

Supplementary Material

Segmented Linear Mixed Model Analysis Reveals Association of the *APOE* $\epsilon 4$ Allele with Faster Rate of Alzheimer's Disease Dementia Progression

Supplementary Table 1. Linearity assessment of cognitive scores over time divided by *APOE* genotype and disease stage.

		$\epsilon 3/\epsilon 3$	$\epsilon 3/\epsilon 4$	$\epsilon 4/\epsilon 4$
MCI	MMSE	Linear (F = 0.49, p = 0.95)	Linear (F = 0.40, p = 0.98)	Linear (F = 0.94, p = 0.50)
	CDR-SB	Linear (F = 3.28, p = 0.99)	Linear (F = 1.31, p = 0.20)	Linear (F = 0.43, p = 0.91)
	ADAS-11	Linear (F = 1.03, p = 0.43)	Linear (F = 0.99, p = 0.46)	Linear (F = 0.30, p = 0.97)
	MoCA	Linear (F = 1.39, p = 0.21)	Linear (F = 0.99, p = 0.47)	Linear (F = 0.38, p = 0.82)
AD	MMSE	Linear (F = 1.24, p = 0.23)	Linear (F = 1.66, p = 0.07)	Linear (F = 1.24, p = 0.26)
	CDR-SB	Nonlinear (F = 3.17, p = 0.00)	Linear (F = 1.05, p = 0.40)	Nonlinear (F = 2.02, p = 0.01)
	ADAS-11	Linear (F = 0.76, p = 0.73)	Nonlinear (F = 1.92, p = 0.03)	Linear (F = 1.51, p = 0.12)
	MoCA	Linear (F = 1.29, p = 0.22)	Linear (F = 1.18, p = 0.30)	Linear (F = 0.50, p = 0.91)

Supplementary Table 2. Linearity assessment of volumetric measures over time divided by *APOE* genotype and disease stage.

		$\epsilon 3/\epsilon 3$	$\epsilon 3/\epsilon 4$	$\epsilon 4/\epsilon 4$
MCI	Whole Brain	Linear (F = 0.82, <i>p</i> = 0.70)	Linear (F = 0.61, <i>p</i> = 0.91)	Linear (F = 0.92, <i>p</i> = 0.53)
	Hippocampus	Linear (F = 0.52, <i>p</i> = 0.95)	Linear (F = 0.95, <i>p</i> = 0.53)	Linear (F = 0.63, <i>p</i> = 0.82)
	Fusiform Gyrus	Linear (F = 1.11, <i>p</i> = 0.34)	Linear (F = 0.54, <i>p</i> = 0.95)	Linear (F = 1.43, <i>p</i> = 0.17)
	Entorhinal Cortex	Linear (F = 1.22, <i>p</i> = 0.69)	Linear (F = 0.95, <i>p</i> = 0.53)	Linear (F = 0.74, <i>p</i> = 0.71)
	Middle Temporal Gyrus	Linear (F = 1.14, <i>p</i> = 0.32)	Linear (F = 0.85, <i>p</i> = 0.65)	Linear (F = 1.02, <i>p</i> = 0.44)
	Ventricles	Linear (F = 0.83, <i>p</i> = 0.69)	Linear (F = 0.65, <i>p</i> = 0.88)	Linear (F = 0.75, <i>p</i> = 0.71)
	AD	Whole Brain	Linear (F = 1.27, <i>p</i> = 0.25)	Nonlinear (F = 2.54, <i>p</i> = 0.01)
Hippocampus		Linear (F = 0.94, <i>p</i> = 0.49)	Linear (F = 1.08, <i>p</i> = 0.38)	Linear (F = 0.34, <i>p</i> = 0.96)
Fusiform Gyrus		Linear (F = 1.37, <i>p</i> = 0.21)	Linear (F = 1.69, <i>p</i> = 0.08)	Linear (F = 1.00, <i>p</i> = 0.45)
Entorhinal Cortex		Linear (F = 0.38, <i>p</i> = 0.94)	Nonlinear (F = 1.91, <i>p</i> = 0.04)	Linear (F = 0.29, <i>p</i> = 0.97)
Middle Temporal Gyrus		Linear (F = 1.23, <i>p</i> = 0.28)	Linear (F = 1.36, <i>p</i> = 0.19)	Linear (F = 0.71, <i>p</i> = 0.70)
Ventricles		Linear (F = 0.86, <i>p</i> = 0.57)	Linear (F = 0.98, <i>p</i> = 0.47)	Linear (F = 1.03, <i>p</i> = 0.43)