

Supplementary Materials

APOE-ε4 and BIN1 increase risk of Alzheimer's disease pathology but not specifically of Lewy body pathology

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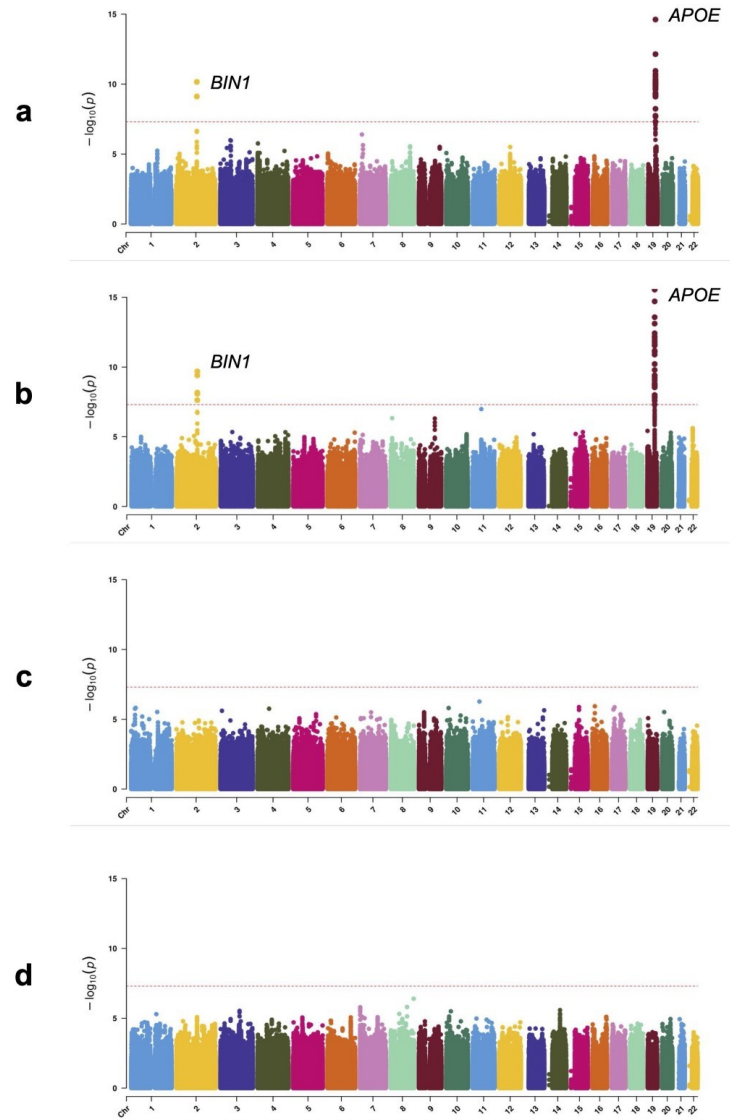
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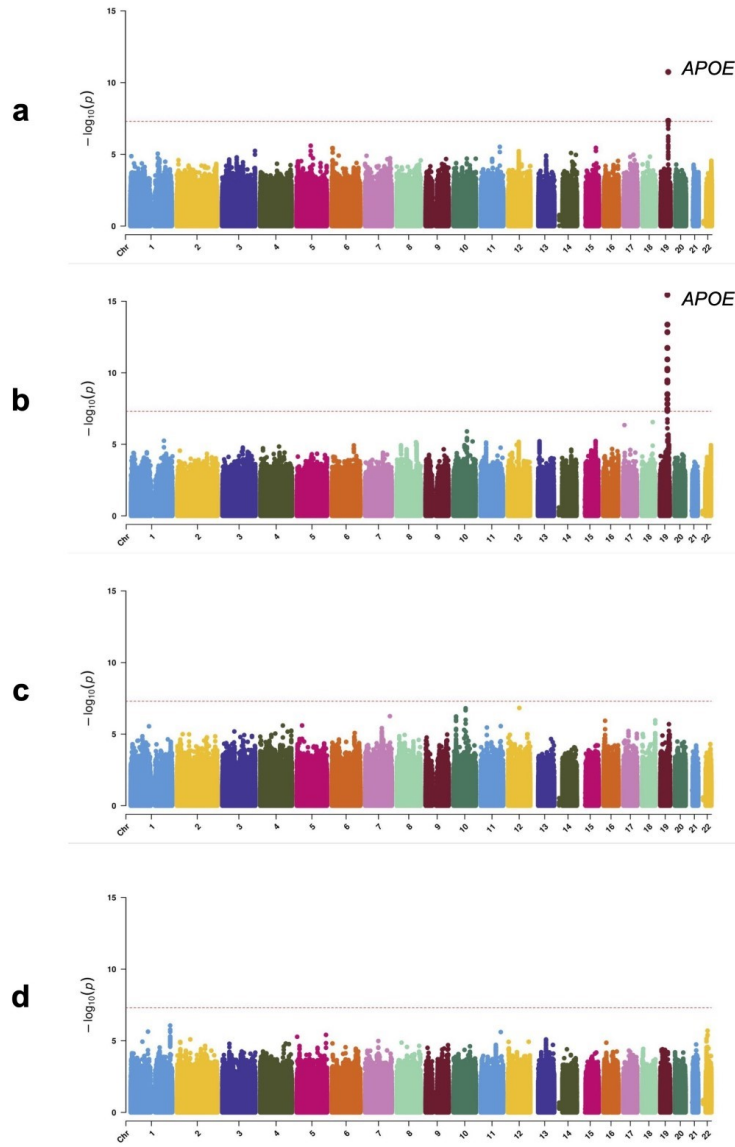
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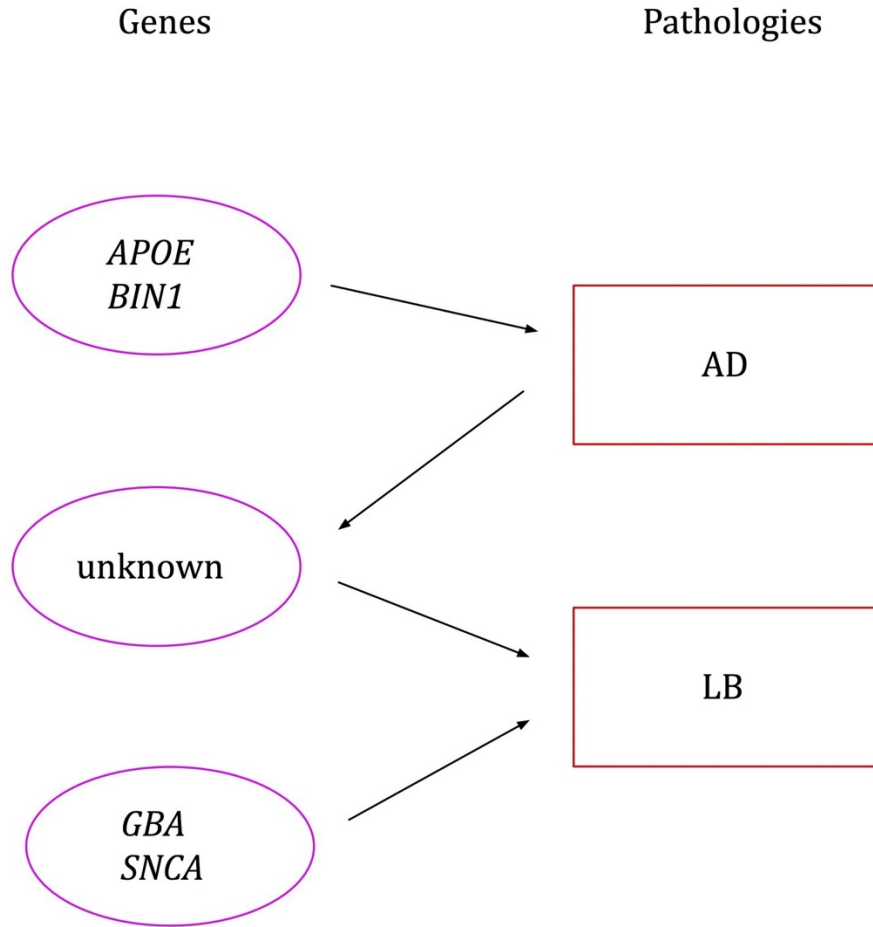
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Supplementary Figure 1. Manhattan plots of genetic association with pathology classes in the subset of NACC individuals. A. Association with AD+LB⁺ pathology versus AD-LB⁻ pathology. **B.** Association with AD+LB⁻ pathology versus AD-LB⁻ pathology. **C.** Association with AD-LB⁺ pathology versus AD-LB⁻ pathology. **D.** Association with AD+LB⁺ pathology versus AD+LB⁻ pathology.



Supplementary Figure 2. Manhattan plots of genetic association with pathology classes in the subset of Rush individuals. A. Association with AD+LB⁺ pathology versus AD-LB⁻ pathology. **B.** Association with AD+LB⁻ pathology versus AD-LB⁻ pathology. **C.** Association with AD-LB⁺ pathology versus AD-LB⁻ pathology. **D.** Association with AD+LB⁺ pathology versus AD+LB⁻ pathology.



Supplementary Figure 3. A candidate genetic model of AD and LB pathology. *APOE* and *BIN1*, among other genes (see *e.g.*, Bellenguez *et al.*), drive AD pathology. AD pathology primes other, unknown genes to drive LB pathology. In a separate mechanism not involving AD pathology, *GBA* and *SNCA*, among other genes (see *e.g.*, Chang *et al.* (2017) and Nalls *et al.*), drive LB pathology. Notably, the set of genes including *APOE* and *BIN1* drives LB pathology only by way of AD pathology and does not affect the likelihood of LB pathology after the step of AD pathogenesis; this risk is determined by as yet unidentified genes.

Supplementary Table 1. Comparison of pathologically assessed proportion of cohort and sample size per pathology group between reference studies [52, 2, 10, 14, 24, 18, 46, 48, 13, 28] and ours. For Beecham *et al.*, Robinson *et al.*, and Sabir *et al.*, we consider only analyses of *APOE-ε4*-associated risk for LB pathology or dementia [2, 46, 48]. For Guerreiro *et al.*, we describe the larger discovery cohort [24]. If a study analyzed a cohort both with and without including certain clinically assessed subjects, we consider the analysis with the fewest clinically assessed individuals for which the effect size of *APOE-ε4* and/or the top variant on *BIN1* is reported.

Study	Total size	# subjects clinically evaluated only	# pathologically confirmed AD-LB-	# pathologically confirmed AD+LB+	# pathologically confirmed AD+LB-	# pathologically confirmed AD-LB+	# pathologically confirmed LB- ^a	# pathologically confirmed LB+ ^a
Tsuang								
<i>et al.</i> (2013)	640	0 (0%)	269	224	244	91	N/A	N/A
Beecham								
<i>et al.</i> (2014)	3,526	0 (0%)	?	?	?	?	2,391	1,135
Bras								
<i>et al.</i> (2014)	3,291	2,624 (80%)	0	?	0	?	0	667
Chung								
<i>et al.</i> (2015)	531	0 (0%)	0	215	316	0	N/A	N/A
Dickson								
<i>et al.</i> (2018)	1,310	660 (50%)	0	491 ^b (10+27+115+19+111+209)	0	159 ^b (46+80+33)	N/A	N/A
Guerreiro								
<i>et al.</i> (2018)	5,007	4,033 (81%)	0	?	0	?	0	974
Robinson								
<i>et al.</i> (2018)	346	0 (0%)	0	226 ^b (19+111+10+21+65)	76 ^b (16+60)	44 ^b (10+12+22)	N/A	N/A
Sabir								
<i>et al.</i> (2019)	1,116	591 (53%)	0	?	0	?	N/A	525
Chia								
<i>et al.</i> (2021)	6,982	4,588 (66%)	605	?	0	?	N/A	1,789
Kaivola								
<i>et al.</i> (2022)	3,423	2,323–2,928 ^c (68–86%)	≤605	407 ^b (66+341)	0	88	N/A	N/A
Current sample	4,985	0 (0%)	1,263	1,072	2,492	158	N/A	N/A

^aThese columns are populated only if an analysis was performed on a pathologically confirmed LB⁻ or LB⁺ group. In this case the sizes of the corresponding subgroups are marked as unknown (*e.g.*, AD⁺LB⁺ and AD-LB⁺ if LB⁺ is known). ^bThe given category was subdivided into multiple phenotypes, described in **Table 3**, and a separate analysis was performed on each subgroup [28, 18, 46]. ^cThe control cohort of 2,928 individuals studied in Kaivola *et al.* was part of a larger set of controls studied in Chia *et al.*, of whom 605 were pathologically confirmed [28, 13]. Therefore, at most 605 of the 2,928 controls in Kaivola *et al.* were pathologically confirmed, and, accordingly, at fewest 2,323 controls were not pathologically confirmed (only clinically evaluated).

Supplementary Table 2. Genome-wide significant loci in our study.

Chr:Pos:Minor:Major is chromosome, position (genome build hg38, GRCh38), minor allele, and major allele. MAF is minor allele frequency. [OR] [CI] (*P*) is effect size reported as odds ratio with 95% confidence interval and significance. The loci besides *BIN1* and *APOE* are novel.

Variant	Chr:Pos:Minor:Major	Known locus or nearest gene	MAF	GWAS	OR [CI] (<i>P</i>)
rs4663105	2:127133851:C:A	<i>BIN1</i>	41.9%	AD ⁺ LB ⁺ vs. AD ⁻ LB ⁻	1.53 [1.35 1.75] (1.35e-10)
rs4663105	2:127133851:C:A	<i>BIN1</i>	41.9%	AD ⁺ LB ⁻ vs. AD ⁻ LB ⁻	1.40 [1.26 1.56] (6.51e-10)
rs112017605	10:62580294:A:G	<i>AC024598.1</i> / <i>AC067752.1</i>	6.0%	AD ⁻ LB ⁺ vs. AD ⁻ LB ⁻	3.01 [2.03 4.06] (4.60e-10)
rs116691607	17:30277568:T:C	<i>BLMH</i>	2.4%	AD ⁻ LB ⁺ vs. AD ⁻ LB ⁻	5.17 [2.88 9.29] (3.96e-08)
rs429358	19:44908684:C:T	<i>APOE</i>	27.1%	AD ⁺ LB ⁺ vs. AD ⁻ LB ⁻	4.24 [3.52 5.10] (1.49e-52)
rs429358	19:44908684:C:T	<i>APOE</i>	27.1%	AD ⁺ LB ⁻ vs. AD ⁻ LB ⁻	4.22 [3.60 4.96] (1.41e-69)

Supplementary Table 3. Association of *APOE-ε2* (rs7412) with different pathology contrasts. The first column corresponds to the current study, while the following two columns correspond to results obtained using the current sample using literature criteria to classify participants into pathology groups (**Fig. 1a–b**) [52, 28]. The last column corresponds to a result reported in the literature [48]. Effect sizes are reported as OR with 95% confidence interval [CI] and significance (*P*-value).

	Current sample	Initial sample × Tsuang <i>et al.</i> (2013) criteria	Initial sample × Kaivola <i>et al.</i> (2022) criteria	Reported by Sabir <i>et al.</i> (2019)
AD+LB⁺ vs. AD-LB⁻	0.39 [0.29 0.51] (3.89e-11)	0.39 [0.29 0.54] (3.90e-09)	0.38 [0.27 0.53] (9.24e-09)	N/A
AD+LB⁺ vs. AD-LB⁻	0.42 [0.34 0.51] (2.68e-16)	0.45 [0.37 0.56] (4.52e-14)	0.44 [0.36 0.53] (9.20e-16)	N/A
AD-LB⁺ vs. AD-LB⁻	1.17 [0.79 1.74] (4.30e-01)	0.90 [0.65 1.24] (5.18e-01)	1.12 [0.75 1.68] (5.72e-01)	N/A
AD+LB⁺ vs. AD+LB⁻	0.90 [0.69 1.18] (4.55e-01)	0.84 [0.62 1.13] (2.49e-01)	0.85 [0.63 1.14] (2.78e-01)	N/A
LB⁺ vs. AD-LB⁻	N/A	N/A	N/A	0.39 [0.26 0.59] (6.88e-06)

Supplementary Table 4. Association of rs4663105 on the *BIN1* locus and *APOE-ε4* (rs429358) with different pathology contrasts. First two columns correspond to the current study (based on a meta-analysis) and are compared to the association in the subsets of NACC and Rush individuals separately.

	Current sample		Current sample NACC individuals		Current sample Rush individuals	
	rs4663105	rs429358	rs4663105	rs429358	rs4663105	rs429358
AD ⁺ LB ⁺ vs. AD ⁻ LB ⁻	1.53 [1.35 1.75] (1.35e- 10)	4.24 [3.52 5.10] (1.49e- 52)	1.68 [1.44 1.96] (7.01e-11)	4.54 [3.66 5.63] (4.95e-43)	1.24 [0.98 1.57] (7.88e-02)	3.48 [2.42 5.01] (1.83e-11)
AD ⁺ LB ⁻ vs. AD ⁻ LB ⁻	1.40 [1.26 1.56] (6.51e- 10)	4.22 [3.60 4.96] (1.41e- 69)	1.52 [1.33 1.73] (3.96e-10)	4.54 [3.66 5.63] (4.95e-43)	1.19 [0.99 1.43] (6.43e-02)	3.53 [2.60 4.77] (3.56e-16)
AD ⁻ LB ⁺ vs. AD ⁻ LB ⁻	1.10 [0.85 1.41] (4.76e- 01)	0.93 [0.60 1.43] (7.34e- 01)	1.01 [0.72 1.42] (9.57e-01)	1.05 [0.62 1.78] (8.53e-01)	1.20 [0.83 1.72] (3.27e-01)	0.72 [0.34 1.53] (3.94e-01)
AD ⁺ LB ⁺ vs. AD ⁺ LB ⁻	1.13 [1.02 1.25] (1.91e- 02)	1.01 [0.90 1.13] (8.33e- 01)	1.15 [1.03 1.30] (1.38e-02)	1.01 [0.90 1.14] (8.36e-01)	1.04 [0.82 1.31] (7.72e-01)	1.01 [0.74 1.38] (9.60e-01)

Supplementary Table 5. Associations of known Alzheimer’s disease risk loci reported in Bellenguez *et al.* (2022) and known Parkinson’s disease risk loci reported in Chang *et al.* (2017) and Nalls *et al.* (2019) with different pathology contrasts [3, 12, 40]. Loci for which the reported variant was missing from our summary statistics are not included. Chr:Pos:Minor:Major is chromosome, position, and minor allele and major allele in our study. Lit. MAF is the frequency reported in the literature of the minor allele in our study. Lit. effect is the effect size reported in the literature. N+R MAF is the minor allele frequency in our study. Nominally significant associations ($P < 0.05$) are colored red (minor allele increases risk) and blue (minor allele decreases risk), associations with $P < 0.10$ are colored green regardless of the direction of effect.

Variant	Chr:Pos:Minor:Major	Locus	Lit. MAF	Lit. effect	Study	N+R MAF	AD*LB+ vs. AD-LB-	AD*LB- vs. AD-LB-	AD-LB+ vs. AD-LB-	AD*LB+ vs. AD*LB-
rs35749011	1:155162560:A:G	GBA	2.4%	1.72 [1.59 1.89] (2.59e-35)	Chang <i>et al.</i> (2017)	1.3%	1.60 [0.87 2.91] (1.28e-01)	0.82 [0.47 1.44] (4.89e-01)	2.10 [0.74 5.93] (1.62e-01)	1.94 [1.24 3.06] (4.04e-03)
rs6658353	1:161499264:C:G	FCGR2A	50.1%	1.07 [1.05 1.09] (6.10e-12)	Nalls <i>et al.</i> (2019)	49.5%	0.94 [0.82 1.07] (3.53e-01)	0.97 [0.87 1.08] (5.51e-01)	0.89 [0.68 1.15] (3.64e-01)	0.99 [0.89 1.10] (8.32e-01)
rs11578699	1:171750629:T:C	VAMP4	19.5%	0.93 [0.91 0.95] (4.47e-09)	Nalls <i>et al.</i> (2019)	19.3%	1.04 [0.88 1.22] (6.48e-01)	0.98 [0.86 1.11] (7.18e-01)	1.20 [0.90 1.60] (2.22e-01)	1.06 [0.93 1.20] (4.05e-01)
rs823118	1:205754444:C:T	NUCKS1/ SLC41A1	46.7%	0.89 [0.87 0.91] (1.12e-23)	Chang <i>et al.</i> (2017)	44.4%	0.94 [0.83 1.07] (3.34e-01)	0.94 [0.85 1.05] (2.63e-01)	1.05 [0.82 1.34] (7.03e-01)	0.97 [0.88 1.08] (6.04e-01)
rs679515	1:207577223:T:C	CR1	18.8%	1.13 [1.11 1.15] (7.20e-46)	Bellenguez <i>et al.</i> (2022)	20.2%	1.09 [0.93 1.29] (2.98e-01)	1.19 [1.04 1.36] (9.99e-03)	0.91 [0.66 1.25] (5.55e-01)	0.95 [0.83 1.08] (4.22e-01)
rs4653767	1:226728377:C:T	ITPKB	31.5%	0.92 [0.90 0.94] (1.63e-11)	Chang <i>et al.</i> (2017)	29.2%	0.92 [0.80 1.06] (2.43e-01)	0.94 [0.84 1.06] (3.23e-01)	0.85 [0.65 1.12] (2.47e-01)	0.95 [0.85 1.06] (3.38e-01)
rs10797576	1:232528865:T:C	SIPA1L2	13.7%	1.12 [1.09 1.15] (8.41e-13)	Chang <i>et al.</i> (2017)	13.2%	1.04 [0.87 1.26] (6.39e-01)	1.05 [0.90 1.22] (5.34e-01)	1.18 [0.84 1.65] (3.46e-01)	1.00 [0.86 1.17] (9.63e-01)
rs72777026	2:9558882:G:A	ADAM17	14.4%	1.06 [1.04 1.08] (2.70e-08)	Bellenguez <i>et al.</i> (2022)	14.2%	1.30 [1.09 1.56] (3.92e-03)	1.17 [1.01 1.37] (4.19e-02)	1.44 [1.04 2.00] (2.81e-02)	1.13 [0.98 1.31] (8.13e-02)
rs76116224	2:17966582:T:A	KCNS3	9.6%	1.12 [1.08 1.16] (1.27e-08)	Nalls <i>et al.</i> (2019)	9.7%	0.95 [0.77 1.18] (6.57e-01)	0.94 [0.79 1.12] (4.83e-01)	1.05 [0.71 1.55] (8.03e-01)	1.06 [0.89 1.27] (5.14e-01)
rs17020490	2:37304796:C:T	PRKD3	14.5%	1.06 [1.04 1.08] (3.30e-09)	Bellenguez <i>et al.</i> (2022)	14.6%	1.10 [0.91 1.31] (3.26e-01)	1.04 [0.90 1.21] (5.81e-01)	1.07 [0.74 1.54] (7.25e-01)	1.04 [0.90 1.19] (6.19e-01)
rs2042477	2:95335195:A:T	KCNIP3	24.2%	0.94 [0.92 0.96] (1.38e-08)	Nalls <i>et al.</i> (2019)	24.7%	0.95 [0.82 1.11] (5.33e-01)	0.90 [0.79 1.01] (8.34e-02)	1.00 [0.76 1.32] (9.88e-01)	1.06 [0.94 1.20] (3.56e-01)
rs34043159	2:101796654:C:T	IL1R2	35.2%	1.08 [1.06 1.10] (5.48e-11)	Chang <i>et al.</i> (2017)	33.1%	1.00 [0.87 1.15] (9.66e-01)	0.96 [0.86 1.08] (5.06e-01)	1.08 [0.83 1.41] (5.59e-01)	1.04 [0.93 1.16] (5.30e-01)
rs6733839	2:127135234:T:C	BIN1	38.9%	1.17 [1.16 1.19] (6.10e-118)	Bellenguez <i>et al.</i> (2022)	41.9%	1.52 [1.34 1.74] (4.60e-10)	1.43 [1.29 1.60] (7.49e-11)	1.12 [0.87 1.45] (3.72e-01)	1.10 [0.99 1.22] (6.57e-02)
rs6430538	2:134782397:T:C	TMEM163/ CCNT2	48.8%	0.89 [0.87 0.91] (8.24e-24)	Chang <i>et al.</i> (2017)	43.7%	1.01 [0.89 1.15] (8.36e-01)	1.12 [1.00 1.24] (4.01e-02)	0.86 [0.67 1.10] (2.27e-01)	0.91 [0.82 1.01] (8.31e-02)

rs353116	2:165277122:T:C	SCN3A	38.5%	0.94 [0.92 0.96] (2.98e-08)	Chang <i>et al.</i> (2017)	38.7%	0.85 [0.74 0.96] (1.14e-02)	0.94 [0.84 1.04] (2.46e-01)	0.90 [0.70 1.15] (4.02e-01)	0.95 [0.86 1.06] (3.52e-01)
rs1474055	2:168253884:T:C	STK39	11.9%	1.20 [1.16 1.25] (5.68e-26)	Chang <i>et al.</i> (2017)	12.2%	0.85 [0.70 1.04] (1.17e-01)	1.00 [0.86 1.17] (9.74e-01)	0.96 [0.66 1.39] (8.16e-01)	0.88 [0.75 1.03] (1.11e-01)
rs139643391	2:202878716:T:TC	WDR12	13.1%	0.94 [0.92 0.96] (1.10e-08)	Bellenguez <i>et al.</i> (2022)	12.2%	0.97 [0.80 1.16] (7.11e-01)	0.94 [0.80 1.10] (4.33e-01)	1.15 [0.83 1.61] (4.04e-01)	0.98 [0.84 1.15] (8.22e-01)
rs10933431	2:233117202:G:C	INPP5D	23.4%	0.93 [0.92 0.95] (3.60e-18)	Bellenguez <i>et al.</i> (2022)	21.8%	0.87 [0.74 1.01] (7.37e-02)	0.79 [0.70 0.90] (3.09e-04)	1.09 [0.83 1.44] (5.42e-01)	1.07 [0.94 1.22] (2.99e-01)
rs4073221	3:18235996:G:T	SATB1	13.2%	1.10 [1.06 1.13] (1.57e-08)	Chang <i>et al.</i> (2017)	12.9%	1.04 [0.86 1.26] (6.68e-01)	1.08 [0.92 1.26] (3.55e-01)	0.97 [0.67 1.39] (8.65e-01)	1.03 [0.88 1.19] (7.40e-01)
rs6808178	3:28664199:T:C	LINC00693	37.9%	1.07 [1.05 1.09] (8.09e-12)	Nalls <i>et al.</i> (2019)	37.5%	0.90 [0.79 1.03] (1.27e-01)	0.99 [0.89 1.10] (8.79e-01)	0.84 [0.65 1.44] (1.64e-01)	0.90 [0.81 1.01] (6.81e-02)
rs12497850	3:48711556:G:T	NCKIPSD/ CDC71	34.7%	0.93 [0.91 0.96] (9.16e-09)	Chang <i>et al.</i> (2017)	34.8%	1.00 [0.87 1.14] (9.60e-01)	1.04 [0.93 1.16] (4.95e-01)	1.09 [0.84 1.41] (5.30e-01)	0.98 [0.87 1.09] (6.53e-01)
rs115185635	3:87471707:C:G	CHMP2B	3.6%	1.21 [1.10 1.33] (1.22e-04)	Chang <i>et al.</i> (2017)	3.9%	0.97 [0.69 1.34] (8.33e-01)	1.03 [0.79 1.34] (8.36e-01)	0.79 [0.40 1.56] (5.06e-01)	0.92 [0.70 1.21] (5.62e-01)
rs55961674	3:122478045:T:C	KPNA1	17.2%	1.09 [1.06 1.12] (9.98e-12)	Nalls <i>et al.</i> (2019)	16.9%	0.97 [0.82 1.15] (7.47e-01)	1.04 [0.91 1.20] (5.47e-01)	0.95 [0.68 1.32] (7.59e-01)	0.97 [0.85 1.12] (6.92e-01)
rs11707416	3:151391177:A:T	MED12L	36.7%	0.94 [0.92 0.96] (1.13e-10)	Nalls <i>et al.</i> (2019)	37.3%	1.00 [0.88 1.14] (9.93e-01)	1.07 [0.96 1.19] (2.47e-01)	1.04 [0.81 1.32] (7.83e-01)	0.95 [0.86 1.06] (3.94e-01)
rs16824536	3:155069722:A:G	MME	5.4%	0.92 [0.89 0.95] (3.60e-08)	Bellenguez <i>et al.</i> (2022)	5.4%	0.80 [0.61 1.04] (9.94e-02)	0.77 [0.62 0.96] (2.09e-02)	1.22 [0.78 1.93] (3.86e-01)	1.10 [0.87 1.40] (4.12e-01)
rs61762319	3:155084189:G:A	MME	2.6%	1.16 [1.11 1.21] (2.20e-11)	Bellenguez <i>et al.</i> (2022)	2.6%	0.97 [0.64 1.48] (8.97e-01)	1.32 [0.95 1.82] (9.44e-02)	0.66 [0.26 1.70] (3.87e-01)	0.72 [0.52 1.00] (5.34e-02)
rs1450522	3:161359842:G:A	SPTSSB	32.6%	1.06 [1.04 1.09] (5.01e-10)	Nalls <i>et al.</i> (2019)	32.0%	0.92 [0.81 1.06] (2.38e-01)	0.96 [0.86 1.08] (5.25e-01)	1.03 [0.80 1.33] (8.15e-01)	0.96 [0.86 1.07] (4.19e-01)
rs12637471	3:183044649:A:G	MCCC1	21.9%	0.85 [0.82 0.87] (2.11e-30)	Chang <i>et al.</i> (2017)	20.2%	1.03 [0.88 1.20] (7.21e-01)	0.94 [0.83 1.07] (3.35e-01)	0.85 [0.63 1.15] (2.93e-01)	1.07 [0.94 1.21] (3.30e-01)
rs34311866	4:958159:C:T	TMEM175/ DGKQ	19.9%	1.23 [1.20 1.27] (1.47e-50)	Chang <i>et al.</i> (2017)	19.1%	1.07 [0.91 1.24] (4.24e-01)	0.89 [0.78 1.02] (9.56e-02)	1.33 [1.01 1.75] (4.29e-02)	1.22 [1.07 1.38] (2.83e-03)
rs6846529	4:11023507:C:T	CLNK/ HS3ST1	28.3%	1.07 [1.05 1.08] (2.20e-17)	Bellenguez <i>et al.</i> (2022)	28.0%	1.11 [0.96 1.28] (1.46e-01)	1.15 [1.02 1.29] (2.12e-02)	1.01 [0.77 1.32] (9.49e-01)	0.97 [0.86 1.08] (5.66e-01)
rs11724635	4:15735478:C:A	FAM200B/ CD38	43.7%	0.90 [0.88 0.92] (1.22e-19)	Chang <i>et al.</i> (2017)	45.3%	1.01 [0.89 1.15] (8.64e-01)	0.97 [0.87 1.08] (5.37e-01)	0.71 [0.55 0.92] (9.03e-03)	1.05 [0.95 1.17] (3.28e-01)
rs34025766	4:17967188:A:T	LCORL	15.9%	0.92 [0.90 0.94] (2.87e-10)	Nalls <i>et al.</i> (2019)	16.4%	1.15 [0.97 1.36] (1.11e-01)	1.04 [0.90 1.20] (5.81e-01)	0.92 [0.65 1.29] (6.25e-01)	1.10 [0.96 1.26] (1.84e-01)
rs2245466	4:40197226:G:C	RHOH	34.3%	1.05 [1.03 1.06] (1.20e-09)	Bellenguez <i>et al.</i> (2022)	33.2%	1.06 [0.93 1.22] (3.74e-01)	1.04 [0.93 1.17] (5.05e-01)	0.97 [0.74 1.27] (8.27e-01)	1.04 [0.93 1.16] (5.13e-01)
rs6812193	4:76277833:T:C	FAM47E	39.8%	0.92 [0.90 0.94] (1.43e-14)	Chang <i>et al.</i> (2017)	37.0%	0.91 [0.80 1.03] (1.44e-01)	0.98 [0.88 1.09] (7.55e-01)	0.92 [0.72 1.18] (5.00e-01)	0.95 [0.85 1.05] (3.06e-01)

rs356182	4:89704960:G:A	SNCA	37.5%	0.75 [0.74 0.77] (5.21e-123)	Chang <i>et al.</i> (2017)	34.9%	0.90 [0.79 1.03] (1.37e-01)	0.95 [0.85 1.07] (4.04e-01)	0.74 [0.57 0.97] (2.60e-02)	0.97 [0.87 1.08] (5.38e-01)
rs78738012	4:113439216:C:T	ANK2/ CAMK2D	10.6%	1.13 [1.09 1.17] (4.78e-11)	Chang <i>et al.</i> (2017)	10.0%	1.05 [0.86 1.30] (6.18e-01)	1.00 [0.84 1.19] (9.78e-01)	1.07 [0.72 1.61] (7.27e-01)	1.02 [0.86 1.21] (8.27e-01)
rs62333164	4:169662006:A:G	CLCN3	32.6%	0.94 [0.92 0.96] (2.00e-10)	Nalls <i>et al.</i> (2019)	32.7%	1.06 [0.93 1.21] (3.73e-01)	1.14 [1.02 1.28] (1.74e-02)	1.14 [0.88 1.46] (3.25e-01)	0.96 [0.86 1.07] (4.79e-01)
rs112403360	5:14724304:A:T	ANKH	7.3%	1.09 [1.06 1.12] (2.30e-09)	Bellenguez <i>et al.</i> (2022)	7.4%	1.05 [0.81 1.36] (7.20e-01)	1.30 [1.06 1.59] (1.13e-02)	1.24 [0.80 1.93] (3.37e-01)	0.82 [0.67 1.00] (5.05e-02)
rs2694528	5:60978096:C:A	ELOVL7	11.5%	1.15 [1.11 1.20] (4.84e-15)	Chang <i>et al.</i> (2017)	8.5%	0.89 [0.71 1.12] (3.13e-01)	0.93 [0.78 1.12] (4.41e-01)	0.76 [0.47 1.23] (2.69e-01)	1.01 [0.83 1.22] (9.46e-01)
rs62374257	5:86927378:C:T	COX7C	23.0%	1.07 [1.05 1.09] (1.40e-15)	Bellenguez <i>et al.</i> (2022)	22.8%	1.21 [1.04 1.41] (1.63e-02)	1.26 [1.11 1.43] (3.83e-04)	1.17 [0.87 1.57] (3.09e-01)	0.96 [0.85 1.08] (5.03e-01)
rs26431	5:103030090:G:C	PAM	29.7%	0.94 [0.92 0.96] (1.57e-09)	Nalls <i>et al.</i> (2019)	30.6%	1.01 [0.88 1.16] (9.07e-01)	1.00 [0.89 1.12] (9.32e-01)	1.09 [0.83 1.42] (5.41e-01)	1.05 [0.94 1.18] (3.70e-01)
rs11950533	5:134863415:A:C	C5orf24	10.2%	0.91 [0.88 0.94] (7.16e-09)	Nalls <i>et al.</i> (2019)	10.4%	0.84 [0.68 1.02] (8.48e-02)	0.83 [0.70 0.98] (2.70e-02)	0.72 [0.47 1.10] (1.33e-01)	0.96 [0.81 1.14] (6.48e-01)
rs871269	5:151052827:T:C	TNIP1	32.6%	0.96 [0.95 0.97] (8.70e-09)	Bellenguez <i>et al.</i> (2022)	32.4%	0.95 [0.83 1.09] (4.59e-01)	0.95 [0.85 1.06] (3.78e-01)	0.99 [0.77 1.29] (9.67e-01)	1.03 [0.93 1.15] (5.70e-01)
rs113706587	5:180201150:A:G	RASGEF1C	11.0%	1.09 [1.07 1.12] (2.20e-16)	Bellenguez <i>et al.</i> (2022)	10.8%	1.09 [0.89 1.34] (4.03e-01)	1.12 [0.95 1.33] (1.85e-01)	0.92 [0.61 1.39] (6.95e-01)	0.96 [0.81 1.13] (6.00e-01)
rs9468199	6:27713436:A:G	ZNF184	17.2%	1.11 [1.08 1.14] (1.46e-12)	Chang <i>et al.</i> (2017)	17.8%	1.07 [0.91 1.27] (4.16e-01)	1.00 [0.87 1.14] (9.80e-01)	1.02 [0.74 1.41] (9.14e-01)	1.06 [0.93 1.21] (3.77e-01)
rs9261484	6:30140906:T:C	TRIM40	24.5%	0.94 [0.92 0.96] (1.62e-08)	Nalls <i>et al.</i> (2019)	25.1%	1.08 [0.94 1.25] (2.75e-01)	1.06 [0.94 1.19] (3.46e-01)	1.01 [0.77 1.33] (9.40e-01)	1.01 [0.90 1.14] (8.47e-01)
rs6605556	6:32615322:G:A	HLA	16.1%	0.91 [0.90 0.93] (7.10e-20)	Bellenguez <i>et al.</i> (2022)	16.0%	0.81 [0.69 0.96] (1.67e-02)	0.87 [0.76 1.00] (4.57e-02)	1.01 [0.74 1.38] (9.43e-01)	0.97 [0.84 1.12] (6.81e-01)
rs9275326	6:32698883:T:C	HLA-DRB6/ HLA-DQA1	11.4%	0.85 [0.82 0.89] (1.26e-13)	Chang <i>et al.</i> (2017)	9.8%	0.74 [0.60 0.91] (4.75e-03)	0.83 [0.70 0.98] (2.84e-02)	0.97 [0.66 1.44] (8.86e-01)	0.88 [0.74 1.06] (1.74e-01)
rs10947943	6:41036354:A:G	TREM2	14.2%	0.94 [0.93 0.96] (1.10e-09)	Bellenguez <i>et al.</i> (2022)	14.4%	0.89 [0.75 1.07] (2.06e-01)	0.86 [0.75 1.00] (4.51e-02)	1.05 [0.76 1.46] (7.71e-01)	1.06 [0.91 1.22] (4.51e-01)
rs143332484	6:41161469:T:C	TREM2	1.3%	1.41 [1.32 1.50] (2.80e-25)	Bellenguez <i>et al.</i> (2022)	1.3%	1.99 [1.09 3.62] (2.50e-02)	1.87 [1.11 3.16] (1.97e-02)	1.69 [0.55 5.18] (3.60e-01)	1.35 [0.89 2.04] (1.58e-01)
rs7767350	6:47517390:T:C	CD2AP	27.1%	1.08 [1.06 1.09] (7.90e-22)	Bellenguez <i>et al.</i> (2022)	28.2%	1.12 [0.97 1.29] (1.18e-01)	1.12 [0.99 1.25] (6.63e-02)	0.98 [0.74 1.28] (8.69e-01)	0.99 [0.88 1.11] (8.49e-01)
rs12528068	6:71778059:T:C	RIMS1	28.4%	1.07 [1.05 1.09] (1.63e-10)	Nalls <i>et al.</i> (2019)	27.9%	1.02 [0.89 1.18] (7.55e-01)	1.10 [0.98 1.24] (9.40e-02)	0.94 [0.72 1.24] (6.83e-01)	0.96 [0.85 1.07] (4.36e-01)
rs997368	6:111922088:G:A	FYN	19.5%	0.93 [0.91 0.95] (1.84e-09)	Nalls <i>et al.</i> (2019)	19.6%	0.92 [0.78 1.08] (3.11e-01)	0.92 [0.78 1.08] (3.11e-01)	0.92 [0.78 1.08] (3.11e-01)	0.88 [0.77 1.01] (6.21e-02)
rs785129	6:114291731:T:C	HS3ST5	35.0%	1.04 [1.03 1.06] (2.40e-09)	Bellenguez <i>et al.</i> (2022)	34.7%	1.19 [1.04 1.36] (1.25e-02)	1.11 [0.99 1.24] (7.66e-02)	1.13 [0.87 1.47] (3.41e-01)	1.05 [0.94 1.17] (4.25e-01)
rs75859381	6:132889222:C:T	RPS12	3.3%	1.25 [1.16 1.33] (1.04e-10)	Nalls <i>et al.</i> (2019)	3.1%	0.83 [0.58 1.19] (3.07e-01)	0.80 [0.60 1.08] (1.48e-01)	1.08 [0.54 2.20] (8.21e-01)	1.13 [0.85 1.52] (3.99e-01)

rs6943429	7:7817263:T:C	UMAD1	42.0%	1.05 [1.03 1.06] (1.00e-10)	Bellenguez <i>et al.</i> (2022)	42.6%	1.00 [0.88 1.15] (9.65e-01)	1.08 [0.97 1.21] (1.44e-01)	0.83 [0.65 1.07] (1.52e-01)	0.91 [0.82 1.02] (9.94e-02)
rs10952097	7:8204382:T:C	ICA1	11.4%	1.07 [1.05 1.10] (6.80e-09)	Bellenguez <i>et al.</i> (2022)	10.0%	1.08 [0.87 1.34] (4.67e-01)	1.10 [0.93 1.31] (2.73e-01)	0.80 [0.51 1.24] (3.09e-01)	1.01 [0.85 1.20] (9.14e-01)
rs13237518	7:12229967:A:C	TMEM106B	41.1%	0.96 [0.94 0.97] (4.90e-11)	Bellenguez <i>et al.</i> (2022)	42.1%	1.23 [1.08 1.39] (1.29e-03)	1.12 [1.01 1.24] (3.34e-02)	1.22 [0.97 1.55] (9.14e-02)	1.05 [0.95 1.17] (3.09e-01)
rs199347	7:23254127:G:A	KLHL7/ NUPL2/ GPNMB	36.8%	0.91 [0.89 0.93] (3.51e-18)	Chang <i>et al.</i> (2017)	41.5%	1.08 [0.95 1.23] (2.39e-01)	1.13 [1.01 1.25] (2.57e-02)	1.04 [0.81 1.32] (7.74e-01)	0.92 [0.83 1.03] (1.40e-01)
rs1160871	7:28129126:G:GTCTT	JAZF1	22.2%	0.95 [0.93 0.97] (9.80e-09)	Bellenguez <i>et al.</i> (2022)	21.9%	0.92 [0.79 1.07] (2.70e-01)	0.97 [0.86 1.10] (6.46e-01)	1.07 [0.80 1.42] (6.47e-01)	0.98 [0.86 1.11] (7.24e-01)
rs6966331	7:37844191:T:C	NME8	34.9%	0.96 [0.94 0.97] (4.60e-10)	Bellenguez <i>et al.</i> (2022)	33.5%	1.03 [0.90 1.18] (6.75e-01)	0.91 [0.82 1.02] (1.11e-01)	0.98 [0.76 1.25] (8.56e-01)	1.11 [0.99 1.24] (7.40e-02)
rs76928645	7:54873635:T:C	SEC61G	10.3%	0.93 [0.91 0.95] (1.60e-10)	Bellenguez <i>et al.</i> (2022)	10.2%	0.81 [0.65 1.00] (4.84e-02)	0.90 [0.76 1.07] (2.33e-01)	1.10 [0.76 1.59] (6.02e-01)	0.92 [0.77 1.10] (3.59e-01)
rs76949143	7:66544864:A:T	GS1- 124K5.11	5.1%	0.87 [0.82 0.91] (1.43e-08)	Nalls <i>et al.</i> (2019)	4.7%	1.09 [0.81 1.45] (5.77e-01)	0.98 [0.77 1.25] (8.99e-01)	0.90 [0.49 1.64] (7.34e-01)	1.08 [0.85 1.37] (5.32e-01)
rs7384878	7:100334426:C:T	ZCWPW1/ NYAP1	31.0%	0.92 [0.91 0.94] (1.10e-26)	Bellenguez <i>et al.</i> (2022)	29.3%	0.95 [0.82 1.09] (4.43e-01)	0.85 [0.75 0.95] (5.45e-03)	1.26 [0.97 1.63] (8.23e-02)	0.94 [0.84 1.05] (2.67e-01)
rs11771145	7:143413669:A:G	EPHA1	34.8%	0.95 [0.93 0.96] (3.30e-14)	Bellenguez <i>et al.</i> (2022)	34.0%	0.95 [0.84 1.09] (4.84e-01)	0.92 [0.82 1.02] (1.26e-01)	1.23 [0.96 1.57] (1.01e-01)	1.02 [0.92 1.14] (7.14e-01)
rs1065712	8:11844613:C:G	CTSB	5.3%	1.09 [1.06 1.12] (1.90e-09)	Bellenguez <i>et al.</i> (2022)	5.8%	1.34 [1.03 1.75] (3.22e-02)	1.09 [0.87 1.38] (4.46e-01)	0.85 [0.48 1.49] (5.67e-01)	1.23 [1.00 1.52] (5.43e-02)
rs2740594	8:11849665:G:A	CTSB	24.7%	0.92 [0.89 0.93] (5.91e-12)	Chang <i>et al.</i> (2017)	27.0%	1.11 [0.96 1.28] (1.47e-01)	1.05 [0.93 1.18] (4.01e-01)	0.93 [0.71 1.23] (6.08e-01)	1.01 [0.90 1.13] (8.84e-01)
rs591323	8:16839582:A:G	MICU3	29.3%	0.91 [0.89 0.94] (2.38e-11)	Chang <i>et al.</i> (2017)	27.2%	1.18 [1.02 1.36] (2.28e-02)	1.04 [0.92 1.17] (5.58e-01)	1.11 [0.85 1.45] (4.27e-01)	1.08 [0.97 1.22] (1.69e-01)
rs2280104	8:22668467:T:C	SORBS3/ PDLIM2/ C8orf58/ BIN3	36.7%	1.07 [1.04 1.09] (2.53e-08)	Chang <i>et al.</i> (2017)	35.3%	0.97 [0.85 1.12] (6.98e-01)	1.03 [0.92 1.15] (6.12e-01)	1.10 [0.85 1.41] (4.78e-01)	0.95 [0.85 1.06] (3.43e-01)
rs73223431	8:27362470:T:C	PTK2B	36.9%	1.07 [1.06 1.08] (4.00e-22)	Bellenguez <i>et al.</i> (2022)	36.4%	1.13 [0.99 1.29] (7.98e-02)	1.16 [1.04 1.29] (6.67e-03)	1.23 [0.96 1.58] (1.04e-01)	1.00 [0.90 1.11] (9.94e-01)
rs11787077	8:27607795:T:C	CLU	39.2%	0.91 [0.90 0.92] (1.70e-44)	Bellenguez <i>et al.</i> (2022)	38.5%	0.85 [0.74 0.97] (1.33e-02)	0.89 [0.80 0.99] (3.43e-02)	0.98 [0.77 1.26] (8.81e-01)	0.95 [0.85 1.06] (3.62e-01)
rs2086641	8:129889663:C:T	FAM49B	27.7%	1.06 [1.04 1.09] (1.81e-08)	Nalls <i>et al.</i> (2019)	27.5%	0.97 [0.84 1.12] (6.69e-01)	1.00 [0.89 1.13] (9.38e-01)	1.23 [0.94 1.62] (1.32e-01)	1.03 [0.92 1.16] (5.74e-01)
rs34173062	8:144103704:A:G	SHARPIN	8.1%	1.13 [1.09 1.16] (1.70e-16)	Bellenguez <i>et al.</i> (2022)	8.3%	0.95 [0.75 1.20] (6.48e-01)	1.12 [0.93 1.35] (2.34e-01)	1.31 [0.89 1.95] (1.76e-01)	0.87 [0.72 1.06] (1.66e-01)
rs13294100	9:17579692:T:G	SH3GL2	37.1%	0.92 [0.89 0.94] (4.84e-13)	Chang <i>et al.</i> (2017)	35.5%	1.00 [0.87 1.14] (9.93e-01)	0.94 [0.84 1.05] (2.74e-01)	0.93 [0.72 1.20] (5.82e-01)	1.04 [0.93 1.15] (5.14e-01)
rs6476434	9:34046393:C:T	UBAP2	26.6%	1.06 [1.04 1.09] (6.58e-09)	Nalls <i>et al.</i> (2019)	27.1%	1.02 [0.88 1.18] (7.94e-01)	0.99 [0.88 1.11] (8.28e-01)	0.88 [0.66 1.16] (3.51e-01)	1.05 [0.93 1.18] (4.15e-01)

rs1800978	9:104903697:G:C	ABCA1	13.0%	1.06 [1.04 1.08] (1.60e-09)	Bellenguez <i>et al.</i> (2022)	13.8%	1.02 [0.85 1.22] (8.18e-01)	0.95 [0.81 1.10] (4.68e-01)	0.74 [0.50 1.09] (1.28e-01)	1.09 [0.95 1.27] (2.23e-01)
rs7912495	10:11676714:G:A	ECHDC3	46.2%	1.06 [1.05 1.08] (9.70e-19)	Bellenguez <i>et al.</i> (2022)	46.1%	1.17 [1.03 1.33] (1.47e-02)	1.13 [1.01 1.25] (2.56e-02)	1.24 [0.97 1.59] (8.33e-02)	1.04 [0.94 1.15] (4.86e-01)
rs10906923	10:15527599:C:A	FAM171A1	30.6%	0.93 [0.91 0.96] (1.35e-08)	Chang <i>et al.</i> (2017)	32.4%	1.03 [0.90 1.18] (6.87e-01)	0.99 [0.89 1.11] (8.71e-01)	0.83 [0.64 1.08] (1.68e-01)	1.05 [0.94 1.17] (4.23e-01)
rs7068231	10:60025170:T:G	ANK3	40.3%	0.95 [0.94 0.96] (3.30e-13)	Bellenguez <i>et al.</i> (2022)	39.5%	1.02 [0.89 1.17] (7.55e-01)	1.01 [0.91 1.13] (8.30e-01)	0.87 [0.68 1.12] (2.77e-01)	0.96 [0.86 1.07] (4.59e-01)
rs6586028	10:80494228:C:T	TSPAN14	19.6%	0.93 [0.91 0.94] (2.00e-19)	Bellenguez <i>et al.</i> (2022)	19.4%	0.90 [0.76 1.05] (1.85e-01)	0.93 [0.81 1.06] (2.73e-01)	1.08 [0.81 1.44] (6.02e-01)	0.98 [0.86 1.12] (7.90e-01)
rs6584063	10:96266650:G:A	BLNK	4.3%	0.89 [0.86 0.92] (6.70e-11)	Bellenguez <i>et al.</i> (2022)	3.5%	0.83 [0.60 1.15] (2.63e-01)	0.80 [0.61 1.04] (9.85e-02)	0.85 [0.46 1.58] (6.07e-01)	1.07 [0.80 1.44] (6.51e-01)
rs10748818	10:102255522:G:A	GBF1	14.9%	1.09 [1.05 1.11] (1.05e-09)	Nalls <i>et al.</i> (2019)	14.5%	0.90 [0.75 1.08] (2.70e-01)	0.98 [0.85 1.13] (7.65e-01)	0.94 [0.66 1.33] (7.12e-01)	0.91 [0.79 1.06] (2.28e-01)
rs117896735	10:119776815:A:G	BAG3	1.2%	1.65 [1.48 1.85] (2.23e-19)	Chang <i>et al.</i> (2017)	1.7%	1.62 [0.98 2.67] (5.93e-02)	1.37 [0.89 2.12] (1.56e-01)	1.03 [0.35 3.04] (9.56e-01)	1.10 [0.75 1.60] (6.28e-01)
rs7908662	10:122413396:G:A	PLEKHA1	46.7%	0.96 [0.95 0.97] (2.60e-09)	Bellenguez <i>et al.</i> (2022)	47.4%	1.00 [0.89 1.14] (9.41e-01)	0.93 [0.83 1.03] (1.55e-01)	0.95 [0.75 1.21] (6.73e-01)	1.05 [0.95 1.17] (3.26e-01)
rs7938782	11:10537230:G:A	RNF141	12.2%	0.92 [0.89 0.94] (2.12e-09)	Nalls <i>et al.</i> (2019)	12.6%	1.05 [0.87 1.27] (5.97e-01)	0.98 [0.83 1.14] (7.55e-01)	1.19 [0.85 1.68] (3.13e-01)	1.09 [0.94 1.28] (2.54e-01)
rs10437655	11:47370397:A:G	CELF1/ SPI1	39.9%	1.06 [1.04 1.07] (5.30e-14)	Bellenguez <i>et al.</i> (2022)	39.8%	1.12 [0.98 1.27] (8.43e-02)	1.07 [0.96 1.18] (2.29e-01)	1.01 [0.79 1.30] (9.17e-01)	1.04 [0.93 1.15] (5.05e-01)
rs1582763	11:60254475:A:G	MS4A	37.1%	0.91 [0.90 0.92] (3.70e-42)	Bellenguez <i>et al.</i> (2022)	36.2%	0.97 [0.86 1.11] (7.01e-01)	0.97 [0.87 1.08] (5.32e-01)	1.03 [0.80 1.31] (8.28e-01)	1.05 [0.94 1.17] (3.64e-01)
rs3793947	11:83833429:A:G	DLG2	46.3%	0.93 [0.91 0.95] (3.72e-09)	Chang <i>et al.</i> (2017)	43.7%	0.96 [0.84 1.09] (5.07e-01)	1.01 [0.91 1.12] (9.24e-01)	1.06 [0.83 1.34] (6.62e-01)	0.92 [0.83 1.02] (1.33e-01)
rs3851179	11:86157598:T:C	PICALM	35.8%	0.90 [0.89 0.92] (3.00e-48)	Bellenguez <i>et al.</i> (2022)	35.2%	0.91 [0.79 1.04] (1.51e-01)	0.86 [0.77 0.96] (7.92e-03)	1.05 [0.82 1.36] (6.99e-01)	1.06 [0.95 1.18] (3.11e-01)
rs74685827	11:121482368:G:T	SORL1	1.9%	1.19 [1.13 1.25] (2.80e-11)	Bellenguez <i>et al.</i> (2022)	2.1%	1.03 [0.65 1.64] (9.08e-01)	1.14 [0.78 1.67] (5.08e-01)	1.84 [0.88 3.86] (1.06e-01)	0.90 [0.63 1.28] (5.45e-01)
rs11218343	11:121564878:C:T	SORL1	3.9%	0.84 [0.81 0.87] (1.40e-21)	Bellenguez <i>et al.</i> (2022)	3.6%	1.02 [0.74 1.39] (9.15e-01)	0.72 [0.55 0.95] (2.12e-02)	1.72 [1.02 2.90] (4.36e-02)	1.32 [1.00 1.73] (4.79e-02)
rs329648	11:133895472:T:C	MIR4697	32.7%	1.09 [1.07 1.12] (1.11e-13)	Chang <i>et al.</i> (2017)	35.0%	0.96 [0.84 1.10] (5.66e-01)	1.10 [0.98 1.23] (1.11e-01)	1.03 [0.79 1.33] (8.33e-01)	0.88 [0.79 0.99] (2.62e-02)
rs76904798	12:40220632:T:C	LRRK2	13.2%	1.15 [1.12 1.19] (1.21e-19)	Chang <i>et al.</i> (2017)	13.0%	0.90 [0.75 1.08] (2.66e-01)	0.89 [0.77 1.04] (1.38e-01)	0.85 [0.59 1.22] (3.68e-01)	0.98 [0.84 1.14] (8.10e-01)
rs7134559	12:46025303:T:C	SCAF11	40.4%	0.95 [0.93 0.97] (3.96e-08)	Nalls <i>et al.</i> (2019)	39.8%	0.92 [0.81 1.05] (2.04e-01)	0.93 [0.84 1.04] (2.05e-01)	1.00 [0.79 1.27] (1.00e+00)	0.98 [0.88 1.09] (7.35e-01)
rs6489896	12:113281983:C:T	TPCN1	7.6%	1.08 [1.05 1.10] (1.80e-09)	Bellenguez <i>et al.</i> (2022)	7.0%	1.31 [1.01 1.69] (4.04e-02)	1.22 [0.99 1.52] (6.46e-02)	1.29 [0.80 2.10] (3.00e-01)	1.00 [0.82 1.22] (9.80e-01)
rs11060180	12:122819039:G:A	OGFOD2	45.0%	0.90 [0.88 0.92] (2.05e-20)	Chang <i>et al.</i> (2017)	45.3%	1.06 [0.94 1.20] (3.58e-01)	1.06 [0.95 1.17] (2.83e-01)	1.10 [0.87 1.40] (4.16e-01)	0.97 [0.87 1.07] (5.40e-01)

rs11610045	12:132487182:A:G	<i>FBRSL1</i>	49.0%	1.06 [1.04 1.08] (1.77e-10)	Nalls <i>et al.</i> (2019)	48.2%	0.86 [0.76 0.98] (2.03e-02)	0.91 [0.82 1.01] (7.42e-02)	0.92 [0.71 1.18] (4.92e-01)	0.97 [0.87 1.07] (5.27e-01)
rs9568188	13:49353596:C:T	<i>CAB39L</i>	26.0%	0.94 [0.92 0.96] (1.15e-08)	Nalls <i>et al.</i> (2019)	26.9%	0.97 [0.84 1.12] (6.81e-01)	1.01 [0.90 1.14] (8.43e-01)	0.95 [0.73 1.25] (7.24e-01)	0.94 [0.84 1.06] (3.26e-01)
rs4771268	13:97212767:T:C	<i>MBNL2</i>	23.0%	1.07 [1.05 1.09] (1.45e-09)	Nalls <i>et al.</i> (2019)	22.6%	0.93 [0.79 1.08] (3.39e-01)	1.02 [0.90 1.16] (7.04e-01)	1.12 [0.84 1.48] (4.45e-01)	0.91 [0.80 1.03] (1.36e-01)
rs12147950	14:37520065:T:C	<i>MIPOL1</i>	43.8%	0.95 [0.93 0.97] (3.54e-08)	Nalls <i>et al.</i> (2019)	43.2%	1.07 [0.94 1.22] (3.22e-01)	1.10 [0.99 1.22] (8.29e-02)	1.29 [1.00 1.65] (4.59e-02)	0.95 [0.86 1.06] (3.49e-01)
rs17125924	14:52924962:G:A	<i>FERMT2</i>	8.9%	1.10 [1.07 1.12] (8.30e-16)	Bellenguez <i>et al.</i> (2022)	9.0%	1.27 [1.00 1.60] (4.95e-02)	1.38 [1.14 1.67] (8.73e-04)	1.17 [0.75 1.82] (4.79e-01)	1.17 [0.75 1.82] (4.79e-01)
rs11158026	14:54882151:T:C	<i>GCH1</i>	30.7%	0.91 [0.89 0.93] (4.30e-16)	Chang <i>et al.</i> (2017)	33.2%	0.95 [0.84 1.09] (4.89e-01)	0.98 [0.88 1.09] (6.80e-01)	0.94 [0.73 1.20] (6.02e-01)	0.97 [0.87 1.08] (5.98e-01)
rs1555399	14:67517653:A:T	<i>TMEM229B</i>	45.6%	0.92 [0.90 0.94] (9.61e-11)	Chang <i>et al.</i> (2017)	48.5%	1.11 [0.98 1.25] (1.17e-01)	1.00 [0.91 1.11] (9.41e-01)	0.91 [0.72 1.16] (4.37e-01)	1.10 [1.00 1.22] (5.79e-02)
rs3742785	14:74906331:C:A	<i>RPS6KL1</i>	21.3%	0.93 [0.91 0.95] (1.92e-09)	Nalls <i>et al.</i> (2019)	21.6%	1.12 [0.96 1.30] (1.55e-01)	1.10 [0.97 1.24] (1.58e-01)	1.11 [0.83 1.49] (4.67e-01)	1.02 [0.90 1.15] (7.68e-01)
rs8005172	14:88006268:T:C	<i>GALC</i>	42.4%	1.08 [1.05 1.10] (8.77e-11)	Chang <i>et al.</i> (2017)	43.4%	1.03 [0.91 1.17] (6.33e-01)	0.96 [0.87 1.07] (4.70e-01)	0.89 [0.70 1.14] (3.54e-01)	1.06 [0.96 1.18] (2.42e-01)
rs7401792	14:92464917:G:A	<i>SLC24A4/ RIN3</i>	37.1%	1.04 [1.02 1.05] (4.80e-08)	Bellenguez <i>et al.</i> (2022)	36.8%	1.03 [0.90 1.18] (6.87e-01)	1.10 [0.99 1.23] (7.90e-02)	0.92 [0.71 1.20] (5.41e-01)	0.96 [0.86 1.07] (4.44e-01)
rs12590654	14:92472511:A:G	<i>SLC24A4/ RIN3</i>	32.8%	0.93 [0.92 0.95] (4.20e-21)	Bellenguez <i>et al.</i> (2022)	33.2%	0.89 [0.78 1.02] (1.04e-01)	1.00 [0.89 1.11] (9.49e-01)	1.30 [1.00 1.67] (4.65e-02)	0.94 [0.85 1.05] (2.94e-01)
rs7157106	14:105761758:A:G	<i>IGH</i>	36.0%	1.05 [1.03 1.07] (2.00e-08)	Bellenguez <i>et al.</i> (2022)	31.7%	1.05 [0.92 1.21] (4.62e-01)	1.10 [0.98 1.24] (9.96e-02)	0.91 [0.69 1.20] (5.07e-01)	0.97 [0.87 1.09] (6.05e-01)
rs8025980	15:50701814:G:A	<i>SPPL2A</i>	34.5%	0.96 [0.94 0.97] (1.30e-08)	Bellenguez <i>et al.</i> (2022)	35.1%	0.99 [0.86 1.12] (8.27e-01)	0.96 [0.86 1.07] (4.46e-01)	0.96 [0.75 1.23] (7.56e-01)	1.05 [0.95 1.17] (3.54e-01)
rs602602	15:58764824:A:T	<i>ADAM10</i>	28.0%	0.94 [0.93 0.96] (2.10e-15)	Bellenguez <i>et al.</i> (2022)	28.0%	1.00 [0.87 1.16] (9.62e-01)	1.00 [0.90 1.13] (9.40e-01)	1.08 [0.82 1.43] (5.67e-01)	0.97 [0.87 1.09] (6.14e-01)
rs2414739	15:61701935:G:A	<i>VPS13C</i>	29.2%	0.91 [0.89 0.93] (3.94e-14)	Chang <i>et al.</i> (2017)	26.5%	0.98 [0.85 1.13] (7.48e-01)	0.91 [0.81 1.03] (1.36e-01)	0.87 [0.66 1.15] (3.43e-01)	1.06 [0.94 1.19] (3.58e-01)
rs117618017	15:63277703:T:C	<i>APH1B</i>	14.4%	1.11 [1.09 1.13] (2.20e-25)	Bellenguez <i>et al.</i> (2022)	13.6%	1.15 [0.95 1.39] (1.43e-01)	1.20 [1.03 1.40] (2.00e-02)	1.44 [1.02 2.02] (3.76e-02)	0.96 [0.83 1.12] (6.04e-01)
rs3848143	15:64131307:G:A	<i>SNX1</i>	22.0%	1.05 [1.04 1.07] (8.40e-11)	Bellenguez <i>et al.</i> (2022)	22.1%	1.04 [0.89 1.22] (5.97e-01)	1.05 [0.92 1.19] (5.00e-01)	0.94 [0.69 1.27] (6.68e-01)	1.00 [0.88 1.13] (9.46e-01)
rs12592898	15:78936857:A:G	<i>CTSH</i>	13.3%	0.94 [0.92 0.96] (4.20e-09)	Bellenguez <i>et al.</i> (2022)	12.6%	0.87 [0.72 1.06] (1.65e-01)	0.90 [0.77 1.05] (1.74e-01)	0.89 [0.63 1.28] (5.38e-01)	0.94 [0.80 1.10] (4.36e-01)
rs11343	16:19268142:T:G	<i>COQ7</i>	45.4%	1.07 [1.05 1.10] (9.13e-11)	Chang <i>et al.</i> (2017)	44.4%	1.06 [0.93 1.20] (3.98e-01)	0.99 [0.89 1.10] (8.64e-01)	0.94 [0.74 1.20] (6.37e-01)	1.10 [0.99 1.22] (9.05e-02)
rs2904880	16:28933075:C:G	<i>CD19</i>	30.9%	0.94 [0.92 0.96] (7.87e-10)	Nalls <i>et al.</i> (2019)	31.6%	1.00 [0.87 1.15] (9.70e-01)	1.08 [0.97 1.21] (1.62e-01)	1.02 [0.78 1.32] (8.95e-01)	0.95 [0.85 1.06] (3.88e-01)

rs1140239	16:30010081:T:C	DOC2A	37.9%	0.94 [0.93 0.96] (2.60e-13)	Bellenguez <i>et al.</i> (2022)	38.0%	0.81 [0.71 0.93] (3.17e-03)	0.90 [0.81 1.00] (5.45e-02)	0.79 [0.61 1.02] (6.90e-02)	0.96 [0.86 1.07] (4.73e-01)
rs14235	16:31110472:A:G	ZNF646/ KAT8	39.7%	1.08 [1.06 1.10] (5.44e-12)	Chang <i>et al.</i> (2017)	37.7%	1.01 [0.88 1.16] (8.69e-01)	1.05 [0.94 1.17] (3.90e-01)	1.08 [0.84 1.39] (5.48e-01)	0.98 [0.88 1.09] (6.70e-01)
rs889555	16:31111250:T:C	KAT8	28.1%	0.95 [0.94 0.97] (2.00e-11)	Bellenguez <i>et al.</i> (2022)	27.8%	0.93 [0.81 1.08] (3.46e-01)	0.91 [0.81 1.02] (1.12e-01)	0.89 [0.67 1.17] (4.04e-01)	1.00 [0.89 1.12] (9.71e-01)
rs6500328	16:50702745:G:A	NOD2	40.1%	0.94 [0.93 0.96] (1.82e-09)	Nalls <i>et al.</i> (2019)	41.3%	1.13 [0.99 1.28] (6.83e-02)	1.10 [0.99 1.23] (6.40e-02)	0.89 [0.69 1.14] (3.61e-01)	1.03 [0.93 1.14] (5.84e-01)
rs4784227	16:52565276:T:C	TOX3	26.5%	1.09 [1.06 1.12] (9.75e-11)	Chang <i>et al.</i> (2017)	24.7%	0.96 [0.83 1.11] (5.91e-01)	0.96 [0.85 1.08] (5.34e-01)	0.73 [0.54 0.98] (3.72e-02)	1.00 [0.89 1.13] (9.54e-01)
rs4985556	16:70660097:A:C	IL34	11.5%	1.07 [1.05 1.09] (6.00e-10)	Bellenguez <i>et al.</i> (2022)	11.5%	1.21 [0.99 1.47] (6.04e-02)	1.03 [0.87 1.22] (7.14e-01)	0.92 [0.61 1.37] (6.74e-01)	1.14 [0.97 1.33] (1.01e-01)
rs450674	16:79574511:C:T	MAF	37.3%	0.96 [0.95 0.98] (3.20e-08)	Bellenguez <i>et al.</i> (2022)	36.8%	0.96 [0.85 1.10] (5.89e-01)	0.87 [0.78 0.97] (1.01e-02)	0.96 [0.75 1.24] (7.74e-01)	1.09 [0.98 1.21] (1.29e-01)
rs12446759	16:81739398:G:A	PLCG2	40.3%	0.95 [0.94 0.96] (1.20e-13)	Bellenguez <i>et al.</i> (2022)	39.8%	1.04 [0.91 1.19] (5.44e-01)	0.96 [0.86 1.06] (4.08e-01)	1.04 [0.81 1.33] (7.74e-01)	1.07 [0.96 1.19] (2.14e-01)
rs16941239	16:86420604:A:T	FOXF1	2.9%	1.13 [1.08 1.17] (1.30e-08)	Bellenguez <i>et al.</i> (2022)	2.6%	0.94 [0.63 1.40] (7.57e-01)	0.91 [0.66 1.25] (5.63e-01)	0.87 [0.40 1.92] (7.38e-01)	1.07 [0.78 1.47] (6.92e-01)
rs56407236	16:90103687:A:G	PRDM7	6.9%	1.11 [1.08 1.14] (6.50e-15)	Bellenguez <i>et al.</i> (2022)	6.3%	1.38 [1.06 1.79] (1.67e-02)	1.06 [0.85 1.32] (6.08e-01)	0.79 [0.46 1.35] (3.88e-01)	1.22 [0.99 1.50] (5.80e-02)
rs35048651	17:1728046:T:TGAG	WDR81	21.4%	1.06 [1.04 1.08] (7.70e-11)	Bellenguez <i>et al.</i> (2022)	21.6%	0.95 [0.81 1.10] (4.98e-01)	0.97 [0.86 1.10] (6.29e-01)	0.94 [0.70 1.26] (6.91e-01)	0.97 [0.85 1.09] (5.83e-01)
rs7225151	17:5233752:A:G	SCIMP/ RABEP1	12.4%	1.08 [1.05 1.10] (4.10e-13)	Bellenguez <i>et al.</i> (2022)	12.1%	1.00 [0.82 1.22] (9.97e-01)	1.11 [0.95 1.31] (1.95e-01)	1.19 [0.82 1.72] (3.68e-01)	1.00 [0.86 1.17] (9.88e-01)
rs12600861	17:7452302:C:A	CHRN1	35.2%	1.05 [1.04 1.08] (1.01e-08)	Nalls <i>et al.</i> (2019)	35.3%	1.00 [0.87 1.14] (9.71e-01)	0.97 [0.87 1.09] (6.32e-01)	1.16 [0.90 1.48] (2.44e-01)	1.01 [0.91 1.13] (8.46e-01)
rs2242595	17:18156140:A:G	MYO15A	11.2%	0.94 [0.92 0.96] (1.10e-09)	Bellenguez <i>et al.</i> (2022)	11.3%	0.87 [0.71 1.06] (1.69e-01)	0.93 [0.80 1.10] (4.01e-01)	0.91 [0.61 1.34] (6.20e-01)	0.91 [0.77 1.07] (2.71e-01)
rs601999	17:42546140:T:C	ATP6V0A1/ PSMC3IP/ TUBG2	30.1%	1.08 (8.03e-09)	Chang <i>et al.</i> (2017)	33.3%	1.07 [0.93 1.23] (3.44e-01)	1.05 [0.94 1.18] (3.76e-01)	1.16 [0.90 1.51] (2.51e-01)	1.01 [0.90 1.13] (9.22e-01)
rs2269906	17:44216969:C:A	UBTF	34.7%	0.93 [0.92 0.96] (6.24e-10)	Nalls <i>et al.</i> (2019)	35.9%	0.97 [0.85 1.11] (6.71e-01)	0.96 [0.87 1.07] (5.17e-01)	0.89 [0.69 1.15] (3.68e-01)	1.00 [0.90 1.11] (9.79e-01)
rs5848	17:44352876:T:C	GRN	28.9%	1.07 [1.06 1.09] (2.40e-20)	Bellenguez <i>et al.</i> (2022)	29.5%	0.98 [0.86 1.13] (8.12e-01)	0.95 [0.85 1.07] (4.00e-01)	1.02 [0.79 1.32] (8.60e-01)	1.01 [0.90 1.13] (8.45e-01)
rs850738	17:44357262:G:A	FAM171A2	39.4%	1.08 [1.05 1.10] (1.29e-11)	Nalls <i>et al.</i> (2019)	40.9%	1.03 [0.91 1.17] (6.49e-01)	0.96 [0.86 1.06] (3.91e-01)	1.02 [0.81 1.30] (8.51e-01)	1.06 [0.96 1.18] (2.57e-01)
rs17649553	17:45917282:T:C	ARHGAP27/ CRHR1/ SPPL2C/ MAPT/ STH/ KANSL1	23.2%	0.78 [0.76 0.80] (1.26e-68)	Chang <i>et al.</i> (2017)	21.2%	0.89 [0.76 1.05] (1.62e-01)	0.91 [0.80 1.03] (1.21e-01)	0.82 [0.60 1.12] (2.06e-01)	0.96 [0.84 1.08] (4.89e-01)

rs199515	17:46779275:G:C	MAPT	21.9%	0.94 [0.93 0.96] (9.30e-13)	Bellenguez <i>et al.</i> (2022)	20.4%	0.93 [0.79 1.09] (3.54e-01)	0.92 [0.81 1.05] (2.00e-01)	0.84 [0.61 1.16] (2.85e-01)	0.96 [0.85 1.10] (5.74e-01)
rs616338	17:49219935:T:C	ABI3	1.2%	1.32 [1.23 1.42] (2.80e-14)	Bellenguez <i>et al.</i> (2022)	1.1%	2.35 [1.02 5.41] (4.47e-02)	1.86 [0.86 4.04] (1.16e-01)	2.64 [0.53 13.00] (2.34e-01)	1.29 [0.80 2.07] (2.89e-01)
rs2526377	17:58332680:G:A	TSPOAP1	44.5%	0.95 [0.94 0.97] (1.60e-12)	Bellenguez <i>et al.</i> (2022)	44.0%	0.91 [0.81 1.04] (1.58e-01)	0.94 [0.85 1.05] (2.62e-01)	1.19 [0.94 1.51] (1.48e-01)	0.95 [0.86 1.06] (3.77e-01)
rs61169879	17:61840005:T:C	BRIP1	16.4%	1.09 [1.06 1.11] (9.28e-10)	Nalls <i>et al.</i> (2019)	15.7%	1.12 [0.94 1.33] (2.14e-01)	1.13 [0.98 1.31] (9.02e-02)	0.92 [0.65 1.31] (6.50e-01)	0.95 [0.83 1.10] (5.02e-01)
rs4277405	17:63471557:C:T	ACE	38.4%	0.94 [0.93 0.95] (8.80e-20)	Bellenguez <i>et al.</i> (2022)	36.7%	1.06 [0.93 1.21] (3.85e-01)	1.06 [0.95 1.19] (2.75e-01)	1.07 [0.84 1.38] (5.70e-01)	0.98 [0.88 1.09] (7.13e-01)
rs666463	17:78429399:T:A	DNAH17	16.7%	0.93 [0.90 0.95] (3.20e-09)	Nalls <i>et al.</i> (2019)	16.6%	1.00 [0.85 1.19] (9.75e-01)	0.97 [0.85 1.12] (7.21e-01)	1.01 [0.73 1.41] (9.46e-01)	1.02 [0.89 1.16] (8.30e-01)
rs8087969	18:51157219:G:T	MEX3C	45.0%	1.06 [1.04 1.08] (1.41e-08)	Nalls <i>et al.</i> (2019)	44.8%	1.03 [0.90 1.17] (6.90e-01)	0.99 [0.89 1.10] (8.90e-01)	0.91 [0.71 1.16] (4.42e-01)	1.03 [0.93 1.14] (5.37e-01)
rs12151021	19:1050875:A:G	ABCA7	33.6%	1.10 [1.09 1.12] (1.60e-37)	Bellenguez <i>et al.</i> (2022)	33.3%	1.23 [1.07 1.42] (3.69e-03)	1.21 [1.08 1.35] (1.18e-03)	1.01 [0.77 1.32] (9.35e-01)	1.02 [0.92 1.14] (6.98e-01)
rs149080927	19:1854254:G:GC	KLF16	48.0%	1.05 [1.04 1.07] (5.10e-10)	Bellenguez <i>et al.</i> (2022)	47.2%	1.03 [0.91 1.17] (5.97e-01)	1.03 [0.93 1.14] (5.94e-01)	1.15 [0.91 1.45] (2.33e-01)	1.04 [0.93 1.15] (5.15e-01)
rs62120679	19:2363321:T:C	LSM7	32.4%	1.08 [1.05 1.11] (6.64e-07)	Chang <i>et al.</i> (2017)	30.2%	0.92 [0.80 1.06] (2.48e-01)	0.98 [0.88 1.10] (7.51e-01)	1.25 [0.96 1.62] (9.53e-02)	1.00 [0.89 1.12] (9.94e-01)
rs9304690	19:49950060:T:C	SIGLEC11	24.0%	1.05 [1.03 1.07] (4.70e-09)	Bellenguez <i>et al.</i> (2022)	25.0%	1.19 [1.03 1.37] (1.87e-02)	1.02 [0.90 1.15] (7.80e-01)	1.05 [0.80 1.40] (7.12e-01)	1.10 [0.98 1.23] (1.13e-01)
rs587709	19:54267597:C:T	LILRB2	32.5%	1.05 [1.04 1.07] (3.60e-11)	Bellenguez <i>et al.</i> (2022)	31.6%	1.10 [0.96 1.26] (1.85e-01)	1.05 [0.93 1.17] (4.43e-01)	0.95 [0.73 1.24] (7.19e-01)	1.05 [0.94 1.17] (4.34e-01)
rs1358782	20:413334:A:G	RBCK1	24.6%	0.95 [0.94 0.97] (1.60e-08)	Bellenguez <i>et al.</i> (2022)	23.7%	1.01 [0.87 1.18] (8.87e-01)	0.94 [0.83 1.07] (3.67e-01)	0.93 [0.70 1.25] (6.47e-01)	1.10 [0.97 1.24] (1.44e-01)
rs8118008	20:3187520:G:A	DDRGI1	40.4%	1.07 [1.04 1.09] (1.99e-06)	Chang <i>et al.</i> (2017)	39.3%	1.05 [0.93 1.20] (4.22e-01)	1.04 [0.93 1.15] (4.97e-01)	0.92 [0.72 1.18] (4.96e-01)	1.03 [0.93 1.14] (5.91e-01)
rs77351827	20:6025395:T:C	CRLS1	12.8%	1.08 [1.05 1.11] (8.87e-09)	Nalls <i>et al.</i> (2019)	11.9%	0.89 [0.73 1.09] (2.51e-01)	0.94 [0.80 1.10] (4.64e-01)	0.94 [0.64 1.38] (7.55e-01)	0.95 [0.81 1.12] (5.49e-01)
rs6014724	20:56423488:G:A	CASS4	9.0%	0.89 [0.87 0.91] (4.10e-21)	Bellenguez <i>et al.</i> (2022)	8.4%	1.00 [0.80 1.24] (9.69e-01)	0.90 [0.75 1.07] (2.30e-01)	0.91 [0.58 1.40] (6.56e-01)	1.05 [0.87 1.26] (6.26e-01)
rs6742	20:63743088:T:C	SLC2A4RG	22.1%	0.95 [0.93 0.97] (2.60e-09)	Bellenguez <i>et al.</i> (2022)	20.6%	0.89 [0.76 1.04] (1.44e-01)	0.93 [0.82 1.06] (2.87e-01)	0.68 [0.48 0.94] (2.05e-02)	0.95 [0.83 1.08] (4.26e-01)
rs2154481	21:26101558:C:T	APP	47.6%	0.95 [0.94 0.97] (1.00e-12)	Bellenguez <i>et al.</i> (2022)	46.9%	1.03 [0.90 1.17] (6.85e-01)	1.05 [0.94 1.17] (3.77e-01)	1.22 [0.96 1.55] (1.11e-01)	0.97 [0.88 1.08] (6.19e-01)
rs2830489	21:26775872:T:C	ADAMTS1	28.1%	0.95 [0.94 0.97] (1.70e-10)	Bellenguez <i>et al.</i> (2022)	28.0%	0.95 [0.82 1.09] (4.30e-01)	0.97 [0.87 1.09] (6.39e-01)	1.08 [0.83 1.40] (5.77e-01)	0.99 [0.89 1.11] (9.19e-01)
rs2248244	21:37480059:A:G	DYRK1A	28.3%	1.07 [1.05 1.10] (2.74e-11)	Nalls <i>et al.</i> (2019)	27.3%	0.98 [0.85 1.14] (8.35e-01)	0.99 [0.88 1.11] (8.33e-01)	0.87 [0.66 1.16] (3.50e-01)	0.98 [0.87 1.10] (7.21e-01)