

Supplementary Table 4. Spearman's correlation test for LC and MMSE

Correlation between LC-MRI parameters and MMSE scores both at baseline and at follow-up

			MMSE		
			Bas	FU	
Baseline	LC _{CR}	LC complex	Rho	0.243	0.223
			p-value	0.071	0.095
		LC complex - Lower half	Rho	0.106	0.178
			p-value	0.435	0.186
		LC complex - Upper half	Rho	0.350	0.193
			p-value	0.004*	0.150
		Right LC	Rho	0.133	0.099
			p-value	0.329	0.465
		Left LC	Rho	0.287	0.226
			p-value	0.100	0.091
	LC _{vox}	LC complex	Rho	0.211	0.202
			p-value	0.119	0.131
		LC complex - Lower half	Rho	0.055	0.171
			p-value	0.687	0.203
		LC complex - Upper half	Rho	0.381	0.193
			p-value	0.040*	0.149
		Right LC	Rho	0.137	0.090
			p-value	0.313	0.505
		Left LC	Rho	0.221	0.228
			p-value	0.101	0.088
Follow-up	LC _{CR}	LC complex	Rho	0.293	0.423
			p-value	0.093	0.003*
		LC complex - Lower half	Rho	0.212	0.363
			p-value	0.117	0.009*
		LC complex - Upper half	Rho	0.300	0.366
			p-value	0.120	0.008*
		Right LC	Rho	0.217	0.345
			p-value	0.109	0.011*
		Left LC	Rho	0.317	0.403
			p-value	0.170	0.004*
	LC _{vox}	LC complex	Rho	0.219	0.471
			p-value	0.105	0.001*
		LC complex - Lower half	Rho	0.253	0.478
			p-value	0.060	0.001*
		LC complex - Upper half	Rho	0.173	0.325
			p-value	0.203	0.014*
		Right LC	Rho	0.159	0.287
			p-value	0.242	0.030*
		Left LC	Rho	0.243	0.484
			p-value	0.071	0.001*

Correlation between overtime variation of LC-MRI parameters and MMSE scores

		MMSE variation	
LC variation	LC _{CR}	LC complex	Rho 0.210
			p-value 0.121
		LC complex - Lower half	Rho 0.204
			p-value 0.132
		LC complex - Upper half	Rho 0.186
			p-value 0.170
	LC _{vox}	Right LC	Rho 0.216
			p-value 0.109
		Left LC	Rho 0.180
			p-value 0.185
		LC complex	Rho 0.242
			p-value 0.072
		LC complex - Lower half	Rho 0.148
			p-value 0.275
		LC complex - Upper half	Rho 0.172
			p-value 0.204
		Right LC	Rho 0.133
			p-value 0.329
		Left LC	Rho 0.145
			p-value 0.287

Legend to tables. The variation of both LC-MRI parameters and MMSE scores were calculated as the difference between follow-up and baseline assessments. Bas: Baseline; FU: Follow-up; All reported p-values were adjusted for FDR multiple comparison correction; *statistically significant for $p < 0.05$.

From the paper "The degeneration of Locus Coeruleus occurring during Alzheimer's Disease clinical progression: a neuroimaging follow-up investigation" published on "Brain Structure and Function" by Alessandro Galgani, Francesco Lombardo, Francesca Frija, Nicola Martini, Gloria Tognoni, Nicola Pavese and Filippo S. Giorgi. (*Corresponding author: Department of Translational Research and of New Surgical and Medical Technologies, University of Pisa. e-mail address: filippo.giorgi@unipi.it).*