

**On-line Table:** Linear regression analysis:  $\beta$ -coefficients (model  $R^2$ ) ( $P$  values) of correlations between deep gray matter structures with significant volumetric differences and cognitive variables and disease characteristics after adjusting for age, sex, years of education, and head size<sup>a</sup>

SDGM Structures	Global Cognition	Executive Function	Attention and Working Memory	Episodic Memory	Language Abilities	Visuospatial Abilities	Disease Duration	UPDRS
Nucleus accumbens	0.23 (0.23) (0.060)	0.23 (0.26) (0.061)	0.28 (0.32) (0.020) <sup>b</sup>	0.15 (0.17) (2.57)	0.25 (0.25) (0.039) <sup>b</sup>	-0.08 (0.12) (5.31)	0.19 (0.03) (17.0)	-0.22 (0.08) (.111)
Thalamus	0.07 (0.20) (57)	0.06 (0.23) (638)	0.23 (0.30) (0.066)	-0.02 (0.16) (854)	0.17 (0.27) (157)	-0.03 (0.11) (.838)	0.25 (0.05) (0.73)	-0.12 (0.05) (.396)
Amygdala	-0.148 (0.20) (172)	-0.30 (0.30) (0.004)	0.01 (0.27) (912)	-0.11 (0.17) (341)	-0.14 (0.27) (180)	-0.08 (0.12) (.507)	0.25 (0.06) (.038)	-0.01 (0.05) (.953)
Hippocampus	0.03 (0.20) (.795)	0.05 (0.23) (690)	0.12 (0.28) (268)	0.07 (0.16) (567)	0.11 (0.26) (.317)	0.02 (0.11) (.832)	0.08 (0.02) (.530)	-0.17 (0.07) (.173)
Caudate nucleus	0.05 (0.20) (.673)	-0.06 (0.22) (625)	0.16 (0.29) (159)	-0.11 (0.17) (.382)	-0.12 (0.26) (.287)	0.01 (0.11) (.924)	-0.12 (0.02) (.362)	-0.16 (0.06) (.208)
Putamen	0.07 (0.20) (.551)	0.03 (0.23) (.821)	0.31 (0.34) (0.005) <sup>b</sup>	0.05 (0.16) (.674)	-0.11 (0.26) (.328)	0.14 (0.13) (.250)	0.08 (0.02) (.512)	-0.33 (0.12) (.009) <sup>b</sup>
Pallidum	0.09 (0.20) (.391)	0.03 (0.23) (.752)	0.19 (0.30) (0.063)	-0.06 (0.16) (.566)	0.04 (0.25) (.721)	0.08 (0.12) (.456)	0.20 (0.05) (.081)	0.00 (0.05) (.965)

**Note:**—UPDRS indicates Unified Parkinson's Disease Rating Scale.

<sup>a</sup> Cells contain  $\beta$ -coefficients, model  $R^2$ , and  $P$  values, respectively.

<sup>b</sup> Significant linear regression coefficients after adjustment for age, sex, years of education, and head size.