

Supplementary Table 4. PheWAS and Visconti-based identification of pigmentation and tanning related SNPs.

(A) PheWAS records flagged as pigmentation, tanning, skin color, other pigmentation-related traits, skin cancer, vitamin D, or lifestyle related.

query_snp_id	trait	chr	position	rsid	ea	nea	eaf	beta	se	p	n	trait_l	flagged_kc	flagged
rs10962611	ebi-a-GCS [†] Skin pigme	9	16804167	rs10962611	G	T	0.761385	0.020611	0.000929	1.6E-122	548203	skin pigme skin;pigme	TRUE	
rs10962611	ukb-b-533 Ease of ski	9	16804167	rs10962611	G	T	0.760239	0.054783	0.002343	6.9E-121	453065	ease of skir skin;tannin	TRUE	
rs10962611	ukb-b-195 [†] Skin colour	9	16804167	rs10962611	G	T	0.760311	-0.031718	0.0014	1.2E-113	456692	skin colour skin	TRUE	
rs10962611	ebi-a-GCS [†] Tanning	9	16804167	rs10962611	G	T	0.761276	-0.023857	0.001127	6.2E-109	513536	tanning tanning;tan	TRUE	
rs10962611	ebi-a-GCS [†] Hair color	9	16804167	rs10962611	G	T	0.76125	0.023487	0.00185	1.2E-46	713771	hair color hair	TRUE	
rs10962611	ebi-a-GCS [†] Hair color (9		16804167	rs10962611	G	T	0.761267	0.008682	0.000737	3.9E-33	534365	hair color (hair	TRUE	
rs10962611	ukb-b-1324 Childhood	9	16804167	rs10962611	G	T	0.759777	0.027123	0.002485	9.9E-28	346955	childhood � sunburn	TRUE	
rs10962611	ebi-a-GCS [†] Sunburns	9	16804167	rs10962611	G	T	0.761024	0.014426	0.001365	6.3E-26	350232	sunburns sunburn	TRUE	
rs10962611	ukb-d-1747 Hair colour	9	16804167	rs10962611	G	T	0.764715	0.009062	0.00088	7.38E-25	360270	hair colour hair	TRUE	
rs10962611	ebi-a-GCS [†] Hair color (9		16804167	rs10962611	G	T	0.761267	-0.008687	0.001117	2.2E-16	531771	hair color (hair	TRUE	
rs10962611	ukb-d-1747 Hair colour	9	16804167	rs10962611	G	T	0.764715	-0.010489	0.001339	4.83E-15	360270	hair colour hair	TRUE	
rs10962611	ieu-b-4959 Malignant i	9	16804167	rs10962611	G	T	0.759995	0.003454	0.000621	2.7E-08	395710	malignant i skin;melan�	TRUE	
rs11070811	ukb-b-533 Ease of ski	15	31394082	rs11070811	T	C	0.182822	-0.029807	0.002589	1.1E-30	453065	ease of skir skin;tannin	TRUE	
rs11070811	ebi-a-GCS [†] Tanning	15	31394082	rs11070811	T	C	0.182577	0.0136	0.00124	3.8E-29	513536	tanning tanning;tan	TRUE	
rs11070811	ukb-b-195 [†] Skin colour	15	31394082	rs11070811	T	C	0.182756	0.016761	0.001538	1.2E-27	456692	skin colour skin	TRUE	
rs11070811	ebi-a-GCS [†] Skin pigme	15	31394082	rs11070811	T	C	0.182518	-0.009899	0.001006	1.2E-23	548203	skin pigme skin;pigme	TRUE	
rs11070811	ukb-b-1324 Childhood	15	31394082	rs11070811	T	C	0.183157	-0.01761	0.002749	1.5E-10	346955	childhood � sunburn	TRUE	
rs11070811	ebi-a-GCS [†] Sunburns	15	31394082	rs11070811	T	C	0.182873	-0.008823	0.001504	5.1E-09	350232	sunburns sunburn	TRUE	
rs11104731	ukb-b-533 Ease of ski	12	88490119	rs11104731	T	C	0.014804	0.111168	0.008326	1.1E-40	453065	ease of skir skin;tannin	TRUE	
rs11104731	ebi-a-GCS [†] Tanning	12	88490119	rs11104731	T	C	0.014821	-0.045117	0.003992	8.6E-34	513536	tanning tanning;tan	TRUE	
rs11104731	ukb-b-195 [†] Skin colour	12	88490119	rs11104731	T	C	0.014774	-0.044961	0.004978	1.7E-19	456692	skin colour skin	TRUE	
rs11104731	ebi-a-GCS [†] Skin pigme	12	88490119	rs11104731	T	C	0.014794	0.02677	0.003294	7.2E-19	548203	skin pigme skin;pigme	TRUE	
rs11104731	ebi-a-GCS [†] Sunburns	12	88490119	rs11104731	T	C	0.014726	0.028916	0.004841	2.4E-09	350232	sunburns sunburn	TRUE	
rs11104731	ukb-b-1324 Childhood	12	88490119	rs11104731	T	C	0.014717	0.049182	0.008852	2.8E-08	346955	childhood � sunburn	TRUE	
rs11139141	ukb-b-107 [†] Standing ht	4	1341553	rs11139141	G	A	0.047519	-0.034637	0.003057	9.3E-30	461950	standing ht tan	TRUE	
rs11139141	ebi-a-GCS [†] Sunburns	4	1341553	rs11139141	G	A	0.048094	-0.027331	0.002717	6.9E-24	350232	sunburns sunburn	TRUE	
rs11139141	ukb-b-1324 Childhood	4	1341553	rs11139141	G	A	0.04788	-0.047383	0.004975	1.7E-21	346955	childhood � sunburn	TRUE	
rs11139141	ukb-a-389 Standing ht	4	1341553	rs11139141	G	A	0.048448	-0.037029	0.004016	2.98E-20	336474	standing ht tan	TRUE	
rs11198111	ebi-a-GCS [†] Tanning	10	1.2E+08	rs11198111	T	C	0.164425	0.026238	0.001316	2.8E-95	513536	tanning tanning;tan	TRUE	
rs11198111	ukb-b-533 Ease of ski	10	1.2E+08	rs11198111	T	C	0.164257	-0.055563	0.002744	3.6E-91	453065	ease of skir skin;tannin	TRUE	
rs11198111	ebi-a-GCS [†] Skin pigme	10	1.2E+08	rs11198111	T	C	0.164324	-0.020306	0.001086	1.2E-84	548203	skin pigme skin;pigme	TRUE	
rs11198111	ukb-b-195 [†] Skin colour	10	1.2E+08	rs11198111	T	C	0.164127	0.027732	0.00164	4E-64	456692	skin colour skin	TRUE	
rs11198111	ebi-a-GCS [†] Facial pign	10	1.2E+08	rs11198111	T	C	0.09699	-2.296	0.2143	1.17E-26	11079	facial pigm pigment;pi�	TRUE	
rs11198111	ukb-b-1324 Childhood	10	1.2E+08	rs11198111	T	C	0.164794	-0.030884	0.002906	2.2E-26	346955	childhood � sunburn	TRUE	
rs11198111	ebi-a-GCS [†] Sunburns	10	1.2E+08	rs11198111	T	C	0.165023	-0.016809	0.001589	2.3E-26	350232	sunburns sunburn	TRUE	
rs11198111	ebi-a-GCS [†] Freckles	10	1.2E+08	rs11198111	T	C	0.087974	-0.503114	0.05371	7.45E-21	11182	freckles freck	TRUE	
rs11198111	ebi-a-GCS [†] Facial pign	10	1.2E+08	rs11198111	T	C	0.09699	-1.49	0.1684	1.07E-18	11079	facial pigm pigment;pi�	TRUE	
rs11208951	ebi-a-GCS [†] Hair color	16	90149171	rs11208951	T	C	0.081083	-0.095634	0.002736	3E-308	713771	hair color hair	TRUE	
rs11208951	ukb-b-533 Ease of ski	16	90149171	rs11208951	T	C	0.080846	-0.137978	0.003735	8.7E-299	453065	ease of skir skin;tannin	TRUE	
rs11208951	ebi-a-GCS [†] Tanning	16	90149171	rs11208951	T	C	0.080911	0.059047	0.001765	3.8E-260	513536	tanning tanning;tan	TRUE	
rs11208951	ukb-b-195 [†] Skin colour	16	90149171	rs11208951	T	C	0.080777	0.069898	0.002242	2.4E-213	456692	skin colour skin	TRUE	
rs11208951	ebi-a-GCS [†] Skin pigme	16	90149171	rs11208951	T	C	0.080864	-0.042944	0.001473	1.6E-206	548203	skin pigme skin;pigme	TRUE	
rs11208951	ukb-d-1747 Hair colour	16	90149171	rs11208951	T	C	0.081432	-0.023256	0.00093	7.7E-138	360270	hair colour hair	TRUE	
rs11208951	ebi-a-GCS [†] Hair color (16		90149171	rs11208951	T	C	0.080937	0.038282	0.001776	9.3E-112	531771	hair color (hair	TRUE	
rs11208951	ukb-d-1747 Hair colour	16	90149171	rs11208951	T	C	0.081432	0.039473	0.002145	1.45E-75	360270	hair colour hair	TRUE	
rs11208951	ukb-b-1324 Childhood	16	90149171	rs11208951	T	C	0.081196	-0.058086	0.004009	1.4E-47	346955	childhood � sunburn	TRUE	
rs11208951	ebi-a-GCS [†] Sunburns	16	90149171	rs11208951	T	C	0.081295	-0.031302	0.002183	2E-47	350232	sunburns sunburn	TRUE	
rs11208951	ebi-a-GCS [†] Hair color (16		90149171	rs11208951	T	C	0.080937	-0.012192	0.001188	9.3E-27	534365	hair color (hair	TRUE	
rs11208951	ukb-d-1747 Hair colour	16	90149171	rs11208951	T	C	0.081432	0.008252	0.000897	3.69E-20	360270	hair colour hair	TRUE	
rs11208951	ukb-d-1747 Hair colour	16	90149171	rs11208951	T	C	0.081432	-0.011708	0.00141	1.04E-16	360270	hair colour hair	TRUE	
rs11208951	ukb-d-C3_1 Malignant i	16	90149171	rs11208951	T	C	0.081438	-0.00653	0.000922	1.4E-12	361194	malignant i skin	TRUE	
rs11208951	ukb-d-C_51 Cancer of s	16	90149171	rs11208951	T	C	0.081438	-0.00653	0.000922	1.4E-12	361194	cancer of sl skin	TRUE	
rs11208951	ebi-a-GCS [†] Skin cance	16	90149171	rs11208951	T	C	0.084616	-0.1237	0.018	5.85E-12	492203	skin cancer skin	TRUE	
rs11208951	ieu-b-4959 Malignant i	16	90149171	rs11208951	T	C	0.080807	-0.006597	0.001008	6E-11	395710	malignant i skin;melan�	TRUE	
rs11208951	ebi-a-GCS [†] Basal cell c	16	90149171	rs11208951	T	C	0.074049	-0.141433	0.02225	2.1E-10	392871	basal cell c basal cell	TRUE	
rs11208951	ukb-d-C_O Other malig	16	90149171	rs11208951	T	C	0.081438	-0.005306	0.000863	7.67E-10	361194	other malig skin	TRUE	
rs11242891	ebi-a-GCS [†] Hair color	6	460302	rs11242891	A	G	0.266668	0.030787	0.001762	2.9E-76	713771	hair color hair	TRUE	
rs11242891	ukb-b-533 Ease of ski	6	460302	rs11242891	A	G	0.266624	-0.033873	0.002269	2.1E-50	453065	ease of skir skin;tannin	TRUE	
rs11242891	ebi-a-GCS [†] Tanning	6	460302	rs11242891	A	G	0.266617	0.013957	0.001086	3.8E-40	513536	tanning tanning;tan	TRUE	
rs11242891	ebi-a-GCS [†] Hair color (6		460302	rs11242891	A	G	0.266699	0.008751	0.00071	4E-36	534365	hair color (hair	TRUE	
rs11242891	ebi-a-GCS [†] Hair color (6		460302	rs11242891	A	G	0.266699	-0.012658	0.001077	1.4E-34	531771	hair color (hair	TRUE	
rs11242891	ukb-d-1747 Hair colour	6	460302	rs11242891	A	G	0.266072	-0.00626	0.00054	5.03E-31	360270	hair colour hair	TRUE	
rs11242891	ukb-d-1747 Hair colour	6	460302	rs11242891	A	G	0.266072	-0.013506	0.001293	1.49E-25	360270	hair colour hair	TRUE	
rs11242891	ukb-d-1747 Hair colour	6	460302	rs11242891	A	G	0.266072	0.008648	0.000849	2.43E-24	360270	hair colour hair	TRUE	
rs11242891	ukb-b-1324 Childhood	6	460302	rs11242891	A	G	0.266333	-0.024479	0.002411	3.2E-24	346955	childhood � sunburn	TRUE	
rs11242891	ukb-d-1747 Hair colour	6	460302	rs11242891	A	G	0.266072	0.012715	0.001315	4.01E-22	360270	hair colour hair	TRUE	
rs11242891	ebi-a-GCS [†] Sunburns	6	460302	rs11242891	A	G	0.266336	-0.012129	0.001319	1.1E-19	350232	sunburns sunburn	TRUE	
rs11242891	ukb-b-195 [†] Skin colour	6	460302	rs11242891	A	G	0.26669	0.012223	0.001359	2.4E-19	456692	skin colour skin	TRUE	
rs11242891	ebi-a-GCS [†] Skin pigme	6	460302	rs11242891	A	G	0.266673	-0.005718	0.0009	1.3E-11	548203	skin pigme skin;pigme	TRUE	
rs11242891	ebi-a-GCS [†] Skin cance	6	460302	rs11242891	A	G	0.305762	-0.0637	0.0108	3.51E-09	492203	skin cancer skin	TRUE	
rs11242891	ieu-b-4959 Malignant i	6	460302	rs11242891	A	G	0.266857	-0.003525	0.000604	5.3E-09	395710	malignant i skin;melan�	TRUE	

rs1126424	ebi-a-GCS	Sunburns	1	1.55E+08	rs1126424	T	C	0.085994	-0.011619	0.002103	2.9E-08	350232	sunburns	sunburn	TRUE
rs1126809	ebi-a-GCS	Skin pigme	11	89017961	rs1126809	A	G	0.304865	0.046485	0.00086	0	548203	skin pigme	skin;pigme	TRUE
rs1126809	ebi-a-GCS	Tanning	11	89017961	rs1126809	A	G	0.304474	-0.057349	0.001044	0	513536	tanning	tanning;tan	TRUE
rs1126809	ukb-b-195	Skin colour	11	89017961	rs1126809	A	G	0.304408	-0.072404	0.0013	0	456692	skin colour	skin	TRUE
rs1126809	ukb-b-533	Ease of ski	11	89017961	rs1126809	A	G	0.304042	0.129574	0.002176	0	453065	ease of skir	skin;tannin	TRUE
rs1126809	ebi-a-GCS	Sunburns	11	89017961	rs1126809	A	G	0.303381	0.04535	0.001268	4.8E-285	350232	sunburns	sunburn	TRUE
rs1126809	ukb-b-1324	Childhood	11	89017961	rs1126809	A	G	0.302839	0.0825	0.002315	3.2E-278	346955	childhood	sunburn	TRUE
rs1126809	ebi-a-GCS	Hair color	(11	89017961	rs1126809	A	G	0.304558	0.017581	0.000682	8.3E-155	534365	hair color	(hair	TRUE
rs1126809	ebi-a-GCS	Hair color	11	89017961	rs1126809	A	G	0.304502	0.038555	0.001709	2.7E-128	713771	hair color	hair	TRUE
rs1126809	ukb-d-1747	Hair colour	11	89017961	rs1126809	A	G	0.306646	0.017986	0.000812	1.1E-108	360270	hair colour	hair	TRUE
rs1126809	ebi-a-GCS	Hair color	(11	89017961	rs1126809	A	G	0.304558	-0.020614	0.001036	1.4E-94	531771	hair color	(hair	TRUE
rs1126809	ukb-d-1747	Hair colour	11	89017961	rs1126809	A	G	0.306646	-0.019955	0.001236	1.2E-58	360270	hair colour	hair	TRUE
rs1126809	ebi-a-GCS	Skin cance	11	89017961	rs1126809	A	G	0.270997	0.1443	0.0105	6.63E-43	492203	skin cancer	skin	TRUE
rs1126809	ieu-b-4959	Malignant	(11	89017961	rs1126809	A	G	0.303379	0.007335	0.000579	1E-36	395710	malignant	skin;melan	TRUE
rs1126809	ebi-a-GCS	Basal cell	(11	89017961	rs1126809	A	G	0.303865	0.13852	0.01157	5E-33	392871	basal cell	c basal cell	TRUE
rs1126809	ukb-d-C3_	'Malignant	(11	89017961	rs1126809	A	G	0.306642	0.00624	0.000531	6.67E-32	361194	malignant	skin	TRUE
rs1126809	ukb-d-C_	SI Cancer of	s 11	89017961	rs1126809	A	G	0.306642	0.00624	0.000531	6.67E-32	361194	cancer of si	skin	TRUE
rs1126809	ukb-d-C_	O Other mali	(11	89017961	rs1126809	A	G	0.306642	0.005317	0.000497	9.7E-27	361194	other malig	skin	TRUE
rs1126809	ukb-b-1291	Cancer cod	11	89017961	rs1126809	A	G	0.304059	0.001722	0.000199	4.2E-18	462933	cancer cod	melanoma	TRUE
rs1126809	ieu-b-4969	Melanoma	11	89017961	rs1126809	A	G	0.302059	0.002038	0.00025	3.6E-16	375767	melanoma	skin;melan	TRUE
rs1126809	finn-b-C3_	Other mali	(11	89017961	rs1126809	A	G	0.1784	0.163	0.0204	1.26E-15		other malig	skin;melan	TRUE
rs1126809	finn-b-C3_	Malignant	(11	89017961	rs1126809	A	G	0.1784	0.1626	0.0204	1.43E-15		malignant	skin	TRUE
rs1126809	finn-b-C3_	Other mali	(11	89017961	rs1126809	A	G	0.1779	0.1648	0.0208	2.37E-15		other malig	skin;melan	TRUE
rs1126809	finn-b-C3_	Malignant	(11	89017961	rs1126809	A	G	0.1779	0.1649	0.0208	2.56E-15		malignant	skin	TRUE
rs1126809	ukb-a-518	Diagnoses	11	89017961	rs1126809	A	G	0.304801	0.002425	0.000315	1.32E-14	337199	diagnoses	- skin	TRUE
rs1126809	finn-b-L12	Skin chang	11	89017961	rs1126809	A	G	0.1784	0.2167	0.0282	1.61E-14		skin chang	skin	TRUE
rs1126809	finn-b-L12	Radiation-r	11	89017961	rs1126809	A	G	0.1784	0.1947	0.0267	3.28E-13		radiation-r	skin;tan	TRUE
rs1126809	ukb-b-9537	Operative p	11	89017961	rs1126809	A	G	0.304061	0.002764	0.000402	6.5E-12	463010	operative p	skin	TRUE
rs1126809	ukb-d-1747	Hair colour	11	89017961	rs1126809	A	G	0.306646	0.008457	0.001257	1.73E-11	360270	hair colour	hair	TRUE
rs1126809	ukb-a-58	Cancer cod	11	89017961	rs1126809	A	G	0.304801	0.001582	0.000235	1.74E-11	337159	cancer cod	melanoma	TRUE
rs1126809	ukb-d-1747	Hair colour	11	89017961	rs1126809	A	G	0.306646	-0.003391	0.000517	5.3E-11	360270	hair colour	hair	TRUE
rs1126809	ukb-b-156	Type of cai	11	89017961	rs1126809	A	G	0.304061	0.001108	0.000169	5.7E-11	463010	type of can	skin	TRUE
rs1126809	ukb-b-8837	Cancer cod	11	89017961	rs1126809	A	G	0.304059	0.001409	0.000217	7.7E-11	462933	cancer cod	basal cell	TRUE
rs1126809	ukb-d-1747	Hair colour	11	89017961	rs1126809	A	G	0.306646	-0.003423	0.000536	1.73E-10	360270	hair colour	hair	TRUE
rs1126809	ukb-b-1024	Type of cai	11	89017961	rs1126809	A	G	0.304061	0.001593	0.000256	5.1E-10	463010	type of can	skin	TRUE
rs1126809	ukb-b-1081	Operative p	11	89017961	rs1126809	A	G	0.304061	0.002009	0.000334	1.9E-09	463010	operative p	skin	TRUE
rs1126809	ukb-a-59	Cancer cod	11	89017961	rs1126809	A	G	0.304801	0.001526	0.000255	2.25E-09	337159	cancer cod	basal cell	TRUE
rs1126809	ukb-b-1591	Treatment	(11	89017961	rs1126809	A	G	0.304023	0.00185	0.000323	1.1E-08	444587	treatment	s tan	TRUE
rs1126809	ukb-b-744	Operative p	11	89017961	rs1126809	A	G	0.304061	0.001278	0.000232	3.6E-08	463010	operative p	skin	TRUE
rs1126809	ukb-b-6772	Operation	(11	89017961	rs1126809	A	G	0.304059	0.001463	0.000266	3.7E-08	462933	operation	c skin	TRUE
rs1161253	ukb-b-195	Skin colour	5	33930012	rs1161253	G	T	0.02316	0.028685	0.004052	1.4E-12	456692	skin colour	skin	TRUE
rs1161253	ebi-a-GCS	Skin pigme	5	33930012	rs1161253	G	T	0.023113	-0.017212	0.002658	1.5E-12	548203	skin pigme	skin;pigme	TRUE
rs1161253	ebi-a-GCS	Hair color	5	33930012	rs1161253	G	T	0.023111	-0.031103	0.005309	9.3E-12	713771	hair color	hair	TRUE
rs1161253	ebi-a-GCS	Sunburns	5	33930012	rs1161253	G	T	0.023117	-0.025883	0.003934	2.5E-10	350232	sunburns	sunburn	TRUE
rs1161253	ukb-b-533	Ease of ski	5	33930012	rs1161253	G	T	0.02311	-0.04002	0.006793	3.8E-09	453065	ease of skir	skin;tannin	TRUE
rs1161253	ukb-b-1324	Childhood	5	33930012	rs1161253	G	T	0.023181	-0.039708	0.007195	3.4E-08	346955	childhood	sunburn	TRUE
rs1164843	ukb-b-1324	Childhood	16	14008674	rs1164843	T	C	0.356354	-0.027274	0.002219	9.9E-35	346955	childhood	sunburn	TRUE
rs1164843	ebi-a-GCS	Sunburns	16	14008674	rs1164843	T	C	0.35606	-0.013577	0.001209	7.9E-31	350232	sunburns	sunburn	TRUE
rs1164843	ukb-b-533	Ease of ski	16	14008674	rs1164843	T	C	0.355255	-0.015757	0.002063	2.2E-14	453065	ease of skir	skin;tannin	TRUE
rs1164843	ebi-a-GCS	Tanning	16	14008674	rs1164843	T	C	0.354962	0.006596	0.000975	4E-12	513536	tanning	tanning;tan	TRUE
rs1171328	ukb-b-533	Ease of ski	7	17134708	rs1171328	A	G	0.025972	0.148572	0.006304	7.9E-123	453065	ease of skir	skin;tannin	TRUE
rs1171328	ebi-a-GCS	Tanning	7	17134708	rs1171328	A	G	0.025938	-0.064014	0.003025	2.1E-114	513536	tanning	tanning;tan	TRUE
rs1171328	ukb-b-195	Skin colour	7	17134708	rs1171328	A	G	0.025952	-0.062992	0.003767	8.8E-63	456692	skin colour	skin	TRUE
rs1171328	ebi-a-GCS	Skin pigme	7	17134708	rs1171328	A	G	0.025921	0.03732	0.002496	5.7E-60	548203	skin pigme	skin;pigme	TRUE
rs1171328	ebi-a-GCS	Sunburns	7	17134708	rs1171328	A	G	0.025556	0.03395	0.003682	6.3E-21	350232	sunburns	sunburn	TRUE
rs1171328	ukb-b-1324	Childhood	7	17134708	rs1171328	A	G	0.025574	0.059305	0.006729	1.2E-18	346955	childhood	sunburn	TRUE
rs1173990	ukb-b-533	Ease of ski	5	59019359	rs1173990	C	A	0.326757	0.023619	0.002137	2.1E-28	453065	ease of skir	skin;tannin	TRUE
rs1173990	ebi-a-GCS	Tanning	5	59019359	rs1173990	C	A	0.326426	-0.00958	0.001024	4.2E-23	513536	tanning	tanning;tan	TRUE
rs1173990	ukb-b-195	Skin colour	5	59019359	rs1173990	C	A	0.327023	-0.012419	0.001276	2.2E-22	456692	skin colour	skin	TRUE
rs1173990	ebi-a-GCS	Skin pigme	5	59019359	rs1173990	C	A	0.326679	0.007393	0.000838	3.1E-20	548203	skin pigme	skin;pigme	TRUE
rs1173990	ebi-a-GCS	Hair color	5	59019359	rs1173990	C	A	0.326622	0.011472	0.001673	8.5E-14	713771	hair color	hair	TRUE
rs1173990	ukb-b-1324	Childhood	5	59019359	rs1173990	C	A	0.327463	0.013047	0.002265	8.4E-09	346955	childhood	sunburn	TRUE
rs1173990	ebi-a-GCS	Sunburns	5	59019359	rs1173990	C	A	0.327118	0.006903	0.001239	2.7E-08	350232	sunburns	sunburn	TRUE
rs1174623	ukb-b-1324	Childhood	16	14277804	rs1174623	T	C	0.014374	0.081482	0.009554	1.5E-17	346955	childhood	sunburn	TRUE
rs1174623	ebi-a-GCS	Sunburns	16	14277804	rs1174623	T	C	0.014415	0.042182	0.005196	5.7E-16	350232	sunburns	sunburn	TRUE
rs1220359	ebi-a-GCS	Hair color	6	396321	rs1220359	T	C	0.220421	-0.276318	0.001918	0	713771	hair color	hair	TRUE
rs1220359	ebi-a-GCS	Hair color	(6	396321	rs1220359	T	C	0.220243	-0.080782	0.000772	0	534365	hair color	(hair	TRUE
rs1220359	ebi-a-GCS	Hair color	(6	396321	rs1220359	T	C	0.220243	0.104937	0.001172	0	531771	hair color	(hair	TRUE
rs1220359	ebi-a-GCS	Skin pigme	6	396321	rs1220359	T	C	0.220207	0.050466	0.000979	0	548203	skin pigme	skin;pigme	TRUE
rs1220359	ebi-a-GCS	Sunburns	6	396321	rs1220359	T	C	0.2197	0.089138	0.001436	0	350232	sunburns	sunburn	TRUE
rs1220359	ebi-a-GCS	Tanning	6	396321	rs1220359	T	C	0.220382	-0.125669	0.001181	0	513536	tanning	tanning;tan	TRUE
rs1220359	ukb-b-1324	Childhood	6	396321	rs1220359	T	C	0.21907	0.153131	0.002526	0	346955	childhood	sunburn	TRUE
rs1220359	ukb-b-195	Skin colour	6	396321	rs1220359	T	C	0.219633	-0.088045	0.001423	0	456692	skin colour	skin	TRUE
rs1220359	ukb-b-533	Ease of ski	6	396321	rs1220359	T	C	0.219829	0.261262	0.002376	0	453065	ease of skir	skin;tannin	TRUE
rs1220359	ieu-b-4959	Malignant	(6	396321	rs1220359	T	C	0.219691	0.018266	0.000634	9.3E-183	395710	malignant	skin;melan	TRUE
rs1220359	ukb-b-1024	Type of cai	6	396321	rs1220359	T	C	0.219631	0.004649	0.00028	1.1E-61	463010	type of can	skin	TRUE

rs12203592	ukb-b-5945	Relative age	6	396321	rs12203592	T	C	0.220214	-0.020671	0.001617	2E-37	204568	relative age	hair	TRUE
rs12203592	ukb-b-4141	Diagnoses	6	396321	rs12203592	T	C	0.219631	0.002738	0.000224	2.2E-34	463010	diagnoses	- skin	TRUE
rs12203592	ukb-b-8837	Cancer cod	6	396321	rs12203592	T	C	0.219631	0.002514	0.000237	2.7E-26	462933	cancer cod	basal cell	TRUE
rs12203592	finn-b-L12	Skin chang	6	396321	rs12203592	T	C	0.03073	0.7012	0.0684	1.12E-24		skin chang	skin	TRUE
rs12203592	ukb-b-1566	Type of car	6	396321	rs12203592	T	C	0.219631	0.001871	0.000185	4.7E-24	463010	type of can	skin	TRUE
rs12203592	finn-b-L12	Radiation-r	6	396321	rs12203592	T	C	0.03073	0.6474	0.0647	1.4E-23		radiation-r	skin;tan	TRUE
rs12203592	finn-b-C3_	Other malig	6	396321	rs12203592	T	C	0.03073	0.388	0.0473	2.45E-16		other malig	skin;melan	TRUE
rs12203592	finn-b-C3_	Malignant i	6	396321	rs12203592	T	C	0.03073	0.3876	0.0473	2.57E-16		malignant i	skin	TRUE
rs12203592	finn-b-C3_	Malignant i	6	396321	rs12203592	T	C	0.03064	0.3754	0.0478	4.21E-15		malignant i	skin	TRUE
rs12203592	finn-b-C3_	Other malig	6	396321	rs12203592	T	C	0.03064	0.3746	0.0477	4.29E-15		other malig	skin;melan	TRUE
rs12203592	ukb-b-8416	Type of car	6	396321	rs12203592	T	C	0.219631	0.001639	0.00021	6.6E-15	463010	type of can	skin	TRUE
rs12203592	ukb-b-1001	Townsend	6	396321	rs12203592	T	C	0.219642	0.017001	0.00241	1.7E-12	462464	townsend d	deprivation	TRUE
rs12203592	ukb-b-1687	Alcohol us	6	396321	rs12203592	T	C	0.217061	-0.010094	0.00157	1.3E-10	235645	alcohol usu	alcohol	TRUE
rs12203592	ukb-b-1591	Treatment i	6	396321	rs12203592	T	C	0.219778	0.002269	0.000354	1.4E-10	444587	treatment s	tan	TRUE
rs12203592	ukb-b-969	Time spend	6	396321	rs12203592	T	C	0.218957	-0.01428	0.002294	4.8E-10	419314	time spend	outdoor	TRUE
rs12203592	finn-b-CD2	Carcinoma	6	396321	rs12203592	T	C	0.03018	0.7341	0.1257	5.2E-09		carcinoma	skin	TRUE
rs12203592	ebi-a-GCS	Vitamin D	6	396321	rs12203592	T	C	0.2206	0.015148	0.002616	7.9E-09	418691	vitamin d l	vitamin d	TRUE
rs12203592	finn-b-CD2	Carcinoma	6	396321	rs12203592	T	C	0.03073	0.7031	0.1236	1.28E-08		carcinoma	skin	TRUE
rs12203592	finn-b-CD2	"Carcinom	6	396321	rs12203592	T	C	0.0301	2.298	0.4081	1.79E-08		"carcinoma	skin	TRUE
rs12203592	ukb-b-346C	Alcohol int	6	396321	rs12203592	T	C	0.219245	0.010362	0.001875	3.3E-08	428117	alcohol int	alcohol	TRUE
rs12203592	finn-b-CD2	Carcinoma	6	396321	rs12203592	T	C	0.03073	2.1959	0.3984	3.54E-08		carcinoma	skin	TRUE
rs12350732	ebi-a-GCS	Skin pigme	9	16885017	rs12350732	A	G	0.609035	0.030985	0.000818	0	548203	skin pigme	skin;pigme	TRUE
rs12350732	ukb-b-1956	Skin colour	9	16885017	rs12350732	A	G	0.608226	-0.045938	0.001234	3.4E-303	456692	skin colour	skin	TRUE
rs12350732	ukb-b-533	Ease of ski	9	16885017	rs12350732	A	G	0.60797	0.074071	0.002066	1.8E-281	453065	ease of ski	skin;tannin	TRUE
rs12350732	ebi-a-GCS	Tanning	9	16885017	rs12350732	A	G	0.608769	-0.032337	0.000992	9.4E-259	513536	tanning	tanning;tan	TRUE
rs12350732	ebi-a-GCS	Hair color	9	16885017	rs12350732	A	G	0.608621	0.033337	0.001627	5.6E-115	713771	hair color	hair	TRUE
rs12350732	ukb-b-1324	Childhood	9	16885017	rs12350732	A	G	0.606787	0.035464	0.00219	5.8E-59	346955	childhood	sunburn	TRUE
rs12350732	ebi-a-GCS	Sunburns	9	16885017	rs12350732	A	G	0.607745	0.018407	0.0012	8.3E-55	350232	sunburns	sunburn	TRUE
rs12350732	ebi-a-GCS	Hair color	9	16885017	rs12350732	A	G	0.608743	-0.014342	0.000983	3.8E-54	531771	hair color	(hair	TRUE
rs12350732	ebi-a-GCS	Hair color	9	16885017	rs12350732	A	G	0.608743	0.009536	0.000648	1.9E-52	534365	hair color	(hair	TRUE
rs12350732	ukb-d-1747	Hair colour	9	16885017	rs12350732	A	G	0.612408	-0.01463	0.001176	1.52E-35	360270	hair colour	hair	TRUE
rs12350732	ukb-d-1747	Hair colour	9	16885017	rs12350732	A	G	0.612408	0.009011	0.000773	2.01E-31	360270	hair colour	hair	TRUE
rs12350732	ukb-b-3596	Diagnoses	9	16885017	rs12350732	A	G	0.607881	-0.001188	0.000121	6.3E-23	463010	diagnoses	- naevi	TRUE
rs12350732	ukb-d-1747	Hair colour	9	16885017	rs12350732	A	G	0.612408	-0.004793	0.000492	1.86E-22	360270	hair colour	hair	TRUE
rs12350732	ukb-d-1747	Hair colour	9	16885017	rs12350732	A	G	0.612408	0.010696	0.001196	3.77E-19	360270	hair colour	hair	TRUE
rs12350732	ieu-b-4959	Malignant i	9	16885017	rs12350732	A	G	0.607959	0.004759	0.000549	4.2E-18	395710	malignant i	skin;melan	TRUE
rs12350732	ukb-d-D22	Diagnoses	9	16885017	rs12350732	A	G	0.612437	-0.002006	0.000242	1.01E-16	361194	diagnoses	- naevi	TRUE
rs12350732	finn-b-L12	Skin chang	9	16885017	rs12350732	A	G	0.5454	0.1653	0.0215	1.38E-14		skin chang	skin	TRUE
rs12350732	ukb-d-C_	Other malig	9	16885017	rs12350732	A	G	0.612437	0.003466	0.000473	2.22E-13	361194	other malig	skin	TRUE
rs12350732	ebi-a-GCS	Skin cancer	9	16885017	rs12350732	A	G	0.594202	0.0716	0.0098	3.46E-13	492203	skin cancer	skin	TRUE
rs12350732	finn-b-L12	Radiation-r	9	16885017	rs12350732	A	G	0.5454	0.1442	0.0204	1.47E-12		radiation-r	skin;tan	TRUE
rs12350732	ukb-d-C3_	Malignant i	9	16885017	rs12350732	A	G	0.612437	0.003498	0.000505	4.32E-12	361194	malignant i	skin	TRUE
rs12350732	ukb-d-C_	Cancer of s	9	16885017	rs12350732	A	G	0.612437	0.003498	0.000505	4.32E-12	361194	cancer of s	skin	TRUE
rs12350732	ebi-a-GCS	Basal cell	9	16885017	rs12350732	A	G	0.611654	0.077581	0.011389	9.6E-12	392871	basal cell c	basal cell	TRUE
rs1267037	ukb-b-1324	Childhood	2	1.62E+08	rs1267037	C	A	0.805912	-0.016215	0.002713	2.3E-09	346955	childhood	sunburn	TRUE
rs1267037	ebi-a-GCS	Sunburns	2	1.62E+08	rs1267037	C	A	0.806239	-0.008423	0.001485	4.1E-08	350232	sunburns	sunburn	TRUE
rs1278766	ukb-b-533	Ease of ski	13	1.14E+08	rs1278766	C	T	0.546029	0.037528	0.002018	3.7E-77	453065	ease of ski	skin;tannin	TRUE
rs1278766	ebi-a-GCS	Tanning	13	1.14E+08	rs1278766	C	T	0.546336	-0.015798	0.000968	1.8E-71	513536	tanning	tanning;tan	TRUE
rs1278766	ebi-a-GCS	Skin pigme	13	1.14E+08	rs1278766	C	T	0.546344	0.011329	0.000799	1.5E-54	548203	skin pigme	skin;pigme	TRUE
rs1278766	ukb-b-1956	Skin colour	13	1.14E+08	rs1278766	C	T	0.546039	-0.017704	0.001206	8.2E-49	456692	skin colour	skin	TRUE
rs1278766	ebi-a-GCS	Sunburns	13	1.14E+08	rs1278766	C	T	0.546111	0.010587	0.00117	2.2E-20	350232	sunburns	sunburn	TRUE
rs1278766	ukb-b-1324	Childhood	13	1.14E+08	rs1278766	C	T	0.545712	0.019119	0.002139	3.9E-19	346955	childhood	sunburn	TRUE
rs12913832	ebi-a-GCS	Hair color	15	28365618	rs12913832	G	A	0.778301	0.383146	0.001819	0	713771	hair color	hair	TRUE
rs12913832	ebi-a-GCS	Hair color	15	28365618	rs12913832	G	A	0.779144	0.095624	0.000751	0	534365	hair color	(hair	TRUE
rs12913832	ebi-a-GCS	Hair color	15	28365618	rs12913832	G	A	0.779144	-0.19879	0.001124	0	531771	hair color	(hair	TRUE
rs12913832	ebi-a-GCS	Skin pigme	15	28365618	rs12913832	G	A	0.780431	0.141193	0.000943	0	548203	skin pigme	skin;pigme	TRUE
rs12913832	ebi-a-GCS	Tanning	15	28365618	rs12913832	G	A	0.779052	-0.064748	0.00116	0	513536	tanning	tanning;tan	TRUE
rs12913832	ukb-b-1956	Skin colour	15	28365618	rs12913832	G	A	0.778392	-0.195478	0.001422	0	456692	skin colour	skin	TRUE
rs12913832	ukb-b-533	Ease of ski	15	28365618	rs12913832	G	A	0.777053	0.154261	0.00239	0	453065	ease of ski	skin;tannin	TRUE
rs12913832	ukb-d-1747	Hair colour	15	28365618	rs12913832	G	A	0.786085	0.102146	0.000896	0	360270	hair colour	hair	TRUE
rs12913832	ukb-d-1747	Hair colour	15	28365618	rs12913832	G	A	0.786085	0.145217	0.001391	0	360270	hair colour	hair	TRUE
rs12913832	ukb-d-1747	Hair colour	15	28365618	rs12913832	G	A	0.786085	-0.214683	0.001341	0	360270	hair colour	hair	TRUE
rs12913832	ukb-d-1747	Hair colour	15	28365618	rs12913832	G	A	0.786085	-0.045818	0.000575	0	360270	hair colour	hair	TRUE
rs12913832	ebi-a-GCS	Sunburns	15	28365618	rs12913832	G	A	0.777588	0.034765	0.001405	1.5E-138	350232	sunburns	sunburn	TRUE
rs12913832	ukb-b-1324	Childhood	15	28365618	rs12913832	G	A	0.775275	0.060538	0.002531	1.9E-126	346955	childhood	sunburn	TRUE
rs12913832	ukb-b-5945	Relative age	15	28365618	rs12913832	G	A	0.777738	0.032407	0.001626	2.5E-88	204568	relative age	hair	TRUE
rs12913832	ukb-a-299	Relative age	15	28365618	rs12913832	G	A	0.785716	0.033055	0.001931	1.33E-65	151113	relative age	hair	TRUE
rs12913832	ukb-d-1747	Hair colour	15	28365618	rs12913832	G	A	0.786085	0.009311	0.000602	6.02E-54	360270	hair colour	hair	TRUE
rs12913832	ukb-d-1747	Hair colour	15	28365618	rs12913832	G	A	0.786085	0.003827	0.000318	2.78E-33	360270	hair colour	hair	TRUE
rs12913832	ukb-e-1747	Hair colour	15	28365618	rs12913832	G	A	0.1363	0.5323	0.06061	1.61E-18		hair colour	hair	TRUE
rs12913832	ukb-e-1717	Skin colour	15	28365618	rs12913832	G	A	0.09961	0.228	0.02957	1.25E-14		skin colour	skin	TRUE
rs12913832	ukb-e-1747	Hair colour	15	28365618	rs12913832	G	A	0.1131	0.7937	0.1151	5.42E-12		hair colour	hair	TRUE
rs12913832	ukb-e-1747	Hair colour	15	28365618	rs12913832	G	A	0.09684	-1.023	0.1632	3.6E-10		hair colour	hair	TRUE
rs12913832	ukb-e-1747	Hair colour	15	28365618	rs12913832	G	A	0.09021	-0.393	0.06302	4.48E-10		hair colour	hair	TRUE
rs12913832	ieu-b-4959	Malignant i	15	28365618	rs12913832	G	A	0.776499	0.003935	0.000635	5.6E-10	395710	malignant i	skin;melan	TRUE
rs12913832	finn-b-L12	Radiation-r	15	28365618	rs12913832	G	A	0.8942	-0.1982	0.0335	3.15E-09		radiation-r	skin;tan	TRUE

rs1291383;ebi-a-GCS;Skin cancer	15	28365618	rs1291383;G	A	0.815303	0.0696	0.0118	3.83E-09	492203	skin cancer	skin	TRUE
rs1291383;ukb-e-1717;Skin colour	15	28365618	rs1291383;G	A	0.2818	0.2464	0.04201	4.5E-09		skin colour	skin	TRUE
rs1291383;finn-b-C3;Other malign	15	28365618	rs1291383;G	A	0.8942	-0.1497	0.0255	4.56E-09		other malign	skin;melan	TRUE
rs1291383;finn-b-C3;Malignant	15	28365618	rs1291383;G	A	0.8942	-0.1494	0.0255	4.92E-09		malignant	skin	TRUE
rs1291383;ukb-e-1747;Hair colour	15	28365618	rs1291383;G	A	0.3754	0.5994	0.1034	6.81E-09		hair colour	hair	TRUE
rs1291383;ukb-e-1747;Hair colour	15	28365618	rs1291383;G	A	0.0402	-0.6696	0.1189	1.8E-08		hair colour	hair	TRUE
rs1291383;finn-b-L12;Skin change	15	28365618	rs1291383;G	A	0.8942	-0.198	0.0352	1.89E-08		skin change	skin	TRUE
rs1291383;finn-b-C3;Other malign	15	28365618	rs1291383;G	A	0.8937	-0.1461	0.026	1.9E-08		other malign	skin;melan	TRUE
rs1291383;finn-b-C3;Malignant	15	28365618	rs1291383;G	A	0.8937	-0.1461	0.026	1.98E-08		malignant	skin	TRUE
rs1308048;ukb-b-533;Ease of skin	1	66888542	rs1308048;C	T	0.418075	-0.034195	0.00204	4.4E-63	453065	ease of skin	skin;tannin	TRUE
rs1308048;ebi-a-GCS;Tanning	1	66888542	rs1308048;C	T	0.418001	0.015316	0.000978	1.8E-56	513536	tanning	tanning;tan	TRUE
rs1308048;ukb-b-195;Skin colour	1	66888542	rs1308048;C	T	0.418162	0.015754	0.001219	3.2E-38	456692	skin colour	skin	TRUE
rs1308048;ebi-a-GCS;Skin pigme	1	66888542	rs1308048;C	T	0.418083	-0.00962	0.000806	2.6E-33	548203	skin pigme	skin;pigme	TRUE
rs1308048;ukb-b-1324;Childhood	1	66888542	rs1308048;C	T	0.419538	-0.02035	0.002164	5.3E-21	346955	childhood	sunburn	TRUE
rs1308048;ebi-a-GCS;Sunburns	1	66888542	rs1308048;C	T	0.419442	-0.010936	0.001183	1E-19	350232	sunburns	sunburn	TRUE
rs1333267;ebi-a-GCS;Hair color	16	89940386	rs1333267;T	G	0.010082	-0.150457	0.007252	4.7E-115	713771	hair color	hair	TRUE
rs1333267;ukb-b-195;Skin colour	16	89940386	rs1333267;T	G	0.010158	0.113642	0.005905	1.6E-82	456692	skin colour	skin	TRUE
rs1333267;ukb-b-533;Ease of skin	16	89940386	rs1333267;T	G	0.010191	-0.176684	0.009824	2.6E-72	453065	ease of skin	skin;tannin	TRUE
rs1333267;ebi-a-GCS;Skin pigme	16	89940386	rs1333267;T	G	0.010011	-0.065813	0.003912	2.1E-71	548203	skin pigme	skin;pigme	TRUE
rs1333267;ukb-d-1747;Hair colour	16	89940386	rs1333267;T	G	0.009727	-0.040858	0.002517	3.08E-59	360270	hair colour	hair	TRUE
rs1333267;ebi-a-GCS;Tanning	16	89940386	rs1333267;T	G	0.010044	0.072717	0.004681	2.3E-58	513536	tanning	tanning;tan	TRUE
rs1333267;ebi-a-GCS;Hair color	(16	89940386	rs1333267;T	G	0.010066	0.054472	0.004708	2.1E-35	531771	hair color	(hair	TRUE
rs1333267;ukb-d-1747;Hair colour	16	89940386	rs1333267;T	G	0.009727	0.059791	0.005804	6.97E-25	360270	hair colour	hair	TRUE
rs1333267;ukb-b-1324;Childhood	16	89940386	rs1333267;T	G	0.010249	-0.102103	0.010535	3.3E-22	346955	childhood	sunburn	TRUE
rs1333267;ebi-a-GCS;Sunburns	16	89940386	rs1333267;T	G	0.010085	-0.050659	0.005793	1.2E-18	350232	sunburns	sunburn	TRUE
rs1333267;ebi-a-GCS;Hair color	(16	89940386	rs1333267;T	G	0.010066	-0.018159	0.003149	6.4E-11	534365	hair color	(hair	TRUE
rs1333267;ukb-d-1747;Hair colour	16	89940386	rs1333267;T	G	0.009727	-0.022125	0.003815	6.64E-09	360270	hair colour	hair	TRUE
rs1333267;ukb-d-1747;Hair colour	16	89940386	rs1333267;T	G	0.009727	0.013712	0.002427	1.6E-08	360270	hair colour	hair	TRUE
rs1338549;ebi-a-GCS;Educationa	6	98312143	rs1338549;G	T	0.533389	-0.011718	0.000928	4.5E-36	470941	educational	education	TRUE
rs1338549;ebi-a-GCS;Educationa	6	98312143	rs1338549;G	T	0.533389	-0.107104	0.01003	8.9E-27	461457	educational	education	TRUE
rs1338549;ukb-b-969;Time spend	6	98312143	rs1338549;G	T	0.533198	0.02046	0.001937	4.5E-26	419314	time spend	outdoor	TRUE
rs1338549;ukb-b-4461;Job involve	6	98312143	rs1338549;G	T	0.533619	0.026867	0.003054	1.4E-18	263556	job involve	tan	TRUE
rs1338549;ukb-b-6811;Time spent	6	98312143	rs1338549;G	T	0.534362	0.0115	0.001331	5.7E-18	364465	time spent	outdoor	TRUE
rs1338549;ukb-b-1324;Childhood	6	98312143	rs1338549;G	T	0.53286	-0.01684	0.002136	3.2E-15	346955	childhood	sunburn	TRUE
rs1338549;ebi-a-GCS;Body mass	6	98312143	rs1338549;G	T	0.533496	0.013776	0.001927	1.3E-13	532396	body mass	body mass	TRUE
rs1338549;ukb-a-502;Job involve	6	98312143	rs1338549;G	T	0.533439	0.025509	0.003602	1.44E-12	190606	job involve	tan	TRUE
rs1338549;ukb-b-1995;Body mass	6	98312143	rs1338549;G	T	0.533648	0.013637	0.001985	6.4E-12	461460	body mass	body mass;	TRUE
rs1338549;ukb-b-2303;Body mass	6	98312143	rs1338549;G	T	0.533646	0.013662	0.002	8.4E-12	454884	body mass	body mass;	TRUE
rs1338549;ebi-a-GCS;Sunburns	6	98312143	rs1338549;G	T	0.53267	-0.007553	0.001168	4.4E-11	350232	sunburns	sunburn	TRUE
rs1338549;ieu-b-5118;Adult BMI	6	98312143	rs1338549;G	T	0.533551	0.00897	0.001377	7.3E-11		adult bmi	s bmi	TRUE
rs1338549;ukb-b-5775;Alcohol int	6	98312143	rs1338549;G	T	0.533717	0.019772	0.003042	8.1E-11	462346	alcohol int	alcohol	TRUE
rs1338549;ukb-a-248;Body mass	6	98312143	rs1338549;G	T	0.533439	0.015594	0.002415	1.06E-10	336107	body mass	body mass;	TRUE
rs1338549;ebi-a-GCS;Body mass	6	98312143	rs1338549;G	T		0.012839	0.002078	6.48E-10	407609	body mass	body mass	TRUE
rs1338549;ebi-a-GCS;Body mass	6	98312143	rs1338549;G	T		0.012804	0.002078	7.24E-10	407609	body mass	body mass	TRUE
rs1338549;ebi-a-GCS;Body mass	6	98312143	rs1338549;G	T	0.565754	0.0117	0.0019	1.05E-09	359983	body mass	body mass	TRUE
rs1338549;ukb-a-25;Alcohol int	6	98312143	rs1338549;G	T	0.533439	0.020759	0.003571	6.14E-09	336965	alcohol int	alcohol	TRUE
rs1338549;ebi-a-GCS;Acceptance	6	98312143	rs1338549;G	T	0.53357	-0.005313	0.000974	4.9E-08	294787	acceptance	tan	TRUE
rs1394145;ebi-a-GCS;Hair color	16	89821155	rs1394145;C	T	0.015274	-0.1219	0.006187	1E-93	713771	hair color	hair	TRUE
rs1394145;ukb-d-1747;Hair colour	16	89821155	rs1394145;C	T	0.015208	-0.038212	0.002109	2.62E-73	360270	hair colour	hair	TRUE
rs1394145;ukb-b-533;Ease of skin	16	89821155	rs1394145;C	T	0.015209	-0.143979	0.008453	4.6E-65	453065	ease of skin	skin;tannin	TRUE
rs1394145;ebi-a-GCS;Tanning	16	89821155	rs1394145;C	T	0.015203	0.063515	0.003995	1.5E-59	513536	tanning	tanning;tan	TRUE
rs1394145;ukb-b-195;Skin colour	16	89821155	rs1394145;C	T	0.015212	0.080443	0.005073	1.2E-56	456692	skin colour	skin	TRUE
rs1394145;ebi-a-GCS;Skin pigme	16	89821155	rs1394145;C	T	0.015201	-0.044394	0.003333	2.2E-42	548203	skin pigme	skin;pigme	TRUE
rs1394145;ebi-a-GCS;Hair color	(16	89821155	rs1394145;C	T	0.015234	0.037908	0.004018	2.3E-21	531771	hair color	(hair	TRUE
rs1394145;ukb-b-1324;Childhood	16	89821155	rs1394145;C	T	0.015298	-0.078388	0.009069	5.4E-18	346955	childhood	sunburn	TRUE
rs1394145;ukb-d-1747;Hair colour	16	89821155	rs1394145;C	T	0.015208	0.040296	0.004865	1.2E-16	360270	hair colour	hair	TRUE
rs1394145;ebi-a-GCS;Sunburns	16	89821155	rs1394145;C	T	0.015298	-0.039621	0.00494	5.3E-16	350232	sunburns	sunburn	TRUE
rs1418174;ebi-a-GCS;Hair color	16	89927151	rs1418174;T	C	0.035033	-0.148817	0.003974	0	713771	hair color	hair	TRUE
rs1418174;ukb-b-533;Ease of skin	16	89927151	rs1418174;T	C	0.034919	-0.177358	0.005426	2.6E-234	453065	ease of skin	skin;tannin	TRUE
rs1418174;ebi-a-GCS;Tanning	16	89927151	rs1418174;T	C	0.034922	0.077829	0.002564	3.1E-213	513536	tanning	tanning;tan	TRUE
rs1418174;ukb-d-1747;Hair colour	16	89927151	rs1418174;T	C	0.035046	-0.041562	0.001352	3.5E-207	360270	hair colour	hair	TRUE
rs1418174;ukb-b-195;Skin colour	16	89927151	rs1418174;T	C	0.034848	0.08799	0.00326	1.7E-160	456692	skin colour	skin	TRUE
rs1418174;ebi-a-GCS;Skin pigme	16	89927151	rs1418174;T	C	0.034855	-0.050887	0.002141	5.4E-140	548203	skin pigme	skin;pigme	TRUE
rs1418174;ebi-a-GCS;Hair color	(16	89927151	rs1418174;T	C	0.034969	0.046732	0.00258	9.5E-82	531771	hair color	(hair	TRUE
rs1418174;ebi-a-GCS;Sunburns	16	89927151	rs1418174;T	C	0.035111	-0.050991	0.00317	2.5E-58	350232	sunburns	sunburn	TRUE
rs1418174;ukb-b-1324;Childhood	16	89927151	rs1418174;T	C	0.035108	-0.093196	0.00582	1E-57	346955	childhood	sunburn	TRUE
rs1418174;ukb-d-1747;Hair colour	16	89927151	rs1418174;T	C	0.035046	0.047774	0.003121	6.88E-53	360270	hair colour	hair	TRUE
rs1418174;ebi-a-GCS;Hair color	(16	89927151	rs1418174;T	C	0.034969	-0.017427	0.001725	2.7E-26	534365	hair color	(hair	TRUE
rs1418174;ukb-d-1747;Hair colour	16	89927151	rs1418174;T	C	0.035046	0.012276	0.001305	5.14E-21	360270	hair colour	hair	TRUE
rs1418174;ukb-d-1747;Hair colour	16	89927151	rs1418174;T	C	0.035046	-0.016816	0.002051	2.46E-16	360270	hair colour	hair	TRUE
rs1423145;ebi-a-GCS;Hair color	16	90130996	rs1423145;G	A	0.028454	-0.141133	0.004799	8.9E-214	713771	hair color	hair	TRUE
rs1423145;ukb-b-533;Ease of skin	16	90130996	rs1423145;G	A	0.02834	-0.1853	0.006557	1.1E-175	453065	ease of skin	skin;tannin	TRUE
rs1423145;ebi-a-GCS;Tanning	16	90130996	rs1423145;G	A	0.028402	0.078831	0.003095	1.5E-153	513536	tanning	tanning;tan	TRUE
rs1423145;ukb-b-195;Skin colour	16	90130996	rs1423145;G	A	0.028338	0.101199	0.003936	8.5E-146	456692	skin colour	skin	TRUE
rs1423145;ukb-d-1747;Hair colour	16	90130996	rs1423145;G	A	0.028716	-0.040756	0.001627	2E-138	360270	hair colour	hair	TRUE
rs1423145;ebi-a-GCS;Skin pigme	16	90130996	rs1423145;G	A	0.028401	-0.061768	0.002583	3E-137	548203	skin pigme	skin;pigme	TRUE

rs14231451	ebi-a-GCS	Hair color (16	90130996	rs14231451	G	A	0.028408	0.045053	0.003116	9.9E-52	531771	hair color (hair	TRUE
rs14231451	ukb-d-1747	Hair colour 16	90130996	rs14231451	G	A	0.028716	0.046984	0.003753	5.86E-36	360270	hair colour hair	TRUE
rs14231451	ukb-b-1324	Childhood 16	90130996	rs14231451	G	A	0.02851	-0.081593	0.007027	3.6E-31	346955	childhood � sunburn	TRUE
rs14231451	ebi-a-GCS	Sunburns 16	90130996	rs14231451	G	A	0.028577	-0.043698	0.003824	8E-31	350232	sunburns sunburn	TRUE
rs14231451	ebi-a-GCS	Hair color (16	90130996	rs14231451	G	A	0.028408	-0.016266	0.002084	5.7E-17	534365	hair color (hair	TRUE
rs14231451	ukb-d-1747	Hair colour 16	90130996	rs14231451	G	A	0.028716	-0.017618	0.002467	9.15E-13	360270	hair colour hair	TRUE
rs14231451	ukb-d-1747	Hair colour 16	90130996	rs14231451	G	A	0.028716	0.010916	0.001569	3.49E-12	360270	hair colour hair	TRUE
rs1437635	ebi-a-GCS	Hair color 11	16358722	rs1437635	A	C	0.16584	0.021702	0.002116	1.2E-27	713771	hair color hair	TRUE
rs1437635	ebi-a-GCS	Hair color (11	16358722	rs1437635	A	C	0.165766	0.006639	0.000845	1.3E-15	534365	hair color (hair	TRUE
rs1437635	ukb-b-1324	Childhood 11	16358722	rs1437635	A	C	0.166029	0.020699	0.002867	5.2E-13	346955	childhood � sunburn	TRUE
rs1437635	ukb-d-1747	Hair colour 11	16358722	rs1437635	A	C	0.164853	0.0071	0.001011	2.19E-12	360270	hair colour hair	TRUE
rs1437635	ebi-a-GCS	Hair color (11	16358722	rs1437635	A	C	0.165766	-0.008488	0.001283	1.3E-11	531771	hair color (hair	TRUE
rs1437635	ebi-a-GCS	Sunburns 11	16358722	rs1437635	A	C	0.165792	0.010176	0.001569	3.6E-11	350232	sunburns sunburn	TRUE
rs1437635	ukb-d-1747	Hair colour 11	16358722	rs1437635	A	C	0.164853	-0.008846	0.001539	8.97E-09	360270	hair colour hair	TRUE
rs1505274�	ebi-a-GCS	Hair color 11	68817897	rs1505274�	A	G	0.106681	0.144992	0.002556	0	713771	hair color hair	TRUE
rs1505274�	ebi-a-GCS	Hair color (11	68817897	rs1505274�	A	G	0.106821	0.048222	0.00102	0	534365	hair color (hair	TRUE
rs1505274�	ebi-a-GCS	Hair color (11	68817897	rs1505274�	A	G	0.106821	-0.063461	0.001549	0	531771	hair color (hair	TRUE
rs1505274�	ukb-d-1747	Hair colour 11	68817897	rs1505274�	A	G	0.106551	0.048869	0.001217	0	360270	hair colour hair	TRUE
rs1505274�	ebi-a-GCS	Skin pigme 11	68817897	rs1505274�	A	G	0.106968	0.043478	0.001285	4.9E-273	548203	skin pigme skin;pigme	TRUE
rs1505274�	ukb-d-1747	Hair colour 11	68817897	rs1505274�	A	G	0.106551	-0.063026	0.001853	3.2E-253	360270	hair colour hair	TRUE
rs1505274�	ukb-b-195�	Skin colour 11	68817897	rs1505274�	A	G	0.106852	-0.066014	0.001948	8.2E-252	456692	skin colour skin	TRUE
rs1505274�	ukb-b-533	Ease of ski 11	68817897	rs1505274�	A	G	0.106692	0.086054	0.003262	2.4E-153	453065	ease of skir skin;tannin	TRUE
rs1505274�	ebi-a-GCS	Tanning 11	68817897	rs1505274�	A	G	0.106796	-0.03781	0.001562	3.2E-137	513536	tanning tanning;tan	TRUE
rs1505274�	ukb-d-1747	Hair colour 11	68817897	rs1505274�	A	G	0.106551	-0.014501	0.000775	5.45E-78	360270	hair colour hair	TRUE
rs1505274�	ukb-d-1747	Hair colour 11	68817897	rs1505274�	A	G	0.106551	0.026839	0.001887	6.75E-46	360270	hair colour hair	TRUE
rs1505274�	ebi-a-GCS	Sunburns 11	68817897	rs1505274�	A	G	0.106533	0.015792	0.001896	2.6E-16	350232	sunburns sunburn	TRUE
rs1505274�	ukb-b-1324	Childhood 11	68817897	rs1505274�	A	G	0.106417	0.02624	0.00347	4E-14	346955	childhood � sunburn	TRUE
rs1548714	ebi-a-GCS	Skin pigme 17	26280204	rs1548714	C	A	0.812202	0.006105	0.001018	3.5E-10	548203	skin pigme skin;pigme	TRUE
rs1548714	ukb-b-195�	Skin colour 17	26280204	rs1548714	C	A	0.812139	-0.00954	0.001536	5.3E-10	456692	skin colour skin	TRUE
rs1548714	ukb-b-1324	Childhood 17	26280204	rs1548714	C	A	0.811733	0.016158	0.002723	3E-09	346955	childhood � sunburn	TRUE
rs1548714	ebi-a-GCS	Sunburns 17	26280204	rs1548714	C	A	0.811844	0.00866	0.00149	8.8E-09	350232	sunburns sunburn	TRUE
rs1548714	ukb-b-533	Ease of ski 17	26280204	rs1548714	C	A	0.812028	0.014662	0.00257	1.2E-08	453065	ease of skir skin;tannin	TRUE
rs1584885	ukb-b-495�	Morning/ev 2	44647038	rs1584885	T	G	0.603717	-0.015473	0.002077	9.3E-14	413343	morning/ev chronotype	TRUE
rs1584885	ukb-a-11	Morning/ev 2	44647038	rs1584885	T	G	0.607032	-0.016454	0.002444	1.67E-11	301143	morning/ev chronotype	TRUE
rs1584885	ieu-b-4862	Chronotype 2	44647038	rs1584885	T	G	0.604383	0.023246	0.00406	6.8E-09		chronotype chronotype	TRUE
rs1584885	ebi-a-GCS	Sunburns 2	44647038	rs1584885	T	G	0.603707	-0.006184	0.001188	3.4E-08	350232	sunburns sunburn	TRUE
rs1723248�	ebi-a-GCS	Tanning 16	89861650	rs1723248�	A	G	0.014222	-0.057801	0.003982	5.5E-53	513536	tanning tanning;tan	TRUE
rs1723248�	ukb-b-533	Ease of ski 16	89861650	rs1723248�	A	G	0.01426	0.123729	0.008414	6E-49	453065	ease of skir skin;tannin	TRUE
rs1723248�	ukb-b-195�	Skin colour 16	89861650	rs1723248�	A	G	0.014281	-0.064188	0.005045	4.4E-37	456692	skin colour skin	TRUE
rs1723248�	ebi-a-GCS	Skin pigme 16	89861650	rs1723248�	A	G	0.014235	0.038483	0.003321	4.1E-35	548203	skin pigme skin;pigme	TRUE
rs1723248�	ebi-a-GCS	Hair color 16	89861650	rs1723248�	A	G	0.014202	0.054691	0.006185	6.1E-21	713771	hair color hair	TRUE
rs1723248�	ebi-a-GCS	Hair color (16	89861650	rs1723248�	A	G	0.014219	-0.030494	0.00401	2E-14	531771	hair color (hair	TRUE
rs1723248�	ebi-a-GCS	Sunburns 16	89861650	rs1723248�	A	G	0.01414	0.033094	0.004955	4.3E-12	350232	sunburns sunburn	TRUE
rs1723248�	ukb-b-1324	Childhood 16	89861650	rs1723248�	A	G	0.014194	0.061024	0.009074	1.8E-11	346955	childhood � sunburn	TRUE
rs1723248�	ukb-d-1747	Hair colour 16	89861650	rs1723248�	A	G	0.014193	-0.026916	0.004865	3.15E-08	360270	hair colour hair	TRUE
rs1805007	ebi-a-GCS	Hair color 16	89986117	rs1805007	T	C	0.102136	0.464908	0.002382	0	713771	hair color hair	TRUE
rs1805007	ebi-a-GCS	Hair color (16	89986117	rs1805007	T	C	0.102788	-0.138864	0.001541	0	531771	hair color (hair	TRUE
rs1805007	ebi-a-GCS	Skin pigme 16	89986117	rs1805007	T	C	0.103319	0.115639	0.001274	0	548203	skin pigme skin;pigme	TRUE
rs1805007	ebi-a-GCS	Sunburns 16	89986117	rs1805007	T	C	0.101395	0.104198	0.001908	0	350232	sunburns sunburn	TRUE
rs1805007	ebi-a-GCS	Tanning 16	89986117	rs1805007	T	C	0.103106	-0.185671	0.001528	0	513536	tanning tanning;tan	TRUE
rs1805007	ukb-b-1324	Childhood 16	89986117	rs1805007	T	C	0.100947	0.196373	0.003503	0	346955	childhood � sunburn	TRUE
rs1805007	ukb-b-195�	Skin colour 16	89986117	rs1805007	T	C	0.10294	-0.224884	0.001939	0	456692	skin colour skin	TRUE
rs1805007	ukb-b-533	Ease of ski 16	89986117	rs1805007	T	C	0.102727	0.427724	0.003233	0	453065	ease of skir skin;tannin	TRUE
rs1805007	ukb-d-1747	Hair colour 16	89986117	rs1805007	T	C	0.104545	0.161626	0.000757	0	360270	hair colour hair	TRUE
rs1805007	ukb-d-1747	Hair colour 16	89986117	rs1805007	T	C	0.104545	-0.143257	0.001838	0	360270	hair colour hair	TRUE
rs1805007	ukb-d-1747	Hair colour 16	89986117	rs1805007	T	C	0.104545	-0.026553	0.000774	8.2E-258	360270	hair colour hair	TRUE
rs1805007	ebi-a-GCS	Hair color (16	89986117	rs1805007	T	C	0.102788	0.030073	0.00103	1.6E-207	534365	hair color (hair	TRUE
rs1805007	ukb-d-1747	Hair colour 16	89986117	rs1805007	T	C	0.104545	0.029519	0.001217	7E-130	360270	hair colour hair	TRUE
rs1805007	ebi-a-GCS	Skin cancer 16	89986117	rs1805007	T	C	0.069444	0.3559	0.0162	8.7E-107	492203	skin cancer skin	TRUE
rs1805007	ieu-b-4959	Malignant � 16	89986117	rs1805007	T	C	0.102274	0.017272	0.000875	9.1E-87	395710	malignant � skin;melan�	TRUE
rs1805007	ukb-d-C3_	Malignant � 16	89986117	rs1805007	T	C	0.104538	0.015099	0.000796	2.85E-80	361194	malignant � skin	TRUE
rs1805007	ukb-d-C_S	Cancer of s 16	89986117	rs1805007	T	C	0.104538	0.015099	0.000796	2.85E-80	361194	cancer of s� skin	TRUE
rs1805007	ukb-d-C_O	Other mali� 16	89986117	rs1805007	T	C	0.104538	0.012076	0.000745	3.88E-59	361194	other malig skin	TRUE
rs1805007	ukb-d-1747	Hair colour 16	89986117	rs1805007	T	C	0.104545	0.006684	0.000425	9.98E-56	360270	hair colour hair	TRUE
rs1805007	ieu-b-4969	Melanoma 16	89986117	rs1805007	T	C	0.101025	0.005736	0.000379	9.9E-52	375767	melanoma � skin;melan�	TRUE
rs1805007	ukb-d-1747	Hair colour 16	89986117	rs1805007	T	C	0.104545	-0.028018	0.001884	5.4E-50	360270	hair colour hair	TRUE
rs1805007	finn-b-L12	Skin chang 16	89986117	rs1805007	T	C	0.06672	0.6389	0.0451	1.64E-45		skin chang� skin	TRUE
rs1805007	finn-b-C3_	Malignant � 16	89986117	rs1805007	T	C	0.06673	0.4521	0.0321	6.08E-45		malignant � skin	TRUE
rs1805007	finn-b-C3_	Other mali� 16	89986117	rs1805007	T	C	0.06673	0.4515	0.0321	8E-45		other malig skin;melan�	TRUE
rs1805007	finn-b-L12	Radiation-r 16	89986117	rs1805007	T	C	0.06673	0.5799	0.0427	4.74E-42		radiation-r� skin;tan	TRUE
rs1805007	finn-b-C3_	Malignant � 16	89986117	rs1805007	T	C	0.06736	0.4376	0.0324	1.65E-41		malignant � skin	TRUE
rs1805007	finn-b-C3_	Other mali� 16	89986117	rs1805007	T	C	0.06736	0.4357	0.0324	2.57E-41		other malig skin;melan�	TRUE
rs1805007	ukb-b-1291	Cancer cod 16	89986117	rs1805007	T	C	0.102354	0.003868	0.0003	4.4E-38	462933	cancer cod� melanoma	TRUE
rs1805007	ukb-d-C3_	Malignant � 16	89986117	rs1805007	T	C	0.104538	0.004009	0.00032	5.24E-36	361194	malignant � skin;melan�	TRUE
rs1805007	ukb-a-58	Cancer cod 16	89986117	rs1805007	T	C	0.104676	0.00404	0.000352	1.68E-30	337159	cancer cod� melanoma	TRUE
rs1805007	ukb-b-107�	Standing he 16	89986117	rs1805007	T	C	0.102369	-0.02372	0.002154	3.3E-28	461950	standing he tan	TRUE

rs1805007	ukb-d-C43	Diagnoses	16	89986117	rs1805007	T	C	0.104538	0.00277	0.000267	3.35E-25	361194	diagnoses	- skin;melan	TRUE
rs1805007	ukb-a-518	Diagnoses	16	89986117	rs1805007	T	C	0.104676	0.004717	0.000471	1.3E-23	337199	diagnoses	- skin	TRUE
rs1805007	ukb-b-8837	Cancer cod	16	89986117	rs1805007	T	C	0.102354	0.003168	0.000327	3.5E-22	462933	cancer cod	basal cell	TRUE
rs1805007	ukb-b-5945	Relative ag	16	89986117	rs1805007	T	C	0.102926	0.020675	0.002231	1.9E-20	204568	relative ag	hair	TRUE
rs1805007	ukb-a-389	Standing ht	16	89986117	rs1805007	T	C	0.104676	-0.025101	0.002808	3.92E-19	336474	standing ht	tan	TRUE
rs1805007	ukb-b-6772	Operation	16	89986117	rs1805007	T	C	0.102354	0.003423	0.000402	1.6E-17	462933	operation	c skin	TRUE
rs1805007	ukb-a-59	Cancer cod	16	89986117	rs1805007	T	C	0.104676	0.003189	0.000382	6.67E-17	337159	cancer cod	basal cell	TRUE
rs1805007	ukb-a-299	Relative ag	16	89986117	rs1805007	T	C	0.104676	0.019727	0.002579	2.04E-14	151113	relative ag	hair	TRUE
rs1805007	ukb-b-1591	Treatment	16	89986117	rs1805007	T	C	0.102512	0.003714	0.000488	2.7E-14	444587	treatment	s tan	TRUE
rs1805007	ukb-b-4141	Diagnoses	16	89986117	rs1805007	T	C	0.102358	0.002316	0.000309	6.7E-14	463010	diagnoses	- skin	TRUE
rs1805007	ukb-b-1024	Type of cai	16	89986117	rs1805007	T	C	0.102358	0.002843	0.000387	2.1E-13	463010	type of can	skin	TRUE
rs1805007	ukb-b-9537	Operative p	16	89986117	rs1805007	T	C	0.102358	0.004427	0.000608	3.3E-13	463010	operative p	skin	TRUE
rs1805007	ukb-b-1852	Main speci	16	89986117	rs1805007	T	C	0.102342	0.003331	0.000467	9.9E-13	461170	main speci	tan	TRUE
rs1805007	ukb-b-2951	Operative p	16	89986117	rs1805007	T	C	0.102358	0.002101	0.000317	3.4E-11	463010	operative p	skin	TRUE
rs1805007	ukb-d-L12	Skin chang	16	89986117	rs1805007	T	C	0.104538	0.001625	0.000246	4.27E-11	361194	skin chang	skin	TRUE
rs1805007	ukb-d-L57	Diagnoses	16	89986117	rs1805007	T	C	0.104538	0.001625	0.000246	4.27E-11	361194	diagnoses	- skin	TRUE
rs1805007	finn-b-CD2	Carcinoma	16	89986117	rs1805007	T	C	0.06618	0.5488	0.0838	5.78E-11		carcinoma	skin	TRUE
rs1805007	ukb-d-2395	Hair/baldin	16	89986117	rs1805007	T	C	0.104752	-0.016432	0.002627	3.97E-10	165649	hair/baldin	hair	TRUE
rs1805007	finn-b-CD2	Carcinoma	16	89986117	rs1805007	T	C	0.06673	0.497	0.0815	1.05E-09		carcinoma	skin	TRUE
rs1805007	ukb-b-8935	Main speci	16	89986117	rs1805007	T	C	0.102351	0.004145	0.00068	1.1E-09	461218	main speci	tan	TRUE
rs1805007	ukb-b-1081	Operative p	16	89986117	rs1805007	T	C	0.102358	0.003034	0.000505	1.9E-09	463010	operative p	skin	TRUE
rs1805007	ukb-b-1325	Treatment	16	89986117	rs1805007	T	C	0.102507	0.00429	0.000731	4.4E-09	445128	treatment	s tan	TRUE
rs1805007	ukb-b-2045	Operative p	16	89986117	rs1805007	T	C	0.102358	0.002028	0.000364	2.6E-08	463010	operative p	skin	TRUE
rs1805008	ebi-a-GCS	Hair color	16	89986144	rs1805008	T	C	0.08717	0.310269	0.002566	0	713771	hair color	hair	TRUE
rs1805008	ebi-a-GCS	Hair color	16	89986144	rs1805008	T	C	0.087726	-0.105671	0.001659	0	531771	hair color	(hair	TRUE
rs1805008	ebi-a-GCS	Skin pigme	16	89986144	rs1805008	T	C	0.088028	0.09461	0.001372	0	548203	skin pigme	skin;pigme	TRUE
rs1805008	ebi-a-GCS	Tanning	16	89986144	rs1805008	T	C	0.087783	-0.133197	0.001646	0	513536	tanning	tanning;tan	TRUE
rs1805008	ukb-b-1956	Skin colour	16	89986144	rs1805008	T	C	0.087768	-0.16144	0.00209	0	456692	skin colour	skin	TRUE
rs1805008	ukb-b-533	Ease of ski	16	89986144	rs1805008	T	C	0.087531	0.305776	0.003486	0	453065	ease of ski	skin;tannin	TRUE
rs1805008	ukb-d-1747	Hair colour	16	89986144	rs1805008	T	C	0.088915	0.090165	0.000854	0	360270	hair colour	hair	TRUE
rs1805008	ukb-d-1747	Hair colour	16	89986144	rs1805008	T	C	0.088915	-0.109631	0.00199	0	360270	hair colour	hair	TRUE
rs1805008	ebi-a-GCS	Hair color	16	89986144	rs1805008	T	C	0.087726	0.035282	0.001109	1.5E-247	534365	hair color	(hair	TRUE
rs1805008	ebi-a-GCS	Sunburns	16	89986144	rs1805008	T	C	0.086887	0.065733	0.002051	4.6E-230	350232	sunburns	sunburn	TRUE
rs1805008	ukb-b-1324	Childhood	16	89986144	rs1805008	T	C	0.086593	0.119469	0.003767	1.1E-220	346955	childhood	s sunburn	TRUE
rs1805008	ukb-d-1747	Hair colour	16	89986144	rs1805008	T	C	0.088915	0.035189	0.001312	2.6E-158	360270	hair colour	hair	TRUE
rs1805008	ukb-d-1747	Hair colour	16	89986144	rs1805008	T	C	0.088915	-0.019651	0.000835	2E-122	360270	hair colour	hair	TRUE
rs1805008	ukb-d-1747	Hair colour	16	89986144	rs1805008	T	C	0.088915	0.006674	0.000458	4.81E-48	360270	hair colour	hair	TRUE
rs1805008	ebi-a-GCS	Skin cancer	16	89986144	rs1805008	T	C	0.083205	0.2064	0.0171	1.43E-33	492203	skin cancer	skin	TRUE
rs1805008	finn-b-C3_	Other mali	16	89986144	rs1805008	T	C	0.06873	0.3309	0.031	1.39E-26		other malig	skin;melan	TRUE
rs1805008	finn-b-C3_	Malignant	16	89986144	rs1805008	T	C	0.06873	0.3306	0.031	1.5E-26		malignant	skin	TRUE
rs1805008	finn-b-C3_	Other mali	16	89986144	rs1805008	T	C	0.06863	0.3355	0.0315	1.85E-26		other malig	skin;melan	TRUE
rs1805008	finn-b-C3_	Malignant	16	89986144	rs1805008	T	C	0.06863	0.336	0.0316	1.9E-26		malignant	skin	TRUE
rs1805008	ukb-d-C3_	Malignant	16	89986144	rs1805008	T	C	0.088927	0.008411	0.000858	1.11E-22	361194	malignant	skin	TRUE
rs1805008	ukb-d-C_	S Cancer of	16	89986144	rs1805008	T	C	0.088927	0.008411	0.000858	1.11E-22	361194	cancer of	skin	TRUE
rs1805008	ieu-b-4969	Melanoma	16	89986144	rs1805008	T	C	0.086683	0.003807	0.000408	9.6E-21	375767	melanoma	skin;melan	TRUE
rs1805008	finn-b-L12	Skin chang	16	89986144	rs1805008	T	C	0.06876	0.3952	0.0433	6.76E-20		skin chang	skin	TRUE
rs1805008	ieu-b-4959	Malignant	16	89986144	rs1805008	T	C	0.087113	0.008235	0.000944	2.6E-18	395710	malignant	skin;melan	TRUE
rs1805008	finn-b-L12	Radiation-r	16	89986144	rs1805008	T	C	0.06873	0.3389	0.0409	1.13E-16		radiation-r	skin;tan	TRUE
rs1805008	ukb-d-C_	O Other mali	16	89986144	rs1805008	T	C	0.088927	0.006404	0.000803	1.52E-15	361194	other malig	skin	TRUE
rs1805008	ukb-d-C3_	Malignant	16	89986144	rs1805008	T	C	0.088927	0.002509	0.000345	3.53E-13	361194	malignant	skin;melan	TRUE
rs1805008	ebi-a-GCS	Basal cell	16	89986144	rs1805008	T	C	0.087745	0.128302	0.018287	2.3E-12	392871	basal cell	c basal cell	TRUE
rs1805008	ukb-a-58	Cancer cod	16	89986144	rs1805008	T	C	0.089474	0.002521	0.000378	2.75E-11	337159	cancer cod	melanoma	TRUE
rs1805008	ukb-b-8837	Cancer cod	16	89986144	rs1805008	T	C	0.08746	0.002076	0.000352	3.7E-09	462933	cancer cod	basal cell	TRUE
rs1805008	finn-b-CD2	Carcinoma	16	89986144	rs1805008	T	C	0.06769	0.4712	0.081	5.96E-09		carcinoma	skin	TRUE
rs1805008	ukb-b-1075	Standing ht	16	89986144	rs1805008	T	C	0.087456	0.012955	0.002319	2.3E-08	461950	standing ht	tan	TRUE
rs2737217	ukb-b-533	Ease of ski	8	1.17E+08	rs2737217	G	A	0.562725	-0.043204	0.002035	4.8E-100	453065	ease of ski	skin;tannin	TRUE
rs2737217	ebi-a-GCS	Tanning	8	1.17E+08	rs2737217	G	A	0.562367	0.018996	0.000976	5.7E-93	513536	tanning	tanning;tan	TRUE
rs2737217	ukb-b-1956	Skin colour	8	1.17E+08	rs2737217	G	A	0.562648	0.019452	0.001216	1.3E-57	456692	skin colour	skin	TRUE
rs2737217	ebi-a-GCS	Skin pigme	8	1.17E+08	rs2737217	G	A	0.562257	-0.012046	0.000805	9.8E-55	548203	skin pigme	skin;pigme	TRUE
rs2737217	ebi-a-GCS	Sunburns	8	1.17E+08	rs2737217	G	A	0.562872	-0.01407	0.00118	1.6E-33	350232	sunburns	sunburn	TRUE
rs2737217	ukb-b-1324	Childhood	8	1.17E+08	rs2737217	G	A	0.563309	-0.025456	0.002158	4.1E-32	346955	childhood	s sunburn	TRUE
rs2737217	ukb-b-1075	Standing ht	8	1.17E+08	rs2737217	G	A	0.56278	-0.011567	0.001327	2.8E-18	461950	standing ht	tan	TRUE
rs2737217	ukb-a-389	Standing ht	8	1.17E+08	rs2737217	G	A	0.562124	-0.012661	0.001751	4.76E-13	336474	standing ht	tan	TRUE
rs2737217	ukb-d-2395	Hair/baldin	8	1.17E+08	rs2737217	G	A	0.560149	-0.009518	0.001636	6.02E-09	165649	hair/baldin	hair	TRUE
rs2737217	ebi-a-GCS	Body mass	8	1.17E+08	rs2737217	G	A		-0.011762	0.002093	1.91E-08	407609	body mass	body mass	TRUE
rs2737217	ebi-a-GCS	Body mass	8	1.17E+08	rs2737217	G	A		-0.011722	0.002093	2.15E-08	407609	body mass	body mass	TRUE
rs3213737	ebi-a-GCS	Serum 25-I	12	96379806	rs3213737	A	G	0.576017	-0.038972	0.001978	0	443734	serum 25-h	vitamin d;2	TRUE
rs3213737	ieu-b-4808	25 hydroxy	12	96379806	rs3213737	A	G	0.576017	-0.038972	0.001978	0		25 hydroxy	vitamin d	TRUE
rs3213737	ebi-a-GCS	Serum 25-I	12	96379806	rs3213737	A	G	0.573813	-0.043437	0.002056	4.4E-99	496946	serum 25-h	vitamin d;2	TRUE
rs3213737	ebi-a-GCS	Serum 25-I	12	96379806	rs3213737	A	G	0.5764	-0.039662	0.001992	3.27E-88	417580	serum 25-h	vitamin d;2	TRUE
rs3213737	ebi-a-GCS	Serum 25-I	12	96379806	rs3213737	A	G	0.576386	-0.039613	0.001996	1.14E-87	417580	serum 25-h	vitamin d;2	TRUE
rs3213737	ebi-a-GCS	Serum 25-I	12	96379806	rs3213737	A	G	0.576386	-0.039399	0.001992	4.19E-87	417580	serum 25-h	vitamin d;2	TRUE
rs3213737	ieu-b-4812	25 hydroxy	12	96379806	rs3213737	A	G	0.576017	-0.038972	0.001978	2.04E-86		25 hydroxy	vitamin d	TRUE
rs3213737	ebi-a-GCS	Serum 25-I	12	96379806	rs3213737	A	G	0.5764	-0.039843	0.002023	2.31E-86	417580	serum 25-h	vitamin d;2	TRUE
rs3213737	ebi-a-GCS	Vitamin D	12	96379806	rs3213737	A	G	0.572406	-0.040335	0.002152	1.6E-79	418691	vitamin d	vitamin d	TRUE
rs3213737	ebi-a-GCS	Vitamin D	12	96379806	rs3213737	A	G		-0.039404	0.002284	1.09E-66	373045	vitamin d	vitamin d	TRUE

rs3213737	ukb-d-308	Vitamin D 12	96379806	rs3213737	A	G	0.57768	-0.041724	0.00249	5.42E-63	329247	vitamin d	vitamin d	TRUE
rs3213737	ukb-d-308	Vitamin D 12	96379806	rs3213737	A	G	0.57768	-0.87215	0.052249	1.59E-62	329247	vitamin d	vitamin d	TRUE
rs3213737	ebi-a-GCS	Sunburns 12	96379806	rs3213737	A	G	0.57641	-0.017272	0.001183	8.5E-50	350232	sunburns	sunburn	TRUE
rs3213737	ukb-b-1324	Childhood 12	96379806	rs3213737	A	G	0.576	-0.031866	0.002159	2.7E-49	346955	childhood	sunburn	TRUE
rs3213737	ebi-a-GCS	Vitamin D 12	96379806	rs3213737	A	G		-0.0153	0.0021	2.85E-13	79366	vitamin d	vitamin d	TRUE
rs3213737	ebi-a-GCS	Tanning 12	96379806	rs3213737	A	G	0.575443	-0.005674	0.000979	7.8E-10	513536	tanning	tanning;tan	TRUE
rs3213737	ebi-a-GCS	Skin cancer 12	96379806	rs3213737	A	G	0.54734	-0.057	0.0097	3.85E-09	492203	skin cancer	skin	TRUE
rs3213737	ukb-b-533	Ease of skin 12	96379806	rs3213737	A	G	0.575066	0.011398	0.002036	2.2E-08	453065	ease of skin	skin;tannin	TRUE
rs4578351	ebi-a-GCS	Hair color 11	16587580	rs4578351	C	T	0.22066	-0.016702	0.001904	1.3E-24	713771	hair color	hair	TRUE
rs4578351	ebi-a-GCS	Skin pigmentation 11	16587580	rs4578351	C	T	0.22057	-0.008238	0.000958	3.2E-21	548203	skin pigmentation	skin;pigmentation	TRUE
rs4578351	ukb-b-195	Skin colour 11	16587580	rs4578351	C	T	0.221046	0.012196	0.001449	3.9E-17	456692	skin colour	skin	TRUE
rs4578351	ukb-b-1324	Childhood 11	16587580	rs4578351	C	T	0.222048	-0.020481	0.002572	1.7E-15	346955	childhood	sunburn	TRUE
rs4578351	ebi-a-GCS	Sunburns 11	16587580	rs4578351	C	T	0.221479	-0.011117	0.001409	2.7E-15	350232	sunburns	sunburn	TRUE
rs4578351	ebi-a-GCS	Hair color (11	16587580	rs4578351	C	T	0.220683	-0.005115	0.00076	3E-13	534365	hair color (	hair	TRUE
rs4578351	ebi-a-GCS	Tanning 11	16587580	rs4578351	C	T	0.220785	0.007602	0.001163	1.3E-12	513536	tanning	tanning;tan	TRUE
rs4578351	ukb-b-533	Ease of skin 11	16587580	rs4578351	C	T	0.221229	-0.017166	0.002425	1.5E-12	453065	ease of skin	skin;tannin	TRUE
rs4578351	ukb-d-1747	Hair colour 11	16587580	rs4578351	C	T	0.218483	-0.005862	0.00091	1.19E-10	360270	hair colour	hair	TRUE
rs4578351	ebi-a-GCS	Body mass 11	16587580	rs4578351	C	T	0.313516	0.0135	0.0021	1.65E-10	359983	body mass	body mass	TRUE
rs4578351	ebi-a-GCS	Hair color (11	16587580	rs4578351	C	T	0.220683	0.00583	0.001154	3.3E-08	531771	hair color (	hair	TRUE
rs4670813	ukb-b-533	Ease of skin 2	38317710	rs4670813	A	G	0.469985	-0.025443	0.002023	2.8E-36	453065	ease of skin	skin;tannin	TRUE
rs4670813	ebi-a-GCS	Tanning 2	38317710	rs4670813	A	G	0.470018	0.011935	0.000969	1.8E-34	513536	tanning	tanning;tan	TRUE
rs4670813	ukb-b-195	Skin colour 2	38317710	rs4670813	A	G	0.470051	0.012521	0.001208	3.7E-25	456692	skin colour	skin	TRUE
rs4670813	ebi-a-GCS	Skin pigmentation 2	38317710	rs4670813	A	G	0.470077	-0.006769	0.000799	1.6E-16	548203	skin pigmentation	skin;pigmentation	TRUE
rs4670813	ukb-b-1324	Childhood 2	38317710	rs4670813	A	G	0.470775	-0.012669	0.002144	3.5E-09	346955	childhood	sunburn	TRUE
rs4670813	ebi-a-GCS	Sunburns 2	38317710	rs4670813	A	G	0.470742	-0.007021	0.001172	7.7E-09	350232	sunburns	sunburn	TRUE
rs4670813	ukb-b-107	Standing height 2	38317710	rs4670813	A	G	0.470169	-0.007456	0.001309	1.2E-08	461950	standing height	tan	TRUE
rs511515	ukb-b-1324	Childhood 6	33541507	rs511515	G	A	0.70089	-0.020386	0.002321	1.6E-18	346955	childhood	sunburn	TRUE
rs511515	ebi-a-GCS	Sunburns 6	33541507	rs511515	G	A	0.700735	-0.010761	0.001289	3.8E-17	350232	sunburns	sunburn	TRUE
rs5636032	ebi-a-GCS	Sunburns 3	1.89E+08	rs5636032	C	A	0.566674	-0.006904	0.001174	1.4E-09	350232	sunburns	sunburn	TRUE
rs5636032	ukb-b-1324	Childhood 3	1.89E+08	rs5636032	C	A	0.566176	-0.012452	0.002146	6.5E-09	346955	childhood	sunburn	TRUE
rs6007506	ukb-b-533	Ease of skin 22	45622014	rs6007506	T	C	0.336835	-0.036322	0.002131	3.9E-65	453065	ease of skin	skin;tannin	TRUE
rs6007506	ebi-a-GCS	Tanning 22	45622014	rs6007506	T	C	0.336783	0.016331	0.001022	1.1E-64	513536	tanning	tanning;tan	TRUE
rs6007506	ebi-a-GCS	Skin pigmentation 22	45622014	rs6007506	T	C	0.336845	-0.011756	0.000843	9.5E-52	548203	skin pigmentation	skin;pigmentation	TRUE
rs6007506	ukb-b-195	Skin colour 22	45622014	rs6007506	T	C	0.3369	0.019103	0.001273	7E-51	456692	skin colour	skin	TRUE
rs6007506	ukb-b-1324	Childhood 22	45622014	rs6007506	T	C	0.337443	-0.024813	0.002257	4.1E-28	346955	childhood	sunburn	TRUE
rs6007506	ebi-a-GCS	Sunburns 22	45622014	rs6007506	T	C	0.337412	-0.013253	0.001235	7.1E-27	350232	sunburns	sunburn	TRUE
rs6007506	ebi-a-GCS	Hair color (22	45622014	rs6007506	T	C	0.336876	-0.003608	0.000668	2.3E-08	534365	hair color (	hair	TRUE
rs6059655	ebi-a-GCS	Hair color 20	32665748	rs6059655	G	A	0.896786	-0.204805	0.002647	0	713771	hair color	hair	TRUE
rs6059655	ebi-a-GCS	Hair color (20	32665748	rs6059655	G	A	0.896525	0.073841	0.0016	0	531771	hair color (	hair	TRUE
rs6059655	ebi-a-GCS	Skin pigmentation 20	32665748	rs6059655	G	A	0.896248	-0.083478	0.001328	0	548203	skin pigmentation	skin;pigmentation	TRUE
rs6059655	ebi-a-GCS	Tanning 20	32665748	rs6059655	G	A	0.896534	0.119281	0.001609	0	513536	tanning	tanning;tan	TRUE
rs6059655	ukb-b-195	Skin colour 20	32665748	rs6059655	G	A	0.896644	0.132097	0.002002	0	456692	skin colour	skin	TRUE
rs6059655	ukb-b-533	Ease of skin 20	32665748	rs6059655	G	A	0.896917	-0.273292	0.00335	0	453065	ease of skin	skin;tannin	TRUE
rs6059655	ukb-d-1747	Hair colour 20	32665748	rs6059655	G	A	0.894184	-0.033592	0.000817	0	360270	hair colour	hair	TRUE
rs6059655	ukb-d-1747	Hair colour 20	32665748	rs6059655	G	A	0.894184	0.073699	0.001885	0	360270	hair colour	hair	TRUE
rs6059655	ebi-a-GCS	Sunburns 20	32665748	rs6059655	G	A	0.897557	-0.068856	0.001963	2.2E-282	350232	sunburns	sunburn	TRUE
rs6059655	ukb-b-1324	Childhood 20	32665748	rs6059655	G	A	0.897978	-0.127339	0.00358	3.9E-277	346955	childhood	sunburn	TRUE
rs6059655	ebi-a-GCS	Hair color (20	32665748	rs6059655	G	A	0.896525	-0.029476	0.001057	4.2E-184	534365	hair color (	hair	TRUE
rs6059655	ukb-d-1747	Hair colour 20	32665748	rs6059655	G	A	0.894184	-0.028173	0.001241	4.4E-114	360270	hair colour	hair	TRUE
rs6059655	ukb-d-1747	Hair colour 20	32665748	rs6059655	G	A	0.894184	0.017647	0.000789	1.2E-110	360270	hair colour	hair	TRUE
rs6059655	ieu-b-4959	Melanoma (20	32665748	rs6059655	G	A	0.897536	-0.015041	0.000894	1.5E-63	395710	malignant	skin;melanoma	TRUE
rs6059655	ebi-a-GCS	Skin cancer 20	32665748	rs6059655	G	A	0.917053	-0.2701	0.0165	3.52E-60	492203	skin cancer	skin	TRUE
rs6059655	ukb-d-C3_	Malignant (20	32665748	rs6059655	G	A	0.894181	-0.011809	0.000811	5.33E-48	361194	malignant	skin	TRUE
rs6059655	ukb-d-C_	Skin Cancer of s 20	32665748	rs6059655	G	A	0.894181	-0.011809	0.000811	5.33E-48	361194	cancer of skin	skin	TRUE
rs6059655	ukb-d-1747	Hair colour 20	32665748	rs6059655	G	A	0.894184	-0.027388	0.001921	4.11E-46	360270	hair colour	hair	TRUE
rs6059655	ebi-a-GCS	Basal cell c 20	32665748	rs6059655	G	A	0.899312	-0.236755	0.016756	2.5E-45	392871	basal cell	basal cell	TRUE
rs6059655	ukb-d-C_O	Other malignant 20	32665748	rs6059655	G	A	0.894181	-0.009911	0.000759	5.9E-39	361194	other malignant	skin	TRUE
rs6059655	ukb-b-107	Standing height 20	32665748	rs6059655	G	A	0.896954	0.025306	0.002195	9.5E-31	461950	standing height	tan	TRUE
rs6059655	ieu-b-4969	Melanoma 20	32665748	rs6059655	G	A	0.898713	-0.003833	0.000387	3.7E-23	375767	melanoma	skin;melanoma	TRUE
rs6059655	ukb-a-389	Standing height 20	32665748	rs6059655	G	A	0.892744	0.027236	0.002878	3.03E-21	336474	standing height	tan	TRUE
rs6059655	ukb-b-1024	Type of cancer 20	32665748	rs6059655	G	A	0.896956	-0.003352	0.000395	2.1E-17	463010	type of cancer	skin	TRUE
rs6059655	ukb-b-1291	Cancer code 20	32665748	rs6059655	G	A	0.896958	-0.00247	0.000306	6.5E-16	462933	cancer code	melanoma	TRUE
rs6059655	ukb-b-8837	Cancer code 20	32665748	rs6059655	G	A	0.896958	-0.002664	0.000334	1.4E-15	462933	cancer code	basal cell	TRUE
rs6059655	ukb-a-518	Diagnoses 20	32665748	rs6059655	G	A	0.892744	-0.003764	0.000483	6.35E-15	337199	diagnoses	skin	TRUE
rs6059655	ukb-a-59	Cancer code 20	32665748	rs6059655	G	A	0.892744	-0.002997	0.000391	1.93E-14	337159	cancer code	basal cell	TRUE
rs6059655	ukb-d-C3_	Malignant (20	32665748	rs6059655	G	A	0.894181	-0.002391	0.000326	2.33E-13	361194	malignant	skin;melanoma	TRUE
rs6059655	ukb-b-9537	Operative f 20	32665748	rs6059655	G	A	0.896956	-0.004496	0.00062	4E-13	463010	operative p	skin	TRUE
rs6059655	finn-b-C3_	Other malignant 20	32665748	rs6059655	G	A	0.9773	-0.3416	0.0523	6.52E-11		other malignant	skin;melanoma	TRUE
rs6059655	finn-b-C3_	Malignant (20	32665748	rs6059655	G	A	0.9773	-0.3413	0.0523	6.78E-11		malignant	skin	TRUE
rs6059655	ukb-d-C43	Diagnoses 20	32665748	rs6059655	G	A	0.894181	-0.001773	0.000272	7.38E-11	361194	diagnoses	skin;melanoma	TRUE
rs6059655	ukb-a-58	Cancer code 20	32665748	rs6059655	G	A	0.892744	-0.002334	0.000361	9.77E-11	337159	cancer code	melanoma	TRUE
rs6059655	finn-b-C3_	Other malignant 20	32665748	rs6059655	G	A	0.9774	-0.3415	0.0531	1.24E-10		other malignant	skin;melanoma	TRUE
rs6059655	finn-b-C3_	Malignant (20	32665748	rs6059655	G	A	0.9774	-0.3419	0.0532	1.27E-10		malignant	skin	TRUE
rs6059655	ukb-b-4141	Diagnoses 20	32665748	rs6059655	G	A	0.896956	-0.001912	0.000315	1.3E-09	463010	diagnoses	skin	TRUE
rs6059655	ukb-b-1591	Treatment (20	32665748	rs6059655	G	A	0.896875	-0.002864	0.000498	8.7E-09	444587	treatment	skin	TRUE
rs6059655	ukb-b-6772	Operation (20	32665748	rs6059655	G	A	0.896958	-0.002254	0.00041	3.7E-08	462933	operation	skin	TRUE

rs6059655	ukb-d-L12	Skin chang	20	32665748	rs6059655	G	A	0.894181	-0.001372	0.000251	4.78E-08	361194	skin change	skin	TRUE
rs6059655	ukb-d-L57	Diagnoses	20	32665748	rs6059655	G	A	0.894181	-0.001372	0.000251	4.78E-08	361194	diagnoses	- skin	TRUE
rs6059655	ukb-b-1852	Main speci	20	32665748	rs6059655	G	A	0.896968	-0.002598	0.000476	4.9E-08	461170	main speci	tan	TRUE
rs6242317	ebi-a-GCS	Sunburns	6	62195368	rs6242317	A	G	0.175551	-0.010229	0.001566	9.5E-11	350232	sunburns	sunburn	TRUE
rs6242317	ukb-b-1324	Childhood	6	62195368	rs6242317	A	G	0.175231	-0.018479	0.002865	1.1E-10	346955	childhood	sunburn	TRUE
rs6689641	ebi-a-GCS	Skin pigme	1	1.11E+08	rs6689641	G	A	0.543021	0.011635	0.000796	2E-54	548203	skin pigme	skin;pigme	TRUE
rs6689641	ukb-b-195	Skin colour	1	1.11E+08	rs6689641	G	A	0.542786	-0.017142	0.001202	3.7E-46	456692	skin colour	skin	TRUE
rs6689641	ukb-b-533	Ease of ski	1	1.11E+08	rs6689641	G	A	0.542975	0.01656	0.002011	1.8E-16	453065	ease of skir	skin;tannin	TRUE
rs6689641	ebi-a-GCS	Tanning	1	1.11E+08	rs6689641	G	A	0.543209	-0.007276	0.000965	6.1E-16	513536	tanning	tanning;tan	TRUE
rs6689641	ukb-b-1324	Childhood	1	1.11E+08	rs6689641	G	A	0.542588	0.014934	0.002134	2.6E-12	346955	childhood	sunburn	TRUE
rs6689641	ebi-a-GCS	Sunburns	1	1.11E+08	rs6689641	G	A	0.542835	0.007843	0.001168	7.5E-12	350232	sunburns	sunburn	TRUE
rs6882046	ebi-a-GCS	Educational	5	87968864	rs6882046	G	A	0.267416	0.108658	0.011379	8.4E-22	461457	educational	education	TRUE
rs6882046	ebi-a-GCS	Educational	5	87968864	rs6882046	G	A	0.267416	0.009842	0.001052	9.4E-21	470941	educational	education	TRUE
rs6882046	ebi-a-GCS	Body mass	5	87968864	rs6882046	G	A	0.335307	0.0171	0.002	5.37E-17	359983	body mass	body mass	TRUE
rs6882046	ieu-b-40	body mass	5	87968864	rs6882046	G	A	0.2791	0.0154	0.002	6.3E-15	677688	body mass	body mass	TRUE
rs6882046	ebi-a-GCS	Body mass	5	87968864	rs6882046	G	A	0.490203	0.023318	0.003173	2E-13	163835	body mass	body mass	TRUE
rs6882046	ukb-b-4461	Job involve	5	87968864	rs6882046	G	A	0.267534	-0.02506	0.003467	4.9E-13	263556	job involve	tan	TRUE
rs6882046	ebi-a-GCS	Body mass	5	87968864	rs6882046	G	A	0.267395	0.01541	0.002188	9.8E-13	532396	body mass	body mass	TRUE
rs6882046	bbj-a-1	Body mass	5	87968864	rs6882046	G	A	0.4886	0.02422	0.003544	8.26E-12		body mass	body mass	TRUE
rs6882046	ebi-a-GCS	Body mass	5	87968864	rs6882046	G	A	0.4886	0.02422	0.003544	8.26E-12	158284	body mass	body mass	TRUE
rs6882046	ukb-b-2303	Body mass	5	87968864	rs6882046	G	A	0.268057	0.01436	0.002268	2.4E-10	454884	body mass	body mass;	TRUE
rs6882046	ukb-a-25	Alcohol int	5	87968864	rs6882046	G	A	0.264184	-0.025644	0.004067	2.86E-10	336965	alcohol int	alcohol	TRUE
rs6882046	ukb-b-577	Alcohol int	5	87968864	rs6882046	G	A	0.268013	-0.021428	0.003449	5.2E-10	462346	alcohol int	alcohol	TRUE
rs6882046	ukb-b-1995	Body mass	5	87968864	rs6882046	G	A	0.268057	0.013896	0.00225	6.6E-10	461460	body mass	body mass;	TRUE
rs6882046	ebi-a-GCS	Sunburns	5	87968864	rs6882046	G	A	0.267234	0.007509	0.001327	2E-09	350232	sunburns	sunburn	TRUE
rs6882046	ukb-a-502	Job involve	5	87968864	rs6882046	G	A	0.264184	-0.024433	0.004113	2.86E-09	190606	job involve	tan	TRUE
rs6882046	ebi-a-GCS	Body mass	5	87968864	rs6882046	G	A		0.014043	0.002367	2.97E-09	407609	body mass	body mass	TRUE
rs6882046	ebi-a-GCS	Body mass	5	87968864	rs6882046	G	A		0.014029	0.002367	3.09E-09	407609	body mass	body mass	TRUE
rs6882046	ukb-b-1324	Childhood	5	87968864	rs6882046	G	A	0.26793	0.01435	0.002422	3.1E-09	346955	childhood	sunburn	TRUE
rs7034354	ebi-a-GCS	Skin pigme	9	12732575	rs7034354	G	A	0.857866	0.015631	0.00114	3.5E-45	548203	skin pigme	skin;pigme	TRUE
rs7034354	ebi-a-GCS	Hair color	9	12732575	rs7034354	G	A	0.857721	0.028597	0.002268	1.7E-39	713771	hair color	hair	TRUE
rs7034354	ukb-b-533	Ease of ski	9	12732575	rs7034354	G	A	0.857455	0.036668	0.002882	4.3E-37	453065	ease of skir	skin;tannin	TRUE
rs7034354	ukb-b-195	Skin colour	9	12732575	rs7034354	G	A	0.857669	-0.021655	0.001723	3.2E-36	456692	skin colour	skin	TRUE
rs7034354	ebi-a-GCS	Tanning	9	12732575	rs7034354	G	A	0.857663	-0.015916	0.001382	5E-31	513536	tanning	tanning;tan	TRUE
rs7034354	ebi-a-GCS	Hair color	9	12732575	rs7034354	G	A	0.857731	0.009953	0.000904	2.8E-29	534365	hair color	(hair	TRUE
rs7034354	ebi-a-GCS	Hair color	9	12732575	rs7034354	G	A	0.857731	-0.012655	0.00137	5.3E-20	531771	hair color	(hair	TRUE
rs7034354	ukb-d-1747	Hair colour	9	12732575	rs7034354	G	A	0.858445	0.009787	0.001077	9.98E-20	360270	hair colour	hair	TRUE
rs7034354	ukb-d-1747	Hair colour	9	12732575	rs7034354	G	A	0.858445	-0.011581	0.001638	1.57E-12	360270	hair colour	hair	TRUE
rs7034354	ebi-a-GCS	Sunburns	9	12732575	rs7034354	G	A	0.857656	0.011075	0.001673	1.1E-10	350232	sunburns	sunburn	TRUE
rs7034354	ukb-b-1324	Childhood	9	12732575	rs7034354	G	A	0.857432	-0.018591	0.003056	1.2E-09	346955	childhood	sunburn	TRUE
rs7428430	ukb-b-1995	Body mass	3	50174184	rs7428430	T	C	0.488338	-0.027894	0.001976	2.9E-45	461460	body mass	body mass;	TRUE
rs7428430	ukb-b-2303	Body mass	3	50174184	rs7428430	T	C	0.488442	-0.027749	0.00199	3.5E-44	454884	body mass	body mass;	TRUE
rs7428430	ebi-a-GCS	Body mass	3	50174184	rs7428430	T	C	0.488006	-0.026047	0.001918	4.9E-43	532396	body mass	body mass	TRUE
rs7428430	ebi-a-GCS	Body mass	3	50174184	rs7428430	T	C		-0.027437	0.002073	5.31E-40	407609	body mass	body mass	TRUE
rs7428430	ebi-a-GCS	Body mass	3	50174184	rs7428430	T	C		-0.027312	0.002073	1.22E-39	407609	body mass	body mass	TRUE
rs7428430	ebi-a-GCS	Body mass	3	50174184	rs7428430	T	C	0.595829	-0.0259	0.0021	2.29E-36	359983	body mass	body mass	TRUE
rs7428430	ieu-b-5118	Adult BMI	3	50174184	rs7428430	T	C	0.488172	-0.017231	0.001371	3.1E-36		adult bmi	s bmi	TRUE
rs7428430	ukb-a-248	Body mass	3	50174184	rs7428430	T	C	0.485851	-0.030087	0.002405	6.66E-36	336107	body mass	body mass;	TRUE
rs7428430	ebi-a-GCS	Educational	3	50174184	rs7428430	T	C	0.488132	0.010389	0.000924	2.5E-29	470941	educational	education	TRUE
rs7428430	ebi-a-GCS	Educational	3	50174184	rs7428430	T	C	0.488132	0.092364	0.009993	1.1E-20	461457	educational	education	TRUE
rs7428430	prot-a-46	Alcohol de	3	50174184	rs7428430	T	C	0.49309	-0.2199	0.0242	1.2E-19	3301	alcohol de	alcohol	TRUE
rs7428430	ieu-b-5117	Adult BMI	3	50174184	rs7428430	T	C	0.488974	-0.016771	0.001969	1.6E-17		adult bmi	f bmi	TRUE
rs7428430	ukb-b-4461	Job involve	3	50174184	rs7428430	T	C	0.489425	-0.022721	0.003041	8E-14	263556	job involve	tan	TRUE
rs7428430	ukb-b-6134	Age compl	3	50174184	rs7428430	T	C	0.482581	0.015391	0.002073	1.1E-13	307897	age comple	education	TRUE
rs7428430	ebi-a-GCS	Serum 25-F3	3	50174184	rs7428430	T	C	0.486295	-0.014317	0.001964	3.09E-13	417580	serum 25-h	vitamin d;2	TRUE
rs7428430	ebi-a-GCS	Serum 25-F3	3	50174184	rs7428430	T	C	0.486295	-0.01382	0.001968	2.18E-12	417580	serum 25-h	vitamin d;2	TRUE
rs7428430	ukb-b-346	Alcohol int	3	50174184	rs7428430	T	C	0.488473	-0.010573	0.001578	2.1E-11	428117	alcohol int	alcohol	TRUE
rs7428430	ebi-a-GCS	Serum 25-F3	3	50174184	rs7428430	T	C	0.486269	-0.013082	0.001964	2.73E-11	417580	serum 25-h	vitamin d;2	TRUE
rs7428430	ukb-a-502	Job involve	3	50174184	rs7428430	T	C	0.485851	-0.02389	0.003587	2.73E-11	190606	job involve	tan	TRUE
rs7428430	ukb-a-505	Age compl	3	50174184	rs7428430	T	C	0.485851	0.016	0.002429	4.53E-11	226899	age comple	education	TRUE
rs7428430	ukb-b-577	Alcohol int	3	50174184	rs7428430	T	C	0.488308	-0.01981	0.00303	6.3E-11	462346	alcohol int	alcohol	TRUE
rs7428430	ukb-a-25	Alcohol int	3	50174184	rs7428430	T	C	0.485851	-0.023129	0.003557	7.94E-11	336965	alcohol int	alcohol	TRUE
rs7428430	ukb-b-969	Time spenc	3	50174184	rs7428430	T	C	0.488403	-0.012496	0.001929	9.4E-11	419314	time spend	outdoor	TRUE
rs7428430	ebi-a-GCS	Body mass	3	50174184	rs7428430	T	C	0.4748	-0.0182	0.00292	4.7E-10	315347	body mass	body mass	TRUE
rs7428430	ebi-a-GCS	Serum 25-F3	3	50174184	rs7428430	T	C	0.489209	-0.012509	0.002033	7.52E-10	496946	serum 25-h	vitamin d;2	TRUE
rs7428430	ukb-b-1553	Leisure/soc	3	50174184	rs7428430	T	C	0.488315	0.003277	0.000538	1.1E-09	461369	leisure/soci	education	TRUE
rs7428430	ukb-a-32	Alcohol int	3	50174184	rs7428430	T	C	0.485851	-0.010841	0.001848	4.43E-09	313248	alcohol int	alcohol	TRUE
rs7428430	ebi-a-GCS	Sunburns	3	50174184	rs7428430	T	C	0.487613	0.006666	0.001167	1.4E-08	350232	sunburns	sunburn	TRUE
rs7428430	ukb-b-1324	Childhood	3	50174184	rs7428430	T	C	0.487961	0.011738	0.002129	3.5E-08	346955	childhood	sunburn	TRUE
rs7428430	ukb-b-1264	Treatment	3	50174184	rs7428430	T	C	0.488235	-0.00455	0.000832	4.6E-08	448935	treatment	s tan	TRUE
rs7530048	ukb-b-533	Ease of ski	16	89489061	rs7530048	T	C	0.034584	-0.055748	0.005403	5.9E-25	453065	ease of skir	skin;tannin	TRUE
rs7530048	ebi-a-GCS	Tanning	16	89489061	rs7530048	T	C	0.034665	0.024837	0.002551	1.1E-23	513536	tanning	tanning;tan	TRUE
rs7530048	ebi-a-GCS	Skin pigme	16	89489061	rs7530048	T	C	0.034637	-0.018333	0.002129	2.3E-18	548203	skin pigme	skin;pigme	TRUE
rs7530048	ukb-b-195	Skin colour	16	89489061	rs7530048	T	C	0.034557	0.026879	0.003244	1.2E-16	456692	skin colour	skin	TRUE
rs7530048	ebi-a-GCS	Hair color	16	89489061	rs7530048	T	C	0.034666	-0.026479	0.003959	4.8E-13	713771	hair color	hair	TRUE
rs7530048	ukb-d-1747	Hair colour	16	89489061	rs7530048	T	C	0.035451	0.020142	0.003076	5.86E-11	360270	hair colour	hair	TRUE

rs7530048	ebi-a-GCS	Hair color (16	89489061	rs7530048	T	C	0.034636	0.014604	0.002569	2.1E-09	531771	hair color (hair	TRUE
rs7530048	ukb-b-1324	Childhood 16	89489061	rs7530048	T	C	0.03469	-0.034208	0.005802	3.7E-09	346955	childhood � sunburn	TRUE
rs7530048	ukb-b-107	Standing ht 16	89489061	rs7530048	T	C	0.034538	0.020597	0.003595	1E-08	461950	standing he tan	TRUE
rs7530048	ebi-a-GCS	Sunburns 16	89489061	rs7530048	T	C	0.034802	-0.017894	0.003157	1.2E-08	350232	sunburns sunburn	TRUE
rs7545901	(ukb-b-533	Ease of ski 11	88017456	rs7545901	(T	C	0.115305	0.022943	0.003212	9.1E-13	453065	ease of skir skin;tannin	TRUE
rs7545901	(ebi-a-GCS	Tanning 11	88017456	rs7545901	(T	C	0.115384	-0.010037	0.001538	5.4E-11	513536	tanning tanning;tan	TRUE
rs7545901	(ebi-a-GCS	Skin pigme 11	88017456	rs7545901	(T	C	0.115372	0.00764	0.001267	4.2E-09	548203	skin pigme skin;pigme	TRUE
rs7545901	(ukb-b-195	� Skin colour 11	88017456	rs7545901	(T	C	0.115297	-0.011092	0.001919	7.5E-09	456692	skin colour skin	TRUE
rs7545901	(ebi-a-GCS	Sunburns 11	88017456	rs7545901	(T	C	0.115487	0.010577	0.001864	2.9E-08	350232	sunburns sunburn	TRUE
rs7545901	(ukb-b-1324	Childhood 11	88017456	rs7545901	(T	C	0.115397	0.018594	0.003411	5E-08	346955	childhood � sunburn	TRUE
rs7768317	ukb-b-533	Ease of ski 6	41922220	rs7768317	T	C	0.248604	-0.016749	0.002319	5.1E-13	453065	ease of skir skin;tannin	TRUE
rs7768317	ukb-b-1324	Childhood 6	41922220	rs7768317	T	C	0.248878	-0.017032	0.002465	4.9E-12	346955	childhood � sunburn	TRUE
rs7768317	ebi-a-GCS	Sunburns 6	41922220	rs7768317	T	C	0.249001	-0.009092	0.001347	2.8E-11	350232	sunburns sunburn	TRUE
rs7768317	ukb-b-107	� Standing ht 6	41922220	rs7768317	T	C	0.248536	-0.010002	0.001503	2.8E-11	461950	standing he tan	TRUE
rs7768317	ukb-a-389	Standing ht 6	41922220	rs7768317	T	C	0.250318	-0.012884	0.001996	1.09E-10	336474	standing he tan	TRUE
rs7768317	ebi-a-GCS	Skin pigme 6	41922220	rs7768317	T	C	0.2488	-0.005578	0.00092	2.4E-10	548203	skin pigme skin;pigme	TRUE
rs7768317	ebi-a-GCS	Tanning 6	41922220	rs7768317	T	C	0.248711	0.006712	0.001109	2.7E-09	513536	tanning tanning;tan	TRUE
rs7794036	ebi-a-GCS	Serum 25-� 7	1.05E+08	rs7794036	C	T	0.530603	0.012746	0.001955	0	443734	serum 25-h vitamin d;2	TRUE
rs7794036	ieu-b-4808	25 hydroxy 7	1.05E+08	rs7794036	C	T	0.530603	0.012746	0.001955	0	25 hydroxy vitamin d		TRUE
rs7794036	ebi-a-GCS	Skin pigme 7	1.05E+08	rs7794036	C	T	0.529931	-0.006066	0.000796	1.2E-13	548203	skin pigme skin;pigme	TRUE
rs7794036	ukb-b-195	� Skin colour 7	1.05E+08	rs7794036	C	T	0.529656	0.008813	0.001202	2.2E-13	456692	skin colour skin	TRUE
rs7794036	ieu-b-4812	25 hydroxy 7	1.05E+08	rs7794036	C	T	0.530603	0.012746	0.001955	7.05E-11	25 hydroxy vitamin d		TRUE
rs7794036	ebi-a-GCS	Sunburns 7	1.05E+08	rs7794036	C	T	0.530078	-0.007779	0.001165	9.1E-11	350232	sunburns sunburn	TRUE
rs7794036	ukb-b-1324	Childhood 7	1.05E+08	rs7794036	C	T	0.529739	-0.012685	0.002131	2.7E-09	346955	childhood � sunburn	TRUE
rs849138	ukb-b-107	� Standing ht 7	28177338	rs849138	A	G	0.506887	-0.026345	0.001306	1.8E-90	461950	standing he tan	TRUE
rs849138	ukb-a-389	Standing ht 7	28177338	rs849138	A	G	0.507497	-0.026348	0.001727	1.5E-52	336474	standing he tan	TRUE
rs849138	ebi-a-GCS	Hair color 7	28177338	rs849138	A	G	0.507117	-0.020445	0.00158	1.4E-49	713771	hair color hair	TRUE
rs849138	ebi-a-GCS	Sex hormoi 7	28177338	rs849138	A	G	0.506761	0.010775	0.000837	2.8E-40	368929	sex hormor bmi	TRUE
rs849138	ebi-a-GCS	Hair color (7	28177338	rs849138	A	G	0.507175	-0.00647	0.000629	4.2E-28	534365	hair color (hair	TRUE
rs849138	ebi-a-GCS	Sex hormoi 7	28177338	rs849138	A	G	0.506195	0.012341	0.001234	1.9E-24	188908	sex hormor bmi	TRUE
rs849138	ebi-a-GCS	Hair color (7	28177338	rs849138	A	G	0.507175	0.008757	0.000954	2.1E-24	531771	hair color (hair	TRUE
rs849138	ukb-d-1747	Hair colour 7	28177338	rs849138	A	G	0.507432	-0.007132	0.000749	1.77E-21	360270	hair colour hair	TRUE
rs849138	ebi-a-GCS	Sex hormoi 7	28177338	rs849138	A	G	0.507355	0.009901	0.001153	1.5E-20	180094	sex hormor bmi	TRUE
rs849138	ebi-a-GCS	Tanning 7	28177338	rs849138	A	G	0.507319	-0.008798	0.000963	3E-20	513536	tanning tanning;tan	TRUE
rs849138	ukb-b-533	Ease of ski 7	28177338	rs849138	A	G	0.507044	0.017948	0.002009	4.1E-19	453065	ease of skir skin;tannin	TRUE
rs849138	ukb-d-1747	Hair colour 7	28177338	rs849138	A	G	0.507432	0.008679	0.00114	2.7E-14	360270	hair colour hair	TRUE
rs849138	ebi-a-GCS	Sunburns 7	28177338	rs849138	A	G	0.507332	0.007697	0.001165	1.9E-10	350232	sunburns sunburn	TRUE
rs849138	ukb-b-1324	Childhood 7	28177338	rs849138	A	G	0.507025	0.012559	0.002131	3.8E-09	346955	childhood � sunburn	TRUE
rs9328259	ebi-a-GCS	Hair color 6	508972	rs9328259	A	C	0.718101	-0.071471	0.001736	0	713771	hair color hair	TRUE
rs9328259	ebi-a-GCS	Hair color (6	508972	rs9328259	A	C	0.718013	-0.021909	0.000699	1.1E-227	534365	hair color (hair	TRUE
rs9328259	ebi-a-GCS	Hair color (6	508972	rs9328259	A	C	0.718013	0.027869	0.001061	4.1E-163	531771	hair color (hair	TRUE
rs9328259	ukb-d-1747	Hair colour 6	508972	rs9328259	A	C	0.71841	-0.022383	0.000836	1E-157	360270	hair colour hair	TRUE
rs9328259	ukb-d-1747	Hair colour 6	508972	rs9328259	A	C	0.71841	0.029779	0.001273	5.2E-121	360270	hair colour hair	TRUE
rs9328259	ukb-d-1747	Hair colour 6	508972	rs9328259	A	C	0.71841	0.011352	0.000532	6.5E-101	360270	hair colour hair	TRUE
rs9328259	ukb-b-533	Ease of ski 6	508972	rs9328259	A	C	0.718082	0.042572	0.002228	2.2E-81	453065	ease of skir skin;tannin	TRUE
rs9328259	ebi-a-GCS	Tanning 6	508972	rs9328259	A	C	0.718095	-0.019376	0.001069	7.2E-78	513536	tanning tanning;tan	TRUE
rs9328259	ukb-d-1747	Hair colour 6	508972	rs9328259	A	C	0.71841	-0.018876	0.001295	4.08E-48	360270	hair colour hair	TRUE
rs9328259	ukb-b-1324	Childhood 6	508972	rs9328259	A	C	0.718185	0.026744	0.00237	1.6E-29	346955	childhood � sunburn	TRUE
rs9328259	ebi-a-GCS	Sunburns 6	508972	rs9328259	A	C	0.71816	0.013462	0.0013	1.8E-25	350232	sunburns sunburn	TRUE
rs9328259	ukb-b-195	� Skin colour 6	508972	rs9328259	A	C	0.717867	-0.010138	0.001334	3E-14	456692	skin colour skin	TRUE
rs9818780	ukb-b-533	Ease of ski 3	1.56E+08	rs9818780	C	T	0.489782	0.023695	0.002015	6.2E-32	453065	ease of skir skin;tannin	TRUE
rs9818780	ebi-a-GCS	Tanning 3	1.56E+08	rs9818780	C	T	0.489925	-0.010106	0.000966	5.6E-29	513536	tanning tanning;tan	TRUE
rs9818780	ebi-a-GCS	Skin pigme 3	1.56E+08	rs9818780	C	T	0.489946	0.008006	0.000797	8.8E-28	548203	skin pigme skin;pigme	TRUE
rs9818780	ukb-b-195	� Skin colour 3	1.56E+08	rs9818780	C	T	0.489812	-0.012641	0.001203	8.3E-26	456692	skin colour skin	TRUE
rs9818780	ebi-a-GCS	Sunburns 3	1.56E+08	rs9818780	C	T	0.48934	0.007689	0.001168	2.7E-11	350232	sunburns sunburn	TRUE
rs9818780	ukb-b-1324	Childhood 3	1.56E+08	rs9818780	C	T	0.489206	0.013617	0.002136	1.8E-10	346955	childhood � sunburn	TRUE
rs9858244	ebi-a-GCS	Serum 25-� 3	85787399	rs9858244	A	G	0.213223	0.013414	0.002374	0	443734	serum 25-h vitamin d;2	TRUE
rs9858244	ieu-b-4808	25 hydroxy 3	85787399	rs9858244	A	G	0.213223	0.013414	0.002374	0	25 hydroxy vitamin d		TRUE
rs9858244	ieu-b-40	body mass 3	85787399	rs9858244	A	G	0.2141	0.0223	0.002	1.3E-28	791497	body mass body mass	TRUE
rs9858244	ebi-a-GCS	Body mass 3	85787399	rs9858244	A	G		0.02273	0.002531	2.67E-19	407609	body mass body mass	TRUE
rs9858244	ebi-a-GCS	Body mass 3	85787399	rs9858244	A	G		0.02265	0.002531	3.6E-19	407609	body mass body mass	TRUE
rs9858244	ebi-a-GCS	Body mass 3	85787399	rs9858244	A	G	0.214016	0.02058	0.002335	5.8E-19	532396	body mass body mass	TRUE
rs9858244	ukb-b-199	� Body mass 3	85787399	rs9858244	A	G	0.214049	0.018826	0.002409	5.5E-15	461460	body mass body mass;	TRUE
rs9858244	ukb-b-230	� Body mass 3	85787399	rs9858244	A	G	0.213943	0.018729	0.002428	1.2E-14	454884	body mass body mass;	TRUE
rs9858244	ebi-a-GCS	Body mass 3	85787399	rs9858244	A	G	0.146157	0.022	0.0029	1.26E-14	359983	body mass body mass	TRUE
rs9858244	ukb-a-248	Body mass 3	85787399	rs9858244	A	G	0.212621	0.022568	0.002937	1.53E-14	336107	body mass body mass;	TRUE
rs9858244	ebi-a-GCS	Body mass 3	85787399	rs9858244	A	G	0.2347	0.0236	0.00312	4.3E-14	315347	body mass body mass	TRUE
rs9858244	ukb-b-1324	Childhood 3	85787399	rs9858244	A	G	0.214182	0.018945	0.002597	3E-13	346955	childhood � sunburn	TRUE
rs9858244	ebi-a-GCS	Body mass 3	85787399	rs9858244	A	G		0.0258	0.0037	3.18E-12	236781	body mass body mass	TRUE
rs9858244	ieu-a-2	Body mass 3	85787399	rs9858244	A	G	0.25	0.0258	0.0037	3.18E-12	339112	body mass body mass	TRUE
rs9858244	ieu-a-835	Body mass 3	85787399	rs9858244	A	G	0.25	0.0262	0.0038	5.11E-12	322088	body mass body mass	TRUE
rs9858244	ebi-a-GCS	Serum 25-� 3	85787399	rs9858244	A	G	0.212773	0.017152	0.002488	5.46E-12	496946	serum 25-h vitamin d;2	TRUE
rs9858244	ebi-a-GCS	Body mass 3	85787399	rs9858244	A	G	0.2247	0.0233	0.0034	9.31E-12	330793	body mass body mass	TRUE
rs9858244	ebi-a-GCS	Sunburns 3	85787399	rs9858244	A	G	0.21411	0.009432	0.001421	4.6E-11	350232	sunburns sunburn	TRUE
rs9858244	ieu-b-4877	smoking in 3	85787399	rs9858244	A	G	0.209	0.027465	0.004343	2.49E-10	632802	smoking in smoking	TRUE
rs9858244	ebi-a-GCS	Serum 25-� 3	85787399	rs9858244	A	G	0.212651	0.015168	0.002405	2.84E-10	417580	serum 25-h vitamin d;2	TRUE

rs9858244	ieu-b-5118	Adult BMI 3	85787399	rs9858244	A	G	0.214071	0.010538	0.001672	2.9E-10	adult bmi s bmi	TRUE
rs9858244	ukb-d-2011	Smoking st 3	85787399	rs9858244	A	G	0.21265	-0.008945	0.00142	3.04E-10	359706 smoking st: smoking	TRUE
rs9858244	ebi-a-GCS	Serum 25-I 3	85787399	rs9858244	A	G	0.212651	0.015065	0.00241	4.07E-10	417580 serum 25-h vitamin d;2	TRUE
rs9858244	ukb-b-2134	Past tobacc 3	85787399	rs9858244	A	G	0.21399	-0.020405	0.003288	5.5E-10	424960 past tobacc smoking	TRUE
rs9858244	ukb-a-17	Past tobacc 3	85787399	rs9858244	A	G	0.212621	-0.023668	0.003872	9.83E-10	310749 past tobacc smoking	TRUE
rs9858244	ebi-a-GCS	Smoking st 3	85787399	rs9858244	A	G	0.214007	0.01017	0.001676	1.8E-09	468170 smoking st: smoking	TRUE
rs9858244	ieu-a-974	Body mass 3	85787399	rs9858244	A	G	0.25	0.0288	0.0048	2.45E-09	171941 body mass body mass	TRUE
rs9858244	ebi-a-GCS	Serum 25-I 3	85787399	rs9858244	A	G	0.212644	0.014187	0.002405	3.67E-09	417580 serum 25-h vitamin d;2	TRUE
rs9858244	ieu-b-4812	25 hydroxy 3	85787399	rs9858244	A	G	0.213223	0.013414	0.002374	1.6E-08	25 hydroxy vitamin d	TRUE
rs9858244	ieu-b-73	Alcoholic c 3	85787399	rs9858244	A	G	0.209	0.013076	0.002352	2.66E-08	526787 alcoholic d alcohol	TRUE
rs9926609	ebi-a-GCS	Sunburns 16	3540962	rs9926609	C	A	0.735838	-0.007435	0.00132	2.5E-08	350232 sunburns sunburn	TRUE

(B) Pigmentation and tanning response loci from Visconti et al. 2018.

gene	rationale	primary_support
MC1R	core pigmentation and sun sensitivity locus	Visconti 2018
ASIP	RALY/ASIP tanning, pigmentation, and sun sensitivity locus	Visconti 2018
RALY	RALY/ASIP tanning, pigmentation, and sun sensitivity locus	Visconti 2018
HERC2	HERC2/OCA2 pigmentation and tanning locus	Visconti 2018
OCA2	HERC2/OCA2 pigmentation and tanning locus	Visconti 2018
IRF4	pigmentation, tanning, and skin cancer locus	Visconti 2018
TYR	pigmentation and tanning locus	Visconti 2018
TYRP1	pigmentation and tanning locus	Visconti 2018
SLC45A2	pigmentation and tanning locus	Visconti 2018
SLC24A4	pigmentation and tanning locus	Visconti 2018
TPCN2	tanning and pigmentation locus	Visconti 2018
BNC2	tanning and pigmentation locus	Visconti 2018
AHR	AHR/AGR3 tanning response locus	Visconti 2018
DCT	tanning response and melanin synthesis-related locus	Visconti 2018
PPARGC1	tanning response and melanocyte biology-related locus	Visconti 2018
TRPS1	tanning response locus	Visconti 2018

(C) The 11 excluded SNPs in GWAS summary format.

exposure	SNP	chr	pos	effect_allele	other_allele	effect_allele	beta	se	p_value	Variation_minor_allele	frequency
Sunburns	rs10962612		9 16804167	G	T		0.761	0.0144	0.00136	6.3E-26 SNP	0.239
Sunburns	rs11104733		12 88490119	T	C		0.0147	0.0289	0.00484	2.4E-09 SNP	0.0147
Sunburns	rs1126809		11 89017961	A	G		0.303	0.0453	0.00127	1E-200 SNP	0.303
Sunburns	rs12203592		6 396321	T	C		0.22	0.0891	0.00144	1E-200 SNP	0.22
Sunburns	rs12350739		9 16885017	A	G		0.608	0.0184	0.0012	8.3E-55 SNP	0.392
Sunburns	rs12913832		15 28365618	G	A		0.778	0.0348	0.0014	1.5E-138 SNP	0.222
Sunburns	rs150527451		11 68817897	A	G		0.107	0.0158	0.0019	2.6E-16 SNP	0.107
Sunburns	rs1805007		16 89986117	T	C		0.101	0.104	0.00191	1E-200 SNP	0.101
Sunburns	rs1805008		16 89986144	T	C		0.0869	0.0657	0.00205	1E-200 SNP	0.0869
Sunburns	rs2737217		8 1.17E+08	G	A		0.563	-0.0141	0.00118	1.6E-33 SNP	0.437
Sunburns	rs6059655		20 32665748	G	A		0.898	-0.0689	0.00196	1E-200 SNP	0.102