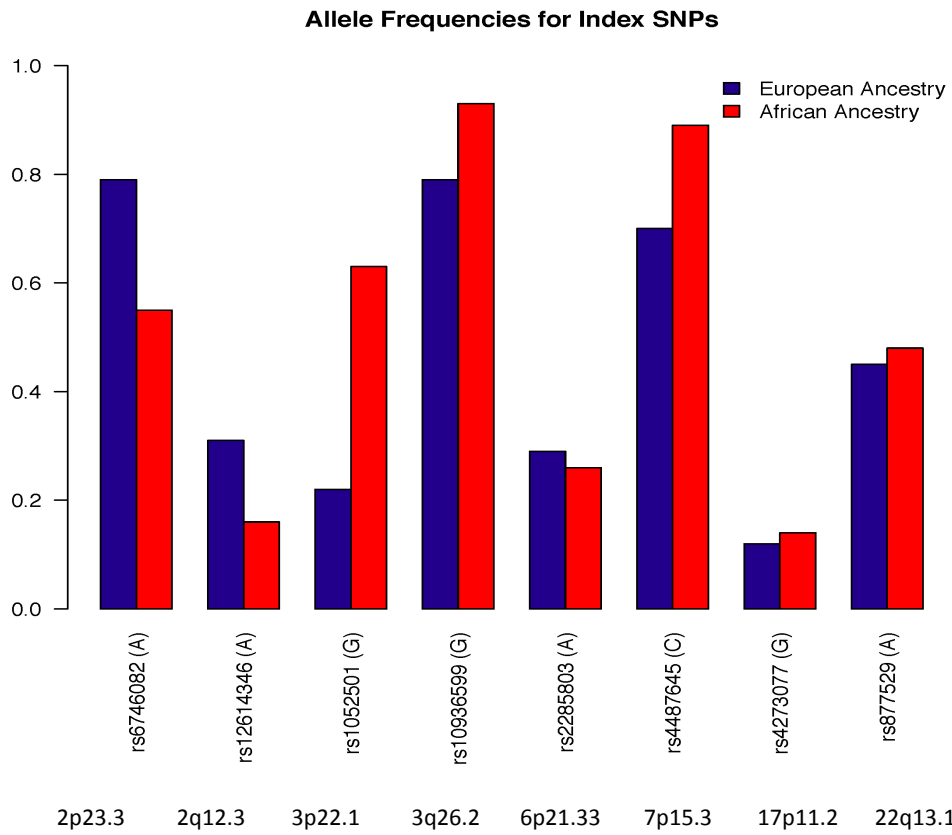
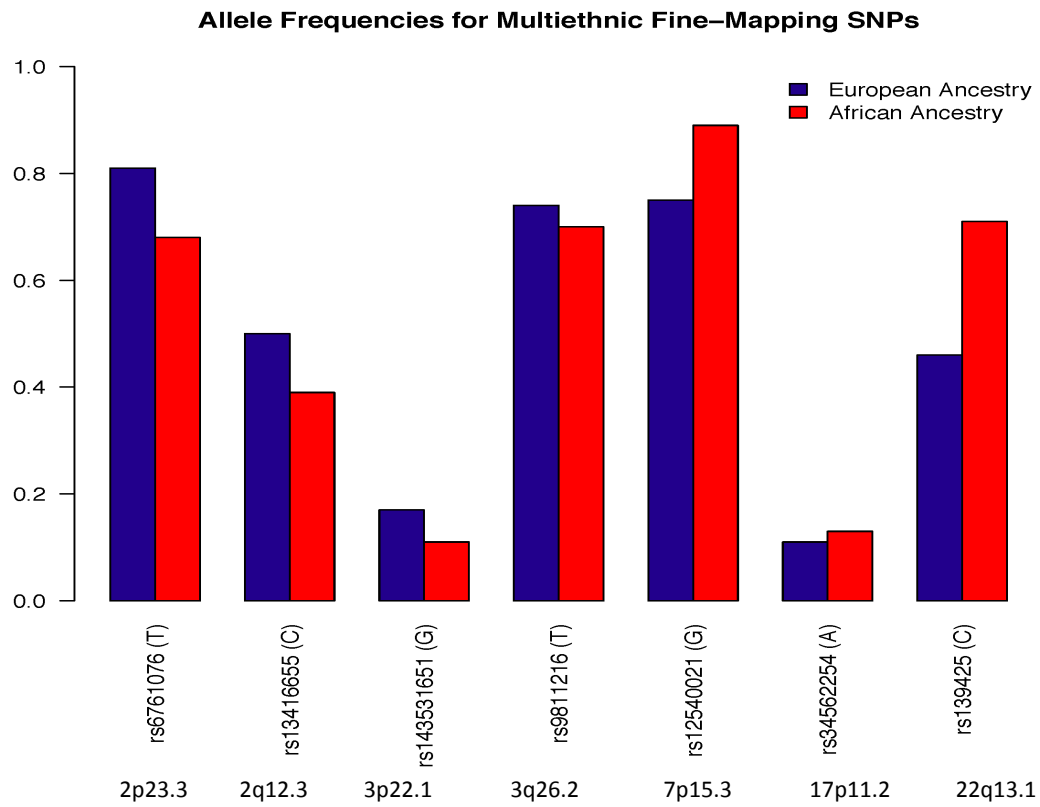


Supplementary Figure 1a. Allele frequencies of index SNPs observed in subjects of European and African ancestry.

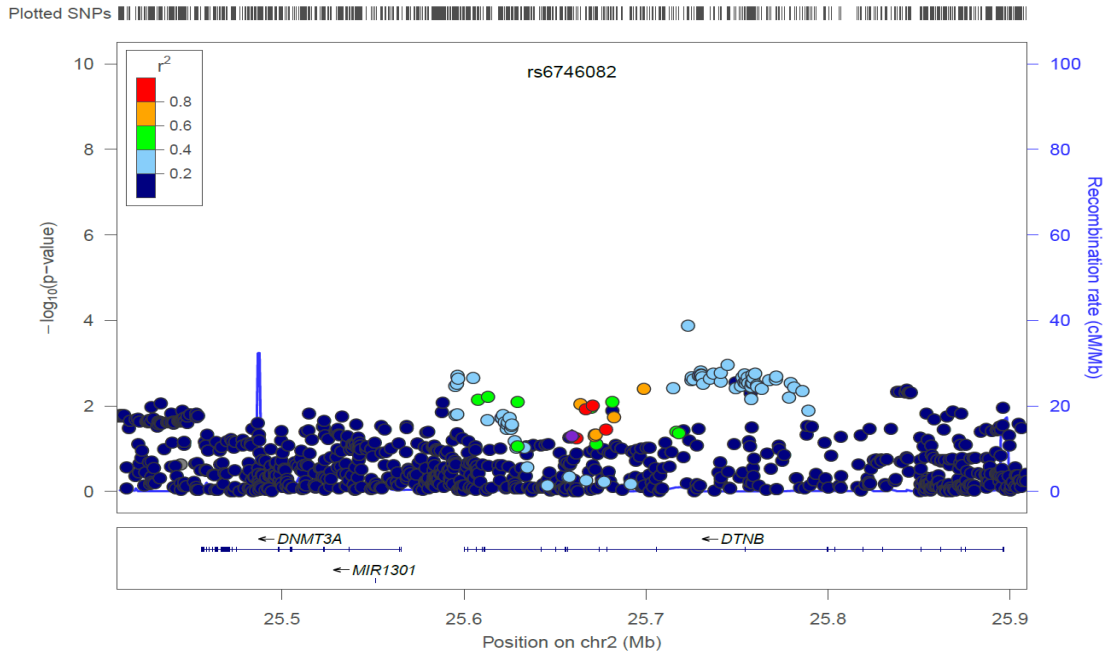


Supplementary Figure 1b. Allele frequencies observed in subjects of European and African ancestry for the most significant SNPs from the combined meta-analysis in two populations.

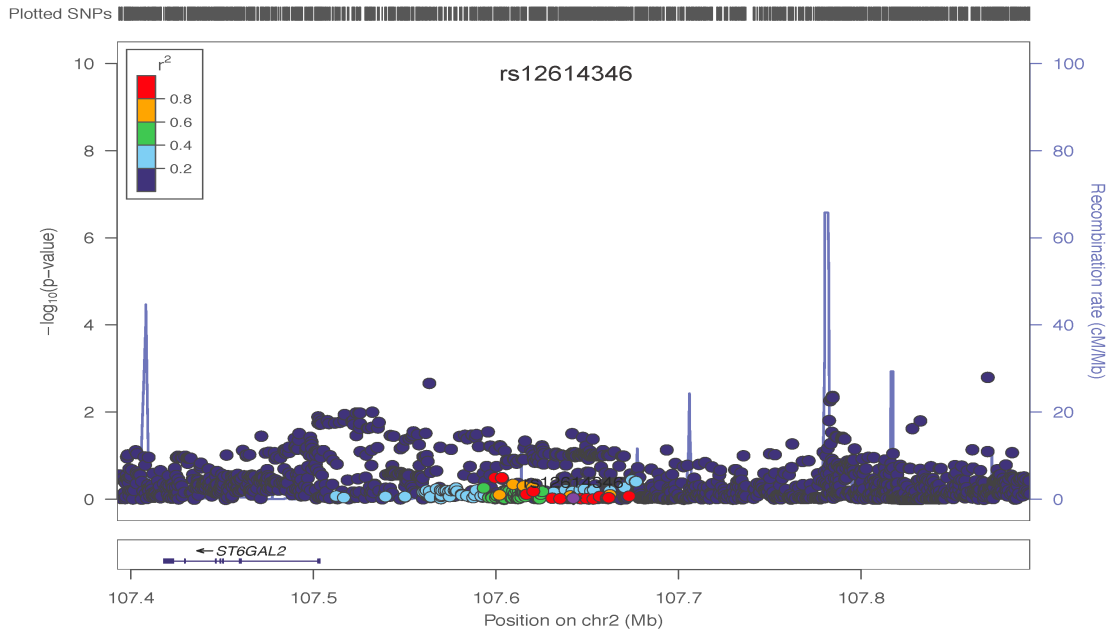


**Supplementary Figure 2a. LocusZoom plots for the eight regions for subjects of European ancestry. (1KGP EUR reference)**

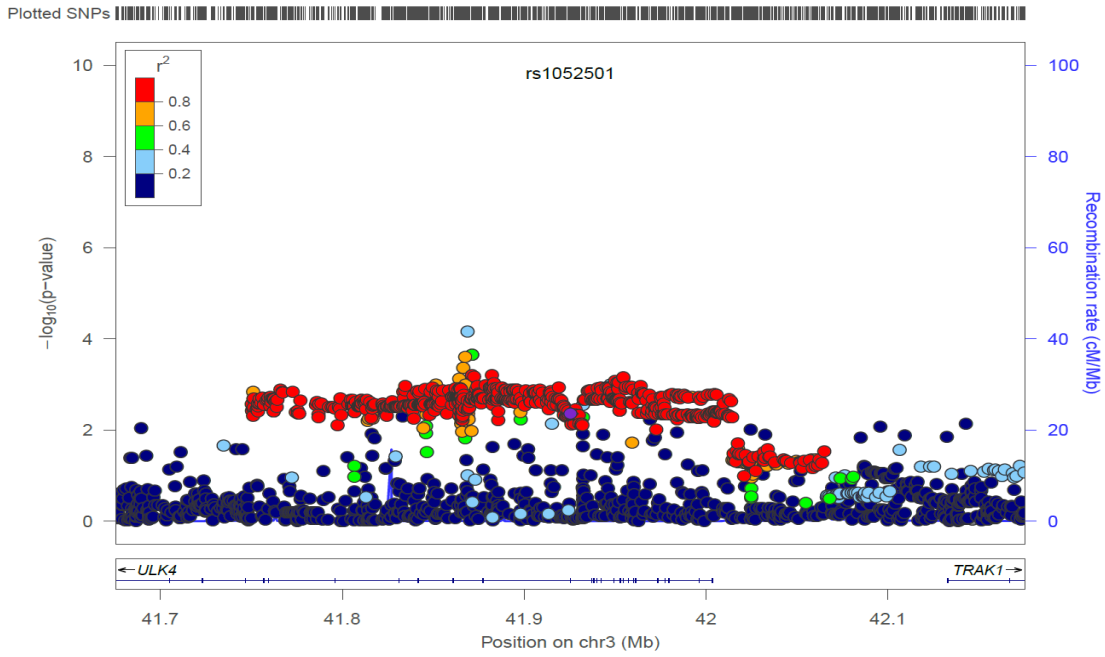
2p23.3



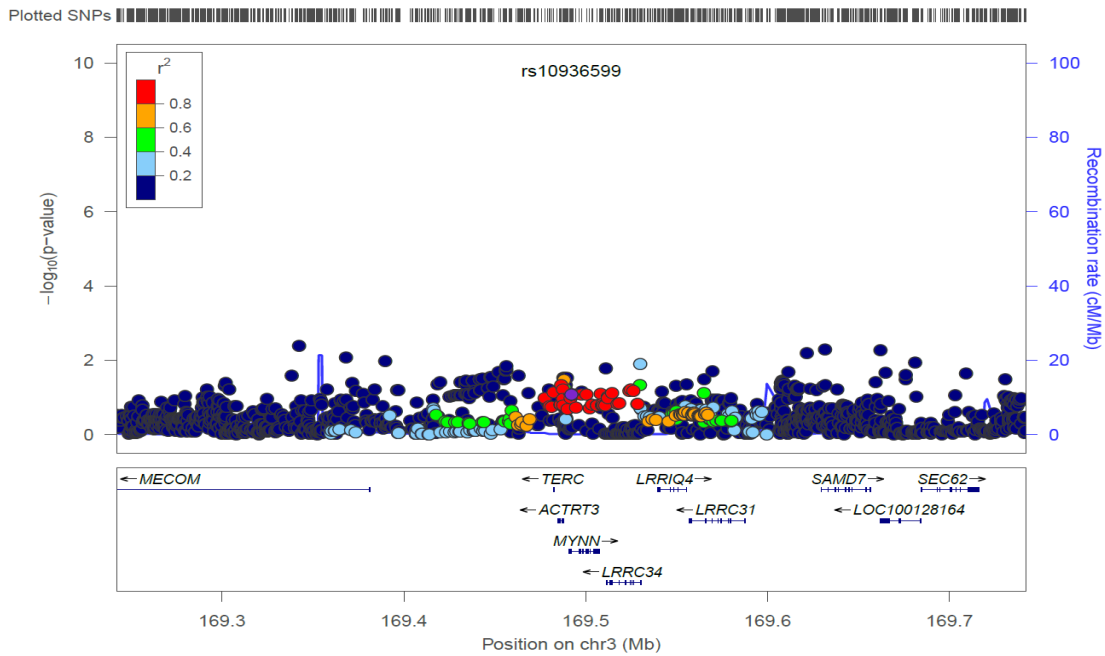
2q12.3



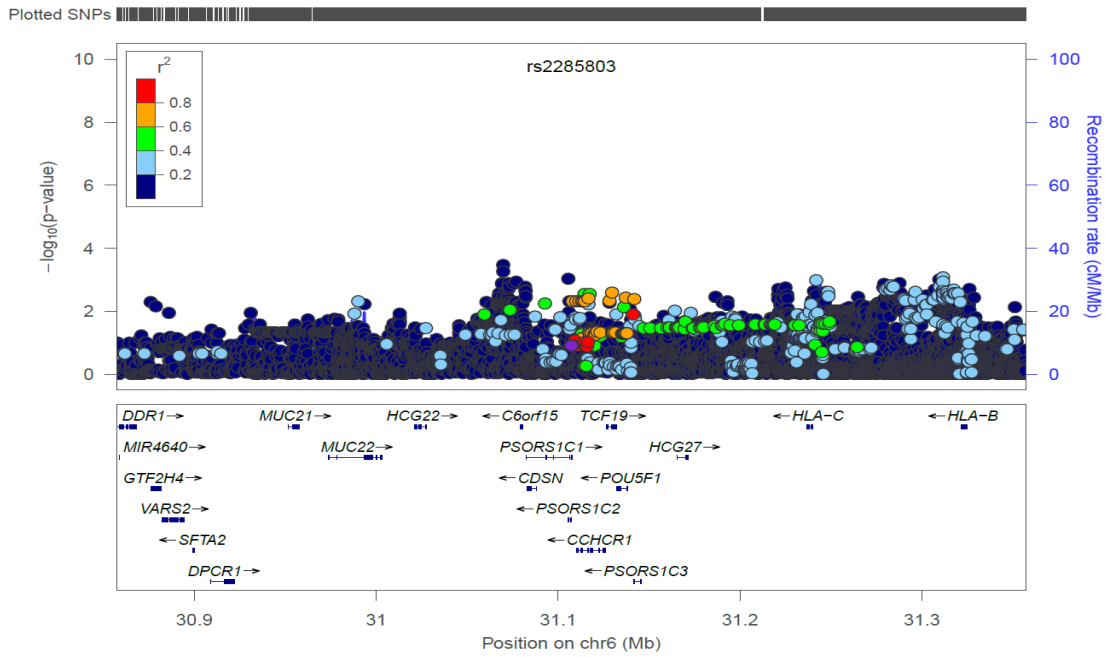
### 3p22.1



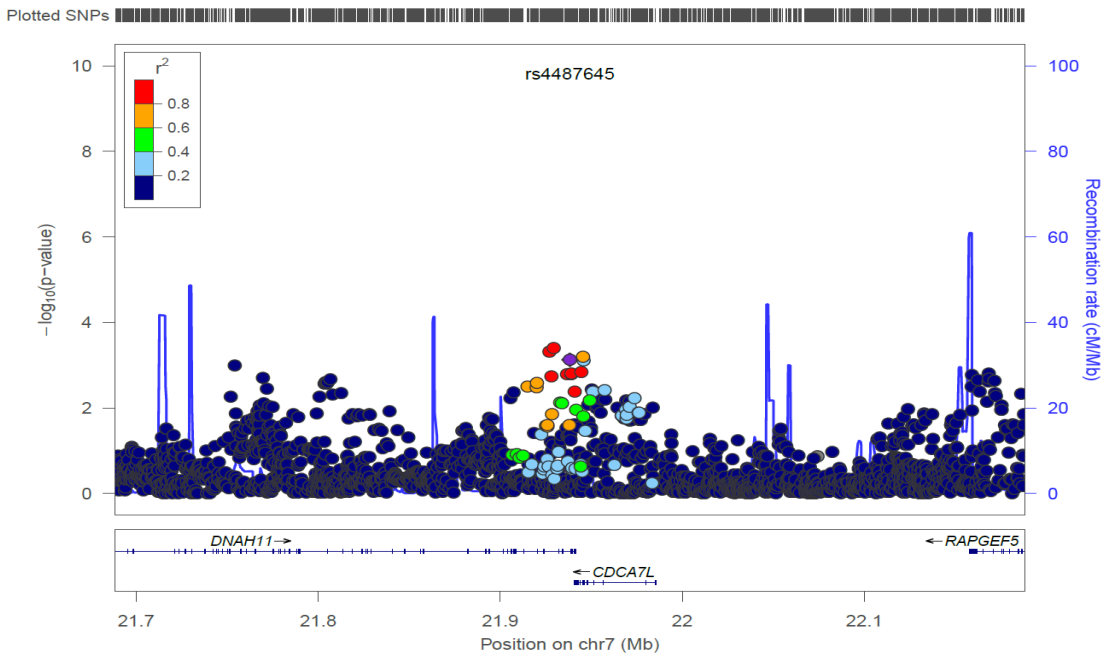
### 3q26.2



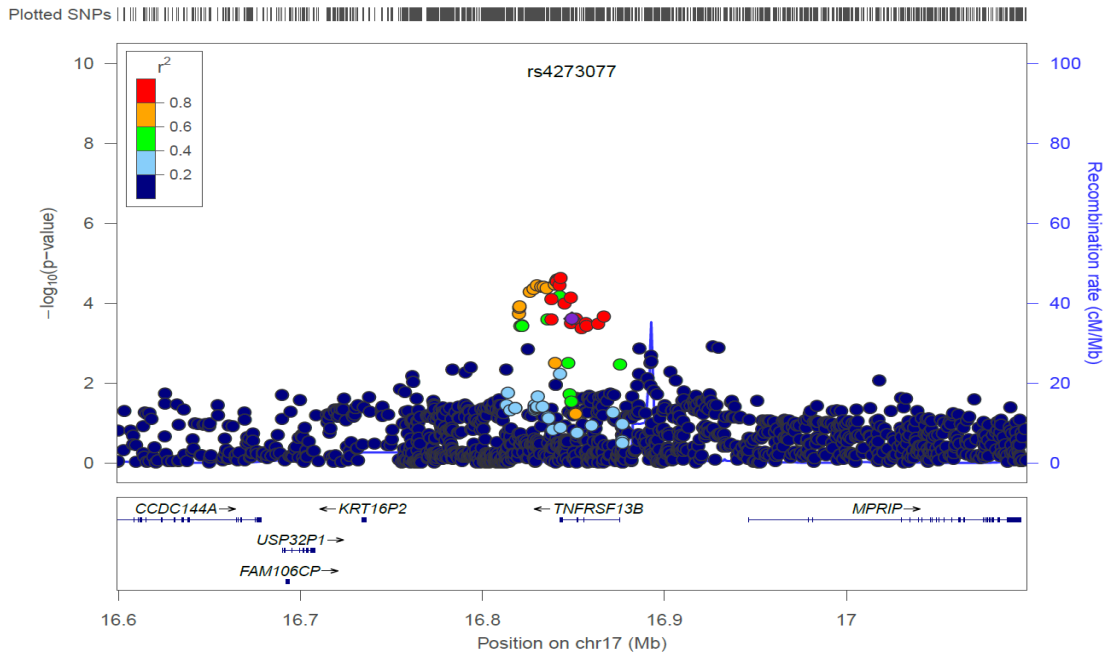
### 6p21.33



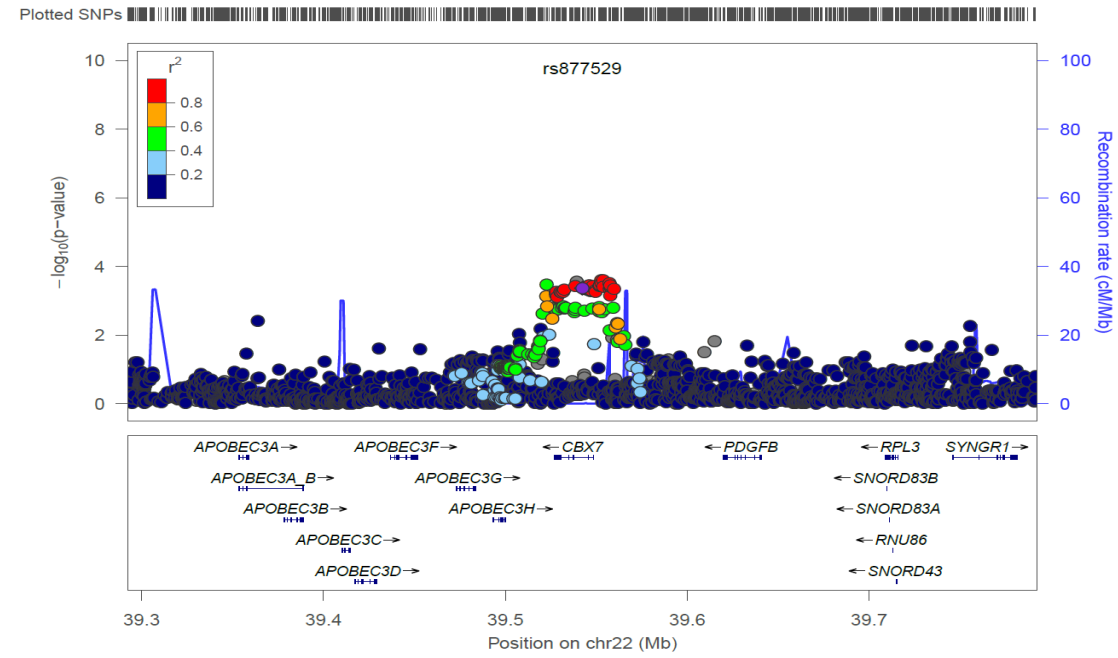
### 7p15.3



17p11.2

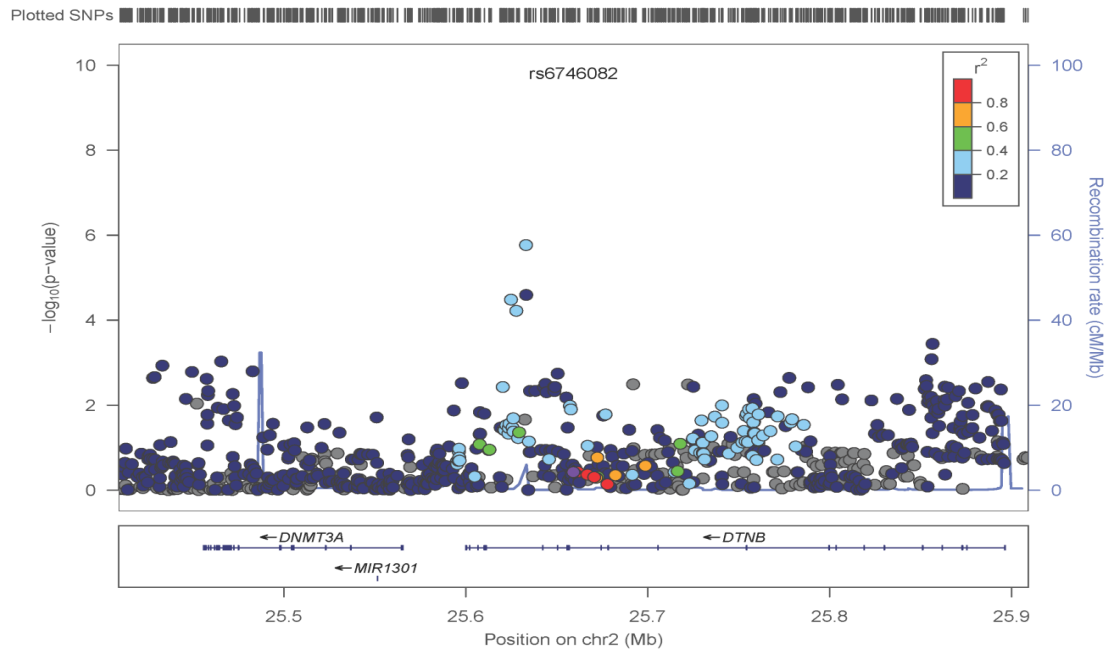


22q13.1

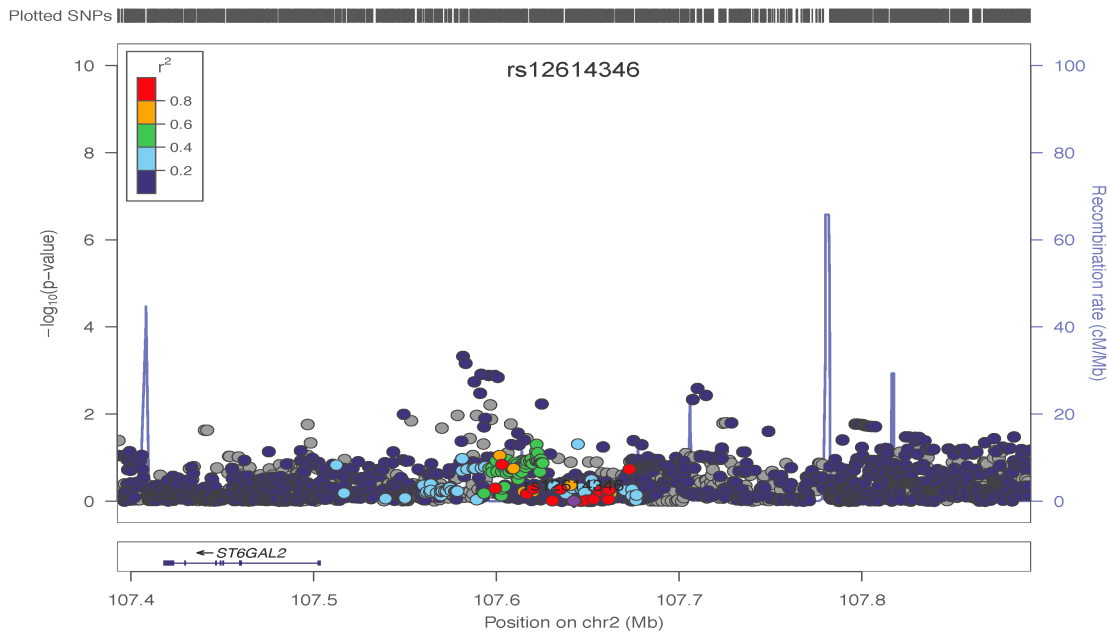


**Supplementary Figure 2b. LocusZoom plots for the eight regions for subjects of African ancestry. (1KGP EUR reference)**

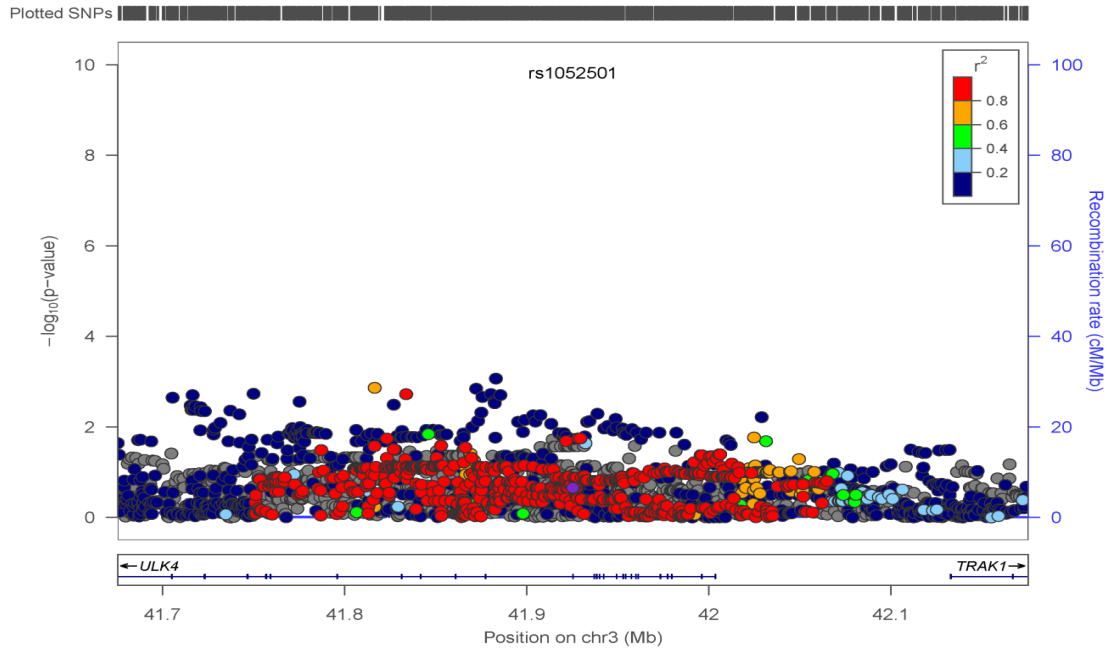
2p23.3



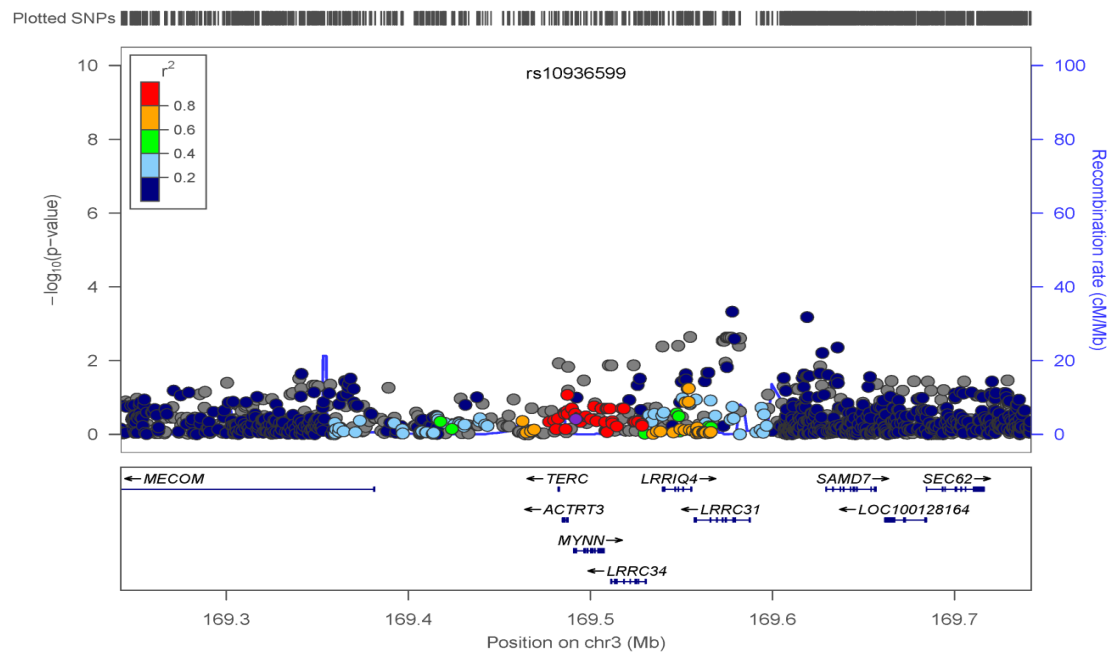
2q12.3



### 3p22.1

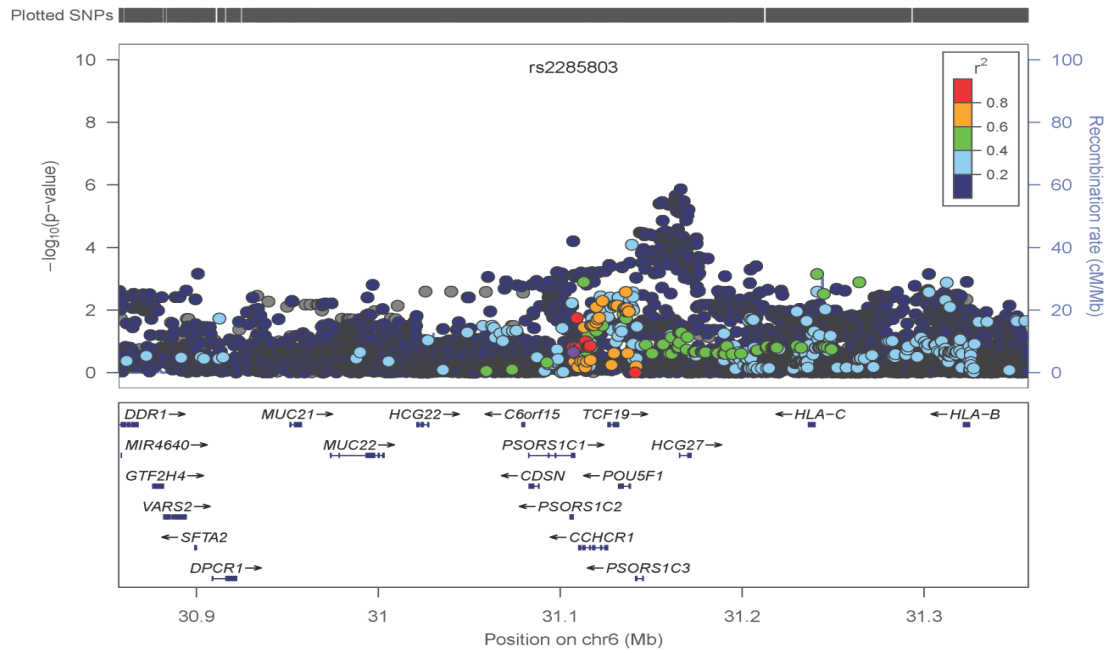


### 3q26.2

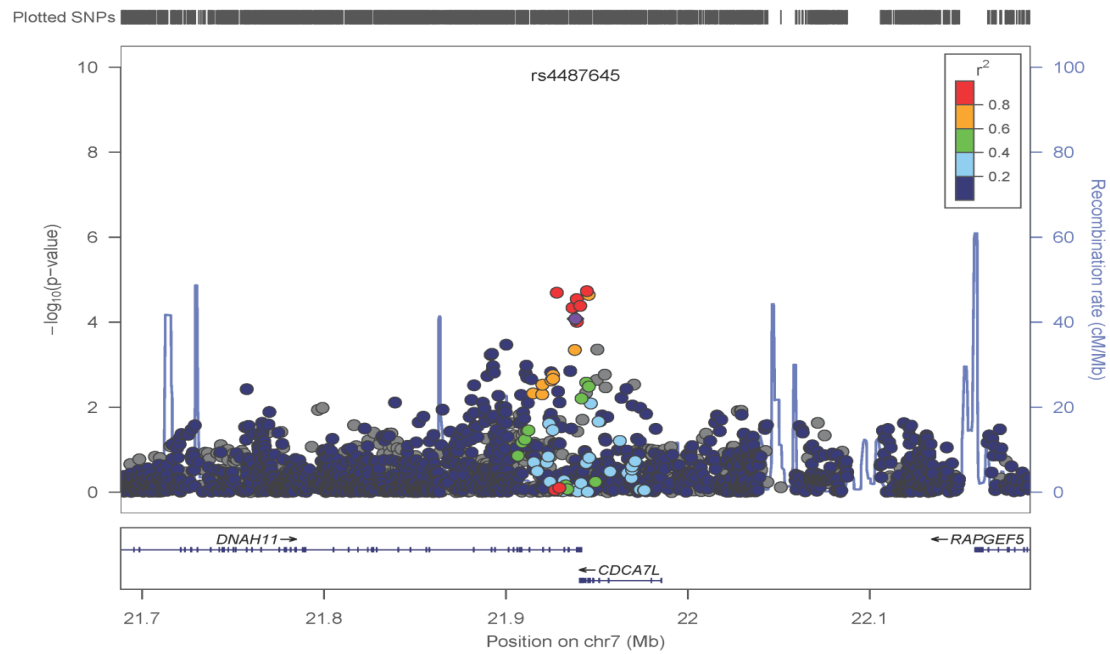




### 6p21.33

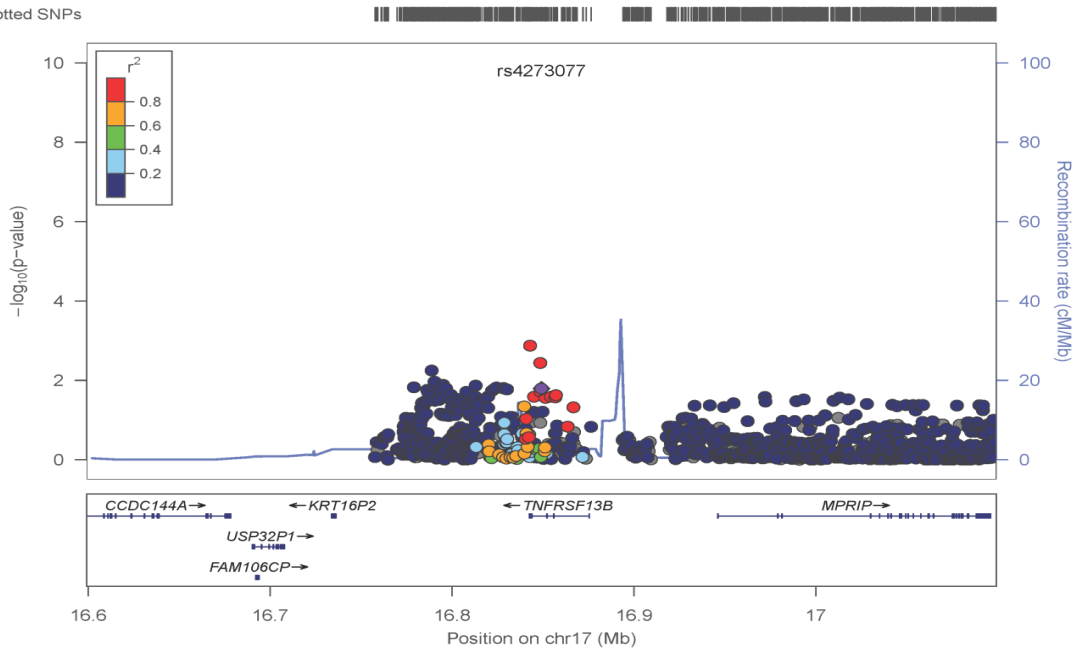


### 7p15.3



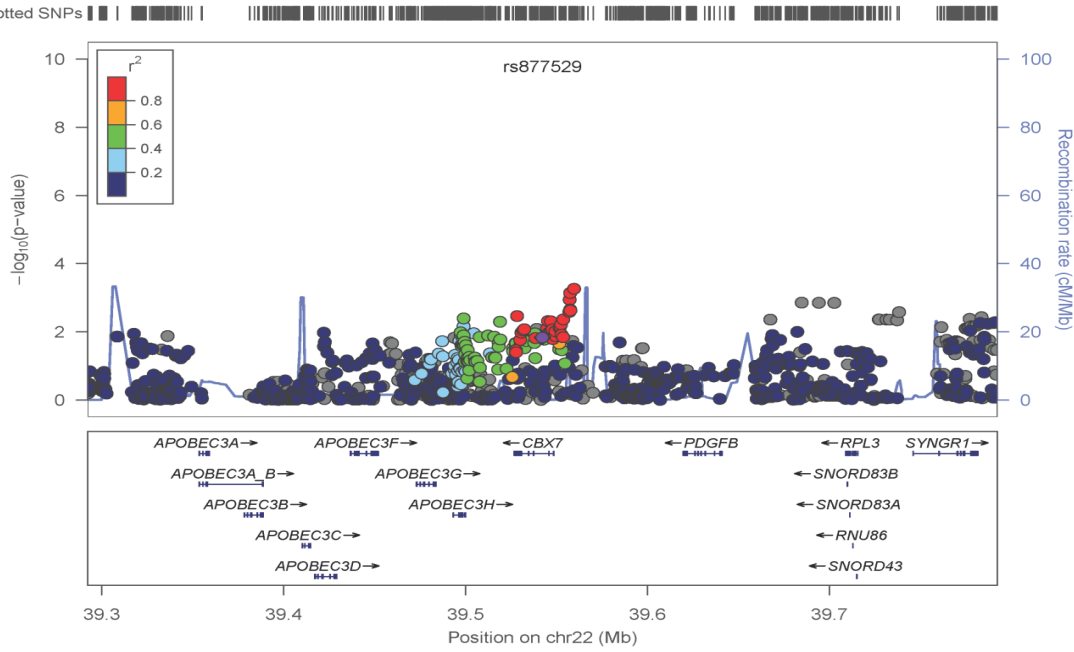
### 17p11.2

Plotted SNPs



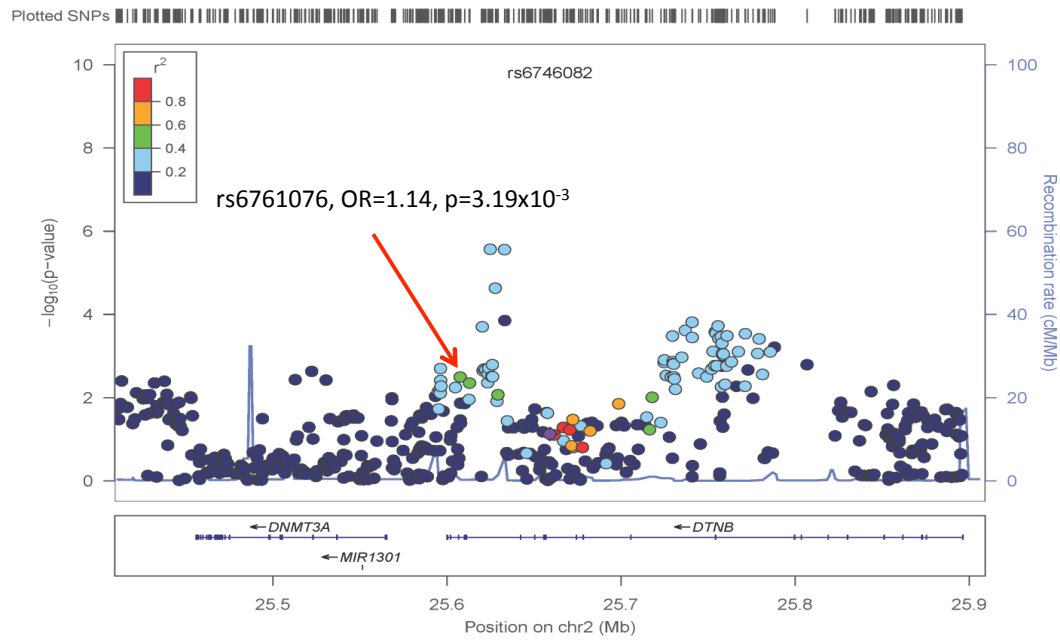
### 22q13.1

Plotted SNPs

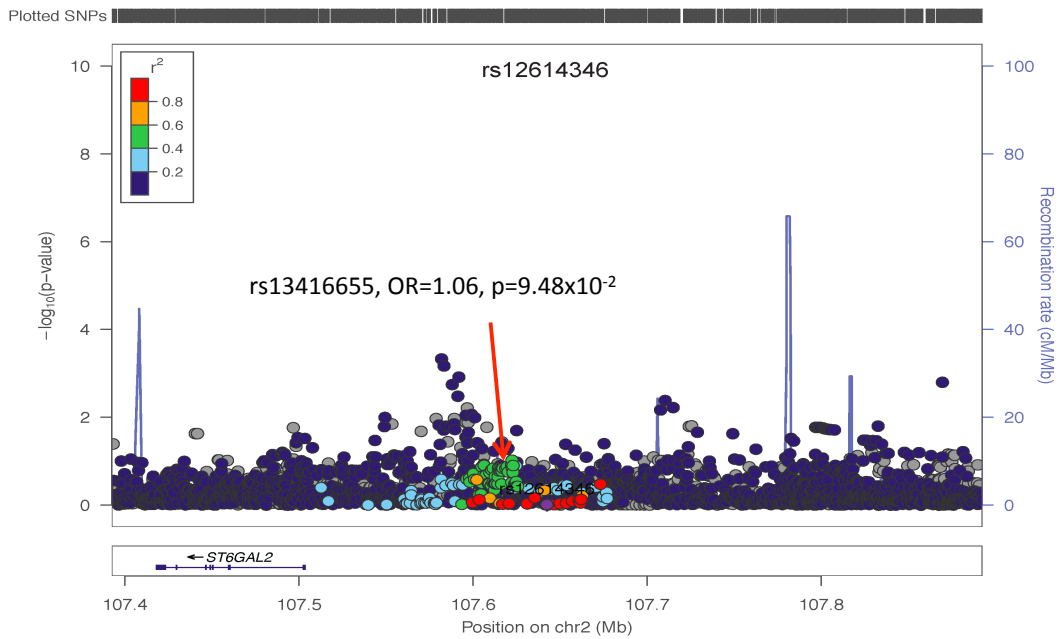


**Supplementary Figure 3a. LocusZoom Plots of European and African ancestry combined meta-analysis with LD calculated in relation to the index SNP (1KGP EUR ref). The most significant Group A SNP in each region is labeled.**

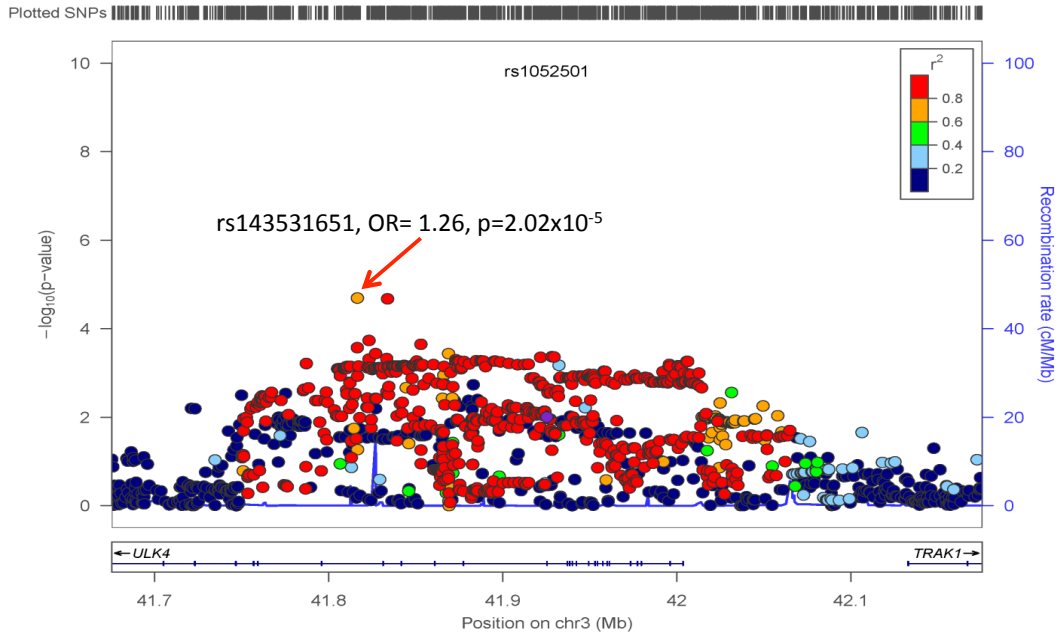
**2p23.3**



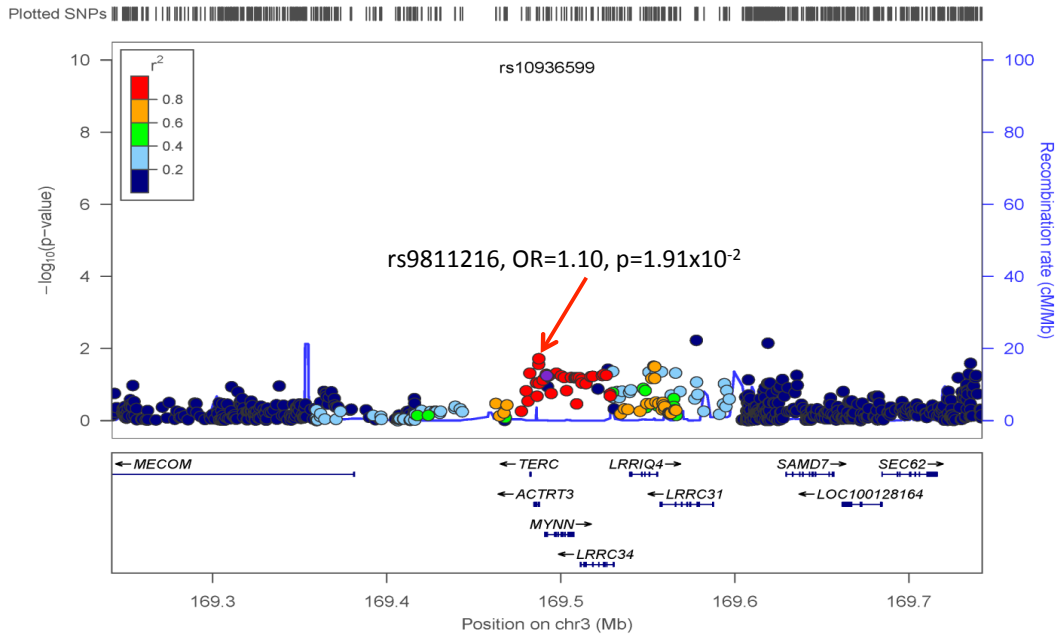
**2q12.3**



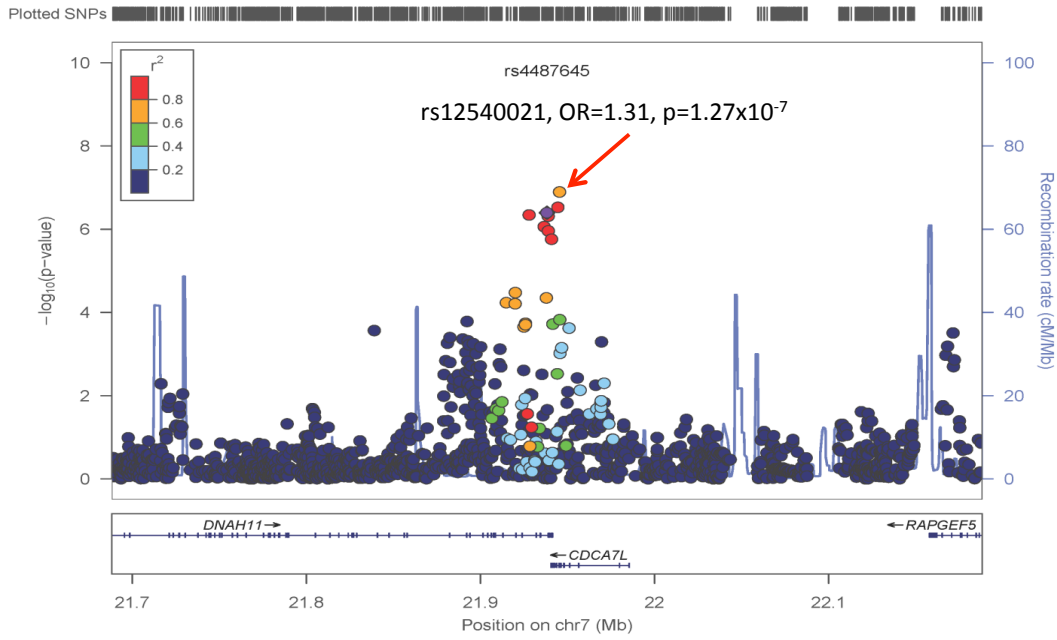
### 3p22.1



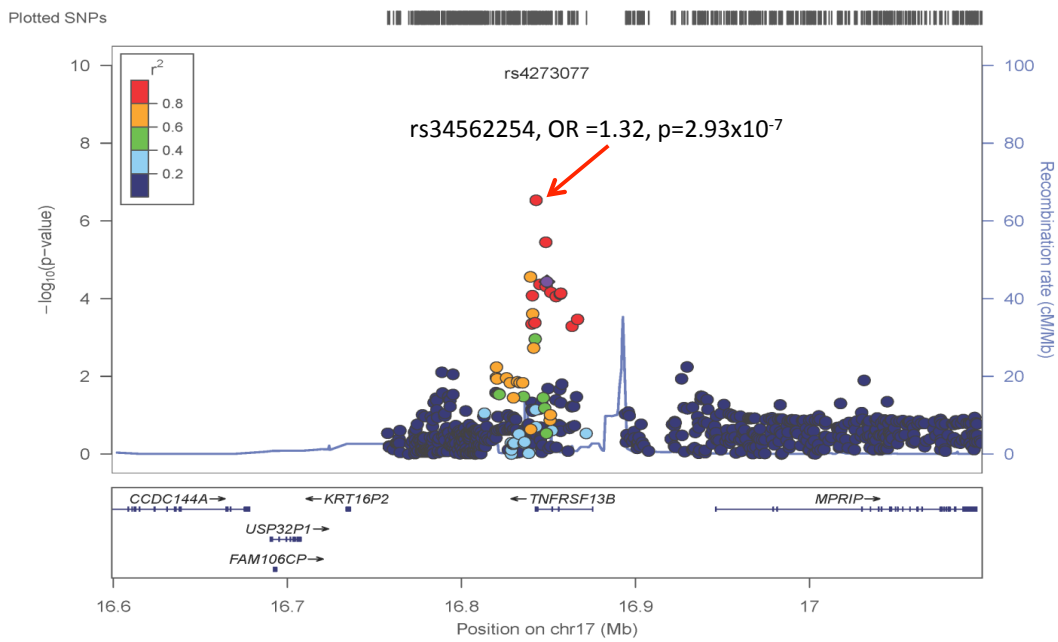
### 3q26.2



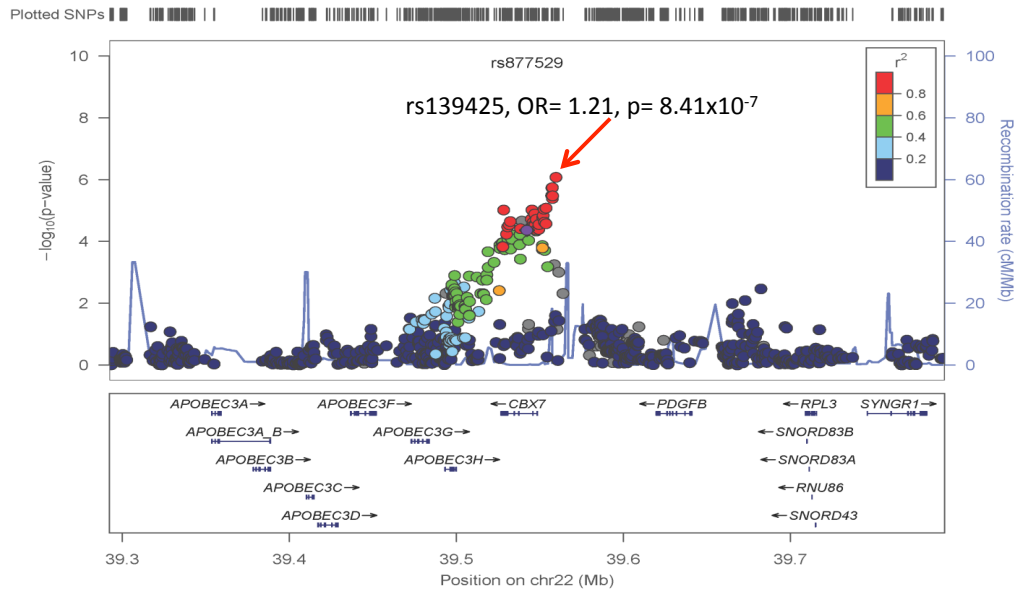
7p15.3



17p11.2

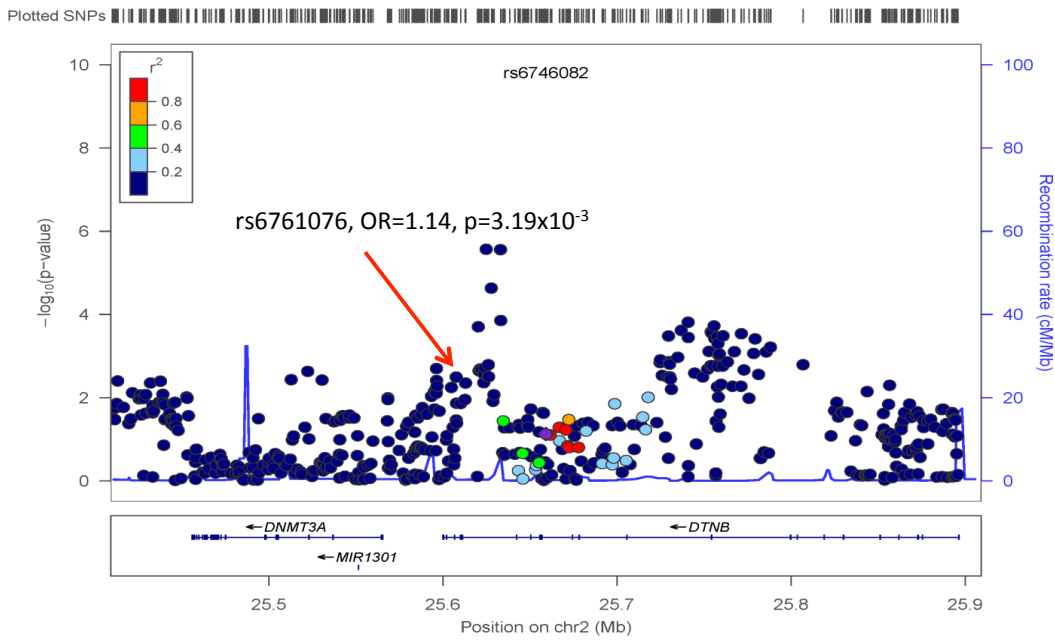


22q13.1

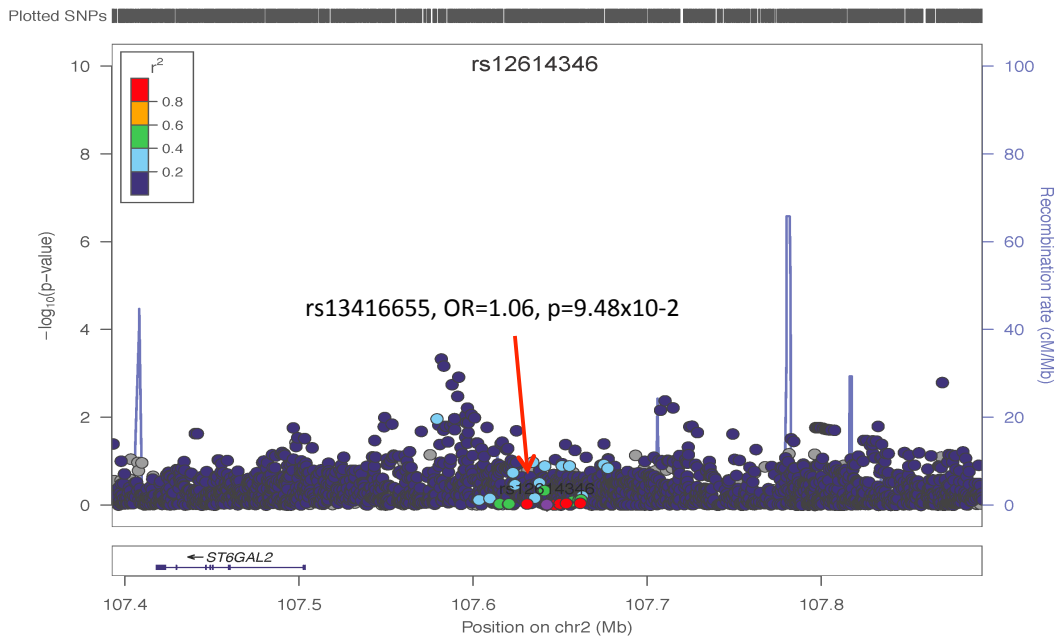


**Supplementary Figure 3b. LocusZoom Plots of European and African ancestry combined meta-analysis with LD calculated in relation to the index SNP (1KGP AFR ref). The most significant Group A SNP in each region is labeled**

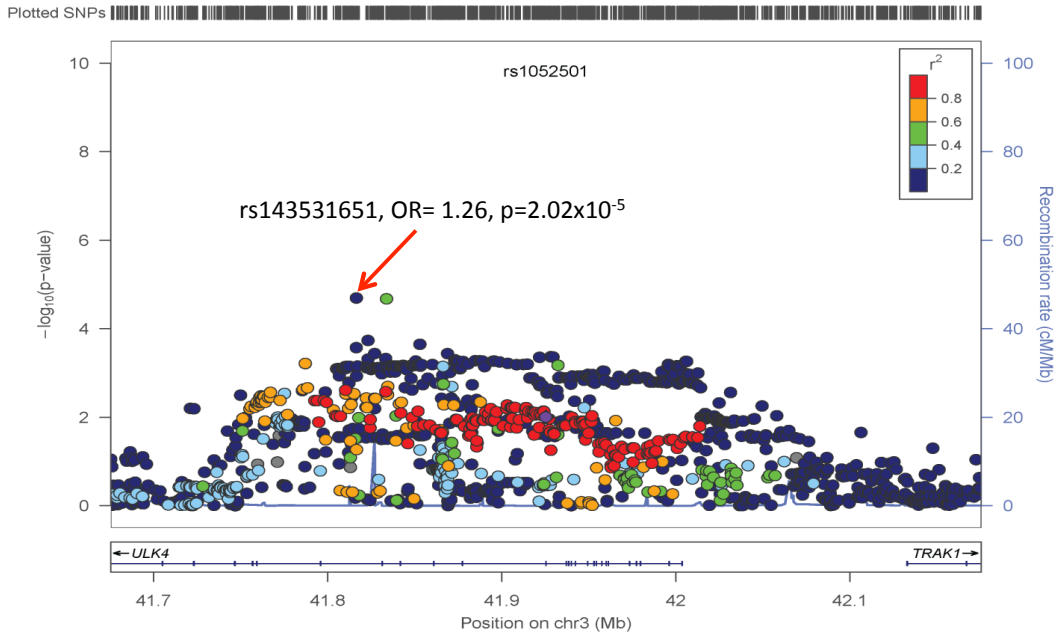
**2p23.3**



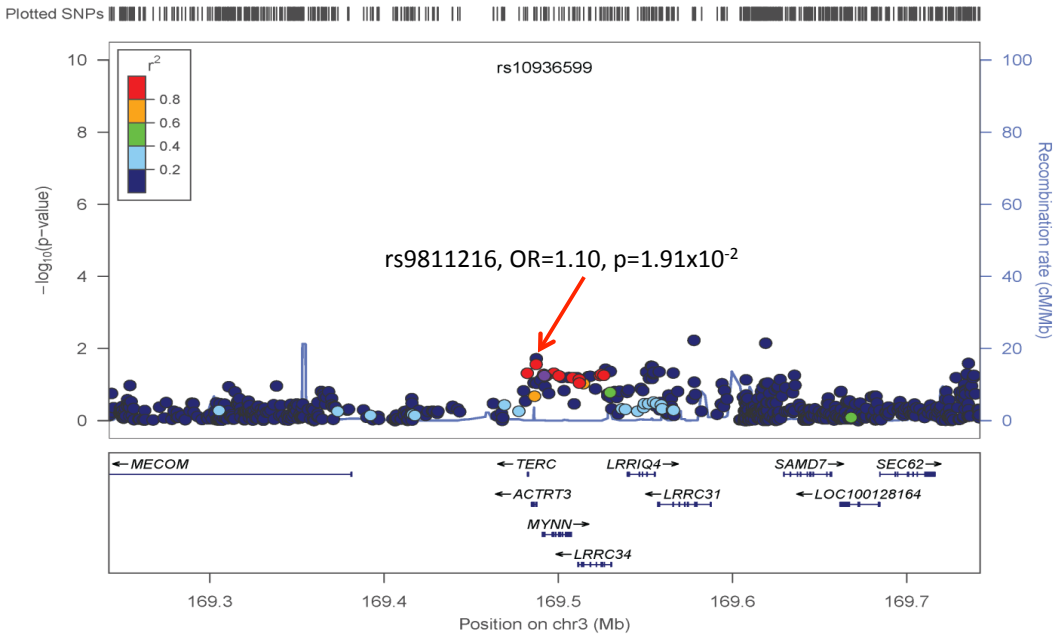
**2q12.3**



### 3p22.1

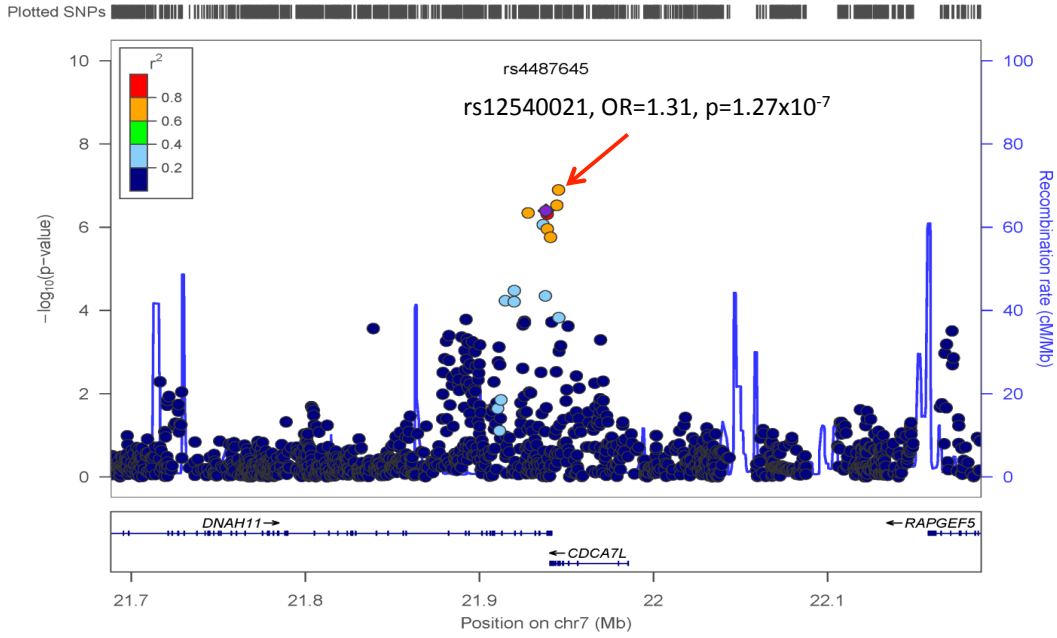


### 3q26.2

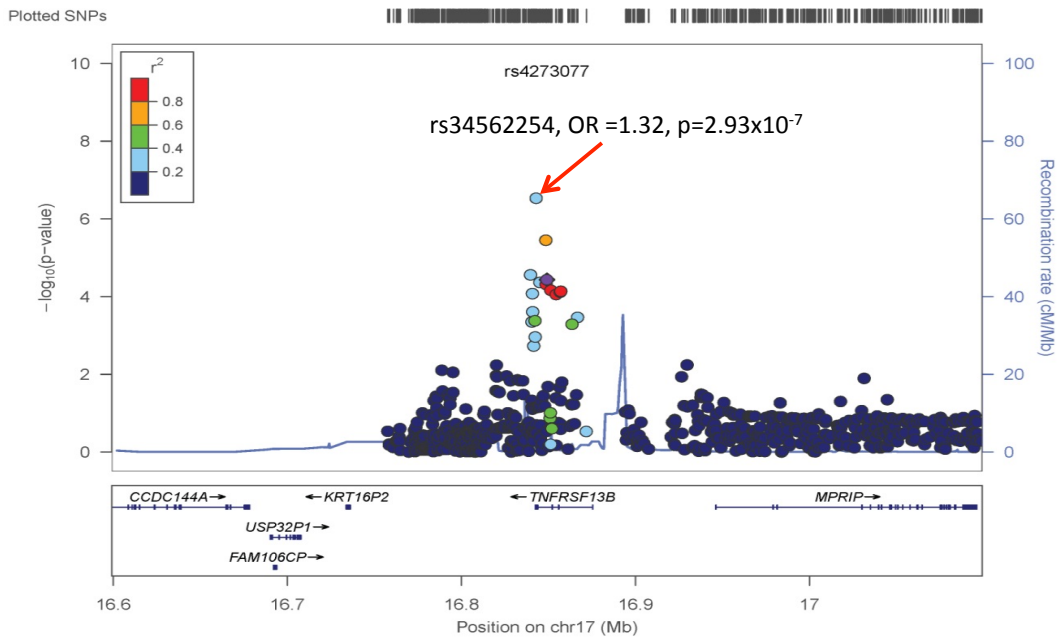




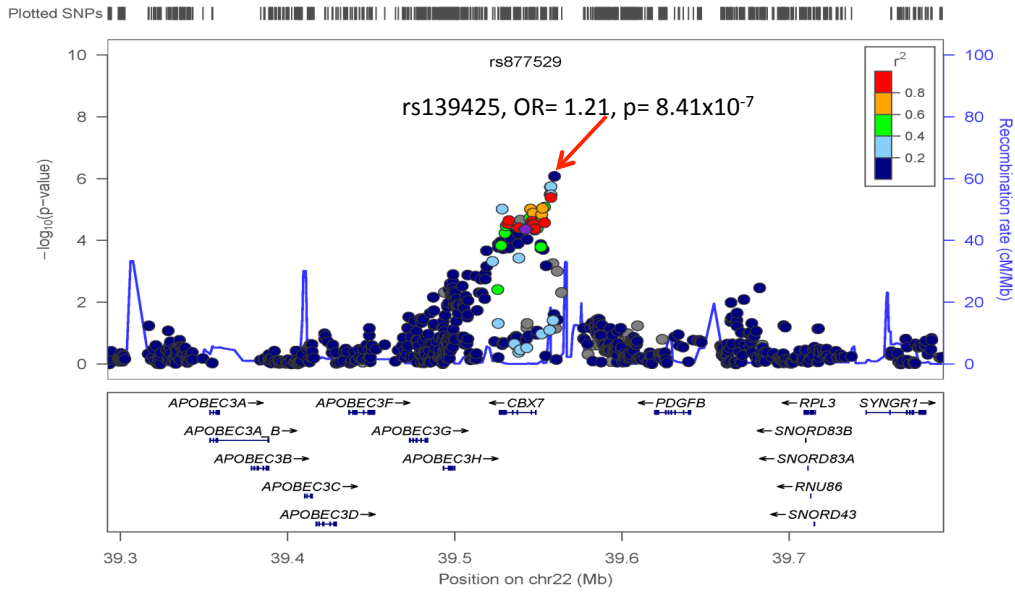
### 7p15.3



### 17p11.2



22q13.1



**Supplementary Table 1. Imputation quality by region in subjects of African ancestry.**

<b>SNP</b>	<b>CHR:BP</b>	<b>Typed<sup>a</sup></b>	<b>Imputed<sup>b</sup></b>	<b>info &gt; 0.8<sup>c</sup></b>	<b>info &lt; 0.8<sup>d</sup></b>
rs6746082	2:25659244	27	2006	884	1122
rs12614346	2:107642482	42	2971	2396	575
rs1052501	3:41925398	22	3438	2777	661
rs10936599	3:169492101	34	2910	1492	1418
rs2285803	6:31107258	125	10229	9358	871
rs4487645	7:21938240	78	4174	2669	1505
rs4273077	17:16849139	22	2574	1125	1449
rs877529	22:39542292	34	3967	1322	2645

<sup>a</sup>Number of genotyped SNPs within +/- 250 kb of the index marker

<sup>b</sup>Number of KGP imputed SNPs with MAF>1%

<sup>c</sup>Imputed SNPs with info > 0.8 and MAF >1%

<sup>d</sup>Imputed SNPs with info < 0.8 and MAF >1%

**Supplementary Table 2. Significance thresholds for eight regions derived from 1,000 permutations using African ancestry case-control data.**

SNP	CHR:BP	N SNPs <sup>a</sup>		Significance threshold	
		Group A <sup>b</sup>	Group B <sup>c</sup>	Group A <sup>b</sup>	Group B <sup>c</sup>
rs6746082	2:25659244	14	870	$7.60 \times 10^{-3}$	$5.04 \times 10^{-6}$
rs12614346	2:107642482	59	2337	$4.85 \times 10^{-3}$	$7.19 \times 10^{-6}$
rs1052501	3:41925398	711	2066	$1.48 \times 10^{-3}$	$5.60 \times 10^{-6}$
rs10936599	3:169492101	70	1422	$2.41 \times 10^{-3}$	$7.62 \times 10^{-6}$
rs2285803	6:31107258	52	9306	$5.46 \times 10^{-3}$	$1.03 \times 10^{-6}$
rs4487645	7:21938240	26	2643	$4.44 \times 10^{-3}$	$3.43 \times 10^{-6}$
rs4273077	17:16849139	36	1089	$3.93 \times 10^{-3}$	$5.79 \times 10^{-6}$
rs877529	22:39542292	58	1264	$2.87 \times 10^{-3}$	$2.50 \times 10^{-6}$

<sup>a</sup>Total number of SNPs (MAF>1% and INFO>0.80) within +/-250 kb of the index SNP

<sup>b</sup>SNP correlated with the index SNP at  $r^2 \geq 0.50$  (based on the 1000 Genomes EUR populations)

<sup>c</sup>SNP correlated with the index SNP at  $r^2 < 0.50$  (based on the 1000 Genomes EUR populations)

**Supplementary Table 3. The most significant associations in subjects of African ancestry ( $r^2 \geq 0.50$  with index in KGP EUR).**

SNP	CHR:BP	A1 <sup>a</sup> /A2	Freq in EAs <sup>b</sup>	Freq in AAs <sup>b</sup>	OR <sup>b</sup> AA	P-value AA	r <sup>2</sup> with Index in Region <sup>c</sup>
rs679112	2:25718052	A/G	0.75	0.58	1.09	$8.10 \times 10^{-2}$	0.25 / 0.53
rs13416655	2:107621925	C/T	0.50	0.39	1.10	$4.90 \times 10^{-2}$	0.13 / 0.52
rs143531651	3:41816589	G/C	0.17	0.11	1.27	$1.37 \times 10^{-3}$	0.02 / 0.79
rs9833035	3:169553498	G/T	0.78	0.69	1.10	$5.67 \times 10^{-2}$	0.13 / 0.61
rs113704463	6:311113052	G/A	0.29	0.40	1.15	$1.27 \times 10^{-3}$	0.38 / 0.57
rs56249828	7:21944607	T/C	0.68	0.89	1.41	$1.85 \times 10^{-5}$	0.71 / 0.85
rs34562254	17:16842991	A/G	0.11	0.13	1.25	$1.33 \times 10^{-3}$	0.33 / 0.90
rs139425	22:39559742	C/G	0.46	0.71	1.21	$5.45 \times 10^{-4}$	0.18 / 0.95

<sup>a</sup>Risk allele

<sup>b</sup>Frequency and OR for A1 allele

<sup>c</sup>r<sup>2</sup> metrics based on 1000 Genomes Project AFR/EUR populations

**Supplementary Table 4. The most significant associations in subjects of European ancestry ( $r^2 \geq 0.50$  with index in KGP EUR).**

SNP	CHR:BP	A1 <sup>a</sup> /A2	Freq in EAs <sup>b</sup>	Freq in AAs	OR EA	P-value EA	P-het EA	R2 with Index in region <sup>c</sup>
rs4665791	2:25698847	G/A	0.83	0.57	1.24	$3.99 \times 10^{-3}$	0.42	0.38 / 0.61
rs4676096	2:107603011	A/G	0.34	0.19	1.06	$3.18 \times 10^{-1}$	0.48	0.30 / 0.86
rs28581706	3:41871397	C/A	0.13	0.35	1.41	$2.23 \times 10^{-4}$	0.43	0.29 / 0.55
rs55735727	3:169488148	A/T	0.74	0.89	1.16	$3.49 \times 10^{-2}$	0.80	0.26 / 0.66
rs112941857	6:31129642	A/C	0.21	0.13	1.27	$2.56 \times 10^{-3}$	0.71	0.05 / 0.62
rs6948632	7:21929452	G/T	0.69	0.60	1.24	$4.00 \times 10^{-4}$	0.63	0.03 / 0.90
rs34562254	17:16842991	A/G	0.11	0.13	1.45	$2.39 \times 10^{-5}$	0.37	0.33 / 0.90
rs139413	22:39553772	G/A	0.49	0.46	1.22	$2.49 \times 10^{-4}$	0.72	0.92 / 0.99

<sup>a</sup>Risk allele

<sup>b</sup>Minimum frequency observed in meta-analysis of four studies

<sup>c</sup> $r^2$  metrics based on 1000 Genomes Project AFR/EUR populations



Supplementary Table 6. Functional overlap for fine-mapping SNPs that were significantly associated with multiple myeloma risk in the combined African and European ancestry analysis.

chromosome	start	end	name	CD20_R001778 DNASE HYPERSENSITIVE SITE	CD20_R001794 CTCF SITE	CD20_R001794 ENHANCER REGION WITH ACTIVE MARKS	CD20_R001794 DNASE HYPERSENSITIVE SITE IN ENHANCER REGION WITH ACTIVE MARKS	CD20_R001794 PROMOTER REGION WITH ACTIVE MARKS	CD20_R001794 DNASE HYPERSENSITIVE SITE IN PROMOTER REGION WITH ACTIVE MARKS	CD20_R001794 DNASE HYPERSENSITIVE SITE	MISSENSE	3' UTR	GENE
chr3	42003368	42003369	rs73071261	0	0	0	0	0	0	0	0	0	
chr3	42003697	42003698	rs73830585	0	0	0	0	0	0	0	0	0	
chr3	42002760	42002761	rs55916855	0	0	0	0	0	1	0	0	0	
chr3	42001846	42001847	rs73071259	0	0	1	0	0	0	0	0	0	
chr3	42004427	42004428	rs55953604	0	0	0	0	1	0	0	0	0	
chr3	41923008	41923009	rs73081392	0	1	0	0	0	0	0	0	0	
chr3	42005165	42005166	rs60966614	0	0	1	0	0	0	0	0	0	
chr3	42004680	42004681	rs4434125	0	0	1	0	0	0	0	0	0	
chr3	42004881	42004882	rs56290987	0	0	1	0	0	0	0	0	0	
chr3	41831202	41831203	rs17215589	0	0	0	0	0	0	0	1	0	ULK4
chr3	42004426	42004427	rs56201224	0	0	0	0	1	0	0	0	0	
chr3	41923299	41923300	rs17217536	0	1	0	0	0	0	0	0	0	
chr3	42001986	42001987	rs7639859	0	0	1	0	0	0	0	0	0	
chr3	41952851	41952852	rs35263917	0	0	0	0	0	0	0	1	0	ULK4
chr7	21939031	21939032	rs56333627	0	0	1	0	0	0	0	0	0	
chr7	21936697	21936698	rs75341503	0	0	1	0	0	0	0	0	0	
chr7	21928078	21928079	rs57104699	0	0	1	0	0	0	0	0	0	
chr7	21944606	21944607	rs56249828	0	0	1	0	0	0	0	0	0	
chr7	21938239	21938240	rs4487645	0	0	0	1	0	0	0	0	0	
chr7	21939088	21939089	rs55714084	0	0	1	0	0	0	0	0	0	
chr7	21940959	21940960	rs7971	0	0	1	0	0	0	0	0	1	
chr7	21945562	21945563	rs12540021	0	0	1	0	0	0	0	0	0	
chr17	16848564	16848565	rs4500785	0	0	1	0	0	0	0	0	0	
chr17	16842990	16842991	rs34562254	0	0	0	0	0	0	0	1	0	TNFRSF13B
chr22	39547961	39547962	rs6001455	0	0	0	0	0	1	0	0	0	
chr22	39530131	39530132	rs139385	0	0	0	0	0	0	1	0	0	
chr22	39547020	39547021	rs139403	0	0	1	0	0	0	0	0	0	
chr22	39549425	39549426	rs12158877	0	0	0	0	0	1	0	0	0	
chr22	39530858	39530859	rs139386	0	1	0	0	0	0	0	0	0	
chr22	39547200	39547201	rs139404	0	0	1	0	0	0	0	0	0	
chr22	39549525	39549526	rs139405	0	0	0	0	0	1	0	0	0	
chr22	39547890	39547891	rs1005300	0	0	0	0	0	1	0	0	0	
chr22	39546144	39546145	rs139402	0	0	1	0	0	0	0	0	0	
chr22	39545395	39545396	rs139400	0	0	1	0	0	0	0	0	0	
chr22	39544969	39544970	rs139398	1	0	0	1	0	0	0	0	0	
chr22	39539298	39539299	rs71813239	0	0	1	0	0	0	0	0	0	
chr22	39542291	39542292	rs877529	0	0	0	1	0	0	0	0	0	
chr22	39548026	39548027	rs5995688	0	0	0	0	0	1	0	0	0	
chr22	39546073	39546074	rs139401	0	0	1	0	0	0	0	0	0	
chr22	39528439	39528440	rs79503	0	0	0	0	0	0	1	0	1	
TOTAL				1	3	19	3	2	8	2	3	2	