

SUPPLEMENTARY MATERIALS

Supplementary Methods

Study Population: CIMBA Consortium

The Consortium of Investigators of Modifiers of BRCA1/2 (CIMBA) is an international collaboration developed to assess clinical and genetic risk factors in BRCA1/2 carriers and their respective associations with the development of breast and ovarian cancer [1, 2]. Investigators from 33 countries including 55 centers and multicenter consortia submitted de-identified data to a central database. The selection criteria for participants are as follows: 1) female carriers of verified disease-causing mutation in either *BRCA1* or *BRCA2* (participants were excluded if they carried mutations in both genes, N = 84) and 2), who were 18 years of age or older, with sufficient clinical data to assess risk which could include demographic/clinical characteristics, specific cancer diagnosis, ascertainment and follow-up dates, and history of prophylactic surgeries. At each center, carriers underwent interview and clinical testing or participated in a research study, after providing written informed consent in accordance with the local institutional review board. A family identifier was applied to indicate related individuals. Race/ethnicity were obtained via questionnaires in pre-defined categories or open-ended questions. Participants with self-reported non-European ancestry were excluded from the present analysis.

Genotyping and Imputation

The genotyping for the current analysis was conducted using the Collaborative Oncological Gene-Environment Study (iCOGS) custom array [3-5]. This array was part of a multi-consortia collaboration, including the Breast Cancer Association Consortium (BCAC), Ovarian Cancer Association Consortium (OCAC), and the Prostate Cancer Association Group to Investigate Cancer Associated Alterations in the Genome (PRACTICAL), to identify and replicate common and rare genetic variants associated with the development of breast, ovarian, and prostate cancers. Development of the array was divided among the consortium in the following distribution: 25% was allotted to each of BCAC, OCAC, and PRACTICAL, 17.5% to CIMBA, and the remaining 7.5% were designed to be from common pathways that have been previously researched. Ultimately, the iCOGs array comprised of 220,123 SNPs, of which 211,155 were successfully manufactured for genotyping.

Genotyping for *BRCA1* carriers was conducted at the Mayo Clinic (USA) and for *BRCA2* carriers at McGill University and Génome Québec Innovation Centre (both in Canada). Genotypes identified through the iCOGs array were called using the Illumina GenCall algorithm [3, 4]. A total of 270 samples from Hapmap2 were used to generate a cluster file for the initial file. For the final call, 3,018 individuals were selected, which included samples from each of the study centers, consortia, and ethnicities from the iCOGs collaboration. Plates at this stage that have a consistently high call rate were used. A different cluster file was generated using 380 genotyped samples from the 1000 Genomes project and Hapmap including European, African, and Asian ethnicity along with 160 positive control samples for rare variants for the iCOGs array. This file was used to call the remaining genotype samples. Subsequently, additional exclusion criteria for quality assurance were applied: 1) single nucleotide polymorphisms (SNPs) located on the Y chromosome, 2) monomorphic SNPs, 3) SNPs that deviated significantly from Hardy-Weinberg equilibrium ($P < 10^{-7}$), 4) SNPs with call rates $< 95\%$, or 5) SNPs demonstrating extreme heterozygosity [3, 5]. After applying these quality control measures to the original 211,155 SNPs from the iCOGs array, we included data on 200,720 SNPs in *BRCA1* mutation carriers and 200,908 SNPs in *BRCA2* mutation carriers. For SNPs not genotyped on the iCOGS custom array, imputation was performed using the IMPUTE2 software based on the January 2012 version of the 1,000 Genomes haplotype [6]. SNPs were excluded from the analysis if they had imputation quality $r^2 < 0.30$. After applying these quality control and exclusion criteria, the current analysis included genotype data from 14,676 *BRCA1* carriers (7,360 of them developed breast cancer) and 7,912 *BRCA2* carriers (4,091 of them developed breast cancer).

Principal components analysis was conducted using 33,661 autosomal SNPs ($MAF > 0.05$) that were weakly correlated with one another (pairwise $r^2 < 0.1$) with 267 HapMap samples (ancestries represented included CHB, JPT, YRI, and CEU) [3]. The first 15 principal components were available for analysis in the present study.

Two-stage Residual Inclusion Regression

In the main instrumental variable (IV) analysis of the data, we have constructed the literature-reported per-allele associations between BMI and SNPs to build a genetic score (GS) for BMI using the formula: $BMI - GS = \sum_{i=1}^{93} \beta_{XGi} SNP_i$. Then we used $BMI - GS$ in the Cox regression of ovarian cancer risk. This method and the inverse variance-weighted meta-analysis

method can both be considered as two-stage predictor substitution (2SPS) method, while the predictor is from the external genome-wide association of BMI in the literature. For non-linear models, the 2SPS methods may give biased estimates in theory [7]. An alternative method of the two-stage instrumental variable analysis is the two-stage residual inclusion (2SRI) method, which can give consistent estimates [7, 8]. For the present study, we described the 2SRI regression using BMI as an example. In the first stage, we fit a linear model of observed BMI as below:

$$BMI = \alpha_0 + \beta_{xg}GS + \alpha_2\mathbf{birthcohort} + \alpha_3\mathbf{country}_j + \alpha_4\mathbf{mutation} + \alpha_4\mathbf{PC} + e$$

where β_{xg} is the estimated effect of genetic score in the current BRCA1/2 study sample, **birthcohort**, **country**, **PC** (*principal components*) are vectors of the dummy variables the three factors, and e is the residual of the regression. Under the assumptions of instrumental variable analysis, e can represent the unobserved confounders. so if it is adjusted for, then the confounding effect for BMI would cease to exist.

In the second stage, we fit a stratified Cox model of ovarian cancer including both observed BMI and the residual e as below:

$$\log\left(\frac{h_j(t)}{h_j(0)}\right) = \beta_{yx}BMI + \beta_1e + \beta_2\mathbf{birthcohort} + \beta_3\mathbf{mutation} + \beta_4\mathbf{PC}$$

where β_{yx} is the IV estimate of interest, and j indicates category of study country for stratified Cox model. In both stage 1 and 2 of the model, we used the robust sandwich estimator of variance to account for non-independence among multiple carriers per family, but there is no easy close-form formula to calculate variance for the simultaneous two equation model. Therefore, we applied the bootstrapping method to estimate variance. In brief, we generated 10,000 randomly selected datasets with replacement, run the 2SRI 10,000 times, and the variation in β_{yx} estimates was used to calculate its 95% confidence interval.

Although the 2SRI method is preferred for non-linear IV regression in theory, its estimator β_{yx} is less stable than the 2SPS estimator β_{YX} because the 2SPS method utilized β_{XGi} directly and data from all study participants even if BMI was missing. Therefore, we considered the 2SRI method as a sensitivity analysis.

References

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The institutional committees that approved individual studies

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Columbia University Medical Center Institutional Review Board
Mount Sinai Hospital Research Ethics Board
Institutional Review Board Fox Chase Cancer Center
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Supplementary Table 1. List of 586 height-associated genetic variants and their associations with height in prior published GWAS and in CIMBA, along with effect on ovarian cancer risk in CIMBA

Rsid #	Chromosome	Position	Nearest gene	Published reference allele	Published effect allele	Effect allele frequency in published GWAS	Effect allele frequency in CIMBA	Imputation quality ¹	Published association with height			Association with height in CIMBA			Association with ovarian cancer in CIMBA			Association with ovarian cancer in BRCA1 carriers			Association with ovarian cancer in BRCA2 carriers		
									Beta ²	SE	P-value ³	Beta (cm)	SE	P-value ³	Log Hazard Ratio ⁴	SE	P-value ⁵	Log Hazard Ratio ⁴	SE	P-value ⁵	Log Hazard Ratio ⁴	SE	P-value ⁵
rs425277	1	2069172	<i>PRKCZ</i>	C	T	0.28	0.29	0.99	0.028	0.003	1E-17	0.072	0.117	0.5397	-0.018	0.036	0.614	-0.029	0.039	0.459	0.062	0.079	0.437
rs9434723	1	9292282	<i>H6PD</i>	G	A	0.16	0.15	0.72	0.029	0.004	9E-13	-0.182	0.170	0.2854	-0.019	0.053	0.722	-0.023	0.058	0.696	0.006	0.113	0.961
rs10779751	1	11284336	<i>FRAP1</i>	A	G	0.72	0.72	1.00	-0.021	0.003	2E-10	-0.127	0.117	0.2766	-0.014	0.036	0.687	-0.033	0.039	0.395	0.118	0.082	0.149
rs2284746	1	17306675	<i>MFAP2</i>	C	G	0.52	0.50	0.84	0.04	0.003	1E-40	0.422	0.113	0.0002	-0.014	0.035	0.680	-0.016	0.039	0.684	-0.006	0.077	0.936
rs12137162	1	19763396	<i>CAPZB</i>	C	A	0.28	0.26	0.88	0.019	0.003	4E-09	0.246	0.126	0.052	-0.014	0.039	0.720	-0.028	0.043	0.522	0.077	0.088	0.379
rs212524	1	21583311	<i>ECE1</i>	T	C	0.60	0.59	0.93	0.021	0.003	5E-12	-0.004	0.109	0.9699	-0.029	0.034	0.384	-0.045	0.037	0.229	0.072	0.075	0.334
rs1014987	1	22498824	<i>WNT4</i>	C	G	0.25	0.23	0.94	0.02	0.004	2E-08	-0.084	0.124	0.4964	0.028	0.038	0.467	0.030	0.042	0.476	0.012	0.079	0.883
rs2806561	1	23504795	<i>LUZP1</i>	A	G	0.43	0.43	0.73	-0.027	0.003	2E-20	-0.014	0.124	0.9128	-0.005	0.039	0.890	-0.017	0.043	0.702	0.067	0.083	0.418
rs4601530	1	25044111	<i>CLIC4</i>	C	T	0.26	0.28	0.55	-0.025	0.003	3E-14	-0.075	0.157	0.6336	0.057	0.047	0.229	0.041	0.052	0.433	0.158	0.102	0.122
rs17163588	1	26450009	<i>PDIK1L</i>	C	T	0.18	0.18	1	0.027	0.004	3E-12	0.404	0.136	0.003	0.041	0.041	0.314	0.032	0.045	0.475	0.102	0.094	0.276
rs2219320	1	26803430	<i>HMG2</i>	T	C	0.25	0.27	1	-0.022	0.004	2E-10	-0.512	0.117	<.0001	-0.009	0.036	0.794	-0.008	0.040	0.842	-0.016	0.081	0.843
rs12119525	1	27503662	<i>SLC9A1</i>	T	A	0.36	0.34	0.82	0.018	0.003	5E-09	-0.108	0.121	0.3737	0.037	0.037	0.313	0.037	0.041	0.357	0.032	0.083	0.704
rs16834765	1	32371442	<i>PTP4A2</i>	C	T	0.06	0.05	0.82	0.045	0.006	2E-12	0.394	0.263	0.1336	0.077	0.080	0.337	0.087	0.088	0.318	0.009	0.188	0.961
rs7544462	1	37962756	<i>C1orf149</i>	A	C	0.09	0.07	0.96	-0.032	0.005	2E-09	-0.282	0.207	0.174	-0.087	0.067	0.194	-0.050	0.073	0.491	-0.363	0.162	0.025
rs6600365	1	41556253	<i>SCMH1</i>	C	T	0.57	0.56	1.00	-0.027	0.003	2E-20	-0.179	0.106	0.0912	0.022	0.033	0.498	0.032	0.036	0.377	-0.044	0.065	0.495
rs564914	1	47915233	<i>FOXD2</i>	A	T	0.39	0.39	0.96	0.024	0.003	2E-15	0.157	0.108	0.1479	-0.029	0.033	0.387	-0.018	0.037	0.619	-0.108	0.075	0.148
rs12855	1	51440093	<i>CDKN2C</i>	C	T	0.09	0.10	0.96	0.038	0.005	7E-14	-0.018	0.181	0.9222	0.102	0.054	0.058	0.116	0.059	0.049	-0.005	0.121	0.970
rs17387330	1	54119578	<i>GLIS1</i>	G	A	0.32	0.27	0.67	0.017	0.003	4E-08	0.049	0.141	0.7302	-0.003	0.044	0.946	-0.028	0.049	0.565	0.159	0.092	0.083
rs6691924	1	54954245	<i>ACOT11</i>	C	T	0.90	0.88	0.50	0.032	0.005	2E-10	-0.486	0.228	0.0328	0.018	0.070	0.795	0.053	0.076	0.489	-0.222	0.163	0.174
rs2815379	1	67510474	<i>SLC35D1</i>	A	G	0.71	0.71	0.76	0.018	0.003	2E-08	0.076	0.131	0.5616	0.044	0.041	0.277	0.053	0.045	0.237	-0.015	0.091	0.865
rs17391694	1	78623626	<i>GIPC2</i>	C	T	0.12	0.10	0.66	0.043	0.005	4E-16	0.699	0.206	0.0007	0.017	0.068	0.801	0.012	0.074	0.869	0.050	0.153	0.744
rs567401	1	85988158	<i>DDAH1</i>	C	T	0.17	0.17	0.63	0.025	0.004	2E-09	0.198	0.171	0.2477	-0.069	0.055	0.210	-0.092	0.061	0.132	0.075	0.117	0.520
rs7551732	1	89139041	<i>PKN2</i>	T	A	0.61	0.60	0.95	0.027	0.003	6E-20	0.084	0.108	0.4404	0.033	0.034	0.332	0.036	0.037	0.332	0.003	0.073	0.962
rs2811594	1	93343282	<i>FAM69A</i>	A	G	0.63	0.65	0.93	0.024	0.003	4E-14	0.516	0.112	<.0001	0.036	0.035	0.305	0.030	0.039	0.440	0.084	0.079	0.289
rs17113369	1	95787223	<i>RWDD3</i>	T	C	0.03	0.04	0.81	-0.073	0.013	6E-09	-0.247	0.299	0.4097	-0.027	0.087	0.757	-0.011	0.095	0.909	-0.153	0.222	0.489
rs7517682	1	103519589	<i>COL11A1</i>	G	A	0.56	0.56	0.98	-0.023	0.003	4E-14	-0.153	0.107	0.1517	0.085	0.033	0.009	0.091	0.036	0.012	0.048	0.073	0.506
rs12120956	1	113202571	<i>CAPZA1</i>	G	A	0.23	0.20	0.95	-0.025	0.004	2E-12	-0.163	0.132	0.2172	0.014	0.039	0.718	0.009	0.042	0.841	0.053	0.087	0.546
rs1321666	1	118492052	<i>WDR3</i>	T	C	0.48	0.47	0.99	0.017	0.003	3E-08	-0.035	0.105	0.7379	0.049	0.033	0.137	0.045	0.036	0.208	0.071	0.076	0.354
rs9428104	1	118855587	<i>SPAG17</i>	A	G	0.75	0.75	1	0.043	0.003	3E-36	0.454	0.119	0.0001	0.036	0.036	0.319	0.027	0.039	0.489	0.099	0.082	0.229
rs12144094	1	120264823	<i>PHGDH</i>	C	G	0.16	0.16	0.96	-0.025	0.004	2E-09	-0.126	0.149	0.396	0.023	0.044	0.600	0.018	0.048	0.712	0.052	0.095	0.586
rs6658763	1	146692373	<i>FMO5</i>	C	T	0.08	0.08	0.76	-0.036	0.005	4E-11	0.345	0.218	0.1131	0.002	0.070	0.975	0.001	0.077	0.993	0.022	0.153	0.887
rs3767627	1	149938898	<i>OTUD7B</i>	T	C	0.16	0.14	1.00	-0.036	0.004	4E-19	-0.438	0.150	0.0035	0.080	0.045	0.074	0.085	0.049	0.081	0.038	0.104	0.717
rs2298265	1	151259043	<i>ZNF687</i>	C	T	0.12	0.13	0.88	-0.03	0.005	8E-11	-0.190	0.171	0.2649	0.076	0.050	0.126	0.089	0.055	0.107	-0.010	0.101	0.923
rs6688100	1	160399586	<i>VANGL2</i>	T	C	0.52	0.50	0.72	-0.016	0.003	2E-08	-0.151	0.127	0.2342	-0.040	0.039	0.304	-0.058	0.043	0.179	0.076	0.083	0.359
rs4656220	1	170649277	<i>PRRX1</i>	C	T	0.39	0.37	0.76	0.021	0.003	2E-10	-0.078	0.124	0.5269	-0.005	0.038	0.894	-0.021	0.043	0.617	0.098	0.081	0.225
rs6694089	1	172083881	<i>DNM3</i>	G	A	0.28	0.27	1.00	0.039	0.003	4E-33	0.283	0.117	0.0154	-0.019	0.034	0.589	-0.025	0.038	0.510	0.025	0.078	0.746
rs12125882	1	172141403	<i>DNM3</i>	A	T	0.43	0.42	0.90	0.027	0.003	1E-19	0.050	0.111	0.6515	-0.059	0.034	0.087	-0.064	0.038	0.088	-0.018	0.075	0.815
rs2421992	1	172241251	<i>DNM3</i>	C	T	0.70	0.70	0.67	0.024	0.003	2E-12	0.224	0.135	0.0981	-0.002	0.041	0.965	-0.022	0.045	0.628	0.130	0.095	0.168
rs17369123	1	172355841	<i>DNM3</i>	C	T	0.19	0.16	0.98	0.031	0.004	1E-16	0.162	0.141	0.2505	-0.008	0.046	0.856	0.015	0.051	0.760	-0.167	0.097	0.084

rs1325596	1	176794066	PAPPA2	G	A	0.57	0.55	0.79	0.025	0.003	1E-17	0.224	0.118	0.0579	-0.071	0.038	0.058	-0.077	0.041	0.062	-0.037	0.082	0.652
rs4652773	1	183054827	LAMC1	A	G	0.54	0.53	0.96	-0.024	0.003	1E-15	-0.172	0.106	0.1055	0.030	0.034	0.381	0.032	0.038	0.394	0.004	0.073	0.953
rs3814333	1	184007119	GLT25D2	C	T	0.32	0.29	1.00	0.049	0.003	5E-51	0.310	0.113	0.0061	0.021	0.036	0.565	0.019	0.039	0.619	0.022	0.083	0.793
rs2275325	1	203800735	ZC3H11A	G	C	0.28	0.26	0.98	0.019	0.003	2E-09	-0.118	0.118	0.3178	-0.050	0.037	0.177	-0.063	0.041	0.124	0.028	0.080	0.723
rs10863936	1	212237798	DTL	G	A	0.53	0.53	0.91	-0.02	0.003	1E-11	0.032	0.109	0.7665	-0.020	0.034	0.561	-0.030	0.037	0.411	0.068	0.071	0.343
rs6540834	1	214627419	PTPN14	C	T	0.34	0.38	0.63	-0.027	0.003	3E-16	-0.300	0.133	0.0247	0.045	0.040	0.256	0.042	0.044	0.334	0.065	0.092	0.480
rs10495098	1	218516310	TGFB2	G	T	0.41	0.41	0.84	0.019	0.003	7E-10	0.097	0.115	0.3999	0.014	0.036	0.695	-0.001	0.039	0.979	0.125	0.077	0.107
rs991967	1	218615451	TGFB2	A	C	0.28	0.30	1.00	0.034	0.003	2E-26	0.156	0.114	0.1734	-0.030	0.035	0.397	-0.035	0.039	0.366	-0.001	0.075	0.992
rs12411277	1	218975475	TGFB2	G	A	0.37	0.36	0.66	-0.022	0.003	2E-13	-0.181	0.134	0.1774	-0.074	0.042	0.076	-0.092	0.046	0.046	0.039	0.091	0.666
rs4428898	1	219739966	SLC30A10	G	A	0.46	0.46	0.89	-0.023	0.003	3E-15	-0.017	0.109	0.8778	0.024	0.033	0.458	0.027	0.036	0.460	0.010	0.075	0.893
rs1935157	1	221317258	HLX	C	G	0.30	0.29	0.62	0.025	0.003	1E-14	0.173	0.145	0.2314	-0.034	0.045	0.446	-0.029	0.050	0.564	-0.084	0.099	0.399
rs6696239	1	227750068	ZNF678	G	A	0.19	0.17	1.00	-0.038	0.004	7E-24	-0.320	0.137	0.0193	-0.011	0.043	0.800	-0.009	0.047	0.847	-0.018	0.093	0.845
rs11799609	1	243618317	SDCCAG8	G	T	0.16	0.16	1.00	0.026	0.004	1E-09	0.120	0.142	0.3969	-0.059	0.046	0.200	-0.058	0.051	0.257	-0.073	0.098	0.457
rs17038954	2	1645673	PXDN	C	T	0.06	0.07	0.52	0.044	0.006	1E-12	0.256	0.293	0.3816	0.003	0.100	0.975	-0.022	0.111	0.842	0.184	0.192	0.338
rs10048625	2	1775648	MYT1L	C	T	0.18	0.16	0.70	0.027	0.004	6E-11	0.244	0.173	0.1581	0.010	0.054	0.857	0.012	0.060	0.840	-0.001	0.114	0.991
rs3885668	2	10178479	KLF11	C	T	0.57	0.59	0.58	-0.022	0.003	8E-13	-0.032	0.139	0.8166	0.006	0.043	0.887	0.033	0.048	0.487	-0.165	0.092	0.072
rs2345835	2	18574952	RDH14	T	C	0.54	0.53	0.75	0.018	0.003	2E-09	0.121	0.120	0.3142	0.048	0.037	0.196	0.067	0.041	0.100	-0.080	0.077	0.301
rs13006748	2	20151819	WDR35	G	C	0.30	0.28	0.87	0.023	0.003	6E-11	-0.093	0.123	0.4527	0.049	0.037	0.186	0.062	0.041	0.127	-0.044	0.086	0.613
rs7561273	2	24247514	LOC38893	A	G	0.54	0.55	1.00	0.025	0.003	8E-18	0.257	0.105	0.0144	-0.024	0.033	0.467	-0.019	0.036	0.590	-0.054	0.075	0.468
rs2278483	2	25040082	CENPO	C	T	0.23	0.23	0.87	0.041	0.003	8E-33	0.027	0.133	0.8421	0.022	0.041	0.586	0.009	0.045	0.850	0.106	0.090	0.236
rs2289195	2	25463483	DNMT3A	G	A	0.43	0.41	0.65	0.038	0.003	2E-37	0.422	0.133	0.0015	0.056	0.041	0.165	0.046	0.045	0.306	0.130	0.088	0.141
rs780094	2	27741237	GCKR	T	C	0.61	0.57	1.00	0.021	0.003	6E-12	0.201	0.106	0.0574	0.022	0.032	0.488	0.018	0.035	0.608	0.050	0.072	0.486
rs7605699	2	33315750	LTBP1	G	C	0.19	0.23	1.00	-0.028	0.004	2E-12	-0.226	0.125	0.0701	-0.009	0.038	0.811	-0.006	0.041	0.880	-0.031	0.084	0.715
rs6714546	2	33361425	LTBP1	A	G	0.72	0.71	0.99	0.03	0.003	2E-18	0.198	0.117	0.0885	0.021	0.037	0.579	0.034	0.041	0.409	-0.058	0.081	0.473
rs6751657	2	33405151	LTBP1	T	C	0.53	0.51	1.00	0.024	0.003	7E-16	0.241	0.104	0.0205	-0.019	0.031	0.541	-0.040	0.034	0.250	0.123	0.068	0.072
rs711245	2	36768875	CRIM1	G	A	0.33	0.32	0.89	-0.024	0.003	4E-14	-0.177	0.117	0.1305	0.055	0.037	0.134	0.039	0.041	0.345	0.179	0.081	0.028
rs6544089	2	37758745	CDC42EP3	C	T	0.39	0.36	0.79	0.02	0.003	8E-11	0.125	0.123	0.3086	0.059	0.037	0.114	0.066	0.041	0.107	0.014	0.084	0.869
rs17511102	2	37960613	CDC42EP3	A	T	0.09	0.06	0.55	0.053	0.006	9E-21	0.139	0.286	0.6264	0.048	0.088	0.585	0.071	0.096	0.457	-0.129	0.204	0.525
rs13416119	2	42462930	EML4	A	G	0.10	0.08	0.87	-0.029	0.005	2E-08	0.088	0.202	0.6635	-0.033	0.064	0.602	-0.047	0.071	0.509	0.058	0.135	0.669
rs9309101	2	43629612	THADA	A	G	0.33	0.35	1.00	0.021	0.003	6E-11	0.065	0.108	0.5481	0.076	0.033	0.021	0.085	0.036	0.019	0.008	0.074	0.910
rs897080	2	44774202	C2orf34	C	T	0.74	0.79	0.90	-0.028	0.003	2E-16	-0.204	0.135	0.1297	0.064	0.043	0.135	0.053	0.047	0.259	0.150	0.096	0.117
rs17032525	2	44907331	C2orf34	G	A	0.13	0.14	0.93	0.025	0.005	5E-08	0.247	0.154	0.1095	-0.010	0.048	0.835	-0.027	0.053	0.617	0.119	0.107	0.265
rs12474201	2	46921285	SOCS5	G	A	0.36	0.36	0.97	0.028	0.003	2E-19	0.274	0.110	0.0124	0.002	0.034	0.950	0.013	0.037	0.719	-0.079	0.075	0.295
rs354196	2	54966407	SPTBN1	A	G	0.53	0.54	0.94	0.021	0.003	6E-12	0.009	0.108	0.9333	-0.037	0.032	0.251	-0.046	0.036	0.193	0.029	0.069	0.677
rs3791679	2	56096892	EFEMP1	A	G	0.23	0.24	1.00	-0.06	0.004	2E-67	-0.592	0.121	<.0001	-0.025	0.038	0.513	-0.027	0.042	0.522	-0.014	0.078	0.858
rs2120335	2	68495002	PPP3R1	G	A	0.41	0.43	0.80	-0.019	0.003	8E-10	-0.184	0.118	0.1177	0.043	0.037	0.245	0.050	0.041	0.220	-0.011	0.080	0.891
rs7568069	2	71584485	ZNF638	G	A	0.58	0.58	1.00	-0.022	0.003	3E-13	-0.327	0.107	0.0022	0.003	0.033	0.938	0.006	0.037	0.880	-0.018	0.067	0.794
rs11684404	2	88924622	EIF2AK3	T	C	0.34	0.32	0.99	0.032	0.003	9E-25	0.212	0.110	0.0543	-0.002	0.035	0.947	0.021	0.038	0.587	-0.162	0.078	0.037
rs11683207	2	98333290	ZAP70	T	C	0.20	0.14	0.82	-0.023	0.004	5E-08	0.199	0.163	0.2213	-0.022	0.053	0.682	-0.044	0.059	0.452	0.125	0.111	0.260
rs13388725	2	109047190	GCC2	A	G	0.41	0.39	0.67	0.018	0.003	2E-09	0.189	0.130	0.145	-0.013	0.041	0.747	-0.010	0.045	0.826	-0.031	0.088	0.723
rs2166898	2	121612659	GLI2	G	A	0.16	0.17	0.55	-0.027	0.004	9E-11	-0.010	0.188	0.9596	-0.037	0.059	0.527	-0.013	0.064	0.843	-0.207	0.134	0.124
rs7567288	2	134434824	NAP5	T	C	0.20	0.18	0.81	0.029	0.004	3E-14	0.210	0.146	0.1499	-0.023	0.047	0.620	-0.050	0.052	0.338	0.143	0.103	0.165
rs4953951	2	136187345	ZRANB3	C	T	0.10	0.13	0.98	-0.036	0.005	1E-11	-0.183	0.167	0.272	-0.002	0.048	0.961	0.020	0.052	0.699	-0.179	0.116	0.124
rs749234	2	145231349	ZEB2	A	G	0.68	0.69	0.74	-0.017	0.003	2E-08	-0.142	0.132	0.2814	0.062	0.041	0.129	0.050	0.045	0.262	0.138	0.088	0.117
rs540652	2	169707428	NOSTRIN	C	T	0.46	0.46	0.86	0.021	0.003	3E-12	0.060	0.112	0.5936	0.044	0.034	0.193	0.042	0.037	0.255	0.060	0.075	0.419
rs12987566	2	172152646	METTL8	C	T	0.26	0.26	0.88	0.024	0.003	1E-12	0.202	0.126	0.1077	-0.009	0.040	0.816	-0.002	0.044	0.967	-0.062	0.089	0.487

rs6746356	2	174815898	SP3	A	C	0.25	0.24	0.79	-0.019	0.003	1E-08	0.070	0.137	0.6115	-0.032	0.044	0.460	-0.017	0.048	0.714	-0.144	0.099	0.144
rs7567851	2	178684720	PDE11A	G	C	0.08	0.09	0.98	0.039	0.006	1E-12	0.388	0.187	0.0376	0.011	0.057	0.849	0.023	0.063	0.715	-0.060	0.121	0.618
rs833152	2	183219101	PDE1A	C	A	0.58	0.58	0.55	-0.017	0.003	2E-08	-0.037	0.143	0.7937	-0.049	0.042	0.247	-0.037	0.047	0.429	-0.131	0.096	0.172
rs12693589	2	191832662	STAT1	T	C	0.25	0.25	1.00	0.022	0.003	9E-11	0.037	0.119	0.758	-0.041	0.038	0.276	-0.052	0.042	0.217	0.036	0.079	0.652
rs6435143	2	203194256	NOP5/NOP	A	C	0.56	0.56	0.84	-0.019	0.003	2E-10	0.057	0.115	0.6206	-0.029	0.036	0.413	-0.019	0.039	0.621	-0.101	0.081	0.210
rs4425077	2	216410516	FN1	G	C	0.60	0.60	0.86	-0.02	0.003	1E-10	-0.160	0.115	0.166	0.008	0.036	0.814	0.011	0.039	0.773	-0.004	0.076	0.963
rs17181956	2	218146080	TNPI	C	T	0.13	0.10	0.86	-0.028	0.005	4E-09	-0.356	0.184	0.0535	-0.106	0.058	0.069	-0.132	0.065	0.042	0.056	0.116	0.627
rs994533	2	218284278	TNS1	G	C	0.33	0.32	1.00	-0.027	0.003	1E-17	-0.075	0.111	0.4968	-0.023	0.034	0.504	-0.034	0.038	0.364	0.058	0.078	0.462
rs1864439	2	218616633	TNS1	C	T	0.89	0.90	0.88	0.027	0.005	3E-08	0.249	0.184	0.1762	0.055	0.057	0.337	0.038	0.062	0.544	0.178	0.128	0.164
rs992157	2	219154781	PNKD/TMB	G	A	0.57	0.55	1.00	0.022	0.003	6E-13	0.041	0.104	0.6921	-0.019	0.033	0.561	-0.024	0.036	0.503	0.019	0.071	0.792
rs2305833	2	219305404	VILI	G	C	0.58	0.58	0.87	0.028	0.003	4E-21	0.223	0.115	0.0515	-0.002	0.035	0.945	0.001	0.039	0.982	-0.032	0.082	0.692
rs12470505	2	219908369	CCDC108	T	G	0.10	0.10	0.97	-0.048	0.005	6E-22	-0.522	0.175	0.0029	-0.143	0.055	0.009	-0.137	0.060	0.023	-0.189	0.129	0.143
rs16859517	2	219949184	NHEJ1	C	T	0.04	0.04	0.79	0.067	0.008	5E-17	0.665	0.294	0.0239	-0.056	0.081	0.493	-0.140	0.091	0.126	0.456	0.174	0.009
rs6761041	2	225030129	SERPINE2	T	C	0.45	0.43	0.99	-0.023	0.003	3E-15	0.091	0.106	0.3888	-0.046	0.032	0.158	-0.039	0.036	0.272	-0.087	0.072	0.225
rs6733349	2	232268312	B3GNT7	T	C	0.34	0.37	0.52	-0.022	0.003	1E-12	-0.024	0.150	0.8714	-0.016	0.045	0.725	-0.011	0.050	0.822	-0.043	0.102	0.671
rs6754426	2	232322779	NCL	G	A	0.45	0.43	0.99	-0.027	0.003	2E-17	-0.217	0.107	0.0422	0.013	0.033	0.689	0.016	0.036	0.652	-0.011	0.073	0.882
rs4973429	2	232377818	C2orf52	G	T	0.34	0.36	0.99	-0.029	0.003	1E-19	-0.171	0.110	0.1219	-0.015	0.034	0.656	0.000	0.037	0.993	-0.120	0.075	0.109
rs2679184	2	232779223	NPPC	T	C	0.23	0.26	0.53	-0.031	0.004	2E-14	-0.227	0.165	0.1676	-0.038	0.050	0.453	-0.046	0.055	0.401	0.021	0.112	0.850
rs749052	2	232796610	NPPC	T	C	0.06	0.07	0.65	-0.067	0.006	2E-26	-0.373	0.255	0.1444	-0.061	0.076	0.417	-0.057	0.083	0.487	-0.087	0.186	0.640
rs11677466	2	232982257	DIS3L2	A	T	0.09	0.07	0.70	0.064	0.007	3E-23	0.799	0.233	0.0006	-0.057	0.077	0.457	-0.062	0.086	0.471	-0.026	0.162	0.875
rs3116168	2	232989831	DIS3L2	T	C	0.73	0.68	0.65	0.039	0.003	1E-31	0.610	0.140	<.0001	0.045	0.044	0.301	0.054	0.048	0.259	-0.022	0.099	0.827
rs2343240	2	233087483	DIS3L2	T	C	0.03	0.02	0.91	-0.078	0.01	3E-15	0.340	0.351	0.3326	0.014	0.111	0.901	0.006	0.122	0.963	0.074	0.259	0.775
rs13393800	2	233442091	EIF4E2	G	A	0.29	0.26	0.55	0.027	0.003	1E-17	-0.041	0.159	0.796	-0.026	0.049	0.604	-0.025	0.054	0.639	-0.030	0.113	0.791
rs4344931	2	241818527	AGXT	A	C	0.71	0.70	0.66	0.02	0.003	8E-10	0.020	0.143	0.8865	0.072	0.044	0.103	0.091	0.049	0.061	-0.048	0.098	0.625
rs11687941	2	242191410	HDLBP	C	G	0.25	0.26	0.96	-0.025	0.003	4E-13	-0.170	0.123	0.1673	-0.079	0.037	0.031	-0.105	0.040	0.010	0.106	0.082	0.196
rs2633761	3	4728104	ITPR1	G	A	0.50	0.46	0.99	0.016	0.003	3E-08	0.189	0.104	0.0687	-0.028	0.032	0.389	-0.050	0.035	0.158	0.113	0.069	0.101
rs13078528	3	11646954	VGLLA	G	A	0.94	0.95	0.83	0.045	0.006	1E-12	0.212	0.257	0.4102	-0.009	0.081	0.912	-0.017	0.089	0.844	0.044	0.174	0.800
rs2596831	3	12632652	RAF1	G	C	0.43	0.43	0.99	-0.017	0.003	7E-09	-0.257	0.106	0.016	-0.008	0.032	0.796	-0.014	0.035	0.693	0.031	0.072	0.673
rs2597513	3	13555836	HDAC11	C	T	0.89	0.89	0.72	-0.039	0.005	3E-16	-0.377	0.201	0.06	-0.071	0.058	0.222	-0.085	0.064	0.184	0.020	0.131	0.879
rs9816693	3	38047954	VILL	G	C	0.17	0.15	0.84	0.031	0.004	3E-15	0.145	0.158	0.3595	0.029	0.050	0.567	0.045	0.055	0.405	-0.082	0.110	0.455
rs3915129	3	41243742	CTNNB1	T	G	0.47	0.45	1.00	0.016	0.003	4E-08	0.191	0.104	0.0672	-0.050	0.033	0.126	-0.031	0.036	0.389	-0.174	0.072	0.015
rs13088462	3	51071713	DOCK3	T	C	0.06	0.05	1.00	0.059	0.007	8E-18	0.577	0.231	0.0125	0.082	0.075	0.277	0.120	0.081	0.138	-0.226	0.179	0.208
rs4256170	3	51192126	DOCK3	G	A	0.01	0.03	0.75	0.191	0.028	1E-11	0.630	0.335	0.0603	0.108	0.109	0.323	0.143	0.118	0.225	-0.159	0.260	0.541
rs2240919	3	52831701	ITIH3	C	G	0.34	0.34	1.00	-0.027	0.003	5E-17	-0.171	0.110	0.1218	0.048	0.034	0.158	0.040	0.037	0.281	0.106	0.074	0.154
rs2581830	3	53134098	RFT1	T	C	0.60	0.59	1.00	-0.031	0.003	4E-25	-0.082	0.107	0.4412	0.002	0.033	0.955	0.000	0.036	0.991	0.008	0.071	0.915
rs2034172	3	55411763	WNT5A	A	G	0.68	0.66	0.75	0.018	0.003	4E-08	-0.298	0.128	0.0199	-0.045	0.039	0.255	-0.028	0.043	0.509	-0.165	0.090	0.065
rs9835332	3	56667682	C3orf63	G	C	0.46	0.46	0.93	-0.028	0.003	4E-22	-0.396	0.108	0.0003	-0.027	0.033	0.416	-0.022	0.036	0.545	-0.058	0.075	0.440
rs1658351	3	58013573	FLNB	C	T	0.65	0.69	0.95	-0.023	0.003	1E-12	-0.298	0.114	0.0089	0.050	0.036	0.167	0.049	0.039	0.213	0.050	0.082	0.540
rs6794009	3	61513495	PTPRG	A	G	0.44	0.44	0.88	0.016	0.003	4E-08	0.019	0.113	0.8671	0.027	0.036	0.443	0.019	0.039	0.625	0.084	0.076	0.268
rs17806888	3	67416322	SUCLG2	T	C	0.12	0.13	0.93	-0.034	0.005	3E-12	-0.344	0.163	0.0351	-0.025	0.051	0.620	-0.046	0.056	0.405	0.114	0.112	0.310
rs2175513	3	68622366	FAM19A1	G	A	0.57	0.55	0.86	-0.017	0.003	3E-08	-0.120	0.114	0.2929	0.012	0.035	0.731	0.004	0.038	0.919	0.067	0.075	0.366
rs12330322	3	72455355	RYBP	C	T	0.22	0.22	0.83	-0.034	0.004	3E-22	-0.193	0.140	0.1686	0.071	0.042	0.089	0.108	0.046	0.020	-0.176	0.092	0.055
rs7633464	3	98715823	DCBLD2	G	A	0.48	0.47	1.00	0.019	0.003	1E-10	0.214	0.105	0.0417	0.020	0.032	0.543	0.021	0.036	0.559	0.008	0.070	0.912
rs9825951	3	99269921	COL8A1	T	A	0.65	0.63	0.84	-0.022	0.003	3E-12	-0.159	0.116	0.17	0.036	0.035	0.309	0.046	0.039	0.237	-0.031	0.078	0.691
rs1797625	3	112826415	C3orf17	A	T	0.36	0.36	0.91	0.019	0.003	5E-10	-0.029	0.114	0.7957	-0.011	0.036	0.751	-0.011	0.039	0.784	-0.014	0.083	0.863
rs1533269	3	114214611	ZBTB20	C	A	0.30	0.33	0.83	-0.02	0.003	1E-09	-0.234	0.124	0.0583	0.020	0.037	0.582	0.020	0.041	0.623	0.022	0.087	0.800

rs1546391	3	114697457	ZBTB20	C	G	0.07	0.09	0.97	0.039	0.006	7E-11	0.349	0.193	0.0707	0.021	0.057	0.706	0.026	0.063	0.677	-0.014	0.123	0.909
rs4974480	3	134178562	ANAPC13	A	T	0.68	0.68	0.95	0.026	0.003	2E-16	0.260	0.115	0.0241	0.007	0.036	0.856	0.011	0.040	0.791	-0.017	0.078	0.824
rs9880211	3	136107549	STAG1	G	A	0.25	0.25	1.00	-0.03	0.003	2E-18	-0.107	0.121	0.3757	0.019	0.037	0.613	0.022	0.041	0.601	-0.001	0.082	0.988
rs724016	3	141105570	ZBTB38	A	G	0.44	0.42	0.99	0.078	0.003	158	0.357	0.106	0.0007	0.045	0.033	0.170	0.041	0.036	0.264	0.076	0.069	0.274
rs11714558	3	141163045	ZBTB38	T	C	0.03	0.02	0.52	-0.134	0.019	2E-12	0.352	0.492	0.4741	0.014	0.146	0.926	0.054	0.159	0.733	-0.276	0.359	0.442
rs936339	3	142535505	PCOLCE2	C	T	0.19	0.18	0.93	0.022	0.004	2E-08	0.124	0.138	0.3696	0.000	0.044	0.999	-0.003	0.048	0.953	0.008	0.101	0.934
rs4325879	3	156851984	CCNL1	C	T	0.27	0.27	0.97	-0.021	0.004	3E-09	-0.184	0.121	0.1271	-0.021	0.035	0.550	-0.025	0.038	0.523	0.008	0.080	0.921
rs6441170	3	157806960	SHOX2	T	C	0.38	0.41	0.76	0.022	0.003	1E-12	0.194	0.120	0.1078	-0.065	0.038	0.083	-0.062	0.041	0.133	-0.092	0.083	0.271
rs7652177	3	171969077	FNDC3B	C	G	0.51	0.52	0.73	0.038	0.003	3E-39	0.259	0.122	0.0334	0.057	0.038	0.133	0.069	0.042	0.099	-0.031	0.081	0.707
rs509035	3	172163449	GHSR	G	A	0.32	0.29	0.97	0.031	0.003	3E-23	0.374	0.115	0.0012	0.018	0.036	0.614	0.021	0.040	0.592	0.002	0.080	0.980
rs9858528	3	183355405	KLHL24	A	G	0.26	0.27	0.98	-0.022	0.003	4E-11	-0.209	0.120	0.0821	-0.013	0.036	0.716	-0.013	0.040	0.736	-0.014	0.083	0.862
rs720390	3	185548683	IGF2BP2	G	A	0.38	0.36	0.69	0.035	0.003	1E-29	0.283	0.131	0.0305	-0.041	0.041	0.315	-0.049	0.045	0.275	0.011	0.089	0.900
rs2300921	3	185651001	SFRS10	T	C	0.42	0.41	0.98	0.018	0.003	9E-09	0.299	0.107	0.0052	-0.013	0.033	0.688	-0.012	0.036	0.743	-0.016	0.073	0.827
rs4686904	3	187438522	BCL6	C	T	0.65	0.66	0.99	-0.021	0.003	3E-11	-0.377	0.110	0.0006	0.007	0.034	0.846	-0.013	0.037	0.716	0.151	0.079	0.056
rs7646824	3	190815978	OSTN	A	G	0.11	0.11	0.96	-0.026	0.005	5E-08	-0.008	0.169	0.9611	-0.021	0.050	0.679	-0.043	0.057	0.446	0.094	0.103	0.358
rs9841435	3	191111160	CCDC50	A	G	0.32	0.32	1.00	0.02	0.003	2E-10	-0.142	0.112	0.2065	0.010	0.034	0.775	-0.007	0.038	0.857	0.117	0.074	0.115
rs3958122	4	1693931	SLBP	C	T	0.35	0.34	0.98	0.027	0.003	3E-18	0.253	0.111	0.0226	0.037	0.035	0.285	0.031	0.038	0.414	0.071	0.076	0.350
rs867245	4	2218888	POLN	C	G	0.06	0.07	1.00	-0.041	0.006	8E-11	0.095	0.215	0.6598	0.122	0.060	0.043	0.121	0.067	0.069	0.122	0.134	0.360
rs6829680	4	7912333	AFAP1	G	A	0.44	0.46	0.91	0.017	0.003	4E-09	0.075	0.111	0.4978	0.029	0.035	0.404	0.030	0.039	0.438	0.030	0.073	0.685
rs2302580	4	8608634	CPZ	C	T	0.42	0.44	1.00	-0.029	0.004	4E-15	-0.354	0.106	0.0008	0.044	0.032	0.173	0.053	0.036	0.140	-0.009	0.073	0.904
rs763318	4	12963574	RAB28	G	A	0.47	0.47	0.63	-0.021	0.003	8E-13	-0.081	0.133	0.5388	-0.020	0.041	0.621	0.008	0.045	0.853	-0.214	0.087	0.014
rs4834927	4	13194091	RAB28	A	G	0.34	0.34	0.69	0.019	0.003	7E-10	0.079	0.133	0.5513	0.061	0.042	0.144	0.098	0.046	0.035	-0.186	0.091	0.041
rs7692995	4	17936634	LCORL	T	C	0.15	0.18	0.99	-0.074	0.004	1E-71	-0.546	0.140	<.0001	-0.022	0.041	0.587	-0.039	0.045	0.395	0.084	0.090	0.351
rs16994718	4	38688362	KLF3	C	T	0.15	0.15	0.69	-0.025	0.004	2E-09	-0.178	0.179	0.3198	-0.008	0.053	0.879	0.007	0.059	0.910	-0.117	0.118	0.324
rs2306596	4	39343940	RFC1	C	A	0.52	0.53	0.97	0.019	0.003	8E-11	0.229	0.106	0.0308	-0.008	0.033	0.811	-0.018	0.036	0.611	0.064	0.075	0.392
rs1996422	4	48687351	FRYL	A	G	0.28	0.26	1.00	0.022	0.003	3E-11	0.023	0.117	0.8419	0.034	0.038	0.362	0.048	0.042	0.244	-0.065	0.081	0.427
rs13113518	4	56399648	CLOCK	T	C	0.36	0.37	0.99	0.018	0.003	8E-09	0.081	0.108	0.4559	0.081	0.033	0.014	0.075	0.036	0.038	0.125	0.072	0.080
rs17081935	4	57823476	C4orf14	C	T	0.19	0.19	0.94	0.031	0.004	7E-17	0.457	0.137	0.0009	0.063	0.043	0.142	0.046	0.048	0.340	0.180	0.092	0.050
rs9993613	4	73476014	ADAMTS3	T	G	0.53	0.55	0.72	-0.03	0.003	5E-24	-0.087	0.125	0.4855	0.011	0.039	0.780	0.007	0.043	0.864	0.039	0.081	0.632
rs17556750	4	82155568	PRKG2	C	A	0.31	0.28	0.92	0.046	0.003	8E-48	0.371	0.121	0.0021	0.005	0.038	0.888	-0.019	0.042	0.651	0.163	0.082	0.046
rs2167645	4	82184049	PRKG2	C	T	0.04	0.03	0.52	0.139	0.021	8E-11	0.607	0.453	0.1796	-0.076	0.136	0.576	-0.139	0.150	0.354	0.334	0.306	0.276
rs17499117	4	82204091	PRKG2	A	G	0.04	0.05	0.64	0.14	0.021	2E-11	0.681	0.297	0.0218	-0.029	0.090	0.747	-0.057	0.099	0.568	0.148	0.199	0.458
rs6813055	4	88630031	DMP1	A	T	0.50	0.46	0.99	-0.017	0.003	2E-08	0.210	0.106	0.0475	-0.004	0.033	0.896	0.007	0.037	0.857	-0.081	0.073	0.271
rs12639764	4	106216205	TET2	T	C	0.38	0.37	1.00	-0.027	0.003	2E-19	0.025	0.107	0.8123	-0.010	0.034	0.763	-0.004	0.038	0.926	-0.057	0.074	0.439
rs1562975	4	109408608	RPL34	G	A	0.30	0.26	0.76	0.025	0.003	6E-15	0.068	0.138	0.621	0.008	0.041	0.840	0.026	0.045	0.559	-0.112	0.095	0.239
rs7659107	4	114742249	CAMK2D	A	G	0.23	0.21	0.66	0.024	0.004	9E-12	0.388	0.155	0.0126	-0.006	0.049	0.902	-0.002	0.055	0.970	-0.039	0.104	0.706
rs6838153	4	122720999	EXOSC9	A	G	0.34	0.33	0.99	0.022	0.003	3E-12	0.090	0.112	0.4201	-0.072	0.034	0.033	-0.061	0.037	0.100	-0.154	0.077	0.044
rs12513181	4	123835656	NUDT6	C	A	0.74	0.73	1.00	-0.02	0.003	3E-09	-0.028	0.118	0.8098	-0.045	0.037	0.219	-0.060	0.040	0.138	0.056	0.083	0.496
rs11100790	4	144442611	SMARCA5	T	C	0.20	0.25	0.59	0.025	0.004	8E-12	0.033	0.156	0.8344	-0.036	0.048	0.446	-0.038	0.052	0.462	-0.019	0.107	0.857
rs7654571	4	145321006	HHIP	A	G	0.77	0.75	0.80	-0.022	0.004	4E-09	0.237	0.135	0.0785	-0.044	0.040	0.276	-0.044	0.044	0.320	-0.051	0.091	0.573
rs6845999	4	145565826	HHIP	C	T	0.44	0.43	0.82	0.051	0.003	5E-67	0.314	0.118	0.0078	-0.024	0.036	0.512	-0.029	0.040	0.459	0.012	0.082	0.882
rs1812175	4	145574844	HHIP	A	G	0.84	0.83	1.00	0.079	0.004	2E-86	0.484	0.141	0.0006	0.013	0.044	0.766	0.000	0.048	0.993	0.107	0.097	0.269
rs17777628	4	145592686	HHIP	G	A	0.04	0.04	0.97	-0.053	0.008	8E-12	-0.928	0.275	0.0007	-0.007	0.080	0.933	0.004	0.087	0.966	-0.080	0.193	0.680
rs4240326	4	145839264	ANAPC10	A	G	0.54	0.55	0.89	-0.04	0.003	3E-43	-0.345	0.111	0.0019	-0.018	0.035	0.606	0.001	0.039	0.974	-0.149	0.077	0.053
rs996743	4	146128884	OTUD4	A	G	0.08	0.09	0.83	-0.063	0.007	2E-22	-0.240	0.201	0.2329	0.036	0.061	0.550	0.044	0.065	0.496	-0.023	0.153	0.882

rs13133465	4	146192618	<i>OTUD4</i>	C	G	0.06	0.05	0.65	-0.045	0.007	4E-12	-0.390	0.282	0.1666	-0.047	0.090	0.601	-0.032	0.098	0.745	-0.183	0.209	0.382
rs13150868	4	152180671	<i>ESSPL</i>	G	T	0.44	0.46	0.55	0.017	0.003	2E-08	0.054	0.142	0.7009	-0.032	0.043	0.461	-0.031	0.047	0.520	-0.032	0.094	0.731
rs955748	4	184215675	<i>WWC2</i>	A	G	0.75	0.76	1.00	0.028	0.003	3E-16	0.050	0.122	0.6828	0.041	0.037	0.265	0.034	0.041	0.398	0.082	0.080	0.304
rs17410035	5	31541142	<i>C5orf22</i>	G	T	0.33	0.33	1.00	0.019	0.003	9E-10	0.097	0.111	0.3813	-0.042	0.034	0.217	-0.045	0.037	0.221	-0.017	0.078	0.830
rs7731703	5	32694942	<i>NPR3</i>	C	T	0.32	0.33	1.00	-0.03	0.003	4E-18	-0.227	0.112	0.0426	-0.028	0.034	0.399	-0.026	0.037	0.485	-0.042	0.072	0.563
rs3811958	5	32772043	<i>NPR3</i>	A	G	0.26	0.25	0.56	0.027	0.003	3E-16	0.021	0.160	0.8977	0.028	0.048	0.557	0.026	0.053	0.623	0.043	0.106	0.686
rs9292468	5	32819073	<i>C5orf23</i>	T	C	0.60	0.59	0.75	-0.036	0.003	2E-33	-0.198	0.124	0.11	-0.005	0.038	0.893	-0.008	0.041	0.846	0.017	0.086	0.844
rs11745439	5	33230034	<i>TARS</i>	A	G	0.72	0.71	0.84	0.026	0.003	8E-16	-0.001	0.127	0.9935	0.005	0.040	0.899	0.028	0.044	0.534	-0.139	0.084	0.098
rs301901	5	37046626	<i>NIPBL</i>	A	G	0.44	0.45	0.93	-0.024	0.003	4E-16	-0.178	0.109	0.1008	-0.019	0.034	0.590	-0.027	0.038	0.472	0.035	0.073	0.629
rs3812040	5	39426020	<i>DAB2</i>	T	C	0.28	0.27	0.90	-0.024	0.003	2E-13	0.043	0.122	0.7228	0.037	0.038	0.331	0.035	0.042	0.411	0.059	0.086	0.491
rs17574650	5	42436916	<i>GHR</i>	A	C	0.11	0.11	0.74	0.038	0.005	2E-12	0.124	0.192	0.5172	-0.005	0.061	0.935	-0.006	0.066	0.926	0.010	0.138	0.945
rs2961830	5	50454732	<i>ISL1</i>	A	T	0.65	0.63	0.84	-0.02	0.003	2E-10	-0.015	0.119	0.8968	-0.021	0.036	0.557	-0.039	0.040	0.322	0.104	0.081	0.199
rs7716219	5	54955071	<i>SLC38A9</i>	T	C	0.69	0.70	0.97	-0.03	0.003	7E-22	-0.304	0.115	0.0084	-0.008	0.035	0.828	0.002	0.039	0.967	-0.065	0.077	0.401
rs2662027	5	56254485	<i>MIER3</i>	G	T	0.10	0.10	1.00	-0.033	0.005	6E-12	-0.229	0.170	0.1782	0.078	0.051	0.124	0.083	0.056	0.137	0.048	0.113	0.672
rs7727731	5	64674446	<i>ADAMTS6</i>	C	T	0.11	0.12	0.67	0.033	0.005	1E-11	0.066	0.189	0.7277	0.005	0.061	0.938	-0.018	0.067	0.793	0.150	0.123	0.222
rs9291926	5	67599656	<i>PIK3R1</i>	T	G	0.51	0.51	0.99	-0.019	0.003	3E-10	-0.164	0.104	0.1146	-0.008	0.033	0.798	-0.007	0.036	0.850	-0.017	0.070	0.814
rs34651	5	72144005	<i>TNPO1</i>	C	T	0.92	0.93	0.86	-0.041	0.006	2E-12	-0.595	0.215	0.0057	0.000	0.070	1.000	-0.020	0.076	0.790	0.156	0.164	0.342
rs820848	5	73964660	<i>HEXB</i>	A	G	0.29	0.29	1.00	0.021	0.004	3E-09	0.098	0.115	0.3948	0.033	0.035	0.346	0.025	0.039	0.515	0.080	0.076	0.295
rs7712162	5	78945171	<i>PAPD4</i>	C	T	0.19	0.17	0.94	0.023	0.004	5E-10	0.255	0.143	0.0737	0.017	0.044	0.701	0.001	0.049	0.984	0.118	0.094	0.207
rs32855	5	79836192	<i>FAM151B</i>	G	A	0.78	0.79	0.96	0.024	0.004	6E-11	0.047	0.132	0.723	0.020	0.039	0.610	0.005	0.043	0.916	0.132	0.095	0.164
rs6894139	5	88327782	<i>MEF2C</i>	T	G	0.44	0.48	0.93	-0.03	0.003	6E-24	-0.249	0.107	0.0201	-0.008	0.033	0.813	-0.003	0.037	0.943	-0.047	0.076	0.534
rs12186664	5	95630225	<i>PCSK1</i>	A	T	0.32	0.31	0.70	0.021	0.003	3E-11	0.256	0.134	0.0571	-0.009	0.041	0.830	-0.016	0.045	0.721	0.043	0.092	0.645
rs6594336	5	108073085	<i>FER</i>	T	C	0.56	0.55	0.97	0.017	0.003	1E-08	0.050	0.107	0.6431	0.037	0.033	0.264	0.049	0.036	0.174	-0.046	0.076	0.548
rs13177718	5	108113344	<i>FER</i>	C	T	0.08	0.08	0.97	-0.043	0.006	3E-13	-0.409	0.203	0.0436	0.111	0.060	0.065	0.145	0.066	0.028	-0.100	0.132	0.449
rs1582931	5	122657199	<i>CCDC100</i>	G	A	0.47	0.47	0.91	-0.028	0.003	3E-20	-0.153	0.110	0.1637	-0.027	0.034	0.433	-0.021	0.038	0.569	-0.062	0.078	0.431
rs6887276	5	127378294	<i>SLC12A2</i>	C	G	0.45	0.47	0.82	0.018	0.003	1E-09	0.118	0.114	0.3009	0.067	0.035	0.057	0.061	0.039	0.115	0.106	0.079	0.177
rs26024	5	127696022	<i>FBN2</i>	A	C	0.34	0.34	1.00	0.023	0.003	3E-14	0.226	0.109	0.0377	-0.087	0.034	0.011	-0.116	0.038	0.002	0.088	0.071	0.212
rs39623	5	129054621	<i>ADAMTS19</i>	A	T	0.92	0.93	0.94	-0.034	0.005	3E-10	-0.232	0.210	0.2702	0.030	0.064	0.640	0.028	0.070	0.687	0.056	0.146	0.700
rs7701414	5	131585958	<i>PDLIM4</i>	A	G	0.44	0.46	1.00	0.037	0.003	1E-34	0.221	0.105	0.0355	0.001	0.033	0.985	-0.004	0.036	0.917	0.026	0.071	0.711
rs526896	5	134356705	<i>PITX1</i>	T	G	0.28	0.28	0.84	-0.036	0.003	2E-25	-0.114	0.128	0.3746	-0.054	0.039	0.161	-0.050	0.043	0.243	-0.082	0.084	0.330
rs9327705	5	134510303	<i>PITX1</i>	G	A	0.23	0.23	1.00	0.02	0.004	2E-08	-0.020	0.125	0.8706	0.019	0.038	0.615	0.013	0.042	0.758	0.057	0.081	0.478
rs165189	5	139145747	<i>PSD2</i>	A	G	0.15	0.14	0.64	0.029	0.005	2E-10	0.193	0.190	0.3094	-0.025	0.058	0.666	-0.030	0.064	0.637	0.004	0.124	0.974
rs4624820	5	141681788	<i>SPRY4</i>	G	A	0.52	0.55	1.00	0.018	0.003	1E-09	-0.037	0.103	0.7202	-0.031	0.032	0.339	-0.046	0.036	0.194	0.068	0.072	0.342
rs2974438	5	168250903	<i>SLIT3</i>	G	A	0.20	0.22	0.77	-0.037	0.004	4E-24	-0.214	0.144	0.1362	0.003	0.047	0.942	-0.012	0.052	0.811	0.102	0.093	0.269
rs4620037	5	170875097	<i>FGF18</i>	A	C	0.20	0.23	0.66	-0.032	0.004	1E-18	-0.139	0.156	0.3701	-0.034	0.048	0.472	-0.028	0.053	0.599	-0.082	0.107	0.444
rs1529701	5	171000977	<i>FGF18</i>	T	C	0.70	0.71	0.95	0.021	0.003	5E-10	0.187	0.117	0.1093	0.012	0.037	0.740	0.018	0.040	0.654	-0.027	0.084	0.751
rs33852	5	171189571	<i>FBXW11</i>	A	G	0.33	0.32	0.93	0.03	0.003	2E-21	0.244	0.115	0.0347	0.016	0.035	0.640	0.016	0.038	0.681	0.030	0.080	0.707
rs12153391	5	171203438	<i>FBXW11</i>	C	A	0.26	0.25	0.92	-0.033	0.004	2E-21	-0.059	0.124	0.6375	0.018	0.039	0.645	-0.001	0.043	0.979	0.141	0.082	0.086
rs7733195	5	172994624	<i>FAM44B</i>	G	A	0.36	0.37	1.00	-0.029	0.003	3E-21	-0.259	0.109	0.0175	0.026	0.034	0.439	0.053	0.038	0.157	-0.158	0.077	0.041
rs422421	5	176517326	<i>FGFR4</i>	T	C	0.78	0.77	1.00	0.034	0.004	2E-20	0.264	0.126	0.0354	0.013	0.038	0.730	0.016	0.042	0.702	-0.005	0.087	0.958
rs11950938	5	176576293	<i>NSD1</i>	C	G	0.03	0.02	0.90	0.061	0.009	5E-11	0.162	0.346	0.6395	0.011	0.108	0.919	0.071	0.116	0.538	-0.483	0.274	0.077
rs12055154	5	176675423	<i>NSD1</i>	A	G	0.03	0.02	0.83	-0.059	0.01	2E-09	-0.918	0.391	0.0188	0.022	0.120	0.852	0.048	0.133	0.720	-0.118	0.270	0.662
rs11750568	5	178535713	<i>ADAMTS2</i>	A	G	0.67	0.70	0.79	-0.02	0.003	6E-11	-0.030	0.127	0.8139	-0.066	0.040	0.096	-0.080	0.044	0.065	0.035	0.086	0.686
rs6879260	5	179731014	<i>GFPT2</i>	T	C	0.61	0.63	0.57	0.027	0.003	2E-18	0.124	0.144	0.3906	-0.062	0.044	0.159	-0.048	0.049	0.322	-0.153	0.097	0.115
rs932445	6	2167225	<i>GMDS</i>	T	C	0.41	0.36	0.69	-0.018	0.003	6E-09	-0.348	0.133	0.0087	-0.036	0.041	0.370	-0.033	0.045	0.461	-0.066	0.089	0.462
rs17603945	6	7213016	<i>RREB1</i>	G	A	0.20	0.17	0.99	0.03	0.004	1E-15	0.374	0.138	0.0068	0.006	0.044	0.888	0.009	0.048	0.851	-0.020	0.096	0.838

rs9392918	6	7708631	<i>BMP6</i>	T	C	0.47	0.46	0.99	0.038	0.003	4E-38	0.123	0.105	0.2392	0.010	0.033	0.763	0.016	0.036	0.652	-0.040	0.072	0.575
rs17330192	6	17589375	<i>FAM8A1</i>	T	C	0.28	0.21	0.78	0.019	0.003	2E-08	0.032	0.143	0.824	-0.059	0.045	0.186	-0.062	0.049	0.211	-0.047	0.100	0.641
rs4141885	6	26157481	<i>HIST1H1E</i>	A	T	0.08	0.12	0.70	-0.073	0.008	8E-22	-0.638	0.194	0.001	0.006	0.055	0.910	0.025	0.060	0.676	-0.129	0.126	0.306
rs806794	6	26200677	<i>HIST1H2B</i>	A	G	0.29	0.31	0.95	-0.06	0.003	5E-74	-0.309	0.116	0.0079	0.035	0.035	0.307	0.039	0.038	0.304	0.009	0.077	0.906
rs1265097	6	31106459	<i>PSORS1C1</i>	C	A	0.12	0.13	1.00	-0.059	0.005	2E-32	-0.351	0.162	0.0307	-0.020	0.047	0.671	-0.018	0.051	0.725	-0.026	0.106	0.810
rs2857693	6	31588384	<i>BAT2</i>	G	T	0.38	0.44	1.00	-0.034	0.003	3E-29	-0.505	0.105	<.0001	-0.013	0.033	0.702	-0.023	0.037	0.525	0.066	0.075	0.381
rs12204421	6	33628863	<i>ITPR3</i>	A	G	0.26	0.27	0.95	-0.027	0.003	1E-14	-0.072	0.121	0.5552	0.062	0.037	0.097	0.040	0.041	0.328	0.213	0.082	0.010
rs3957165	6	33784864	<i>MLN</i>	C	T	0.81	0.80	0.91	0.022	0.004	2E-08	-0.093	0.135	0.4937	0.014	0.042	0.745	0.002	0.046	0.962	0.103	0.097	0.290
rs12214804	6	34188866	<i>HMGA1</i>	C	T	0.92	0.90	0.98	-0.084	0.006	2E-49	-0.462	0.181	0.0107	-0.017	0.055	0.755	-0.022	0.062	0.719	0.015	0.116	0.896
rs3800461	6	34616322	<i>C6orf106</i>	G	C	0.13	0.11	1.00	0.053	0.005	9E-33	0.647	0.163	<.0001	0.004	0.052	0.945	-0.003	0.057	0.964	0.054	0.116	0.645
rs6919534	6	35246903	<i>ZNF76</i>	G	A	0.87	0.85	1.00	0.05	0.004	8E-31	0.140	0.144	0.3307	-0.007	0.045	0.873	-0.014	0.049	0.777	0.039	0.100	0.701
rs6899744	6	35286295	<i>DEF6</i>	G	T	0.02	0.02	0.97	-0.132	0.014	2E-22	0.068	0.420	0.8712	-0.119	0.129	0.353	-0.111	0.142	0.432	-0.167	0.292	0.566
rs4713902	6	35614026	<i>FKBP5</i>	T	C	0.27	0.29	1.00	-0.027	0.004	9E-15	0.121	0.116	0.2969	0.061	0.034	0.077	0.056	0.038	0.140	0.093	0.074	0.206
rs16895130	6	41924931	<i>CCND3</i>	A	G	0.28	0.29	0.88	0.023	0.003	4E-12	-0.204	0.125	0.1023	0.018	0.037	0.631	0.027	0.041	0.513	-0.039	0.085	0.650
rs10948222	6	45244415	<i>SUPT3H</i>	T	C	0.58	0.42	0.98	0.031	0.003	1E-20	0.131	0.106	0.219	-0.034	0.033	0.295	-0.031	0.036	0.381	-0.056	0.072	0.441
rs9395264	6	47475022	<i>CD2AP</i>	T	G	0.68	0.70	0.93	0.02	0.003	2E-10	0.012	0.119	0.9225	-0.044	0.037	0.231	-0.040	0.040	0.325	-0.075	0.078	0.336
rs12190423	6	72202711	<i>OGFRL1</i>	G	C	0.38	0.38	0.86	-0.017	0.003	3E-08	-0.139	0.115	0.2279	0.023	0.035	0.514	0.027	0.039	0.489	-0.008	0.076	0.915
rs12209223	6	76164589	<i>FILIP1</i>	C	A	0.12	0.09	0.75	0.051	0.005	5E-25	0.278	0.204	0.1725	-0.006	0.063	0.927	-0.044	0.070	0.530	0.237	0.129	0.065
rs6903448	6	76173832	<i>FILIP1</i>	C	T	0.16	0.16	0.80	-0.035	0.004	9E-18	-0.197	0.159	0.215	0.010	0.051	0.843	0.029	0.056	0.613	-0.117	0.109	0.283
rs648831	6	80956208	<i>BCKDHB</i>	C	T	0.50	0.51	0.94	0.031	0.003	3E-26	0.297	0.106	0.0053	-0.049	0.034	0.149	-0.061	0.038	0.105	0.028	0.073	0.700
rs1341278	6	81038921	<i>BCKDHB</i>	T	G	0.06	0.05	1.00	0.056	0.006	6E-18	0.247	0.226	0.2762	-0.112	0.073	0.126	-0.143	0.081	0.079	0.081	0.152	0.592
rs9443804	6	81315597	<i>BCKDHB</i>	A	G	0.44	0.46	0.81	0.024	0.003	4E-15	0.151	0.115	0.1889	0.052	0.035	0.141	0.063	0.039	0.104	-0.026	0.078	0.740
rs310421	6	81792063	<i>FAM46A</i>	G	T	0.54	0.55	0.83	0.032	0.003	3E-27	0.092	0.115	0.4243	0.066	0.036	0.064	0.057	0.039	0.142	0.126	0.082	0.123
rs3828760	6	82456984	<i>FAM46A</i>	C	T	0.12	0.12	0.69	0.03	0.005	1E-10	0.279	0.191	0.144	0.027	0.059	0.646	0.012	0.065	0.854	0.140	0.133	0.293
rs761391	6	85448103	<i>TBX18</i>	C	T	0.54	0.54	0.82	-0.019	0.003	8E-09	-0.126	0.116	0.2768	-0.052	0.035	0.130	-0.056	0.038	0.141	-0.026	0.081	0.750
rs314263	6	105392745	<i>LIN28B</i>	C	T	0.68	0.69	1.00	-0.043	0.003	1E-42	-0.468	0.113	<.0001	-0.008	0.034	0.811	-0.013	0.037	0.716	0.033	0.076	0.664
rs479744	6	109020032	<i>FOXO3</i>	G	T	0.21	0.23	0.79	-0.025	0.004	8E-12	-0.165	0.141	0.2426	-0.032	0.044	0.468	-0.048	0.048	0.321	0.068	0.096	0.477
rs6920372	6	109723939	<i>PPIL6</i>	G	A	0.41	0.43	0.99	-0.025	0.003	2E-17	-0.393	0.105	0.0002	-0.054	0.032	0.099	-0.050	0.036	0.156	-0.075	0.072	0.296
rs2145357	6	116451442	<i>NT5DC1</i>	A	G	0.27	0.27	0.96	0.021	0.003	4E-10	0.242	0.119	0.0423	-0.004	0.037	0.923	-0.003	0.041	0.948	-0.017	0.078	0.831
rs1405212	6	117490664	<i>VGLL2</i>	T	C	0.59	0.65	0.88	0.023	0.003	2E-14	0.092	0.115	0.423	-0.007	0.035	0.852	0.004	0.039	0.914	-0.076	0.077	0.324
rs389663	6	117868051	<i>DCBLD1</i>	T	C	0.68	0.67	0.75	-0.022	0.003	3E-12	-0.313	0.129	0.0153	0.046	0.039	0.241	0.066	0.044	0.128	-0.090	0.083	0.279
rs4895801	6	126216403	<i>NCOA7</i>	C	G	0.47	0.44	0.89	0.017	0.003	6E-09	0.224	0.112	0.0461	0.033	0.034	0.332	0.011	0.038	0.782	0.182	0.075	0.016
rs1155939	6	126866133	<i>C6orf173</i>	C	A	0.50	0.51	0.99	0.042	0.003	1E-45	0.166	0.105	0.1132	0.064	0.033	0.049	0.066	0.036	0.067	0.054	0.070	0.442
rs1415701	6	130345835	<i>L3MBTL3</i>	G	A	0.27	0.26	1.00	-0.044	0.004	2E-34	-0.219	0.120	0.0685	-0.032	0.036	0.376	-0.052	0.039	0.180	0.116	0.082	0.157
rs7740107	6	130374461	<i>L3MBTL3</i>	T	A	0.74	0.75	1.00	-0.042	0.003	2E-36	-0.220	0.120	0.0676	-0.043	0.036	0.231	-0.062	0.040	0.117	0.092	0.083	0.268
rs6921207	6	131327956	<i>EPB41L2</i>	G	A	0.37	0.37	0.95	0.023	0.003	3E-14	0.347	0.111	0.0017	-0.020	0.034	0.566	-0.023	0.038	0.543	0.001	0.078	0.990
rs7745166	6	142617680	<i>GPR126</i>	C	A	0.43	0.46	0.69	-0.026	0.003	4E-16	-0.015	0.127	0.9092	-0.016	0.038	0.679	-0.018	0.041	0.665	-0.001	0.088	0.987
rs4896582	6	142703877	<i>GPR126</i>	G	A	0.30	0.32	0.99	-0.051	0.003	3E-55	-0.293	0.113	0.0098	-0.018	0.035	0.601	-0.015	0.039	0.702	-0.042	0.072	0.564
rs2748483	6	146335560	<i>GRM1</i>	A	T	0.45	0.43	0.94	-0.019	0.003	4E-10	-0.067	0.108	0.535	-0.025	0.034	0.452	-0.032	0.037	0.399	0.015	0.073	0.835
rs6902771	6	152157881	<i>ESR1</i>	C	T	0.46	0.46	0.98	0.031	0.003	7E-25	0.259	0.107	0.0151	0.091	0.032	0.005	0.084	0.036	0.018	0.140	0.072	0.051
rs3020418	6	152345162	<i>ESR1</i>	G	A	0.30	0.28	1.00	0.032	0.003	8E-24	0.081	0.116	0.4846	0.004	0.036	0.904	0.022	0.039	0.573	-0.129	0.084	0.124
rs11156098	6	156587831	<i>ARID1B</i>	T	C	0.88	0.90	0.90	-0.027	0.005	2E-08	-0.635	0.180	0.0004	-0.059	0.056	0.298	-0.052	0.062	0.398	-0.098	0.128	0.444
rs1832871	6	158722034	<i>TULP4</i>	A	G	0.66	0.68	0.82	-0.025	0.003	2E-15	-0.182	0.123	0.1391	-0.023	0.037	0.526	-0.037	0.040	0.360	0.072	0.082	0.380
rs9456307	6	158929442	<i>TULP4</i>	T	A	0.06	0.05	0.49	-0.053	0.007	2E-15	-0.747	0.352	0.0339	0.128	0.099	0.194	0.156	0.108	0.148	-0.049	0.236	0.835
rs991946	6	166329862	<i>T</i>	C	T	0.48	0.45	0.82	-0.021	0.003	8E-13	-0.017	0.117	0.8871	-0.032	0.038	0.401	-0.034	0.042	0.419	-0.008	0.075	0.914
rs2763273	6	168834623	<i>SMOC2</i>	C	T	0.24	0.23	0.92	-0.022	0.003	3E-10	-0.299	0.131	0.0221	0.043	0.040	0.286	0.046	0.045	0.309	0.018	0.084	0.832

rs7774834	6	169349731	THBS2	C	A	0.51	0.50	0.99	0.018	0.003	5E-10	0.001	0.104	0.9945	-0.029	0.032	0.366	-0.024	0.035	0.492	-0.062	0.071	0.385
rs798497	7	2795957	GNAI2	A	G	0.30	0.29	0.97	-0.057	0.003	2E-71	-0.291	0.117	0.0131	0.032	0.036	0.367	0.042	0.039	0.280	-0.040	0.080	0.613
rs4725061	7	8086639	GLCCI1	A	G	0.44	0.43	0.71	0.02	0.003	1E-10	0.163	0.126	0.1942	-0.031	0.038	0.420	-0.011	0.042	0.787	-0.169	0.088	0.055
rs929637	7	12276522	TMEM106B	G	T	0.22	0.23	1.00	-0.021	0.004	2E-09	-0.020	0.126	0.8755	-0.012	0.038	0.761	-0.002	0.042	0.970	-0.083	0.086	0.336
rs17140875	7	19248278	FERD3L	G	T	0.05	0.05	0.58	-0.043	0.007	7E-09	-0.008	0.300	0.9788	0.111	0.092	0.228	0.118	0.101	0.245	0.072	0.205	0.724
rs2390151	7	19642100	TWISTNB	G	T	0.18	0.19	0.92	0.033	0.004	3E-17	0.155	0.140	0.2665	-0.043	0.045	0.338	-0.058	0.050	0.243	0.051	0.095	0.587
rs3807931	7	20381674	ITGB8	G	A	0.45	0.46	0.95	0.027	0.003	1E-19	-0.045	0.108	0.6769	-0.026	0.033	0.439	-0.019	0.037	0.607	-0.071	0.072	0.324
rs12538407	7	23521316	IGF2BP3	A	G	0.40	0.39	0.99	-0.032	0.003	4E-26	-0.122	0.107	0.2564	-0.019	0.032	0.551	-0.019	0.035	0.582	-0.019	0.073	0.797
rs1055144	7	25871109	NFE2L3	C	T	0.19	0.18	1.00	0.021	0.004	8E-09	0.175	0.135	0.193	0.019	0.041	0.640	0.031	0.045	0.493	-0.060	0.099	0.544
rs552707	7	28205303	JAZF1	T	C	0.69	0.72	0.99	-0.046	0.003	9E-46	-0.196	0.117	0.0948	-0.035	0.036	0.336	-0.054	0.039	0.171	0.104	0.081	0.200
rs12533079	7	28751137	CREB5	T	G	0.21	0.21	1.00	-0.022	0.004	2E-09	-0.272	0.129	0.0345	-0.022	0.040	0.575	-0.028	0.044	0.527	0.014	0.087	0.875
rs6462432	7	32935524	KBTBD2	G	A	0.39	0.40	0.65	0.017	0.003	3E-08	0.197	0.128	0.1248	0.035	0.040	0.376	0.052	0.044	0.233	-0.084	0.091	0.357
rs6974574	7	38110073	STARD3NL	A	T	0.69	0.66	0.93	0.03	0.003	1E-18	0.281	0.114	0.0134	-0.046	0.034	0.184	-0.048	0.038	0.203	-0.023	0.076	0.765
rs1007358	7	46201355	IGFBP3	A	G	0.23	0.23	0.60	0.021	0.004	9E-10	0.114	0.162	0.4817	0.018	0.049	0.713	0.035	0.054	0.516	-0.103	0.106	0.329
rs6949739	7	46417403	IGFBP3	T	A	0.09	0.08	0.97	-0.038	0.005	7E-13	-0.338	0.196	0.0858	0.077	0.062	0.214	0.073	0.069	0.290	0.096	0.129	0.458
rs2715094	7	50730452	GRB10	G	A	0.75	0.79	0.79	-0.021	0.003	9E-10	-0.070	0.144	0.6253	-0.006	0.043	0.894	-0.009	0.047	0.842	0.013	0.105	0.904
rs1113765	7	55889334	14-Sep	G	A	0.19	0.21	0.71	-0.024	0.004	2E-10	-0.437	0.153	0.0041	-0.014	0.046	0.761	-0.043	0.051	0.397	0.171	0.097	0.076
rs12669267	7	73304636	WBSCR28	C	T	0.13	0.14	0.52	-0.029	0.005	3E-08	-0.401	0.200	0.0453	-0.022	0.062	0.720	-0.024	0.068	0.721	-0.011	0.142	0.938
rs17807185	7	77308295	RSBNIL	A	G	0.38	0.39	0.62	0.022	0.003	4E-13	0.266	0.136	0.0505	0.022	0.041	0.589	0.037	0.045	0.404	-0.087	0.095	0.364
rs2888877	7	92228400	CDK6	T	C	0.78	0.79	0.96	-0.066	0.004	4E-69	-0.361	0.133	0.0065	0.024	0.041	0.552	0.007	0.044	0.871	0.154	0.096	0.108
rs42039	7	92244422	CDK6	C	T	0.27	0.26	1.00	0.068	0.003	4E-88	0.241	0.121	0.046	-0.003	0.037	0.928	0.018	0.041	0.665	-0.151	0.079	0.054
rs6971575	7	96039648	SLC25A13	C	G	0.71	0.73	0.80	-0.021	0.004	3E-09	-0.132	0.128	0.3036	-0.043	0.040	0.284	-0.069	0.044	0.114	0.142	0.088	0.108
rs17250196	7	99817196	GATS/PVR	G	T	0.06	0.05	0.88	0.045	0.007	4E-10	0.886	0.259	0.0006	-0.088	0.084	0.296	-0.102	0.093	0.273	0.032	0.170	0.850
rs6952113	7	120777619	C7orf58	G	A	0.38	0.40	0.93	-0.018	0.003	1E-09	-0.195	0.111	0.0805	0.028	0.034	0.396	0.025	0.037	0.497	0.049	0.073	0.502
rs6962887	7	135045786	CNOT4	T	G	0.32	0.31	0.61	-0.023	0.003	6E-11	-0.375	0.144	0.0091	0.019	0.045	0.681	0.014	0.050	0.776	0.043	0.096	0.653
rs273945	7	137611566	CREB3L2	A	C	0.58	0.58	1.00	0.019	0.003	1E-09	0.284	0.105	0.007	0.058	0.032	0.070	0.081	0.035	0.021	-0.096	0.070	0.167
rs822531	7	148629759	EZH2	C	T	0.78	0.77	0.67	0.036	0.004	2E-18	-0.027	0.155	0.8606	-0.015	0.047	0.754	-0.034	0.051	0.513	0.127	0.113	0.262
rs6955948	7	150508720	TMEM176A	C	T	0.28	0.29	0.99	0.031	0.003	5E-20	0.015	0.114	0.8962	0.011	0.035	0.753	-0.007	0.039	0.849	0.152	0.079	0.054
rs4875421	8	4827332	CSMD1	T	A	0.55	0.53	0.95	-0.019	0.003	1E-10	0.090	0.108	0.4047	0.012	0.034	0.715	-0.004	0.037	0.920	0.122	0.070	0.083
rs429433	8	8747894	MFHAS1	A	G	0.95	0.96	0.60	-0.046	0.007	1E-10	0.128	0.343	0.7091	-0.009	0.102	0.928	-0.025	0.112	0.821	0.103	0.237	0.664
rs7834383	8	13273477	DLC1	G	T	0.35	0.32	0.87	0.022	0.003	2E-11	0.269	0.118	0.0228	0.019	0.037	0.605	0.021	0.041	0.604	0.001	0.079	0.987
rs7823327	8	22562352	PEBP4	G	T	0.49	0.50	0.67	0.019	0.003	6E-11	0.193	0.126	0.1253	0.008	0.040	0.840	0.016	0.044	0.727	-0.046	0.085	0.593
rs4273857	8	23173053	LOXL2	A	G	0.76	0.77	0.99	-0.027	0.003	9E-15	-0.175	0.123	0.1546	0.009	0.039	0.816	0.029	0.043	0.490	-0.134	0.084	0.112
rs17088184	8	23375235	SLC25A37	C	G	0.17	0.15	1.00	0.025	0.004	5E-10	0.111	0.146	0.4455	-0.047	0.046	0.303	-0.035	0.050	0.488	-0.135	0.102	0.184
rs2013265	8	24092500	ADAM28	C	T	0.25	0.22	0.62	-0.028	0.003	2E-16	-0.468	0.160	0.0034	0.104	0.047	0.029	0.119	0.052	0.022	0.005	0.106	0.965
rs3812423	8	25298710	KCTD9	G	C	0.36	0.36	0.99	-0.021	0.003	2E-12	-0.209	0.110	0.0568	-0.035	0.034	0.305	-0.038	0.037	0.306	-0.025	0.076	0.747
rs568610	8	27527995	SCARA3	C	T	0.24	0.26	0.83	0.022	0.003	1E-10	-0.210	0.130	0.1074	-0.039	0.039	0.319	-0.032	0.043	0.450	-0.090	0.091	0.320
rs6988484	8	49413780	EFCAB1	T	C	0.25	0.27	0.96	0.022	0.003	5E-11	0.027	0.123	0.8257	-0.025	0.036	0.493	-0.047	0.040	0.239	0.121	0.080	0.134
rs10958476	8	57095808	PLAG1	T	C	0.21	0.20	1.00	0.051	0.004	2E-40	0.254	0.130	0.0512	0.027	0.040	0.503	0.018	0.044	0.673	0.088	0.088	0.319
rs9650315	8	57155598	CHCHD7	G	T	0.13	0.16	0.81	-0.061	0.005	2E-41	-0.467	0.163	0.0042	0.042	0.049	0.392	0.060	0.054	0.268	-0.084	0.103	0.414
rs2956605	8	75883054	CRISPLD1	A	C	0.62	0.61	1.00	-0.024	0.003	5E-15	-0.191	0.108	0.0773	-0.024	0.033	0.464	-0.033	0.036	0.364	0.041	0.072	0.567
rs4735677	8	78148191	PXMP3	A	T	0.28	0.29	1.00	0.037	0.003	6E-30	0.234	0.116	0.0442	0.010	0.036	0.777	0.033	0.039	0.397	-0.156	0.080	0.052
rs2737220	8	116637685	TRPS1	T	C	0.62	0.62	1.00	-0.017	0.003	1E-08	-0.233	0.107	0.029	-0.046	0.032	0.150	-0.043	0.035	0.226	-0.071	0.072	0.324
rs1550162	8	117563532	EIF3H	G	A	0.71	0.73	1.00	-0.024	0.003	1E-13	-0.177	0.118	0.1313	0.047	0.036	0.190	0.030	0.040	0.451	0.165	0.079	0.037
rs1599473	8	120475358	NOV	G	T	0.25	0.24	0.91	-0.027	0.003	1E-14	-0.114	0.130	0.3782	0.041	0.041	0.310	0.047	0.045	0.289	0.007	0.089	0.941
rs8180991	8	126500350	TRIB1	C	G	0.23	0.22	0.79	-0.028	0.004	3E-15	-0.229	0.143	0.1101	0.043	0.044	0.329	0.065	0.048	0.174	-0.122	0.103	0.239

rs4733724	8	130723728	<i>MLZE</i>	A	G	0.20	0.21	0.95	-0.05	0.004	1E-41	-0.192	0.132	0.1445	-0.067	0.040	0.095	-0.088	0.045	0.051	0.063	0.084	0.454
rs1036821	8	135650483	<i>ZFAT</i>	G	A	0.30	0.30	1.00	-0.037	0.003	1E-30	-0.321	0.114	0.0049	0.011	0.035	0.745	-0.009	0.039	0.821	0.150	0.081	0.062
rs11783655	8	145037573	<i>PLEC1</i>	T	A	0.40	0.40	0.95	-0.018	0.003	1E-09	-0.090	0.110	0.4124	0.012	0.034	0.719	0.031	0.037	0.395	-0.129	0.075	0.087
rs7033940	9	6440419	<i>UHRF2</i>	G	C	0.13	0.12	0.98	-0.024	0.004	5E-08	0.099	0.163	0.5441	-0.036	0.051	0.475	-0.037	0.056	0.513	-0.034	0.105	0.743
rs2149163	9	16455833	<i>BNC2</i>	G	C	0.40	0.38	0.95	0.02	0.003	2E-11	0.331	0.111	0.0028	-0.014	0.035	0.689	-0.012	0.039	0.762	-0.029	0.076	0.703
rs3927536	9	16787670	<i>BNC2</i>	C	T	0.78	0.75	0.90	0.021	0.004	2E-09	0.151	0.128	0.2403	-0.044	0.038	0.243	-0.059	0.042	0.159	0.053	0.086	0.540
rs10962832	9	17048990	<i>CNTLN</i>	A	T	0.16	0.15	0.99	-0.024	0.004	4E-08	0.043	0.144	0.7644	-0.006	0.044	0.886	0.005	0.049	0.915	-0.087	0.099	0.379
rs1576900	9	18629792	<i>ADAMTSL1</i>	G	A	0.30	0.30	0.91	-0.019	0.003	7E-09	-0.243	0.119	0.0414	0.003	0.037	0.924	0.018	0.040	0.652	-0.101	0.086	0.240
rs3763631	9	35808334	<i>NPR2/SPA</i>	C	G	0.31	0.30	1.00	-0.019	0.003	1E-09	-0.167	0.114	0.1429	0.002	0.035	0.952	-0.019	0.039	0.626	0.144	0.076	0.057
rs958225	9	78759705	<i>PCSK5</i>	T	A	0.05	0.07	0.50	0.046	0.008	7E-09	-0.058	0.288	0.8402	-0.085	0.088	0.337	-0.071	0.096	0.462	-0.180	0.200	0.367
rs7853235	9	86660782	<i>RMI1</i>	T	C	0.80	0.80	0.94	-0.029	0.004	8E-15	-0.409	0.134	0.0023	-0.015	0.042	0.710	-0.010	0.046	0.835	-0.058	0.092	0.533
rs181338	9	89108161	<i>ZCCHC6</i>	C	T	0.51	0.51	0.96	0.028	0.003	3E-22	0.194	0.106	0.0675	0.001	0.032	0.971	0.008	0.035	0.828	-0.044	0.071	0.533
rs7043114	9	95387983	<i>IPPK</i>	C	T	0.56	0.60	0.70	-0.029	0.003	2E-22	-0.130	0.127	0.3034	0.005	0.040	0.890	0.018	0.044	0.673	-0.087	0.090	0.335
rs1257763	9	96893945	<i>PTPDC1</i>	A	G	0.96	0.96	0.72	-0.078	0.01	2E-16	0.135	0.325	0.6792	-0.046	0.099	0.646	0.000	0.113	0.998	-0.296	0.180	0.101
rs12347744	9	97575273	<i>C9orf3</i>	C	T	0.07	0.06	0.77	-0.039	0.006	5E-11	-0.725	0.251	0.0039	0.101	0.079	0.204	0.146	0.087	0.093	-0.207	0.184	0.262
rs4448343	9	98266370	<i>PTCH1</i>	A	G	0.35	0.34	1.00	0.035	0.003	5E-30	0.166	0.111	0.1337	-0.013	0.034	0.693	-0.008	0.037	0.823	-0.050	0.079	0.523
rs1329393	9	98318926	<i>PTCH1</i>	C	T	0.16	0.17	0.71	0.034	0.005	2E-13	-0.127	0.164	0.438	0.039	0.050	0.441	0.025	0.055	0.654	0.135	0.112	0.230
rs817300	9	98380222	<i>PTCH1</i>	G	A	0.07	0.06	0.62	-0.085	0.007	4E-34	-0.911	0.269	0.0007	-0.050	0.088	0.567	-0.063	0.097	0.519	0.040	0.178	0.822
rs10990303	9	98410405	<i>PTCH1</i>	C	T	0.23	0.22	0.91	0.036	0.004	4E-24	0.163	0.130	0.2102	0.019	0.041	0.640	0.025	0.045	0.584	-0.020	0.088	0.819
rs7870753	9	99201585	<i>HABP4</i>	A	G	0.22	0.23	0.98	0.043	0.004	4E-33	0.504	0.128	<.0001	-0.066	0.040	0.093	-0.075	0.044	0.085	-0.007	0.088	0.941
rs989393	9	101743336	<i>COL15A1</i>	T	C	0.29	0.29	0.76	-0.022	0.003	3E-11	-0.066	0.132	0.6185	0.003	0.040	0.948	0.008	0.045	0.853	-0.039	0.083	0.643
rs9409082	9	108901049	<i>TMEM38B</i>	C	T	0.24	0.25	0.97	-0.028	0.004	9E-15	0.093	0.123	0.4489	0.048	0.036	0.186	0.057	0.040	0.154	-0.011	0.082	0.888
rs902143	9	109181911	<i>ZNF462</i>	C	T	0.45	0.42	0.94	0.02	0.003	1E-11	0.052	0.109	0.6322	-0.059	0.033	0.075	-0.068	0.037	0.063	0.002	0.072	0.975
rs7027110	9	109599046	<i>ZNF462</i>	G	A	0.23	0.22	0.88	0.032	0.003	2E-20	0.045	0.133	0.7369	-0.017	0.042	0.688	-0.002	0.047	0.957	-0.113	0.091	0.216
rs3739707	9	113792706	<i>LPAR1</i>	C	A	0.25	0.29	0.69	-0.024	0.004	4E-12	-0.158	0.140	0.2587	0.016	0.042	0.700	0.045	0.046	0.327	-0.202	0.101	0.044
rs10119624	9	118305438	<i>I-Dec</i>	G	A	0.67	0.66	0.97	0.024	0.003	4E-14	0.163	0.111	0.1421	0.017	0.033	0.602	0.029	0.037	0.433	-0.053	0.074	0.473
rs12344396	9	118921327	<i>PAPPA</i>	G	C	0.62	0.56	0.71	0.019	0.003	8E-10	-0.016	0.128	0.9031	0.022	0.038	0.568	0.011	0.042	0.797	0.099	0.087	0.257
rs7033487	9	119129257	<i>PAPPA</i>	T	C	0.21	0.19	1.00	-0.037	0.004	1E-24	-0.288	0.131	0.028	0.077	0.041	0.061	0.083	0.045	0.068	0.040	0.090	0.657
rs1742829	9	119422807	<i>ASTN2</i>	T	A	0.92	0.92	0.99	-0.037	0.006	2E-11	-0.190	0.200	0.3411	-0.018	0.060	0.759	-0.018	0.066	0.781	-0.020	0.129	0.876
rs7466269	9	133464084	<i>FUBP3</i>	A	G	0.36	0.38	0.66	-0.033	0.003	1E-27	-0.126	0.132	0.3401	-0.024	0.042	0.568	0.006	0.046	0.892	-0.224	0.093	0.016
rs3132297	9	137301866	<i>RXRA</i>	A	G	0.83	0.82	0.90	0.023	0.004	4E-08	0.092	0.146	0.5276	-0.008	0.044	0.859	0.003	0.048	0.954	-0.081	0.098	0.407
rs7849585	9	139111870	<i>QSOX2</i>	G	T	0.33	0.32	0.93	0.036	0.003	1E-29	0.112	0.116	0.3348	0.023	0.036	0.521	0.023	0.039	0.556	0.019	0.080	0.810
rs3812591	9	139341612	<i>SEC16A</i>	T	C	0.27	0.27	0.99	0.024	0.003	7E-13	0.198	0.119	0.0972	-0.052	0.037	0.162	-0.043	0.040	0.286	-0.113	0.085	0.182
rs4332428	10	4965434	<i>AKR1C1</i>	A	G	0.12	0.13	0.72	-0.036	0.005	2E-15	-0.187	0.182	0.3037	-0.016	0.055	0.774	-0.033	0.060	0.577	0.105	0.122	0.390
rs12779328	10	12943973	<i>CCDC3</i>	C	T	0.28	0.30	0.94	-0.028	0.003	2E-17	-0.184	0.118	0.1175	-0.080	0.036	0.026	-0.089	0.040	0.026	-0.020	0.076	0.789
rs4350272	10	25056118	<i>ARHGAP21</i>	A	G	0.72	0.74	0.85	-0.02	0.003	3E-09	-0.152	0.128	0.2337	0.076	0.039	0.052	0.063	0.042	0.140	0.172	0.092	0.063
rs7069985	10	27890831	<i>RAB18</i>	A	G	0.25	0.22	0.94	0.023	0.003	2E-11	-0.010	0.130	0.9395	0.061	0.039	0.117	0.070	0.043	0.105	0.007	0.085	0.938
rs10995319	10	52762887	<i>PRKG1</i>	T	C	0.24	0.23	0.96	-0.019	0.003	3E-08	-0.128	0.126	0.3091	-0.038	0.039	0.329	-0.053	0.043	0.221	0.063	0.080	0.430
rs1171615	10	61469090	<i>SLC16A9</i>	C	T	0.78	0.81	0.67	-0.022	0.004	6E-09	-0.208	0.163	0.1996	0.022	0.049	0.655	0.013	0.054	0.805	0.080	0.113	0.480
rs10997979	10	69937192	<i>MYPN</i>	A	G	0.50	0.47	0.99	0.021	0.003	4E-13	0.317	0.104	0.0024	-0.027	0.033	0.418	-0.022	0.037	0.557	-0.053	0.070	0.454
rs4746769	10	70196580	<i>DNA2</i>	T	C	0.14	0.16	0.80	-0.029	0.004	9E-12	0.019	0.162	0.9066	0.034	0.047	0.476	0.006	0.052	0.905	0.205	0.098	0.037
rs1815314	10	80928793	<i>ZMIZ1</i>	G	A	0.42	0.41	1.00	-0.022	0.003	5E-14	-0.122	0.105	0.242	-0.011	0.032	0.724	-0.010	0.035	0.780	-0.023	0.071	0.747
rs1923367	10	81132829	<i>ZCCHC24</i>	G	C	0.48	0.50	0.92	-0.03	0.003	5E-24	-0.031	0.110	0.7747	0.007	0.034	0.826	-0.016	0.037	0.663	0.176	0.076	0.021
rs2631676	10	93037409	<i>PCGF5</i>	A	G	0.19	0.17	0.99	0.028	0.004	5E-13	0.227	0.137	0.0995	0.033	0.043	0.445	0.043	0.047	0.365	-0.034	0.095	0.723
rs915506	10	97805074	<i>CCNJ</i>	G	A	0.35	0.35	0.61	-0.021	0.003	1E-11	-0.006	0.139	0.9663	-0.060	0.043	0.163	-0.058	0.047	0.218	-0.070	0.095	0.458
rs11599750	10	101805442	<i>CPNI</i>	C	T	0.38	0.39	1.00	-0.023	0.003	3E-14	-0.188	0.106	0.0762	0.001	0.032	0.978	0.018	0.035	0.601	-0.123	0.075	0.102

rs10883563	10	102684380	FAM178A	C	A	0.55	0.55	0.88	0.023	0.003	6E-15	0.421	0.112	0.0002	0.001	0.034	0.984	-0.002	0.038	0.955	0.023	0.076	0.765
rs7899004	10	104341435	SUFU	T	C	0.44	0.42	0.95	-0.025	0.003	7E-17	-0.065	0.109	0.549	-0.029	0.034	0.387	-0.052	0.038	0.165	0.124	0.074	0.092
rs6584575	10	105577409	SH3PXD2A	G	A	0.10	0.11	0.98	0.034	0.005	1E-10	0.145	0.178	0.4166	-0.019	0.051	0.705	-0.026	0.056	0.645	0.019	0.120	0.872
rs291979	10	121129797	GRK5	G	A	0.23	0.23	0.92	0.029	0.004	2E-16	0.325	0.130	0.0122	-0.038	0.040	0.340	-0.036	0.044	0.412	-0.058	0.090	0.519
rs1614303	10	123396806	FGFR2	G	T	0.83	0.82	1.00	0.022	0.004	6E-09	0.107	0.136	0.4322	0.046	0.042	0.273	0.048	0.046	0.296	0.033	0.093	0.719
rs10794175	10	126358073	FAM53B	G	T	0.43	0.44	1.00	0.02	0.003	6E-12	-0.011	0.106	0.9166	0.045	0.032	0.159	0.031	0.035	0.385	0.148	0.075	0.047
rs11245515	10	126824068	CTBP2	T	C	0.44	0.44	1.00	-0.017	0.003	9E-09	-0.005	0.105	0.9641	0.012	0.032	0.696	0.012	0.035	0.725	0.012	0.072	0.870
rs11244750	10	127673877	FANK1	C	T	0.32	0.35	0.83	0.018	0.003	2E-08	0.188	0.121	0.1199	-0.034	0.038	0.370	-0.038	0.042	0.357	-0.004	0.082	0.958
rs2272566	11	244552	PSMD13	A	G	0.52	0.55	0.85	-0.016	0.003	3E-08	-0.049	0.113	0.6626	0.052	0.035	0.137	0.044	0.038	0.255	0.114	0.078	0.147
rs2735469	11	2022804	MRPL23	A	G	0.84	0.84	1.00	-0.029	0.005	3E-10	-0.332	0.144	0.0214	0.045	0.044	0.305	0.059	0.048	0.226	-0.050	0.102	0.621
rs4320932	11	2171601	INS-IGF2	T	C	0.19	0.21	1.00	-0.029	0.004	2E-12	-0.487	0.129	0.0002	-0.021	0.041	0.598	-0.016	0.045	0.718	-0.055	0.085	0.515
rs17659078	11	2284590	ASCL2	C	A	0.27	0.25	1.00	0.021	0.003	6E-10	0.074	0.119	0.5356	0.044	0.037	0.231	0.032	0.040	0.433	0.130	0.087	0.134
rs2237886	11	2810731	KCNQ1	C	T	0.11	0.09	0.86	0.043	0.005	5E-18	0.478	0.189	0.0116	0.055	0.059	0.354	0.066	0.065	0.305	-0.032	0.135	0.815
rs6485978	11	12678415	TEAD1	T	C	0.46	0.42	0.62	0.023	0.003	1E-15	0.251	0.134	0.0609	0.050	0.041	0.221	0.056	0.045	0.216	0.010	0.094	0.919
rs2099745	11	12924265	TEAD1	G	A	0.08	0.06	0.72	-0.036	0.006	2E-09	0.182	0.250	0.4677	-0.135	0.080	0.091	-0.166	0.089	0.061	0.036	0.174	0.838
rs10766065	11	13277961	ARNTL	C	T	0.73	0.71	0.97	-0.019	0.003	3E-08	0.027	0.116	0.8188	0.027	0.036	0.440	0.019	0.039	0.637	0.095	0.077	0.219
rs7126398	11	14268729	SPON1	G	C	0.08	0.06	0.96	0.041	0.006	3E-12	0.591	0.227	0.0091	-0.074	0.078	0.344	-0.087	0.087	0.318	0.012	0.148	0.934
rs757081	11	17351683	NUCB2	C	G	0.34	0.33	0.83	0.024	0.003	8E-15	0.222	0.121	0.0677	0.013	0.038	0.727	0.030	0.041	0.471	-0.097	0.083	0.245
rs10767838	11	30347927	C11orf46	A	G	0.28	0.28	0.91	-0.025	0.003	3E-14	-0.275	0.124	0.0263	0.026	0.038	0.494	0.013	0.042	0.748	0.110	0.081	0.172
rs3802758	11	45936035	PEX16	G	A	0.94	0.92	0.73	0.039	0.007	2E-09	0.772	0.227	0.0007	-0.011	0.069	0.876	-0.032	0.075	0.667	0.158	0.157	0.314
rs1681630	11	47969152	PTPRJ	T	C	0.66	0.69	0.76	-0.029	0.003	2E-20	-0.344	0.129	0.0078	-0.019	0.040	0.642	-0.025	0.044	0.566	0.024	0.085	0.774
rs3782089	11	65336819	SSSCA1	C	T	0.06	0.08	0.93	-0.053	0.007	5E-16	-0.283	0.202	0.1606	0.045	0.059	0.445	0.073	0.064	0.256	-0.140	0.142	0.324
rs7112925	11	66826160	RHOD	C	T	0.36	0.36	0.95	-0.024	0.003	6E-15	-0.075	0.112	0.5066	-0.071	0.034	0.037	-0.075	0.038	0.045	-0.042	0.076	0.582
rs2510396	11	68417652	GAL	G	C	0.86	0.86	0.87	0.029	0.004	9E-12	0.369	0.159	0.02	-0.009	0.049	0.847	-0.018	0.054	0.737	0.055	0.107	0.607
rs3750972	11	68830628	TPCN2	T	G	0.48	0.49	0.99	0.019	0.003	1E-09	0.234	0.105	0.0259	0.040	0.032	0.220	0.028	0.036	0.435	0.125	0.070	0.077
rs4357716	11	69163161	MYEOV	C	T	0.14	0.14	1.00	0.031	0.005	7E-11	0.284	0.150	0.0579	0.060	0.047	0.206	0.070	0.052	0.180	-0.016	0.099	0.875
rs11236294	11	74739934	NEU3	G	T	0.29	0.31	0.62	0.019	0.003	5E-09	-0.012	0.142	0.9328	0.006	0.043	0.884	-0.014	0.048	0.765	0.143	0.096	0.138
rs606452	11	75276178	SERPINH1	A	C	0.86	0.82	0.54	-0.043	0.004	2E-23	-0.209	0.185	0.2582	0.061	0.057	0.282	0.096	0.062	0.123	-0.177	0.127	0.163
rs632124	11	118613235	DDX6	T	A	0.42	0.41	0.73	0.023	0.003	2E-14	0.055	0.124	0.6578	0.000	0.038	0.999	0.031	0.042	0.457	-0.227	0.085	0.008
rs10790381	11	120257495	ARHGFE12	A	G	0.18	0.16	0.57	-0.027	0.004	2E-12	-0.322	0.192	0.0934	0.053	0.059	0.367	0.039	0.065	0.544	0.148	0.132	0.259
rs1461503	11	122845075	BSX	A	C	0.57	0.56	1.00	0.018	0.003	5E-10	0.064	0.106	0.5442	0.002	0.033	0.958	0.000	0.036	0.995	0.015	0.071	0.833
rs11221442	11	128577624	FLII	G	C	0.25	0.23	0.53	-0.027	0.004	3E-14	0.003	0.172	0.9872	0.052	0.053	0.330	0.097	0.058	0.097	-0.270	0.118	0.022
rs11612228	12	576984	B4GALNT3	C	T	0.38	0.36	1.00	0.02	0.003	7E-10	0.027	0.109	0.8057	0.019	0.034	0.580	0.019	0.038	0.613	0.020	0.073	0.780
rs7299326	12	1573005	ERC1	C	T	0.05	0.06	0.86	-0.041	0.007	1E-08	-0.364	0.224	0.1049	0.009	0.069	0.891	-0.004	0.077	0.963	0.094	0.145	0.516
rs2856321	12	11855773	ETV6	G	A	0.64	0.66	0.97	-0.031	0.003	8E-24	-0.372	0.111	0.0008	-0.036	0.034	0.283	-0.025	0.037	0.501	-0.114	0.075	0.126
rs1420023	12	12876111	CDKN1B	C	G	0.12	0.12	0.94	-0.028	0.005	2E-08	-0.146	0.167	0.3809	0.099	0.052	0.057	0.098	0.057	0.087	0.102	0.111	0.358
rs4326884	12	20536371	PDE3A	G	A	0.51	0.51	0.87	0.019	0.003	2E-10	0.014	0.115	0.905	-0.007	0.035	0.832	-0.004	0.039	0.927	-0.039	0.079	0.620
rs11047239	12	24207780	SOX5	C	G	0.30	0.28	0.91	0.023	0.003	3E-13	0.153	0.120	0.2052	0.020	0.038	0.601	0.030	0.042	0.475	-0.049	0.079	0.534
rs1861908	12	27997409	KLHDC5	C	G	0.80	0.77	1.00	-0.023	0.004	1E-08	-0.069	0.125	0.5795	0.000	0.039	0.991	-0.005	0.043	0.912	0.029	0.089	0.745
rs11049611	12	28600244	CCDC91	C	T	0.30	0.28	1.00	-0.038	0.003	3E-32	-0.312	0.116	0.0074	0.127	0.036	0.000	0.138	0.040	0.001	0.051	0.079	0.522
rs12820411	12	28952342	CCDC91	G	C	0.32	0.33	0.93	-0.021	0.003	3E-11	-0.189	0.117	0.1052	0.031	0.036	0.386	0.047	0.040	0.241	-0.068	0.077	0.373
rs10843390	12	29496991	ERGIC2	C	T	0.29	0.29	0.99	0.021	0.003	5E-11	0.015	0.115	0.8957	-0.028	0.036	0.437	-0.010	0.039	0.794	-0.146	0.083	0.077
rs10880969	12	46827023	SLC38A2	T	C	0.70	0.70	0.98	0.024	0.003	6E-13	0.095	0.116	0.4154	0.038	0.035	0.286	0.034	0.039	0.380	0.074	0.082	0.364
rs2306694	12	56680636	CS	A	G	0.07	0.06	1.00	0.046	0.006	2E-15	0.183	0.212	0.3884	0.014	0.070	0.844	0.049	0.075	0.516	-0.260	0.177	0.143
rs10877030	12	58256714	CTDSP2	T	G	0.32	0.30	0.93	-0.023	0.003	4E-13	-0.254	0.117	0.0299	-0.035	0.036	0.321	-0.026	0.039	0.500	-0.097	0.080	0.225
rs17122659	12	59956923	SLC16A7	A	G	0.12	0.10	0.81	0.031	0.005	5E-10	0.312	0.192	0.1036	0.101	0.057	0.076	0.122	0.062	0.050	-0.062	0.128	0.626

rs2164968	12	65677086	MSRB3	T	C	0.38	0.36	1.00	0.018	0.003	1E-08	0.000	0.109	0.9995	0.021	0.033	0.513	0.007	0.036	0.848	0.113	0.071	0.114
rs8756	12	66359752	HMGA2	C	A	0.51	0.55	1.00	-0.059	0.003	5E-90	-0.524	0.104	<.0001	0.043	0.032	0.187	0.038	0.035	0.284	0.074	0.073	0.309
rs11175992	12	66391396	HMGA2	T	A	0.28	0.28	0.64	-0.048	0.004	1E-33	-0.318	0.148	0.0314	0.014	0.045	0.758	0.015	0.049	0.756	0.010	0.103	0.926
rs10748128	12	69827658	FRS2	G	T	0.35	0.35	0.64	0.038	0.003	4E-29	0.354	0.136	0.009	-0.051	0.041	0.222	-0.055	0.046	0.229	-0.015	0.093	0.875
rs17783015	12	90231386	ATP2B1	C	T	0.16	0.14	0.82	-0.023	0.004	2E-08	-0.053	0.163	0.7453	-0.007	0.050	0.890	-0.029	0.055	0.596	0.135	0.110	0.219
rs11107062	12	93919840	MRPL42	C	T	0.21	0.17	0.74	0.028	0.004	1E-11	0.261	0.157	0.0971	0.006	0.049	0.896	0.021	0.054	0.690	-0.105	0.115	0.362
rs3825199	12	93976954	SOCS2	A	G	0.23	0.21	1.00	0.051	0.004	4E-49	0.264	0.128	0.0387	-0.006	0.039	0.874	0.003	0.043	0.950	-0.067	0.089	0.454
rs10859567	12	94126925	CRADD	T	G	0.44	0.42	0.96	-0.035	0.003	5E-33	-0.160	0.108	0.1377	-0.029	0.033	0.372	-0.025	0.036	0.488	-0.062	0.075	0.404
rs7971536	12	102373788	CCDC53	T	A	0.46	0.48	0.63	-0.029	0.003	2E-19	-0.100	0.129	0.437	0.034	0.040	0.390	0.041	0.044	0.351	-0.015	0.092	0.869
rs833706	12	103062597	PAH	A	G	0.25	0.25	0.97	-0.021	0.004	3E-09	0.036	0.123	0.7706	-0.016	0.038	0.666	0.003	0.041	0.936	-0.145	0.084	0.083
rs2164747	12	104344836	HSP90B1	A	G	0.10	0.12	0.99	0.029	0.005	5E-09	-0.016	0.164	0.9213	-0.062	0.050	0.219	-0.056	0.055	0.310	-0.103	0.113	0.364
rs2888893	12	107338631	C12orf23	C	T	0.49	0.54	0.99	-0.017	0.003	9E-09	-0.080	0.106	0.4499	0.014	0.032	0.664	0.009	0.036	0.799	0.044	0.072	0.541
rs11616067	12	116393174	MED13L	A	G	0.24	0.23	0.96	-0.021	0.004	8E-09	0.008	0.125	0.9478	0.021	0.037	0.566	-0.005	0.041	0.910	0.197	0.079	0.013
rs4767473	12	117365506	FBXW8	G	A	0.86	0.88	0.75	0.025	0.004	3E-08	-0.139	0.186	0.4563	0.006	0.056	0.908	-0.014	0.061	0.817	0.146	0.129	0.256
rs497273	12	121204682	SPPL3	C	G	0.62	0.66	0.99	-0.018	0.003	7E-09	-0.123	0.110	0.2621	0.035	0.035	0.319	0.025	0.038	0.522	0.095	0.076	0.215
rs11835818	12	122494809	BCL7A	T	C	0.49	0.47	0.62	0.022	0.003	2E-13	0.183	0.133	0.1677	0.004	0.041	0.930	0.015	0.045	0.744	-0.070	0.090	0.437
rs7980687	12	123822711	SBNO1	G	A	0.20	0.21	0.97	0.039	0.004	1E-26	0.200	0.129	0.1203	0.003	0.040	0.934	-0.001	0.045	0.989	0.030	0.087	0.731
rs11057552	12	124750895	FAM101A	T	A	0.18	0.18	0.99	0.028	0.004	4E-13	0.386	0.136	0.0047	0.071	0.042	0.090	0.068	0.046	0.136	0.093	0.097	0.336
rs1809889	12	124801226	FAM101A	T	C	0.71	0.73	0.94	-0.032	0.003	4E-21	-0.367	0.120	0.0023	-0.013	0.038	0.732	0.006	0.042	0.878	-0.136	0.083	0.103
rs1199734	13	21570246	LATS2	T	G	0.81	0.80	0.58	0.022	0.004	2E-08	-0.134	0.175	0.4439	0.024	0.052	0.639	0.041	0.057	0.467	-0.110	0.114	0.337
rs11618507	13	30172751	SLC7A1	G	T	0.25	0.20	1.00	0.023	0.004	3E-10	0.226	0.128	0.0788	0.065	0.040	0.107	0.072	0.045	0.104	0.023	0.088	0.796
rs12323101	13	33143406	PDS5B	G	A	0.37	0.35	1.00	0.021	0.003	1E-11	0.343	0.109	0.0017	0.065	0.034	0.058	0.076	0.037	0.043	-0.012	0.082	0.880
rs12863103	13	33723244	STARD13	C	T	0.29	0.30	1.00	-0.019	0.003	2E-09	-0.246	0.115	0.0322	0.056	0.036	0.120	0.040	0.040	0.310	0.163	0.080	0.042
rs7334755	13	50469913	C13orf1	C	T	0.19	0.20	1.00	-0.032	0.004	9E-15	-0.092	0.132	0.4868	-0.008	0.040	0.845	-0.005	0.044	0.912	-0.029	0.089	0.740
rs2687950	13	50718468	KCNRG	C	T	0.25	0.25	0.87	0.036	0.003	9E-27	0.285	0.128	0.0265	-0.008	0.040	0.837	-0.015	0.045	0.736	0.031	0.084	0.713
rs1753637	13	51084173	DLEU7	T	G	0.69	0.71	0.99	-0.036	0.003	1E-29	-0.160	0.116	0.1673	0.004	0.035	0.918	0.016	0.038	0.681	-0.082	0.077	0.285
rs3118905	13	51105334	DLEU7	G	A	0.28	0.29	0.97	-0.058	0.003	1E-69	-0.344	0.118	0.0036	0.046	0.036	0.204	0.037	0.040	0.351	0.102	0.076	0.179
rs4883972	13	75058481	KLF12	C	G	0.45	0.50	0.73	-0.019	0.003	3E-10	0.031	0.121	0.7951	-0.009	0.036	0.801	-0.024	0.040	0.539	0.097	0.084	0.248
rs3818416	13	78474468	EDNRB	A	C	0.77	0.75	0.94	0.021	0.004	2E-09	0.174	0.125	0.1657	0.046	0.039	0.241	0.044	0.043	0.308	0.050	0.087	0.567
rs11616380	13	80705315	SPRY2	G	T	0.28	0.29	0.85	0.019	0.003	1E-08	0.202	0.123	0.1006	-0.053	0.039	0.173	-0.034	0.043	0.423	-0.173	0.081	0.032
rs6563199	13	81550449	SPRY2	T	C	0.65	0.65	0.92	-0.018	0.003	1E-08	-0.330	0.113	0.0034	0.019	0.035	0.595	0.014	0.039	0.717	0.049	0.078	0.531
rs7319045	13	92024574	GPC5	A	G	0.61	0.61	0.92	-0.024	0.003	8E-15	0.042	0.112	0.7107	0.084	0.035	0.017	0.086	0.039	0.027	0.068	0.076	0.372
rs7985356	13	115027462	CDC16	T	A	0.23	0.23	1.00	-0.023	0.003	5E-11	-0.081	0.124	0.5128	-0.070	0.038	0.065	-0.085	0.042	0.040	0.030	0.085	0.726
rs8017130	14	23759156	HOMEZ	A	G	0.69	0.67	0.80	0.023	0.003	1E-11	0.100	0.125	0.4208	-0.035	0.037	0.350	-0.032	0.042	0.440	-0.053	0.079	0.498
rs1950500	14	24830850	NFATC4	T	C	0.70	0.70	0.65	-0.031	0.003	3E-22	-0.250	0.140	0.0738	-0.020	0.044	0.647	-0.012	0.049	0.801	-0.074	0.093	0.424
rs12435366	14	35838389	NFKBIA	C	T	0.27	0.23	0.94	-0.023	0.004	5E-11	-0.104	0.129	0.4213	0.056	0.038	0.143	0.072	0.041	0.083	-0.060	0.095	0.528
rs10131337	14	37144516	PAX9	C	T	0.24	0.23	0.51	0.027	0.004	3E-12	0.587	0.173	0.0007	0.047	0.052	0.362	0.037	0.057	0.513	0.116	0.115	0.317
rs4901537	14	55203126	SAMD4A	G	C	0.74	0.81	0.65	-0.022	0.004	2E-09	0.082	0.164	0.6173	-0.067	0.050	0.180	-0.069	0.055	0.214	-0.061	0.112	0.587
rs11624136	14	59688820	DAAMI	G	A	0.50	0.51	0.97	0.018	0.003	2E-09	0.060	0.106	0.5738	-0.005	0.034	0.887	-0.002	0.037	0.958	-0.019	0.074	0.800
rs2093210	14	60957279	C14orf39	C	T	0.58	0.58	0.98	-0.039	0.003	3E-35	-0.139	0.107	0.1938	0.024	0.034	0.469	0.025	0.037	0.502	0.029	0.072	0.684
rs2781373	14	65568215	MAX	G	A	0.38	0.35	0.63	-0.021	0.003	4E-12	-0.006	0.138	0.9652	0.046	0.043	0.283	0.060	0.047	0.204	-0.045	0.094	0.636
rs1980850	14	68647188	RAD51L1	A	G	0.83	0.80	1.00	0.03	0.004	4E-14	0.440	0.133	0.001	-0.024	0.039	0.541	-0.023	0.043	0.587	-0.019	0.085	0.820
rs2058092	14	73932966	NUMB	T	C	0.44	0.47	0.71	-0.017	0.003	1E-08	-0.249	0.126	0.0474	0.061	0.039	0.116	0.060	0.043	0.161	0.078	0.086	0.364
rs862034	14	74990746	LTBP2	A	G	0.64	0.64	0.78	0.028	0.003	6E-20	0.212	0.123	0.0835	-0.028	0.039	0.460	-0.035	0.042	0.414	0.012	0.086	0.889
rs7154721	14	92427348	TRIP11	T	C	0.43	0.43	1.00	-0.027	0.003	5E-20	-0.177	0.105	0.0937	0.005	0.033	0.878	0.017	0.036	0.641	-0.068	0.071	0.344
rs1190545	14	102904179	KIAA0329	G	C	0.74	0.74	0.98	0.025	0.003	4E-14	-0.031	0.120	0.7978	-0.039	0.037	0.297	-0.037	0.041	0.370	-0.056	0.086	0.513

rs12882130	14	103878774	MARK3	C	G	0.37	0.36	0.63	-0.025	0.003	5E-15	0.050	0.138	0.716	0.001	0.042	0.987	-0.012	0.046	0.794	0.091	0.092	0.328
rs10152739	15	38483866	SPRED1	A	T	0.25	0.27	0.99	0.022	0.003	1E-10	0.190	0.120	0.1129	0.001	0.037	0.981	0.022	0.040	0.585	-0.154	0.084	0.068
rs316618	15	41796498	LTK	T	A	0.22	0.22	0.97	-0.026	0.004	3E-12	-0.286	0.126	0.0234	-0.002	0.039	0.956	0.022	0.042	0.611	-0.168	0.088	0.056
rs10744956	15	51269629	AP4E1	A	G	0.78	0.80	0.98	0.028	0.004	4E-15	-0.091	0.131	0.4889	-0.020	0.039	0.613	-0.024	0.043	0.579	-0.001	0.086	0.994
rs16964211	15	51530495	CYP19A1	G	A	0.05	0.06	0.99	-0.057	0.007	1E-15	-0.191	0.227	0.3992	0.027	0.069	0.700	-0.016	0.077	0.835	0.284	0.139	0.041
rs782930	15	61408362	RORA	G	A	0.35	0.33	0.93	-0.02	0.003	3E-10	-0.395	0.113	0.0005	0.045	0.034	0.182	0.036	0.037	0.330	0.103	0.072	0.151
rs7177711	15	62379971	FAM148A	A	G	0.46	0.44	0.61	-0.021	0.003	5E-13	0.022	0.134	0.8714	0.006	0.041	0.886	0.005	0.045	0.910	0.011	0.096	0.907
rs7162825	15	63439186	LACTB	C	T	0.50	0.50	0.98	0.016	0.003	4E-08	0.035	0.105	0.7419	-0.035	0.032	0.279	-0.054	0.035	0.122	0.107	0.076	0.159
rs10152591	15	70048157	TLE3	A	C	0.10	0.09	0.96	-0.044	0.005	2E-17	-0.182	0.186	0.3287	0.006	0.060	0.925	0.004	0.067	0.952	0.009	0.125	0.941
rs975210	15	70364352	TLE3	G	A	0.18	0.16	1.00	0.035	0.004	1E-17	0.309	0.142	0.03	-0.013	0.045	0.775	0.006	0.050	0.905	-0.144	0.096	0.134
rs11634405	15	72084693	THSD4	A	G	0.64	0.62	0.70	-0.02	0.003	4E-10	-0.177	0.130	0.1713	0.058	0.040	0.148	0.060	0.044	0.169	0.036	0.088	0.686
rs12904334	15	72842705	ARIHI	G	A	0.02	0.02	0.87	0.084	0.013	4E-11	1.033	0.441	0.0193	-0.053	0.139	0.702	-0.075	0.153	0.623	0.110	0.309	0.722
rs4337252	15	74226765	LOXLI	G	C	0.50	0.48	1.00	0.026	0.003	3E-19	0.304	0.103	0.0031	-0.016	0.032	0.624	-0.007	0.036	0.853	-0.083	0.070	0.235
rs5742915	15	74336633	PML	T	C	0.47	0.45	1.00	0.035	0.003	2E-29	0.041	0.104	0.6924	-0.013	0.033	0.699	-0.011	0.036	0.750	-0.022	0.072	0.760
rs16968242	15	76740219	SCAPER	C	G	0.07	0.07	0.95	0.035	0.006	2E-09	-0.107	0.208	0.6081	0.010	0.064	0.878	0.013	0.071	0.851	-0.021	0.131	0.875
rs12914466	15	81836638	TMC3	G	A	0.62	0.60	0.56	0.017	0.003	1E-08	0.135	0.142	0.3436	0.015	0.043	0.726	0.003	0.047	0.955	0.099	0.095	0.298
rs17349981	15	82231920	MEX3B	A	T	0.15	0.12	0.63	-0.025	0.004	4E-09	-0.146	0.195	0.4535	0.118	0.061	0.054	0.111	0.067	0.096	0.149	0.141	0.290
rs2257011	15	84266145	SH3GL3	G	T	0.50	0.49	0.86	0.044	0.003	1E-47	0.262	0.111	0.0187	-0.023	0.035	0.518	-0.012	0.039	0.762	-0.103	0.076	0.171
rs7162542	15	84514290	ADAMTSL3	C	G	0.55	0.57	0.99	0.046	0.003	8E-55	0.290	0.105	0.0056	-0.019	0.032	0.551	-0.002	0.036	0.952	-0.143	0.070	0.042
rs11855014	15	85728834	PDE8A	G	A	0.29	0.31	0.83	-0.022	0.003	9E-11	0.124	0.124	0.3201	0.038	0.037	0.301	0.055	0.041	0.176	-0.080	0.084	0.340
rs11633371	15	89356832	ACAN	G	T	0.49	0.48	0.96	0.028	0.003	1E-20	0.280	0.106	0.0086	-0.027	0.032	0.401	-0.029	0.036	0.410	-0.013	0.074	0.859
rs16942341	15	89388905	ACAN	C	T	0.03	0.03	0.60	-0.138	0.01	3E-43	-1.584	0.403	<.0001	0.255	0.123	0.039	0.226	0.139	0.103	0.415	0.248	0.095
rs3817428	15	89415247	ACAN	C	G	0.28	0.22	0.51	-0.039	0.003	2E-31	-0.089	0.172	0.6045	0.144	0.053	0.006	0.149	0.058	0.010	0.112	0.121	0.353
rs2238300	15	89851580	FANCI	G	A	0.40	0.38	1.00	-0.021	0.003	2E-12	0.042	0.107	0.6934	-0.004	0.033	0.908	0.004	0.036	0.908	-0.061	0.074	0.408
rs7181724	15	94551607	MCTP2	A	G	0.45	0.45	0.68	0.02	0.003	1E-10	-0.051	0.127	0.6884	-0.060	0.040	0.134	-0.063	0.044	0.151	-0.034	0.084	0.682
rs2871865	15	99194896	IGF1R	C	G	0.12	0.12	0.89	-0.062	0.005	2E-34	-0.625	0.172	0.0003	-0.044	0.051	0.392	-0.030	0.056	0.589	-0.141	0.115	0.221
rs2573625	15	100513158	ADAMTS17	C	T	0.67	0.64	0.77	0.029	0.003	6E-20	0.220	0.127	0.0825	0.023	0.038	0.543	0.021	0.041	0.617	0.034	0.082	0.683
rs4246302	15	100687967	ADAMTS17	A	G	0.32	0.31	0.80	0.027	0.003	2E-16	0.148	0.125	0.2363	0.009	0.038	0.819	0.012	0.042	0.776	-0.023	0.082	0.778
rs4548838	15	100761190	ADAMTS17	T	C	0.54	0.55	0.94	-0.033	0.003	9E-28	-0.405	0.108	0.0002	-0.011	0.034	0.738	-0.003	0.037	0.932	-0.072	0.073	0.323
rs8042424	15	101762539	CHSY1	C	T	0.26	0.24	0.82	-0.023	0.004	8E-11	-0.162	0.135	0.2306	0.001	0.041	0.983	-0.013	0.045	0.773	0.104	0.089	0.245
rs11648796	16	792190	NARFL	A	G	0.25	0.29	0.72	0.033	0.004	1E-18	0.135	0.135	0.3206	0.003	0.042	0.938	-0.001	0.047	0.989	0.028	0.092	0.761
rs12597498	16	990815	LMF1	C	T	0.37	0.37	0.99	0.018	0.003	8E-09	0.304	0.109	0.0051	0.014	0.033	0.664	0.005	0.036	0.893	0.080	0.074	0.284
rs26868	16	2249376	CASKIN1	T	A	0.47	0.41	0.89	0.029	0.003	3E-18	0.199	0.113	0.0786	-0.013	0.035	0.720	-0.026	0.039	0.499	0.072	0.078	0.357
rs2014467	16	2336394	ABCA3	T	C	0.34	0.35	0.55	0.019	0.003	2E-09	0.174	0.146	0.2324	-0.002	0.045	0.960	-0.005	0.050	0.925	0.010	0.097	0.914
rs12926008	16	2488211	CCNF	T	C	0.69	0.65	0.53	0.02	0.003	3E-10	0.336	0.149	0.0242	0.040	0.045	0.384	0.066	0.050	0.189	-0.143	0.098	0.142
rs129963	16	3796147	CREBBP	T	C	0.58	0.54	1.00	0.021	0.003	3E-10	0.065	0.104	0.5305	0.018	0.033	0.589	0.009	0.037	0.815	0.082	0.071	0.246
rs2531992	16	4021734	ADCY9	A	G	0.85	0.83	0.78	0.027	0.004	1E-10	0.408	0.161	0.011	-0.061	0.048	0.204	-0.082	0.053	0.121	0.069	0.110	0.527
rs960006	16	4911195	UBN1	T	C	0.47	0.47	0.54	0.02	0.003	1E-09	0.067	0.145	0.6427	0.010	0.044	0.813	0.006	0.048	0.903	0.038	0.099	0.706
rs1659127	16	14388305	MKL2	G	A	0.34	0.33	1.00	0.03	0.003	3E-19	0.134	0.112	0.2317	-0.011	0.034	0.752	-0.032	0.038	0.402	0.125	0.074	0.088
rs2023693	16	20880040	DCUN1D3	A	G	0.60	0.57	0.76	0.017	0.003	2E-08	0.265	0.121	0.0293	0.014	0.038	0.708	0.003	0.042	0.938	0.082	0.086	0.337
rs11642612	16	30030195	FLJ25404	A	C	0.40	0.39	1.00	0.016	0.003	4E-08	0.021	0.107	0.8466	-0.013	0.033	0.686	-0.019	0.036	0.603	0.027	0.073	0.711
rs4785393	16	50259483	PAPD5	A	G	0.16	0.19	0.93	0.023	0.004	1E-08	-0.246	0.137	0.0726	-0.011	0.042	0.789	-0.023	0.046	0.621	0.074	0.088	0.401
rs8058684	16	53515118	RBL2	G	A	0.31	0.32	1.00	0.021	0.003	1E-10	0.061	0.113	0.5915	-0.033	0.035	0.347	-0.043	0.039	0.266	0.049	0.074	0.512
rs1966913	16	67384226	LRRC36	A	T	0.04	0.05	0.85	-0.044	0.007	1E-09	-0.572	0.267	0.0321	-0.100	0.083	0.226	-0.119	0.092	0.193	0.032	0.176	0.857
rs3790086	16	69887707	WWP2	C	G	0.44	0.42	0.91	-0.023	0.003	3E-15	-0.170	0.110	0.1221	0.039	0.034	0.244	0.049	0.037	0.185	-0.028	0.076	0.712
rs217181	16	72114002	HPR	C	T	0.20	0.19	1.00	0.024	0.004	4E-10	0.260	0.131	0.0467	0.067	0.040	0.093	0.077	0.044	0.079	0.001	0.092	0.991

rs11640018	16	75328308	<i>CFDP1</i>	T	C	0.37	0.38	0.55	0.019	0.003	2E-09	0.059	0.143	0.6795	0.043	0.046	0.350	0.041	0.051	0.413	0.053	0.092	0.570
rs4243206	16	81589983	<i>CMIP</i>	A	C	0.81	0.81	0.61	-0.024	0.004	2E-09	-0.125	0.173	0.4702	0.030	0.053	0.574	0.034	0.059	0.567	0.013	0.113	0.906
rs6420435	16	82184201	<i>MPHOSPH6</i>	A	C	0.79	0.75	0.91	-0.023	0.004	3E-10	0.078	0.126	0.5373	-0.036	0.039	0.356	-0.041	0.042	0.334	0.000	0.083	0.996
rs2326458	16	84987679	<i>ZDHHC7</i>	C	A	0.75	0.74	0.95	-0.022	0.004	5E-10	-0.166	0.123	0.1768	0.004	0.035	0.911	-0.010	0.039	0.797	0.105	0.086	0.220
rs4843367	16	86417890	<i>FOXF1</i>	C	T	0.34	0.36	0.74	-0.019	0.003	2E-09	-0.095	0.125	0.4477	-0.035	0.039	0.370	-0.055	0.044	0.211	0.097	0.082	0.238
rs8052560	16	88777242	<i>C16orf84</i>	C	A	0.79	0.80	1.00	0.036	0.004	4E-16	0.129	0.129	0.317	0.023	0.041	0.574	0.032	0.045	0.477	-0.035	0.090	0.697
rs2377058	16	89734831	<i>C16orf55</i>	A	G	0.34	0.35	1.00	0.017	0.003	4E-08	0.077	0.108	0.4773	-0.005	0.034	0.874	0.000	0.037	0.998	-0.040	0.072	0.577
rs870183	17	599811	<i>VPS53</i>	A	G	0.53	0.54	1.00	0.017	0.003	6E-09	0.036	0.104	0.7303	0.042	0.032	0.199	0.028	0.036	0.433	0.134	0.073	0.065
rs9217	17	7363088	<i>ZBTB4</i>	T	C	0.37	0.35	1.00	0.028	0.003	5E-20	0.434	0.109	<.0001	-0.061	0.033	0.067	-0.077	0.037	0.037	0.040	0.075	0.587
rs1625895	17	7578115	<i>TP53</i>	T	C	0.88	0.86	0.99	0.03	0.005	4E-10	0.136	0.153	0.3754	-0.025	0.046	0.586	-0.025	0.051	0.623	-0.023	0.102	0.823
rs8067165	17	8031936	<i>HES7</i>	C	G	0.60	0.58	1.00	0.023	0.003	7E-12	0.151	0.106	0.1531	0.015	0.033	0.641	0.016	0.036	0.656	0.011	0.070	0.881
rs4640244	17	21284223	<i>KCNJ12</i>	A	G	0.39	0.34	0.56	-0.025	0.003	2E-13	0.049	0.149	0.7396	-0.025	0.045	0.579	-0.005	0.049	0.923	-0.161	0.105	0.124
rs3809790	17	27955540	<i>SSH2</i>	C	T	0.47	0.46	0.75	-0.016	0.003	5E-08	0.006	0.123	0.9578	0.000	0.036	0.989	-0.009	0.040	0.818	0.069	0.078	0.379
rs3760318	17	29247715	<i>CENTA2</i>	G	A	0.37	0.37	1.00	-0.041	0.003	3E-41	-0.384	0.107	0.0003	-0.043	0.033	0.188	-0.045	0.036	0.205	-0.033	0.074	0.657
rs2028067	17	30239698	<i>UTP6</i>	T	C	0.17	0.20	0.60	0.031	0.004	8E-16	0.121	0.168	0.4742	0.024	0.050	0.637	0.023	0.055	0.674	0.024	0.113	0.833
rs2338115	17	36929578	<i>PIP4K2B</i>	C	T	0.54	0.52	0.71	0.023	0.003	1E-14	-0.312	0.126	0.013	0.002	0.037	0.961	0.022	0.041	0.587	-0.143	0.086	0.096
rs584828	17	38599230	<i>IGFBP4</i>	C	T	0.40	0.39	0.68	-0.025	0.003	4E-17	-0.257	0.130	0.0482	0.109	0.040	0.006	0.105	0.043	0.016	0.134	0.091	0.144
rs9766	17	40852841	<i>EZHI</i>	G	A	0.54	0.50	0.98	0.021	0.003	9E-13	0.063	0.104	0.5473	0.006	0.033	0.857	0.011	0.036	0.764	-0.023	0.070	0.740
rs4986172	17	43216281	<i>ACBD4</i>	C	T	0.35	0.43	0.85	-0.034	0.003	8E-27	-0.364	0.115	0.0016	0.027	0.036	0.459	0.034	0.039	0.392	-0.021	0.080	0.793
rs8073371	17	46096276	<i>COPZ2</i>	C	T	0.22	0.20	1.00	-0.025	0.004	4E-12	0.057	0.129	0.6572	-0.095	0.043	0.029	-0.093	0.048	0.054	-0.103	0.092	0.259
rs318095	17	46974734	<i>ATP5G1</i>	T	C	0.54	0.52	0.86	-0.024	0.003	2E-16	-0.211	0.113	0.0611	-0.022	0.035	0.530	-0.039	0.038	0.311	0.092	0.078	0.240
rs2072153	17	47390014	<i>ZNF652</i>	G	C	0.31	0.32	0.99	0.026	0.003	4E-16	0.168	0.114	0.1415	0.057	0.035	0.105	0.065	0.039	0.091	-0.005	0.079	0.951
rs4605213	17	49244747	<i>NME1-NME</i>	G	C	0.34	0.35	0.92	0.018	0.003	8E-09	0.017	0.114	0.8807	0.000	0.035	0.998	0.010	0.039	0.795	-0.071	0.077	0.358
rs11867943	17	54229842	<i>ANKFN1</i>	A	T	0.12	0.11	0.96	0.027	0.005	1E-08	0.275	0.170	0.1054	0.118	0.051	0.022	0.110	0.057	0.052	0.182	0.111	0.103
rs1401795	17	54839652	<i>C17orf67</i>	A	G	0.49	0.54	0.56	-0.03	0.003	1E-23	-0.072	0.138	0.6023	0.013	0.044	0.759	-0.001	0.048	0.981	0.110	0.101	0.273
rs2079795	17	59496649	<i>C17orf82</i>	T	C	0.67	0.67	0.99	-0.045	0.003	2E-46	-0.414	0.111	0.0002	-0.013	0.034	0.705	-0.027	0.037	0.462	0.086	0.077	0.264
rs2378870	17	59638623	<i>NACA2</i>	T	C	0.63	0.61	0.98	-0.02	0.003	4E-10	0.165	0.107	0.124	0.025	0.033	0.454	0.031	0.036	0.390	-0.017	0.073	0.811
rs2044124	17	61845425	<i>CCDC47</i>	T	C	0.94	0.95	0.91	-0.045	0.007	9E-12	-0.447	0.245	0.0679	0.187	0.079	0.018	0.177	0.087	0.042	0.272	0.174	0.118
rs2854207	17	61947107	<i>CSH2</i>	C	G	0.27	0.26	0.92	0.046	0.003	1E-42	0.200	0.123	0.1051	0.022	0.037	0.558	0.026	0.041	0.522	0.005	0.085	0.952
rs2070776	17	62007498	<i>CD79B</i>	A	G	0.65	0.66	1.00	0.042	0.003	6E-41	0.382	0.109	0.0005	-0.064	0.034	0.059	-0.052	0.038	0.166	-0.146	0.077	0.056
rs3923086	17	63549488	<i>AXIN2</i>	A	C	0.60	0.54	1.00	0.024	0.003	5E-13	0.400	0.106	0.0002	-0.032	0.032	0.318	-0.031	0.035	0.374	-0.032	0.072	0.660
rs2072268	17	66303352	<i>ARSG</i>	G	A	0.48	0.52	0.72	-0.02	0.003	1E-10	-0.248	0.123	0.0426	-0.004	0.037	0.916	0.000	0.041	0.996	-0.035	0.083	0.676
rs11867479	17	68090207	<i>KCNJ16</i>	C	T	0.35	0.33	0.97	0.026	0.003	2E-16	0.323	0.112	0.0038	-0.013	0.034	0.692	-0.032	0.037	0.393	0.118	0.080	0.141
rs10083886	17	69923355	<i>SOX9</i>	C	T	0.26	0.27	0.99	0.019	0.003	7E-09	0.157	0.118	0.1861	0.012	0.036	0.734	0.022	0.039	0.578	-0.050	0.085	0.553
rs2117563	17	73368985	<i>GRB2</i>	A	G	0.83	0.81	0.94	0.024	0.004	1E-09	0.442	0.140	0.0016	0.059	0.042	0.165	0.074	0.047	0.114	-0.042	0.091	0.642
rs1552173	17	76718842	<i>PSCD1</i>	C	T	0.54	0.53	0.60	-0.018	0.003	8E-10	-0.035	0.137	0.8002	-0.006	0.040	0.871	-0.024	0.044	0.580	0.122	0.094	0.192
rs1478610	17	79422252	<i>BAHCC1</i>	G	A	0.37	0.37	0.60	0.025	0.004	9E-10	-0.063	0.140	0.6533	-0.031	0.043	0.473	-0.026	0.047	0.583	-0.071	0.096	0.457
rs888403	18	2766938	<i>SMCHD1</i>	A	G	0.36	0.30	0.54	0.019	0.003	9E-09	-0.200	0.153	0.1906	-0.002	0.047	0.963	-0.012	0.052	0.814	0.069	0.103	0.502
rs692964	18	13094132	<i>CEP192</i>	G	A	0.60	0.63	0.73	-0.019	0.003	2E-10	-0.137	0.125	0.275	0.009	0.039	0.828	-0.012	0.043	0.785	0.154	0.093	0.097
rs14062	18	19450303	<i>MIB1</i>	A	G	0.67	0.69	0.87	0.018	0.003	8E-09	0.046	0.121	0.7023	0.000	0.037	0.991	-0.011	0.041	0.793	0.083	0.080	0.298
rs4369779	18	20735408	<i>CABLES1</i>	T	C	0.79	0.81	0.96	0.056	0.004	2E-53	0.486	0.135	0.0003	-0.026	0.042	0.540	-0.054	0.046	0.238	0.172	0.096	0.074
rs11661645	18	45888770	<i>KIAA0427</i>	G	A	0.31	0.32	0.90	0.02	0.003	5E-10	0.180	0.119	0.1285	-0.039	0.036	0.274	-0.026	0.039	0.500	-0.138	0.085	0.104
rs2337143	18	46482070	<i>SMAD7</i>	A	G	0.65	0.66	0.77	-0.018	0.003	3E-08	-0.417	0.124	0.0008	0.025	0.039	0.519	0.023	0.042	0.586	0.041	0.086	0.632
rs12458127	18	46657358	<i>DYM</i>	C	T	0.08	0.06	0.77	-0.057	0.006	1E-21	-0.399	0.251	0.1127	-0.152	0.081	0.062	-0.148	0.090	0.099	-0.182	0.169	0.281
rs9967417	18	46959500	<i>DYM</i>	G	C	0.57	0.60	0.73	-0.04	0.003	2E-40	-0.278	0.125	0.0257	-0.011	0.037	0.767	0.010	0.041	0.802	-0.160	0.082	0.053
rs11152213	18	57852948	<i>MC4R</i>	A	C	0.25	0.23	0.99	0.025	0.004	7E-13	0.373	0.123	0.0025	-0.040	0.039	0.307	-0.058	0.044	0.187	0.066	0.082	0.417

rs8097893	18	74983055	<i>GALR1</i>	A	G	0.05	0.04	0.51	-0.042	0.007	5E-10	0.340	0.374	0.3623	0.124	0.110	0.260	0.142	0.123	0.250	0.030	0.220	0.891
rs11659752	18	77222862	<i>NFATC1</i>	T	G	0.30	0.30	0.82	-0.024	0.003	6E-13	0.044	0.124	0.7234	-0.003	0.039	0.937	0.029	0.042	0.493	-0.235	0.085	0.006
rs11880992	19	2176403	<i>DOT1L</i>	G	A	0.40	0.42	0.95	0.033	0.003	7E-28	0.081	0.108	0.4525	-0.014	0.034	0.688	-0.019	0.037	0.612	0.024	0.077	0.755
rs2074977	19	3434028	<i>NFIC</i>	A	C	0.36	0.35	1.00	0.029	0.003	2E-20	-0.118	0.108	0.2768	0.006	0.034	0.856	-0.012	0.037	0.745	0.134	0.077	0.083
rs2123731	19	4929473	<i>UHRF1</i>	A	G	0.27	0.27	0.70	-0.023	0.004	2E-11	-0.302	0.138	0.0293	-0.033	0.044	0.457	-0.025	0.048	0.608	-0.082	0.095	0.389
rs891088	19	7184762	<i>INSR</i>	A	G	0.26	0.27	0.83	0.029	0.003	7E-18	0.243	0.131	0.0633	0.015	0.041	0.719	0.040	0.045	0.367	-0.172	0.095	0.070
rs1346490	19	7244233	<i>INSR</i>	A	C	0.39	0.43	0.71	-0.018	0.003	1E-08	-0.003	0.125	0.9828	0.043	0.037	0.245	0.036	0.041	0.381	0.087	0.081	0.285
rs8102380	19	10801185	<i>ILF3</i>	G	A	0.69	0.64	0.61	-0.02	0.003	8E-11	-0.110	0.137	0.4207	0.035	0.043	0.411	0.026	0.047	0.583	0.103	0.095	0.278
rs7259684	19	12186611	<i>LOC72974</i>	A	G	0.07	0.09	0.91	0.035	0.006	4E-08	0.158	0.197	0.4241	-0.117	0.063	0.061	-0.118	0.070	0.090	-0.110	0.129	0.394
rs8103068	19	17522869	<i>BST2</i>	T	C	0.14	0.15	0.79	-0.031	0.005	2E-11	-0.302	0.172	0.0796	-0.055	0.050	0.272	-0.075	0.055	0.176	0.069	0.109	0.527
rs10401193	19	19591066	<i>GATAD2A</i>	A	G	0.18	0.17	0.99	-0.028	0.004	9E-14	0.065	0.137	0.6347	0.036	0.043	0.407	0.024	0.048	0.622	0.114	0.094	0.226
rs8103992	19	19665643	<i>PBX4</i>	A	C	0.80	0.78	0.98	-0.029	0.004	1E-14	0.069	0.129	0.593	0.011	0.040	0.787	0.046	0.044	0.299	-0.228	0.088	0.009
rs7253628	19	31047269	<i>ZNF536</i>	A	G	0.16	0.15	0.98	0.024	0.004	2E-09	0.222	0.145	0.1262	-0.041	0.045	0.356	-0.061	0.049	0.219	0.089	0.096	0.357
rs4802134	19	38346685	<i>SIPA1L3</i>	A	G	0.79	0.75	1.00	-0.027	0.004	3E-11	-0.088	0.122	0.4689	-0.018	0.036	0.612	-0.010	0.040	0.810	-0.074	0.077	0.336
rs4803468	19	41922352	<i>BCKDHA</i>	A	G	0.58	0.59	0.77	-0.03	0.003	2E-21	-0.057	0.122	0.6418	-0.025	0.037	0.504	-0.047	0.041	0.257	0.121	0.083	0.146
rs11880124	19	42683791	<i>DEDD2</i>	A	G	0.09	0.09	0.94	-0.041	0.005	2E-14	-0.649	0.189	0.0006	0.073	0.055	0.185	0.074	0.061	0.223	0.063	0.128	0.623
rs2682587	19	44082429	<i>XRCC1</i>	C	A	0.20	0.18	1.00	0.023	0.004	2E-09	-0.057	0.134	0.672	-0.057	0.042	0.171	-0.057	0.046	0.211	-0.056	0.091	0.541
rs7273787	20	4098567	<i>SMOX</i>	A	G	0.35	0.30	0.57	0.022	0.003	3E-12	0.027	0.149	0.8556	0.007	0.045	0.876	0.008	0.050	0.879	0.004	0.100	0.968
rs17721822	20	6469596	<i>BMP2</i>	G	A	0.37	0.35	0.94	-0.035	0.003	3E-29	-0.135	0.113	0.2319	-0.038	0.035	0.281	-0.038	0.038	0.327	-0.036	0.080	0.654
rs1884897	20	6612832	<i>BMP2</i>	A	G	0.64	0.62	0.80	-0.044	0.003	1E-48	-0.484	0.120	<.0001	-0.051	0.037	0.175	-0.036	0.041	0.381	-0.163	0.081	0.043
rs6080830	20	17771113	<i>BANF2</i>	A	G	0.44	0.43	0.68	-0.016	0.003	4E-08	-0.087	0.127	0.4949	-0.080	0.039	0.041	-0.098	0.043	0.023	0.048	0.084	0.569
rs7261425	20	20068635	<i>C20orf26</i>	C	G	0.29	0.29	0.70	-0.021	0.003	2E-10	-0.176	0.136	0.1952	-0.043	0.042	0.299	-0.045	0.046	0.330	-0.035	0.094	0.709
rs6137287	20	21180259	<i>C20orf19</i>	C	T	0.31	0.28	0.95	0.02	0.003	4E-10	0.184	0.118	0.12	0.041	0.036	0.265	0.049	0.040	0.224	-0.019	0.085	0.821
rs1074683	20	32304653	<i>PXMP4</i>	C	G	0.24	0.24	0.97	-0.044	0.003	8E-38	0.010	0.123	0.9379	0.036	0.037	0.337	0.027	0.042	0.516	0.094	0.078	0.227
rs1535466	20	33718706	<i>EDEM2</i>	G	A	0.73	0.75	1.00	-0.027	0.003	3E-16	-0.285	0.118	0.0161	-0.063	0.038	0.094	-0.068	0.042	0.104	-0.036	0.079	0.643
rs143384	20	34025756	<i>GDF5</i>	A	G	0.42	0.43	0.86	0.075	0.003	1E-121	0.387	0.112	0.0006	0.052	0.035	0.129	0.052	0.038	0.171	0.053	0.078	0.497
rs2425163	20	34432670	<i>PHF20</i>	A	G	0.18	0.19	0.98	0.058	0.004	3E-52	0.307	0.131	0.0193	0.048	0.041	0.247	0.062	0.045	0.170	-0.043	0.092	0.641
rs4812586	20	35544673	<i>SAMHD1</i>	A	G	0.16	0.14	1.00	-0.03	0.004	9E-14	0.106	0.151	0.4842	0.018	0.046	0.700	0.033	0.051	0.519	-0.075	0.099	0.446
rs2224538	20	38552078	<i>MAFB</i>	T	C	0.35	0.36	0.87	-0.017	0.003	2E-08	-0.028	0.116	0.8106	-0.039	0.037	0.298	-0.064	0.041	0.119	0.121	0.078	0.122
rs17450430	20	47772264	<i>STAU1</i>	A	T	0.24	0.25	0.67	0.035	0.003	2E-24	0.211	0.146	0.1492	-0.008	0.045	0.853	-0.010	0.050	0.840	0.003	0.100	0.980
rs6020202	20	48634821	<i>SNAI1</i>	G	A	0.22	0.24	1.00	-0.022	0.004	8E-10	0.025	0.124	0.8414	-0.017	0.038	0.651	-0.010	0.041	0.817	-0.067	0.085	0.428
rs1326023	20	54842378	<i>MC3R</i>	A	G	0.70	0.69	1.00	-0.024	0.003	1E-13	0.115	0.114	0.3154	-0.027	0.036	0.454	-0.030	0.039	0.445	-0.006	0.077	0.937
rs2057291	20	57472043	<i>GNAS</i>	A	G	0.66	0.66	0.54	-0.02	0.003	2E-10	0.134	0.150	0.3703	0.007	0.044	0.872	0.006	0.049	0.904	0.019	0.104	0.852
rs3026499	20	57948773	<i>EDN3</i>	G	A	0.33	0.32	0.59	-0.026	0.005	5E-08	-0.157	0.146	0.2832	-0.056	0.045	0.209	-0.066	0.049	0.179	0.005	0.098	0.963
rs6061231	20	60956917	<i>RPS21</i>	C	A	0.28	0.28	1.00	-0.021	0.003	1E-10	0.189	0.116	0.1029	0.014	0.037	0.695	0.021	0.041	0.608	-0.026	0.074	0.730
rs2829941	21	27208935	<i>APP</i>	G	T	0.61	0.59	0.90	0.017	0.003	3E-08	0.113	0.112	0.3141	-0.006	0.035	0.860	-0.027	0.038	0.487	0.135	0.073	0.067
rs2834442	21	35690786	<i>KCNE2</i>	T	A	0.64	0.66	0.98	0.024	0.003	4E-15	0.231	0.112	0.039	0.019	0.034	0.565	0.015	0.037	0.692	0.049	0.078	0.531
rs2211866	21	39688107	<i>KCNJ15</i>	A	G	0.59	0.59	0.96	-0.022	0.003	4E-13	-0.077	0.108	0.4755	-0.015	0.033	0.659	-0.013	0.037	0.728	-0.029	0.073	0.695
rs9977276	21	47436327	<i>COL6A1</i>	T	G	0.78	0.79	1.00	0.022	0.004	3E-10	-0.113	0.128	0.3756	-0.007	0.039	0.858	0.007	0.042	0.878	-0.109	0.083	0.190
rs7284476	22	38129332	<i>TRIOBP</i>	G	A	0.43	0.41	0.76	0.018	0.003	6E-09	0.067	0.122	0.5793	0.056	0.038	0.143	0.061	0.042	0.144	0.017	0.086	0.842
rs5757318	22	39275656	<i>CBX6</i>	A	T	0.15	0.15	0.70	0.029	0.005	2E-09	0.150	0.173	0.3846	-0.024	0.055	0.670	-0.039	0.061	0.525	0.075	0.118	0.528
rs738288	22	39907661	<i>SMCR7L</i>	G	A	0.53	0.57	0.85	-0.02	0.003	6E-11	-0.030	0.116	0.7953	0.039	0.036	0.285	0.050	0.040	0.209	-0.044	0.082	0.587

CIMBA: The Consortium of Investigators of Modifiers of *BRCA1/2*; GWAS: genome-wide association studies

- Notes:**
- [1] Imputation quality of 1 indicates genotyped SNPs.
 - [2] Effect estimate after height standardization.
 - [3] *P*-values were calculated using student's *t*-test. All *P*-values are two-sided.
 - [4] Association with ovarian cancer were estimated using weighted Cox models that adjusted for principal components, birth cohort, menopausal status, country of enrollment and mutation status.
 - [5] *P*-values were calculated using chi-squared test. All *P*-values are two-sided.

Supplementary Table 2. List of 93 BMI-associated genetic variants and their associations with BMI in prior published GWAS and in CIMBA, along with effect on ovarian cancer risk in CIMBA

Rsid #	Chromosome	Position	Nearest gene	Reference allele	Effect allele	Effect allele frequency in published GWAS	Effect allele frequency in CIMBA	Imputation quality ¹	Published association with BMI			Association with BMI in CIMBA			Association with ovarian cancer in CIMBA			Association with ovarian cancer in <i>BRCA1</i> carriers			Association with ovarian cancer in <i>BRCA2</i> carriers		
									Beta ²	SE	<i>P</i> -value ³	Beta, Kg/m ²	SE	<i>P</i> -value ³	Log Hazard Ratio ⁴	SE	<i>P</i> -value ⁵	Log Hazard Ratio ⁴	SE	<i>P</i> -value ⁵	Log Hazard Ratio ⁴	SE	<i>P</i> -value ⁵
rs977747	1	47684677	<i>TAL1</i>	T	G	0.61	0.61	0.97	-0.017	0.003	8.7E-08	-0.164	0.085	0.0544	0.005	0.033	0.8834	0.000	0.036	0.9948	0.036	0.071	0.6140
rs657452	1	49589847	<i>AGBL4</i>	A	G	0.61	0.62	0.93	-0.023	0.003	5.5E-13	-0.108	0.087	0.214	-0.047	0.033	0.1596	-0.046	0.037	0.2092	-0.053	0.073	0.4694
rs11583200	1	50559820	<i>ELAVL4</i>	C	T	0.60	0.61	0.88	-0.018	0.003	1.5E-08	-0.167	0.090	0.0622	-0.024	0.035	0.4898	-0.005	0.039	0.9060	-0.162	0.074	0.0275
rs3101336	1	72751185	<i>NEGR1</i>	T	C	0.61	0.64	1.00	0.033	0.003	2.7E-26	0.141	0.085	0.0972	-0.025	0.033	0.4576	-0.042	0.037	0.2464	0.100	0.077	0.1982
rs12566985	1	75002193	<i>FPGT</i>	G	A	0.55	0.57	0.99	-0.024	0.003	3.3E-15	-0.272	0.082	0.0009	-0.053	0.032	0.0946	-0.075	0.035	0.0329	0.085	0.067	0.2055
rs12401738	1	78446761	<i>FUBP1</i>	G	A	0.35	0.33	0.81	0.021	0.003	1.2E-10	0.106	0.096	0.2704	0.038	0.039	0.3234	0.060	0.042	0.1597	-0.115	0.089	0.1964
rs11165643	1	96924097	<i>PTBP2</i>	C	T	0.58	0.59	0.68	0.022	0.003	2.1E-12	0.172	0.101	0.0905	0.004	0.040	0.9221	0.021	0.044	0.6390	-0.106	0.083	0.2023

rs17024393	1	110154688	<i>GNAT2</i>	T	C	0.04	0.03	0.98	0.066	0.009	7.0E-14	0.456	0.253	0.0714	-0.146	0.093	0.1181	-0.171	0.101	0.0914	0.048	0.229	0.8323
rs543874	1	177889480	<i>SEC16B</i>	A	G	0.19	0.18	1.00	0.048	0.004	2.6E-35	0.286	0.104	0.006	0.046	0.042	0.2717	0.050	0.046	0.2810	0.028	0.089	0.7563
rs2820292	1	201784287	<i>NAVI</i>	A	C	0.56	0.54	0.94	0.020	0.003	1.8E-10	0.281	0.086	0.001	-0.017	0.033	0.6073	-0.015	0.036	0.6704	-0.027	0.075	0.7189
rs13021737	2	632348	<i>TMEM18</i>	A	G	0.83	0.81	0.99	0.060	0.004	1.1E-50	0.479	0.106	<.0001	0.020	0.042	0.6332	0.026	0.046	0.5688	-0.027	0.091	0.7695
rs10182181	2	25150296	<i>ADCY3</i>	A	G	0.46	0.45	0.64	0.031	0.003	8.8E-24	0.191	0.104	0.067	0.013	0.041	0.7565	0.031	0.046	0.4987	-0.105	0.094	0.2669
rs11126666	2	26928811	<i>KCNK3</i>	G	A	0.28	0.25	0.54	0.021	0.003	1.3E-09	-0.033	0.130	0.8018	-0.001	0.050	0.9775	-0.004	0.056	0.9366	0.014	0.111	0.9001
rs1016287	2	59305625	<i>LINC011</i>	T	C	0.71	0.70	0.93	-0.023	0.003	2.3E-11	-0.105	0.092	0.2527	0.028	0.037	0.4436	0.033	0.040	0.4134	-0.010	0.081	0.9066
rs11688816	2	63053048	<i>EHBPI</i>	G	A	0.48	0.50	1.00	-0.017	0.003	1.9E-08	0.040	0.082	0.6282	0.009	0.033	0.7753	0.011	0.036	0.7513	-0.008	0.072	0.9121
rs2121279	2	143043285	<i>LRP1B</i>	C	T	0.15	0.12	0.83	0.024	0.004	2.3E-08	-0.102	0.137	0.4584	-0.018	0.053	0.7381	-0.029	0.059	0.6225	0.051	0.115	0.6543
rs1460676	2	164567689	<i>FIGN</i>	T	C	0.17	0.17	1.00	0.020	0.004	9.0E-07	0.018	0.112	0.8689	0.080	0.041	0.0502	0.104	0.045	0.0201	-0.092	0.097	0.3433
rs1528435	2	181550962	<i>UBE2E3</i>	C	T	0.63	0.62	0.88	0.018	0.003	1.2E-08	0.111	0.089	0.2112	0.030	0.036	0.4070	0.021	0.040	0.5925	0.083	0.074	0.2658
rs17203016	2	208255518	<i>CREB1</i>	A	G	0.20	0.18	0.90	0.021	0.004	8.2E-08	-0.236	0.112	0.0352	0.064	0.044	0.1464	0.070	0.048	0.1450	0.014	0.096	0.8874
rs7599312	2	213413231	<i>ERBB4</i>	G	A	0.28	0.27	0.88	-0.022	0.003	1.2E-10	0.092	0.098	0.3483	0.052	0.039	0.1736	0.048	0.042	0.2630	0.078	0.085	0.3558
rs492400	2	219349752	<i>USP37</i>	C	T	0.58	0.59	0.86	-0.016	0.003	4.2E-07	-0.216	0.090	0.0168	-0.004	0.036	0.9139	0.000	0.039	0.9940	-0.035	0.082	0.6667
rs2176040	2	227092802	<i>LOC6467</i>	A	G	0.63	0.64	1.00	-0.014	0.003	6.1E-06	0.003	0.086	0.9706	0.024	0.034	0.4749	0.025	0.037	0.5054	0.023	0.076	0.7617
rs6804842	3	25106437	<i>RARB</i>	A	G	0.57	0.58	0.58	0.019	0.003	2.5E-09	-0.050	0.109	0.6453	0.087	0.044	0.0461	0.099	0.048	0.0398	0.004	0.090	0.9627
rs2365389	3	61236462	<i>FHIT</i>	C	T	0.42	0.41	0.96	-0.020	0.003	1.6E-10	-0.101	0.085	0.2358	0.022	0.033	0.5041	0.015	0.037	0.6915	0.076	0.072	0.2916
rs3849570	3	81792112	<i>GBE1</i>	C	A	0.36	0.30	0.84	0.019	0.003	2.6E-08	0.117	0.097	0.2271	-0.039	0.038	0.3032	-0.060	0.042	0.1533	0.109	0.086	0.2055
rs13078960	3	85807590	<i>CADM2</i>	T	G	0.20	0.20	0.91	0.030	0.004	1.7E-14	0.071	0.107	0.5102	-0.079	0.042	0.0585	-0.069	0.046	0.1302	-0.136	0.096	0.1552
rs16851483	3	141275436	<i>RASA2</i>	G	T	0.07	0.07	1.00	0.048	0.008	3.6E-10	-0.141	0.163	0.3871	-0.203	0.068	0.0030	-0.204	0.075	0.0068	-0.188	0.148	0.2033
rs1516725	3	185824004	<i>ETV5</i>	T	C	0.87	0.86	0.88	0.045	0.005	1.9E-22	-0.071	0.127	0.5764	0.043	0.050	0.3829	0.053	0.055	0.3376	-0.020	0.108	0.8511
rs10938397	4	45182527	<i>GNPDA2</i>	A	G	0.43	0.43	1.00	0.040	0.003	3.2E-38	0.302	0.083	0.0003	0.004	0.033	0.8913	0.016	0.036	0.6491	-0.076	0.073	0.2982
rs17001654	4	77129568	<i>SCARB2</i>	C	G	0.15	0.17	0.75	0.031	0.005	7.8E-09	0.044	0.128	0.7285	0.019	0.048	0.6883	0.021	0.053	0.6881	0.006	0.106	0.9567
rs13107325	4	103188709	<i>SLC39A8</i>	C	T	0.07	0.09	0.76	0.048	0.007	1.8E-12	0.163	0.171	0.3384	0.035	0.067	0.6061	0.031	0.074	0.6751	0.056	0.150	0.7092
rs11727676	4	145659064	<i>HHIP</i>	T	C	0.09	0.09	0.68	-0.036	0.006	2.6E-08	-0.055	0.172	0.751	0.060	0.064	0.3526	0.059	0.070	0.4042	0.066	0.159	0.6756
rs2112347	5	75015242	<i>POC5</i>	T	G	0.37	0.37	0.99	-0.026	0.003	6.2E-17	-0.239	0.085	0.0052	-0.008	0.033	0.8196	0.013	0.037	0.7139	-0.158	0.076	0.0369
rs7715256	5	153537893	<i>GALNT10</i>	G	T	0.58	0.56	0.99	-0.016	0.003	1.7E-07	-0.167	0.083	0.0449	-0.049	0.033	0.1373	-0.049	0.036	0.1770	-0.051	0.071	0.4782

rs205262	6	34563164	<i>C6orf10</i>	A	G	0.27	0.28	1.00	0.022	0.004	1.8E-10	0.185	0.091	0.0419	-0.015	0.036	0.6817	-0.017	0.039	0.6608	0.003	0.078	0.9739
rs2033529	6	40348653	<i>TDRG1</i>	A	G	0.29	0.30	0.63	0.019	0.003	1.4E-08	-0.015	0.113	0.8912	-0.040	0.045	0.3724	-0.034	0.049	0.4949	-0.077	0.098	0.4344
rs2207139	6	50845490	<i>TFAP2B</i>	A	G	0.18	0.16	0.99	0.045	0.004	4.1E-29	0.170	0.110	0.1224	0.120	0.043	0.0050	0.146	0.047	0.0019	-0.057	0.094	0.5439
rs9400239	6	108977663	<i>FOXO3</i>	T	C	0.69	0.70	0.97	0.019	0.003	1.6E-08	0.105	0.091	0.2458	0.016	0.035	0.6492	0.024	0.039	0.5304	-0.036	0.075	0.6292
rs9374842	6	120185665	<i>LOC2857</i>	C	T	0.75	0.77	0.89	0.019	0.004	9.7E-08	0.055	0.105	0.6025	0.021	0.040	0.5949	0.018	0.044	0.6728	0.040	0.089	0.6523
rs13191362	6	163033350	<i>PARK2</i>	A	G	0.12	0.12	0.91	-0.028	0.005	7.3E-09	-0.026	0.131	0.8453	0.022	0.052	0.6650	0.054	0.057	0.3383	-0.192	0.117	0.1001
rs1167827	7	75163169	<i>HIP1</i>	A	G	0.55	0.58	1.00	0.020	0.003	6.3E-10	-0.077	0.084	0.3553	-0.010	0.032	0.7688	0.006	0.036	0.8681	-0.110	0.072	0.1268
rs9641123	7	93197732	<i>CALCR</i>	G	C	0.43	0.41	1.00	0.019	0.004	5.0E-07	0.266	0.084	0.0016	0.014	0.031	0.6584	0.003	0.035	0.9228	0.082	0.069	0.2323
rs6465468	7	95169514	<i>ASB4</i>	G	T	0.30	0.26	0.65	0.017	0.004	2.3E-06	0.031	0.117	0.7881	-0.074	0.046	0.1082	-0.076	0.051	0.1339	-0.056	0.099	0.5758
rs17405819	8	76806584	<i>HNF4G</i>	T	C	0.30	0.31	0.97	-0.022	0.003	2.1E-11	-0.203	0.089	0.023	-0.010	0.035	0.7822	-0.020	0.039	0.6132	0.054	0.074	0.4689
rs16907751	8	81375457	<i>ZBTB10</i>	C	T	0.08	0.12	0.79	-0.035	0.007	1.3E-07	-0.187	0.145	0.1977	-0.027	0.056	0.6278	-0.052	0.063	0.4017	0.131	0.118	0.2670
rs2033732	8	85079709	<i>RALYL</i>	T	C	0.75	0.75	0.72	0.019	0.004	4.9E-08	0.068	0.112	0.5437	-0.088	0.042	0.0369	-0.047	0.047	0.3162	-0.345	0.088	<.0001
rs4740619	9	15634326	<i>C9orf93</i>	T	C	0.46	0.46	0.97	-0.018	0.003	4.6E-09	-0.065	0.083	0.4323	0.034	0.034	0.3128	0.032	0.037	0.3994	0.051	0.072	0.4843
rs10968576	9	28414339	<i>LINGO2</i>	A	G	0.32	0.30	0.99	0.025	0.003	6.6E-14	0.098	0.089	0.2701	0.048	0.035	0.1739	0.056	0.039	0.1475	-0.004	0.080	0.9639
rs6477694	9	111932342	<i>EPB41L4</i>	C	T	0.63	0.67	0.97	-0.017	0.003	2.7E-08	-0.152	0.088	0.0851	-0.042	0.034	0.2077	-0.042	0.037	0.2565	-0.045	0.071	0.5226
rs1928295	9	120378483	<i>TLR4</i>	T	C	0.45	0.45	0.91	-0.019	0.003	7.9E-10	-0.139	0.087	0.1099	-0.047	0.034	0.1612	-0.041	0.037	0.2647	-0.084	0.077	0.2744
rs10733682	9	129460914	<i>LMX1B</i>	A	G	0.52	0.51	0.83	-0.017	0.003	1.8E-08	-0.070	0.091	0.4389	0.026	0.036	0.4748	0.029	0.039	0.4533	0.002	0.080	0.9764
rs7899106	10	87410904	<i>GRID1</i>	A	G	0.05	0.05	0.95	0.040	0.007	3.0E-08	0.084	0.191	0.6602	0.097	0.075	0.1964	0.126	0.081	0.1228	-0.132	0.176	0.4525
rs17094222	10	102395440	<i>HIF1AN</i>	T	C	0.21	0.22	0.74	0.025	0.004	5.9E-11	0.140	0.114	0.219	-0.019	0.044	0.6750	-0.020	0.049	0.6898	-0.012	0.097	0.8987
rs11191560	10	104869038	<i>NT5C2</i>	T	C	0.09	0.09	0.86	0.031	0.005	8.5E-09	0.029	0.160	0.8581	-0.113	0.061	0.0636	-0.123	0.067	0.0655	-0.051	0.136	0.7070
rs7903146	10	114758349	<i>TCF7L2</i>	C	T	0.29	0.30	1.00	-0.023	0.003	1.1E-11	-0.151	0.089	0.0896	-0.061	0.034	0.0746	-0.061	0.038	0.1055	-0.061	0.074	0.4080
rs4256980	11	8673939	<i>TRIM66</i>	C	G	0.65	0.64	1.00	0.021	0.003	2.9E-11	0.093	0.086	0.2804	-0.041	0.033	0.2173	-0.038	0.036	0.2930	-0.060	0.074	0.4214
rs11030104	11	27684517	<i>BDNF</i>	A	G	0.21	0.23	0.99	-0.041	0.004	5.6E-28	-0.369	0.098	0.0002	0.039	0.039	0.3073	0.068	0.042	0.1101	-0.147	0.085	0.0850
rs2176598	11	43864278	<i>HSD17B1</i>	T	C	0.75	0.74	0.98	-0.020	0.004	3.0E-08	0.049	0.095	0.6044	0.013	0.037	0.7153	0.028	0.041	0.4975	-0.081	0.075	0.2791
rs3817334	11	47650993	<i>MTCH2</i>	C	T	0.41	0.43	0.75	0.026	0.003	5.2E-17	0.170	0.097	0.0781	0.034	0.037	0.3547	0.036	0.040	0.3671	0.019	0.084	0.8219
rs12286929	11	115022404	<i>CADMI</i>	A	G	0.52	0.51	0.72	0.022	0.003	1.3E-12	-0.001	0.097	0.9879	-0.056	0.038	0.1402	-0.055	0.042	0.1948	-0.069	0.081	0.3895
rs7138803	12	50247468	<i>BCDIN3D</i>	G	A	0.38	0.39	0.95	0.032	0.003	8.2E-24	0.079	0.086	0.3581	0.027	0.033	0.4177	0.036	0.037	0.3301	-0.028	0.073	0.7044

rs11057405	12	122781897	<i>CLIP1</i>	G	A	0.10	0.10	0.69	-0.031	0.006	2.0E-08	-0.283	0.160	0.0765	0.084	0.068	0.2179	0.086	0.075	0.2522	0.076	0.148	0.6088
rs12429545	13	54102206	<i>OLFM4</i>	G	A	0.13	0.14	0.52	0.033	0.005	1.1E-12	0.282	0.161	0.0794	0.084	0.064	0.1902	0.077	0.071	0.2794	0.134	0.144	0.3488
rs9540493	13	66205704	<i>MIR548X</i>	A	G	0.54	0.55	0.62	-0.017	0.003	1.4E-07	0.029	0.104	0.7778	-0.045	0.041	0.2635	-0.058	0.045	0.1951	0.046	0.085	0.5824
rs1441264	13	79580919	<i>MIR548A</i>	G	A	0.61	0.64	0.55	0.018	0.003	6.0E-08	0.114	0.115	0.3219	0.001	0.044	0.9736	0.006	0.049	0.9034	-0.030	0.093	0.7455
rs10132280	14	25928179	<i>STXBP6</i>	C	A	0.32	0.32	0.88	-0.023	0.003	1.1E-11	-0.262	0.095	0.0058	-0.051	0.037	0.1726	-0.066	0.041	0.1104	0.049	0.080	0.5403
rs12885454	14	29736838	<i>PRKD1</i>	C	A	0.36	0.34	0.99	-0.021	0.003	1.9E-10	-0.129	0.086	0.1356	-0.043	0.034	0.1983	-0.055	0.037	0.1390	0.039	0.076	0.6033
rs7141420	14	79899454	<i>NRXN3</i>	C	T	0.53	0.50	0.64	0.023	0.003	1.2E-14	-0.014	0.102	0.8951	0.006	0.040	0.8734	0.004	0.044	0.9332	0.029	0.095	0.7596
rs3736485	15	51748610	<i>DMXL2</i>	A	G	0.55	0.51	0.89	-0.018	0.003	7.4E-09	-0.092	0.087	0.2915	0.009	0.035	0.7923	0.004	0.039	0.9190	0.043	0.072	0.5526
rs16951275	15	68077168	<i>MAP2K5</i>	T	C	0.22	0.24	1.00	-0.031	0.004	1.9E-17	-0.265	0.096	0.0055	0.013	0.037	0.7218	0.032	0.040	0.4236	-0.130	0.084	0.1245
rs7164727	15	73093991	<i>LOC1002</i>	C	T	0.69	0.67	0.91	0.018	0.003	6.8E-08	-0.004	0.092	0.9632	0.033	0.035	0.3578	0.008	0.039	0.8384	0.198	0.079	0.0121
rs758747	16	3627358	<i>NLRC3</i>	C	T	0.27	0.29	1.00	0.023	0.004	7.5E-10	0.041	0.090	0.645	0.005	0.035	0.8935	0.002	0.038	0.9688	0.032	0.072	0.6600
rs12446632	16	19935389	<i>GPRC5B</i>	G	A	0.13	0.14	0.98	-0.040	0.005	1.5E-18	-0.254	0.116	0.0282	0.007	0.046	0.8845	0.005	0.050	0.9145	0.008	0.109	0.9402
rs2650492	16	28333411	<i>SBK1</i>	G	A	0.30	0.23	0.61	0.021	0.004	1.9E-09	0.235	0.126	0.0623	-0.053	0.050	0.2954	-0.055	0.055	0.3215	-0.028	0.109	0.7970
rs3888190	16	28889486	<i>ATP2A1</i>	C	A	0.40	0.36	1.00	0.031	0.003	3.1E-23	0.160	0.085	0.0604	-0.025	0.034	0.4748	-0.022	0.038	0.5647	-0.042	0.077	0.5839
rs4787491	16	30015337	<i>INO80E</i>	A	G	0.51	0.54	0.92	0.016	0.003	2.2E-06	0.212	0.086	0.0134	-0.022	0.035	0.5247	-0.025	0.039	0.5115	-0.004	0.075	0.9608
rs9925964	16	31129895	<i>KAT8</i>	A	G	0.38	0.39	0.99	-0.019	0.003	8.1E-10	-0.238	0.084	0.0047	0.034	0.033	0.2994	0.035	0.036	0.3384	0.029	0.070	0.6797
rs2080454	16	49062590	<i>CBLN1</i>	C	A	0.59	0.59	0.72	-0.017	0.003	6.6E-08	-0.011	0.097	0.9114	0.073	0.038	0.0568	0.074	0.042	0.0794	0.060	0.085	0.4771
rs1558902	16	53803574	<i>FTO</i>	T	A	0.42	0.42	1.00	0.082	0.003	7.5E-153	0.492	0.083	<.0001	0.059	0.031	0.0613	0.070	0.035	0.0422	-0.021	0.070	0.7598
rs9914578	17	2005136	<i>SMG6</i>	C	G	0.21	0.19	0.98	0.020	0.004	9.0E-08	0.136	0.104	0.1915	0.021	0.040	0.5872	0.008	0.044	0.8612	0.113	0.088	0.1993
rs1000940	17	5283252	<i>RABEP1</i>	A	G	0.32	0.31	0.99	0.019	0.003	1.3E-08	0.074	0.088	0.3998	-0.018	0.036	0.6137	-0.010	0.039	0.7912	-0.076	0.079	0.3371
rs12940622	17	78615571	<i>RPTOR</i>	G	A	0.43	0.42	0.73	-0.018	0.003	2.5E-09	-0.040	0.097	0.6779	-0.012	0.037	0.7392	-0.010	0.041	0.8039	-0.027	0.082	0.7445
rs1808579	18	21104888	<i>Clorf8</i>	C	T	0.47	0.44	0.91	-0.017	0.003	4.2E-08	-0.086	0.087	0.3217	0.026	0.034	0.4414	0.040	0.037	0.2856	-0.068	0.075	0.3650
rs7239883	18	40147671	<i>LOC2842</i>	G	A	0.61	0.60	0.85	-0.016	0.003	1.6E-07	-0.098	0.091	0.284	-0.005	0.036	0.9002	-0.029	0.040	0.4699	0.163	0.081	0.0450
rs7243357	18	56883319	<i>GRP</i>	T	G	0.19	0.18	0.94	-0.022	0.004	3.9E-08	-0.025	0.111	0.8186	0.016	0.043	0.7074	0.009	0.047	0.8532	0.067	0.091	0.4640
rs6567160	18	57829135	<i>MC4R</i>	T	C	0.24	0.23	0.99	0.056	0.004	3.9E-53	0.408	0.097	<.0001	-0.038	0.040	0.3315	-0.054	0.044	0.2159	0.057	0.082	0.4855
rs17724992	19	18454825	<i>PGPEP1</i>	A	G	0.25	0.26	1.00	-0.019	0.004	3.4E-08	-0.090	0.093	0.333	-0.057	0.036	0.1124	-0.060	0.040	0.1308	-0.042	0.078	0.5941
rs29941	19	34309532	<i>KCTD15</i>	A	G	0.67	0.69	1.00	0.018	0.003	2.4E-08	0.118	0.089	0.1833	-0.006	0.034	0.8581	-0.002	0.037	0.9613	-0.031	0.074	0.6744

rs2075650	19	45395619	<i>TOMM40</i>	A	G	0.15	0.14	0.75	-0.026	0.005	1.3E-08	-0.080	0.135	0.5536	0.057	0.053	0.2845	0.053	0.058	0.3618	0.071	0.118	0.5470
rs2287019	19	46202172	<i>QPCTL</i>	C	T	0.20	0.21	0.67	-0.036	0.004	4.6E-18	-0.093	0.122	0.4445	-0.004	0.050	0.9289	-0.029	0.055	0.6052	0.172	0.103	0.0935
rs3810291	19	47569003	<i>ZC3H4</i>	G	A	0.67	0.67	1.00	0.028	0.004	4.8E-15	0.075	0.087	0.3908	-0.013	0.034	0.7063	-0.018	0.038	0.6384	0.017	0.073	0.8201
rs6091540	20	51087862	<i>ZFP64</i>	C	T	0.28	0.28	0.64	-0.019	0.004	8.0E-08	0.051	0.114	0.6513	0.022	0.044	0.6153	0.024	0.048	0.6182	0.016	0.098	0.8716
rs2836754	21	40291740	<i>ETS2</i>	T	C	0.61	0.62	1.00	0.016	0.003	4.2E-07	0.051	0.084	0.542	-0.051	0.033	0.1204	-0.054	0.036	0.1355	-0.032	0.071	0.6574

CIMBA: The Consortium of Investigators of Modifiers of *BRCA1/2*; GWAS: genome-wide association studies

Notes:

[1] Imputation quality of 1 indicates genotyped SNPs.

[2] Effect estimate after BMI standardization.

[3] *P*-values were calculated using student's *t*-test. All *P*-values are two-sided.

[4] Association with ovarian cancer were estimated using weighted Cox models that adjusted for principal components, birth cohort, menopausal status, country of enrollment and mutation status.

[5] *P*-values were calculated using chi-squared test. All *P*-values are two-sided.

Supplementary Table 3. Associations of the height genetic score (height-GS) with height and ovarian cancer risk factors

	Number of participants	Summary effect	Standard error	<i>P</i> -value	% variation explained
Measured height, cm					
All participants	7,657	0.993	0.029	7.00E-241	13.4
<i>BRCA1</i> carriers	4,502	1.004	0.037	3.84E-149	14.0
<i>BRCA2</i> carriers	3,155	0.980	0.046	2.48E-94	12.6
Case participants	784	0.939	0.087	1.20E-25	13.1
Control participants	6,873	1.000	0.031	2.31E-218	13.5
Traditional risk factors					
BMI, kg/m ²	7,516	-0.010	0.024	0.66	
Weight, kg	7,569	0.798	0.064	2.73E-35	
Age at baseline, y	22,588	-0.128	0.032	4.52E-05	
Age at menarche, y	7,459		0.028	0.007	7.25E-05
Parous, yes vs no	8,394	-0.010	0.011	0.35	
Age at first live birth, y	6,290	-0.013	0.025	0.58	
Menopausal status, pre vs post	8,445	0.012	0.009	0.18	
Age at menopause, y	4,336	-0.080	0.036	0.03	

Notes:

Regression coefficient is presented for continuous variables and natural log-scale odds ratio for binary variables, per unit increase of the weighted height genetic score. *P*-values were calculated from linear regression models for all variables except for parity and menopausal status (logistic regression models).

Supplementary Table 4. Associations of the body mass index genetic score (BMI-GS) with BMI and ovarian cancer risk factors

	Number of participants	Summary effect	Standard error	P-value	% variation explained
Observed BMI at date of questionnaire, kg/m ²					
All participants	7,516	0.966	0.069	2.79E-44	2.6
<i>BRCA1</i> carrier	4,401	0.912	0.088	8.05E-25	2.4
<i>BRCA2</i> carrier	3,115	1.048	0.110	2.10E-21	2.9
Case participants	772	0.671	0.215	1.88E-03	1.3
Control participants	6,744	1.000	0.073	1.11E-42	2.7
Premenopausal control participants	3,253	0.949	0.101	1.09E-20	2.6
Postmenopausal control participants	3,152	1.052	0.109	8.10E-22	2.9
Observed BMI in young adulthood, kg/m ²					
All participants	5,417	0.971	0.102	2.31E-21	1.7
<i>BRCA1</i> carrier	3,134	0.942	0.132	1.24E-12	1.6
<i>BRCA2</i> carrier	2,283	1.015	0.160	2.76E-10	1.7
Case participants	536	0.734	0.285	1.04E-02	1.2
Control participants	4,881	1.000	0.109	5.69E-20	1.7
Premenopausal control participants	2,180	1.171	0.168	4.18E-12	2.2
Postmenopausal control participants	2,365	0.872	0.153	1.27E-08	1.4
Traditional risk factors					
Height	7,657	0.371	0.092	5.40E-05	
Age at baseline, y	22,588	-0.165	0.085	0.79	
Age at menarche, y	7,459	-0.104	0.020	3.30E-07	
Parous, yes vs no	8,394	0.028	0.031	0.38	
Age at first live birth, y	6,290	-0.131	0.073	0.07	
Menopausal status, pre vs post	8,445	-0.027	0.026	0.28	
Age at menopause, y	4,336	-0.200	0.108	0.06	

Notes:

Regression coefficient is presented for continuous variables and natural log-scale odds ratio for binary variables, per unit increase of the weighted BMI genetic score. *P*-values were calculated from linear regression models for all variables except for parity and menopausal status (logistic regression models).