	RNF130	5q35.3	C/T	1	1	0	1	1	0
rs13226650	A	MLXIPL	7q11.23	A/G	1	1	0	0	0	0
rs13232179	A	CRYGN	7q36.1	A/T	0	0	0	0	0	0
rs1332844	T	PHACTR1	6p24.1	C/T	0	0	0	0	0	0
rs1333047	T	CDKN2BAS	9p21.3	A/T	0	0	0	0	0	0
rs1333049	C	CDKN2BAS	9p21.3	C/G	0	0	0	0	0	0
rs13333226	A	UMOD	16p12.3	A/G	1	1	0	1	1	0
rs13376333	T	KCNN3	1q21.3	C/T	1	1	0	1	1	0
rs13407662	T		2p16.2	C/T	1	1	0	1	1	0
rs1364044	A	ADAMTS12	5p13.2	C/T	1	1	0	1	1	0
rs1387153	C		11q14.3	C/T	1	1	0	1	1	0
rs1412444	T	LIPA	10q23.31	A/G	1	1	1	1	1	1
rs1441756	G		8p21.3	G/T	1	0	0	1	0	0
rs1445021	A		15q23	C/T	1	1	0	0	0	0
rs1462872	A	NRG1	8p12	C/T	1	1	0	1	1	0
rs1465330	A	ZDHHC22	14q24.3	A/T	0	0	0	0	0	0
rs1466535	C	LRP1	12q13.3	C/T	1	1	0	1	1	0
rs1475591	T		21q22.11	C/T	1	1	0	0	0	0
rs1526687	T		2p16.3	G/T	1	1	0	1	1	0
rs1532085	G		15q21.3	A/G	0	0	0	0	0	0
rs1535	G	FADS2	11q12.2	A/G	0	0	0	0	0	0

rs1537370	T	CDKN2BAS	9p21.3	C/T	0	0	0	0	0	0
rs157582	T	TOMM40	19q13.32	A/G	1	0	0	1	0	0
rs161802	T	PARK7	1p36.23	G/T	0	0	0	0	0	0
rs16893526	G		6q14.1	A/G	1	1	0	1	1	0
rs16965039	T	NLRC5	16q13	C/T	1	1	0	0	0	0
rs16971384	A	ZFXH3	16q22.3	A/G	1	1	0	1	1	0
rs16976171	T		18q12.3	G/T	1	1	0	1	1	0
rs16982520	A	ZNF831	20q13.32	A/G	1	1	0	1	1	0
rs17015535	A	WDR33	2q14.3	A/T	0	0	0	0	0	0
rs17042171	A		4q25	A/C	0	0	0	0	0	0
rs17045031	A		3p14.1	A/G	1	1	0	1	1	0
rs17088339	A		18q22.3	A/T	0	0	0	0	0	0
rs17091905	A		8p21.3	A/G	0	0	0	0	0	0
rs17159640	T	IFRD1	7q31.1	A/T	0	0	0	0	0	0
rs17167021	G		5q21.1	A/G	1	1	0	0	0	0
rs172166	C		6p22.1	C/G	0	0	0	0	0	0
rs17228212	C	SMAD3	15q22.33	C/T	1	1	0	1	1	0
rs1735151	T	IGSF5	21q22.2	C/T	1	1	0	1	1	0
rs17375901	T	MTHFR	1p36.22	C/T	1	1	0	1	1	0
rs17398575	A		7q22.3	A/G	1	1	0	0	0	0
rs174546	A	FADS1	11q12.2	C/T	1	1	0	1	1	0
rs1746048	C		10q11.21	C/T	1	1	1	1	1	1
rs17465637	C	MIA3	1q41	A/C	1	1	1	0	0	0
rs17609940	G	ANKS1A	6p21.31	C/G	0	0	0	0	0	0
rs17666963	T		10q26.13	C/T	1	1	0	1	1	0
rs17672135	T	FMN2	1q43	C/T	1	1	0	1	1	0
rs17696736	G	NAA25	12q24.13	A/G	1	0	0	0	0	0
rs17724172	C	DLGAP1	18p11.31	C/T	1	1	0	0	0	0
rs17772222	A		14q31.3	A/G	1	1	0	1	1	0
rs1799945	G	HFE	6p22.2	C/G	0	0	0	0	0	0
rs1800562	A	HFE	6p22.2	A/G	1	1	0	1	1	0
rs1803274	T	BCHE	3q26.1	A/G	1	1	0	1	1	0
rs1842896	T		4q32.1	G/T	1	1	0	1	1	0
rs1878406	T	EDNRA	4q31.22	C/T	1	1	0	1	1	0
rs1883025	T	ABCA1	9q31.1	A/G	1	1	0	1	1	0
rs1902341	G	OSBPL10	3p23	A/G	1	1	0	1	1	0
rs1937579	T		6q25.2	A/G	1	1	0	1	1	0
rs1993293	A		15q26.3	A/G	1	1	0	0	0	0
rs1994016	C	ADAMTS7	15q25.1	C/T	0	0	0	0	0	0
rs2040862	T	WNT8A	5q31.2	C/T	1	1	0	1	1	0
rs2043085	A		15q21.3	A/G	1	1	0	1	1	0
rs2048327	C	SLC22A3	6q25.3	A/G	1	1	0	1	1	0
rs2075290	C	ZNF259	11q23.3	C/T	0	0	0	0	0	0
rs2075650	G	TOMM40	19q13.32	A/G	1	1	0	1	1	0
rs2080401	A		2q31.1	G/T	1	1	0	1	1	0
rs2083637	G		8p21.3	C/T	0	0	0	0	0	0
rs2084898	A		11q23.3	A/G	1	1	0	1	1	0
rs2106261	T	ZFXH3	16q22.3	A/G	0	0	0	0	0	0
rs2107595	A		7p21.1	C/T	1	0	0	1	0	0
rs2123536	T		2p24.1	A/G	1	1	0	1	1	0
rs2125623	C	OTUD7A	15q13.3	C/T	1	1	0	1	1	0
rs216172	C	SMG6	17p13.3	C/G	0	0	0	0	0	0
rs2197089	C	LPL	8p21.3	C/T	1	0	0	1	0	0
rs2199936	A				0	0	0	0	0	0
rs2200733	T		4q25	C/T	1	0	0	1	0	0
rs2201728	G		4q23	A/G	1	1	0	1	1	0

rs2206277	A	TFAP2B	6p12.3	A/G	1	1	0	1	1	0
rs2238151	T	ALDH2	12q24.12	C/T	1	0	0	1	0	0
rs225132	G	ERRF1	1p36.23	A/C	1	1	0	1	1	0
rs2259816	T	HNF1A	12q24.31	A/C	1	1	1	1	1	1
rs2266788	C	APOA5	11q23.3	C/T	0	0	0	0	0	0
rs2281727	G	SMG6	17p13.3	C/T	0	0	0	0	0	0
rs2306374	C	MRAS	3q22.3	C/T	0	0	0	0	0	0
rs2332267	T		1q25.3	A/G	1	1	0	1	1	0
rs2341260	T		1p31.1	C/T	1	1	0	1	1	0
rs2346177	A		2p21	A/G	1	1	0	1	1	0
rs2359536	C		10p12.31	C/T	1	1	0	1	1	0
rs2383207	G	CDKN2BAS	9p21.3	A/G	0	0	0	0	0	0
rs2398162	A		15q26.2	A/G	1	1	0	1	1	0
rs2437258	T				0	0	0	0	0	0
rs247616	T	CETP	16q13	C/T	1	1	0	1	1	0
rs247617	C	CETP	16q13	A/C	0	0	0	0	0	0
rs2505083	C	KIAA1462	10p11.23	C/T	1	1	1	1	1	1
rs2515629	A	ABCA1	9q31.1	C/T	1	1	0	1	1	0
rs2521501	T	FES	15q26.1	A/T	0	0	0	0	0	0
rs2622633	A	ZFPM2	8q23.1	A/G	1	1	0	0	0	0
rs264	A	LPL	8p21.3	A/G	1	1	0	1	1	0
rs2679073	A		15q25.3	C/T	1	1	0	1	1	0
rs268	G	LPL	8p21.3	A/G	1	1	0	0	0	0
rs2681472	A	ATP2B1	12q21.33	C/T	1	1	0	1	1	0
rs2820037	T		1q43	A/T	0	0	0	0	0	0
rs2895811	C	HHIPL1	14q32.2	C/T	1	1	1	1	1	1
rs290227	G	SYK	9q22.2	C/T	1	1	0	1	1	0
rs2932538	G	MOV10	1p13.2	C/T	1	1	0	1	1	0
rs2943634	C		2q36.3	A/C	1	1	0	1	1	0
rs295	A	LPL	8p21.3	A/C	0	0	0	0	0	0
rs301	C	LPL	8p21.3	C/T	0	0	0	0	0	0
rs3099844	A				1	1	0	0	0	0
rs3184504	T	SH2B3	12q24.12	C/T	1	1	1	1	1	1
rs34014631	A	C10orf76	10q24.32	A/G	1	1	0	1	1	0
rs365302	C	FNDC1	6q25.3	A/G	1	1	0	1	1	0
rs3729639	T	E2F4	16q22.1	C/T	1	1	0	1	1	0
rs3739998	C	KIAA1462	10p11.23	C/G	0	0	0	0	0	0
rs3742207	C	COL4A1	13q34	A/C	1	1	0	1	1	0
rs3757840	A	YKT6	7p13	A/C	1	1	0	1	1	0
rs3764261	A	CETP	16q13	G/T	0	0	0	0	0	0
rs3782889	C	MYL2	12q24.11	C/T	1	1	0	1	1	0
rs3798220	C	LPA	6q25.3	C/T	1	1	1	1	1	1
rs3807989	G	CAV1	7q31.2	A/G	1	1	0	1	1	0
rs3809346	A	COL4A1	13q34	C/T	0	0	0	0	0	0
rs3869109	G				1	1	0	0	0	0
rs3894944	A		4p16.1	C/T	1	1	0	0	0	0
rs3903239	G		1q24.2	C/T	1	1	0	1	1	0
rs4304924	G	RNF219	13q31.1	A/G	1	1	0	0	0	0
rs4373814	G	CACNB2	10p12.33	C/G	0	0	0	0	0	0
rs4380028	C	ADAMTS7	15q25.1	A/G	1	0	0	1	0	0
rs4528684	T		19p13.12	C/T	1	1	0	1	1	0
rs4635554	G		2p24.1	G/T	1	1	0	1	1	0
rs46522	T	UBE2Z	17q21.32	C/T	1	1	1	1	1	1
rs4665058	A	BAZ2B	2q24.2	A/C	1	1	0	1	1	0
rs469568	T	ADAMTS2	5q35.3	G/T	1	1	0	1	1	0
rs4698036	G		4p16.1	G/T	1	0	0	1	0	0

rs4712972	A	SLC17A4	6p22.2	A/G	1	1	0	1	1	0
rs4773144	G	COL4A1	13q34	A/G	1	1	1	1	1	1
rs4792143	T	SHISA6	17p12	C/T	1	1	0	1	1	0
rs4804155	C	DOCK6	19p13.2	C/G	0	0	0	0	0	0
rs4820834	A	CCDC157	22q12.2	A/G	1	1	0	1	1	0
rs4846922	T	GALNT2	1q42.13	C/T	1	1	0	1	1	0
rs4875320	A	CSMD1	8p23.2	A/T	0	0	0	0	0	0
rs4900022	A	KCNK13	14q32.11	A/G	1	1	0	0	0	0
rs4937126	G	ST3GAL4	11q24.2	A/G	1	1	0	1	1	0
rs496300	G		21q22.3	A/G	1	1	0	1	1	0
rs4977574	G	CDKN2BAS	9p21.3	A/G	1	1	1	1	1	1
rs4979906	G		10q22.3	A/G	1	1	0	1	1	0
rs508487	T	TAGLN	11q23.3	A/G	1	0	0	1	0	0
rs514659	C	ABO	9q34.2	A/C	1	0	0	1	0	0
rs556621	A		6p21.1	A/C	1	1	0	1	1	0
rs560887	G	G6PC2	2q31.1	A/G	1	0	0	1	0	0
rs569805	A	ABCB11	2q31.1	A/T	0	0	0	0	0	0
rs5754891	A		22q12.3	A/G	1	1	0	1	1	0
rs579459	C	ABO	9q34.2	C/T	1	1	1	1	1	1
rs5904726	A	MIR508	Xq27.3	A/G	0	0	0	0	0	0
rs599839	A	PSRC1	1p13.3	A/G	0	0	0	0	0	0
rs6015450	G		20q13.32	A/G	0	0	0	0	0	0
rs602633	T	PSRC1	1p13.3	A/C	0	0	0	0	0	0
rs605920	C		18q22.1	C/G	0	0	0	0	0	0
rs632728	T		6p21.1	A/G	0	0	0	0	0	0
rs633185	G	ARHGAP42	11q22.1	C/G	0	0	0	0	0	0
rs646776	T	PSRC1	1p13.3	A/G	1	1	1	1	1	1
rs6511720	T	LDLR	19p13.2	G/T	1	1	0	1	1	0
rs6596140	T		5q31.1	C/T	1	1	0	1	1	0
rs6601299	T		8p23.1	C/T	0	0	0	0	0	0
rs6601530	G	PINX1	8p23.1	A/G	1	1	0	1	1	0
rs660240	T	PSRC1	1p13.3	A/G	0	0	0	0	0	0
rs6666258	C	KCNN3	1q21.3	C/G	0	0	0	0	0	0
rs671	A	ALDH2	12q24.12	A/G	1	1	0	0	0	0
rs6711016	C		2p24.1	A/C	1	0	0	1	0	0
rs6725887	C	WDR12	2q33.2	C/T	1	1	1	1	1	1
rs673548	G	APOB	2p24.1	A/G	1	1	0	1	1	0
rs6782380	C		3p14.3	C/G	0	0	0	0	0	0
rs6817105	C		4q25	C/T	0	0	0	0	0	0
rs6843082	G		4q25	A/G	1	1	0	1	1	0
rs6868223	A	ADAMTS12	5p13.3	A/G	1	1	0	1	1	0
rs688034	T	SEZ6L	22q12.1	C/T	1	1	0	1	1	0
rs6905288	T	VEGFA	6p21.1	A/G	1	1	0	0	0	0
rs6922269	A	MTHFD1L	6q25.1	A/G	1	1	0	1	1	0
rs6929568	T		6p24.3	G/T	1	1	0	1	1	0
rs6947830	A		7p21.2	A/G	1	1	0	1	1	0
rs6983473	A	C8orf80	8p21.1	A/T	0	0	0	0	0	0
rs7025486	A	DAB2IP	9q33.2	A/G	1	1	0	1	1	0
rs7070038	A		10q21.1	A/G	1	1	0	1	1	0
rs7092929	A		10p15.2	A/C	1	1	0	1	1	0
rs7120489	A	PARVA	11p15.3	A/G	1	1	0	1	1	0
rs7121446	G	LOC399959	11q24.1	A/G	1	1	0	1	1	0
rs7136259	T		12q21.33	C/T	1	1	0	1	1	0
rs7164883	G	HCN4	15q24.1	A/G	1	1	0	1	1	0
rs7173743	C		15q25.1	C/T	1	0	0	1	0	0
rs7193343	T	ZFXH3	16q22.3	C/T	1	0	0	1	0	0

rs7203193	A	LITAF	16p13.13	A/G	1	1	0	1	1	0
rs7246657	T	LOC284412	19q13.12	C/T	1	1	0	1	1	0
rs7323893	T		13q31.2	C/T	0	0	0	0	0	0
rs741013	A		3p14.1	A/T	0	0	0	0	0	0
rs744487	A		1q42.3	G/T	1	1	0	1	1	0
rs74733271	A	PMAIP1	18q21.32	G/T	0	0	0	0	0	0
rs749924	T	LOC728323	2q37.3	C/T	1	1	0	0	0	0
rs7550636	T		1q31.2	C/T	1	1	0	0	0	0
rs7569328	T		2p24.1	C/T	1	1	0	1	1	0
rs7581224	T		2p11.2	G/T	1	1	0	1	1	0
rs7586540	A		2p25.2	A/G	1	1	0	1	1	0
rs7651039	C	BTD	3p25.1	C/T	1	1	0	1	1	0
rs7671266	T		4p16.1	C/T	1	1	0	1	1	0
rs7687921	T	GPM6A	4q34.2	A/T	0	0	0	0	0	0
rs7765175	T		6q21	C/T	1	1	0	1	1	0
rs780094	A	GCKR	2p23.3	A/G	0	0	0	0	0	0
rs7801190	C	SLC12A9	7q22.1	C/G	0	0	0	0	0	0
rs7808424	G	ASZ1	7q31.2	G/T	1	1	0	1	1	0
rs782590	T	SMEK2	2p16.1	C/T	1	1	0	1	1	0
rs7841189	C		8p21.3	C/T	1	0	0	1	0	0
rs7856675	A	SLC1A1	9p24.2	A/G	1	1	0	0	0	0
rs7865146	A	AK1	9q34.11	C/T	1	1	0	1	1	0
rs7865618	A	CDKN2BAS	9p21.3	A/G	1	0	0	1	0	0
rs7890572	G	IL1RAPL1	Xp21.2	A/G	0	0	0	0	0	0
rs7903146	A	TCF7L2	10q25.2	C/T	1	1	0	1	1	0
rs7937106	C		11q22.3	C/T	1	1	0	1	1	0
rs7965445	A		12q24.33	A/G	1	1	0	1	1	0
rs8017423	T		14q32.11	C/T	1	1	0	0	0	0
rs8028579	T	SEMA6D	15q21.1	G/T	0	0	0	0	0	0
rs805303	G				1	1	0	0	0	0
rs8055236	G	CDH13	16q23.3	G/T	1	1	0	1	1	0
rs8060686	T	EDC4	16q22.1	C/T	1	1	0	1	1	0
rs879324	A	ZFH3	16q22.3	C/T	1	1	0	1	1	0
rs886126	T	CUX2	12q24.11	C/T	1	1	0	1	1	0
rs899435	A		12p13.1	G/T	1	1	0	1	1	0
rs899967	C	BCL2	18q21.33	C/G	0	0	0	0	0	0
rs9268402	G				1	1	0	0	0	0
rs9321637	C		6q23.3	C/T	1	1	0	1	1	0
rs9326246	C	BUD13	11q23.3	C/G	0	0	0	0	0	0
rs932764	G	PLCE1	10q23.33	A/G	1	1	0	1	1	0
rs9328448	A		6p24.3	A/G	1	1	0	1	1	0
rs9369640	C	PHACTR1	6p24.1	A/C	0	0	0	0	0	0
rs937254	A	GCOM1	15q21.3	A/G	1	1	0	1	1	0
rs9388451	C	HEY2	6q22.31	C/T	1	1	0	1	1	0
rs944797	C	CDKN2BAS	9p21.3	C/T	0	0	0	0	0	0
rs9506514	A	IFT88	13q12.11	A/C	1	1	0	1	1	0
rs9508025	C	FLT1	13q12.3	C/G	0	0	0	0	0	0
rs9546711	A		13q31.1	A/G	1	1	0	1	1	0
rs964184	G	ZNF259	11q23.3	C/G	0	0	0	0	0	0
rs974819	T		11q22.3	A/G	1	1	1	1	1	1
rs978152	C	KCNQ3	8q24.22	C/G	0	0	0	0	0	0
rs9818870	T	MRAS	3q22.3	C/T	1	1	1	1	1	1
rs9907236	A		17q24.3	A/G	1	1	0	1	1	0
rs991316	T		4q23	A/G	1	1	0	1	1	0
rs9939224	G	CETP	16q13	G/T	1	1	0	1	1	0
rs9940128	A	FTO	16q12.2	A/G	1	1	0	1	1	0

rs9982601	T		21q22.11	C/T	1	1	1	1	1	1
rs9987289	A		8p23.1	A/G	1	1	0	1	1	0
rs3825807	A	ADAMTS7	15q25.1	C/T	1	1	1	0	0	0

Table S3

SNP	Risk Allele	Gene	Band	Alleles	In GRS1	In GRS2	In GRS3	In GRS4	In GRS5	In GRS6
rs10199521	T	PAX4	2p25.3	A/G	1	1	0	1	1	0
rs10229583	G		7q32.1	A/G	1	1	0	1	1	0
rs10403021	C		19q12	C/T	1	1	0	1	1	0
rs10440833	A	CDKAL1	6p22.3	A/T	0	0	0	0	0	0
rs10460009	C	LOC727896	18p11.31	C/T	1	1	0	1	1	0
rs10461617	A	MAP3K1	5q11.2	A/G	1	1	0	1	1	0
rs1048886	G	C6orf57	6q13	A/G	1	1	0	1	1	0
rs10520514	A	TCERG1L	4q34.3	A/T	0	0	0	0	0	0
rs1073203	G		5q23.2	C/G	0	0	0	0	0	0
rs10741243	G		10q26.3	C/G	0	0	0	0	0	0
rs10744625	C	EFCAB4B	12p13.32	C/T	1	1	0	0	0	0
rs10811661	T	GLIS3	9p21.3	C/T	1	1	1	1	1	1
rs10814916	C		9p24.2	A/C	1	1	0	1	1	0
rs10830963	G		11q14.3	C/G	0	0	0	0	0	0
rs10885122	G	GRK5	10q25.2	G/T	1	1	0	1	1	0
rs10886471	C		10q26.11	C/T	1	1	0	1	1	0
rs10906115	A		10p13	A/G	1	0	0	1	0	0
rs10910200	G	NOTCH2	1q42.2	C/G	0	0	0	0	0	0
rs10923931	T		1p12	G/T	1	1	1	1	1	1
rs10927101	A		1q44	A/C	1	0	0	1	0	0
rs10946398	C	CDKAL1	6p22.3	A/C	0	0	0	0	0	0
rs10965250	G	HHEX	9p21.3	A/G	0	0	0	0	0	0
rs11071657	A		15q22.2	A/G	1	0	0	1	0	0
rs1111875	C		10q23.33	A/G	1	1	1	1	1	1
rs11165354	A	TGFBR3	1p22.1	A/C	1	1	0	1	1	0
rs11257655	T	SLC30A8	10p13	C/T	1	0	0	1	0	0
rs1153188	A		12q13.2	A/T	0	0	0	0	0	0
rs11558471	A		8q24.11	A/G	0	0	0	0	0	0
rs11605924	A	CRY2	11p11.2	A/C	1	1	0	1	1	0
rs11634397	G	ZFAND6	15q25.1	A/G	1	1	0	1	1	0
rs11642841	A	FTO	16q12.2	A/C	0	0	0	0	0	0
rs11677370	T	ADCY5	2p25.3	A/T	0	0	0	0	0	0
rs11708067	A		3q21.1	A/G	1	1	0	1	1	0
rs11765845	A		7p15.1	A/G	1	1	0	1	1	0
rs11787792	A	GPSM1	9q34.3	A/G	1	1	0	0	0	0
rs11867934	C	SLC2A2	17p11.2	C/T	1	1	0	0	0	0
rs11920090	T		3q26.2	A/T	0	0	0	0	0	0
rs12010175	G		Xq28	A/G	0	0	0	0	0	0
rs12027542	A	PCNXL2	1q42.2	A/G	1	1	0	1	1	0
rs12219125	T	HIGD1C	10p12.31	G/T	1	1	0	1	1	0
rs12304921	G		12q13.12	A/G	1	1	0	1	1	0
rs12518099	C		5q14.3	A/G	1	1	0	1	1	0
rs12655917	C	AP3B1	5q14.1	A/G	1	1	0	0	0	0
rs12779790	G	ARHGEF7	10p13	A/G	1	1	1	1	1	1
rs12853515	G		13q34	C/G	0	0	0	0	0	0
rs12914656	C		15q25.3	C/T	1	1	0	1	1	0
rs13064954	G	SLC30A8	3q25.31	A/G	1	1	0	1	1	0
rs13081389	A		3p25.2	A/G	1	0	0	1	0	0
rs13266634	C		8q24.11	C/T	1	1	1	1	1	1
rs13292136	C		9q21.31	C/T	1	1	0	1	1	0

rs1333051	A		9p21.3	A/T	0	0	0	0	0	0
rs1342038	G		1q25.1	C/T	1	1	0	1	1	0
rs1359790	G		13q31.1	C/T	1	1	0	1	1	0
rs1374910	T	IGF2BP2	3q27.2	C/T	1	1	0	1	1	0
rs1387153	T		11q14.3	C/T	1	0	0	1	0	0
rs1401492	C	CACNA1D	3p21.1	A/G	1	1	0	1	1	0
rs1436953	G		15q22.2	A/G	1	1	0	1	1	0
rs1436955	C		15q22.2	A/G	1	0	0	1	0	0
rs1470579	C	IGF2BP2	3q27.2	A/C	1	1	1	1	1	1
rs1495377	G		12q21.1	C/G	0	0	0	0	0	0
rs1531343	C	RPSAP52	12q14.3	C/G	0	0	0	0	0	0
rs1552224	A	ARAP1	11q13.4	G/T	1	1	0	1	1	0
rs1571942	C	PLXDC2	10p12.31	C/T	0	0	0	0	0	0
rs163182	C	KCNQ1	11p15.4	C/G	0	0	0	0	0	0
rs16861329	G	ST6GAL1	3q27.3	C/T	1	1	0	1	1	0
rs16891077	A	ISCA1P1	5q12.1	A/G	1	1	0	1	1	0
rs16955379	C	CMIP	16q23.2	C/T	1	1	0	1	1	0
rs16962638	C		13q33.1	A/G	0	0	0	0	0	0
rs17036101	G		3p25.2	A/G	0	0	0	0	0	0
rs17045328	G	CR2	1q32.2	A/G	1	1	0	1	1	0
rs17053082	T		5q33.2	C/T	1	1	0	1	1	0
rs17376456	A	C5orf36	5q15	A/G	1	1	0	1	1	0
rs17404956	A		5q34	A/G	1	1	0	0	0	0
rs17431357	C	TRIAP1	12q24.31	C/T	1	1	0	1	1	0
rs174550	T	FADS1	11q12.2	C/T	1	1	0	1	1	0
rs17584499	T	PTPRD	9p24.1	C/T	1	1	0	0	0	0
rs17589516	C	ZFAND3	6p21.2	A/G	1	1	0	1	1	0
rs17797882	T		16q23.2	C/T	1	1	0	1	1	0
rs1801214	T	WFS1	4p16.1	C/T	0	0	0	0	0	0
rs1801282	C	PPARG	3p25.2	C/G	0	0	0	0	0	0
rs1802295	A	SUPV3L1	10q22.1	C/T	1	1	0	1	1	0
rs1861612	T	DNER	2q36.3	A/G	1	1	0	1	1	0
rs1970671	G		18q21.2	C/G	0	0	0	0	0	0
rs2028299	C	AP3S2	15q26.1	A/C	1	1	0	1	1	0
rs2038823	C	HS6ST3	13q32.1	A/C	1	1	0	1	1	0
rs2063640	A	ZPLD1	3q12.3	A/C	1	1	0	1	1	0
rs2115386	C	INSR	19p13.2	A/G	1	1	0	1	1	0
rs2166706	G		11q14.3	C/T	1	0	0	1	0	0
rs2191349	T		7p21.2	G/T	1	1	0	1	1	0
rs2237892	C	KCNQ1	11p15.4	C/T	1	1	0	1	1	0
rs2237895	C	KCNQ1	11p15.4	A/C	1	1	0	1	1	0
rs2237897	C	KCNQ1	11p15.4	C/T	1	1	0	0	0	0
rs231362	G	KCNQ1OT1	11p15.5	C/T	1	1	0	1	1	0
rs2383208	A		9p21.3	A/G	0	0	0	0	0	0
rs2407103	C		8p11.23	A/G	1	1	0	1	1	0
rs2407314	C	CSMD1	8p23.2	C/G	0	0	0	0	0	0
rs243021	A		2p16.1	C/T	1	0	0	1	0	0
rs2696835	C	LOC732275	16q24.1	C/G	0	0	0	0	0	0
rs2722769	C		11p15.3	C/G	0	0	0	0	0	0
rs2811893	T	MYSM1	1p32.1	C/T	1	1	0	1	1	0
rs2833610	A	HUNK	21q22.11	A/G	1	1	0	1	1	0
rs2943641	C		2q36.3	C/T	1	1	0	1	1	0
rs3007729	T		1p36.13	C/T	1	1	0	1	1	0
rs30360	G		5q11.2	A/C	1	1	0	1	1	0
rs312457	G	SLC16A13	17p13.1	C/T	1	1	0	0	0	0
rs328506	C		20q13.31	C/T	1	1	0	1	1	0

rs340874	C	PROX1	1q32.3	A/G	1	1	0	1	1	0
rs35767	G	IGF1	12q23.2	C/T	1	1	0	1	1	0
rs3773506	C	PLS1	3q23	C/G	0	0	0	0	0	0
rs3786897	A	PEPD	19q13.11	A/G	1	1	0	1	1	0
rs3792615	T	1-Mar	4q32.3	A/G	1	1	0	1	1	0
rs3802177	G	SLC30A8	8q24.11	C/T	0	0	0	0	0	0
rs391300	G	SRR	17p13.3	A/G	1	1	0	1	1	0
rs3916765	A				1	1	0	0	0	0
rs3923113	A		2q24.3	G/T	1	1	0	1	1	0
rs4402960	T	IGF2BP2	3q27.2	G/T	0	0	0	0	0	0
rs4430796	G	HNF1B	17q12	A/G	1	1	0	0	0	0
rs4457053	G	LOC728723	5q13.3	A/G	1	1	0	1	1	0
rs4462262	C		10q21.1	C/T	1	1	0	1	1	0
rs4470583	A		4q32.2	A/G	1	1	0	0	0	0
rs4506565	T	TCF7L2	10q25.2	A/T	0	0	0	0	0	0
rs4527850	T	WISP1	8q24.22	C/T	1	1	0	0	0	0
rs4607103	C	MIR548A2	3p14.1	C/T	1	1	1	1	1	1
rs4689388	T	WFS1	4p16.1	A/G	1	1	0	1	1	0
rs4698790	T	GAR1	4q25	G/T	1	1	0	1	1	0
rs4712523	G	CDKAL1	6p22.3	A/G	0	0	0	0	0	0
rs4712524	G	CDKAL1	6p22.3	A/G	0	0	0	0	0	0
rs472265	G	PAPL	19q13.2	A/G	1	1	0	1	1	0
rs4760790	A		12q21.1	A/G	0	0	0	0	0	0
rs476141	A		1q44	A/C	1	1	0	1	1	0
rs4787008	G	A2BP1	16p13.3	A/G	1	1	0	1	1	0
rs4812829	A	R3HDML	20q13.12	A/G	1	1	0	1	1	0
rs4819143	C		21q22.3	A/G	1	1	0	1	1	0
rs4838605	C	ARHGAP22	10q11.22	C/T	1	1	0	1	1	0
rs5015480	C		10q23.33	C/T	0	0	0	0	0	0
rs5215	C	KCNJ11	11p15.1	C/T	0	0	0	0	0	0
rs563694	C	G6PC2	2q31.1	G/T	1	1	0	1	1	0
rs564398	T	CDKN2BAS	9p21.3	A/G	1	1	0	1	1	0
rs591044	A	SEZ6L	22q12.1	C/T	1	1	0	1	1	0
rs5945326	A	DUSP9	Xq28	A/G	0	0	0	0	0	0
rs6017317	G	FITM2	20q13.12	G/T	1	0	0	1	0	0
rs623323	T	RNMTL1	17p13.3	A/G	1	1	0	1	1	0
rs6426514	A	RHOU	1q42.13	A/G	1	1	0	1	1	0
rs642858	A		6q24.1	C/T	1	1	0	1	1	0
rs6467136	G		7q32.1	A/G	1	1	0	1	1	0
rs649891	C	PTPRD	9p23	A/G	1	1	0	1	1	0
rs6576507	A		15q12	C/T	1	1	0	0	0	0
rs6583826	G	KIF11	10q23.33	A/G	1	0	0	1	0	0
rs6702784	C	OSCP1	1p34.3	A/C	1	1	0	1	1	0
rs6707387	A	SPAG16	2q34	A/G	1	1	0	1	1	0
rs6723108	T	TMEM163	2q21.3	G/T	1	1	0	1	1	0
rs6769511	C	IGF2BP2	3q27.2	C/T	0	0	0	0	0	0
rs6780569	G		3p24.3	A/G	1	1	0	1	1	0
rs6931514	G	CDKAL1	6p22.3	A/G	0	0	0	0	0	0
rs7020996	C	CDKN2BAS	9p21.3	C/T	1	0	0	0	0	0
rs7034200	A	GLIS3	9p24.2	A/C	0	0	0	0	0	0
rs7041847	A	GLIS3	9p24.2	A/G	0	0	0	0	0	0
rs7043482	G		9q21.32	A/C	1	1	0	1	1	0
rs7107217	C		11q24.3	A/C	1	1	0	1	1	0
rs7119	T	HMG20A	15q24.3	A/G	1	1	0	1	1	0
rs7172432	A		15q22.2	A/G	1	0	0	1	0	0
rs7178572	G	HMG20A	15q24.3	A/G	1	0	0	1	0	0

rs7305618	C	C12orf27	12q24.31	C/T	1	1	0	1	1	0
rs730570	G	C14orf70	14q32.2	A/G	1	1	0	1	1	0
rs7403531	T	RASGRP1	15q14	C/T	1	1	0	1	1	0
rs742731	A		20p11.23	A/G	1	1	0	1	1	0
rs7542900	C		1p21.3	C/T	1	1	0	1	1	0
rs7560163	C		2q23.3	C/G	0	0	0	0	0	0
rs7578326	A		2q36.3	A/G	1	0	0	1	0	0
rs7578597	T	THADA	2p21	C/T	1	1	1	1	1	1
rs7630877	A	PEX5L	3q26.33	A/G	1	1	0	1	1	0
rs7636	A	ACHE	7q22.1	C/T	1	1	0	1	1	0
rs7659604	T		4q27	C/T	1	1	0	1	1	0
rs7754840	C	CDKAL1	6p22.3	C/G	0	0	0	0	0	0
rs7756992	G	CDKAL1	6p22.3	A/G	0	0	0	0	0	0
rs7766070	A	CDKAL1	6p22.3	A/C	1	0	0	1	0	0
rs7772697	T		6q25.1	C/T	1	1	0	1	1	0
rs780094	C	GCKR	2p23.3	A/G	1	1	0	1	1	0
rs7901695	C	TCF7L2	10q25.2	C/T	0	0	0	0	0	0
rs7903146	A	TCF7L2	10q25.2	C/T	1	1	1	1	1	1
rs791595	A		7q32.1	A/G	1	1	0	1	1	0
rs7944584	A	MADD	11p11.2	A/T	0	0	0	0	0	0
rs7957197	T	OASL	12q24.31	A/T	0	0	0	0	0	0
rs7961581	C		12q21.1	C/T	1	1	1	1	1	1
rs8042680	A	PRC1	15q26.1	A/C	1	1	0	1	1	0
rs8048589	C	SNX29	16p13.13	C/T	1	1	0	1	1	0
rs8050136	A	FTO	16q12.2	A/C	0	0	0	0	0	0
rs8090011	G	LAMA1	18p11.31	C/G	0	0	0	0	0	0
rs8181588	A	KCNQ1	11p15.4	C/T	1	0	0	1	0	0
rs831571	c		3p14.1	C/T	1	1	0	1	1	0
rs849134	A	JAZF1	7p15.1	A/G	0	0	0	0	0	0
rs864745	T	JAZF1	7p15.1	A/G	1	1	1	1	1	1
rs896854	T	TP53INP1	8q22.1	A/G	1	1	0	1	1	0
rs9295474	G	CDKAL1	6p22.3	C/G	0	0	0	0	0	0
rs9300039	C		11p12	A/C	1	1	0	1	1	0
rs9391988	A	SLC22A23	6p25.2	A/G	1	1	0	1	1	0
rs9465871	C	CDKAL1	6p22.3	C/T	1	0	0	1	0	0
rs9470794	C	ZFAND3	6p21.2	C/T	1	1	0	1	1	0
rs9472138	T		6p21.1	C/T	1	1	1	1	1	1
rs9525916	T		13q14.11	A/T	0	0	0	0	0	0
rs9543976	G	UCHL3	13q22.2	A/G	1	1	0	1	1	0
rs9552911	G	SGCG	13q12.12	A/G	1	1	0	0	0	0
rs972283	G		7q32.3	A/G	1	1	0	1	1	0
rs9787485	T		10q23.1	C/T	1	1	0	1	1	0
rs9792548	C		9q21.33	A/G	1	1	0	1	1	0
rs9862730	A	CLSTN2	3q23	A/G	1	1	0	1	1	0
rs9866141	T		3q25.31	C/T	1	1	0	1	1	0
rs9939609	A	FTO	16q12.2	A/T	0	0	0	0	0	0
rs5219	T		11p15.1	C/T	1	1	1	1	1	1
rs10490072	T		2p16.1	C/T	1	1	1	1	1	1

Table S4

SNP	Risk Allele	Gene	Band	Alleles	In GRS1	In GRS2	In GRS4	In GRS5
rs1000589	T		13q21.31	G/T	1	1	1	1
rs10052657	C	PDE4D	5q11.2	A/C	1	1	1	1
rs10058728	T	CSNK1A1	5q32	A/T	0	0	0	0
rs10069690	T	TERT	5p15.33	C/T	1	1	0	0
rs10088218	G		8q24.21	A/G	1	1	1	1
rs10088262	A		8q24.13	A/G	1	1	1	1
rs10090154	T		8q24.21	C/T	0	0	0	0
rs1011970	T	CDKN2BAS	9p21.3	G/T	1	1	1	1
rs1014971	T		22q13.1	A/G	1	1	1	1
rs1016343	T		8q24.21	C/T	1	1	1	1
rs10170236	C		2q23.2	A/G	1	1	1	1
rs10187424	A	GGCX	2p11.2	C/T	1	1	1	1
rs10197940	T		2q23.3	C/T	1	1	1	1
rs1027643	T		5q14.3	C/T	1	1	1	1
rs103294	C	LILRA3	19q13.42	C/T	1	1	1	1
rs10411161	T	ZNF577	19q13.41	C/T	1	1	1	1
rs10411210	C	RHPN2	19q13.11	C/T	1	1	1	1
rs10419226	A	CRTC1	19p13.11	G/T	1	1	1	1
rs1044873	C	IRF8	16q24.1	C/T	1	0	1	0
rs10472076	C		5q11.2	C/T	1	1	1	1
rs10484561	G				1	1	0	0
rs10486567	G	JAZF1	7p15.2	A/G	1	1	1	1
rs10500715	T	SBF2	11p15.4	G/T	1	1	1	1
rs10503733	T	NKX3-1	8p21.2	A/C	1	0	1	0
rs10505477	A		8q24.21	C/T	0	0	0	0
rs10505483	T		8q24.21	A/G	0	0	0	0
rs10510102	G	ATE1	10q26.13	A/G	1	1	1	1
rs10759243	A		9q31.2	A/C	1	1	1	1
rs10771399	T		12p11.22	A/G	1	1	1	1
rs10774214	T		12p13.32	C/T	1	1	1	1
rs10775480	T	SLC14A1	18q12.3	C/T	1	0	1	0
rs1078806	C	FGFR2	10q26.13	C/T	0	0	0	0
rs10788473	T	GRID1	10q23.1	C/T	1	1	1	1
rs10795668	A		10p14	A/G	1	1	1	1
rs10821936	C	ARID5B	10q21.2	C/T	1	1	1	1
rs10822013	T	ZNF365	10q21.2	C/T	1	1	1	1
rs10828317	T	PIP4K2A	10p12.2	C/T	1	1	1	1
rs10849033	G	C12orf5	12p13.32	A/G	1	1	0	0
rs10873876	T	ST6GALNAC3	1p31.1	C/T	1	1	1	1
rs10875943	C	TUBA1C	12q13.12	C/T	1	1	1	1
rs10896449	G		11q13.3	A/G	0	0	0	0
rs10911251	A	LAMC1	1q25.3	A/C	1	1	1	1
rs1092913	T	ROPN1L	5p15.2	A/G	1	1	1	1
rs10934853	A	EEFSEC	3q21.3	A/C	1	1	1	1
rs10936599	C	ARPM1	3q26.2	C/T	1	1	1	1
rs10936632	A	CLDN11	3q26.2	A/C	1	1	0	0
rs10937405	C	TP63	3q28	C/T	1	1	1	1
rs10941679	G		5p12	A/G	1	0	1	0
rs10953615	C		7q31.1	A/G	1	1	1	1
rs10974531	A		9p24.2	A/C	1	1	1	1

rs10993994	T	MSMB	10q11.23	C/T	1	1	1	1
rs10995190	G	ZNF365	10q21.2	A/G	1	1	1	1
rs11012732	A	MLLT10	10p12.31	A/G	1	1	1	1
rs11022157	A	C11orf21	11p15.5	A/C	1	1	0	0
rs11066015	A	ACAD10	12q24.12	A/G	0	0	0	0
rs11066280	A	C12orf51	12q24.13	A/T	0	0	0	0
rs11080466	C	FAM38B	18p11.22	A/G	1	1	1	1
rs11083846	A	PRKD2	19q13.32	A/G	1	1	1	1
rs11135910	A	EBF2	8p21.2	C/T	1	1	1	1
rs11155133	G		6q24.1	A/G	1	1	0	0
rs11169552	C	ATF1	12q13.12	C/T	1	1	1	1
rs11196174	G	TCF7L2	10q25.2	A/G	1	1	0	0
rs11199914	C		10q26.12	C/T	1	1	0	0
rs11228565	A		11q13.3	A/G	1	0	1	0
rs11242675	T	FOXQ1	6p25.3	C/T	1	1	1	1
rs11249433	G	LOC647121	1p11.2	C/T	1	1	1	1
rs11552449	T	DCLRE1B	1p13.2	C/T	1	1	1	1
rs11568818	A	MMP7	11q22.2	A/G	1	1	1	1
rs11571833	T	N4BP2L1	13q13.1	A/T	0	0	0	0
rs11636802	G		15q21.3	A/G	1	1	1	1
rs11650494	A		17q21.32	A/G	1	1	1	1
rs11672691	G		19q13.2	A/G	1	1	1	1
rs116909374	T				1	1	0	0
rs11704416	C	TNRC6B	22q13.1	C/G	0	0	0	0
rs11780156	T		8q24.21	C/T	1	1	1	1
rs11782652	A	CHMP4C	8q21.13	A/G	1	1	1	1
rs11789015	A	BARX1	9q22.32	A/G	1	1	1	1
rs11814448	C		10p12.31	A/C	1	1	1	1
rs11820646	C		11q24.3	C/T	0	0	0	0
rs11892031	A	UGT1A8	2q37.1	A/C	1	1	1	1
rs11902236	A	GRHL1	2p25.1	C/T	1	1	1	1
rs11903757	C		2q32.3	C/T	1	1	0	0
rs11978267	G	IKZF1	7p12.2	A/G	0	0	0	0
rs1209950	T	ETS2	21q22.2	C/T	1	1	1	1
rs12155172	A		7p15.3	A/G	1	1	1	1
rs1218582	G	KCNN3	1q21.3	C/T	1	1	1	1
rs1219648	G	FGFR2	10q26.13	A/G	0	0	0	0
rs12202284	A		6p25.3	A/C	0	0	0	0
rs12203592	T	IRF4	6p25.3	C/T	1	0	0	0
rs12210050	T	EXOC2	6p25.3	C/T	0	0	0	0
rs12289961	T		11q12.1	C/T	1	0	1	0
rs12296850	A	SLC17A8	12q23.1	A/G	1	1	0	0
rs12355688	T	ZMIZ1	10q22.3	C/T	1	1	0	0
rs12413624	T		10q26.11	A/T	0	0	0	0
rs12422552	C		12p13.1	C/G	0	0	0	0
rs1243180	T	MLLT10	10p12.31	A/T	0	0	0	0
rs12456874	G	C18orf1	18p11.21	A/G	1	1	0	0
rs12493607	C	TGFBR2	3p24.1	C/G	0	0	0	0
rs12615966	A		2q12.1	C/T	1	1	1	1
rs12621643	T	KCNE4	2q36.1	G/T	1	1	1	1
rs12653946	T		5p15.33	C/T	1	1	0	0
rs1270884	A		12q24.21	C/T	1	1	1	1
rs1292011	A		12q24.21	C/T	1	1	1	1
rs12922061	T		16q12.2	C/T	1	0	1	0
rs130067	G				1	1	0	0
rs13016963	A	ALS2CR12	2q33.1	A/G	1	1	1	1

rs13117307	T	EXOC1	4q12	C/T	1	1	1	1
rs13181	C	KLC3	19q13.32	G/T	1	1	1	1
rs132390	C	EMID1	22q12.2	C/T	1	1	0	0
rs13252298	A		8q24.21	A/G	1	1	1	1
rs13254738	C		8q24.21	A/C	1	1	1	1
rs13281615	G		8q24.21	A/G	1	0	1	0
rs13294589	G		9p21.2	A/G	1	1	1	1
rs13329835	G	CDYL2	16q23.2	A/G	1	1	1	1
rs13385191	G	C2orf43	2p24.1	A/G	1	1	1	1
rs13387042	A		2q35	A/G	1	1	1	1
rs13393577	T	MIR548F2	2q34	C/T	1	1	1	1
rs13397985	G	SP140	2q37.1	G/T	1	1	1	1
rs13401811	G	ACOXL	2q13	A/G	1	1	1	1
rs1353747	T	PDE4D	5q11.2	G/T	1	1	1	1
rs1393350	A	TYR	11q14.3	A/G	1	1	1	1
rs1427593	A		2q22.1	A/G	1	1	1	1
rs1432295	G		2p16.1	A/G	1	1	1	1
rs1432679	C	EBF1	5q33.3	C/T	1	1	1	1
rs1436904	T	CHST9	18q11.2	G/T	1	1	1	1
rs1439287	A	BCL2L11	2q13	C/T	1	1	1	1
rs1447295	A	LOC727677	8q24.21	A/C	0	0	0	0
rs1494961	C	MRPS18C	4q21.23	C/T	1	1	1	1
rs1495741	A		8p22	A/G	1	1	1	1
rs1496766	C	MAGI2	7q21.11	C/T	1	1	0	0
rs1512268	T	NKX3-1	8p21.2	A/G	1	1	1	1
rs1547374	A	TFF1	21q22.3	A/G	1	1	1	1
rs1550623	A	CDCA7	2q31.1	C/T	1	1	1	1
rs1562430	T		8q24.21	A/G	1	0	1	0
rs1585440	C		13q21.32	A/C	1	1	1	1
rs1665650	T	HSPA12A	10q25.3	A/G	1	1	1	1
rs1679013	C		9p21.3	C/T	1	1	0	0
rs16857609	T	DIRC3	2q35	C/T	1	0	1	0
rs16886165	G		5q11.2	G/T	1	1	1	1
rs16892766	A		8q23.3	A/C	1	1	1	1
rs16901979	A		8q24.21	A/C	0	0	0	0
rs16902094	G		8q24.21	A/G	1	1	1	1
rs16951095	C	LAMA1	18p11.31	C/T	1	1	0	0
rs16953002	A	FTO	16q12.2	A/G	1	1	1	1
rs16976734	G	RFX7	15q21.3	A/G	1	0	1	0
rs17023900	G		3p12.1	A/G	1	1	1	1
rs17079534	A	MYRIP	3p22.1	A/G	0	0	0	0
rs17172185	T	HECW1	7p14.1	C/T	1	1	1	1
rs17206779	G	ADAMTS6	5q12.3	C/T	1	1	1	1
rs17221259	G		12p13.1	C/T	1	1	1	1
rs17246404	C	POT1	7q31.33	C/T	1	1	1	1
rs17356907	A		12q22	A/G	1	1	0	0
rs17401966	A	KIF1B	1p36.22	A/G	1	1	1	1
rs17483466	G	ACOXL	2q13	A/G	1	1	1	1
rs17530068	C		6q14.1	C/T	1	1	1	1
rs17631303	G				1	1	1	1
rs17674580	T	SLC14A1	18q12.3	C/T	1	1	1	1
rs17761864	A	SMG6	17p13.3	A/C	1	1	1	1
rs17817449	T	FTO	16q12.2	G/T	1	1	1	1
rs17837497	A	TBXAS1	7q34	A/G	0	0	0	0
rs1789924	C	ADH1C	4q23	C/T	1	1	1	1
rs1800682	A	FASAS	10q23.31	C/T	1	0	1	0

rs183211	A	NSF	17q21.31	A/G	1	1	1	1
rs1859962	G		17q24.3	G/T	1	1	1	1
rs1879352	C		18p11.32	A/G	1	1	1	1
rs1881797	C	LOC148824	1q44	C/T	1	1	1	1
rs1886449	A		13q22.1	C/T	1	1	1	1
rs1894292	G	AFM	4q13.3	A/G	1	1	1	1
rs1906953	A	GRM4	6p21.31	C/T	1	1	1	1
rs1933488	A	RGS17	6q25.2	A/G	1	1	1	1
rs1983891	T	FOXP4	6p21.1	C/T	1	1	1	1
rs2014300	G	RUNX1	21q22.12	A/G	1	1	1	1
rs2016394	G	DLX2	2q31.1	C/T	1	1	1	1
rs2019960	G		8q24.21	C/T	1	1	1	1
rs2039553	A		13q31.1	A/G	1	1	1	1
rs2041840	C	C2orf56	2p22.2	A/G	1	1	1	1
rs204247	G		6p23	A/G	1	1	1	1
rs2046210	A	C6orf97	6q25.1	C/T	1	1	1	1
rs2048672	C	FLJ43663	7q32.3	G/T	1	1	1	1
rs2072590	T	HOXD3	2q31.1	G/T	1	1	1	1
rs2074356	T	C12orf51	12q24.13	C/T	0	0	0	0
rs2086452	C	ADAMTS17	15q26.3	A/G	1	1	0	0
rs2089222	A	MAP1LC3B2	12q24.22	A/G	1	1	1	1
rs210134	G	BAK1	6p21.31	A/G	0	0	0	0
rs210142	C	BAK1	6p21.31	C/T	1	1	1	1
rs2121875	G	FGF10	5p12	G/T	1	1	1	1
rs2131877	G	C3orf21	3q29	C/T	1	1	1	1
rs2178146	A		16q24.1	A/G	1	1	1	1
rs2180341	G	RNF146	6q22.33	A/G	1	1	1	1
rs2191566	G	ZNF230	19q13.31	A/C	1	1	1	1
rs2236007	G	PAX9	14q13.3	A/G	1	1	1	1
rs2236256	C	OPRM1	6q25.2	A/C	1	1	1	1
rs2239612	T	ST6GAL1	3q27.3	C/T	1	1	1	1
rs2239633	G	CEBPE	14q11.2	C/T	1	0	1	0
rs2239815	T	XBP1	22q12.1	C/T	1	0	1	0
rs2242652	G	TERT	5p15.33	C/T	0	0	0	0
rs224278	C	EGR2	10q21.3	C/T	1	1	1	1
rs225190	G	MYO1D	17q11.2	A/G	1	1	1	1
rs2255280	T	DAB2	5p13.1	A/C	1	1	0	0
rs2257205	A	RNF43	17q22	A/G	1	1	1	1
rs2273669	G	ARMC2	6q21	A/G	1	1	1	1
rs2274223	G	PLCE1	10q23.33	A/G	0	0	0	0
rs2283873	A	TCN2	22q12.2	A/G	1	1	0	0
rs2285947	A	DNAH11	7p15.3	A/G	1	1	1	1
rs2290854	A	MDM4	1q32.1	C/T	1	1	1	1
rs2292884	G	MLPH	2q37.3	A/G	1	1	1	1
rs2294008	T	PSCA	8q24.3	C/T	1	1	1	1
rs2342002	T		6q11.1	C/T	1	1	0	0
rs2352028	A	GPC5	13q31.3	C/T	1	1	1	1
rs2363956	T	ANKLE1	19p13.11	G/T	0	0	0	0
rs2371030	G		2q34	A/G	1	1	1	1
rs2380205	C		10p15.1	C/T	1	1	1	1
rs2395185	T				1	1	0	0
rs2405942	A	SHROOM2	Xp22.2	A/G	0	0	0	0
rs2423279	C		20p12.3	C/T	1	1	1	1
rs2427345	G		20q13.33	C/T	1	1	1	1
rs2439302	G	NRG1	8p12	C/G	0	0	0	0
rs2466024	A		8q24.21	A/G	1	0	1	0

rs2466035	C		8q24.21	C/T	1	1	1	1
rs2494938	A	LRFN2	6p21.1	A/G	1	1	1	1
rs2495478	T	PCSK9	1p32.3	C/T	1	1	1	1
rs2511714	G	ODF1	8q22.3	G/T	1	1	1	1
rs2562796	T	HIBCH	2q32.2	G/T	1	1	1	1
rs258322	A	CDK10	16q24.3	C/T	1	1	1	1
rs2588809	T	RAD51L1	14q24.1	C/T	1	1	1	1
rs2596542	A				1	1	0	0
rs2608053	G	PVT1	8q24.21	A/G	1	1	1	1
rs2621416	G				1	1	0	0
rs2647012	G				1	1	0	0
rs2660753	T		3p12.1	C/T	1	0	1	0
rs2665390	C	LOC100287227	3q25.31	C/T	1	1	1	1
rs2687201	T		3p13	A/C	1	1	1	1
rs2689154	G		1q43	C/G	0	0	0	0
rs2735839	G	KLK3	19q13.33	A/G	1	1	1	1
rs2797501	A	GDI2	10p15.1	A/G	1	1	1	1
rs2808630	G	CRP	1q23.2	C/T	1	1	1	1
rs2823093	G		21q21.1	A/G	1	1	1	1
rs2847281	C	PTPN2	18p11.21	C/T	1	1	1	1
rs2853677	C	TERT	5p15.33	C/T	1	1	0	0
rs2900333	C	PLBD1	12p13.1	C/T	1	1	1	1
rs2926702	T	NCOA2	8q13.3	A/G	1	1	1	1
rs2943559	G		8q21.11	A/G	1	1	1	1
rs2981578	C	FGFR2	10q26.13	A/G	1	0	1	0
rs2981579	A	FGFR2	10q26.13	C/T	1	1	1	1
rs2981582	A	FGFR2	10q26.13	C/T	0	0	0	0
rs3016539	A	PARK2	6q26	A/G	1	1	1	1
rs3096702	A				1	1	0	0
rs3112612	T		16q12.2	C/T	1	0	1	0
rs3117582	C				1	1	0	0
rs31489	C	CLPTM1L	5p15.33	A/C	0	0	0	0
rs31490	A	CLPTM1L	5p15.33	A/G	1	0	1	0
rs3217810	T	CCND2	12p13.32	C/T	0	0	0	0
rs3217901	G	CCND2	12p13.32	A/G	1	1	1	1
rs3219090	C	PARP1	1q42.12	A/G	1	1	1	1
rs339331	T	RFX6	6q22.1	C/T	1	1	1	1
rs34289250	C	BRIP1	17q23.2	C/T	0	0	0	0
rs36600	A	MTMR3	22q12.2	C/T	1	1	1	1
rs372883	T	BACH1	21q21.3	A/G	1	1	1	1
rs3734805	C	C6orf97	6q25.1	A/C	1	0	1	0
rs3750817	T	FGFR2	10q26.13	C/T	1	0	1	0
rs3755132	G	DDX1	2p24.3	G/T	1	1	1	1
rs3757318	A	C6orf97	6q25.1	A/G	1	1	1	1
rs3760982	A	KCNN4	19q13.31	A/G	1	1	1	1
rs3765524	T	PLCE1	10q23.33	C/T	1	0	1	0
rs3769825	T	CASP8	2q33.1	C/T	1	1	1	1
rs3771570	A	FARP2	2q37.3	C/T	1	1	1	1
rs3781264	C	PLCE1	10q23.33	C/T	1	1	1	1
rs3784099	A	RAD51L1	14q24.1	A/G	1	1	1	1
rs3790844	T	NR5A2	1q32.1	C/T	1	1	1	1
rs3802842	C	C11orf93	11q23.1	A/C	1	1	1	1
rs3803662	A	TOX3	16q12.1	C/T	1	1	1	1
rs3806624	G	EOMES	3p24.1	C/T	1	1	1	1
rs3814113	T		9p22.2	C/T	1	1	1	1
rs3817198	C	LSP1	11p15.5	C/T	1	0	1	0

rs3817963	G				1	1	0	0
rs3824662	T	GATA3	10p14	G/T	1	1	1	1
rs3850699	A	TRIM8	10q24.32	C/T	1	1	1	1
rs3903072	G		11q13.1	A/C	1	1	1	1
rs391023	G	IRF8	16q24.1	A/G	1	1	1	1
rs402710	C	CLPTM1L	5p15.33	C/T	1	1	1	1
rs4072037	A	MUC1	1q22	A/G	1	1	1	1
rs41322152	C	NPFFR1	10q22.1	C/G	0	0	0	0
rs4132601	C	IKZF1	7p12.2	G/T	1	1	1	1
rs4242382	A		8q24.21	A/G	1	0	1	0
rs4242384	C		8q24.21	A/C	1	1	1	1
rs4245739	A	MDM4	1q32.1	A/C	0	0	0	0
rs4269383	C		6q25.3	A/G	1	1	1	1
rs4322600	G		14q31.3	A/G	1	1	1	1
rs4324798	A				1	1	0	0
rs4368253	C		18q21.32	C/T	1	1	1	1
rs4406737	G	FAS	10q23.31	A/G	1	1	1	1
rs4415084	T		5p12	C/T	1	0	0	0
rs4430796	A	HNF1B	17q12	A/G	1	0	0	0
rs4444235	C	BMP4	14q22.2	C/T	1	1	1	1
rs445114	T		8q24.21	C/T	1	1	1	1
rs4474514	A	KITLG	12q21.32	A/G	1	1	1	1
rs4488809	C	TP63	3q28	C/T	1	0	1	0
rs4510656	C	CDKAL1	6p22.3	A/C	1	1	1	1
rs4530903	T				1	1	0	0
rs455804	C	NCRNA00110	21q21.3	G/T	1	1	1	1
rs4610302	G	SPARCL1	4q22.1	A/G	1	1	1	1
rs4635969	T	CLPTM1L	5p15.33	C/T	1	1	1	1
rs4691139	G	TRIM61	4q32.3	A/G	1	1	1	1
rs4767364	A	NAA25	12q24.13	A/G	1	1	1	1
rs4784227	T		16q12.1	C/T	0	0	0	0
rs4785204	T	HEATR3	16q12.1	C/T	1	1	1	1
rs4785763	A	DBNDD1	16q24.3	A/C	1	1	1	1
rs4795519	C		17q11.1	A/C	1	1	1	1
rs4808801	A	ELL	19p13.11	A/G	1	1	1	1
rs4813802	G		20p12.3	G/T	1	1	1	1
rs4822983	T	CHEK2	22q12.1	C/T	0	0	0	0
rs4849887	C		2q14.2	C/T	1	1	1	1
rs4869742	T	C6orf97	6q25.1	C/T	1	1	1	1
rs4924410	A	SRP14	15q15.1	A/C	1	1	1	1
rs4924935	G	PRPSAP2	17p11.2	C/T	1	1	1	1
rs4925386	C	LAMA5	20q13.33	C/T	1	1	1	1
rs4927850	A		3q29	C/T	1	1	1	1
rs4939827	T	SMAD7	18q21.1	C/T	1	1	1	1
rs4962416	C	CTBP2	10q26.13	C/T	1	1	1	1
rs4982731	C	CEBPE	14q11.2	C/T	1	1	1	1
rs4987855	G	BCL2	18q21.33	A/G	1	1	1	1
rs501764	C	FLJ45983	10p14	G/T	1	1	1	1
rs505922	C	ABO	9q34.2	C/T	1	1	1	1
rs527616	G		18q11.2	C/G	0	0	0	0
rs539901	G		15q21.3	G/T	1	1	0	0
rs546784	A	PDE4B	1p31.3	A/G	0	0	0	0
rs563507	A	PARD3	10p11.21	A/G	1	1	1	1
rs573666	G		13q14.3	A/G	1	1	1	1
rs5768709	G	FAM19A5	22q13.32	A/G	1	1	1	1
rs5919432	A		Xq12	C/T	0	0	0	0

rs59336	T	TBX3	12q24.21	A/T	0	0	0	0
rs5945572	A	NUDT11	Xp11.22	A/G	0	0	0	0
rs5945619	C	NUDT11	Xp11.22	C/T	0	0	0	0
rs5955543	G	NHS	Xp22.13	A/G	0	0	0	0
rs6001930	C	MKL1	22q13.1	C/T	1	1	1	1
rs6062509	A	LIME1	20q13.33	G/T	1	1	1	1
rs6104690	A		20p12.2	A/G	1	1	1	1
rs614367	T		11q13.3	C/T	1	1	1	1
rs616488	A	PEX14	1p36.22	C/T	1	0	1	0
rs6428370	G		1q31.3	A/G	1	1	1	1
rs6457327	C				1	1	0	0
rs6464375	A	DPP6	7q36.2	C/T	1	1	1	1
rs6465657	C	LMTK2	7q21.3	C/T	1	1	1	1
rs647161	A		5q31.1	A/C	1	1	1	1
rs6472903	T		8q21.11	G/T	1	1	1	1
rs6479272	T	SLC35D2	9q22.32	C/T	1	1	1	1
rs6479527	C	PTPDC1	9q22.32	A/G	1	0	1	0
rs6503659	A	HAP1	17q21.2	A/T	0	0	0	0
rs6504950	G	STXBP4	17q22	A/G	1	1	1	1
rs651164	G	SLC22A1	6q25.3	A/G	1	1	1	1
rs6683977	C	PDE4B	1p31.3	C/G	0	0	0	0
rs6687758	G		1q41	A/G	1	1	1	1
rs6691170	T		1q41	G/T	1	1	1	1
rs671	A	ALDH2	12q24.12	A/G	1	1	0	0
rs6711606	A	RNF149	2q11.2	G/T	1	1	1	1
rs6736997	A		2q37.2	A/C	1	1	0	0
rs674313	T		6p21.32	A/G	1	1	0	0
rs6753473	G	GPR113	2p23.3	G/T	1	1	1	1
rs6759952	T	DIRC3	2q35	C/T	1	0	1	0
rs6762644	G	ITPR1	3p26.1	A/G	1	1	1	1
rs6763931	T	ZBTB38	3q23	A/G	1	1	1	1
rs6772209	G		3q26.31	A/G	0	0	0	0
rs6773854	C		3q27.3	C/T	1	1	1	1
rs6788895	G	SIAH2	3q25.1	G/T	1	1	0	0
rs6828523	C	ADAM29	4q34.1	A/C	1	1	1	1
rs684232	G	VPS53	17p13.3	A/G	1	1	1	1
rs6858698	C	CAMK2D	4q26	C/G	0	0	0	0
rs6869388	C	C5orf36	5q15	C/T	1	1	1	1
rs6869841	A		5q35.2	C/T	1	1	1	1
rs6879627	G		5p15.33	C/T	1	1	1	1
rs6903608	G				1	1	0	0
rs6964969	C	IKZF1	7p12.2	A/G	0	0	0	0
rs6983267	G		8q24.21	G/T	1	1	1	1
rs6983561	C		8q24.21	A/C	1	1	0	0
rs7014346	A	POU5F1B	8q24.21	A/G	1	0	1	0
rs7023329	A	MTAP	9p21.3	A/G	1	1	1	1
rs7040024	A	DMRT1	9p24.3	A/C	1	1	1	1
rs704010	T	ZMIZ1	10q22.3	A/G	1	1	1	1
rs7072776	A	MLLT10	10p12.31	A/G	1	0	1	0
rs707824	T		6p23	A/G	1	1	1	1
rs708224	A	BICD1	12p11.21	A/G	1	1	1	1
rs7086803	A	VTI1A	10q25.2	A/G	1	1	1	1
rs7089424	C	ARID5B	10q21.2	G/T	0	0	0	0
rs710521	A		3q28	A/G	1	1	1	1
rs7107217	C		11q24.3	A/C	1	1	1	1
rs7130881	G		11q13.3	A/G	1	1	1	1

rs7141529	G		14q24.1	C/T	1	1	1	1
rs7142143	C	PYGL	14q22.1	C/T	1	1	0	0
rs716274	G		11q22.3	A/G	1	1	1	1
rs7176508	A		15q23	A/G	1	1	1	1
rs720475	G	ARHGEF5	7q35	A/G	1	1	1	1
rs721048	A	EHBP1	2p15	A/G	1	1	1	1
rs7216064	A	BPTF	17q24.2	A/G	1	1	1	1
rs7241993	G		18q23	C/T	1	1	1	1
rs732765	G	DLST	14q24.3	A/G	1	1	1	1
rs7335046	G	UBAC2	13q32.3	C/G	0	0	0	0
rs735665	A		11q24.1	A/G	1	1	1	1
rs738722	T	HSCB	22q12.1	C/T	1	1	1	1
rs7412746	T		1q21.3	C/T	1	1	1	1
rs742134	G	BIK	22q13.2	A/G	1	1	1	1
rs7501939	C	HNF1B	17q12	C/T	1	1	1	1
rs7504990	A	DCC	18q21.2	C/T	1	1	1	1
rs7538876	A	PADI6	1p36.13	A/G	1	1	1	1
rs753955	G		13q12.12	C/T	1	1	1	1
rs755383	T	DMRT1	9p24.3	C/T	1	0	1	0
rs7554607	A	RYR2	1q43	A/G	1	1	1	1
rs757210	G	HNF1B	17q12	A/G	1	0	1	0
rs7574865	G	STAT4	2q32.3	G/T	1	1	1	1
rs7578361	C		2q23.2	G/T	0	0	0	0
rs757978	T	FARP2	2q37.3	A/G	1	1	1	1
rs7584330	C	MLPH	2q37.3	A/G	1	0	1	0
rs7591996	C		2p25.2	A/C	1	1	1	1
rs7611694	A	SIDT1	3q13.2	A/C	1	1	1	1
rs7626795	G	IL1RAP	3q28	A/G	1	1	1	1
rs7629490	T		3p11.2	C/T	1	1	1	1
rs7716600	A		5p12	A/C	1	1	1	1
rs7745098	G		6q23.3	C/T	1	1	1	1
rs7758229	T	SLC22A3	6q25.3	G/T	1	1	1	1
rs7832232	A		8p11.22	A/G	1	1	1	1
rs78378222	C	TP53	17p13.1	A/C	1	1	1	1
rs7853844	A	1-Dec	9q33.1	A/G	1	1	1	1
rs790356	G	DLG2	11q14.1	A/G	1	1	1	1
rs7904519	G	TCF7L2	10q25.2	A/G	1	0	1	0
rs7931342	G		11q13.3	G/T	1	0	1	0
rs7944004	T	C11orf21	11p15.5	G/T	1	0	0	0
rs798766	T	TACC3	4p16.3	C/T	1	1	1	1
rs8008270	G	FERMT2	14q22.1	C/T	1	1	1	1
rs801114	G		1q42.13	G/T	1	1	1	1
rs8015138	C		14q22.1	A/C	1	1	1	1
rs8023845	G		15q15.1	G/T	1	0	1	0
rs8030672	A		15q23	A/T	0	0	0	0
rs8034191	G	AGPHD1	15q25.1	C/T	1	1	1	1
rs8048207	T	CDH8	16q21	C/T	1	1	1	1
rs8067378	G	GSDMB	17q12	A/G	1	1	1	1
rs807624	A		2p24.3	A/C	1	0	1	0
rs8100241	G	ANKLE1	19p13.11	A/G	1	1	1	1
rs8102137	C	CCNE1	19q12	C/T	1	1	1	1
rs8102476	C	PPP1R14A	19q13.2	C/T	1	1	1	1
rs817826	C		9q31.2	C/T	1	1	1	1
rs865686	T		9q31.2	G/T	1	1	1	1
rs872071	G	IRF4	6p25.3	A/G	1	1	1	1
rs889312	C		5q11.2	A/C	1	0	1	0

rs898518	A	LEF1	4q25	A/C	1	1	1	1
rs902774	A		12q13.13	A/G	1	1	1	1
rs907611	A	LSP1	11p15.5	A/G	1	1	0	0
rs909116	T	TNNT3	11p15.5	C/T	1	1	1	1
rs910873	T	PIGU	20q11.22	A/G	1	1	1	1
rs926070	A				1	1	0	0
rs9268853	C				1	1	0	0
rs9272105	A				1	1	0	0
rs9272535	A	HLA-DQA1	6p21.32	A/G	0	0	0	0
rs9273363	A				1	1	0	0
rs9275319	A				1	1	0	0
rs9275572	A				1	1	0	0
rs9290663	T	KCNMB2	3q26.32	A/T	0	0	0	0
rs9303196	T		17p13.2	A/T	0	0	0	0
rs9303542	G	SKAP1	17q21.32	A/G	1	1	1	1
rs9363918	A		6q12	G/T	1	1	1	1
rs9364554	T	SLC22A3	6q25.3	C/T	1	0	1	0
rs9378805	C	IRF4	6p25.3	A/C	1	0	1	0
rs9383938	T		6q25.1	G/T	1	0	1	0
rs9383951	G	ESR1	6q25.1	C/G	0	0	0	0
rs9387478	C		6q22.1	A/C	1	1	1	1
rs9390123	A	PHACTR2	6q24.2	C/T	1	1	1	1
rs941764	G	CCDC88C	14q32.11	A/G	1	1	1	1
rs9430161	G	C1orf127	1p36.22	G/T	1	1	1	1
rs944289	T		14q13.3	C/T	1	1	1	1
rs9485372	G		6q25.1	A/G	1	1	1	1
rs948562	G	ZFP91	11q12.1	C/T	1	1	1	1
rs9502893	G		6p25.3	C/T	1	1	1	1
rs9543325	C		13q22.1	C/T	0	0	0	0
rs9557635	A	NALCN	13q33.1	A/G	1	1	1	1
rs9573163	G		13q22.1	C/G	0	0	0	0
rs9600079	T		13q22.1	G/T	1	1	1	1
rs961253	A		20p12.3	A/C	1	1	1	1
rs9623117	C	TNRC6B	22q13.1	C/T	1	1	1	1
rs9642880	T		8q24.21	G/T	1	1	1	1
rs965513	A		9q22.33	A/G	1	1	1	1
rs966423	C	DIRC3	2q35	C/T	1	1	1	1
rs9693444	A		8p12	A/C	1	1	1	1
rs971074	G	ADH7	4q23	A/G	1	1	1	1
rs975334	C	CNTN4	3p26.2	C/T	1	1	1	1
rs9783347	A	GTF2H1	11p15.1	A/G	1	1	1	1
rs9790517	T	TET2	4q24	C/T	1	1	1	1
rs981782	C	HCN1	5p12	G/T	1	1	1	1
rs9868873	G	SEMA5B	3q21.1	A/G	1	1	1	1
rs9874556	A		3p26.2	A/G	1	1	1	1
rs9929218	G	CDH1	16q22.1	A/G	1	1	1	1
rs9934948	C		16q22.3	C/T	1	1	1	1
rs9958208	A	RIT2	18q12.3	A/G	1	1	1	1
rs9981861	G	DSCAM	21q22.2	C/T	1	1	1	1
rs999737	C	RAD51L1	14q24.1	C/T	1	1	1	1

Table S5: Characteristics of New England Centenarian Study Controls (N=281)		
Alive/Deceased ¹	Mean Age ²	Male/Female
189/70	78.3	161/120

1 – 22 Controls were lost to follow-up

2 – Mean age at death or date of last contact

Table S6: Results of Poisson GLM Ignoring Family Correlation – LLFS Data

Alzheimer's Disease									
	LD threshold of $r^2 > 0.8$ (93 SNPs)			LD threshold of $r^2 > 0.2$ (83 SNPs)			Published GRS (8 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	-0.01520	-1.53	0.125	-0.00622	-0.61	0.545	-0.02261	-0.73	0.465
Generation Two	-0.00975	-1.91	0.056	-0.00471	-0.89	0.373	-0.01231	-0.77	0.442
Both Generations	-0.01114	-2.47	0.013	-0.00529	-1.13	0.258	-0.01635	-1.16	0.248
CVD and Stroke									
	LD threshold of $r^2 > 0.8$ (239 SNPs)			LD threshold of $r^2 > 0.2$ (218 SNPs)			Published GRS (20 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	-0.00361	-0.62	0.534	-0.00380	-0.62	0.533	0.02636	1.36	0.173
Generation Two	-0.00022	-0.07	0.942	-0.00134	-0.43	0.669	0.00527	0.53	0.595
Both Generations	-0.00105	-0.40	0.693	-0.00203	-0.73	0.463	0.00899	1.03	0.305
Type 2 Diabetes									
	LD threshold of $r^2 > 0.8$ (155 SNPs)			LD threshold of $r^2 > 0.2$ (137 SNPs)			Published GRS (14 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	0.00319	0.48	0.629	0.00376	0.53	0.595	0.01409	0.64	0.523
Generation Two	0.00486	1.43	0.153	0.00401	1.10	0.270	0.01397	1.23	0.219
Both Generations	0.00459	1.53	0.127	0.00406	1.26	0.206	0.01512	1.51	0.132
Cancer									
	LD threshold of $r^2 > 0.8$ (431 SNPs)			LD threshold of $r^2 > 0.2$ (386 SNPs)					
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval			
Generation One	-0.00074	-0.17	0.862	-0.00161	-0.36	0.718			
Generation Two	0.00040	0.18	0.855	-0.00052	-0.23	0.820			
Both Generations	0.00039	0.20	0.842	-0.00051	-0.25	0.803			

1 – β Estimate is for the regression coefficient for the familial longevity indicator (0=control, 1=proband or relative of proband), in log-scale for the analysis of generation one subjects (N=1562), generation two subjects (N=3102), and aggregated data from both generations. The results of generation one and two are adjusted for sex. The results of aggregated data from both generations are adjusted for sex and generation.

Table S7: Results of Poisson GLM with GEE using Exchangeable Correlation Structure – LLFS Data

Alzheimer's Disease									
	LD threshold of $r^2 > 0.8$ (93 SNPs)			LD threshold of $r^2 > 0.2$ (83 SNPs)			Published GRS (8 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	-0.01668	-2.18	0.029	-0.00801	-1.13	0.258	-0.02190	-0.91	0.365
Generation Two	-0.00929	-2.11	0.034	-0.00390	-0.98	0.327	-0.01097	-0.78	0.435
Both Generations	-0.01037	-2.54	0.011	-0.00433	-1.16	0.245	-0.01568	-1.23	0.219
CVD and Stroke									
	LD threshold of $r^2 > 0.8$ (239 SNPs)			LD threshold of $r^2 > 0.2$ (218 SNPs)			Published GRS (20 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	-0.00407	-1.02	0.305	-0.00456	-1.12	0.263	0.02737	2.05	0.041
Generation Two	0.00043	0.18	0.855	-0.00076	-0.32	0.750	0.00475	0.63	0.529
Both Generations	-0.00067	-0.31	0.756	-0.00175	-0.80	0.423	0.01118	1.59	0.111
Type 2 Diabetes									
	LD threshold of $r^2 > 0.8$ (155 SNPs)			LD threshold of $r^2 > 0.2$ (137 SNPs)			Published GRS (14 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	0.00493	1.01	0.310	0.00603	1.26	0.207	0.01594	1.08	0.282
Generation Two	0.00627	2.27	0.023	0.00538	1.98	0.047	0.01707	2.12	0.034
Both Generations	0.00555	2.18	0.029	0.00503	2.00	0.045	0.01745	2.32	0.021
Cancer									
	LD threshold of $r^2 > 0.8$ (431 SNPs)			LD threshold of $r^2 > 0.2$ (386 SNPs)					
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval			
Generation One	0.00001	0.003	0.998	-0.00090	-0.26	0.791			
Generation Two	0.00003	0.02	0.985	-0.00067	-0.39	0.697			
Both Generations	0.00015	0.09	0.928	-0.00058	-0.35	0.729			

1 – β Estimate is for the regression coefficient for the familial longevity indicator (0=control, 1=proband or relative of proband), in log-scale for the analysis of generation one subjects (N=1562), generation two subjects (N=3102), and aggregated data from both generations. The results of generation one and two are adjusted for sex. The results of aggregated data from both generations are adjusted for sex and generation.

Table S8: Results of Linear Mixed Model with Random Intercept and Kinship Matrix – LLFS Data

Alzheimer's Disease									
	LD threshold of $r^2 > 0.8$ (93 SNPs)			LD threshold of $r^2 > 0.2$ (83 SNPs)			Published GRS (8 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	-0.00618	-2.20	0.028	-0.00298	-1.10	0.271	-0.01063	-1.02	0.307
Generation Two	-0.00330	-2.13	0.033	-0.00134	-0.91	0.363	-0.00359	-0.64	0.522
Both Generations	-0.00430	-3.30	0.001	-0.00232	-1.86	0.063	-0.00567	-1.18	0.238
CVD and Stroke									
	LD threshold of $r^2 > 0.8$ (239 SNPs)			LD threshold of $r^2 > 0.2$ (218 SNPs)			Published GRS (20 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	-0.00136	-0.86	0.390	-0.00158	-0.98	0.327	0.01171	2.04	0.041
Generation Two	0.00041	0.47	0.638	-0.00024	-0.27	0.787	0.00380	1.21	0.226
Both Generations	-0.00020	-0.27	0.787	-0.00075	-1.00	0.317	0.00452	1.71	0.088
Type 2 Diabetes									
	LD threshold of $r^2 > 0.8$ (155 SNPs)			LD threshold of $r^2 > 0.2$ (137 SNPs)			Published GRS (14 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	0.00238	1.11	0.267	0.00263	1.26	0.208	0.00833	1.21	0.225
Generation Two	0.00369	3.14	0.002	0.00322	2.81	0.005	0.00863	2.32	0.020
Both Generations	0.00307	3.09	0.002	0.00284	2.93	0.003	0.00845	2.68	0.007
Cancer									
	LD threshold of $r^2 > 0.8$ (431 SNPs)			LD threshold of $r^2 > 0.2$ (386 SNPs)					
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval			
Generation One	0.00007	0.05	0.959	-0.00029	-0.22	0.826			
Generation Two	0.00076	1.05	0.294	0.00024	0.34	0.732			
Both Generations	0.00095	1.56	0.119	0.00058	0.96	0.339			

1 – β Estimate is for the regression coefficient for the familial longevity indicator (0=control, 1=proband or relative of proband), in linear scale for the analysis of generation one subjects (N=1562), generation two subjects (N=3102), and aggregated data from both generations. The results of generation one and two are adjusted for sex. The results of aggregated data from both generations are adjusted for sex and generation.

Table S9: Results of Poisson Generalized Linear Mixed Model with Random Intercept per Family – LLFS & NECS Data									
Alzheimer's Disease									
	LD threshold of $r^2 > 0.8$ (81 SNPs)			LD threshold of $r^2 > 0.2$ (73 SNPs)			Published GRS (8 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	-0.01201	-1.41	0.159	-0.00185	-0.21	0.834	-0.00303	-0.12	0.905
Generation Two	-0.00946	-1.78	0.076	-0.00609	-1.11	0.267	-0.01230	-0.76	0.447
Both Generations	-0.01047	-2.29	0.022	-0.00558	-1.19	0.234	-0.00956	-0.69	0.490
CVD and Stroke									
	LD threshold of $r^2 > 0.8$ (205 SNPs)			LD threshold of $r^2 > 0.2$ (187 SNPs)			Published GRS (17 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	0.00110	0.21	0.831	0.00190	0.351	0.726	0.02291	1.28	0.201
Generation Two	-0.00090	-0.27	0.783	-0.00200	-0.58	0.556	0.00307	0.27	0.787
Both Generations	-0.00054	-0.19	0.847	-0.00110	-0.38	0.705	0.00700	0.72	0.471
Type 2 Diabetes									
	LD threshold of $r^2 > 0.8$ (140 SNPs)			LD threshold of $r^2 > 0.2$ (123 SNPs)			Published GRS (14 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	0.00102	0.18	0.858	0.00198	0.32	0.746	0.02868	1.59	0.112
Generation Two	0.00578	1.58	0.114	0.00524	1.34	0.180	0.01397	1.23	0.219
Both Generations	0.00425	1.36	0.173	0.00413	1.24	0.214	0.01828	1.90	0.058
Cancer									
	LD threshold of $r^2 > 0.8$ (377 SNPs)			LD threshold of $r^2 > 0.2$ (336 SNPs)					
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval			
Generation One	0.00355	0.97	0.331	0.00374	0.97	0.330			
Generation Two	0.00066	0.28	0.777	0.00021	0.09	0.932			
Both Generations	0.00130	0.65	0.514	0.00104	0.50	0.616			

1 - β Estimate is for the regression coefficient for the familial longevity indicator (0=control, 1=proband or relative of proband), in log-scale for the analysis of generation one subjects (LLFS N=1387, NECS N=281), generation two subjects (N=3102), and aggregated data from both generations. The results of generation one and two are adjusted for sex. The results of aggregated data from both generations are adjusted for sex and generation.

Table S10: Results of Poisson GLM Ignoring Family Correlation – LLFS & NECS Data

Alzheimer's Disease									
	LD threshold of $r^2 > 0.8$ (81 SNPs)			LD threshold of $r^2 > 0.2$ (73 SNPs)			Published GRS (8 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	-0.01196	-1.43	0.153	-0.00185	-0.21	0.831	-0.00297	-0.12	0.907
Generation Two	-0.00911	-1.72	0.085	-0.00578	-1.06	0.291	-0.01231	-0.77	0.442
Both Generations	-0.00994	-2.23	0.026	-0.00468	-1.01	0.311	-0.00981	-0.73	0.468
CVD and Stroke									
	LD threshold of $r^2 > 0.8$ (205 SNPs)			LD threshold of $r^2 > 0.2$ (187 SNPs)			Published GRS (17 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	0.00110	0.21	0.831	0.00190	0.35	0.726	0.02291	1.28	0.201
Generation Two	-0.00089	-0.28	0.784	-0.00200	-0.59	0.559	0.00377	0.33	0.739
Both Generations	-0.00035	-0.13	0.898	-0.00093	-0.32	0.748	0.00923	0.97	0.334
Type 2 Diabetes									
	LD threshold of $r^2 > 0.8$ (140 SNPs)			LD threshold of $r^2 > 0.2$ (123 SNPs)			Published GRS (14 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	0.00102	0.18	0.858	0.00198	0.32	0.746	0.02868	1.59	0.111
Generation Two	0.00669	1.85	0.064	0.00597	1.54	0.124	0.01397	1.23	0.219
Both Generations	0.00511	1.67	0.095	0.00488	1.49	0.136	0.01833	1.91	0.056
Cancer									
	LD threshold of $r^2 > 0.8$ (377 SNPs)			LD threshold of $r^2 > 0.2$ (336 SNPs)					
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval			
Generation One	0.00355	0.97	0.331	0.00374	0.97	0.330			
Generation Two	0.00084	0.36	0.717	0.00021	0.09	0.932			
Both Generations	0.00166	0.85	0.396	0.00126	0.61	0.540			

1 – β Estimate is for the regression coefficient for the familial longevity indicator (0=control, 1=proband or relative of proband), in log-scale for the analysis of generation one subjects (LLFS N=1387, NECS N=281), generation two subjects (N=3102), and aggregated data from both generations. The results of generation one and two are adjusted for sex. The results of aggregated data from both generations are adjusted for sex and generation.

Table S11: Results of Poisson GLM with GEE using Exchangeable Correlation Structure – LLFS & NECS Data

Alzheimer's Disease									
	LD threshold of $r^2 > 0.8$ (81 SNPs)			LD threshold of $r^2 > 0.2$ (73 SNPs)			Published GRS (8 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	-0.01251	-1.76	0.078	-0.00293	-0.45	0.653	-0.00608	-0.30	0.764
Generation Two	-0.00973	-2.09	0.036	-0.00729	-1.67	0.095	-0.01261	-0.87	0.386
Both Generations	-0.01062	-2.52	0.012	-0.00667	-1.67	0.095	-0.01009	-0.79	0.429
CVD and Stroke									
	LD threshold of $r^2 > 0.8$ (205 SNPs)			LD threshold of $r^2 > 0.2$ (187 SNPs)			Published GRS (17 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	0.00160	0.42	0.672	0.00189	0.49	0.624	0.02176	1.57	0.118
Generation Two	-0.00123	-0.44	0.663	-0.00239	-0.81	0.417	-0.00095	-0.10	0.930
Both Generations	-0.00087	-0.33	0.740	-0.00154	-0.58	0.560	0.00323	0.35	0.729
Type 2 Diabetes									
	LD threshold of $r^2 > 0.8$ (140 SNPs)			LD threshold of $r^2 > 0.2$ (123 SNPs)			Published GRS (14 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	0.00372	0.94	0.348	0.00470	1.17	0.242	0.03054	2.51	0.012
Generation Two	0.00422	1.06	0.290	0.00363	0.88	0.381	0.01355	1.48	0.138
Both Generations	0.00381	1.06	0.290	0.00341	0.92	0.357	0.01771	2.16	0.031
Cancer									
	LD threshold of $r^2 > 0.8$ (377 SNPs)			LD threshold of $r^2 > 0.2$ (336 SNPs)					
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval			
Generation One	0.00388	1.35	0.179	0.00392	1.39	0.166			
Generation Two	-0.00017	-0.08	0.934	-0.00072	-0.37	0.715			
Both Generations	0.00079	0.42	0.674	0.00042	0.24	0.812			

1 – β Estimate is for the regression coefficient for the familial longevity indicator (0=control, 1=proband or relative of proband), in log-scale for the analysis of generation one subjects (LLFS N=1387, NECS N=281), generation two subjects (N=3102), and aggregated data from both generations. The results of generation one and two are adjusted for sex. The results of aggregated data from both generations are adjusted for sex and generation.

Table S12: Results of Linear Mixed Model with Random Intercept and Kinship Matrix – LLFS & NECS Data

Alzheimer's Disease									
	LD threshold of $r^2 > 0.8$ (81 SNPs)			LD threshold of $r^2 > 0.2$ (73 SNPs)			Published GRS (8 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	-0.00478	-1.81	0.070	-0.00112	-0.44	0.660	-0.00236	-0.27	0.787
Generation Two	-0.00299	-1.79	0.073	-0.00161	-0.99	0.322	-0.00359	-0.64	0.522
Both Generations	-0.00334	-2.25	0.024	-0.00150	-1.04	0.300	-0.00276	-0.55	0.582
CVD and Stroke									
	LD threshold of $r^2 > 0.8$ (205 SNPs)			LD threshold of $r^2 > 0.2$ (187 SNPs)			Published GRS (17 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	0.00068	0.46	0.644	0.00080	0.53	0.599	0.00887	1.65	0.098
Generation Two	0.00020	0.21	0.834	-0.00045	-0.46	0.646	0.00335	0.99	0.323
Both Generations	0.00025	0.30	0.767	-0.00021	-0.25	0.805	0.00464	1.54	0.123
Type 2 Diabetes									
	LD threshold of $r^2 > 0.8$ (140 SNPs)			LD threshold of $r^2 > 0.2$ (123 SNPs)			Published GRS (14 SNPs)		
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval	β^1	Z-Stat	pval
Generation One	0.00166	0.86	0.390	0.00212	1.11	0.267	0.01503	2.57	0.010
Generation Two	0.00457	3.60	.0003	0.00416	3.34	0.001	0.00863	2.32	0.020
Both Generations	0.00410	3.69	.0002	0.00390	3.57	.0004	0.01036	3.13	0.002
Cancer									
	LD threshold of $r^2 > 0.8$ (377 SNPs)			LD threshold of $r^2 > 0.2$ (336 SNPs)					
Data	β^1	Z-Stat	pval	β^1	Z-stat	pval			
Generation One	0.00168	1.36	0.174	0.00173	1.40	0.162			
Generation Two	0.00099	1.26	0.208	0.00058	0.74	0.459			
Both Generations	0.00124	1.78	0.075	0.00096	1.37	0.171			

1 – β Estimate is for the regression coefficient for the familial longevity indicator (0=control, 1=proband or relative of proband), in linear scale for the analysis of generation one subjects (LLFS N=1387, NECS N=281), generation two subjects (N=3102), and aggregated data from both generations. The results of generation one and two are adjusted for sex. The results of aggregated data from both generations are adjusted for sex and generation.

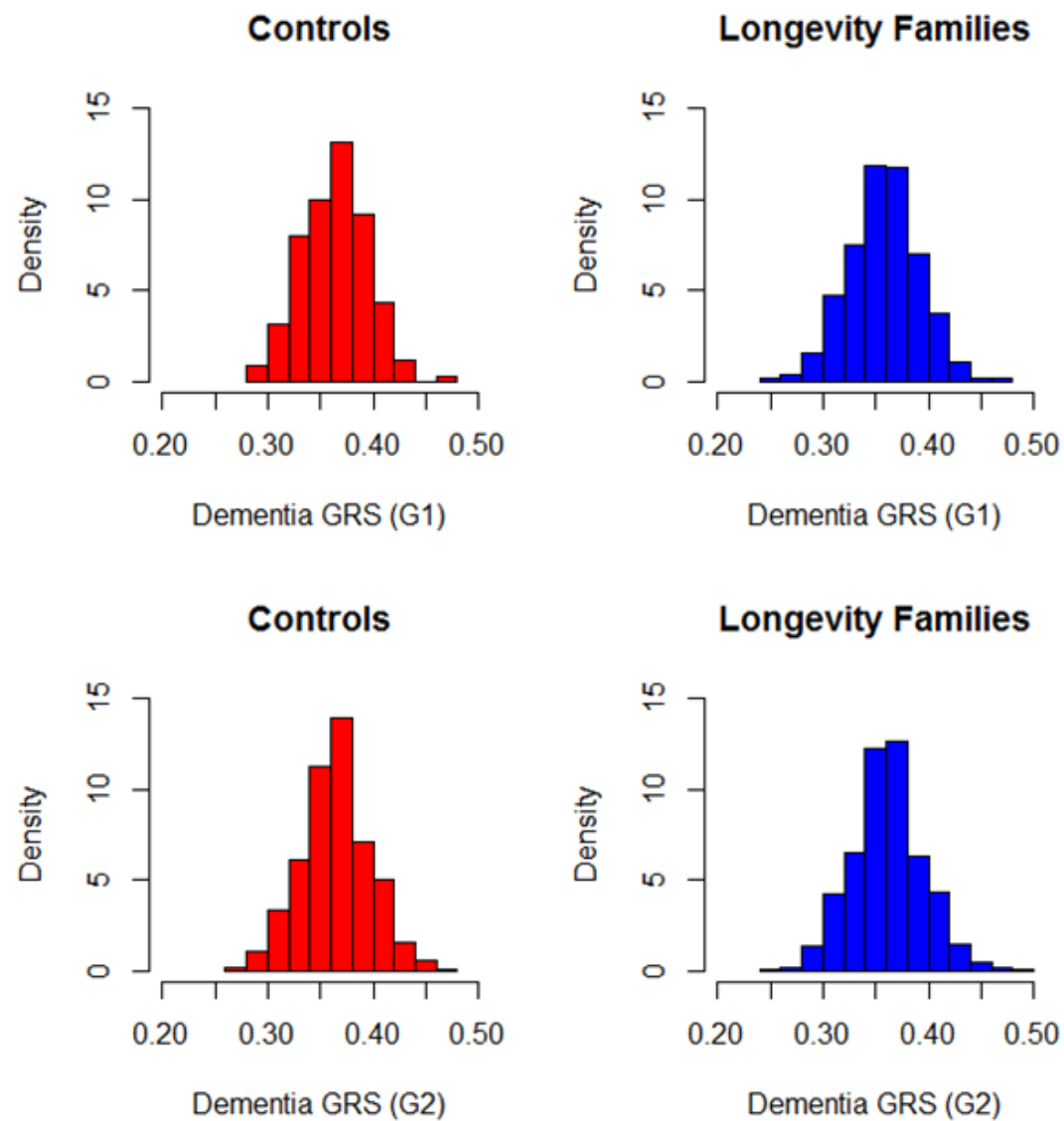


Figure S-1: Distribution of Alzheimer's disease GRS in Generations one and two

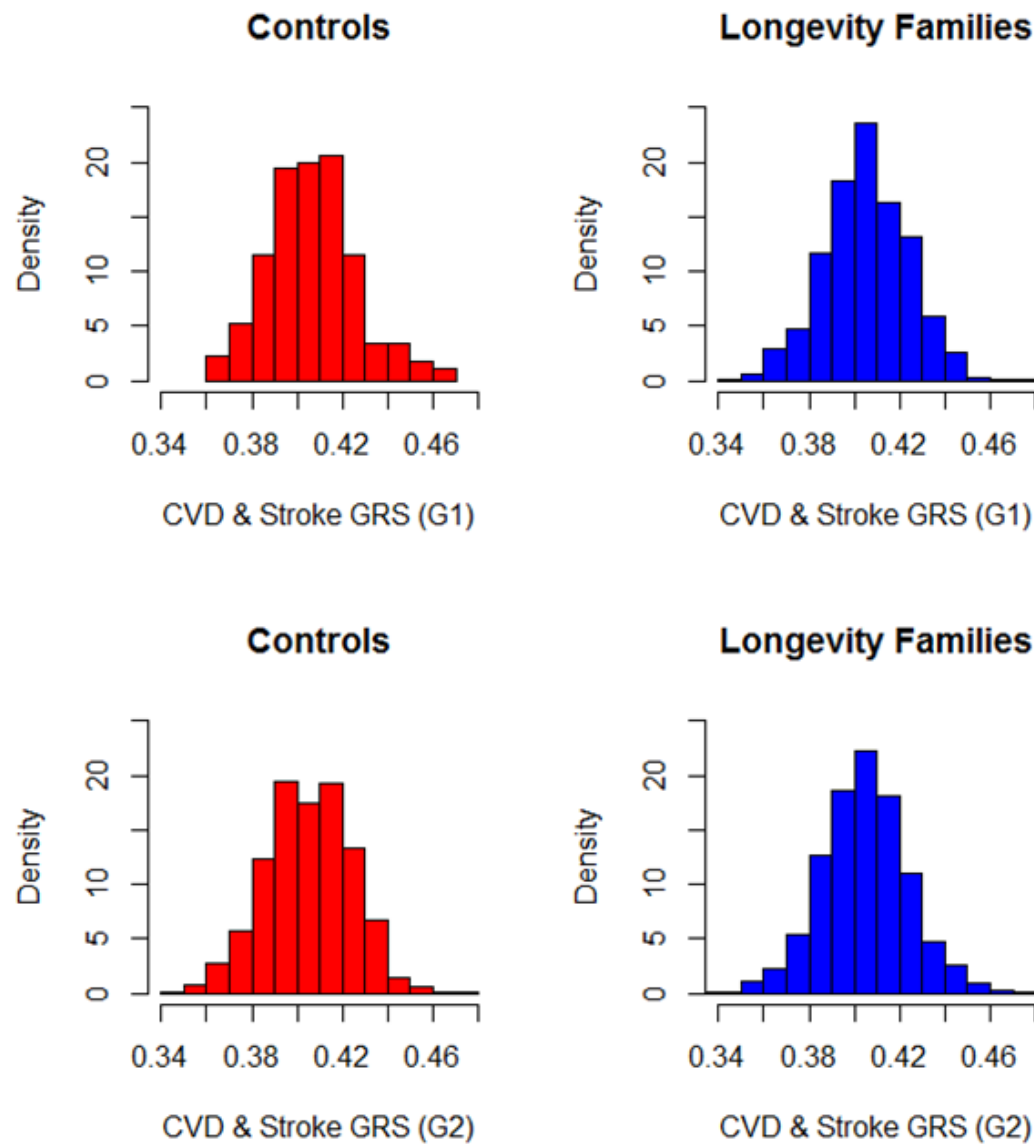


Figure S-2: Distribution of Cardiovascular Disease and Stroke GRS in Generations one and two

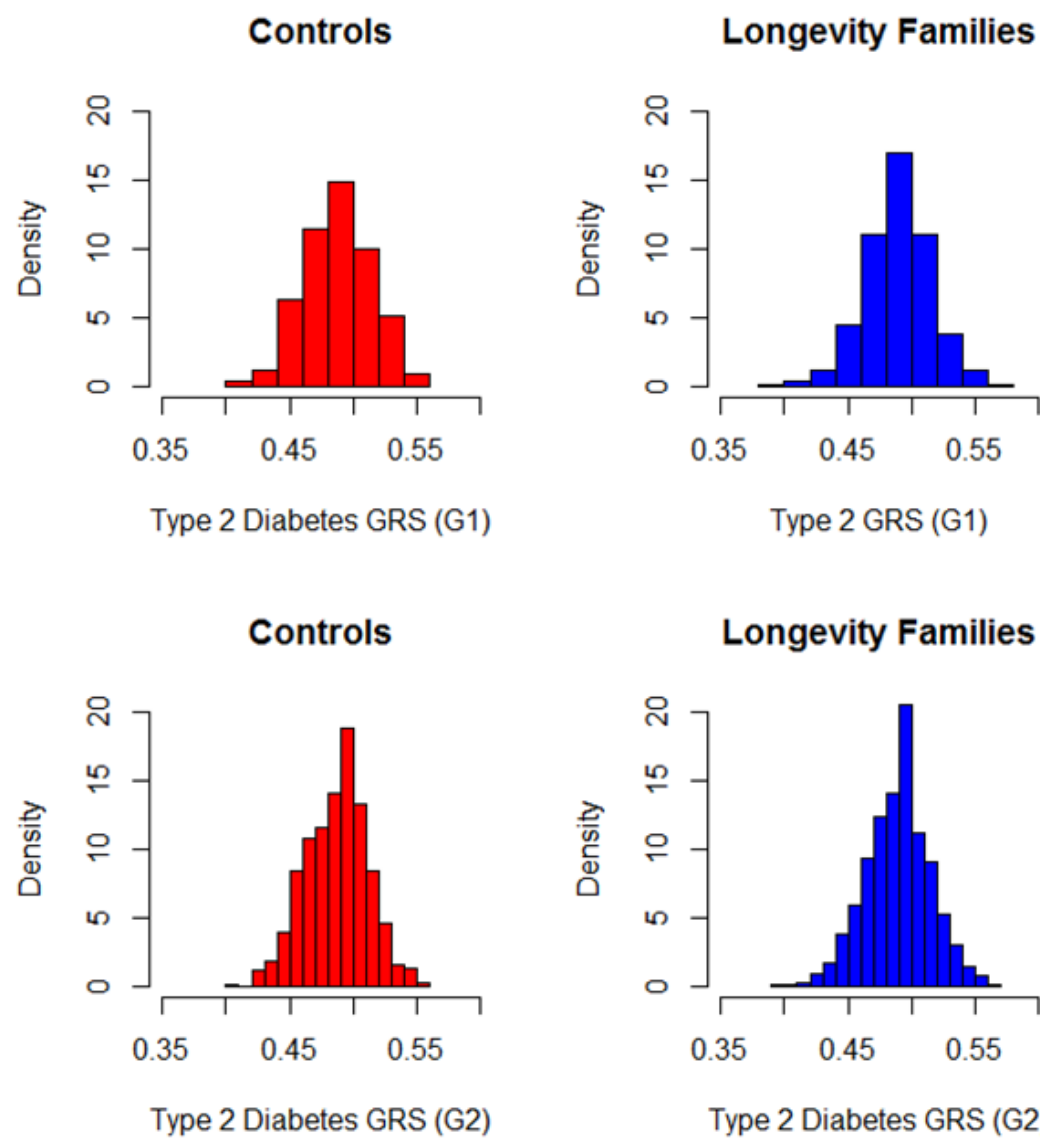


Figure S-3: Distribution of Type 2 Diabetes GRS in Generations one and two

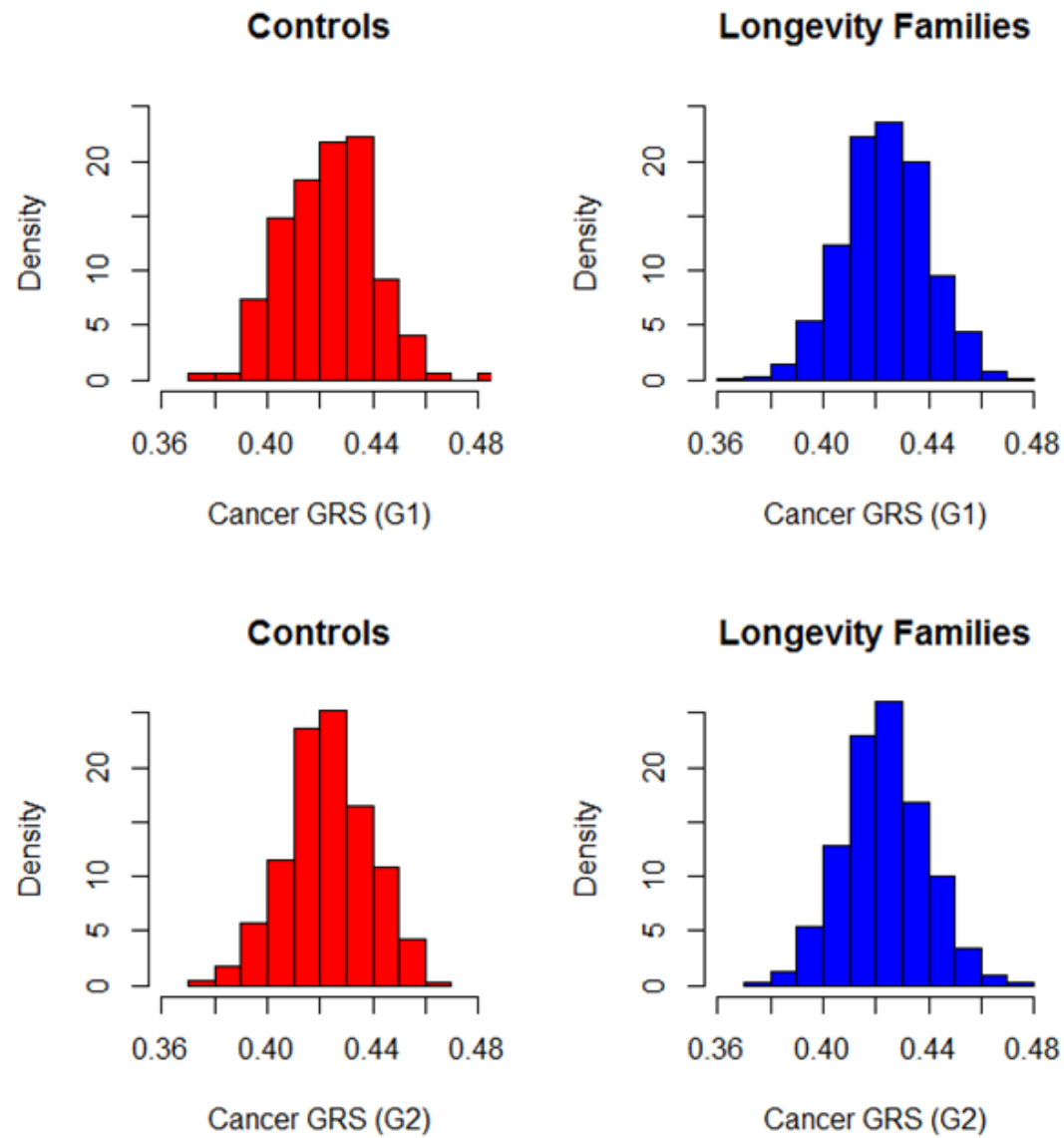


Figure S-4: Distribution of Cancer GRS in Generations one and two