

**Supplementary Material S5.** Comparison between patients with and without available Magnetic Resonance Imaging.

Variable	Without MRI (n= 63)	With MRI (n= 120)	F / $\chi^2$	p-value	Adj. p
<i>Demographics</i>					
Age, years	66.35 ± 6.79	63.24 ± 9.57	5.24	0.023	0.650
Education, years	11.25 ± 4.36	12.16 ± 4.43	1.73	0.189	1.000
Sex, male	41 (65.10%)	80 (66.70%)	0.04	0.829	1.000
<i>Clinical features</i>					
Disease duration, years	1.37 ± 0.65	1.54 ± 0.83	1.87	0.173	1.000
UPDRS-III	21.95 ± 10.27	21.60 ± 9.72	0.05	0.822	1.000
Modified HY stage	1.89 ± 0.50	1.78 ± 0.54	1.72	0.191	1.000
Age at onset:					
Early-onset	0 (0.0%)	12 (10.0%)	6.74	0.009	1.000
Late-onset	20 (31.7%)	27 (22.5%)	1.85	0.174	0.252
<i>Cognitive assessment</i>					
<i>Attention and working memory</i>					
TMT part A	34.68 ± 18.67	36.20 ± 22.20	0.21	0.644	1.000
Digit span backward	3.81 ± 0.84	3.70 ± 2.44	0.11	0.732	1.000
<i>Executive functions</i>					
MCST-n. of categories	3.70 ± 2.05	4.16 ± 1.96	2.19	0.140	1.000
Letter fluency task	28.49 ± 9.87	28.03 ± 9.77	0.08	0.767	1.000
TMT part B	124.42 ± 100.92	111.32 ± 86.73	0.81	0.368	1.000
<i>Visuospatial abilities</i>					
Copying drawings	11.28 ± 2.23	11.55 ± 2.16	0.60	0.437	1.000
JOL	22.48 ± 5.61	22.64 ± 5.41	0.03	0.858	1.000
<i>Language</i>					
Nouns denomination task	9.80 ± 0.55	9.90 ± 0.36	2.16	0.143	1.000
Verbs denomination task	9.57 ± 0.90	9.29 ± 1.11	2.76	0.098	1.000
<i>Memory</i>					
Prose Recall Test	11.16 ± 3.39	11.35 ± 3.88	0.11	0.741	1.000
RAVLT-Free Recall	6.76 ± 3.59	6.86 ± 3.20	0.03	0.847	1.000
RAVLT-Intrusions	1.63 ± 2.71	0.90 ± 2.10	4.07	0.045	1.000
RAVLT-Recognition Enhancement	4.11 ± 3.36	5.03 ± 3.71	2.73	0.100	1.000
<i>Behavioural measures</i>					
Beck Depression Inventory	8.10 ± 8.16	7.56 ± 7.00	0.21	0.643	1.000
Parkinson Anxiety Scale	10.90 ± 8.85	10.09 ± 7.89	0.40	0.528	1.000
Apathy Evaluation Scale	31.32 ± 7.64	30.53 ± 7.93	0.41	0.521	1.000
PD-Sleep Scale	120.47 ± 22.36	121.85 ± 24.52	0.13	0.717	1.000
Epworth Sleepiness Scale	4.05 ± 3.11	3.62 ± 3.17	0.77	0.381	1.000
Parkinson Fatigue Scale	2.15 ± 1.02	2.01 ± 0.99	0.75	0.387	1.000
<i>Quality of life</i>					
PDQ-39	15.94 ± 11.80	14.50 ± 9.55	0.64	0.425	1.000

Note. Data were reported as mean ± standard deviation or count (percentage); HY, Hoehn and Yahr; UPDRS, Unified Parkinson's Disease Rating Scale; TMT, Trail Making Test; MCST (Nelson's modification), Modified Card Sorting Test; JOL, Judgement of line orientation test; RAVLT, Rey's Auditory Verbal Learning Test; PDQ-39, 39-item Parkinson's disease questionnaire; Adj-p represents p-value corrected for multiple comparisons using the Bonferroni procedure, and statistically significant differences are shown in **bold**.