Data Supplement

IGAP Threshold	SNP number
IGAP Significance	**18**
P=0.00001	131
P=0.0001	450
P=0.001	2325
P=0.01	**16123**
P=0.02	29299
P=0.03	41973
P=0.04	54153
P=0.05	65710
P=0.10	119549
P=0.20	216162
P=0.30	305202
P=0.40	387829
P=0.50	464560

Table e-1: Number of SNPs included in each PGRS calculation. The PGRS iterations used in biomarker analyses are bolded.

	Liberal PGRS (Threshold=0.01)	Conservative PGRS (IGAP loci only)
Baseline Memory	**-0.084 (0.026) p=0.001**	**-0.085 (0.028) p=0.002**
Longitudinal Memory	**-0.020 (0.006) p=0.001**	-0.004 (0.007) p=0.60
Baseline Executive Function	-0.048 (0.031) p=0.12	-0.043 (0.033) p=0.19
Longitudinal Executive Function	**-0.018 (0.007) p=0.01**	0.001 (0.008) p=0.94
Baseline Hippocampus Volume	**-103.4 (35.99) p=0.004**	-15.06 (38.5) p=0.70
Longitudinal Hippocampus Volume	*-6.71 (3.79) p=0.08*	-4.13 (4.04) p=0.31
Progression to MCI/AD	**0.43 (0.11) p<0.00001**	0.18 (0.11) p=0.11
CSF Aβ	**-6.87 (3.00) p=0.02**	-2.25 (3.07) p=0.47
Florbetapir Aβ	**0.027 (0.010) p=0.008**	*0.015 (0.009) p=0.09*
Analyses within GSP (young CN)		
Baseline Hippocampus	*-30.50 (18.54) p=0.10*	-3.94 (16.83) p=0.82

Table e-2: Analyses were repeated using a PGRS that included chromosome 19, and revealed a similar pattern of results. Unstandardized beta values, standard errors, and p-values care listed for each model covariate. Significant effects are bolded (p<0.05) and trends are italicized (p<0.10).
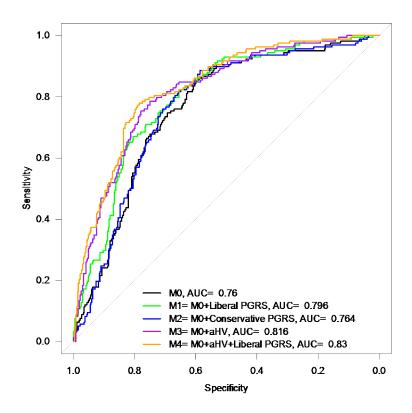
Figure e-1: ROC analysis assessing risk of clinical progression within three years (either normal to MCI/AD, or MCI to AD). A total of 15/194 CN and 143/332 MCI progressed within three years. M0 is a model with APOE4, diagnosis (CN or MCI), age, sex, education, and the five MDS principle components. M1 includes all the covariates in M0, with the addition of the liberally defined PGRS that incorporates subthreshold SNPs. M2 includes all the covariates in M0, with the addition of the conservative PGRS that only incorporates the smaller set of loci meeting statistical significance in the large IGAP meta-analysis. M3 includes all the covariates in M0, with the addition of baseline hippocampus volume. Finally, M4 includes all the covariates in M0, with the addition of both the liberal PGRS and baseline hippocampus volume. The incorporation of the liberal PGRS improves prediction of clinical progression, with an effect size that is a similar magnitude of baseline hippocampus volume.