Supplement

eTable 1. Baseline associations between cognitive performance and plasma p-tau 181 and NfL concentration. Analyses adjusted for age and sex.

Variable	**A-TN- (N=260)**		**A+TN- (N=173)**		**A+TN+ (N=300)**		**A-TN+ (N=132)**	
ADNI-mem	B (s.B)	p	B (s.B)	p	B (s.B)	p	B (s.B)	p
Plasma p-tau 181 log_{10} baseline	-0.22 (-0.09)	0.13	-0.56 (-0.16)	0.03	-1.14 (-0.24)	$2.84x10^{-05}$	-0.19 (-0.08)	0.36
Plasma NfL log_{10} baseline	-0.79 (-0.23)	0.002	-0.74 (-0.18)	0.03	-1.27 (-0.25)	$6.84x10^{-05}$	-0.60 (-0.17)	0.08

Abbreviations: A+/-, Amyloid-β positive/negative; TN+/-, Tau/Neurodegeneration positive/negative; B, beta (slope); s.B, standardized beta; p-tau 181, plasma phosphorylated tau 181; NfL, neurofilament light protein.

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eTable 2. Prediction of ADNI-mem, tau (flortaucipir) and Aβ (florbetapir) PET meta ROI SUVR tracer uptake for plasma p-tau 181 and plasma NfL baseline concentrations and rates of change over time (slope). Analyses adjusted for age, sex and the time difference between baseline and ADNI-mem assessment/ PET scan and CDR global score. Baseline cognition was included in the model when predicting ADNI-mem at follow-up.

Variable	**Entire cohort (N=503)**		**A-TN- (N=192)**		**A+TN- (N=101)**		**A+TN+ (N=121)**		**A-TN+ (N=89)**	
ADNI-mem	B (s.B)	p	B (s.B)	p	B (s.B)	p	B (s.B)	p	B (s.B)	p
Plasma p-tau181 log_{10} baseline	-0.64 (-0.16)	<0.001	-0.11 (-0.04)	0.4	-0.29 (-0.07)	0.29	-1.57 (-0.25)	<0.001	-0.45 (-0.13)	0.10
Plasma NfL log_{10} baseline	-0.88 (-0.16)	<0.001	-0.39 (-0.09)	0.08	-0.20 (-0.04)	0.60	-1.04 (-0.16)	0.04	-1.33 (-0.28)	<0.001
Plasma p-tau181 slope	-2.86 (-0.03)	0.32	-3.89 (-0.06)	0.18	-5.20 (-0.05)	0.42	-1.54 (0.01)	0.86	-3.31 (-0.04)	0.63
Plasma NfL slope	-12.95 (-0.11)	<0.001	-10.55 (-0.12)	<0.001	-8.18 (-0.08)	0.245	-23.48 (-0.20)	<0.001	0.99 (0.01)	0.90
Tau PET	**Entire cohort (N=196)**		**A-TN- (N=83)**		**A+TN- (N=40)**		**A+TN+ (N=41)**		**A-TN+ (N=32)**	
Plasma p-tau181 log_{10} baseline	0.62 (0.26)	<0.001	0.04 (0.07)	0.54	0.08 (0.05)	0.79	1.99 (0.31)	0.06	0.17 (0.10)	0.62
Plasma NfL log_{10} baseline	0.54 (0.15)	0.05	0.05 (0.05)	0.73	-0.22 (-0.10)	0.56	1.61 (0.24)	0.16	0.17 (0.07)	0.73
Plasma p-tau181 slope	5.35 (0.08)	0.26	0.21 (0.01)	0.90	9.88 (0.21)	0.18	13.93 (0.09)	0.59	13.11 (0.22)	0.26
Plasma NfL slope	22.07(0.26)	<0.001	0.70 (0.03)	0.80	10.51 (0.25)	0.13	69.70 (0.45)	<0.001	17.81 (0.28)	0.12
Amyloid PET	**Entire cohort (N=103)**		**A-TN- (N=51)**		**A+TN- (N=19)**		**A+TN+ (N=16)**		**A-TN+ (N=17)**	
Plasma p-tau181 log_{10} baseline	0.70 (0.24)	0.01	-0.03 (-0.03)	0.87	0.76 (0.18)	0.55	0.66 (0.25)	0.36	0.11 (0.05)	0.83
Plasma NfL log_{10} baseline	0.90 (0.19)	0.08	0.28 (0.13)	0.49	0.45 (0.06)	0.85	0.01 (0.003)	0.99	0.24 (0.09)	0.79
Plasma p-tau181 slope	5.92 (0.07)	0.49	4.52 (0.13)	0.42	58.47 (0.36)	0.13	-13.71 (-0.14)	0.64	-9.40 (-0.18)	0.55
Plasma NfL slope	13.93 (0.13)	0.18	8.78 (0.17)	0.24	11.82 (0.09)	0.71	-23.98 (-0.32)	0.24	23.57 (0.38)	0.09

eFigure 1. Baseline group differences for A) plasma p-tau 181 and B) plasma NfL concentrations (all comparisons significant ($p<0.001$) except A+TN- vs A-TN+) and associations at baseline between cognitive performance (ADNI-mem) and C) log_{10} plasma p-tau 181 and D) log_{10} plasma NfL concentrations in the different ATN groups.

Abbreviations: A+/-, Amyloid-β positive/negative; TN+/-, Tau/Neurodegeneration; P-tau 181, Tau phosphorylated at threonine 181; Nfl, Neurofilament light chain; pg/ml, picogram per milliliter; bl, baseline.