

Supplementary Figures

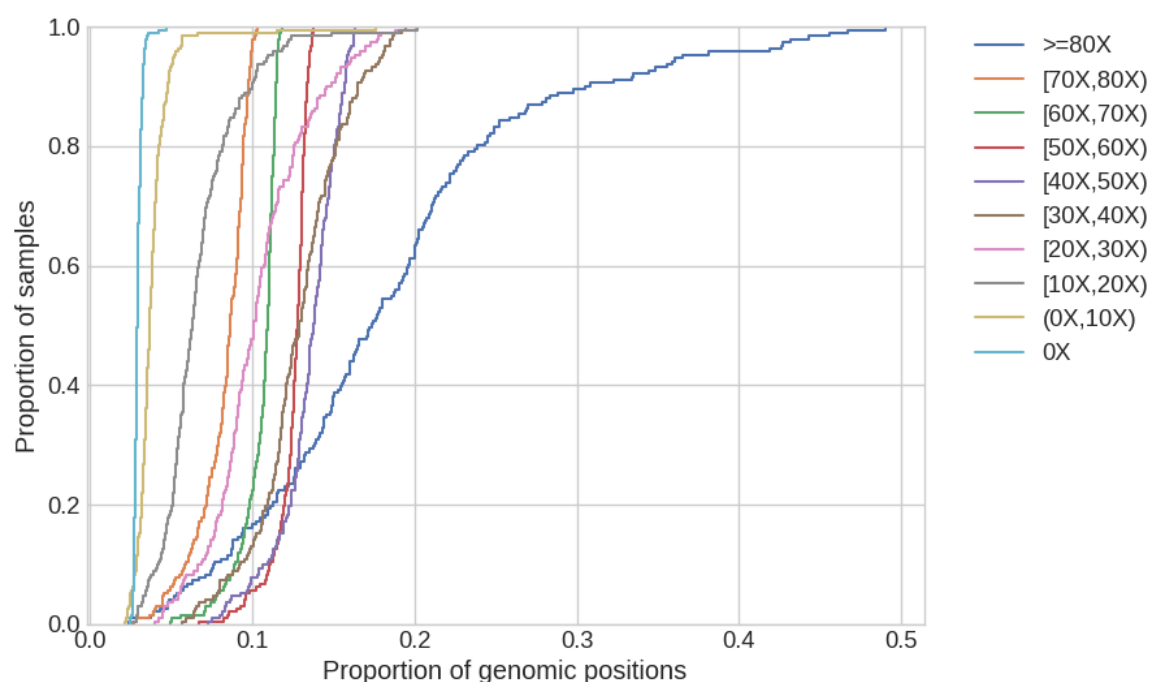


Figure SF1: Empirical cumulative distribution functions for a given depth coverage in the whole-exome dataset. X-axis represents the proportion of genomic positions that displayed the given depth coverage, whereas the y-axis represents the proportion of samples with the corresponding proportion of genomic positions.

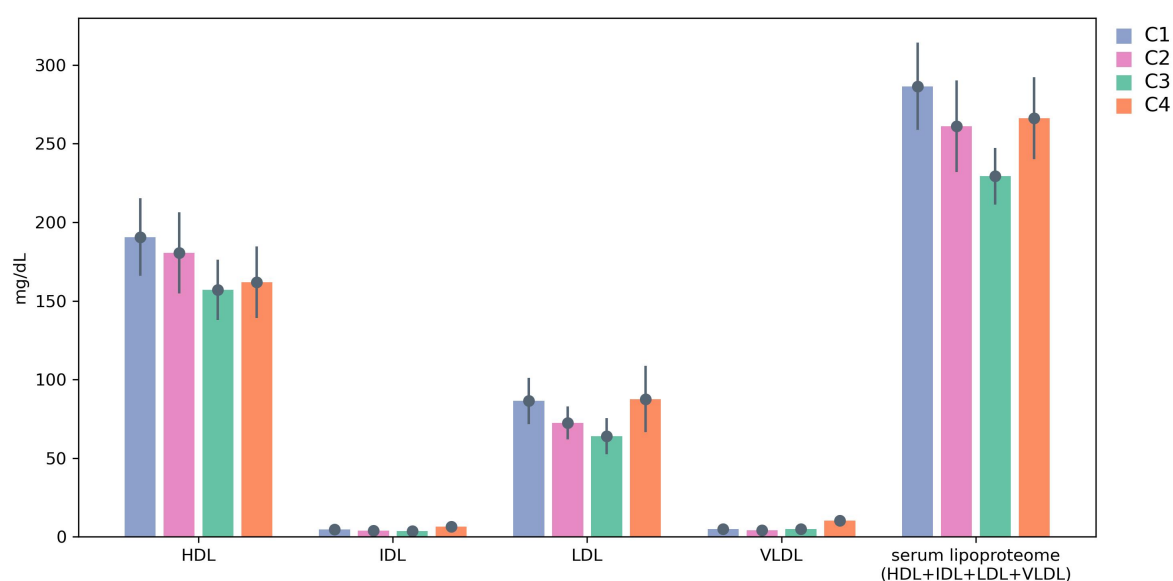


Figure SF2: Average levels (mg/dL) of serum main fractions of HDL, IDL, LDL and VLDL for each identified cluster. Error bars represent standard-deviation.

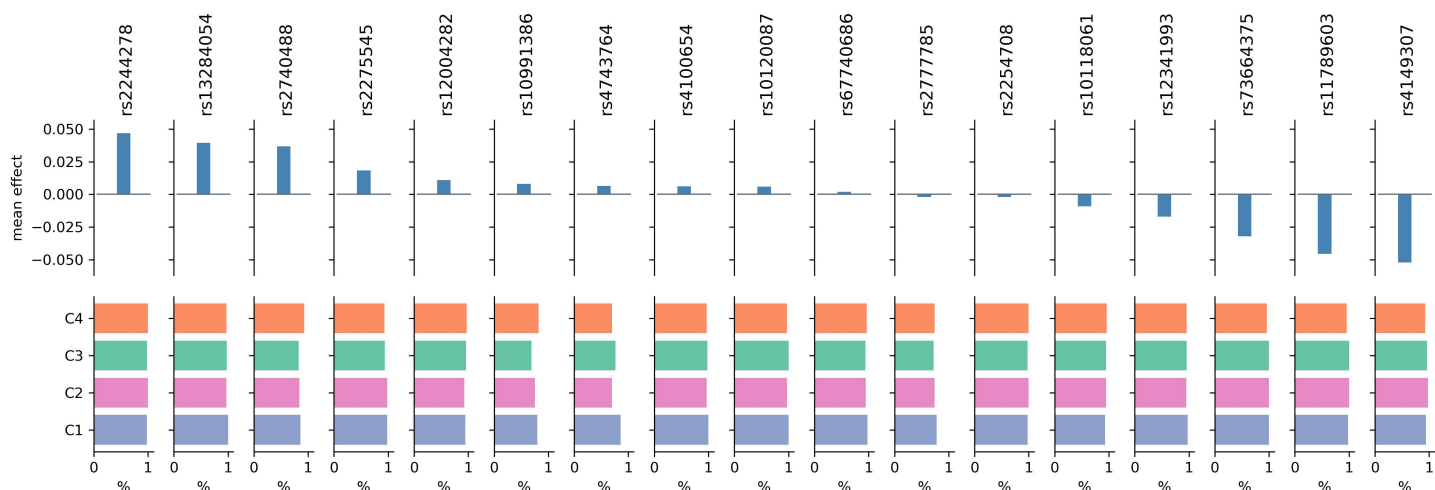


Figure SF3: 17 transcript variants of *ABCA1*. Top panel shows average effect of the effect allele for each variant across all OMICS PRED models. Bottom panel shows percentage of individuals in each cluster that carry at least one effect allele.

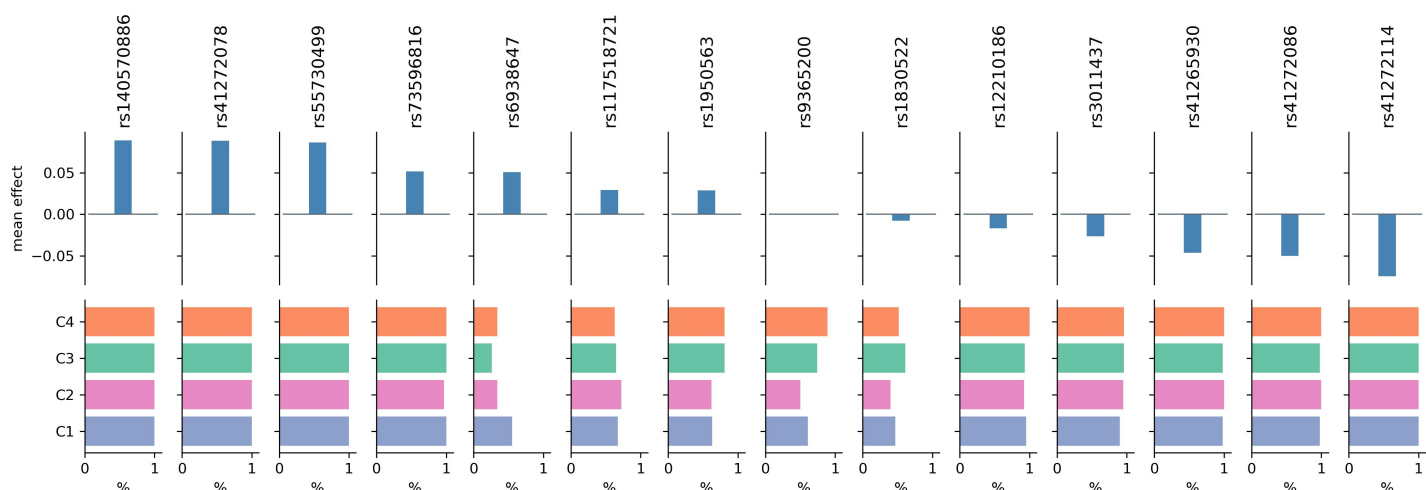


Figure SF4: 14 transcript variants of *LPA*. Top panel shows average effect of the effect allele for each variant across all OMICS PRED models. Bottom panel shows percentage of individuals in each cluster that carry at least one effect allele.

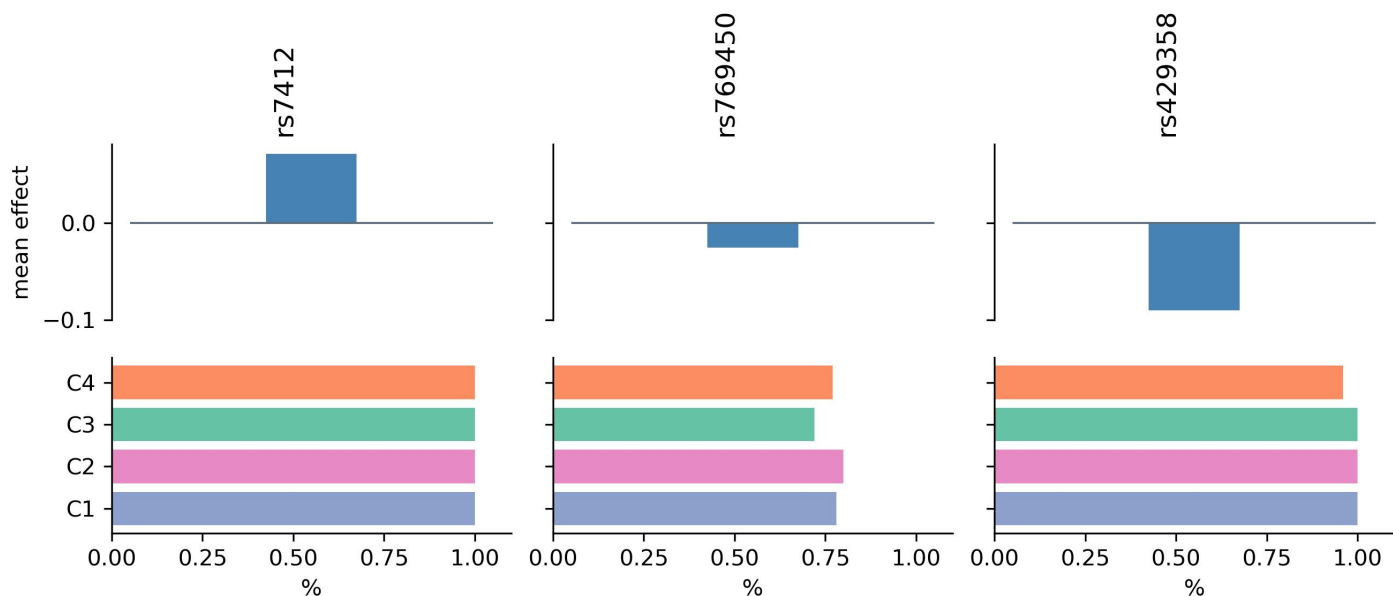


Figure SF5: 3 transcript variants of *APOE*. Top panel shows average effect of the effect allele for each variant across all OMICS PRED models. Bottom panel shows percentage of individuals in each cluster that carry at least one effect allele.

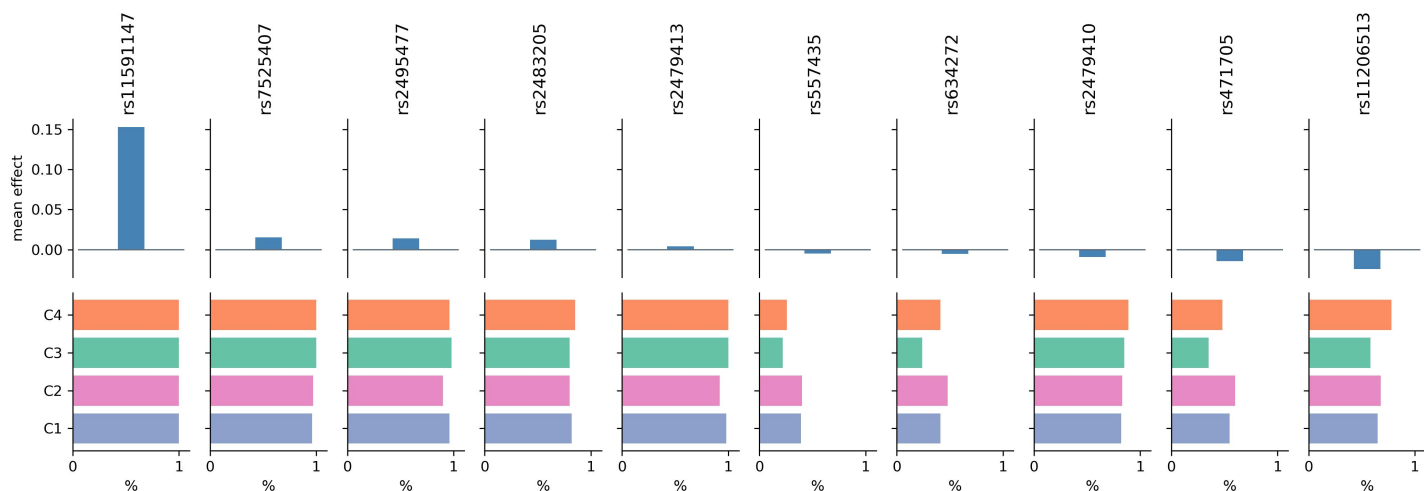


Figure SF6: 10 transcript variants of *PCSK9*. Top panel shows average effect of the effect allele for each variant across all OMICS PRED models. Bottom panel shows percentage of individuals in each cluster that carry at least one effect allele.

Supplementary Tables

Table ST1: Results from logistic regression using biomolecular traits as response variables and PGS as predictors, correcting at the same time for age, gender and BMI.

trait	Pseudo -R2	regress or	coef	std-err	z	P> z	95%C l-min	95%CI -max	Description
Glycine	0.1839	Intercept	-1.1437	0.336	-3.403	0.001	-1.802	-0.485	Glycine
Glycine	0.1839	PGS	1.7808	0.432	4.122	0	0.934	2.627	Glycine
Glycine	0.1839	gender	-1.825	0.492	-3.708	0	-2.79	-0.86	Glycine
Glycine	0.1839	age	0.4177	0.4	1.045	0.296	-0.366	1.201	Glycine
Glycine	0.1839	bmi	-0.4558	0.735	-0.62	0.535	-1.897	0.985	Glycine
Histidine	0.01977	Intercept	-0.5895	0.28	-2.109	0.035	-1.137	-0.042	Histidine
Histidine	0.01977	PGS	0.1483	0.368	0.403	0.687	-0.573	0.87	Histidine
Histidine	0.01977	gender	0.1964	0.329	0.597	0.55	-0.448	0.841	Histidine
Histidine	0.01977	age	0.6149	0.322	1.911	0.056	-0.016	1.245	Histidine
Histidine	0.01977	bmi	-0.2047	0.575	-0.356	0.722	-1.331	0.922	Histidine
Glutamine	0.04499	Intercept	-1.3639	0.322	-4.241	0	-1.994	-0.734	Glutamine
Glutamine	0.04499	PGS	0.6208	0.393	1.578	0.115	-0.15	1.392	Glutamine
Glutamine	0.04499	gender	0.8847	0.356	2.488	0.013	0.188	1.582	Glutamine
Glutamine	0.04499	age	0.0432	0.355	0.122	0.903	-0.653	0.739	Glutamine

Glutamine	0.04499	bmi	-0.5198	0.692	-0.752	0.452	-1.875	0.836	Glutamine
Tyrosine	0.1393	Intercept	-1.2747	0.324	-3.937	0	-1.909	-0.64	Tyrosine
Tyrosine	0.1393	PGS	1.0798	0.421	2.568	0.01	0.256	1.904	Tyrosine
Tyrosine	0.1393	gender	1.3305	0.37	3.594	0	0.605	2.056	Tyrosine
Tyrosine	0.1393	age	1.1399	0.352	3.235	0.001	0.449	1.831	Tyrosine
Tyrosine	0.1393	bmi	0.4597	0.656	0.7	0.484	-0.827	1.746	Tyrosine
Phenylalanine	0.01678	Intercept	-1.0029	0.312	-3.219	0.001	-1.614	-0.392	Phenylalanine
Phenylalanine	0.01678	PGS	0.0615	0.39	0.158	0.875	-0.704	0.827	Phenylalanine
Phenylalanine	0.01678	gender	0.4261	0.342	1.246	0.213	-0.244	1.096	Phenylalanine
Phenylalanine	0.01678	age	0.1563	0.34	0.46	0.645	-0.509	0.822	Phenylalanine
Phenylalanine	0.01678	bmi	0.7332	0.569	1.288	0.198	-0.382	1.849	Phenylalanine
Creatinine	0.2434	Intercept	-1.7062	0.376	-4.532	0	-2.444	-0.968	Creatinine
Creatinine	0.2434	PGS	0.1646	0.467	0.352	0.725	-0.751	1.08	Creatinine
Creatinine	0.2434	gender	2.5738	0.411	6.256	0	1.767	3.38	Creatinine
Creatinine	0.2434	age	-0.3923	0.396	-0.99	0.322	-1.169	0.384	Creatinine
Creatinine	0.2434	bmi	1.4645	0.669	2.19	0.029	0.154	2.775	Creatinine

Valine	0.2079	Intercept	-1.792	0.363	-4.935	0	-2.504	-1.08	Valine
Valine	0.2079	PGS	0.181	0.447	0.405	0.685	-0.694	1.056	Valine
Valine	0.2079	gender	2.2286	0.418	5.337	0	1.41	3.047	Valine
Valine	0.2079	age	-0.7077	0.406	-1.743	0.081	-1.504	0.088	Valine
Valine	0.2079	bmi	1.7908	0.661	2.711	0.007	0.496	3.086	Valine
Leucine	0.2267	Intercept	-2.1044	0.397	-5.3	0	-2.883	-1.326	Leucine
Leucine	0.2267	PGS	1.1499	0.444	2.588	0.01	0.279	2.021	Leucine
Leucine	0.2267	gender	2.2729	0.411	5.531	0	1.467	3.078	Leucine
Leucine	0.2267	age	-0.1924	0.396	-0.485	0.627	-0.969	0.584	Leucine
Leucine	0.2267	bmi	1.3515	0.665	2.033	0.042	0.049	2.654	Leucine
Isoleucine	0.138	Intercept	-1.2466	0.317	-3.931	0	-1.868	-0.625	Isoleucine
Isoleucine	0.138	PGS	0.0968	0.413	0.234	0.815	-0.713	0.907	Isoleucine
Isoleucine	0.138	gender	1.8501	0.362	5.111	0	1.141	2.56	Isoleucine
Isoleucine	0.138	age	-0.2288	0.36	-0.635	0.525	-0.935	0.477	Isoleucine
Isoleucine	0.138	bmi	0.7309	0.619	1.181	0.238	-0.482	1.944	Isoleucine
Glucose	0.04364	Intercept	-1.5421	0.345	-4.469	0	-2.218	-0.866	Glucose
Glucose	0.04364	PGS	0.2686	0.367	0.731	0.465	-0.451	0.989	Glucose
Glucose	0.04364	gender	0.2438	0.36	0.678	0.498	-0.461	0.949	Glucose
Glucose	0.04364	age	0.7734	0.359	2.156	0.031	0.07	1.477	Glucose

Glucose	0.04364	bmi	0.8798	0.581	1.513	0.13	-0.26	2.019	Glucose
Acetoacetic acid	0.03635	Intercept	-1.0043	0.306	-3.282	0.001	-1.604	-0.405	Acetoacetic acid
Acetoacetic acid	0.03635	PGS	0.7244	0.365	1.987	0.047	0.01	1.439	Acetoacetic acid
Acetoacetic acid	0.03635	gender	0.4806	0.346	1.387	0.165	-0.198	1.16	Acetoacetic acid
Acetoacetic acid	0.03635	age	-0.3114	0.344	-0.904	0.366	-0.986	0.364	Acetoacetic acid
Acetoacetic acid	0.03635	bmi	0.5302	0.581	0.913	0.361	-0.608	1.668	Acetoacetic acid
LDCH	0.0625	Intercept	-2.0387	0.389	-5.239	0	-2.801	-1.276	Lipoprotein Main Fractions, Cholesterol, LDL
LDCH	0.0625	PGS	1.0638	0.412	2.579	0.01	0.255	1.872	Lipoprotein Main Fractions, Cholesterol, LDL
LDCH	0.0625	gender	0.7207	0.388	1.86	0.063	-0.039	1.48	Lipoprotein Main Fractions, Cholesterol, LDL
LDCH	0.0625	age	0.5471	0.382	1.431	0.152	-0.202	1.296	Lipoprotein Main Fractions, Cholesterol, LDL
LDCH	0.0625	bmi	0.4148	0.611	0.679	0.497	-0.783	1.612	Lipoprotein Main Fractions,

									Cholesterol, LDL
IDFC	0.1712	Intercept	-2.7415	0.463	-5.915	0	-3.65	-1.833	Lipoprotein Main Fractions, Free Cholesterol, IDL
IDFC	0.1712	PGS	-0.0573	0.476	-0.12	0.904	-0.989	0.875	Lipoprotein Main Fractions, Free Cholesterol, IDL
IDFC	0.1712	gender	1.7463	0.414	4.218	0	0.935	2.558	Lipoprotein Main Fractions, Free Cholesterol, IDL
IDFC	0.1712	age	1.3211	0.427	3.09	0.002	0.483	2.159	Lipoprotein Main Fractions, Free Cholesterol, IDL
IDFC	0.1712	bmi	0.5192	0.681	0.762	0.446	-0.816	1.854	Lipoprotein Main Fractions, Free Cholesterol, IDL
IDPL	0.1176	Intercept	-2.3351	0.419	-5.574	0	-3.156	-1.514	Lipoprotein Main Fractions, Phospholipids, IDL

IDPL	0.1176	PGS	0.0042	0.461	0.009	0.993	-0.899	0.907	Lipoprotein Main Fractions, Phospholipids, IDL
IDPL	0.1176	gender	1.2969	0.397	3.266	0.001	0.519	2.075	Lipoprotein Main Fractions, Phospholipids, IDL
IDPL	0.1176	age	0.9116	0.401	2.275	0.023	0.126	1.697	Lipoprotein Main Fractions, Phospholipids, IDL
IDPL	0.1176	bmi	1.2945	0.624	2.076	0.038	0.072	2.517	Lipoprotein Main Fractions, Phospholipids, IDL
IDCH	0.1819	Intercept	-2.9199	0.479	-6.102	0	-3.858	-1.982	Lipoprotein Main Fractions, Cholesterol, IDL
IDCH	0.1819	PGS	0.3236	0.465	0.696	0.486	-0.588	1.235	Lipoprotein Main Fractions, Cholesterol, IDL
IDCH	0.1819	gender	1.7971	0.419	4.293	0	0.977	2.618	Lipoprotein Main Fractions, Cholesterol, IDL
IDCH	0.1819	age	1.3295	0.431	3.083	0.002	0.484	2.175	Lipoprotein Main Fractions,

									Cholesterol, IDL
IDCH	0.1819	bmi	0.9952	0.668	1.49	0.136	-0.314	2.304	Lipoprotein Main Fractions, Cholesterol, IDL
VLAB	0.1298	Intercept	-2.5596	0.441	-5.807	0	-3.423	-1.696	Lipoprotein Main Fractions, Apo-B, VLDL
VLAB	0.1298	PGS	0.2868	0.446	0.644	0.52	-0.587	1.16	Lipoprotein Main Fractions, Apo-B, VLDL
VLAB	0.1298	gender	1.1545	0.396	2.918	0.004	0.379	1.93	Lipoprotein Main Fractions, Apo-B, VLDL
VLAB	0.1298	age	1.2626	0.417	3.027	0.002	0.445	2.08	Lipoprotein Main Fractions, Apo-B, VLDL
VLAB	0.1298	bmi	1.2899	0.627	2.058	0.04	0.061	2.519	Lipoprotein Main Fractions, Apo-B, VLDL
IDTG	0.0994	Intercept	-2.3443	0.415	-5.646	0	-3.158	-1.53	Lipoprotein Main Fractions, Triglycerides , IDL
IDTG	0.0994	PGS	0.4623	0.43	1.074	0.283	-0.381	1.306	Lipoprotein Main Fractions, Triglycerides

									, IDL
IDTG	0.0994	gender	0.8732	0.387	2.254	0.024	0.114	1.632	Lipoprotein Main Fractions, Triglycerides , IDL
IDTG	0.0994	age	1.0735	0.401	2.674	0.007	0.287	1.86	Lipoprotein Main Fractions, Triglycerides , IDL
IDTG	0.0994	bmi	1.2705	0.609	2.086	0.037	0.077	2.464	Lipoprotein Main Fractions, Triglycerides , IDL
TPCH	0.04903	Intercept	-1.8698	0.371	-5.043	0	-2.596	-1.143	Main Parameters, Cholesterol, Chol
TPCH	0.04903	PGS	0.963	0.399	2.411	0.016	0.18	1.746	Main Parameters, Cholesterol, Chol
TPCH	0.04903	gender	0.4773	0.378	1.264	0.206	-0.263	1.217	Main Parameters, Cholesterol, Chol
TPCH	0.04903	age	0.5319	0.379	1.405	0.16	-0.21	1.274	Main Parameters, Cholesterol, Chol
TPCH	0.04903	bmi	0.1847	0.639	0.289	0.773	-1.069	1.438	Main Parameters, Cholesterol, Chol

LDTG	0.1066	Intercept	-2.4675	0.428	-5.767	0	-3.306	-1.629	Lipoprotein Main Fractions, Triglycerides , LDL
LDTG	0.1066	PGS	0.8404	0.418	2.01	0.044	0.021	1.66	Lipoprotein Main Fractions, Triglycerides , LDL
LDTG	0.1066	gender	0.8818	0.389	2.268	0.023	0.12	1.644	Lipoprotein Main Fractions, Triglycerides , LDL
LDTG	0.1066	age	1.2786	0.412	3.106	0.002	0.472	2.085	Lipoprotein Main Fractions, Triglycerides , LDL
LDTG	0.1066	bmi	0.0007	0.669	0.001	0.999	-1.311	1.312	Lipoprotein Main Fractions, Triglycerides , LDL
VLTG	0.1309	Intercept	-2.5727	0.441	-5.837	0	-3.437	-1.709	Lipoprotein Main Fractions, Triglycerides , VLDL
VLTG	0.1309	PGS	0.6718	0.427	1.575	0.115	-0.164	1.508	Lipoprotein Main Fractions, Triglycerides , VLDL
VLTG	0.1309	gender	1.3243	0.399	3.321	0.001	0.543	2.106	Lipoprotein Main Fractions,

									Triglycerides , VLDL
VLTG	0.1309	age	0.9623	0.407	2.362	0.018	0.164	1.761	Lipoprotein Main Fractions, Triglycerides , VLDL
VLTG	0.1309	bmi	1.2945	0.627	2.064	0.039	0.066	2.523	Lipoprotein Main Fractions, Triglycerides , VLDL
HDTG	0.05646	Intercept	-1.5199	0.342	-4.445	0	-2.19	-0.85	Lipoprotein Main Fractions, Triglycerides , HDL
HDTG	0.05646	PGS	0.7074	0.403	1.755	0.079	-0.082	1.497	Lipoprotein Main Fractions, Triglycerides , HDL
HDTG	0.05646	gender	-0.6331	0.401	-1.58	0.114	-1.419	0.152	Lipoprotein Main Fractions, Triglycerides , HDL
HDTG	0.05646	age	0.8009	0.385	2.078	0.038	0.046	1.556	Lipoprotein Main Fractions, Triglycerides , HDL
HDTG	0.05646	bmi	0.1063	0.64	0.166	0.868	-1.149	1.361	Lipoprotein Main Fractions, Triglycerides , HDL

TPTG	0.1006	Intercept	-2.3528	0.416	-5.654	0	-3.168	-1.537	Main Parameters, Triglycerides , TG
TPTG	0.1006	PGS	0.4992	0.424	1.178	0.239	-0.332	1.33	Main Parameters, Triglycerides , TG
TPTG	0.1006	gender	0.8746	0.388	2.256	0.024	0.115	1.635	Main Parameters, Triglycerides , TG
TPTG	0.1006	age	1.0759	0.402	2.676	0.007	0.288	1.864	Main Parameters, Triglycerides , TG
TPTG	0.1006	bmi	1.2009	0.61	1.968	0.049	0.005	2.397	Main Parameters, Triglycerides , TG
VLCH	0.1213	Intercept	-2.4576	0.431	-5.706	0	-3.302	-1.613	Lipoprotein Main Fractions, Cholesterol, VLDL
VLCH	0.1213	PGS	0.3587	0.434	0.827	0.408	-0.492	1.209	Lipoprotein Main Fractions, Cholesterol, VLDL
VLCH	0.1213	gender	1.3173	0.396	3.325	0.001	0.541	2.094	Lipoprotein Main Fractions, Cholesterol, VLDL
VLCH	0.1213	age	0.9371	0.404	2.321	0.02	0.146	1.729	Lipoprotein Main

									Fractions, Cholesterol, VLDL
VLCH	0.1213	bmi	1.2894	0.623	2.069	0.039	0.068	2.511	Lipoprotein Main Fractions, Cholesterol, VLDL
HDCH	0.1128	Intercept	-0.8771	0.317	-2.764	0.006	-1.499	-0.255	Lipoprotein Main Fractions, Cholesterol, HDL
HDCH	0.1128	PGS	1.1481	0.415	2.768	0.006	0.335	1.961	Lipoprotein Main Fractions, Cholesterol, HDL
HDCH	0.1128	gender	-1.3106	0.45	-2.914	0.004	-2.192	-0.429	Lipoprotein Main Fractions, Cholesterol, HDL
HDCH	0.1128	age	-0.0643	0.386	-0.166	0.868	-0.822	0.693	Lipoprotein Main Fractions, Cholesterol, HDL
HDCH	0.1128	bmi	-1.8221	1.086	-1.677	0.094	-3.952	0.307	Lipoprotein Main Fractions, Cholesterol, HDL
TPA1	0.09932	Intercept	-0.7217	0.304	-2.376	0.018	-1.317	-0.126	TPA1
TPA1	0.09932	PGS	0.6772	0.433	1.563	0.118	-0.172	1.526	TPA1

TPA1	0.09932	gender	-1.5609	0.467	-3.344	0.001	-2.476	-0.646	TPA1
TPA1	0.09932	age	0.0591	0.383	0.154	0.877	-0.692	0.81	TPA1
TPA1	0.09932	bmi	-1.7831	1.077	-1.656	0.098	-3.894	0.328	TPA1
L4CH	0.09583	Intercept	-2.2703	0.41	-5.531	0	-3.075	-1.466	LDL Subfractions, Cholesterol, LDL-4
L4CH	0.09583	PGS	0.5023	0.441	1.138	0.255	-0.363	1.367	LDL Subfractions, Cholesterol, LDL-4
L4CH	0.09583	gender	1.3364	0.395	3.385	0.001	0.563	2.11	LDL Subfractions, Cholesterol, LDL-4
L4CH	0.09583	age	0.6361	0.391	1.626	0.104	-0.13	1.403	LDL Subfractions, Cholesterol, LDL-4
L4CH	0.09583	bmi	0.8439	0.617	1.369	0.171	-0.365	2.053	LDL Subfractions, Cholesterol, LDL-4
L3CH	0.03785	Intercept	-1.5561	0.353	-4.408	0	-2.248	-0.864	LDL Subfractions, Cholesterol, LDL-3
L3CH	0.03785	PGS	0.9403	0.401	2.346	0.019	0.155	1.726	LDL Subfractions, Cholesterol, LDL-3
L3CH	0.03785	gender	-0.0278	0.387	-0.072	0.943	-0.786	0.73	LDL Subfractions, Cholesterol,

									LDL-3
L3CH	0.03785	age	0.4551	0.375	1.214	0.225	-0.28	1.19	LDL Subfractions, Cholesterol, LDL-3
L3CH	0.03785	bmi	-0.4298	0.699	-0.615	0.538	-1.799	0.939	LDL Subfractions, Cholesterol, LDL-3
L2CH	0.06019	Intercept	-0.9733	0.319	-3.052	0.002	-1.598	-0.348	LDL Subfractions, Cholesterol, LDL-2
L2CH	0.06019	PGS	0.9838	0.397	2.475	0.013	0.205	1.763	LDL Subfractions, Cholesterol, LDL-2
L2CH	0.06019	gender	-0.6428	0.408	-1.576	0.115	-1.442	0.156	LDL Subfractions, Cholesterol, LDL-2
L2CH	0.06019	age	-0.2699	0.376	-0.717	0.473	-1.008	0.468	LDL Subfractions, Cholesterol, LDL-2
L2CH	0.06019	bmi	-0.6729	0.809	-0.832	0.406	-2.258	0.913	LDL Subfractions, Cholesterol, LDL-2
L2FC	0.07816	Intercept	-0.9869	0.318	-3.104	0.002	-1.61	-0.364	LDL Subfractions, Free Cholesterol, LDL-2
L2FC	0.07816	PGS	0.9733	0.408	2.387	0.017	0.174	1.772	LDL Subfractions,

									Free Cholesterol, LDL-2
L2FC	0.07816	gender	-0.9051	0.418	-2.165	0.03	-1.725	-0.086	LDL Subfractions, Free Cholesterol, LDL-2
L2FC	0.07816	age	0.0579	0.378	0.153	0.878	-0.684	0.8	LDL Subfractions, Free Cholesterol, LDL-2
L2FC	0.07816	bmi	-1.8434	1.079	-1.709	0.087	-3.958	0.271	LDL Subfractions, Free Cholesterol, LDL-2
L2PL	0.07009	Intercept	-0.7431	0.312	-2.383	0.017	-1.354	-0.132	LDL Subfractions, Phospholipids, LDL-2
L2PL	0.07009	PGS	0.7512	0.406	1.852	0.064	-0.044	1.546	LDL Subfractions, Phospholipids, LDL-2
L2PL	0.07009	gender	-0.8945	0.416	-2.15	0.032	-1.71	-0.079	LDL Subfractions, Phospholipids, LDL-2
L2PL	0.07009	age	-0.3291	0.377	-0.872	0.383	-1.068	0.41	LDL Subfractions, Phospholipids, LDL-2
L2PL	0.07009	bmi	-1.6729	1.07	-1.563	0.118	-3.77	0.424	LDL Subfractions, Phospholipids

									s, LDL-2
V5PL	0.04336	Intercept	-1.7365	0.371	-4.677	0	-2.464	-1.009	VLDL Subfractions, Phospholipids, VLDL-5
V5PL	0.04336	PGS	0.0304	0.433	0.07	0.944	-0.819	0.88	VLDL Subfractions, Phospholipids, VLDL-5
V5PL	0.04336	gender	0.1952	0.376	0.52	0.603	-0.541	0.931	VLDL Subfractions, Phospholipids, VLDL-5
V5PL	0.04336	age	0.981	0.384	2.556	0.011	0.229	1.733	VLDL Subfractions, Phospholipids, VLDL-5
V5PL	0.04336	bmi	0.4042	0.608	0.665	0.506	-0.787	1.595	VLDL Subfractions, Phospholipids, VLDL-5
L3PL	0.03003	Intercept	-1.4095	0.341	-4.137	0	-2.077	-0.742	LDL Subfractions, Phospholipids, LDL-3
L3PL	0.03003	PGS	0.753	0.396	1.899	0.058	-0.024	1.53	LDL Subfractions, Phospholipids, LDL-3
L3PL	0.03003	gender	-0.2693	0.384	-0.702	0.483	-1.021	0.483	LDL Subfractions, Phospholipids, LDL-3
L3PL	0.03003	age	0.4405	0.372	1.184	0.236	-0.289	1.17	LDL Subfractions, Phospholipid

									s, LDL-3
L3PL	0.03003	bmi	-0.2876	0.693	-0.415	0.678	-1.645	1.07	LDL Subfractions, Phospholipids, LDL-3
L4FC	0.07638	Intercept	-2.1786	0.402	-5.416	0	-2.967	-1.39	LDL Subfractions, Free Cholesterol, LDL-4
L4FC	0.07638	PGS	0.8492	0.41	2.073	0.038	0.046	1.652	LDL Subfractions, Free Cholesterol, LDL-4
L4FC	0.07638	gender	0.9886	0.38	2.598	0.009	0.243	1.734	LDL Subfractions, Free Cholesterol, LDL-4
L4FC	0.07638	age	0.718	0.391	1.838	0.066	-0.048	1.483	LDL Subfractions, Free Cholesterol, LDL-4
L4FC	0.07638	bmi	0.1089	0.648	0.168	0.867	-1.161	1.379	LDL Subfractions, Free Cholesterol, LDL-4
L4PL	0.1338	Intercept	-2.6145	0.448	-5.838	0	-3.492	-1.737	LDL Subfractions, Phospholipids, LDL-4
L4PL	0.1338	PGS	0.892	0.433	2.058	0.04	0.042	1.742	LDL Subfractions, Phospholipid

									s, LDL-4
L4PL	0.1338	gender	1.4696	0.4	3.67	0	0.685	2.254	LDL Subfractions, Phospholipids, LDL-4
L4PL	0.1338	age	0.8912	0.411	2.168	0.03	0.085	1.697	LDL Subfractions, Phospholipids, LDL-4
L4PL	0.1338	bmi	0.7674	0.643	1.194	0.232	-0.492	2.027	LDL Subfractions, Phospholipids, LDL-4
V5TG	0.07004	Intercept	-1.9251	0.382	-5.042	0	-2.673	-1.177	VLDL Subfractions, Triglycerides, VLDL-5
V5TG	0.07004	PGS	0.8296	0.41	2.025	0.043	0.027	1.632	VLDL Subfractions, Triglycerides, VLDL-5
V5TG	0.07004	gender	-0.1681	0.388	-0.433	0.665	-0.929	0.593	VLDL Subfractions, Triglycerides, VLDL-5
V5TG	0.07004	age	1.1569	0.398	2.907	0.004	0.377	1.937	VLDL Subfractions, Triglycerides, VLDL-5
V5TG	0.07004	bmi	-0.016	0.653	-0.025	0.98	-1.295	1.263	VLDL Subfractions, Triglycerides, VLDL-5
V5FC	0.07662	Intercept	-1.8883	0.378	-5	0	-2.628	-1.148	VLDL Subfractions, Free

									Cholesterol, VLDL-5
V5FC	0.07662	PGS	0.0665	0.428	0.155	0.877	-0.773	0.906	VLDL Subfractions, Free Cholesterol, VLDL-5
V5FC	0.07662	gender	-0.0158	0.382	-0.042	0.967	-0.764	0.732	VLDL Subfractions, Free Cholesterol, VLDL-5
V5FC	0.07662	age	1.3326	0.398	3.351	0.001	0.553	2.112	VLDL Subfractions, Free Cholesterol, VLDL-5
V5FC	0.07662	bmi	0.6994	0.601	1.164	0.245	-0.479	1.877	VLDL Subfractions, Free Cholesterol, VLDL-5
H2CH	0.09546	Intercept	-0.5697	0.302	-1.887	0.059	-1.162	0.022	HDL Subfractions, Cholesterol, HDL-2
H2CH	0.09546	PGS	0.5429	0.438	1.24	0.215	-0.316	1.401	HDL Subfractions, Cholesterol, HDL-2
H2CH	0.09546	gender	-1.5045	0.461	-3.263	0.001	-2.408	-0.601	HDL Subfractions, Cholesterol, HDL-2
H2CH	0.09546	age	-0.1886	0.381	-0.494	0.621	-0.936	0.559	HDL Subfractions, Cholesterol,

									HDL-2
H2CH	0.09546	bmi	-1.8272	1.08	-1.692	0.091	-3.944	0.29	HDL Subfractions, Cholesterol, HDL-2
L2TG	0.04251	Intercept	-1.1828	0.321	-3.689	0	-1.811	-0.554	LDL Subfractions, Triglycerides , LDL-2
L2TG	0.04251	PGS	0.9164	0.396	2.315	0.021	0.14	1.692	LDL Subfractions, Triglycerides , LDL-2
L2TG	0.04251	gender	-0.5961	0.397	-1.501	0.133	-1.374	0.182	LDL Subfractions, Triglycerides , LDL-2
L2TG	0.04251	age	0.1377	0.373	0.37	0.712	-0.592	0.868	LDL Subfractions, Triglycerides , LDL-2
L2TG	0.04251	bmi	-0.3345	0.699	-0.478	0.632	-1.705	1.036	LDL Subfractions, Triglycerides , LDL-2
V4PL	0.1539	Intercept	-2.944	0.497	-5.924	0	-3.918	-1.97	VLDL Subfractions, Phospholipids, VLDL-4
V4PL	0.1539	PGS	0.9226	0.444	2.078	0.038	0.053	1.793	VLDL Subfractions, Phospholipids, VLDL-4
V4PL	0.1539	gender	1.2603	0.408	3.089	0.002	0.461	2.06	VLDL Subfractions, Phospholipids

									s, VLDL-4
V4PL	0.1539	age	1.5529	0.44	3.526	0	0.69	2.416	VLDL Subfractions, Phospholipids, VLDL-4
V4PL	0.1539	bmi	0.844	0.651	1.296	0.195	-0.432	2.12	VLDL Subfractions, Phospholipids, VLDL-4
V4TG	0.1129	Intercept	-2.533	0.441	-5.744	0	-3.397	-1.669	VLDL Subfractions, Triglycerides, VLDL-4
V4TG	0.1129	PGS	0.9319	0.426	2.186	0.029	0.096	1.767	VLDL Subfractions, Triglycerides, VLDL-4
V4TG	0.1129	gender	0.6245	0.392	1.593	0.111	-0.144	1.393	VLDL Subfractions, Triglycerides, VLDL-4
V4TG	0.1129	age	1.4747	0.422	3.494	0	0.648	2.302	VLDL Subfractions, Triglycerides, VLDL-4
V4TG	0.1129	bmi	0.3284	0.636	0.516	0.606	-0.919	1.575	VLDL Subfractions, Triglycerides, VLDL-4
H2FC	0.1092	Intercept	-0.7064	0.305	-2.319	0.02	-1.303	-0.109	HDL Subfractions, Free Cholesterol, HDL-2
H2FC	0.1092	PGS	0.9034	0.436	2.074	0.038	0.05	1.757	HDL Subfractions,

									Free Cholesterol, HDL-2
H2FC	0.1092	gender	-1.5707	0.469	-3.349	0.001	-2.49	-0.652	HDL Subfractions, Free Cholesterol, HDL-2
H2FC	0.1092	age	-0.0792	0.385	-0.206	0.837	-0.834	0.676	HDL Subfractions, Free Cholesterol, HDL-2
H2FC	0.1092	bmi	-1.9412	1.089	-1.783	0.075	-4.075	0.192	HDL Subfractions, Free Cholesterol, HDL-2
L3TG	0.06809	Intercept	-1.6316	0.359	-4.54	0	-2.336	-0.927	LDL Subfractions, Triglycerides , LDL-3
L3TG	0.06809	PGS	0.8821	0.415	2.124	0.034	0.068	1.696	LDL Subfractions, Triglycerides , LDL-3
L3TG	0.06809	gender	-0.3849	0.39	-0.987	0.324	-1.149	0.379	LDL Subfractions, Triglycerides , LDL-3
L3TG	0.06809	age	0.9951	0.39	2.555	0.011	0.232	1.759	LDL Subfractions, Triglycerides , LDL-3
L3TG	0.06809	bmi	-1.2306	0.829	-1.485	0.138	-2.855	0.394	LDL Subfractions, Triglycerides

									, LDL-3
V4FC	0.1357	Intercept	-2.807	0.48	-5.848	0	-3.748	-1.866	VLDL Subfractions, Free Cholesterol, VLDL-4
V4FC	0.1357	PGS	0.9226	0.44	2.099	0.036	0.061	1.784	VLDL Subfractions, Free Cholesterol, VLDL-4
V4FC	0.1357	gender	1.1027	0.401	2.747	0.006	0.316	1.89	VLDL Subfractions, Free Cholesterol, VLDL-4
V4FC	0.1357	age	1.5403	0.435	3.545	0	0.689	2.392	VLDL Subfractions, Free Cholesterol, VLDL-4
V4FC	0.1357	bmi	0.4003	0.657	0.609	0.542	-0.887	1.688	VLDL Subfractions, Free Cholesterol, VLDL-4
V3PL	0.1012	Intercept	-2.3963	0.424	-5.653	0	-3.227	-1.566	VLDL Subfractions, Phospholipids, VLDL-3
V3PL	0.1012	PGS	0.7706	0.424	1.817	0.069	-0.06	1.602	VLDL Subfractions, Phospholipids, VLDL-3
V3PL	0.1012	gender	1.1747	0.39	3.015	0.003	0.411	1.938	VLDL Subfractions, Phospholipid

									s, VLDL-3
V3PL	0.1012	age	0.8413	0.399	2.11	0.035	0.06	1.623	VLDL Subfractions, Phospholipids, VLDL-3
V3PL	0.1012	bmi	0.8851	0.62	1.427	0.154	-0.331	2.101	VLDL Subfractions, Phospholipids, VLDL-3
H2TG	0.06502	Intercept	-1.4603	0.349	-4.186	0	-2.144	-0.777	HDL Subfractions, Triglycerides, HDL-2
H2TG	0.06502	PGS	1.0002	0.407	2.46	0.014	0.203	1.797	HDL Subfractions, Triglycerides, HDL-2
H2TG	0.06502	gender	-0.5885	0.401	-1.468	0.142	-1.374	0.197	HDL Subfractions, Triglycerides, HDL-2
H2TG	0.06502	age	0.6767	0.385	1.759	0.079	-0.077	1.431	HDL Subfractions, Triglycerides, HDL-2
H2TG	0.06502	bmi	-1.0018	0.806	-1.243	0.214	-2.582	0.578	HDL Subfractions, Triglycerides, HDL-2
L4TG	0.1062	Intercept	-2.4584	0.43	-5.718	0	-3.301	-1.616	LDL Subfractions, Triglycerides, LDL-4
L4TG	0.1062	PGS	0.7041	0.423	1.666	0.096	-0.124	1.533	LDL Subfractions, Triglycerides

									, LDL-4
L4TG	0.1062	gender	0.7223	0.388	1.862	0.063	-0.038	1.483	LDL Subfractions, Triglycerides , LDL-4
L4TG	0.1062	age	1.4476	0.418	3.459	0.001	0.627	2.268	LDL Subfractions, Triglycerides , LDL-4
L4TG	0.1062	bmi	-0.0278	0.667	-0.042	0.967	-1.335	1.28	LDL Subfractions, Triglycerides , LDL-4
V3TG	0.1045	Intercept	-2.4086	0.421	-5.723	0	-3.233	-1.584	VLDL Subfractions, Triglycerides , VLDL-3
V3TG	0.1045	PGS	1.0243	0.418	2.448	0.014	0.204	1.844	VLDL Subfractions, Triglycerides , VLDL-3
V3TG	0.1045	gender	1.0171	0.388	2.619	0.009	0.256	1.778	VLDL Subfractions, Triglycerides , VLDL-3
V3TG	0.1045	age	0.8744	0.401	2.178	0.029	0.088	1.661	VLDL Subfractions, Triglycerides , VLDL-3
V3TG	0.1045	bmi	0.7728	0.623	1.241	0.214	-0.447	1.993	VLDL Subfractions, Triglycerides , VLDL-3
V2CH	0.1447	Intercept	-2.6836	0.452	-5.935	0	-3.57	-1.797	VLDL Subfractions, Cholesterol,

									VLDL-2
V2CH	0.1447	PGS	0.9618	0.429	2.242	0.025	0.121	1.803	VLDL Subfractions, Cholesterol, VLDL-2
V2CH	0.1447	gender	1.3118	0.402	3.262	0.001	0.524	2.1	VLDL Subfractions, Cholesterol, VLDL-2
V2CH	0.1447	age	1.0228	0.416	2.459	0.014	0.207	1.838	VLDL Subfractions, Cholesterol, VLDL-2
V2CH	0.1447	bmi	1.2173	0.654	1.86	0.063	-0.065	2.5	VLDL Subfractions, Cholesterol, VLDL-2
V5CH	0.02127	Intercept	-1.5103	0.34	-4.445	0	-2.176	-0.844	VLDL Subfractions, Cholesterol, VLDL-5
V5CH	0.02127	PGS	0.2004	0.408	0.491	0.623	-0.6	1.001	VLDL Subfractions, Cholesterol, VLDL-5
V5CH	0.02127	gender	0.1569	0.367	0.427	0.669	-0.563	0.877	VLDL Subfractions, Cholesterol, VLDL-5
V5CH	0.02127	age	0.6123	0.367	1.668	0.095	-0.107	1.332	VLDL Subfractions, Cholesterol, VLDL-5
V5CH	0.02127	bmi	0.429	0.599	0.716	0.474	-0.746	1.604	VLDL Subfractions, Cholesterol,

									VLDL-5
V3FC	0.1194	Intercept	-2.523	0.437	-5.769	0	-3.38	-1.666	VLDL Subfractions, Free Cholesterol, VLDL-3
V3FC	0.1194	PGS	0.8109	0.433	1.873	0.061	-0.037	1.659	VLDL Subfractions, Free Cholesterol, VLDL-3
V3FC	0.1194	gender	1.1486	0.394	2.918	0.004	0.377	1.92	VLDL Subfractions, Free Cholesterol, VLDL-3
V3FC	0.1194	age	1.0619	0.406	2.618	0.009	0.267	1.857	VLDL Subfractions, Free Cholesterol, VLDL-3
V3FC	0.1194	bmi	1.1979	0.623	1.923	0.055	-0.023	2.419	VLDL Subfractions, Free Cholesterol, VLDL-3
V3CH	0.09811	Intercept	-2.3539	0.417	-5.646	0	-3.171	-1.537	VLDL Subfractions, Cholesterol, VLDL-3
V3CH	0.09811	PGS	0.6981	0.422	1.655	0.098	-0.129	1.525	VLDL Subfractions, Cholesterol, VLDL-3
V3CH	0.09811	gender	1.1459	0.387	2.96	0.003	0.387	1.905	VLDL Subfractions, Cholesterol,

									VLDL-3
V3CH	0.09811	age	0.8346	0.398	2.099	0.036	0.055	1.614	VLDL Subfractions, Cholesterol, VLDL-3
V3CH	0.09811	bmi	0.8375	0.614	1.363	0.173	-0.366	2.041	VLDL Subfractions, Cholesterol, VLDL-3
V2TG	0.0932	Intercept	-2.1933	0.392	-5.601	0	-2.961	-1.426	VLDL Subfractions, Triglycerides , VLDL-2
V2TG	0.0932	PGS	0.7412	0.417	1.777	0.076	-0.076	1.559	VLDL Subfractions, Triglycerides , VLDL-2
V2TG	0.0932	gender	1.0371	0.388	2.674	0.007	0.277	1.797	VLDL Subfractions, Triglycerides , VLDL-2
V2TG	0.0932	age	0.5678	0.39	1.457	0.145	-0.196	1.332	VLDL Subfractions, Triglycerides , VLDL-2
V2TG	0.0932	bmi	1.2014	0.618	1.945	0.052	-0.009	2.412	VLDL Subfractions, Triglycerides , VLDL-2
V2PL	0.1521	Intercept	-2.66	0.447	-5.956	0	-3.535	-1.785	VLDL Subfractions, Phospholipids, VLDL-2
V2PL	0.1521	PGS	1.0828	0.425	2.545	0.011	0.249	1.917	VLDL Subfractions, Phospholipid

									s, VLDL-2
V2PL	0.1521	gender	1.3896	0.403	3.452	0.001	0.601	2.179	VLDL Subfractions, Phospholipids, VLDL-2
V2PL	0.1521	age	0.9016	0.409	2.205	0.027	0.1	1.703	VLDL Subfractions, Phospholipids, VLDL-2
V2PL	0.1521	bmi	1.3044	0.654	1.995	0.046	0.023	2.586	VLDL Subfractions, Phospholipids, VLDL-2
V4CH	0.1533	Intercept	-2.9425	0.497	-5.92	0	-3.917	-1.968	VLDL Subfractions, Cholesterol, VLDL-4
V4CH	0.1533	PGS	1.0594	0.441	2.4	0.016	0.194	1.925	VLDL Subfractions, Cholesterol, VLDL-4
V4CH	0.1533	gender	1.32	0.404	3.271	0.001	0.529	2.111	VLDL Subfractions, Cholesterol, VLDL-4
V4CH	0.1533	age	1.4639	0.44	3.327	0.001	0.602	2.326	VLDL Subfractions, Cholesterol, VLDL-4
V4CH	0.1533	bmi	0.6386	0.656	0.974	0.33	-0.647	1.924	VLDL Subfractions, Cholesterol, VLDL-4
H2PL	0.1334	Intercept	-0.4879	0.304	-1.606	0.108	-1.083	0.107	HDL Subfractions, Phospholipid

									s, HDL-2
H2PL	0.1334	PGS	0.5931	0.45	1.319	0.187	-0.288	1.474	HDL Subfractions, Phospholipids, HDL-2
H2PL	0.1334	gender	-1.9938	0.521	-3.829	0	-3.014	-0.973	HDL Subfractions, Phospholipids, HDL-2
H2PL	0.1334	age	-0.1866	0.39	-0.479	0.632	-0.95	0.577	HDL Subfractions, Phospholipids, HDL-2
H2PL	0.1334	bmi	-1.8185	1.079	-1.685	0.092	-3.933	0.296	HDL Subfractions, Phospholipids, HDL-2
V1TG	0.09527	Intercept	-2.1546	0.391	-5.517	0	-2.92	-1.389	VLDL Subfractions, Triglycerides, VLDL-1
V1TG	0.09527	PGS	0.0174	0.435	0.04	0.968	-0.835	0.87	VLDL Subfractions, Triglycerides, VLDL-1
V1TG	0.09527	gender	1.1379	0.387	2.941	0.003	0.38	1.896	VLDL Subfractions, Triglycerides, VLDL-1
V1TG	0.09527	age	0.7492	0.392	1.912	0.056	-0.019	1.517	VLDL Subfractions, Triglycerides, VLDL-1
V1TG	0.09527	bmi	1.2682	0.609	2.083	0.037	0.075	2.462	VLDL Subfractions, Triglycerides

									, VLDL-1
V1CH	0.1098	Intercept	-2.3883	0.413	-5.78	0	-3.198	-1.578	VLDL Subfractions, Cholesterol, VLDL-1
V1CH	0.1098	PGS	0.9323	0.414	2.252	0.024	0.121	1.744	VLDL Subfractions, Cholesterol, VLDL-1
V1CH	0.1098	gender	0.8714	0.389	2.238	0.025	0.108	1.635	VLDL Subfractions, Cholesterol, VLDL-1
V1CH	0.1098	age	0.9152	0.4	2.289	0.022	0.132	1.699	VLDL Subfractions, Cholesterol, VLDL-1
V1CH	0.1098	bmi	1.2151	0.62	1.96	0.05	0	2.43	VLDL Subfractions, Cholesterol, VLDL-1
V2FC	0.1194	Intercept	-2.5058	0.433	-5.784	0	-3.355	-1.657	VLDL Subfractions, Free Cholesterol, VLDL-2
V2FC	0.1194	PGS	0.718	0.427	1.681	0.093	-0.119	1.555	VLDL Subfractions, Free Cholesterol, VLDL-2
V2FC	0.1194	gender	1.1812	0.394	2.995	0.003	0.408	1.954	VLDL Subfractions, Free Cholesterol, VLDL-2

V2FC	0.1194	age	0.9693	0.406	2.388	0.017	0.174	1.765	VLDL Subfractions, Free Cholesterol, VLDL-2
V2FC	0.1194	bmi	1.2484	0.629	1.985	0.047	0.016	2.481	VLDL Subfractions, Free Cholesterol, VLDL-2
H4TG	0.1183	Intercept	-2.532	0.435	-5.815	0	-3.386	-1.679	HDL Subfractions, Triglycerides , HDL-4
H4TG	0.1183	PGS	0.9159	0.425	2.155	0.031	0.083	1.749	HDL Subfractions, Triglycerides , HDL-4
H4TG	0.1183	gender	0.9223	0.394	2.341	0.019	0.15	1.694	HDL Subfractions, Triglycerides , HDL-4
H4TG	0.1183	age	1.1268	0.409	2.755	0.006	0.325	1.928	HDL Subfractions, Triglycerides , HDL-4
H4TG	0.1183	bmi	1.2125	0.62	1.955	0.051	-0.003	2.428	HDL Subfractions, Triglycerides , HDL-4
H1FC	0.1284	Intercept	-0.7015	0.309	-2.273	0.023	-1.306	-0.097	HDL Subfractions, Free Cholesterol, HDL-1
H1FC	0.1284	PGS	0.6527	0.435	1.499	0.134	-0.201	1.506	HDL Subfractions,

									Free Cholesterol, HDL-1
H1FC	0.1284	gender	-1.5192	0.463	-3.283	0.001	-2.426	-0.612	HDL Subfractions, Free Cholesterol, HDL-1
H1FC	0.1284	age	0.087	0.387	0.225	0.822	-0.671	0.845	HDL Subfractions, Free Cholesterol, HDL-1
H1FC	0.1284	bmi	21.4217	16900	-0.001	0.999	33200	33200	HDL Subfractions, Free Cholesterol, HDL-1
V1FC	0.139	Intercept	-2.5521	0.44	-5.801	0	-3.414	-1.69	VLDL Subfractions, Free Cholesterol, VLDL-1
V1FC	0.139	PGS	0.7053	0.433	1.628	0.103	-0.144	1.554	VLDL Subfractions, Free Cholesterol, VLDL-1
V1FC	0.139	gender	1.3497	0.403	3.352	0.001	0.561	2.139	VLDL Subfractions, Free Cholesterol, VLDL-1
V1FC	0.139	age	0.8255	0.407	2.026	0.043	0.027	1.624	VLDL Subfractions, Free Cholesterol,

									VLDL-1
V1FC	0.139	bmi	1.6833	0.638	2.639	0.008	0.433	2.933	VLDL Subfractions, Free Cholesterol, VLDL-1
V1PL	0.118	Intercept	-2.4149	0.422	-5.726	0	-3.241	-1.588	VLDL Subfractions, Phospholipids, VLDL-1
V1PL	0.118	PGS	0.7587	0.428	1.771	0.077	-0.081	1.598	VLDL Subfractions, Phospholipids, VLDL-1
V1PL	0.118	gender	1.3205	0.395	3.341	0.001	0.546	2.095	VLDL Subfractions, Phospholipids, VLDL-1
V1PL	0.118	age	0.6632	0.398	1.667	0.096	-0.117	1.443	VLDL Subfractions, Phospholipids, VLDL-1
V1PL	0.118	bmi	1.3651	0.626	2.181	0.029	0.139	2.592	VLDL Subfractions, Phospholipids, VLDL-1
H3TG	0.1396	Intercept	-2.2089	0.414	-5.33	0	-3.021	-1.397	HDL Subfractions, Triglycerides, HDL-3
H3TG	0.1396	PGS	1.7545	0.418	4.195	0	0.935	2.574	HDL Subfractions, Triglycerides, HDL-3
H3TG	0.1396	gender	-0.1606	0.41	-0.391	0.696	-0.965	0.644	HDL Subfractions,

									Triglycerides , HDL-3
H3TG	0.1396	age	1.0958	0.416	2.633	0.008	0.28	1.912	HDL Subfractions, Triglycerides , HDL-3
H3TG	0.1396	bmi	-0.0415	0.693	-0.06	0.952	-1.399	1.316	HDL Subfractions, Triglycerides , HDL-3
H1CH	0.1323	Intercept	-0.5897	0.308	-1.917	0.055	-1.193	0.013	HDL Subfractions, Cholesterol, HDL-1
H1CH	0.1323	PGS	0.7429	0.442	1.68	0.093	-0.124	1.61	HDL Subfractions, Cholesterol, HDL-1
H1CH	0.1323	gender	-1.5812	0.469	-3.369	0.001	-2.501	-0.661	HDL Subfractions, Cholesterol, HDL-1
H1CH	0.1323	age	-0.1542	0.388	-0.398	0.691	-0.914	0.606	HDL Subfractions, Cholesterol, HDL-1
H1CH	0.1323	bmi	- 17.8623	2949.764	-0.006	0.995	- 5799.294	5763.57	HDL Subfractions, Cholesterol, HDL-1
H4PL	0.07164	Intercept	-2.1562	0.394	-5.469	0	-2.929	-1.383	HDL Subfractions, Phospholipids, HDL-4
H4PL	0.07164	PGS	0.6724	0.414	1.625	0.104	-0.138	1.483	HDL Subfractions,

									Phospholipids, HDL-4
H4PL	0.07164	gender	0.571	0.381	1.5	0.134	-0.175	1.317	HDL Subfractions, Phospholipids, HDL-4
H4PL	0.07164	age	1.1002	0.396	2.778	0.005	0.324	1.877	HDL Subfractions, Phospholipids, HDL-4
H4PL	0.07164	bmi	0.0802	0.653	0.123	0.902	-1.199	1.359	HDL Subfractions, Phospholipids, HDL-4
H4CH	0.05131	Intercept	-1.947	0.376	-5.178	0	-2.684	-1.21	HDL Subfractions, Cholesterol, HDL-4
H4CH	0.05131	PGS	0.3637	0.42	0.867	0.386	-0.459	1.186	HDL Subfractions, Cholesterol, HDL-4
H4CH	0.05131	gender	0.8134	0.373	2.178	0.029	0.082	1.545	HDL Subfractions, Cholesterol, HDL-4
H4CH	0.05131	age	0.6553	0.382	1.716	0.086	-0.093	1.404	HDL Subfractions, Cholesterol, HDL-4
H4CH	0.05131	bmi	0.5322	0.613	0.869	0.385	-0.669	1.733	HDL Subfractions, Cholesterol, HDL-4
H3CH	0.1112	Intercept	-0.9653	0.326	-2.963	0.003	-1.604	-0.327	HDL Subfractions,

									Cholesterol, HDL-3
H3CH	0.1112	PGS	0.8129	0.425	1.912	0.056	-0.021	1.646	HDL Subfractions, Cholesterol, HDL-3
H3CH	0.1112	gender	-1.563	0.466	-3.35	0.001	-2.477	-0.649	HDL Subfractions, Cholesterol, HDL-3
H3CH	0.1112	age	0.405	0.387	1.046	0.296	-0.354	1.164	HDL Subfractions, Cholesterol, HDL-3
H3CH	0.1112	bmi	-1.4999	1.077	-1.393	0.164	-3.611	0.611	HDL Subfractions, Cholesterol, HDL-3
H4FC	0.03565	Intercept	-1.7309	0.352	-4.922	0	-2.42	-1.042	HDL Subfractions, Free Cholesterol, HDL-4
H4FC	0.03565	PGS	0.5572	0.401	1.388	0.165	-0.23	1.344	HDL Subfractions, Free Cholesterol, HDL-4
H4FC	0.03565	gender	0.3657	0.372	0.982	0.326	-0.364	1.096	HDL Subfractions, Free Cholesterol, HDL-4
H4FC	0.03565	age	0.663	0.377	1.758	0.079	-0.076	1.402	HDL Subfractions, Free Cholesterol,

									HDL-4
H4FC	0.03565	bmi	-0.3117	0.695	-0.448	0.654	-1.675	1.051	HDL Subfractions, Free Cholesterol, HDL-4
H3PL	0.1278	Intercept	-0.5511	0.316	-1.746	0.081	-1.17	0.067	HDL Subfractions, Phospholipids, HDL-3
H3PL	0.1278	PGS	0.4189	0.433	0.967	0.334	-0.43	1.268	HDL Subfractions, Phospholipids, HDL-3
H3PL	0.1278	gender	-1.9533	0.516	-3.785	0	-2.965	-0.942	HDL Subfractions, Phospholipids, HDL-3
H3PL	0.1278	age	-0.0249	0.388	-0.064	0.949	-0.786	0.736	HDL Subfractions, Phospholipids, HDL-3
H3PL	0.1278	bmi	-1.6067	1.078	-1.49	0.136	-3.72	0.507	HDL Subfractions, Phospholipids, HDL-3
H3FC	0.06144	Intercept	-1.0487	0.327	-3.202	0.001	-1.691	-0.407	HDL Subfractions, Free Cholesterol, HDL-3
H3FC	0.06144	PGS	0.3819	0.415	0.921	0.357	-0.431	1.195	HDL Subfractions, Free Cholesterol, HDL-3

H3FC	0.06144	gender	-0.947	0.414	-2.286	0.022	-1.759	-0.135	HDL Subfractions, Free Cholesterol, HDL-3
H3FC	0.06144	age	0.5089	0.378	1.347	0.178	-0.231	1.249	HDL Subfractions, Free Cholesterol, HDL-3
H3FC	0.06144	bmi	-1.5913	1.07	-1.487	0.137	-3.689	0.506	HDL Subfractions, Free Cholesterol, HDL-3

SM1.Whole exome analytical pipeline based on GATK best practises pipeline for germline short variants identification.

Trimming of adapters in raw fastq files

```
4 | cutadapt \  
5 |     -j 10 \  
6 |     -m 20 \  
7 |     -q 20 \  
8 |     -a $adapter_3p \  
9 |     -A $adapter_3p \  
10 |    -g $adapter_5p \  
11 |    -G $adapter_5p \  
12 |    -o $outR1 \  
13 |    -p $outR2 \  
14 |    $inR1 $inR2
```

Indexing of human reference

```
16 | bwa index -b 375000000 -a bwtsv $reference
```

Alignment to the human reference

```
18 | bwa mem -M -t 10 $reference $inR1 $inR2
```

Filtering based on mapping quality

```
20 | cat $inFile \  
21 |     | grep -v chrUn \  
22 |     | grep -v random \  
23 |     | samtools view -bSq 20 - > $outFile
```

Sorting of BAM file

```
25 | picard SortSam \  
26 |     --VALIDATION_STRINGENCY SILENT \  
27 |     --SORT_ORDER coordinate \  
28 |     --TMP_DIR $tmpDir \  
29 |     --INPUT ${inFile} \  
30 |     --OUTPUT ${outFile}
```

Duplicates removal

```
32 | picard MarkDuplicates \  
33 |     --REMOVE_DUPLICATES true \  
34 |     --TMP_DIR $tmpDir \  
35 |     --VALIDATION_STRINGENCY SILENT \  
36 |     --INPUT ${inFile} \  
37 |     --OUTPUT ${outFile} \  
38 |     --METRICS_FILE ${metrics}
```

Add read group

```
40 | picard AddOrReplaceReadGroups \  
41 |     --INPUT ${inFile} \  
42 |     --OUTPUT ${outFile} \  
43 |     --SORT_ORDER coordinate \  
44 |     --VALIDATION_STRINGENCY SILENT \  
45 |     --CREATE_INDEX true \  
46 |     --TMP_DIR $tmpDir \  
47 |     --RGID "${flowCellName}_${laneNumber}" \  
48 |     --RGLB nexteraflex
```

```

49 | --RGPL illumina \
50 | --RGPU "${flowCellName}_${laneNumber}_${filePrefix}" \
51 | --RGSF "${filePrefix}"

```

52 Base quality recalibration

53 For this step the following files were downloaded from GATK resource bundle:

```

54 Homo_sapiens_assembly38.dbsnp138.vcf
55 Homo_sapiens_assembly38.dbsnp138.vcf.idx
56 Mills_and_1000G_gold_standard.indels.hg38.vcf.gz
57 Mills_and_1000G_gold_standard.indels.hg38.vcf.gz.tbi
58 Homo_sapiens_assembly38.known_indels.vcf.gz
59 Homo_sapiens_assembly38.known_indels.vcf.gz.tbi

```

60

```

61 | gatk --java-options "-Xmx30g" BaseRecalibrator \
62 |   --input $inFile \
63 |   --known-sites $millsindels \
64 |   --known-sites $grch38indels \
65 |   --known-sites $grch38dbsnp \
66 |   --reference $reference \
67 |   --tmp-dir $tmpDir \
68 |   --output $outFile

```

```

69 | gatk --java-options "-Xmx20g" ApplyBQSR \
70 |   --input $inFileBam \
71 |   --reference $reference \
72 |   --bqsr-recal-file $inFileTable \
73 |   --tmp-dir $tmpDir \
74 |   --output $outFile

```

75 Variant calling

```

76 | samtools faidx $reference.fna

```

```

77 | samtools dict $reference.fna -o $reference.dict

```

```

78 | gatk --java-options "-Xmx30g" HaplotypeCaller \
79 |   -L $targeted_regions \
80 |   -ERC GVCF \
81 |   -ip 100 \
82 |   -R $reference \
83 |   -I $inFile \
84 |   --tmp-dir $tmpDir \
85 |   -O $outFile

```

86 Consolidate GVCFs

```

87 | gatk --java-options "-Xmx30g" GenomicsDBImport \
88 |   -R $reference \
89 |   --genomicsdb-workspace-path $chromosomeOUT \
90 |   --sample-name-map $gvcf_files \
91 |   -L $targeted_regions \
92 |   -ip 100 \
93 |   --merge-input-intervals true \
94 |   --batch-size 50 \
95 |   --tmp-dir $tmpDir \
96 |   --reader-threads 5

```

97 Genotype GVCFs

```

98 1 gatk --java-options "-Xmx30g" GenotypeGVCFs \
99 2   -R $reference \
100 3   -V $inDB \
101 4   -ip 100 \
102 5   --tmp-dir $tmpDir \
103 6   -O $outFile

```

104 **Gather VCFs**

```

105 1 gatk --java-options "-Xmx30g" GatherVcfs \
106 2   -R $reference \
107 3   -I $chr1_vcf \
108 4   -I $chr2_vcf \
109 5   -I $chr3_vcf \
110 6   -I $chr4_vcf \
111 7   -I $chr5_vcf \
112 8   -I $chr6_vcf \
113 9   -I $chr7_vcf \
114 10  -I $chr8_vcf \
115 11  -I $chr9_vcf \
116 12  -I $chr10_vcf \
117 13  -I $chr11_vcf \
118 14  -I $chr12_vcf \
119 15  -I $chr13_vcf \
120 16  -I $chr14_vcf \
121 17  -I $chr15_vcf \
122 18  -I $chr16_vcf \
123 19  -I $chr17_vcf \
124 20  -I $chr18_vcf \
125 21  -I $chr19_vcf \
126 22  -I $chr20_vcf \
127 23  -I $chr21_vcf \
128 24  -I $chr22_vcf \
129 25  -I $chrX_vcf \
130 26  -I $chrY_vcf \
131 27  -I $chrM_vcf \
132 28  --TMP_DIR $tmpDir \
133 29  -O $outFile

```

134 **Index VCF**

```

135 1 tabix -p vcf cohort.vcf.gz

```

136 **Separate indels**

```

137 1 vcftools --keep-only-indels \
138 2   --recode \
139 3   --recode-INFO-all \
140 4   --gzvcf $inFile \
141 5   --out $outFile

```

142 **Separate SNPs**

```

143 1 vcftools --remove-indels \
144 2   --recode \
145 3   --recode-INFO-all \
146 4   --gzvcf $inFile \
147 5   --out $outFile

```

148 **Make site only VCF**

```

149 1 gatk MakeSitesOnlyVcf \

```

```

150 2 --TMP_DIR $tmpDir \
151 3 -I $inFile \
152 4 -O $outFile

```

153 Variant recalibration

154 For this step the following files were downloaded from GATK resource bundle:

```

155 hapmap_3.3.hg38.vcf.gz
156 1000G_omni2.5.hg38.vcf.gz
157 1000G_phase1.snps.high_confidence.hg38.vcf.gz
158 Homo_sapiens_assembly38.dbsnp138.vcf

```

```

159 1 gatk --java-options "-Xmx50g" VariantRecalibrator \
160 2 -mode SNP \
161 3 --trust-all-polymorphic \
162 4 --max-gaussians 6 \
163 5 --tmp-dir $tmpDir \
164 6 -tranche 100.0 \
165 7 -tranche 99.0 \
166 8 -tranche 98.0 \
167 9 -tranche 97.0 \
168 10 -tranche 96.0 \
169 11 -tranche 95.0 \
170 12 -tranche 94.0 \
171 13 -tranche 93.0 \
172 14 -tranche 92.0 \
173 15 -tranche 91.0 \
174 16 -tranche 90.0 \
175 17 -an QD \
176 18 -an MQRankSum \
177 19 -an ReadPosRankSum \
178 20 -an FS \
179 21 -an MQ \
180 22 -an SOR \
181 23 -an DP \
182 24 --resource:hapmap,known=false,training=true,truth=true,prior=15 ${
183 hapmap} \
184 25 --resource:omni,known=false,training=true,truth=true,prior=12 ${omni} \
185 26 --resource:1000G,known=false,training=true,truth=false,prior=10 ${g1000
186 } \
187 27 --resource:dbsnp,known=true,training=false,truth=false,prior=7 ${dbsnp}
188 \
189 28 --tranches-file ${outTranches} \
190 29 --rscript-file ${outRscript} \
191 30 -V ${inFile} \
192 31 -O ${outFile}

```

193 Apply variant recalibration

```

194 1 gatk --java-options "-Xmx50g" ApplyVQSR \
195 2 -mode SNP \
196 3 --tmp-dir $tmpDir \
197 4 -R $reference \
198 5 --truth-sensitivity-filter-level 93.0 \
199 6 --tranches-file $inTranches \
200 7 --recal-file $inRecalTable \
201 8 -V $inVCF \
202 9 -O $outFile

```

203 Calculate genotype posteriors

```
204 1 gatk --java-options "-Xmx20g" CalculateGenotypePosteriors \  
205 2     --tmp-dir $tmpDir \  
206 3     -V $inFile \  
207 4     -O $outFile
```

208 **Variant filtration**

```
209 1 gatk --java-options "-Xmx20g" VariantFiltration \  
210 2     -R $reference \  
211 3     -V $inFile \  
212 4     -O $outFile \  
213 5     --genotype-filter-name "GQfilter" \  
214 6     --genotype-filter-expression "GQ < 20" \  
215 7     --genotype-filter-name "DPfilter" \  
216 8     --genotype-filter-expression "DP < 10"
```

217 **Select variants**

```
218 1 gatk --java-options "-Xmx20g" SelectVariants \  
219 2     -R $reference \  
220 3     --tmp-dir $tmpDir \  
221 4     --exclude-filtered true \  
222 5     -V $inFile \  
223 6     -O $outFile
```