

Table e-1. Assessing interdependence of the two association signals using conditional analysis

		Test SNP	Main effect		Conditional effect		
			HR	P	Covariate SNP	HR	P
NGRC	Block 1	rs73656147	1.95	3E-6	rs17763929	1.35	0.10
	Block 2	rs17763929	1.88	5E-8	rs73656147	1.62	1E-3
PAGE Prevalent	Block 1	rs73656147	2.88	7E-4	rs17763929	4.75	3E-3
		Adj PC1-3	2.17	0.05	Adj PC1-3	1.88	0.23
	Block 2	rs17763929	1.87	0.01	rs73656147	0.94	0.44
		Adj PC1-3	3.03	4E-3	Adj PC1-3	2.24	0.10
PAGE Incident	Block 1	rs73656147	1.62	0.07	rs17763929	1.66	0.07
		Adj PC1-3	1.48	0.16	Adj PC1-3	1.50	0.16
	Block 2	rs17763929	1.04	0.41	rs73656147	0.96	0.42
		Adj PC1-3	1.03	0.45	Adj PC1-3	0.97	0.45

Main effect is the association of test SNP with age-at-diagnosis. Conditional effect is the association of test SNP with age-at-diagnosis adjusted for covariate SNP. HR (hazard ratio) is the age-for-age increase in the odds of event (PD diagnosis) per copy of the minor allele estimated using Cox regression, with its associated significance (P). NGRC was adjusted for PC1-3. PAGE had ancestry informative markers (AIMs) for about half of the participants. For PAGE, the first row for each SNP is using the total sample size without adjusting for PCs, and the second row for each SNP is using the subset of samples with AIMs and adjusting for PC1-3. P values are two-sided for NGRC, and one-sided for PAGE.