

Captions for Supplementary Materials:

Figure 1

Manhattan plots of all 21 GWAS for clinical lab measures and the results of the following ICD-9 based PheWAS. For each of 21 clinical lab measures, the results of associations are marked as $-\log_{10}$ of the p-value in red, with the abbreviation of each clinical lab measure indicated above each plot, abbreviations explained in Table 1. Plotted in blue are $-\log_{10}$ (p-value) from the associations of distinct ICD-9 code based case/control diagnoses. All results are from p-values < 0.01 . The red dashed line in each Manhattan plot is at the Bonferroni corrected p-value of 1.37×10^{-8} for the clinical lab GWAS, and the blue dashed line is the Bonferroni corrected p-value 4.9×10^{-6} for the ICD-9 diagnoses based PheWAS.

Figure 2a

Comparison of significant SNPs between clinical lab measures and ICD-9 code PheWAS. The x-axis has the clinical lab measures and y-axis shows its association p-value with the SNP, where red dots are the top SNPs from clinical lab PheWAS and blue triangle are the same SNPs associated with ICD-9 diagnoses. Table 2 lists what the ICD-9 diagnoses were for each of the clinical lab measures.

Figure 2b

In this chromosomal ideogram, lines link SNP chromosomal locations to colored diamonds (representing clinical lab measures) or circles (representing ICD-9 diagnoses) showing the cross-phenotype associations for the SNPs identified first with associations with clinical lab measures.

Figure 3

Spectrum of phenotypic associations for *LDLR* SNP rs6511720, for PheWAS p-values < 0.01 . This SNP was originally associated in our study with the clinical lab measure of LDL.

Supplementary Table 1

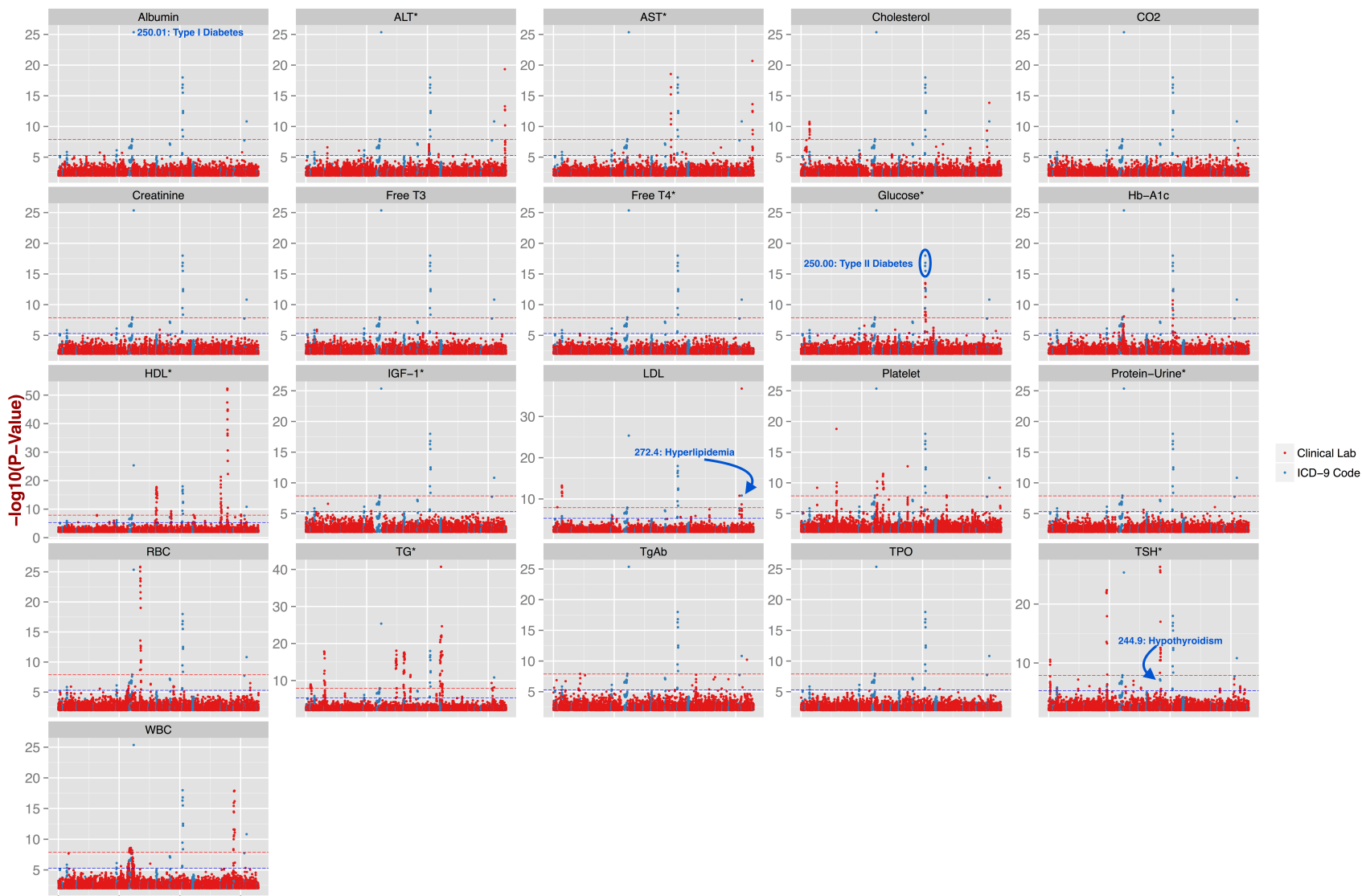
Associations passing our Bonferroni corrected p-value cutoff. The spreadsheet has three tabs: the results of the clinical lab measure GWAS, the results of the ICD-9 based PheWAS, the associations for both combined by SNP.

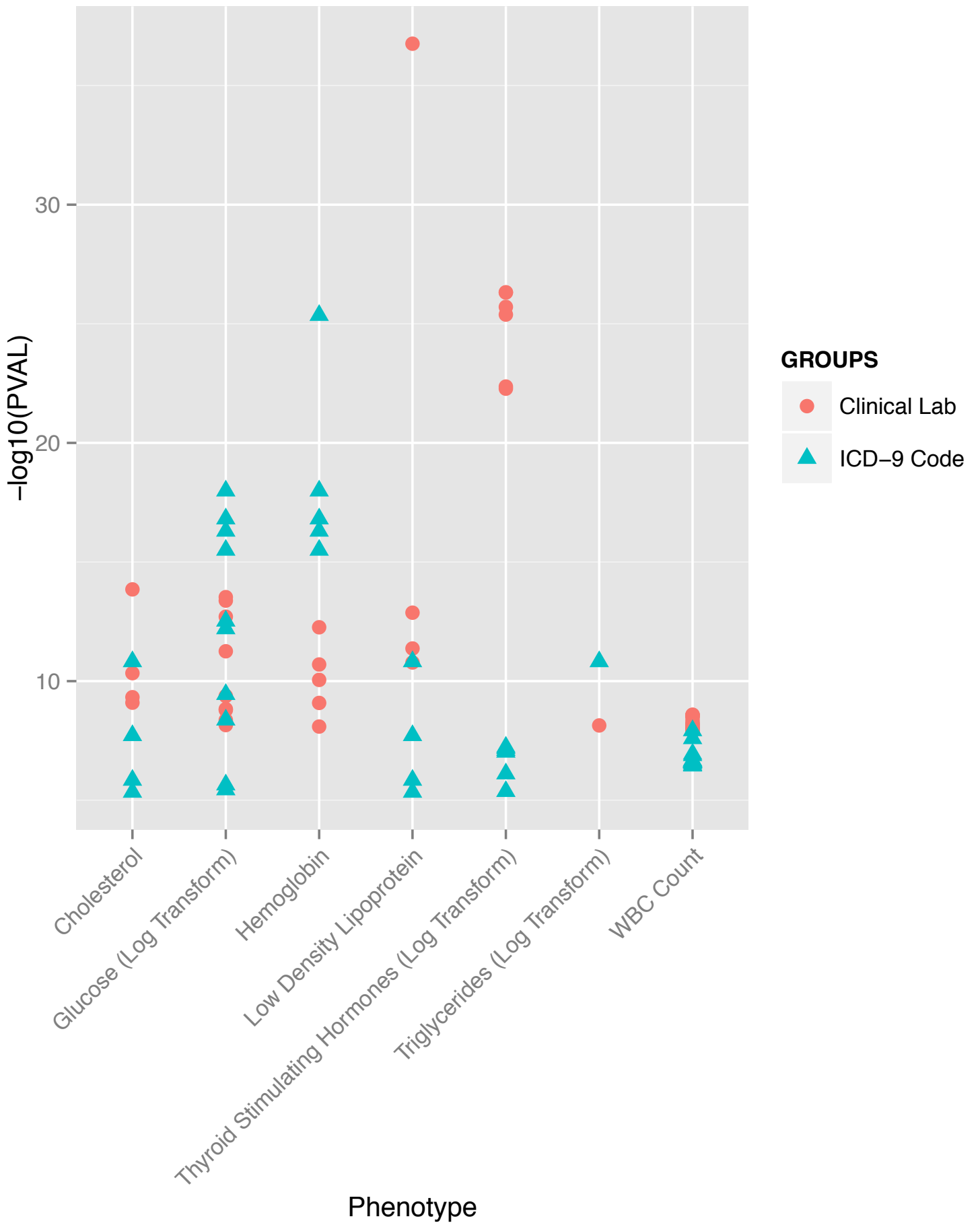
Supplementary Table 2

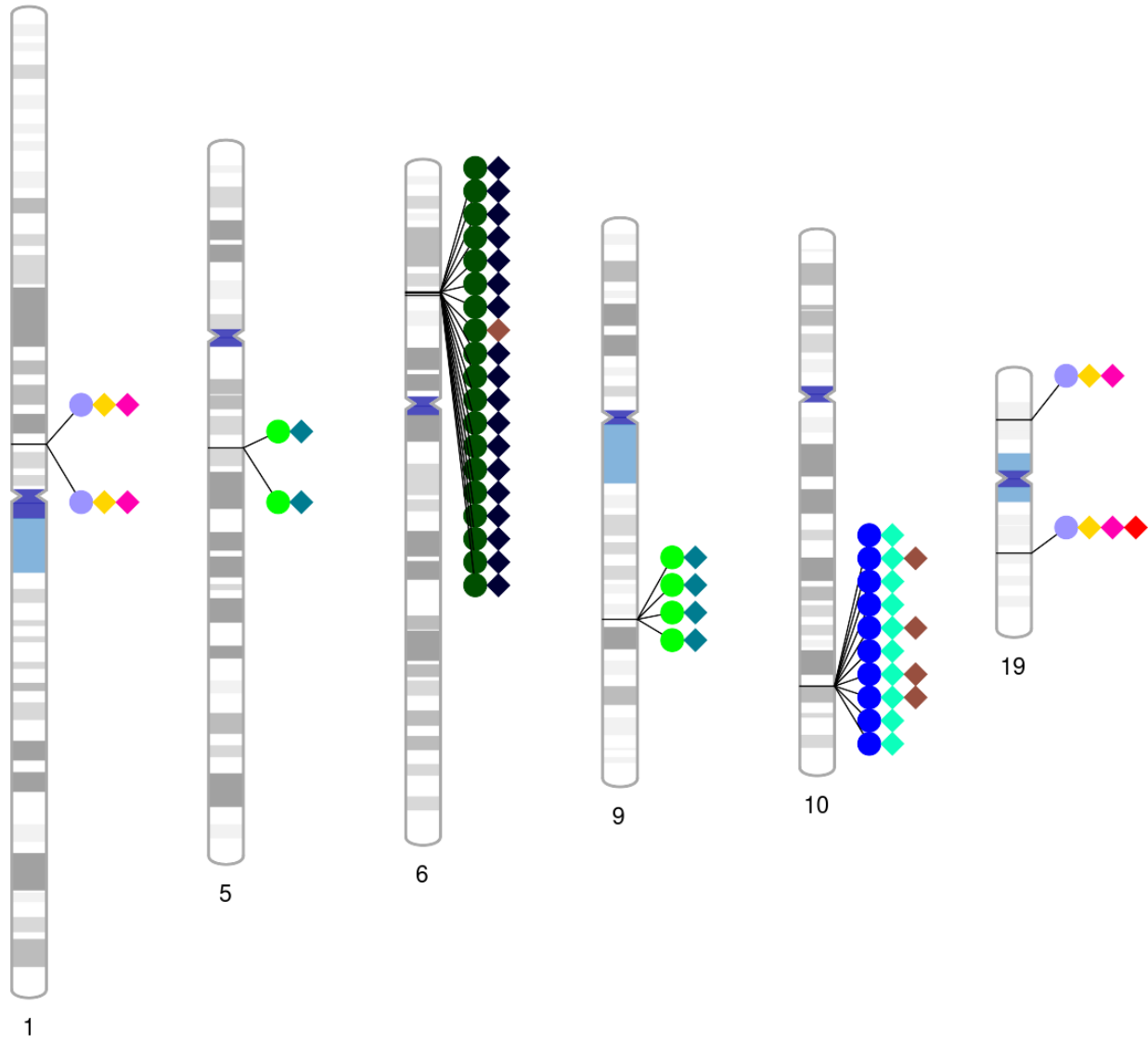
The spreadsheet has two tabs: the clinical lab measures, the ICD-9 code. Each tab provides total number of subjects for the clinical lab measurements, and the total number of cases/controls for the ICD-9 case/control phenotypes. It also includes total number of SNPs passing Bonferoni threshold within each clinical lab measures and ICD-9 codes.

Supplementary Figure

For each clinical lab measure GWAS, there is one Manhattan plot and one quantile-quantile normal plot (QQ-plot). The Manhattan plot on the left shows the p-values from each GWAS, plotted as $-\log_{10}$ of the p-value, across all chromosomes. A red line is placed at our Bonferroni corrected p-value cutoff. On the right is a QQ-plot of all p-values from the GWAS (black points), compared to a normal distribution (red line). The calculated lambda (also known as genomic inflation factor) is noted at the top of the QQ plot, strong deviations above "1" for lambda indicate an inflation of significant p-values or strong non-normality of the distribution of p-values of the GWAS.







○ ICD-9 Code

◇ Clinical Lab

■ 250.01: Diabetes Mellitus Type 1

■ WBC Count

■ 244.9: Hypothyroidism

■ Thyroid Stimulating Hormones

■ 250.00: Diabetes Mellitus Type 2

■ Glucose

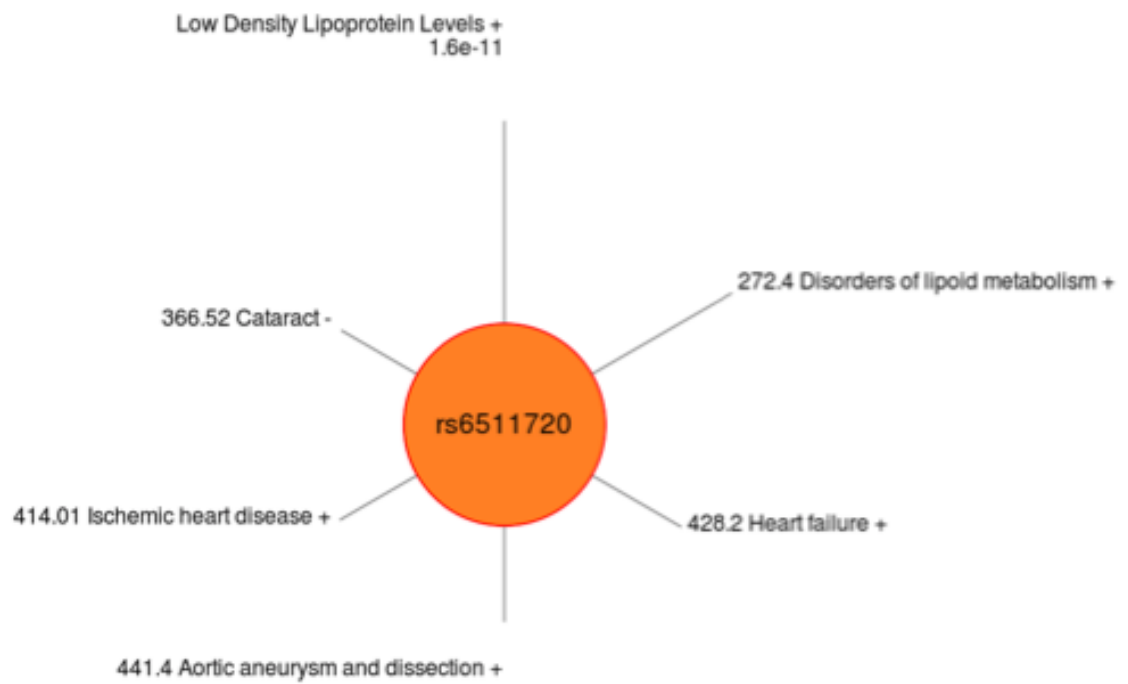
■ Hemoglobin

■ 272.4: Hyperlipidemia

■ Cholesterol

■ Low Density Lipoprotein

■ Triglycerides



MHS-SAPCD1.MHS	rs1171574	White Blood Cell Count	6	3125230 G	0.0	0.26	0.13	0.044	2.72E-09
MHS-SAPCD1.MHS	rs1171574	White Blood Cell Count	6	3125230 A	0.0	0.26	0.13	0.044	2.78E-09
MHS-SAPCD1.MHS	rs1171574	White Blood Cell Count	6	3125231 G	0.0	0.26	0.13	0.044	2.80E-09
MHS-SAPCD1.MHS	rs1171574	White Blood Cell Count	6	3125231 A	0.0	0.26	0.13	0.044	2.82E-09
MHS-SAPCD1.MHS	rs1171574	White Blood Cell Count	6	3125232 G	0.0	0.26	0.13	0.044	2.84E-09
MHS-SAPCD1.MHS	rs1171574	White Blood Cell Count	6	3125232 A	0.0	0.26	0.13	0.044	2.86E-09
AKAI	rs8847300	High Density Lipoprotein (Eq. Transformation)	9	30748400 G	0.08	0.03	0.12	0.006	2.98E-09
AKAI	rs8847300	High Density Lipoprotein (Eq. Transformation)	9	30748400 A	0.08	0.03	0.12	0.006	3.00E-09
MHS-SAPCD1.MHS	rs1171580	White Blood Cell Count	6	3171580 T	0.0	0.26	0.13	0.044	3.10E-09
MHS-SAPCD1.MHS	rs1171580	White Blood Cell Count	6	3171580 A	0.0	0.26	0.13	0.044	3.12E-09
DOCK7	rs162860	Tyrosinase (Eq. Transformation)	1	6366990 C	0.07	0.04	0.09	0.007	3.47E-09
NA	rs1748195	Tyrosinase (Eq. Transformation)	1	6366990 G	0.07	0.04	0.09	0.007	3.47E-09
NA	rs1748195	Tyrosinase (Eq. Transformation)	1	6366990 T	0.06	0.02	0.08	0.004	3.78E-09
NA	rs4484415	Tyrosinase (Eq. Transformation)	8	19776981 A	0.05	0.05	0.12	0.009	3.84E-09
NA	rs4484415	Tyrosinase (Eq. Transformation)	8	19776981 T	0.05	0.05	0.12	0.009	3.86E-09
ARHGFB3	rs13021374	Plasmin	3	5695668 G	0.05	0.45	0.07	0.717	4.10E-09
NA	rs4484415	High Density Lipoprotein (Eq. Transformation)	8	19776981 A	0.05	0.05	0.12	0.009	4.06E-09
NA	rs4484415	High Density Lipoprotein (Eq. Transformation)	8	19776981 T	0.05	0.05	0.12	0.009	4.12E-09
NA	rs8729416	White Blood Cell Count	17	38507314 T	0.04	-0.15	-0.08	0.016	4.12E-09
NA	rs8729416	White Blood Cell Count	17	38507314 A	0.04	0.26	0.13	0.044	4.20E-09
SK1	rs872028	Tyrosinase (Eq. Transformation)	11	11574021 T	0.06	-0.06	-0.12	0.010	4.28E-09
TGFB2	rs12124326	Glucuronidase (Eq. Transformation)	10	11459883 T	0.72	0.02	-0.09	0.003	4.29E-09
NA	rs137782	Thyroid Stimulating Hormone (Eq. Transformation)	9	30054380 G	0.02	0.04	-0.09	0.006	4.71E-09
DOCK7	rs1748195	Tyrosinase (Eq. Transformation)	1	6366990 C	0.07	0.04	0.09	0.007	4.82E-09
DOCK7	rs162860	Tyrosinase (Eq. Transformation)	1	6366990 T	0.07	0.04	0.09	0.007	4.88E-09
TGFB2	rs7961275	Glucuronidase (Eq. Transformation)	10	11459296 A	0.54	0.01	-0.08	0.003	5.06E-09
AKAI	rs2341999	High Density Lipoprotein (Eq. Transformation)	9	30748990 C	0.08	0.03	0.12	0.006	5.14E-09
C2	rs1052701	White Blood Cell Count	6	31870200 G	0.0	0.26	0.13	0.044	5.17E-09
DOCK7	rs2078917	Tyrosinase (Eq. Transformation)	1	6307295 A	0.07	0.04	0.09	0.007	5.95E-09
CGMNA	rs1929201	White Blood Cell Count	12	31832924 T	0.26	0.15	0.08	0.006	5.97E-09
MHS-SAPCD1.MHS	rs1171577	White Blood Cell Count	6	3127274 A	0.0	0.26	0.13	0.044	6.10E-09
MHS-SAPCD1.MHS	rs1171577	White Blood Cell Count	6	3127274 G	0.0	0.26	0.13	0.044	6.16E-09
AP0A4	rs4937773	Tyrosinase (Eq. Transformation)	11	11660334 T	0.06	-0.06	-0.12	0.010	6.16E-09
DOCK7	rs10215025	Tyrosinase (Eq. Transformation)	1	6305904 C	0.08	0.04	0.09	0.007	6.70E-09
DOCK7	rs4847860	Tyrosinase (Eq. Transformation)	1	6305904 C	0.08	0.04	0.09	0.007	6.86E-09
C9ORF2	rs4927511	White Blood Cell Count	6	3168194 A	0.0	0.26	0.13	0.044	6.86E-09
TGFB2	rs12153172	Glucuronidase (Eq. Transformation)	10	11448990 G	0.71	-0.02	-0.09	0.003	6.96E-09
DOCK7	rs10285103	Tyrosinase (Eq. Transformation)	1	6313196 A	0.08	0.04	0.09	0.007	7.12E-09
NA	rs445925	Tyrosinase (Eq. Transformation)	19	4545640 G	0.08	-0.06	-0.13	0.011	7.26E-09
DOCK7	rs1278864	Tyrosinase (Eq. Transformation)	1	6312017 A	0.08	0.04	0.09	0.007	7.63E-09
CELSD3	rs1073983	Cholesteryl	8	30984880 C	0.02	1.08	0.11	0.011	7.84E-09
USP1	rs10883123	Hemoglobin A2c	6	4263695 C	0.73	-0.13	-0.13	0.003	8.06E-09
NA	rs4938883	High Density Lipoprotein (Eq. Transformation)	18	47487214 C	0.03	0.03	0.10	0.005	8.66E-09
USP1	rs10883123	Tyrosinase (Eq. Transformation)	6	4263695 C	0.68	0.04	0.09	0.007	9.00E-09
NA	rs4745568	Plasmin	0.79	-0.29	-0.08	0.011	0.002	0.00	9.02E-09
TRAF8	rs11375715	White Blood Cell Count	6	3158395 A	0.0	0.26	0.13	0.044	9.08E-09
POEHB	rs5681052	Thyroid Stimulating Hormone (Eq. Transformation)	5	7624242 T	0.11	-0.03	-0.08	0.006	9.30E-09
C2	rs1037847	White Blood Cell Count	6	31878420 G	0.0	0.25	0.13	0.044	9.10E-09
NA	rs1201018	White Blood Cell Count	6	3170366 C	0.0	0.25	0.13	0.044	9.25E-09
DOCK7	rs10215025	Tyrosinase (Eq. Transformation)	1	6305904 C	0.08	0.04	0.09	0.007	9.28E-09
LPL	rs44	High Density Lipoprotein (Eq. Transformation)	8	1882107 C	0.0	-0.04	-0.14	0.006	9.42E-09
PCSK9	rs4481268	Low Density Lipoprotein	3	5510249 C	0.08	10.41	0.31	1.87	1.00E-09
C2	rs407139	White Blood Cell Count	6	3182484 A	0.0	0.25	0.13	0.044	1.02E-09
SKI	rs12151452	Tyrosinase (Eq. Transformation)	11	11681104 C	0.08	-0.06	-0.13	0.010	1.03E-09
TMS62	rs4414713	Tyrosinase (Eq. Transformation)	1	11681104 C	0.02	0.07	0.16	0.013	1.05E-09
NA	rs12151452	Tyrosinase (Eq. Transformation)	11	11681104 A	0.0	0.04	0.09	0.007	1.06E-09
NA	rs4414713	High Density Lipoprotein (Eq. Transformation)	7	7584005 A	0.72	0.04	0.09	0.007	1.06E-09
LPL	rs12151452	Tyrosinase (Eq. Transformation)	11	11681104 T	0.0	0.03	0.10	0.005	1.10E-09
FAH3DA	rs1802572	Plasmin	12	11180206 G	0.72	0.07	0.15	0.012	1.10E-09
OPN	rs202827	Thyroglobulin Antibody	2	16281708 G	0.09	-0.01	-1.28	7.87	1.20E-09
PNB2	rs2272385	High Density Lipoprotein (Eq. Transformation)	9	31458154 A	0.0	0.0	0.0	0.005	1.24E-09
AP0A4	rs1171782	White Blood Cell Count	6	3162020 T	0.0	0.25	0.13	0.044	1.29E-09
AKAI	rs8847300	High Density Lipoprotein (Eq. Transformation)	9	30748990 C	0.08	0.03	0.12	0.006	1.29E-09
CFB	rs1270942	White Blood Cell Count	6	3161880 A	0.0	0.25	0.13	0.044	1.30E-09
USP1	rs10215887	Tyrosinase (Eq. Transformation)	1	6297661 C	0.0608	0.08	0.007	1.10E-09	
SK1	rs2002614	Tyrosinase (Eq. Transformation)	11	116811742 T	0.080324	-0.0867	-0.13	0.01	1.32E-09
DOCK7	rs11288004	Tyrosinase (Eq. Transformation)	1	6316458 G	0.080324	0.0408	0.08	0.007	1.33E-09

Bonferoni corrected SNPs in ICD-9 code PheWAS

Gene	SNP	ICD-9 Code	ICD-9 Code Desc	CHR	BP	Allele	Allele Frequency	Cases	Controls	Beta	SE	P-Value	NHGRI GWAS Trait
TCF7L2	rs12243326	250	Type II Diabetes Mellitus	10	114788815	T	0.72	3485	8225	-0.25	0.03	6.25E-13	Two-hour glucose challenge
CFB	rs1270942	250.01	Type I Diabetes Mellitus	6	31918860	A	0.91	347	11496	-0.61	0.11	1.32E-07	
VWA7	rs3115671	250.01	Type I Diabetes Mellitus	6	31734345	G	0.91	347	11494	-0.59	0.11	2.27E-07	
MSHS-SAPCD1,MSHS	rs3117574	250.01	Type I Diabetes Mellitus	6	31725230	G	0.91	346	11494	-0.59	0.11	2.29E-07	
MSHS-SAPCD1,MSHS	rs3117577	250.01	Type I Diabetes Mellitus	6	31727474	A	0.91	347	11496	-0.59	0.11	2.21E-07	
APOM	rs3117582	250.01	Type I Diabetes Mellitus	6	31620520	T	0.91	347	11496	-0.58	0.11	3.34E-07	Lung cancer,Lung adenocarcinoma
MSHS-SAPCD1,MSHS	rs3131379	250.01	Type I Diabetes Mellitus	6	31721033	G	0.91	347	11494	-0.59	0.11	2.56E-07	Systemic lupus erythematosus
CLIC1	rs3131383	250.01	Type I Diabetes Mellitus	6	31704294	G	0.91	347	11492	-0.59	0.11	2.85E-07	
	rs445925	272.4	Hyperlipidemia	19	45415640	G	0.89	5965	4581	0.34	0.05	1.51E-11	Cardiovascular disease risk factors,Apolipoprotein levels,Carotid intima media thickness,Lipoprotein-associated phospholipase A2 activity and mass,Metabolite levels
TCF7L2	rs4506565	250	Type II Diabetes Mellitus	10	114756041	A	0.68	3483	8223	-0.29	0.03	1.03E-18	Fasting glucose-related traits,Type 2 diabetes
C2	rs497309	250.01	Type I Diabetes Mellitus	6	31892484	A	0.91	347	11493	-0.59	0.11	2.65E-07	
C2	rs558702	250.01	Type I Diabetes Mellitus	6	31870326	G	0.91	347	11494	-0.61	0.11	1.14E-07	
	rs602633	272.4	Hyperlipidemia	1	109821511	G	0.79	5957	4571	0.18	0.04	4.55E-06	
LDLR	rs6511720	272.4	Hyperlipidemia	19	11202306	G	0.88	5963	4579	0.28	0.05	1.91E-08	LDL cholesterol,Cardiovascular disease risk factors,Cholesterol, total,Metabolite levels,Carotid intima media thickness,Lipoprotein-associated phospholipase A2 activity and mass
TCF7L2	rs7901695	250	Type II Diabetes Mellitus	10	114754088	T	0.69	3485	8225	-0.28	0.03	5.01E-17	Type 2 diabetes,Coronary heart disease
TCF7L2	rs7903146	250	Type II Diabetes Mellitus	10	114758349	C	0.70	3485	8225	-0.29	0.03	1.53E-17	Type 2 diabetes,Fasting glucose-related traits (interaction with BMI),Glycated hemoglobin levels,Metabolic syndrome,Type 2 diabetes and other traits,Fasting insulin-related traits (interaction with BMI),Proinsulin levels
	rs965513	244.9	Hypothyroidism	9	100556109	G	0.66	1750	9801	0.22	0.04	8.03E-08	Thyroid cancer
VWA7	rs3101017	250.01	Type I Diabetes Mellitus	6	31733466	T	0.91	347	11496	-0.59	0.11	2.54E-07	
PDE8B	rs10037599	244.9	Hypothyroidism	5	76541325	A	0.60	1750	9790	-0.19	0.04	7.71E-07	
	rs10759944	244.9	Hypothyroidism	9	100556972	G	0.66	1751	9801	0.22	0.04	9.48E-08	
TNXB	rs1150753	250.01	Type I Diabetes Mellitus	6	32059867	A	0.91	347	11481	-0.65	0.11	2.56E-08	
TCF7L2	rs12255372	250	Type II Diabetes Mellitus	10	114808902	G	0.71	3485	8225	-0.25	0.03	2.99E-13	
	rs1269852	250.01	Type I Diabetes Mellitus	6	32080191	G	0.91	347	11496	-0.66	0.11	1.19E-08	
PDE8B	rs1382879	244.9	Hypothyroidism	5	76521868	T	0.60	1747	9788	-0.18	0.04	4.24E-06	
	rs1443438	244.9	Hypothyroidism	9	100550028	C	0.66	1751	9801	0.22	0.04	6.67E-08	Obesity-related traits
	rs3101018	250.01	Type I Diabetes Mellitus	6	31705864	C	0.91	347	11496	-0.59	0.11	2.45E-07	
MSHS-SAPCD1,MSHS	rs3130484	250.01	Type I Diabetes Mellitus	6	31715882	T	0.91	347	11496	-0.59	0.11	2.17E-07	
MSHS-SAPCD1,MSHS	rs3131378	250.01	Type I Diabetes Mellitus	6	31725285	A	0.91	347	11496	-0.59	0.11	2.54E-07	
MSHS-SAPCD1,MSHS	rs3132445	250.01	Type I Diabetes Mellitus	6	31712196	G	0.91	347	11496	-0.59	0.11	2.58E-07	
TCF7L2	rs4074720	250	Type II Diabetes Mellitus	10	114748497	C	0.53	3484	8225	-0.19	0.03	3.58E-10	
TCF7L2	rs4132670	250	Type II Diabetes Mellitus	10	114767771	G	0.68	3481	8222	-0.27	0.03	3.16E-16	
C2	rs519417	250.01	Type I Diabetes Mellitus	6	31878433	G	0.91	347	11492	-0.59	0.11	3.60E-07	
TCF7L2	rs6585196	250	Type II Diabetes Mellitus	10	114737050	T	0.63	3479	8202	0.15	0.03	3.60E-06	
TCF7L2	rs6585201	250	Type II Diabetes Mellitus	10	114768783	G	0.54	3484	8223	-0.18	0.03	4.24E-09	
CELSR2	rs660240	272.4	Hyperlipidemia	1	109817838	C	0.79	5965	4581	0.19	0.04	1.43E-06	LDL cholesterol,Cardiovascular disease risk factors
	rs7850258	244.9	Hypothyroidism	9	100549013	G	0.66	1751	9801	0.22	0.04	5.85E-08	Hypothyroidism
TCF7L2	rs7901275	250	Type II Diabetes Mellitus	10	114732906	A	0.54	3485	8226	-0.15	0.03	2.24E-06	
CSNK2B	rs9267531	250.01	Type I Diabetes Mellitus	6	31636742	A	0.91	347	11496	-0.59	0.11	2.48E-07	
	rs9273363	250.01	Type I Diabetes Mellitus	6	32626272	C	0.74	347	11489	-0.85	0.08	4.40E-26	

Number of Cases for each Clinical Lab Measure

Clinical Lab Measure	Number of Cases	Number of SNPs passing Bonferoni threshold
ALANINEAMINOTRANSFERASE_Log_Transform	11007	5
ALBUMIN-BLOOD	10804	0
ASPARTATEAMINOTRANSFERASE_Log_Transform	10838	12
BICARBONATE(HCO3)	937	0
CARBONDIOXIDE(CO2)	11570	0
CHOLESTEROL-BLOOD	9295	12
CREATININE-BLOOD-MASS_VOLUME	5215	0
FREE_T3	2152	0
FREE_T4_Log_Transformed	3562	0
GLUCOSE_Log_Transformed	8899	10
HEMOGLOBINA1C	6501	5
HIGHDENSITYLIPOPROTEIN_Log_Transformed	9330	66
INSULIN-LIKEGROWTHFACTOR1_Log_Transformed	206	0
LOWDENSITYLIPOPROTEIN	9237	14
PLATELET-BLOOD-COUNT	11545	25
PROTEIN-URINE_Log_Transformed	2034	0
RBC-COUNT-BLOOD	11599	20
THYROGLOBULINANTIBODY	819	2
THYROIDPEROXIDASEANTIBODY_Log_Transformed	943	0
THYROIDSTIMULATINGHORMONE_Log_Transformed	9531	25
TRIGLYCERIDES-BLOOD_Log_Transform	9330	112
WBC-COUNT-BLOOD	11597	39

Case-Control number based on phenotype information for each ICD-9 code used in analysis

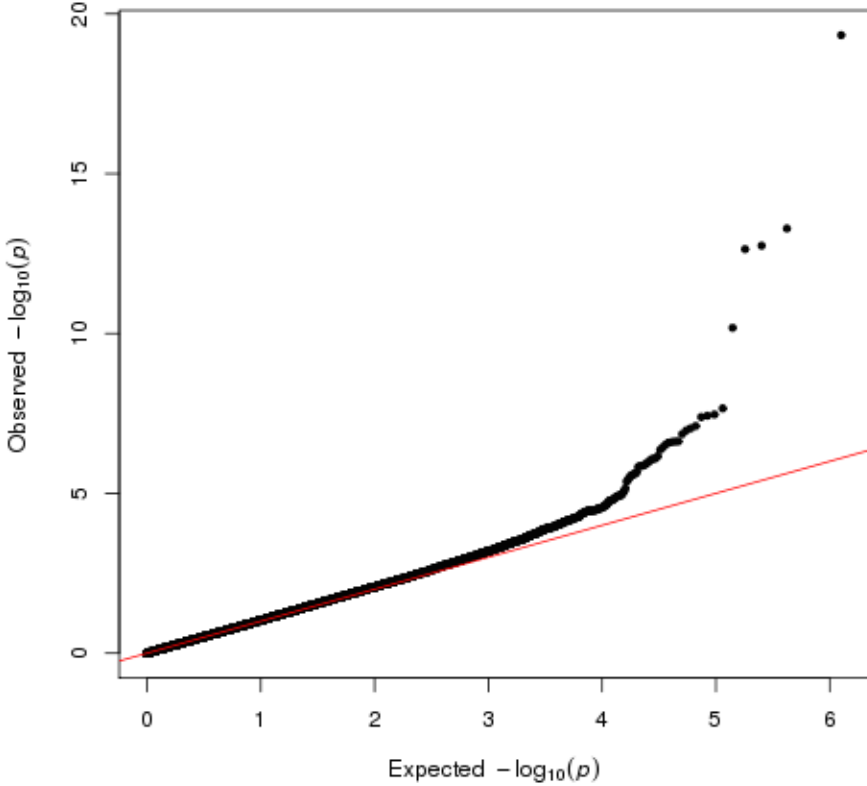
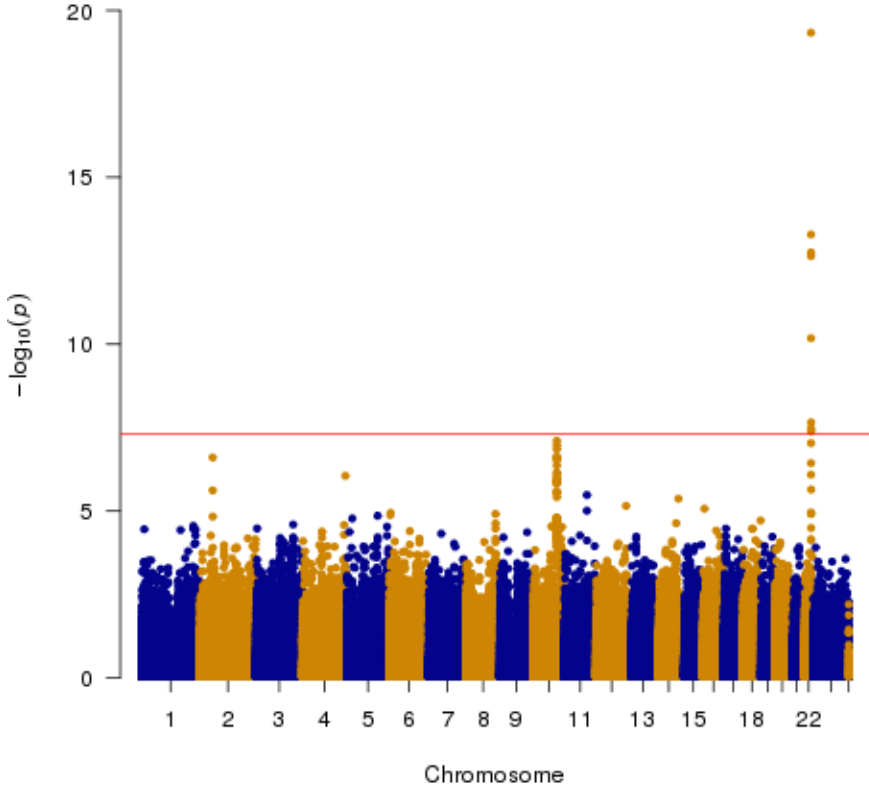
ICD-9 Code	ICD-9 Description	Cases	Controls	Number of SNPs Passing Bonferroni Threshold
110.1	Dermatophytosis Of Nail		338	11873
112.1	Candidal Vulvovaginitis		220	11991
185	Malignant Neoplasm Of Prostate		307	11904
211.3	Benign Neoplasm Of Colon		444	11767
238.2	Neoplasm Of Uncertain Behavior Of Skin		710	11501
244.9	Hypothyroidism Nos		1753	10458
250	Type Ii Diabetes Mellitus [Non-Insulin Dependent Type] [N]		3486	8725
250.01	Type I Diabetes Mellitus [Insulin Dependent Type] [Iddim] [I]		348	11863
250.4	Diabetes Mellitus Type Ii [Non-Insulin Dependent Type] [N]		540	11671
250.6	Diabetes Mellitus Type Ii [Non-Insulin Dependent Type] [N]		351	11860
268.9	Vitamin D Deficiency Nos		1556	10655
272.1	Pure Hyperglycemia		207	12004
272.2	Mixed Hyperlipidemia		998	11213
272.4	Other And Unspecified Hyperlipidemia		5968	6243
274.9	Gout Nos		431	11780
276.8	Hypopotassemia		222	11989
278	Obesity Nos		1560	10651
278.01	Morbid Obesity		1845	10366
280.9	Iron Deficiency Anemia, Unspecified		366	11845
285.9	Anemia Nos		895	11316
300	Anxiety State Nos		1327	10884
300.01	Panic Disorder Without Agoraphobia		202	12009
300.02	Generalized Anxiety Disorder		663	11548
305.1	Tobacco Use Disorder		1656	10555
309	Adjustment Disorder With Depressed Mood		785	11426
311	Depressive Disorder Nec		2490	9721
327.23	Obstructive Sleep Apnea		891	11320
333.94	Restless Legs Syndrome		269	11942
346	Migraine With Aura, Without Mention Of Intractable Migr:		248	11963
346.1	Migraine Without Aura, Without Mention Of Intractable Iv		250	11961
346.9	Migraine, Unspecified, Without Mention Of Intractable Ml		367	11844
354	Carpal Tunnel Syndrome		595	11616
357.2	Polynuropathy In Diabetes		335	11876
365	Preglaucoma, Unspecified		358	11853
365.11	Primary Open Angle Glaucoma		261	11950
366.1	Senile Cataract, Unspecified		237	11974
366.15	Cortical Senile Cataract		394	11817
366.16	Senile Nuclear Cataract		976	11235
366.52	Other After-Cataract, Not Obscuring Vision		727	11484
367.4	Presbyopia		1014	11197
367.9	Unspecified Disorder Of Refraction And Accommodation		1698	10513
373	Blepharitis Nos		214	11997
375.15	Tear Film Insuffic Nos		310	11901
379.21	Vitreous Degeneration		245	11966
380.4	Impacted Cerumen		413	11798
389.1	Sensorineural Hearing Loss, Unspecified		263	11948
389.9	Hearing Loss Nos		259	11952
401.9	Hypertension Nos		6091	6120
402.9	Unspecified Hypertensive Heart Disease Without Heart Fai		324	11887
412	Old Myocardial Infarction		337	11874
413.9	Other And Unspecified Angina Pectoris		383	11828
414	Coronary Atherosclerosis Of Unspecified Type Of Vessel, N		1594	10617
414.01	Coronary Atherosclerosis Of Native Coronary Artery		999	11212
414.8	Other Specified Forms Of Chronic Ischemic Heart Disease		316	11895
414.9	Chronic Ischemic Heart Disease, Unspecified		575	11636
415.19	Other Pulmonary Embolism And Infarction		217	11994
424	Mitral Valve Disorder		353	11858
424.1	Aortic Valve Disorder		591	11620
427.31	Atrial Fibrillation		1041	11170
428	Chf Nos		299	11912

428.2	Systolic Heart Failure, Unspecified	353	11858	0
428.9	Heart Failure Nos	417	11794	0
429.2	Ascvd	401	11810	0
433.1	Occlusion And Stenosis Of Carotid Artery, Without Mention	646	11565	0
435.9	Unspecified Transient Cerebral Ischemia	225	11986	0
436	Acute, But Ill-Defined Cerebrovascular Disease	229	11982	0
437	Cerebral Atherosclerosis	277	11934	0
440.21	Atherosclerosis Of Native Arteries Of The Extremities With	399	11812	0
441.4	Abdominal Aortic Aneurysm Without Mention Of Rupture	512	11699	0
443.9	Peripheral Vascular Disease, Unspecified	648	11563	0
459.81	Venous Insufficiency Nos	212	11999	0
461.9	Acute Sinusitis Nos	2310	9901	0
462	Acute Pharyngitis	621	11590	0
465.9	Acute Upper Respiratory Infections Of Unspecified Site	696	11515	0
466	Acute Bronchitis	1477	10734	0
472	Chronic Rhinitis	411	11800	0
477.8	Allergic Rhinitis Due To Other Allergen	392	11819	0
477.9	Allergic Rhinitis Nos	1095	11116	0
491.21	Obstructive Chronic Bronchitis With (Acute) Exacerbation	282	11929	0
492.8	Other Emphysema	271	11940	0
493.9	Asthma, Unspecified Type, Without Mention Of Status Asti	1269	10942	0
496	Chronic Airway Obstruction, Not Elsewhere Classified	1022	11189	0
530.11	Reflux Esophagitis	378	11833	0
530.81	Esophageal Reflux	2919	9292	0
564.1	Irritable Bowel Syndrome	354	11857	0
564.2	Postgastric Surgery Syndromes	385	11826	0
579.3	Other And Unspecified Postsurgical Nonabsorption	594	11617	0
585.3	Chronic Kidney Disease, Stage Iii (Moderate)	1417	10794	0
585.4	Chronic Kidney Disease, Stage Iv (Severe)	271	11940	0
585.9	Chronic Kidney Disease, Unspecified	228	11983	0
592	Calculus Of Kidney	393	11818	0
599	Urinary Tract Infection, Site Not Specified	621	11590	0
600	Hypertrophy (Benign) Of Prostate Without Urinary Obstruc	425	11786	0
600.01	Hypertrophy (Benign) Of Prostate With Urinary Obstructio	371	11840	0
607.84	Impotence Of Organic Origin	547	11664	0
616.1	Vaginitis Nos	228	11983	0
625.6	Stress Incontinence, Female	248	11963	0
626.2	Excessive Or Frequent Menstruation	305	11906	0
627.3	Postmenopausal Atrophic Vaginitis	227	11984	0
682.6	Cellulitis And Abscess Of Leg, Except Foot	254	11957	0
692.9	Contact Dermatitis And Other Eczema, Unspecified Cause	1403	10808	0
695.3	Rosacea	220	11991	0
696.1	Other Psoriasis And Similar Disorders Excluding Psoriatic A	218	11993	0
702	Actinic Keratosis	718	11493	0
702.19	Other Seborrheic Keratosis	261	11950	0
706.1	Other Acne	225	11986	0
706.2	Sebaceous Cyst	210	12001	0
714	Rheumatoid Arthritis	429	11782	26
715	Osteoarthritis, Generalized, Involving Unspecified Site	915	11296	0
715.16	Osteoarthritis, Localized, Primary, Involving Lower Leg	418	11793	0
715.9	Osteoarthritis, Unspecified Whether Generalized Or Local	265	11946	0
715.96	Osteoarthritis, Unspecified Whether Generalized Or Local	794	11417	0
719.41	Pain In Joint Involving Shoulder Region	817	11394	0
719.45	Pain In Joint Involving Pelvic Region And Thigh	341	11870	0
719.46	Pain In Joint Involving Lower Leg	1260	10951	0
719.47	Pain In Joint Involving Ankle And Foot	293	11918	0
721.3	Lumbosacral Spondylosis Without Myelopathy	242	11969	0
722	Displacement Of Cervical Intervertebral Disc Without Myel	293	11918	0
722.1	Displacement Of Lumbar Intervertebral Disc Without Myel	616	11595	0
722.52	Degeneration Of Lumbar Or Lumbosacral Intervertebral Di	431	11780	0
722.93	Other And Unspecified Disc Disorder Of Lumbar Region	244	11967	0
723.1	Cervicalgia	825	11386	0
724.02	Spinal Stenosis Of Lumbar Region	520	11691	0

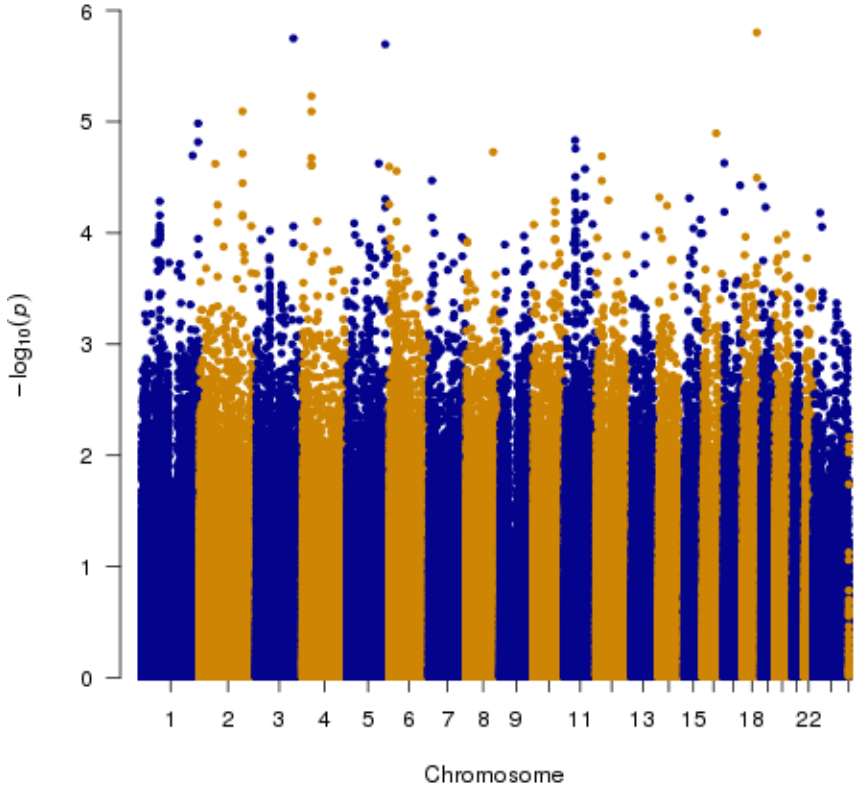
724.2 Lumbago	996	11215	0
724.3 Sciatica	455	11756	0
724.4 Thoracic Or Lumbosacral Neuritis Or Radiculitis, Unspecific	656	11555	0
724.5 Backache Nos	1579	10632	0
726.1 Disorders Of Bursae And Tendons In Shoulder Region, Unsi	388	11823	0
726.5 Enthesopathy Of Hip Region	287	11924	0
727.03 Trigger Finger	250	11961	0
728.71 Plantar Fascial Fibromatosis	228	11983	0
728.85 Spasm Of Muscle	207	12004	0
729.1 Myalgia And Myositis Nos	771	11440	0
729.5 Pain In Limb	1508	10703	0
733 Osteoporosis Nos	959	11252	0
733.09 Other Osteoporosis	295	11916	0
780.2 Syncope And Collapse	240	11971	0
780.4 Dizziness And Giddiness	596	11615	0
780.52 Insomnia Nos	665	11546	0
780.57 Unspecified Sleep Apnea	679	11532	0
780.79 Other Malaise And Fatigue	1125	11086	0
781.2 Abnormality Of Gait	211	12000	0
782 Disturbance Of Skin Sensation	298	11913	0
782.3 Edema	1170	11041	0
784 Headache	965	11246	0
785.1 Palpitations	351	11860	0
786.05 Shortness Of Breath	483	11728	0
786.09 Other Dyspnea And Respiratory Abnormality	627	11584	0
786.2 Cough	1099	11112	0
786.5 Chest Pain Nos	944	11267	0
786.59 Chest Pain Nec	414	11797	0
787.02 Nausea Alone	234	11977	0
787.91 Diarrhea	487	11724	0
788.1 Dysuria	532	11679	0
788.3 Urinary Incontinence Nos	220	11991	0
788.41 Urinary Frequency	301	11910	0
788.43 Nocturia	269	11942	0
789 Abdominal Pain, Unspecified Site	491	11720	0
789.06 Abdominal Pain, Epigastric	242	11969	0
789.07 Abdominal Pain, Generalized	220	11991	0
790.21 Impaired Fasting Glucose	216	11995	0
790.6 Other Abnormal Blood Chemistry	248	11963	0
790.93 Elevated Prostate Specific Antigen [Psa]	371	11840	0
791 Proteinuria	269	11942	0
796.2 Elevated Blood Pressure Reading Without Diagnosis Of Hypertension	205	12006	0

Alanine Amino Tranferase (Log Transform)

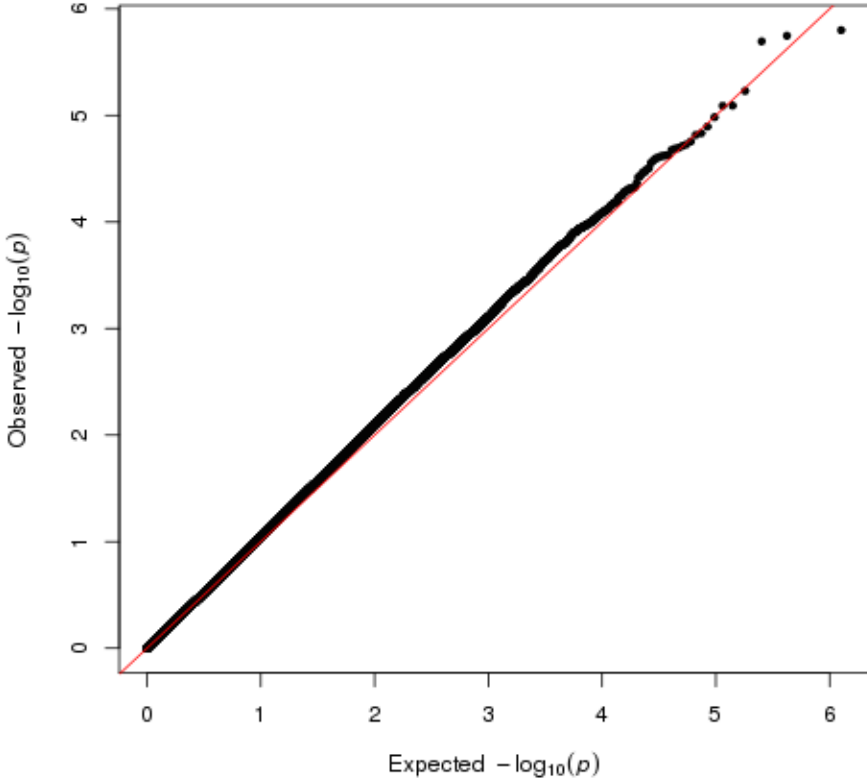
Genomic Inflation Factor is 1.05177536762139



Albumin

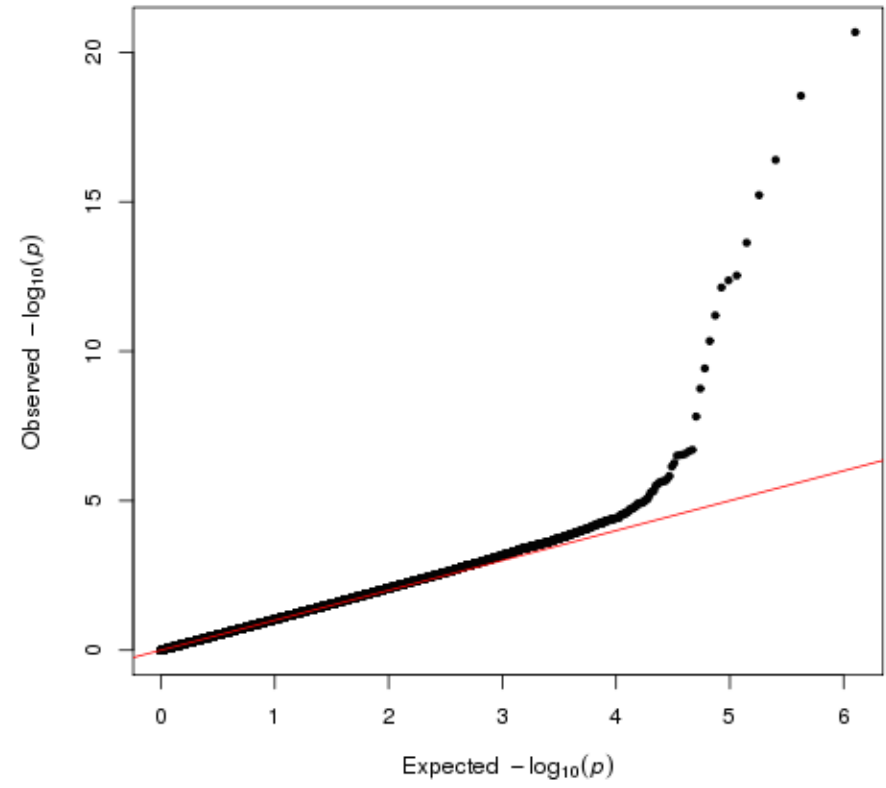
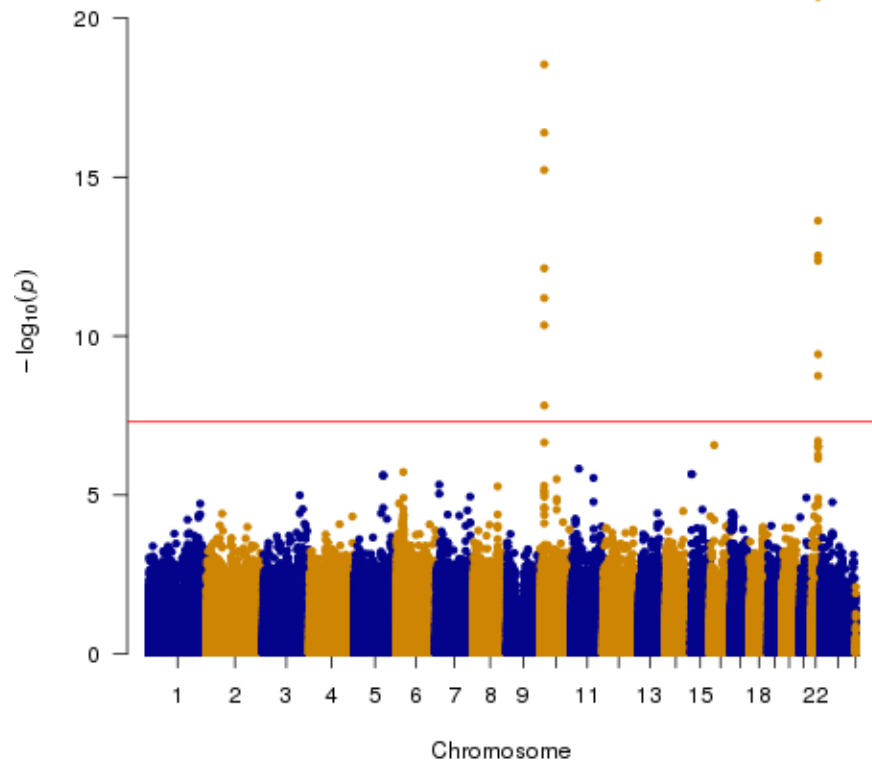


Genomic Inflation Factor is 1.05642617632916



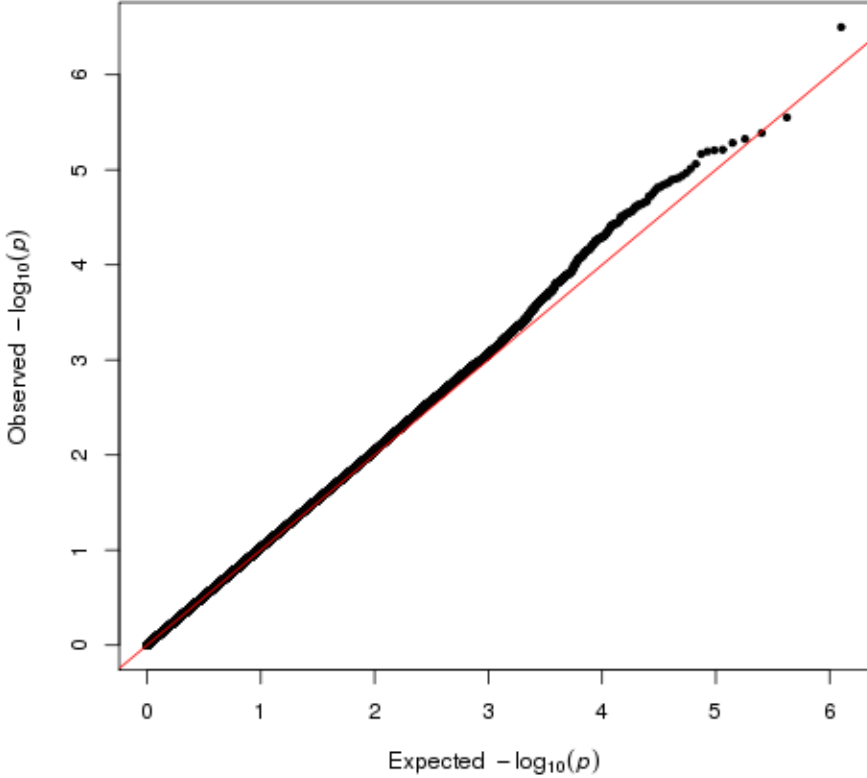
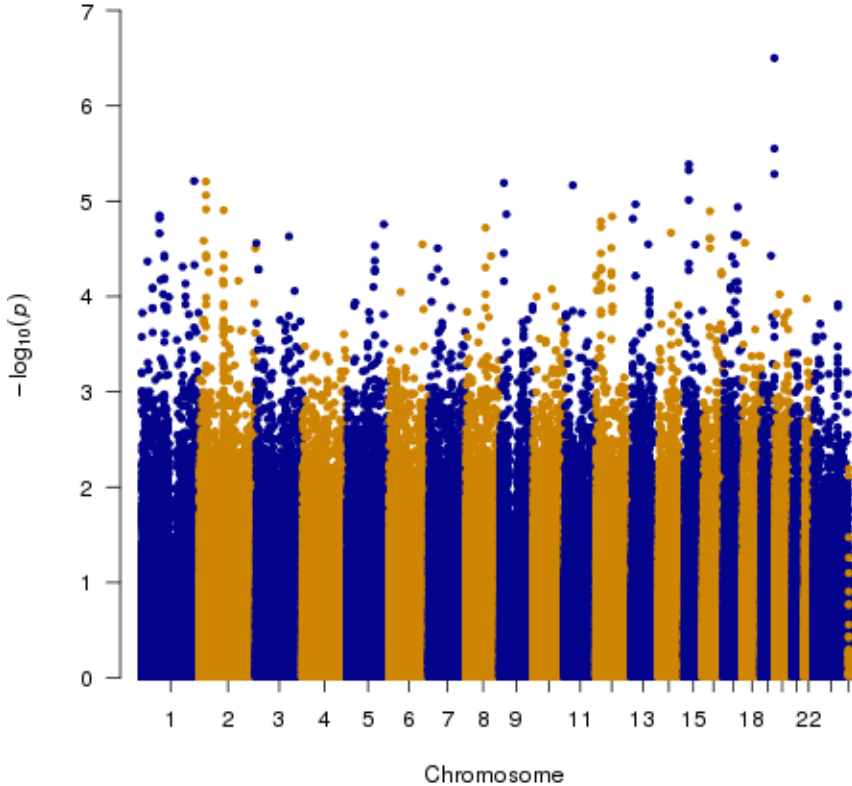
Aspartate Amino Transferase

Genomic Inflation Factor is 1.04834340569528

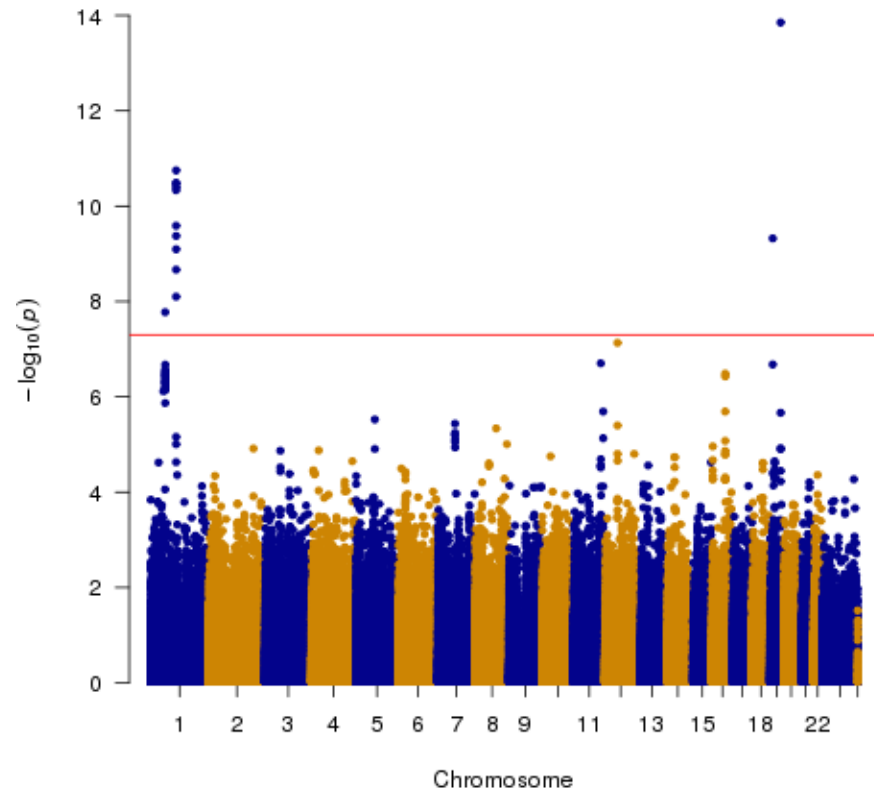


Carbon dioxide

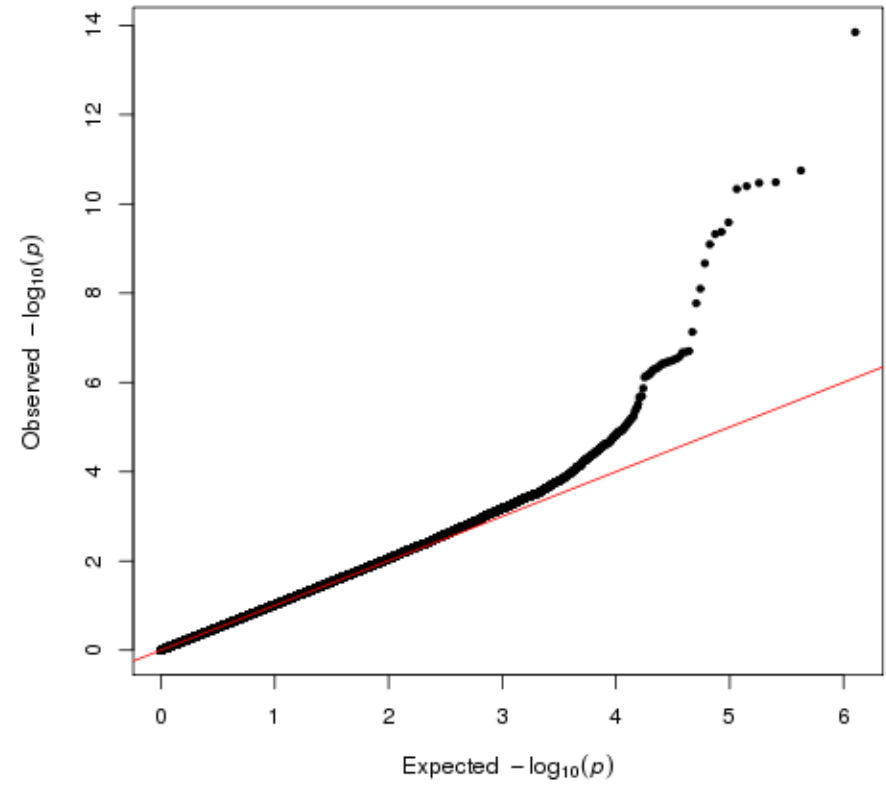
Genomic Inflation Factor is 1.03191172663572



Cholesterol

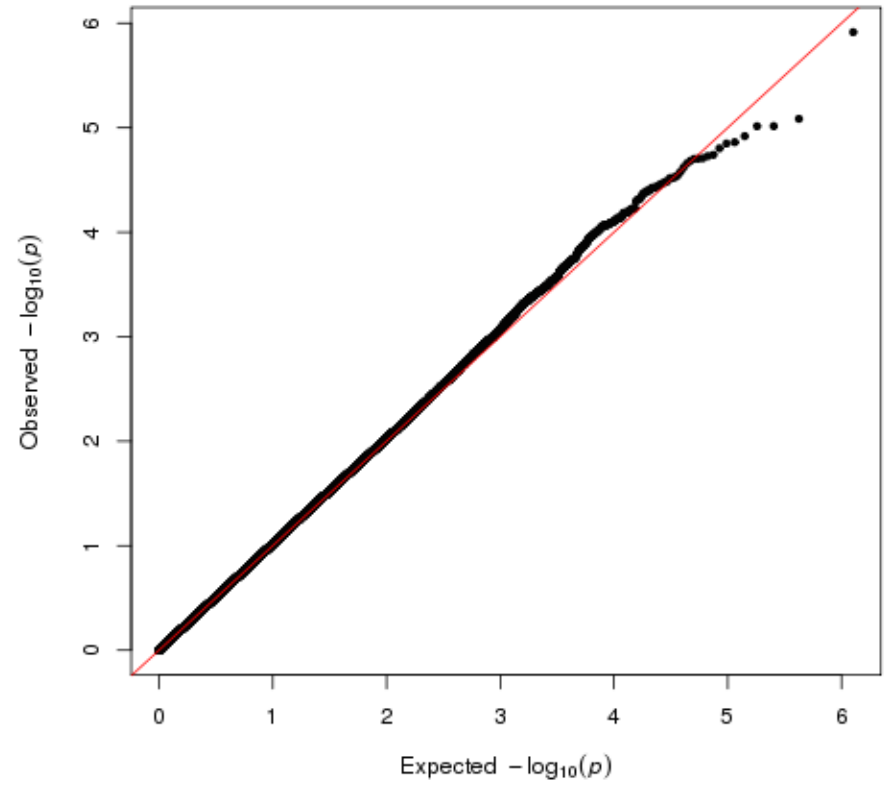
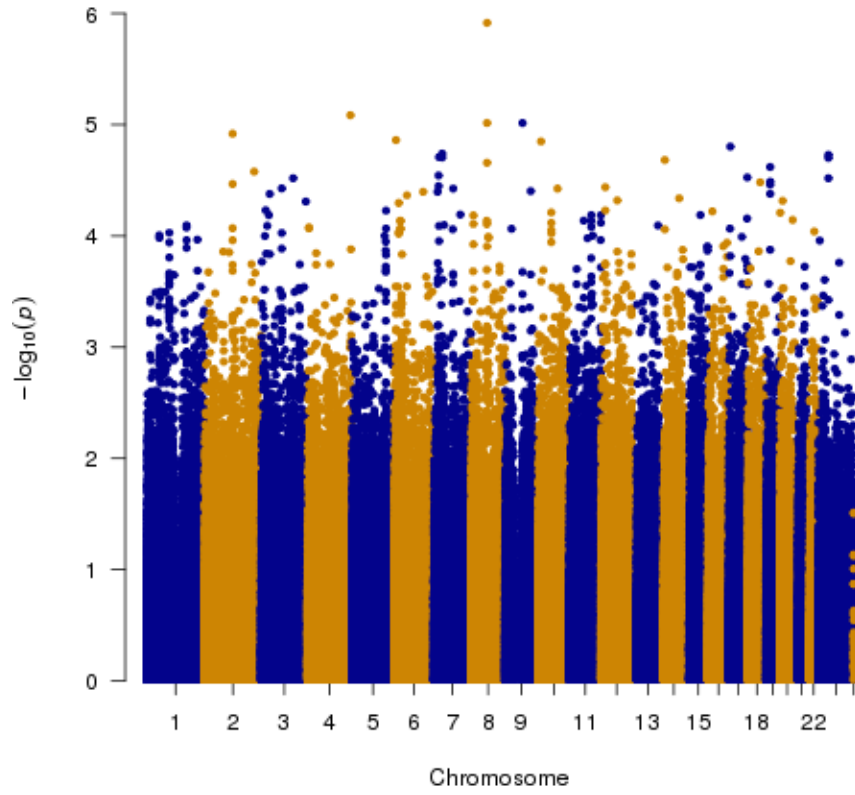


Genomic Inflation Factor is 1.03861543949955



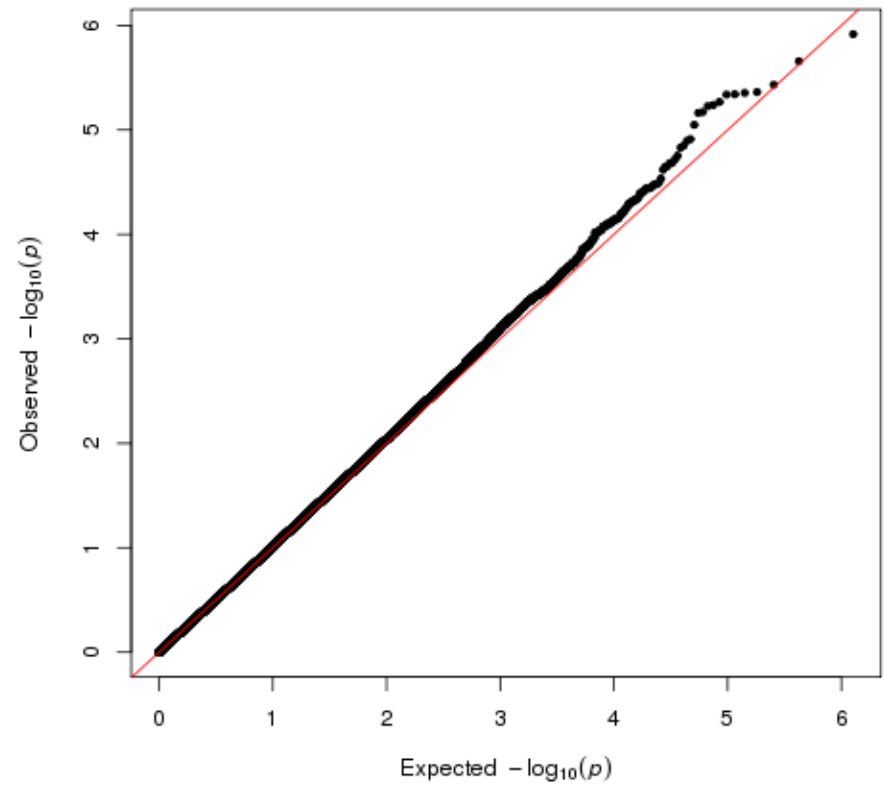
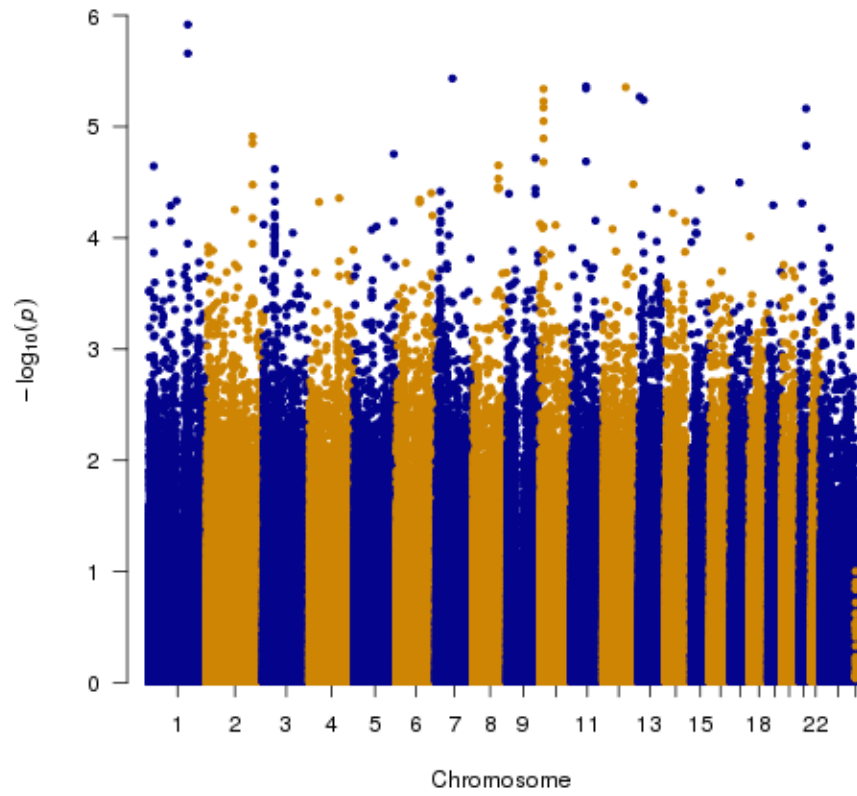
Creatinine

Genomic Inflation Factor is 1.02137723914402



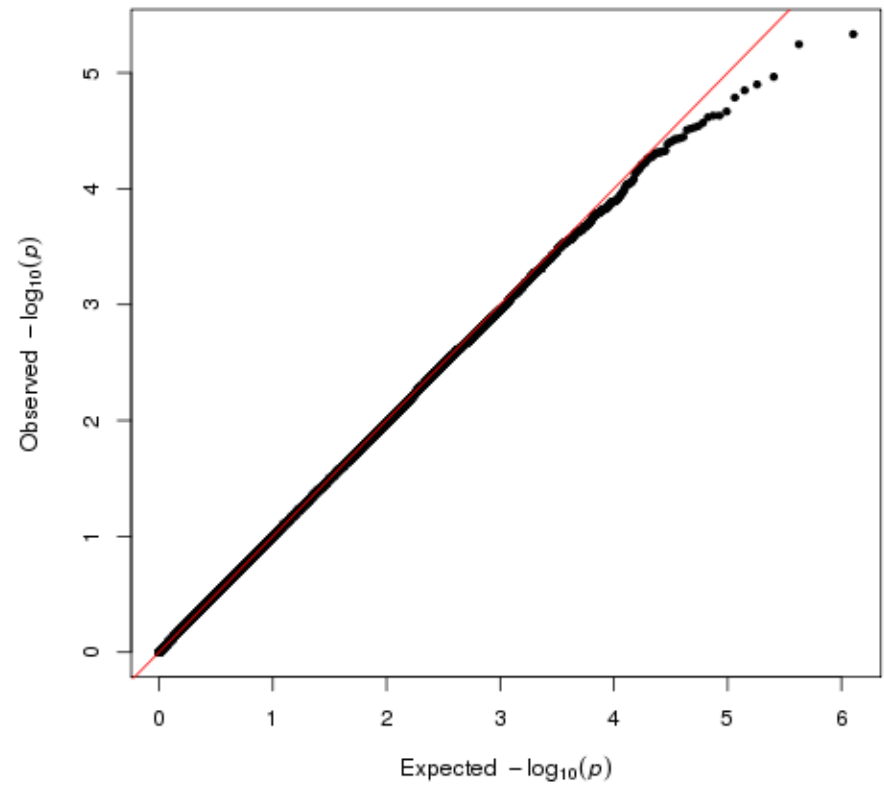
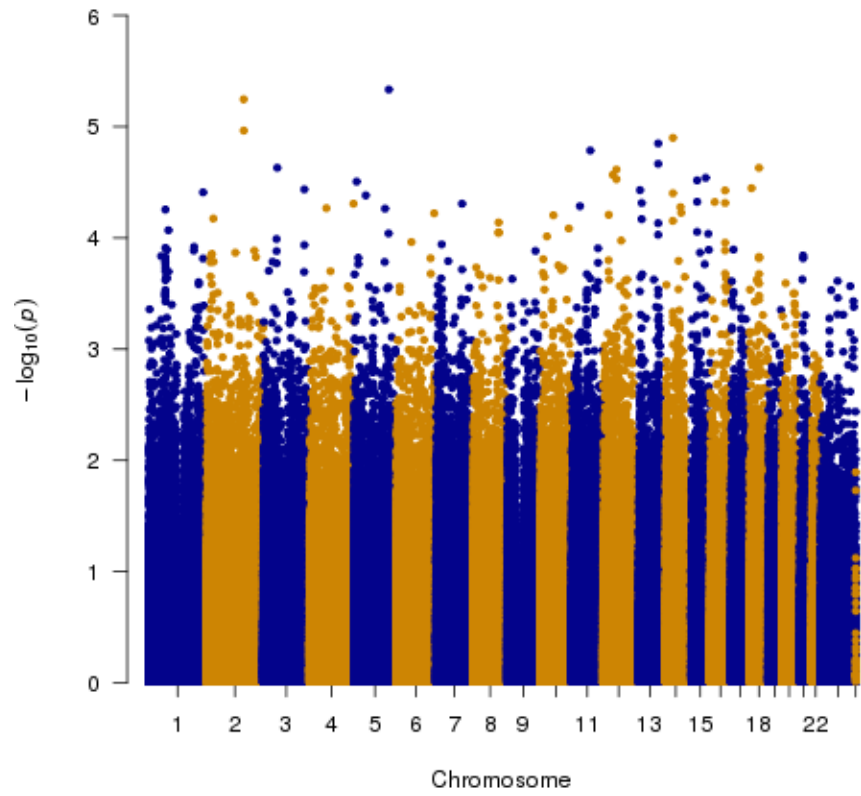
Free T3

Genomic Inflation Factor is 1.01909752408458



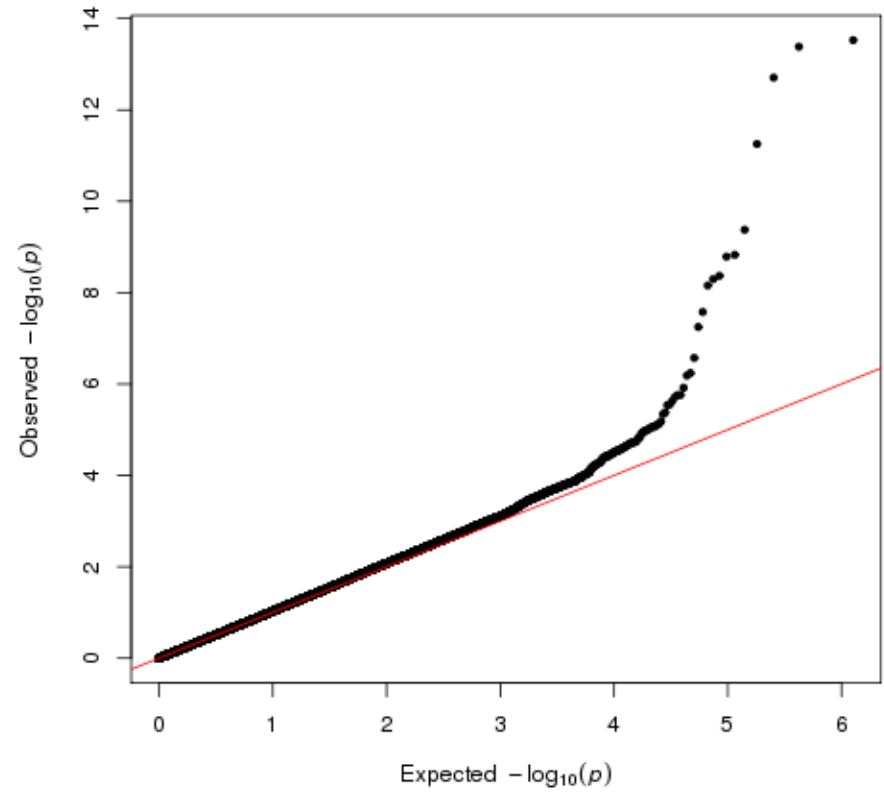
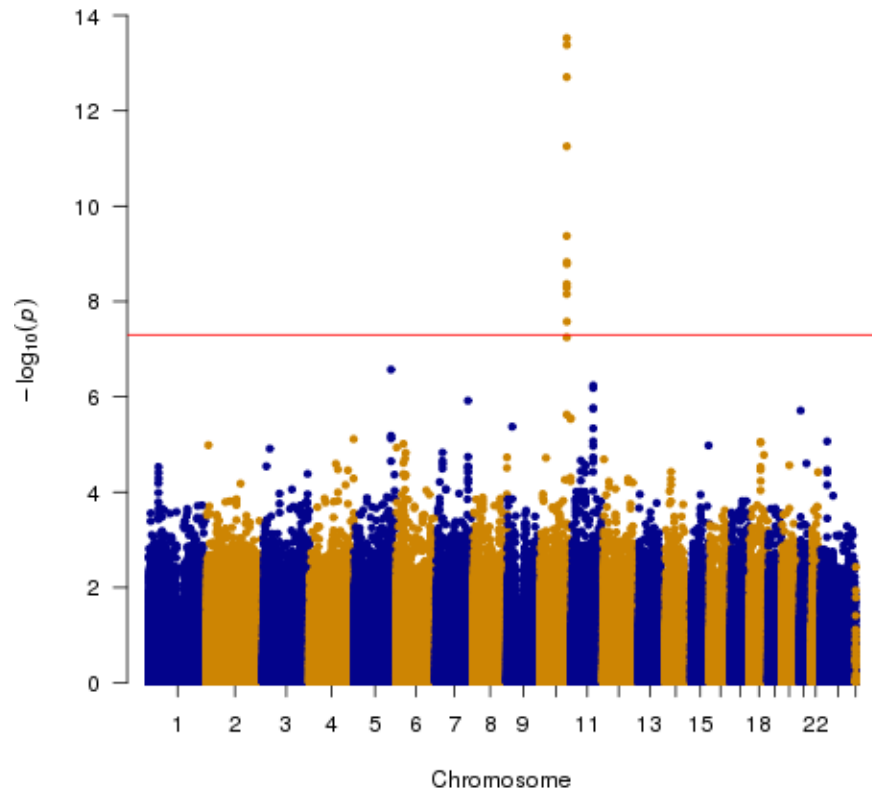
Free T4 (Log Transform)

Genomic Inflation Factor is 0.994634136933098



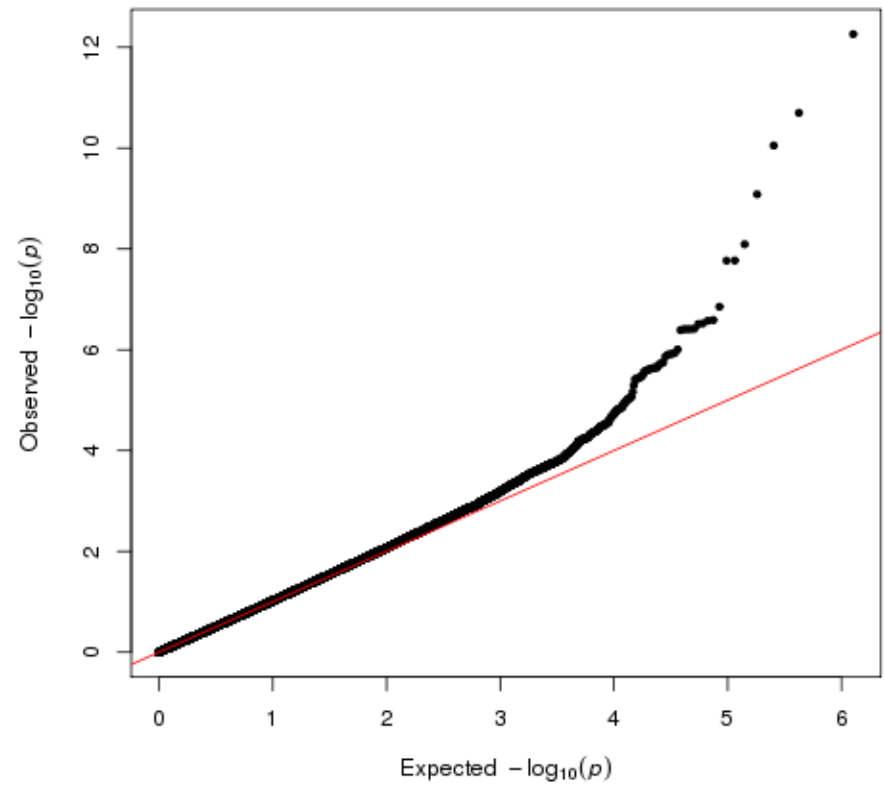
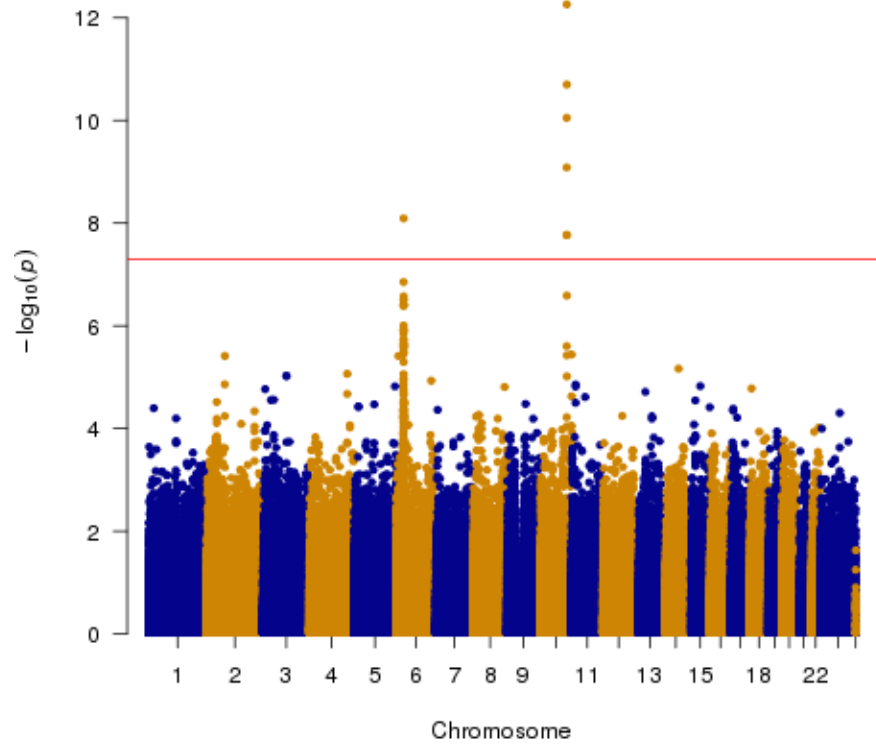
Glucose (Log Transform)

Genomic Inflation Factor is 1.04610050813471



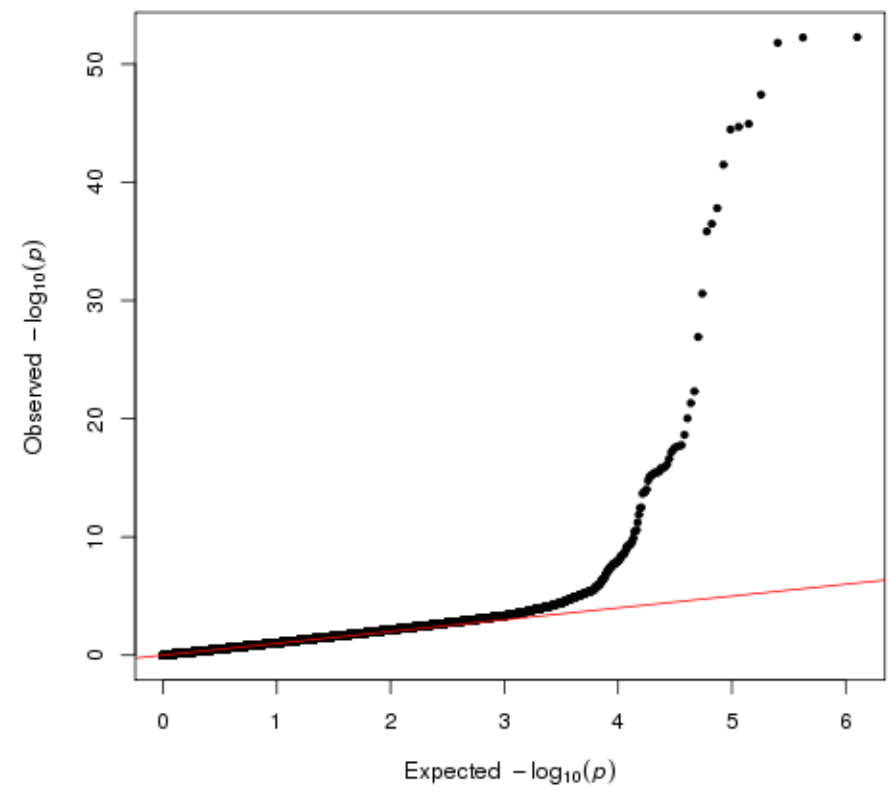
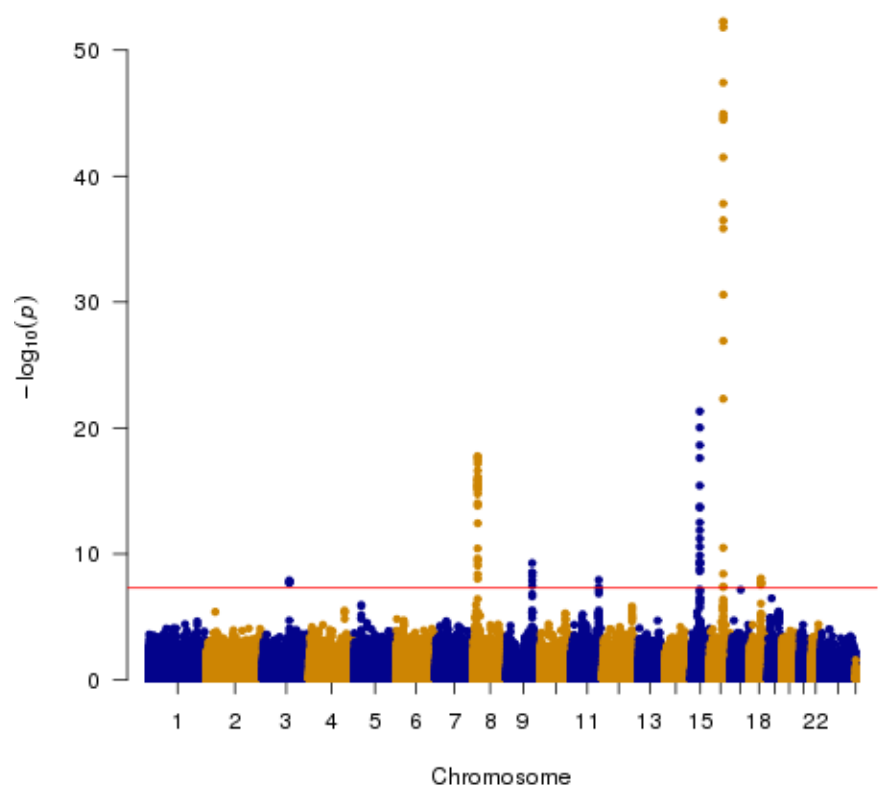
Hemoglobin A1c

Genomic Inflation Factor is 1.04169847694333



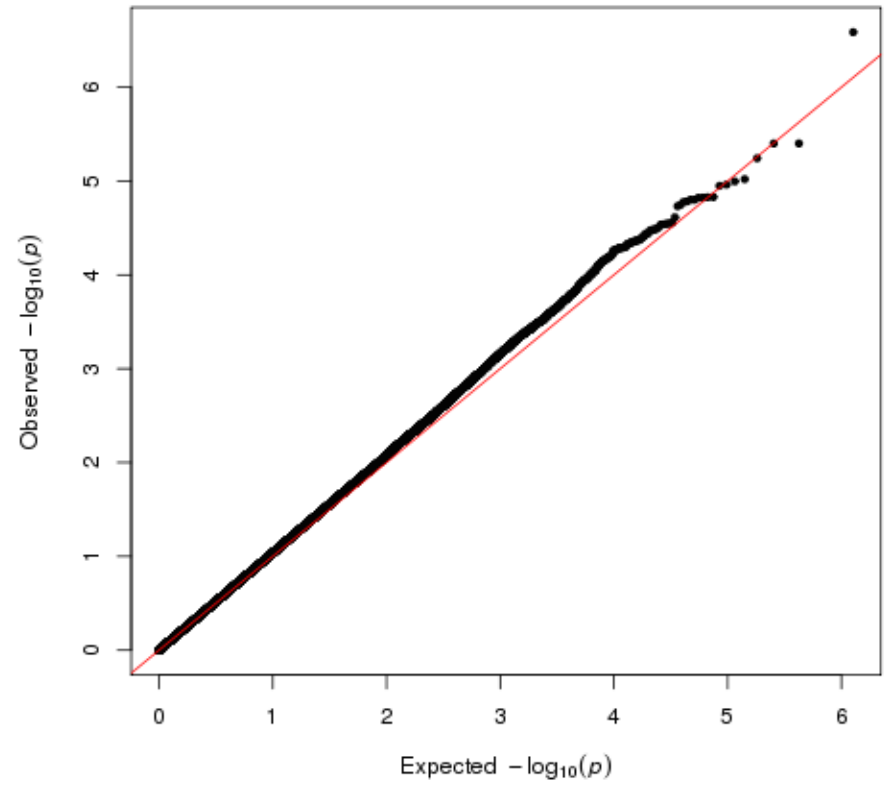
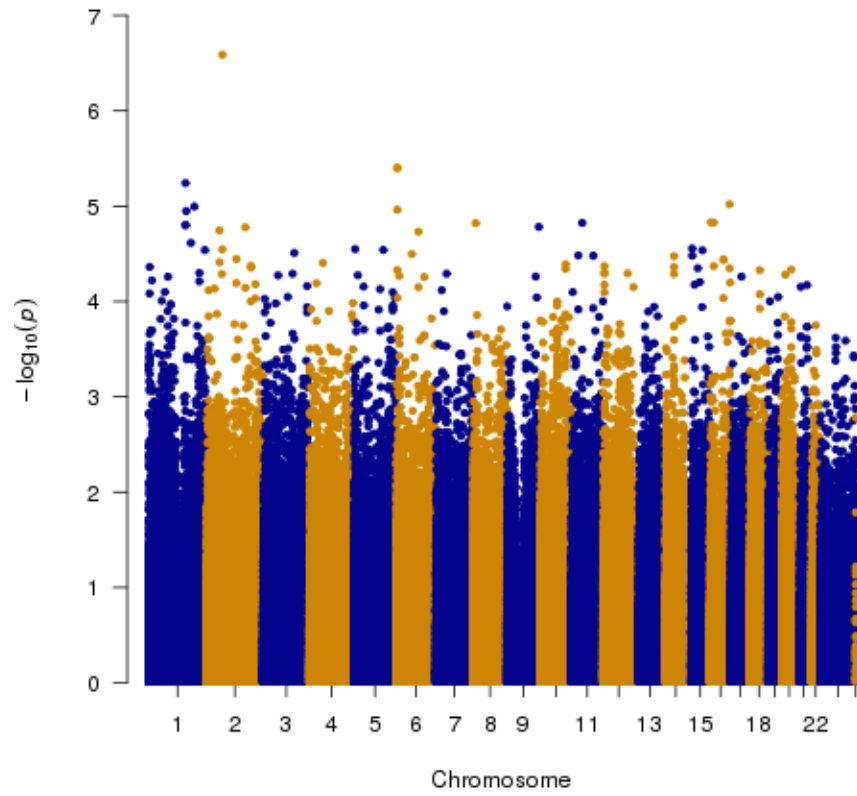
High Density Lipoprotein (Log Transform)

Genomic Inflation Factor is 1.12722693928373



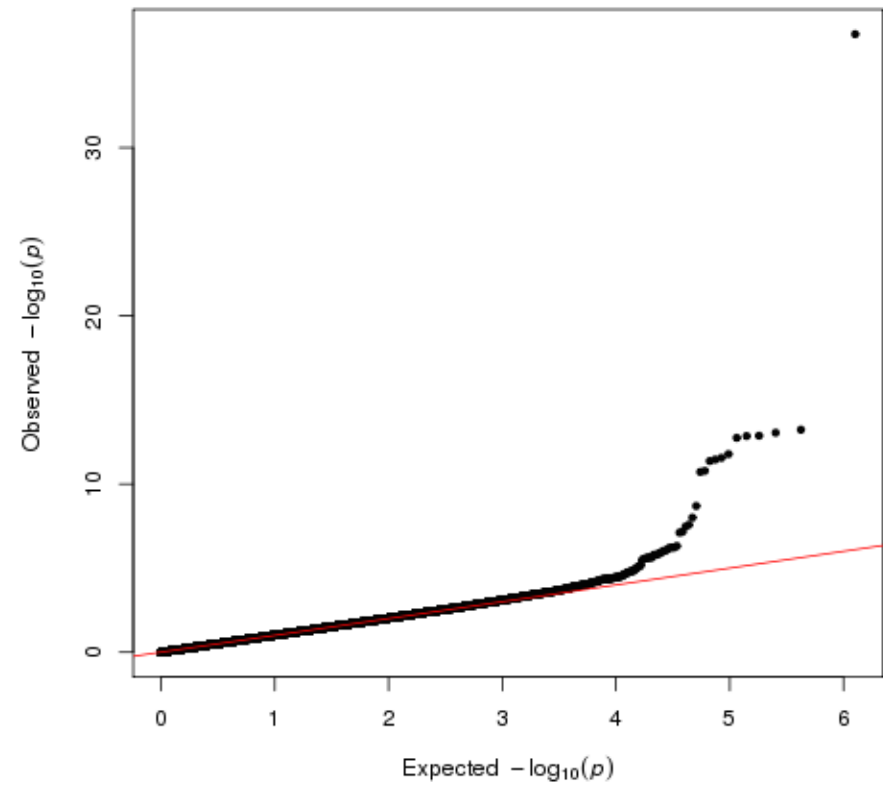
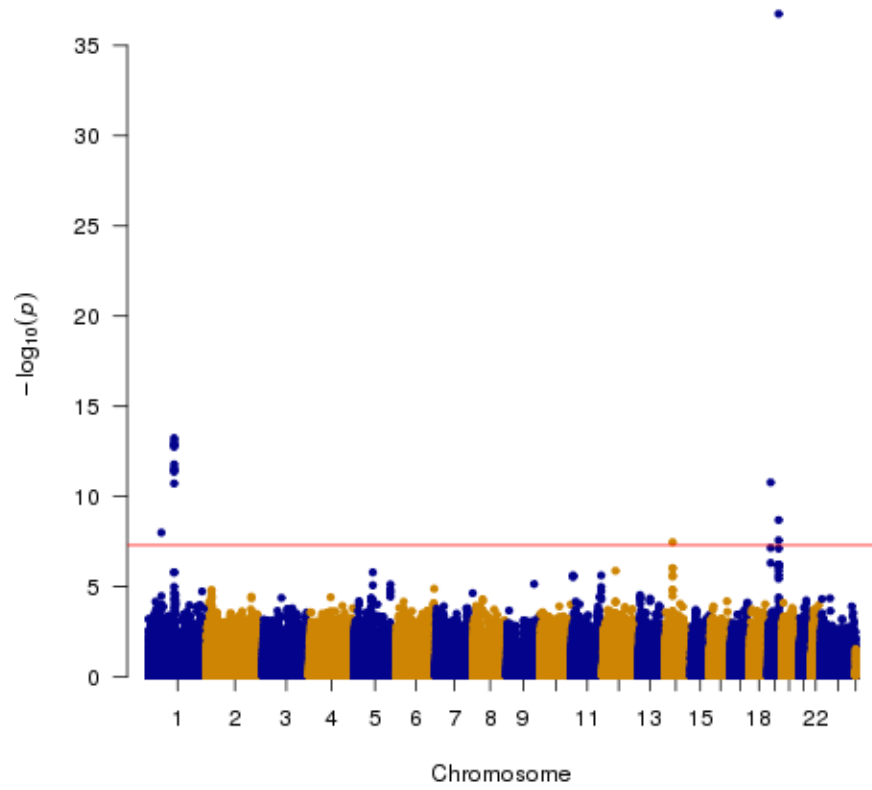
Insulin-Like Growth Factor-1 (Log Transform)

Genomic Inflation Factor is 1.04924180854575



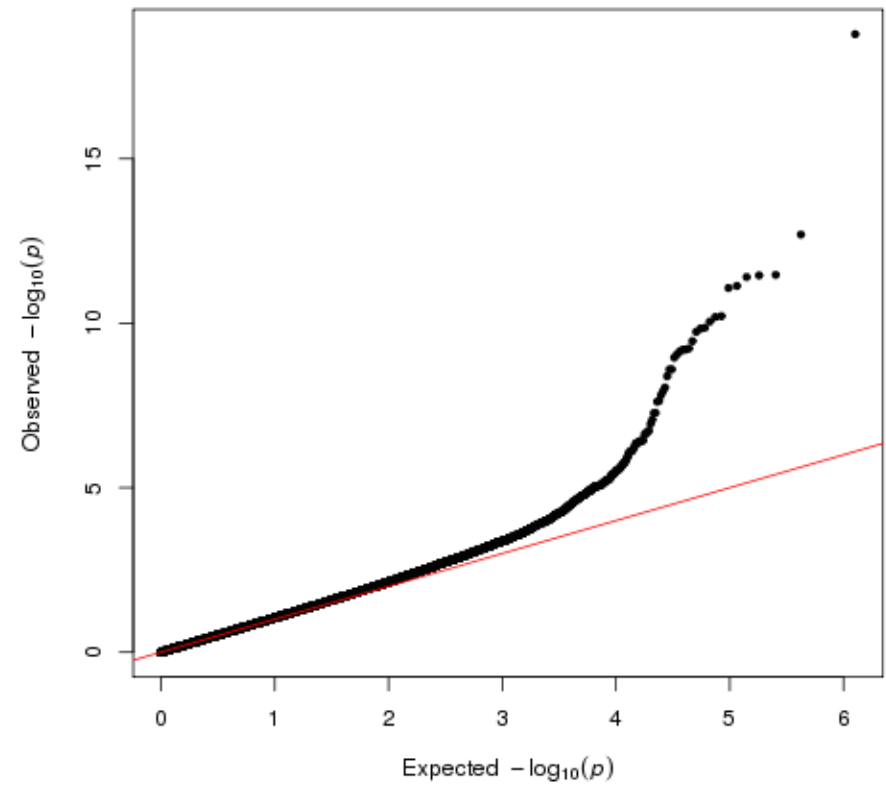
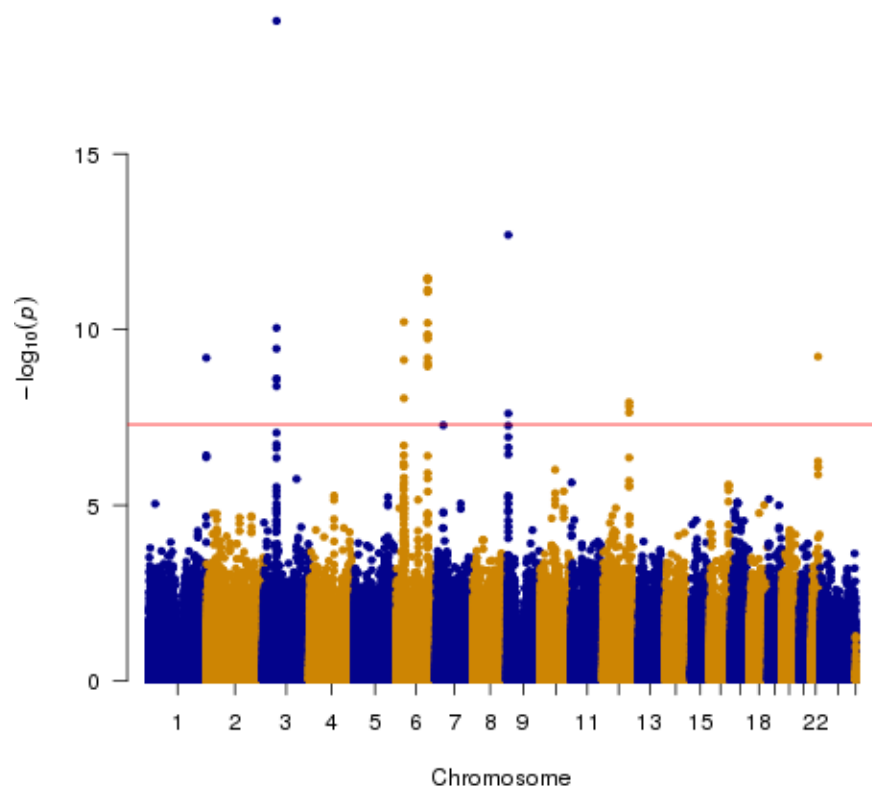
Low Density Lipoprotein

Genomic Inflation Factor is 1.02632679841335



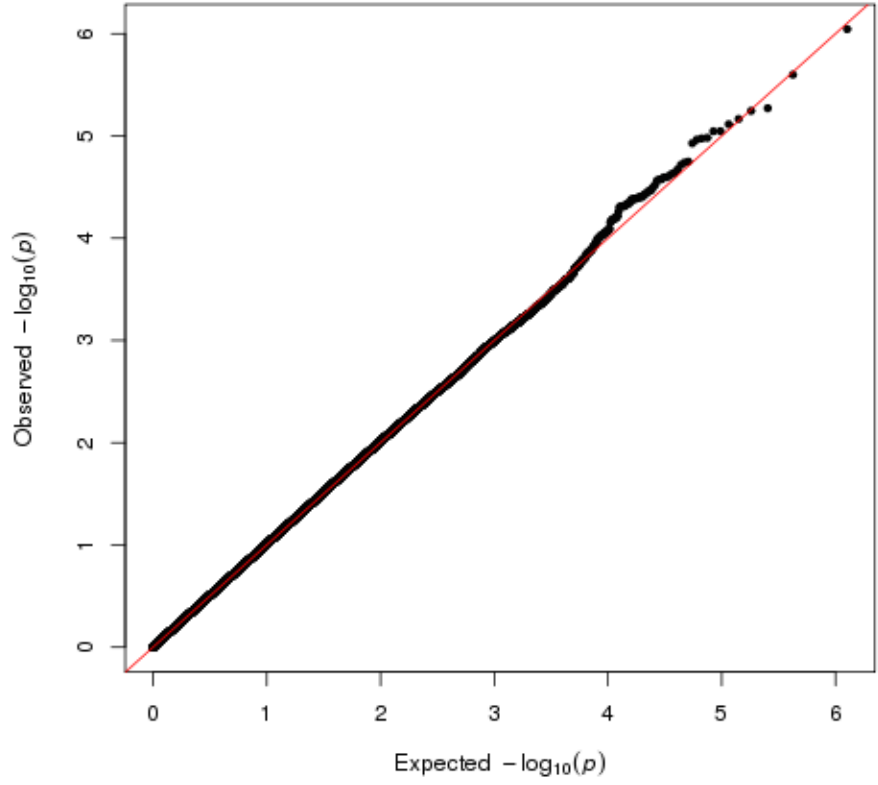
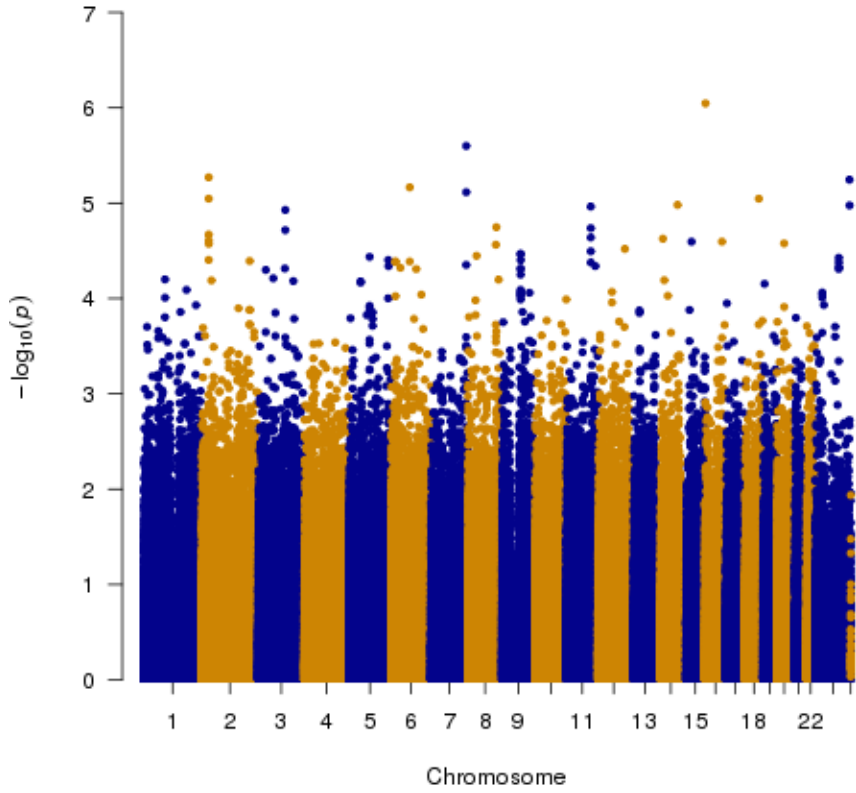
Platelet Count

Genomic Inflation Factor is 1.0900758968758



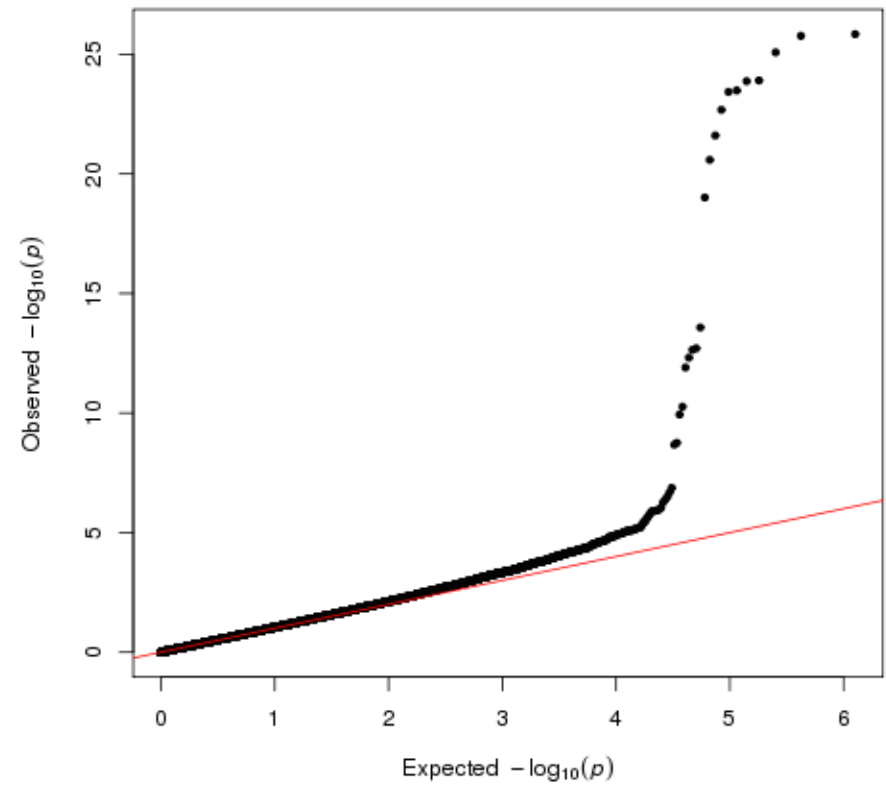
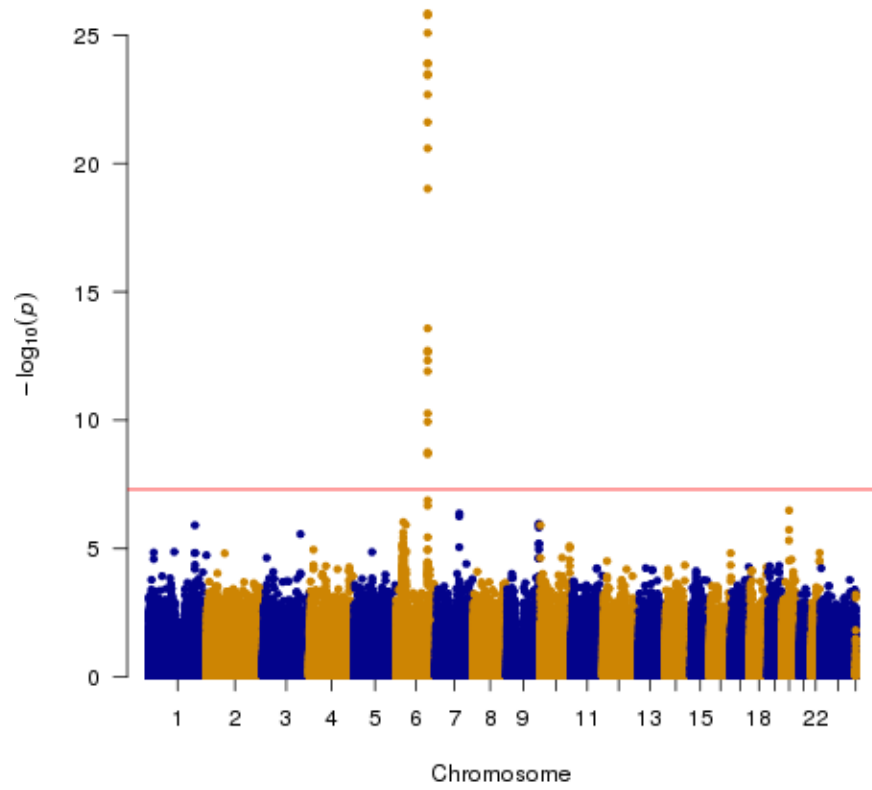
Protein Urine (Log Transform)

Genomic Inflation Factor is 1.01001768028042



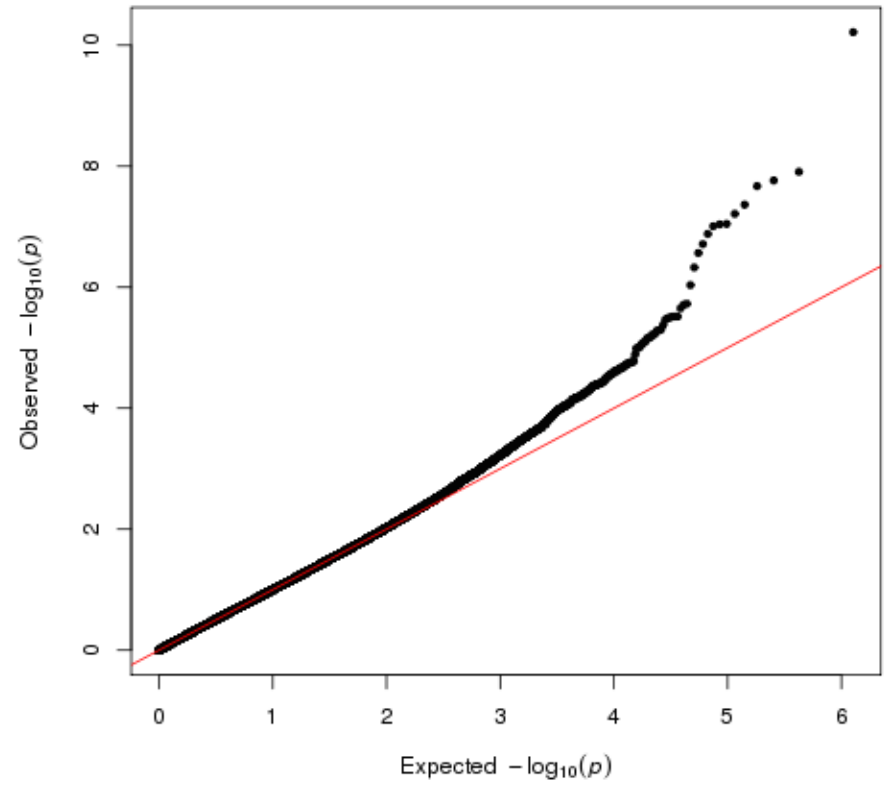
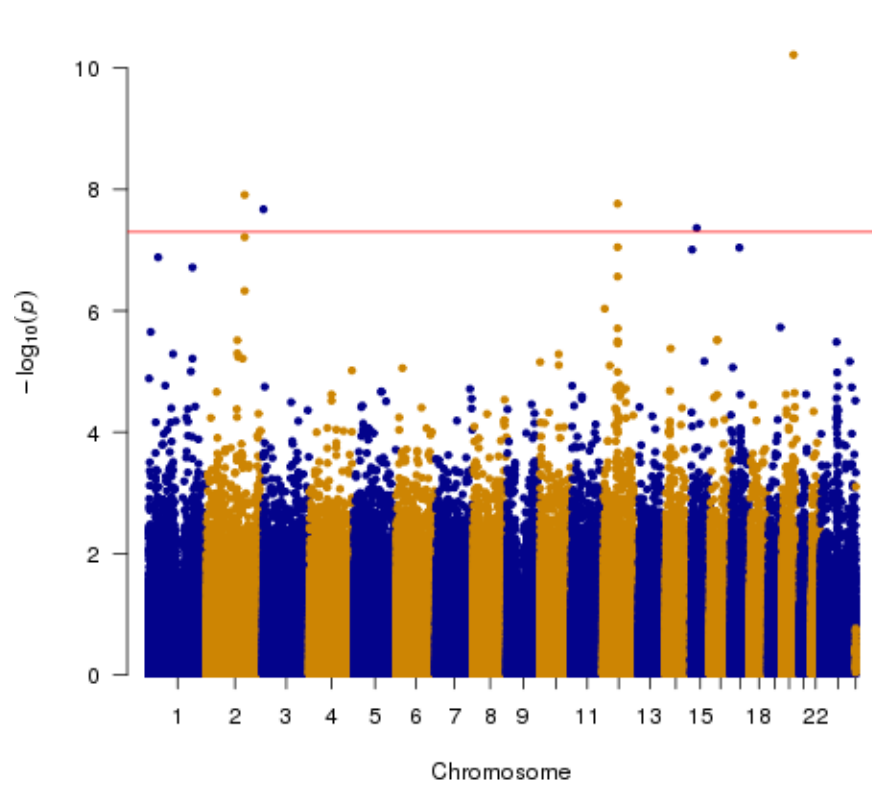
Red Blood Cell Count

Genomic Inflation Factor is 1.08384120146952



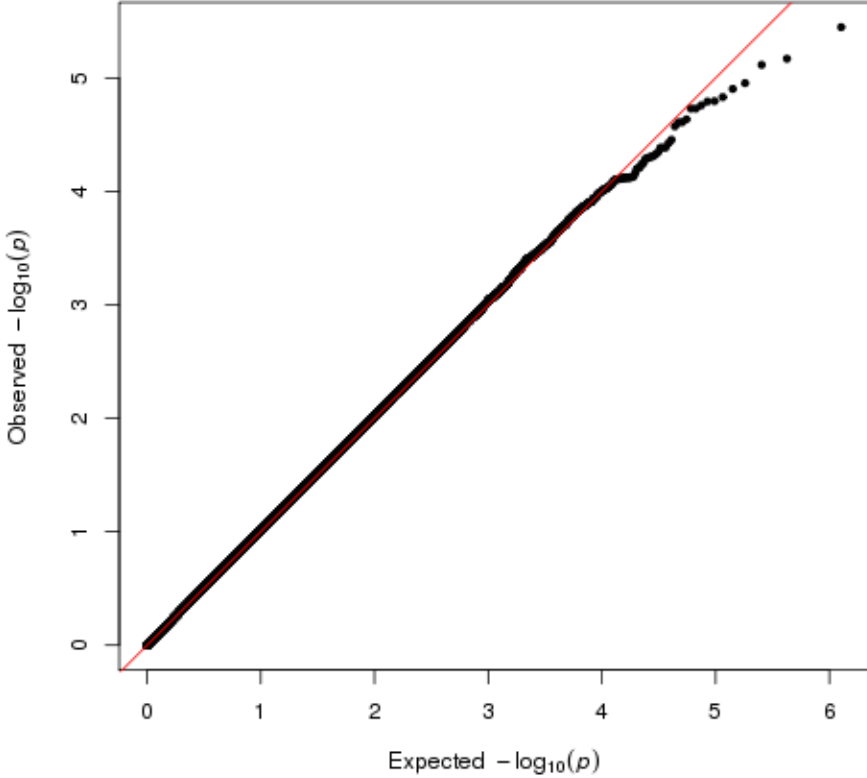
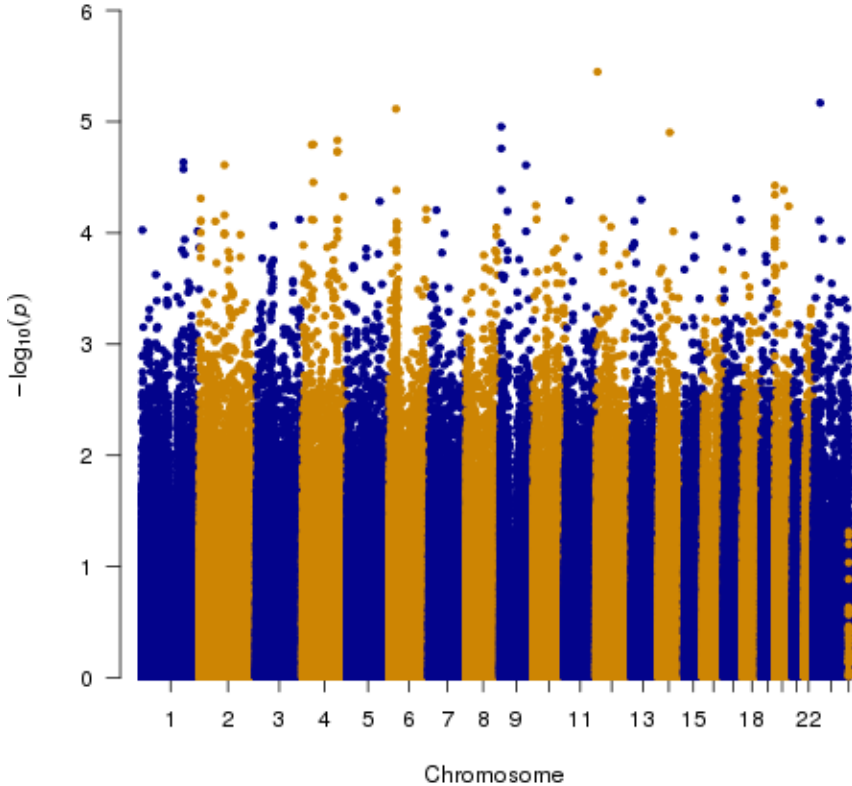
Thyroid Globulin Antibody

Genomic Inflation Factor is 1.01748080326271



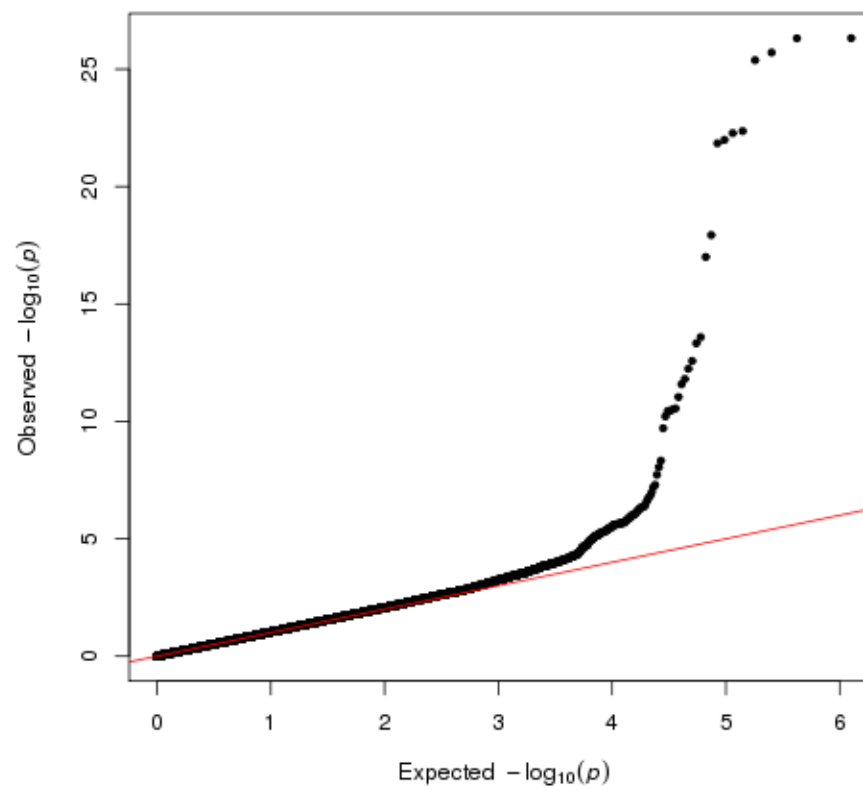
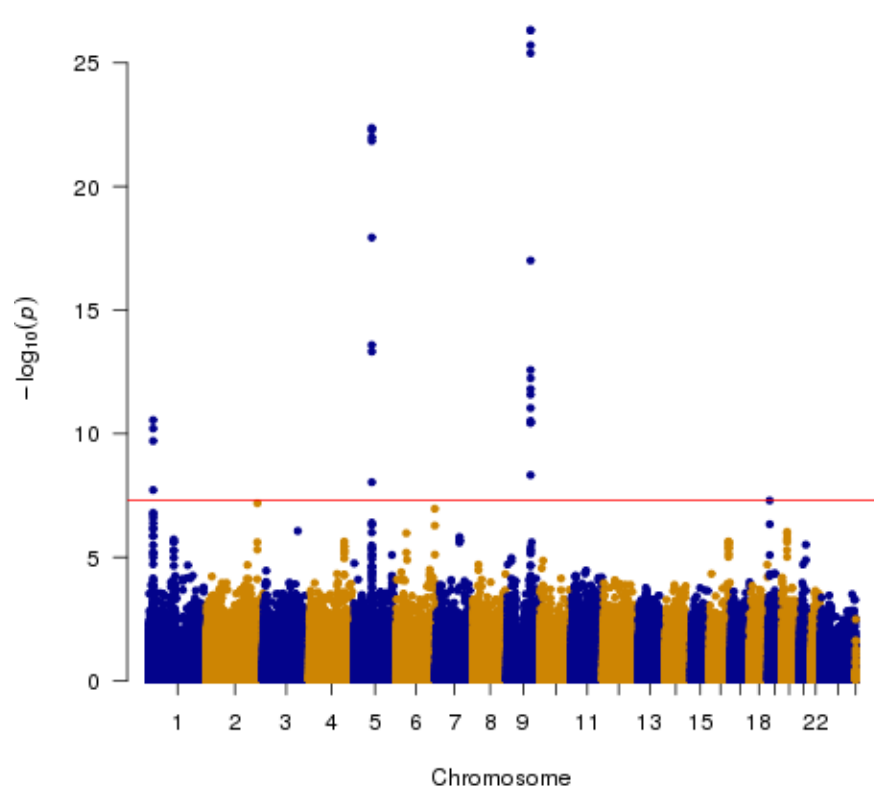
Thyroidperoxidase Antibody (Log Transform)

Genomic Inflation Factor is 1.01816685662392



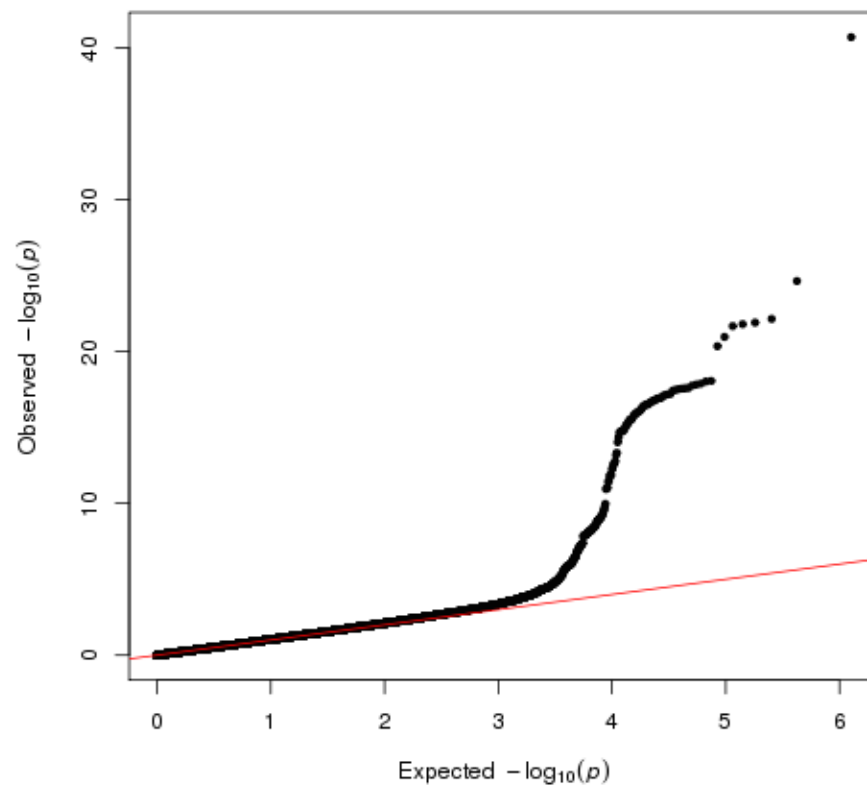
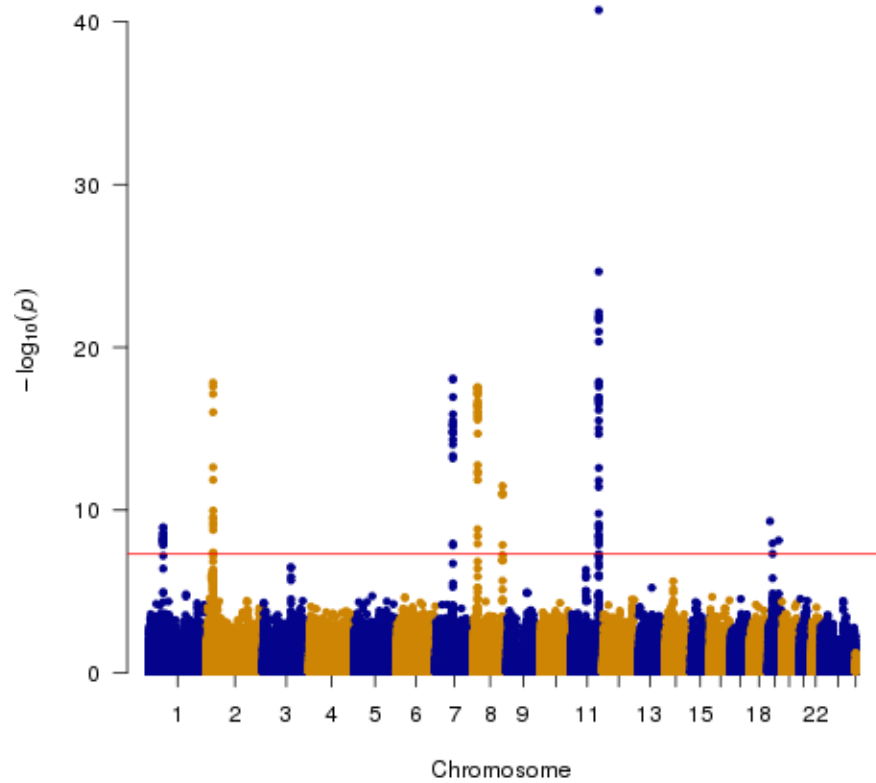
Thyroid Stimulating Hormone (Log Transform)

Genomic Inflation Factor is 1.06533258684863



Triglycerides (Log Transform)

Genomic Inflation Factor is 1.11045917460547



White Blood Cell Count

Genomic Inflation Factor is 1.09920578761999

