

**Table 3. PRS and APOE predictions of AD/MCI/Controls/  
Amyloid phenotypes in ADNI.**

Model	Statistical Characteristics	AD vs Controls [174/224]	MCI vs Controls [344/224]	Amyloid positive vs Amyloid negative [357/304]
<i>APOE</i>	Beta <sup>1,3,4</sup> [se]	0.99[0.13] -0.58[0.22] 0.03[0.01]	0.3[0.1] -0.5[0.17] -0.02[0.01]	1.08[0.01] 0.2[0.17] 0.04[0.01]
	p	1.06e-18	9.6e-5	<2.2e-16
	AUC/ AUC*	0.72/ 0.76	0.58/ 0.62	0.72/ 0.76
PRS (p<0.5) without <i>APOE</i>	Beta <sup>2,3,4</sup> [se]	0.93[0.12] -0.7[0.2] 0.016[0.015]	0.68[0.1] -0.47[0.18] -0.007[0.01]	0.3[0.08] 0.13[0.16] 0.023[0.01]
	p	2.7e-18	6.e-12	1.4e-3
	AUC/ AUC*	0.74/ 0.75	0.66/ 0.67	0.58/ 0.58
FULL PRS model	Beta <sup>1-4</sup> [se]	0.93[0.13] 0.88[0.13] -0.63[0.24] 0.04[0.02]	0.26[0.1] 0.66[0.1] -0.47[0.18] -0.002[0.01]	1.06[0.1] 0.22[0.09] 0.22[0.17] 0.05[0.01]
	p	1.9e-30	1.1e-12	2.3e-29
	AUC/ AUC*	<b>0.81</b> / <b>0.82</b>	<b>0.67</b> / <b>0.68</b>	<b>0.75</b> / <b>0.76</b>
Anova p (PRS above <i>APOE</i> )		1.7e-13	1.8e-10	0.038

Beta<sup>1</sup>=beta (e2+e4), Beta<sup>2</sup>=beta(PRS), Beta<sup>3</sup>=beta(sex), Beta<sup>4</sup>=beta(age);  
AUC-area under the curve without taking gender and age into account;  
AUC\*- area under the curve where gender and age were used as predictors;

Legend: 1<sup>st</sup> column –three scenarios where PRS predictions were made: *APOE* alone, PRS without *APOE* and full model (*APOE* plus PRS (p<0.5)); 2<sup>nd</sup> column- statistical characteristics that were calculated for each model, these includes effect size (beta) with standard error (se), p-values and AUC (with and without gender and age) and p-value of significance PRS above *APOE* model; columns 3-5 represent three analyses with number of samples where different models were tested.