

Supplementary Table 1: Study overview. Sample size, count (percentage) female, age $\pm$ standard deviation, covariates used in GWAS model, total variants tested, and genomic control (λ) for each cohort used in this study.

	Cohort	Total <i>N</i>		Female		Age		Covariates in GWAS model#	Variants tested	GC (λ), all variants	
		Cases	Controls	Cases	Controls	Cases	Controls				
Million Veteran Program	MVP EUR	2,251	252,345	207 (9.2%)	17,529 (6.9%)	70.5 $\pm$ 9.6	65.8 $\pm$ 11.5	Age + Age^2 + Sex + 10 PCs	9,196,080	1.024	
	MVP AFR	315	78,885	90 (28.6%)	10,188 (12.9%)	62.8 $\pm$ 10.1	59.8 $\pm$ 11.0	Age + Age^2 + Sex + 10 PCs	16,048,430	1.011	
	MVP HIS	80	26,368	5 (6.3%)	2,189 (8.3%)	68.3 $\pm$ 10.9	60.0 $\pm$ 13.4	Age + Age^2 + Sex + 10 PCs	10,627,029	1.027	
	Total	2,646	357,598								
Afshari et al. (2017)	FECD Multi-center (EUR)	886	526	584 (65.9%)	304 (57.7%)	69.9 $\pm$ 11.2	72.0 $\pm$ 8.2	Age + Sex + 6 PCs	8,513,362	1.023	
	Duke University (EUR)	518	159	368 (71.0%)	85 (53.5%)	69.4 $\pm$ 11.2	70.5 $\pm$ 8.7	Age + Sex + 6 PCs			
	AREDS (EUR)	0	1,879	NA	1,107 (58.9%)	NA	68.0 $\pm$ 4.7	Age + Sex + 6 PCs			
	Total	1,404	2,564								
Meta-analyses	EUR meta-analysis	3,655	254,909							9,714,851	1.024
	Multi-ancestry meta-analysis*	3,970	333,794							18,302,074	1.010

* MVP HIS excluded due to fewer than 100 cases