

The variables with $P < 0.05$ on univariate analysis were incorporated into multivariate analysis, including baseline CSF, $A\beta_{1-42}$ levels, p-tau_{181p}, t-tau, AV-45, APOE ϵ 4, baseline CDR-SB, ADAS11, ADAS13, MMSE, RAVLT-immediate, learning, percent of forgetting, FAQ, MoCA, EcogSP (memory, language, visuospatial abilities, planning, organization, divided attention, total), ADNI-EF, ADNI-MEM, CDT, BNT, Category Fluency Tests, cortical volume of right pars orbitalis, thickness average of right supramarginal, subcortical volume of bilateral amygdala, surface area of left caudal anterior cingulate, thickness average of bilateral entorhinal, cortical volume of right entorhinal, subcortical volume of bilateral hippocampus, cortical volume of left middle temporal, thickness average of left middle temporal, thickness average of left superior temporal, surface area of left posterior cingulate, subcortical volume of bilateral inferior lateral ventricle, subcortical volume of right choroid plexus.

Table S1. Multiplied interactions between variables in the regression model.

<i>Variable</i>	<i>Estimate</i>	<i>StdErr</i>	<i>WaldChiSq</i>	<i>ProbChiSq</i>
Age*APOE ϵ 4	0.0755	0.0342	4.8739	0.0273
Education*APOE ϵ 4	-0.1687	0.0871	3.7507	0.0528
APOE ϵ 4*t-tau	-0.00768	0.00429	3.2071	0.0733
APOE ϵ 4*p-tau _{181p}	-0.0235	0.0115	4.1763	0.0410
$A\beta_{1-42}$ *t-tau	0.000323	0.000134	5.8632	0.0155
$A\beta_{1-42}$ *p-tau _{181p}	0.000569	0.000325	3.0556	0.0805
$A\beta_{1-42}$ *p-tau _{181p}	0.000569	0.000325	3.0556	0.0805
$A\beta_{1-42}$ *gender	-0.0384	0.0144	7.1239	0.0076
APOE ϵ 4*Classification	-0.9805	0.5287	3.4398	0.0636
$A\beta_{1-42}$ *Classification	0.0280	0.0155	3.2774	0.0702