

Online Supplement

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Supplemental Table 1. Least squares means* by APOE genotype for a measure of A β binding

	APOE Genotype									
	$\epsilon 3\epsilon 3$ (n = 15)			$\epsilon 3\epsilon 4$ (n = 15)			$\epsilon 4\epsilon 4$ (n = 15)		Overall- APOE	
	Mean	95% CI	p value	Mean	95% CI	p value [†]	Mean	95% CI	p value [†]	p value [‡]
BP_{ND} – Partial Volume Corrected										
Frontal Cortex	0.164	0.100, 0.268	-----	0.332	0.196, 0.561	0.097	0.432	0.357, 0.523	<0.001	0.001
Lateral Temporal	0.114	0.062, 0.212	-----	0.237	0.137, 0.409	0.128	0.311	0.252, 0.383	<0.001	0.006
Lateral Parietal	0.247	0.150, 0.405	-----	0.442	0.283, 0.689	0.131	0.517	0.427, 0.625	0.001	0.023
Posterior Cingulate	0.246	0.167, 0.359	-----	0.217	0.125, 0.379	0.712	0.477	0.370, 0.614	0.004	0.003
Precuneus	0.243	0.186, 0.317	-----	0.375	0.251, 0.560	0.127	0.610	0.516, 0.713	<0.001	<0.001
Mean Cortical	0.138	0.081, 0.238	-----	0.270	0.163, 0.450	0.125	0.356	0.294, 0.431	<0.001	0.003

*Least squares means are obtained from separate generalized linear models in which APOE genotype is the main explanatory variable and age and sex are covariates; generalized estimating equations yielding a robust variance estimator are used to account for clustering induced by matching by age and sex and a natural logarithm transformation is used to accommodate a positively skewed outcome with an inverse transformation returning the least squares means to their original scale.

p values are for significance tests comparing the [†]two respective APOE genotype categories to the reference $\epsilon 3\epsilon 3$ APOE Genotype category, as well as for the [‡]overall APOE genotype effect. They are not adjusted for the multiplicity of comparisons.

Supplemental Table 2. Unadjusted means by *APOE* genotype of neuropsychological test performance measures and their correlations with PVC BP_{ND}

	<i>APOE</i> Genotype						X ^{2a}	P Value*	
	$\epsilon 3\epsilon 3$ (n=15)		$\epsilon 3\epsilon 4$ (n=15)		$\epsilon 4\epsilon 4$ (n=15)				
	Mean	SD	Mean	SD	Mean	SD			
Language									
Boston Naming Test	56.3	±3.2	58.4	±1.7	57.5	±2.4	3.90	0.14	
Category Fluency	72.0	±14.3	72.7	±15.7	74.7	±12.2	0.17	0.92	
Letter Fluency (FAS)	46.4	±13.8	42.9	±13.0	42.5	±12.8	0.81	0.67	
Executive Function									
Digit Symbol (WAIS-III)	11.0	±2.6	10.4	±2.6	10.4	±2.6	0.73	0.69	
Trail Making Test, Part B	59.1	±20.9	60.5	±14.2	59.7	±14.6	0.49	0.78	
Stroop color word score	46.0	±5.8	43.9	±6.8	45.6	±5.0	1.00	0.61	
Verbal and Visual Memory									
CVLT free delayed recall	11.1	±2.8	10.8	±2.5	11.8	±4.2	1.94	0.38	
CVLT recognition hits	15.1	±0.6	14.9	±1.0	14.6	±1.7	0.49	0.78	
Logical Memory I	13.5	±3.9	13.3	±4.2	12.6	±3.3	0.22	0.89	
Logical Memory II	12.9	±3.9	11.7	±4.5	11.6	±3.3	1.19	0.55	
Visual Reproductions II	11.4	±2.7	11.3	±3.6	11.6	±2.2	0.08	0.96	
Visuospatial/Construction									
Block Design (WAIS-III)	11.6	±2.3	11.8	±3.2	11.2	±2.1	0.48	0.79	
Olfactory Identification									
UPSIT (Smell Test)	34.4	±3.7	34.5	±4.8	34.8	±4.0	0.49	0.78	

*Chi-square statistics and their p values are from Kruskal-Wallis analyses having 2 degrees of freedom with *APOE* genotype as the categorical explanatory variable; a nonparametric test is used because not all measures had Gaussian distributions. There is no adjustment for multiplicity of comparisons.

Supplemental Table 3. Correlations between neuropsychological test performance measures and cortical Aβ		
	Spearman r*	P Value*
Language		
Boston Naming Test	0.39	0.01
Category Fluency	0.20	0.19
Letter Fluency (FAS)	0.26	0.08
Executive Function		
Digit Symbol (WAIS-III)	-0.06	0.71
Trail Making Test, Part B	0.13	0.39
Stroop color word score	0.23	0.13
Verbal and Visual Memory		
CVLT free delayed recall	-0.05	0.75
CVLT recognition hits	-0.22	0.14
Logical Memory I	0.02	0.86
Logical Memory II	-0.06	0.71
Visual Reproductions II	0.20	0.18
Visuospatial/Construction		
Block Design (WAIS-III)	0.10	0.52
Olfactory Identification		
UPSIT (Smell Test)	-0.19	0.22

*Spearman rank correlation coefficients and their p values are from correlations with the mean cortical A β burden (BP_{ND}) with partial volume correction. There is no adjustment for multiplicity of comparisons.