

## CHRNA5 and lung cancer risk in smokers

**Supplemental Table 1.** Basic information of *CHRNA5* SNPs in this study

SNP ID	Position	Allele	MAF		HWE	ORs	95% CI		Allele
		A <sup>a</sup> /B	Case	Control	p-value				p <sup>b</sup> -value
rs2277550	78858263	A/C	0.015	0.018	0.747	0.838	0.322	2.178	0.716
rs684513	78858400	G/C	0.25	0.286	0.333	0.833	0.632	1.098	0.195
rs7178897	78862975	C/T	0.062	0.061	0.063	1.004	0.605	1.666	0.989
rs667282	78863472	C/T	0.447	0.487	0.279	0.854	0.669	1.09	0.204
rs16969948	78864786	G/A	0.064	0.055	0.314	1.171	0.7	1.959	0.547
rs588765	78865425	T/C	0.219	0.188	0.544	1.216	0.899	1.644	0.204
rs16969949	78866964	T/C	0.061	0.056	0.966	1.093	0.653	1.83	0.736
rs12903839	78867042	G/C	0.009	0.005	0.931	1.775	0.395	7.97	0.707
rs17486278	78867482	C/A	0.272	0.27	0.799	1.01	0.768	1.328	0.944
rs1875869	78868157	T/A	0.061	0.056	0.966	1.093	0.653	1.83	0.736
rs601079	78869579	A/T	0.281	0.246	0.321	1.197	0.908	1.578	0.201
rs495956	78869930	G/A	0.271	0.238	0.528	1.193	0.902	1.577	0.216
rs680244	78871288	A/G	0.281	0.248	0.642	1.181	0.897	1.556	0.236
rs7180002	78873993	T/A	0.033	0.032	0.572	1.044	0.524	2.077	0.903
rs692780	78876505	G/C	0.228	0.199	0.707	1.187	0.882	1.596	0.257
rs11637635	78877150	A/G	0.208	0.179	0.788	1.204	0.885	1.637	0.237
rs951266	78878541	T/C	0.033	0.035	0.531	0.941	0.48	1.847	0.86
rs10519205	78878791	C/T	0.059	0.054	0.872	1.114	0.658	1.888	0.687
rs555018	78879242	C/T	0.221	0.188	0.544	1.231	0.911	1.664	0.176
rs12903575	78881087	A/G	0.009	0.01	0.861	0.876	0.246	3.123	0.907
rs17408276	78881618	C/T	0.231	0.189	0.856	1.292	0.956	1.746	0.095
rs16969968	78882925	A/G	0.044	0.035	0.278	1.269	0.679	2.371	0.454

<sup>a</sup>Minor allele; <sup>b</sup>p values were calculated from two-sided chi-square tests or Fisher's exact tests for either allele frequency. Abbreviations: OR, odd ratio; CI, confidence interval; HWE, Hardy-Weinberg equilibrium; MAF, minor allele frequency.

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**Supplemental Table 2.** Basic information of CHRNA5 SNPs in nonsmokersubpopulation

SNP ID	Position	Alleles		Frequency		H-W <i>p</i> -value	ORs	95% CI		Allele <i>p</i> <sup>b</sup> -value		
		A <sup>a</sup> /B		Case	Control			lower	upper			
rs10519205	78878791	C/T		0.056	0.944	0.060	0.940	0.764	0.915	0.386	2.169	0.841
rs12903839	78867042	G/C		0.008	0.992	0.005	0.995	0.945	1.672	0.150	18.594	0.792
rs16969948	78864786	G/A		0.063	0.937	0.062	0.938	0.339	1.027	0.453	2.330	0.948
rs17408276	78881618	C/T		0.222	0.778	0.199	0.801	0.369	1.153	0.710	1.874	0.564
rs17486278	78867482	C/A		0.246	0.754	0.255	0.745	0.618	0.955	0.602	1.514	0.843
rs495956	78869930	G/A		0.246	0.754	0.260	0.740	0.137	0.931	0.588	1.475	0.761
rs601079	78869579	A/T		0.254	0.746	0.267	0.733	0.082	0.936	0.594	1.477	0.777
rs680244	78871288	A/G		0.254	0.746	0.271	0.729	0.226	0.914	0.580	1.440	0.698
rs7180002	78873993	T/A		0.032	0.968	0.026	0.974	0.697	1.219	0.381	3.897	0.981
rs951266	78878541	T/C		0.032	0.968	0.029	0.971	0.670	1.115	0.353	3.519	0.908
rs16969968	78882925	A/G		0.048	0.952	0.031	0.969	0.066	1.565	0.583	4.207	0.371
rs1875869	78868157	T/A		0.056	0.944	0.064	0.936	0.880	0.856	0.364	2.016	0.722
rs667282	78863472	C/T		0.492	0.508	0.481	0.519	0.134	1.045	0.702	1.557	0.827
rs11637635	78877150	A/G		0.190	0.810	0.195	0.805	0.379	0.970	0.585	1.609	0.906
rs12903575	78881087	A/G		0.008	0.992	0.010	0.990	0.889	0.832	0.092	7.512	0.712
rs16969949	78866964	T/C		0.056	0.944	0.064	0.936	0.880	0.856	0.364	2.016	0.722
rs2277550	78858263	A/C		0.016	0.984	0.017	0.983	0.806	0.952	0.195	4.640	0.736
rs684513	78858400	G/C		0.310	0.690	0.274	0.726	0.258	1.189	0.770	1.836	0.435
rs555018	78879242	C/T		0.206	0.794	0.202	0.798	0.266	1.025	0.626	1.677	0.923
rs588765	78865425	T/C		0.198	0.802	0.202	0.798	0.266	0.976	0.593	1.606	0.922
rs7178897	78862975	C/T		0.063	0.937	0.071	0.929	0.045#	0.881	0.393	1.975	0.759
rs692780	78876505	G/C		0.206	0.794	0.217	0.783	0.376	0.940	0.576	1.534	0.804

#Site with HWE  $p \leq 0.05$  is excluded; <sup>a</sup>Minor allele; <sup>b</sup>*p* values were calculated from two-sided chi-square tests or Fisher's exact tests for either allele frequency. Abbreviations: OR, odd ratio; CI, confidence interval; HWE, Hardy-Weinberg equilibrium.

**Supplemental Table 3.** Analysis of SNP distribution and models in the smoking versus nonsmoking-subpopulations

SNP	Model	Genotype	Smoking subpopulation		Nonsmoking subpopulation	
			OR <sup>a</sup> (95% CI)	<i>p</i> -value	OR <sup>a</sup> (95% CI)	<i>p</i> -value
rs495956	Co-dominant	A/A	1.00	0.057	1.00	0.82
		G/A	1.98 (1.03-7.9)		0.85 (0.44-1.67)	
		G/G	2.56 (0.75-8.75)		1.21 (0.35-4.24)	
	Dominant	A/A	1.00	0.018*	1.00	0.75
		G/A-G/G	2.07 (1.12-3.82)		0.90 (0.48-1.70)	
	Recessive	A/A-G/A	1.00	0.24	1.00	0.68
		G/G	2.04 (0.61-6.83)		1.30 (0.38-4.40)	
	Over-dominant	A/A-G/G	1.00	0.068	1.00	0.59
		G/A	1.80 (0.95-3.40)		0.83 (0.43-1.61)	
	Log-additive		1.77 (1.08-2.89)	0.019	0.98 (0.59-1.63)	0.93
rs601079	Co-dominant	T/T	1.00	0.07	1.00	0.39
		A/T	1.89 (1.00-3.58)		0.72 (0.37-1.42)	
		A/A	2.57 (0.75-8.78)		1.62 (0.48-5.44)	
	Dominant	T/T	1.00	0.024*	1.00	0.55
		A/T-A/A	1.99 (1.09-3.64)		0.82 (0.44-1.56)	
	Recessive	T/T-A/T	1.00	0.24	1.00	0.31
		A/A	2.04 (0.61-6.84)		1.85 (0.57-6.04)	

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rs680244	Over-dominant	T/T-A/A	1.00	0.087	1.00	0.25
		A/T	1.72 (0.92-3.20)		0.68 (0.35-1.32)	
	Log-additive		1.74 (1.07-2.82)	0.023	0.98 (0.59-1.64)	0.95
		Co-dominant	G/G	1.00	0.056	1.00
	G/A		1.98 (1.04-3.78)		0.73 (0.37-1.43)	
	A/A		2.56 (0.75-8.74)		1.52 (0.46-5.00)	
	Dominant	G/G	1.00	0.018*	1.00	0.55
		G/A-A/A	2.07 (1.12-3.81)		0.82 (0.44-1.56)	
	Recessive	G/G-G/A	1.00	0.25	1.00	0.36
		A/A	2.01 (0.60-6.72)		1.74 (0.54-5.53)	
rs588765	Over-dominant	G/G-A/A	1.00	0.065	1.00	0.27
		G/A	1.80 (0.96-3.38)		0.69 (0.36-1.34)	
	Log-additive		1.77 (1.09-2.89)	0.019	0.98 (0.59-1.62)	0.93
		Co-dominant	C/C	1.00	0.07	1.00
	T/C		1.98 (1.02-3.87)		0.85 (0.42-1.70)	
	T/T		2.83 (0.58-13.70)		1.22 (0.29-5.09)	
	Dominant	C/C	1.00	0.023*	1.00	0.74
		T/C-T/T	2.07 (1.09-3.93)		0.89 (0.46-1.73)	
	Recessive	C/C-T/C	1.00	0.28	1.00	0.72
		T/T	2.29 (0.48-10.91)		1.29 (0.32-5.28)	
rs555018	Over-dominant	C/C-T/T	1.00	0.06	1.00	0.6
		T/C	1.87 (0.96-3.61)		0.83 (0.42-1.66)	
	Log-additive		1.86 (1.08-3.20)	0.022	0.96 (0.56-1.65)	0.89
		Co-dominant	T/T	1.00	0.07	1.00
	C/T		1.98 (1.02-3.87)		0.95 (0.48-1.91)	
	C/C		2.83 (0.58-13.70)		1.27 (0.31-5.30)	
	Dominant	T/T	1.00	0.023*	1.00	0.99
		C/T-C/C	2.07 (1.09-3.93)		1.00 (0.52-1.92)	
	Recessive	T/T-C/T	1.00	0.28	1.00	0.72
		C/C	2.29 (0.48-10.91)		1.29 (0.32-5.28)	
rs11637635	Over-dominant	T/T-C/C	1.00	0.06	1.00	0.85
		C/T	1.87 (0.96-3.61)		0.94 (0.47-1.86)	
	Log-additive		1.86 (1.08-3.20)	0.022	1.03 (0.60-1.77)	0.9
		Co-dominant	G/G	1.00	0.058	1.00
	G/A		2.08 (1.04-4.15)		0.83 (0.41-1.69)	
	A/A		2.83 (0.58-13.70)		1.22 (0.29-5.06)	
	Dominant	G/G	1.00	0.018*	1.00	0.71
		G/A-A/A	2.17 (1.12-4.19)		0.88 (0.45-1.72)	
	Recessive	G/G-G/A	1.00	0.28	1.00	0.72
		A/A	2.29 (0.48-10.91)		1.29 (0.32-5.28)	
Over-dominant	G/G-A/A	1.00	0.048	1.00	0.57	
	G/A	1.96 (0.99-3.88)		0.82 (0.41-1.65)		
Log-additive		1.91 (1.10-3.32)	0.019	0.95 (0.55-1.64)	0.87	

\*A  $p$  value  $\leq 0.05$  indicates statistical significance; <sup>a</sup>adjusted by sex, age, and drinking status. Abbreviations: OR, odds ratio; CI, confidence interval.