ONLINE METHODS

Phenotype harmonization and selection. We spent substantial effort harmonizing the smoking phenotypes across studies. Briefly, first, we created the Phenotype Working Group (PWG) to address these crucial issues. Second, we obtained English versions of the exact smoking-related questions, responses and summary data from each study. These were entered into a master database and examined for completeness, outliers and distributions of all smoking variables. Third, we produced a list of candidate smoking phenotypes available from each study. Fourth, as has been recommended[25], we calculated heritabilities and intercorrelations between the candidate smoking variables using data from the Swedish Twin Registry[26,27] and the Finnish Twin Cohort Study[28,29], two population-based twin registries containing extensive smoking data. Finally, the PWG integrated all these data to derive the operational phenotypes to be used in the meta-analyses.

The central criteria were that a candidate phenotype had to (i) be exactly or nearly exactly assessed in nearly all studies, (ii) have distributional properties similar across studies and conducive to meta-analyses (for example, sufficiently prevalent to allow reasonable statistical power), (iii) have reasonable heritability so that genetic analysis was suitable and (iv) have face validity to senior researchers in the field.

These analyses yielded unexpected results. For example, the Fagerström Test for Nicotine Dependence is commonly used in the field, as either a continuous or dichotomized variable. However, item-level twin analyses showed it to be a composite measure of some items with high heritability (for example, CPD) but some items with heritability near zero and with important common environmental effects (unpublished data).

We examined three elements of smoking behavior: smoking initiation, smoking heaviness and smoking cessation. Smoking initiation was assessed in two ways: by contrasting individuals who reported having ever versus never smoked regularly, and age of smoking initiation.

Ever versus never regular smokers. Regular smokers were defined as those who reported having smoked ≥ 100 cigarettes during their lifetime and never regular smokers were defined as those who reported having smoked between 0 and 99 cigarettes during their lifetime. This definition is consistent with the Centers for Disease Control classification of "ever smoker"[30].

Age of smoking initiation. Age of smoking initiation was the reported age the participant started smoking cigarettes. Some studies collected the age at which the participant first tried smoking, whereas others collected the age the participant began smoking regularly. As both variables (age first tried and age began smoking regularly) were available in the Swedish Twin Registry, we calculated the univariate heritabilities for each variable and the genetic correlation between them. We studied only females due to the confounding effects of prevalent smokeless tobacco ('snus') use in Swedish males[31]. The heritabilities for the two variables were similar and the genetic correlation was 0.97, which suggested a great deal of overlap in the genetic contributors to each trait and supported the idea of using either value in a general assessment of age of smoking initiation in the meta-analysis.

Cigarettes per day. Smoking quantity was assessed as the CPD value. Some studies collected the average CPD, whereas other studies collected the maximum CPD. Longitudinal data from the Finnish Twin Cohort Study revealed a high correlation (>0.71) between these variables over time and supported the idea of using either value in a general assessment of CPD in the meta-analysis.

Smoking cessation. Smoking cessation contrasted former versus current smokers, where current smokers reported that they smoked at the time of the interview and former smokers had quit smoking at least 1 year before the interview. As relapse to smoking is highest within the first year of quitting smoking, smokers who had quit smoking for less than 1 year at interview were excluded from the analysis. Descriptive characteristics of the 16 studies participating in the TAG Consortium are presented in **Table 1**.

Genotyping and imputation. The 16 TAG studies performed their own genotyping, quality control and imputation (**Supplementary Tables 2** and **3**). Studies ranged in size from $n = 585$ to $n = 22{,}037$ and were genotyped on six different GWAS platforms. Each study applied its own set of quality control filters, which were comparable among studies. Each study excluded SNPs with a call rate <89%, <1% minor allele frequency or departure from Hardy-Weinberg equilibrium. Subjects were excluded for non-European ancestry using PLINK multidimensional scaling[32], STRUCTURE[33] or EigenSoft principal component analysis[34]. In addition, subjects were excluded for <90% call rate, excess autosomal heterozygosity, mismatch between reported and genetically determined sex or first- or second-degree relatedness. Genotype imputation[5] was used to harmonize genotyping across different studies, as well as to infer genotypes for SNPs that were not genotyped directly on the platforms but that were genotyped on the HapMap-2 CEU samples[32]. SNP imputation was performed using either MACH[35], IMPUTE[36] or BIMBAM10 v0.99[37] and resulted in a common set of ~2.5 million SNPs after removal of SNPs with minor allele frequency <1% or poor imputation performance (**Supplementary Table 3**). Imputed allele dosages for each SNP (that is, the number of copies of the minor allele) were tested for association with each smoking phenotype using an additive model.

Study-specific GWAS analysis. Each study conducted uniform cross-sectional analyses for each smoking phenotype using an additive genetic model. Linear regression was used for quantitative traits (CPD and age of smoking initiation), and logistic regression was used for discrete traits (ever versus never smokers and former versus current smokers). Age of smoking initiation was transformed using the natural logarithm owing to heavy tails and non-normality. The dependent variables were the smoking phenotypes and the independent variables were the imputed allele dosage for a SNP plus an indicator variable for whether a subject was classified as a case in the primary study. If the primary study was case-control in design and the phenotype being studied was known to be associated with smoking, we adjusted for case status to reduce potential confounding[38]. Individual study results were corrected for residual inflation of the test statistic using genomic control[39].

Due to the known differences in the prevalences of the smoking phenotypes between the two sexes[40], all TAG Consortium analyses were run separately for males and females. We then tested whether associations between ~2.5 million SNPs and each smoking phenotype differed by sex by meta-analyzing males and females separately and performing a t-test of their parameter estimates for each SNP using a significance threshold of $P < 5 \times 10^{-8}$ (ref. 41).

Meta-analysis of GWAS results. We performed fixed-effect meta-analysis for each smoking phenotype by computing pooled inverse-variance–weighted β coefficients, standard errors and z-scores for each SNP[6]. Fixed effects analyses were chosen because they are regarded as the most efficient method for discovery in the GWAS setting[7,8]. Meta-analyses were performed using METAL (see URLs). Heterogeneity across studies was investigated using the I^2 statistic[9]. We used a significance threshold of $P < 5 \times 10^{-8}$ (refs. 10,11).

***In silico* follow-up of top regions.** To validate potential associations identified in the TAG Consortium analyses, we partnered with two other smoking GWAS consortia and conducted a reciprocal exchange of the 15 most significant genetic regions for each smoking phenotype in each study[12,13]. Regions were defined by SNPs with P values $<10^{-4}$ that clustered together ($r^2 > 0.5$ and/or locations <50 kb apart). The ENGAGE Smoking GWAS Consortium consisted of 34,762 individuals and the Ox-GSK Smoking GWAS Consortium consisted of 34,226 individuals, making the final sample size across the three consortia $n = 143{,}023$. Studies that participated in multiple consortia were only represented once in the final analyses.

URLs. Genetic Computing Cluster, http://www.geneticcluster.org/; METAL, http://www.sph.umich.edu/csg/abecasis/metal/.

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Supplementary Table 6. Association testing for CPD on chromosome 15, conditional o

SNP	Position	Coded Allele	Noncoded Allele	r^2 to rs1051730	Conditioned P-value	Unconditioned P-value	Gene
rs1051730	76,681,394	G	A	1	-	$8.00X10^{-33}$	*CHRNA3*
rs684513	76,645,455	G	C	0.139	$6.3X10^{-09}$	$5.87X10^{-25}$	*CHRNA5*
rs9788682	76,589,641	G	A	0.167	$1.06X10^{-08}$	$2.44X10^{-23}$	*LOC123688*
rs7163730	76,601,736	G	A	0.175	$1.22X10^{-08}$	$2.21X10^{-24}$	*LOC123688*
rs7164594	76,590,112	T	C	0.175	$1.25X10^{-08}$	$3.1X10^{-24}$	*LOC123688*
rs667282	76,650,527	T	C	0.129	$1.26X10^{-08}$	$3.65X10^{-24}$	*CHRNA5*
rs4461039	76,604,502	T	A	0.169	$1.29X10^{-08}$	$2.59X10^{-24}$	*LOC123688*
rs2036534	76,614,003	T	C	0.175	$1.38X10^{-08}$	$1.49X10^{-23}$	*LOC123688*
rs7177514	76,694,461	G	C	0.175	$1.43X10^{-08}$	$3.95X10^{-25}$	*CHRNA3*
rs8042059	76,694,914	C	A	0.175	$1.49X10^{-08}$	$4.57X10^{-25}$	*CHRNA3*
rs3813570	76,619,887	T	C	0.126	$1.53X10^{-08}$	$1.24X10^{-23}$	*PSMA4*
rs11637630	76,686,774	G	A	0.178	$1.59X10^{-08}$	$3.95X10^{-25}$	*CHRNA3*
rs637137	76,661,031	T	A	0.115	$1.66X10^{-08}$	$5.32X10^{-24}$	*CHRNA5*
rs6495308	76,694,711	T	C	0.178	$1.74X10^{-08}$	$4.69X10^{-25}$	*CHRNA3*
rs938682	76,683,602	G	A	0.175	$1.76X10^{-08}$	$1.76X10^{-24}$	*CHRNA3*
rs12910984	76,678,682	G	A	0.151	$2.07X10^{-08}$	$1.84X10^{-24}$	*CHRNA3*
rs3743078	76,681,814	G	C	0.169	$2.25X10^{-08}$	$4.22X10^{-25}$	*CHRNA3*
rs8042374	76,695,087	G	A	0.175	$2.85X10^{-08}$	$2.38X10^{-24}$	*CHRNA3*
rs2869030	76,498,858	T	G	0.061	$3.7X10^{-08}$	$3.52X10^{-12}$	
rs4887069	76,696,125	G	A	0.127	$7.46X10^{-08}$	$6.52X10^{-23}$	*CHRNA3*
rs6495309	76,702,300	T	C	0.167	$7.48X10^{-08}$	$4.51X10^{-23}$	
rs12440014	76,713,781	G	C	0.161	$8.57X10^{-08}$	$6.02X10^{-24}$	*CHRNB4*
rs4887053	76,499,754	C	A	0.15	$1.09X10^{-07}$	$3.71X10^{-19}$	
rs2869032	76,501,616	T	C	0.15	$1.14X10^{-07}$	$3.78X10^{-19}$	
rs2869045	76,505,954	T	C	0.15	$1.15X10^{-07}$	$3.95X10^{-19}$	
rs5019044	76,583,337	T	A	0.15	$1.47X10^{-07}$	$4.22X10^{-20}$	
rs11072766	76,558,601	T	C	0.158	$3.78X10^{-07}$	$1.47X10^{-18}$	*IREB2*
rs2938674	76,544,968	C	A	0.158	$4.42X10^{-07}$	$2.06X10^{-18}$	*IREB2*
rs2568483	76,539,398	G	A	0.158	$4.52X10^{-07}$	$2.31X10^{-18}$	*IREB2*
rs2568488	76,523,648	T	A	0.158	$4.62X10^{-07}$	$2.66X10^{-18}$	*IREB2*
rs2656073	76,529,331	T	G	0.158	$4.91X10^{-07}$	$3.07X10^{-18}$	*IREB2*
rs2656069	76,532,762	T	C	0.158	$5.18X10^{-07}$	$6.05X10^{-18}$	*IREB2*
rs2656071	76,532,398	T	A	0.158	$5.23X10^{-07}$	$3.08X10^{-18}$	*IREB2*
rs924840	76,518,863	T	A	0.167	$1.11X10^{-06}$	$3.54X10^{-18}$	*IREB2*
rs2938671	76,519,809	G	A	0.167	$1.14X10^{-06}$	$3.7X10^{-18}$	*IREB2*
rs2958719	76,530,084	G	A	0.089	$3.98X10^{-06}$	$9.62X10^{-16}$	*IREB2*
rs12441088	76,715,319	T	G	0.172	$4.21X10^{-06}$	$7.6X10^{-22}$	*CHRNB4*
rs12443170	76,694,791	G	A	0.041	$5.97X10^{-06}$	$7.34X10^{-18}$	*CHRNA3*
rs11636605	76,715,933	G	A	0.094	$1.37X10^{-05}$	$8.58X10^{-16}$	*CHRNB4*
rs11072768	76,716,533	T	G	0.102	$1.44X10^{-05}$	$2.18X10^{-15}$	*CHRNB4*
rs12441998	76,716,427	G	A	0.111	$1.54X10^{-05}$	$2.45X10^{-15}$	*CHRNB4*
rs1316971	76,717,565	G	A	0.108	$1.54X10^{-05}$	$3.37X10^{-15}$	*CHRNB4*
rs569207	76,660,174	T	C	0.126	$2.35X10^{-05}$	$6.35X10^{-06}$	*CHRNA5*
rs11072774	76,739,752	T	C	0.096	$3.88X10^{-05}$	$1.99X10^{-12}$	
rs9920506	76,718,112	G	A	0.078	$3.98X10^{-05}$	$7.08X10^{-13}$	*CHRNB4*
rs12594247	76,733,688	T	C	0.095	$7.84X10^{-05}$	$7.1X10^{-12}$	
rs4887074	76,739,165	G	C	0.032	$9.51X10^{-05}$	$9.47X10^{-09}$	
rs8023822	76,732,095	G	C	0.052	0.000127	$5.06X10^{-09}$	

rs578776	76,675,455	G	A	0.212	0.000135	2.68X10^{-19}	*CHRNA3*
rs16970006	76,757,314	T	C	0.041	0.00016	6.55X10^{-08}	
rs12148319	76,743,247	G	A	0.075	0.000249	4.5X10^{-09}	
rs518425	76,670,868	G	A	0.227	0.000272	2.11X10^{-18}	*CHRNA5*
rs12594550	76,746,092	G	C	0.083	0.000322	1.1X10^{-08}	
rs11634628	76,792,634	G	A	0.032	0.000638	4.03X10^{-07}	
rs11072794	76,793,637	T	C	0.034	0.000683	4.14X10^{-07}	
rs12899940	76,788,754	T	C	0.034	0.000712	4.31X10^{-07}	
rs4362358	76,583,159	T	C	0.23	0.000727	4.11X10^{-17}	
rs4887078	76,798,128	T	C	0.034	0.0008	7.69X10^{-07}	
rs11072793	76,793,497	G	A	0.034	0.000801	8.17X10^{-07}	
rs1062980	76,579,582	T	C	0.224	0.000819	5.98X10^{-16}	*IREB2*
rs12904234	76,566,439	T	C	0.221	0.000851	6.09X10^{-16}	*IREB2*
rs7173512	76,636,969	T	C	0.333	0.000858	2.41X10^{-05}	
rs1964678	76,541,055	G	A	0.23	0.000891	5.03X10^{-16}	*IREB2*
rs8042238	76,561,326	T	C	0.223	0.000903	4.17X10^{-16}	*IREB2*
rs4299116	76,553,249	T	A	0.219	0.000904	4.31X10^{-16}	*IREB2*
rs3743075	76,696,507	T	C	0.309	0.000907	0.000084	*CHRNA3*
rs8043227	76,555,926	G	C	0.23	0.000909	4.27X10^{-16}	*IREB2*
rs8042260	76,561,429	G	A	0.206	0.000909	4.19X10^{-16}	*IREB2*
rs12910910	76,554,905	T	C	0.224	0.000913	4.28X10^{-16}	*IREB2*
rs12903295	76,566,027	G	A	0.229	0.000921	4.38X10^{-16}	*IREB2*
rs965604	76,576,278	G	A	0.23	0.000939	4.51X10^{-16}	*IREB2*
rs13180	76,576,543	T	C	0.23	0.001027	1.56X10^{-15}	*IREB2*
rs11633519	76,786,607	G	A	0.037	0.001053	9.16X10^{-07}	
rs8032552	76,758,191	T	C	0.039	0.001294	4.1X10^{-07}	
rs8043123	76,760,448	T	C	0.045	0.001336	4.96X10^{-07}	
rs11072787	76,760,032	T	C	0.034	0.001471	2.64X10^{-07}	
rs12914385	76,685,778	T	C	0.774	0.001913	4.23X10^{-35}	*CHRNA3*
rs11629637	76,806,079	T	C	0.413	0.002506	1.35X10^{-20}	
rs11638490	76,795,005	T	C	0.371	0.002642	6.65X10^{-21}	
rs12910627	76,781,988	G	C	0.399	0.003733	3.67X10^{-21}	
rs899997	76,806,633	T	G	0.034	0.003851	2.72X10^{-06}	
rs11072791	76,784,131	C	A	0.399	0.003977	5.04X10^{-21}	
rs11634351	76,731,773	G	A	0.502	0.004128	7.64X10^{-25}	
rs1383634	76,816,451	T	C	0.034	0.004272	3.18X10^{-06}	
rs2219939	76,816,778	G	A	0.039	0.00442	3.42X10^{-06}	
rs922692	76,771,269	C	A	0.399	0.00442	5.69X10^{-21}	
rs4887091	76,830,635	T	C	0.018	0.004511	4.95X10^{-06}	
rs11638372	76,770,614	T	C	0.399	0.004535	6.77X10^{-21}	
rs11072785	76,755,284	T	C	0.478	0.004789	7.69X10^{-22}	
rs1021071	76,755,234	G	C	0.47	0.004805	7.06X10^{-22}	
rs4887077	76,765,419	T	C	0.399	0.004815	7.64X10^{-21}	
rs7182567	76,832,109	G	A	0.021	0.004886	5.44X10^{-06}	
rs11638830	76,735,374	G	C	0.491	0.004942	3.46X10^{-23}	
rs12902602	76,754,456	G	A	0.457	0.004953	6.97X10^{-22}	
rs4886580	76,756,440	T	G	0.444	0.005104	8.96X10^{-22}	
rs6495314	76,747,584	C	A	0.47	0.005173	7.69X10^{-23}	
rs1996371	76,743,861	T	C	0.47	0.005284	4.35X10^{-23}	
rs12899135	76,741,434	G	A	0.461	0.005321	1.56X10^{-22}	
rs11639372	76,753,710	T	C	0.483	0.006441	1.01X10^{-21}	

rs3813565	76,806,665	T	G	0.441	0.007192	$3.26X10^{-21}$	
rs7403393	76,922,857	G	C		0.008749	$1.57X10^{-08}$	
rs7164529	76,932,853	G	A		0.009419	$4.39X10^{-09}$	
rs12286	76,838,814	G	A	0.372	0.01246	$1.06X10^{-18}$	*ADAMTS7*
rs12595538	76,941,508	T	A		0.01305	$7.8X10^{-09}$	
rs4887082	76,812,122	T	C	0.399	0.01376	$2.88X10^{-19}$	
rs1809420	76,843,824	T	C		0.01609	$3.23X10^{-18}$	*ADAMTS7*
rs7174367	76,851,722	G	A	0.337	0.01751	$7X10^{-18}$	*ADAMTS7*
rs11072810	76,919,261	T	C		0.01815	$1.15X10^{-08}$	
rs11072811	76,919,385	C	A		0.01818	$1.22X10^{-08}$	
rs17243470	76,959,821	T	G		0.01975	$1.28X10^{-07}$	*MORF4L1*
rs17487514	76,740,840	T	C	0.227	0.02294	$3.25X10^{-05}$	
rs4539564	76,915,554	G	A		0.02634	$1.91X10^{-09}$	
rs11852830	76,912,484	T	A		0.02937	$6.16X10^{-08}$	
rs11857532	76,755,323	T	G	0.41	0.03034	$6.35X10^{-18}$	
rs8032771	76,913,114	G	A		0.03042	$5.54X10^{-08}$	
rs8040868	76,698,236	T	C	0.753	0.0307	$4.03X10^{-08}$	*CHRNA3*
rs8035039	76,916,878	G	A		0.03152	$3.12X10^{-09}$	
rs6495337	76,912,744	G	C		0.04394	$1.55X10^{-07}$	
rs7171916	76,855,006	G	C	0.291	0.05961	$1.23X10^{-14}$	*ADAMTS7*
rs7173743	76,928,839	T	C		0.08455	$2.14X10^{-08}$	
rs5029904	76,939,477	G	C		0.1404	$1.65X10^{-07}$	
rs931794	76,613,235	G	A	0.872	0.1447	$1.64X10^{-31}$	*LOC123688*
rs8031948	76,603,112	T	G	0.87	0.1578	$3.15X10^{-31}$	*LOC123688*
rs10519203	76,601,101	G	A	0.872	0.1835	$4.89X10^{-31}$	*LOC123688*
rs9788721	76,589,924	T	C	0.872	0.1851	$4.14X10^{-31}$	*LOC123688*
rs12910237	76,743,393	T	C	0.351	0.1947	$1.43X10^{-07}$	
rs922691	76,751,049	G	A	0.308	0.2096	$6.04X10^{-07}$	
rs1504550	76,553,305	G	A	0.72	0.217	$4.53X10^{-26}$	*IREB2*
rs17484524	76,559,731	G	A	0.701	0.2192	$2.01X10^{-26}$	*IREB2*
rs2009746	76,541,157	G	A	0.732	0.2211	$1.52X10^{-25}$	*IREB2*
rs17484235	76,548,469	G	C	0.711	0.2232	$1.14X10^{-25}$	*IREB2*
rs8034191	76,593,078	T	C	0.872	0.2322	$1.68X10^{-31}$	*LOC123688*
rs2568494	76,528,019	G	A	0.72	0.2592	$3.39X10^{-24}$	*IREB2*
rs2656052	76,527,987	C	A	0.711	0.261	$3.76X10^{-24}$	*IREB2*
rs7181486	76,528,673	T	C	0.71	0.2628	$2.46X10^{-24}$	*IREB2*
rs17483929	76,529,431	G	A	0.711	0.2645	$2.7X10^{-24}$	*IREB2*
rs17483548	76,517,368	G	A	0.711	0.2661	$9.66X10^{-24}$	
rs2656065	76,537,604	G	A	0.699	0.2681	$4.88X10^{-25}$	*IREB2*
rs17483721	76,520,786	T	C	0.711	0.2733	$7.34X10^{-24}$	*IREB2*
rs17405217	76,518,204	T	C	0.711	0.274	$9.09X10^{-24}$	*IREB2*
rs1021070	76,733,918	G	C	0.346	0.2846	$2.16X10^{-08}$	
rs7181405	76,735,207	G	A	0.339	0.2858	$2.31X10^{-08}$	
rs2036527	76,638,670	G	A	0.837	0.3942	$1.2X10^{-32}$	
rs12905641	76,751,417	T	C	0.314	0.4385	$1.07X10^{-07}$	
rs951266	76,665,596	G	A	0.867	0.5209	$3X10^{-33}$	*CHRNA5*
rs8038920	76,761,600	G	A	0.321	0.5446	$6.98X10^{-08}$	
rs1994016	76,867,289	T	C	0.134	0.5454	$3.33X10^{-10}$	*ADAMTS7*
rs7180002	76,661,048	T	A	0.867	0.5528	$4.11X10^{-33}$	*CHRNA5*
rs17486278	76,654,537	C	A	0.89	0.5929	$5.91X10^{-33}$	*CHRNA5*
rs3743057	76,876,062	T	C	0.204	0.5941	$9.45X10^{-06}$	*ADAMTS7*

rs7177699	76,876,789	T	C	0.212	0.5983	$6.78X10^{-11}$	*ADAMTS7*
rs3825807	76,876,166	G	A	0.212	0.6064	$1.29X10^{-10}$	*ADAMTS7*
rs16969968	76,669,980	G	A	0.9	0.6075	$4.48X10^{-33}$	*CHRNA5*
rs2277545	76,870,646	T	C	0.196	0.6162	$7.55X10^{-11}$	*ADAMTS7*
rs12903203	76,871,988	T	C	0.256	0.6198	$1.08X10^{-10}$	*ADAMTS7*
rs7178051	76,905,351	T	C		0.6273	$1.07X10^{-05}$	
rs1564499	76,871,863	T	C	0.204	0.63	$4.7X10^{-06}$	*ADAMTS7*
rs1317286	76,683,184	G	A	0.897	0.6598	$5.26X10^{-33}$	*CHRNA3*
rs2904228	76,873,154	G	A	0.194	0.6727	$5.99X10^{-06}$	*ADAMTS7*
rs12905740	76,869,419	T	C	0.173	0.674	$3.08X10^{-06}$	*ADAMTS7*
rs1994017	76,867,361	T	C	0.204	0.6782	$2.86X10^{-06}$	*ADAMTS7*
rs4380028	76,898,148	T	C		0.6893	$8.92X10^{-06}$	
rs6495335	76,904,188	T	G		0.7042	$8.7X10^{-06}$	
rs7176187	76,908,428	T	C		0.7066	$5.13X10^{-06}$	
rs1394371	76,511,524	T	C	0.592	0.8119	$2.36X10^{-18}$	
rs17487223	76,711,042	T	C	0.747	0.887	$4.23X10^{-29}$	*CHRNB4*
rs1383636	76,893,275	G	A		0.929	$1.24X10^{-06}$	
rs922693	76,886,593	G	A		0.9355	$8.09X10^{-07}$	*ADAMTS7*
rs8038189	76,886,081	G	C		0.9568	$6.75X10^{-07}$	*ADAMTS7*

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CHRNA3 LOC123688 PSMA4
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CHRNA5 IREB2 PSMA4
IREB2 PSMA4
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CHRNA5 IREB2 PSMA4
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CHRNA3 CHRNB4
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CHRNA5 CHRNB4
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