

**Supplementary Table S3. Associations of PRS SNPs with Smoking Intensity (Pack Years) Stratified by Race.**

SNP	Whites		Blacks	
	Beta (95% CI)	p-value	Beta (95% CI)	p-value
chr1:77501822	-1.33 (-5.78,3.12)	0.5582	-0.69 (-8.39,7.01)	0.8606
chr1:78277321	2.20 (-4.45,8.86)	0.5170	-5.06 (-15.53,5.42)	0.3442
chr1:154593749	0.98 (-6.16,8.11)	0.7887	<b>16.86 (1.65,32.08)</b>	<b>0.0302</b>
chr1:168541843	-1.21 (-5.21,2.79)	0.5547	0.52 (-3.98,5.01)	0.8223
chr2:44962598	0.78 (-2.88,4.45)	0.6754	-0.13 (-6.89,6.64)	0.9710
chr2:139640758	-1.58 (-9.95,6.79)	0.7116	-0.38 (-3.88,3.12)	0.8328
chr2:173211033	-0.36 (-2.84,2.12)	0.7763	-1.59 (-4.15,0.98)	0.2259
chr4:66968056	-0.42 (-2.81,1.96)	0.7268	0.82 (-1.68,3.31)	0.5201
chr4:163086840	0.24 (-2.24,2.72)	0.8506	0.03 (-2.49,2.54)	0.9839
chr5:1000041	2.74 (-6.04,11.53)	0.5408	2.33 (-2.07,6.74)	0.2999
chr5:1249701	7.48 (-6.05,21.02)	0.2789	--	--
chr5:1276758	6.05,21.02)	0.2789	--	--
chr5:1276758	-0.78 (-3.35,1.79)	0.5508	-1.20 (-3.75,1.35)	0.3568
chr5:1285917	-0.95 (-12.7,10.8)	0.8743	9.96 (-18.2,38.1)	0.4882
chr5:1287079	-0.65 (-3.07,1.77)	0.5979	-0.91 (-3.58,1.75)	0.5031
chr5:1293971	-1.15 (-3.96,1.67)	0.4241	-2.05 (-6.12,2.03)	0.3249
chr5:1300154	1.00 (-9.50,11.51)	0.8513	10.21 (-17.8,38.2)	0.4755
chr5:1321972	-1.87 (-4.31,0.57)	0.1327	1.46 (-0.98,3.91)	0.2407
chr5:90954814	1.32 (-1.67,4.32)	0.3858	-0.29 (-3.69,3.12)	0.8692
chr5:150741896	-6.90 (-18.08,4.27)	0.2264	8.45 (-12.4,29.3)	0.4281
chr6:410848	18.08,4.27)	0.2264	8.45 (-12.4,29.3)	0.4281
chr6:410848	-0.86 (-3.26,1.54)	0.4832	-1.07 (-3.75,1.60)	0.4333
chr6:25885586	0.04 (-4.58,4.66)	0.9860	-1.42 (-3.92,1.09)	0.2688
chr6:28250019	2.92 (-0.71,6.55)	0.1151	-1.17 (-4.28,1.94)	0.4615
chr6:29255716	0.46 (-4.04,4.96)	0.8420	-3.30 (-8.60,2.00)	0.2231
chr6:29510044	-1.39 (-4.67,1.88)	0.4045	0.36 (-2.09,2.80)	0.7744
chr6:29638984	-1.32 (-5.16,2.51)	0.4989	3.57 (-3.12,10.26)	0.2964
chr6:29791973	0.51 (-1.99,3.00)	0.6901	-0.55 (-2.94,1.85)	0.6557
chr6:30106386	0.49 (-2.35,3.32)	0.7363	-1.17 (-4.76,2.42)	0.5236
chr6:30170385	1.32 (-1.09,3.74)	0.2818	0.22 (-2.14,2.58)	0.8550
chr6:30897052	-0.33 (-2.82,2.16)	0.7961	0.96 (-1.38,3.29)	0.4239
chr6:31100075	1.44 (-0.99,3.86)	0.2455	-0.97 (-3.33,1.40)	0.4234
chr6:31149800	-0.26 (-4.23,3.72)	0.8993	-1.98 (-5.40,1.44)	0.2570
chr6:31353652	-0.60 (-3.45,2.24)	0.6777	-1.09 (-4.24,2.06)	0.4972
chr6:31466334	-1.51 (-4.64,1.61)	0.3435	-4.13 (-7.95,-0.31)	0.0346
chr6:31660956	-0.45 (-2.86,1.96)	0.7160	-0.31 (-3.91,3.28)	0.8649
chr6:31710997	3.33 (-2.54,9.21)	0.2665	0.17 (-3.22,3.56)	0.9218

chr6:32367427	0.23 (-3.02,3.48)	0.8905	0.16 (-3.62,3.94)	0.9339
chr6:32623148	-2.86 (-5.80,0.07)	0.0564	-1.55 (-4.52,1.42)	0.3076
chr6:32789960	-0.37 (-2.90,2.16)	0.7751	0.14 (-2.30,2.59)	0.9089
chr6:32815309	-2.66 (-5.53,0.21)	0.0696	0.69 (-2.35,3.74)	0.6559
chr6:71674838	-8.58 (-28.1,11.0)	0.3901	7.47 (-32.3,47.3)	0.7131
chr7:130983859	-1.31 (-3.69,1.07)	0.2797	0.80 (-1.60,3.20)	0.5136
chr8:27487202	2.64 (- 10.12,15.4)	0.6851	8.76 (-19.3,36.8)	0.5407
chr8:27539570	0.04 (-4.28,4.37)	0.9843	3.78 (-0.45,8.01)	0.0805
chr8:32552592	-0.50 (-3.57,2.57)	0.7502	-0.78 (-3.36,1.8)	0.5543
chr9:17934122	1.24 (-2.79,5.26)	0.5464	2.28 (-4.26,8.81)	0.4954
chr9:22083405	-2.10 (-4.54,0.35)	0.0940	1.74 (-0.66,4.14)	0.1554
chr9:133410109	-2.02 (- 11.26,7.22)	0.6690	--	--
chr9:133638697	0.15 (-2.28,2.59)	0.9032	-1.76 (-4.16,0.65)	0.1533
chr10:100251945	-3.65 (-9.08,1.79)	0.1892	1.67 (-2.23,5.57)	0.4018
chr10:100912491	-2.22 (-7.89,3.46)	0.4442	-5.35 (-18.35,7.65)	0.4205
chr10:103927874	1.44 (-2.00,4.88)	0.4127	-0.67 (-3.53,2.19)	0.6479
chr11:57482553	-2.67 (-8.15,2.81)	0.3406	-2.12 (-18.6,14.4)	0.8018
chr11:116128039	<b>18.4 (4.34,32.4)</b>	<b>0.0105</b>	--	--
chr11:118254910	-1.08 (-3.52,1.35)	0.3829	-3.36 (-5.86,-0.86)	0.0086
chr12:889653	-0.79 (-3.35,1.77)	0.5458	0.32 (-2.75,3.40)	0.8365
chr12:926876	2.98 (-3.51,9.47)	0.3689	-5.26 (-20.34,9.82)	0.4943
chr13:32398489	-12.58 (- 27.9,2.75)	0.1081	-11.64 (-34.7,11.4)	0.3225
chr13:83706928	<b>-6.90 (-12.4,- 1.36)</b>	<b>0.0149</b>	-1.71 (-5.43,2.01)	0.3680
chr15:43469998	3.18 (-0.58,6.93)	0.0979	0.04 (-2.52,2.59)	0.9778
chr15:49084427	-1.58 (-4.58,1.41)	0.3012	-4.68 (-9.56,0.20)	0.0608
chr15:70139434	0.42 (-2.08,2.91)	0.7443	0.16 (-2.35,2.67)	0.9009
chr15:74763478	3.28 (- 3.97,10.54)	0.3756	2.61 (-5.01,10.24)	0.5017
chr15:78533575	-3.30 (-7.35,0.76)	0.1120	2.30 (-9.33,13.94)	0.6983
chr15:78588410	4.17 (- 4.43,12.76)	0.3425	9.06 (-11.7,29.8)	0.3932
chr15:78617056	-0.54 (-8.28,7.19)	0.8903	-14.81 (-37.91,8.28)	0.2092
chr15:78689081	-1.03 (-9.83,7.78)	0.8194	-1.54 (-14.2,11.12)	0.8120
chr15:78694883	3.82 (-0.29,7.93)	0.0687	0.90 (-2.72,4.53)	0.6254
chr15:78766388	2.56 (-4.52,9.63)	0.4785	-6.29 (-15.8,3.25)	0.1967
chr15:78797392	-0.82 (-3.34,1.69)	0.5217	-0.15 (-3.52,3.21)	0.9288
chr15:78818441	0.76 (-2.74,4.26)	0.6718	1.06 (-7.40,9.53)	0.8060
chr15:78906418	-22.40 (- 70.5,25.6)	0.3609	--	--
chr16:26969325	-6.79 (-54.9,41.4)	0.7822	0.19 (-17.74,18.13)	0.9832
chr17:72303817	-0.29 (-2.91,2.33)	0.8286	0.71 (-2.26,3.69)	0.6394

chr17:74942005	0.19 (-2.91,3.29)	0.9053	0.09 (-5.53,5.72)	0.9740
chr18:23161171	-2.24 (-8.80,4.32)	0.5037	-3.30 (-17.5,10.9)	0.6486
	-4.89 (-			
chr19:40701301	10.32,0.53)	0.0773	4.19 (-8.00,16.37)	0.5008
chr19:40833083	-0.66 (-3.63,2.31)	0.6633	-1.12 (-4.38,2.14)	0.5015
	3.22 (-			
chr19:40906287	5.35,11.78)	0.4618	-12.60 (-35.7,10.5)	0.2845
chr20:63895952	3.08 (-1.52,7.68)	0.1899	-2.24 (-6.36,1.89)	0.2880
chr22:28725099	-10.6 (-26.9,5.57)	0.1984	--	--

Effect estimates are adjusted for age, sex, family history of lung cancer, history of COPD and the top five PCs. SNPs with significant effects at  $\alpha=0.05$  are in bold.