

Supplementary Table S1

Correlation table between the measured variables at baseline.

		AGE	BMI	Creatininemia	eGFR	MMSE	Plasma A β 42/40	Plasma NfL	CSF A β 42/40
AGE	Correlation Coefficient		0.058	0.066	-0.399	-0.064	-0.026	0.381	0.030
	Significance Level P n		0.2796 344	0.2355 325	<0.0001 325	0.2380 337	0.6367 328	<0.0001 350	0.7135 156
BMI	Correlation Coefficient	0.058		0.208	-0.166	0.033	0.112	-0.189	0.023
	Significance Level P n	0.2796 344		0.0002 320	0.0029 320	0.5531 333	0.0443 324	0.0004 344	0.7735 156
Creatininemia	Correlation Coefficient	0.066	0.208		-0.752	-0.049	0.049	0.182	-0.008
	Significance Level P n	0.2355 325	0.0002 320		<0.0001 325	0.3906 314	0.3963 308	0.0010 325	0.9207 151
eGFR	Correlation Coefficient	-0.399	-0.166	-0.752		0.077	-0.061	-0.337	-0.006
	Significance Level P n	<0.0001 325	0.0029 320	<0.0001 325		0.1739 314	0.2826 308	<0.0001 325	0.9379 151
MMSE	Correlation Coefficient	-0.064	0.033	-0.049	0.077		0.058	-0.188	0.184
	Significance Level P n	0.2380 337	0.5531 333	0.3906 314	0.1739 314		0.3042 318	0.0005 337	0.0236 151
Plasma A β 42/40	Correlation Coefficient	-0.026	0.112	0.049	-0.061	0.058		-0.072	0.028
	Significance Level P n	0.6367 328	0.0443 324	0.3963 308	0.2826 308	0.3042 318		0.1942 328	0.7333 149
Plasma NfL	Correlation Coefficient	0.381	-0.189	0.182	-0.337	-0.188	-0.072		0.011
	Significance Level P n	<0.0001 350	0.0004 344	0.0010 325	<0.0001 325	0.0005 337	0.1942 328		0.8915 156
CSF A β 42/40	Correlation Coefficient	0.030	0.023	-0.008	-0.006	0.184	0.028	0.011	
	Significance Level P n	0.7135 156	0.7735 156	0.9207 151	0.9379 151	0.0236 151	0.7333 149	0.8915 156	

Spearman rank correlation coefficient: the p-values significance level was adjusted for multiple comparisons to 0.0018

Supplementary Table S2

Brain structure changes within patients at baseline.

	AD	MCI	p	MCI			p
				1st tertile NfL	2 nd tertile NfL	3rd tertile NfL	
CSF volume (mean \pm SD)	0.1972 (0.011)	0.1929 (0.012)	0.0003	0.1927 (0.011)	0.1941 (0.014)	0.1916 (0.010)	NS
White matter volume (mean \pm SD)	0.3430 (0.013)	0.3417 (0.012)	NS	0.3385 (0.010)	0.3426 (0.013)	0.3433 (0.011)	NS
Fazekas scale	1.822 (0.696)	1.796 (0.622)	NS	1.544 (0.520)	1.956 (0.638)	1.830 (0.627)	0.002
Grey matter volume (mean \pm SD)	0.459 (0.010)	0.465 (0.010)	<0.0001	0.4688 (0.009)	0.4633 (0.01)	0.4652 (0.08)	0.01
Hippocampus volume (mean \pm SD)	0.0028 (0.001)	0.0034 (0.001)	<0.0001	0.0036 (0.0006)	0.0034 (0.0008)	0.0034 (0.0008)	NS
Scheltens scale	1.920 (0.920)	1.522 (0.942)	0.0001	1.200 (0.862)	1.525 (0.907)	1.777 (0.981)	<0.01

The P-values significance level was adjusted for multiple comparisons to 0.0083

Supplementary Table S3

Correlation table between brain structure and plasma NfL at baseline.

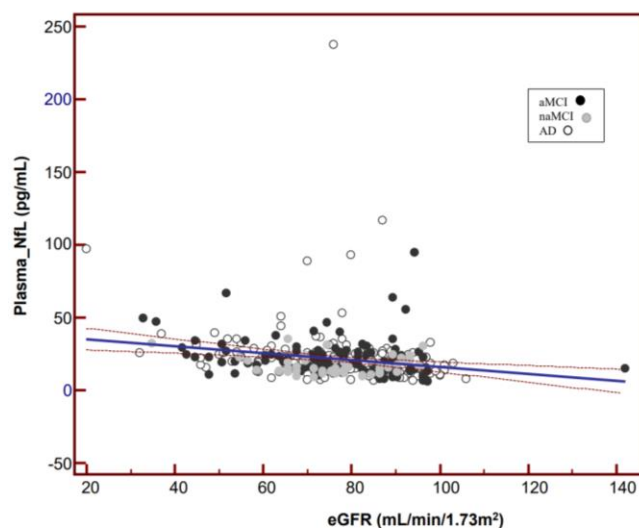
<u>Correlation of plasma NfL</u>		<u>Entire cohort</u>	AD	MCI (all)
CSF volume (mm ³)	Correlation Coefficient	0.030	0.069	-0.001
	<u>Significance Level</u>	0.6042	0.4141	0.9853
	n	305	143	162
White matter volume (mm ³)	Correlation Coefficient	0.140	0.126	0.157
	<u>Significance Level</u>	0.0142	0.1329	0.0466
	n	305	143	162
Fazekas scale	Correlation Coefficient	0.237	0.325	0.151
	<u>Significance Level</u>	<0.0001	0.0001	0.0571
	n	298	138	160
Grey matter volume (mm ³)	Correlation Coefficient	-0.211	-0.261	-0.178
	<u>Significance Level</u>	0.0002	0.0016	0.0236
	n	305	143	162
Hippocampus volume (mm ³)	Correlation Coefficient	-0.090	-0.031	-0.109
	<u>Significance Level</u>	0.1163	0.7103	0.1655
	n	305	143	162
Sheltens scale	Correlation Coefficient	0.249	0.245	0.254
	<u>Significance Level</u>	<0.0001	0.0031	0.0012
	n	304	144	160

Spearman rank correlation coefficient

The P-values significance level was adjusted for multiple comparisons to 0.0083

Supplementary Figure S1: Renal parameters in the three clinical groups according to plasma NfL levels. Baseline plasma NfL levels of 325 subjects are plotted against eGFR (A) and creatinemia (B) according to AD or MCI status (aMCI and naMCI). Graph shows regression line (blue) with the 95% confidence interval (red).

A



B

