

**Supplementary Table S1.** Spreadsheet of the Parkinson`s disease patients included in the study - demographic data, presence of motor complications, symptomatic treatment

Patient no.	Sex	Age (years)	PD duration	Age at onset	Motor complications	Levodopa	DA	IMAO	COMT inhibitors	LEDD (mg)	Psychiatric medication
1	M	60	9	51	no	yes	yes	yes	no	204	no
2	M	65	4	61	no	no	yes	yes	no	160	no
3	F	71	3	68	no	yes	no	yes	no	475	no
4	M	67	15	52	yes	yes	no	yes	no	2095	yes
5	M	66	14	52	no	yes	no	yes	yes	1023	yes
6	F	70	3	67	no	yes	yes	yes	no	529	no
7	M	71	5	66	no	no	yes	yes	no	310	no
8	F	67	2	65	no	yes	no	yes	no	850	no
9	M	56	4	52	no	no	yes	yes	no	120	no
10	M	60	1	59	no	yes	yes	no	no	1157	no
11	M	60	0	60	no	yes	yes	yes	no	515	no
12	F	74	4	70	no	yes	no	yes	no	350	yes
13	M	60	4	56	no	yes	yes	yes	no	1079	yes
14	M	78	NA	NA	no	yes	no	no	no	475	yes
15	M	56	NA	NA	no	yes	yes	yes	no	1170	yes
16	M	72	1	71	no	yes	no	no	no	375	no
17	M	63	13	50	yes	yes*	no	no	no	839	yes
18	M	65	1	64	no	no	yes	yes	no	120	no
19	M	69	11	58	yes	yes	yes	no	yes	1378	yes
20	F	87	NA	NA	no	yes	no	no	no	375	no
21	M	69	2	67	no	no	yes	yes	no	180	no
22	F	67	NA	NA	yes	yes*	no	no	no	2593	yes
23	F	71	NA	NA	yes	yes	no	yes	yes	726	yes
24	F	63	NA	NA	yes	yes	yes	yes	yes	2008	yes
25	F	62	NA	NA	yes	yes	yes	yes	yes	1679	yes
26	M	66	NA	NA	no	yes	no	no	no	250	no
27	M	74	4	70	yes	yes	yes	yes	yes	1014	no
28	M	55	0	55	no	yes	no	yes	no	725	yes
29	M	85	5	80	no	yes	yes	yes	no	1610	yes
30	M	74	NA	NA	no	yes	no	yes	no	1100	no
31	M	54	4	50	yes	yes	yes	yes	no	1545	no
32	M	83	NA	NA	no	yes	no	yes	no	1100	yes
33	F	70	6	64	yes	yes*	no	no	no	1242	yes
34	M	79	NA	NA	no	yes	yes	no	yes	1570	yes
35	M	67	NA	NA	no	yes	yes	yes	no	670	yes
36	F	76	NA	NA	yes	yes	no	yes	yes	1348	yes
37	M	81	2	79	no	yes	no	no	no	250	yes
38	F	70	10	60	yes	yes	yes	yes	yes	1398	yes
39	M	73	23	50	yes	yes*	no	yes	no	968	yes
40	F	80	NA	NA	no	yes	no	yes	no	600	yes
41	F	74	7	67	yes	yes	yes	no	yes	1864	no
42	F	80	1	79	no	yes	no	yes	no	850	no
43	M	75	2	73	no	yes	no	no	no	500	no
44	M	79	4	75	NA	NA	NA	NA	NA	NA	NA
45	M	78	NA	NA	NA	NA	NA	NA	NA	NA	NA
46	M	51	1	50	no	NA	NA	NA	NA	NA	NA
47	M	67	NA	NA	NA	NA	NA	NA	NA	NA	NA
48	M	54	4	50	yes	yes	yes	yes	no	1545	no
49	M	70	1	69	NA	NA	NA	NA	NA	NA	NA

(COMT = catechol O-methyl transferase; DA = dopamine agonists; F = female; LEDD = levodopa equivalent daily dose; M = male; MAOI = monoaminoxidase inhibitors; NA = not available; \* = levodopa/carbidopa intestinal gel, included in the LEDD)

**Supplementary Table S2.** Spreadsheet of the Parkinson`s disease patients included in the study - Hoehn and Yahr stage, presence of cerebrovascular disease, cognitive impairment, and serum level of uric acid

Patient no.	Hoehn and Yahr stage	Cerebrovascular disease	Cognitive impairment	Serum uric acid (3.4-7 mg/dl)
1	NA	yes	yes	6.7
2	3	NA	NA	5.2
3	2	yes	no	6.4
4	3	yes	yes	3.3
5	3	no	yes	4.6
6	3	no	no	3.9
7	1	no	no	5.7
8	2	NA	NA	5.8
9	2	no	no	5.9
10	2	no	no	6.8
11	2	NA	NA	5.9
12	2	NA	NA	3.1
13	2.5	NA	NA	4.9
14	2	yes	yes	5.1
15	2	no	no	5.9
16	NA	NA	NA	5.9
17	4	no	yes	4.1
18	2	no	no	5.9
19	2	yes	yes	5.6
20	NA	yes	no	7.5
21	2	no	no	5.8
22	4	no	yes	4
23	3	yes	yes	3.9
24	3	no	no	3.3
25	4	no	no	4.1
26	NA	no	no	4.3
27	3	no	yes	3.7
28	NA	no	no	7.3
29	2.5	NA	no	6.5
30	NA	no	no	5.7
31	2	no	no	6.9
32	3	yes	yes	4.9
33	NA	NA	yes	3.2
34	NA	no	yes	5.4
35	3	no	no	4.2
36	3	no	no	3.2
37	2	yes	yes	5.1
38	3	no	no	7.5
39	4	no	yes	3.6
40	3	yes	yes	2.7
41	4	yes	no	3.5
42	2	yes	no	3.5
43	2	yes	no	5.5
44	3	no	yes	4
45	NA	NA	NA	5.3
46	1	NA	NA	3.9
47	2	no	no	4.3
48	2	no	no	5.3
49	NA	no	NA	5.9

(NA = not available)

**Supplementary Table S3.** Results of logistic regression analysing relationship between serum uric acid and the presence or absence of motor complications and cognitive impairment

Dependent variable	Unstandardized regression weight	P value	OR	95% CI for OR	
				Lower	Upper
Motor complications	- 0.595	0.034	0.552	0.318	0.957
Cognitive impairment	- 0.617	0.028	0.539	0.310	0.957

(OR = odds ratio; CI = confidence interval)

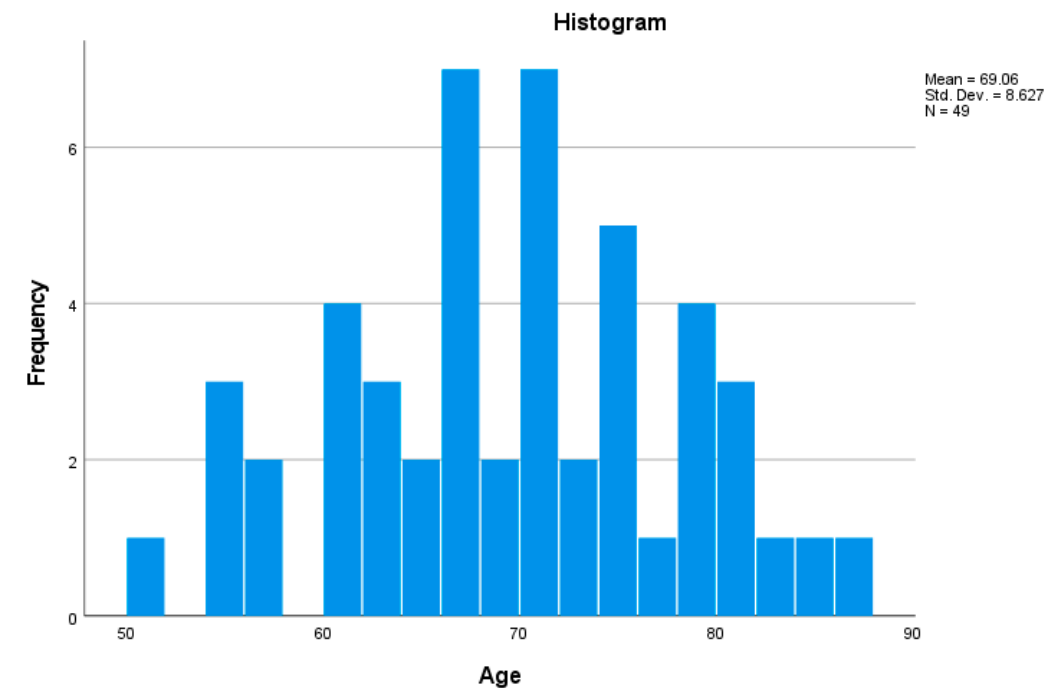
**Supplementary Table S4.** Results of the Kolmogorov-Smirnov and Shapiro-Wilk tests performed to evaluate distribution of age and serum uric acid level, in SPSS® Statistics Subscription.

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Age	.059	49	.200*	.985	49	.777
Serum UA	.115	49	.118	.962	49	.111

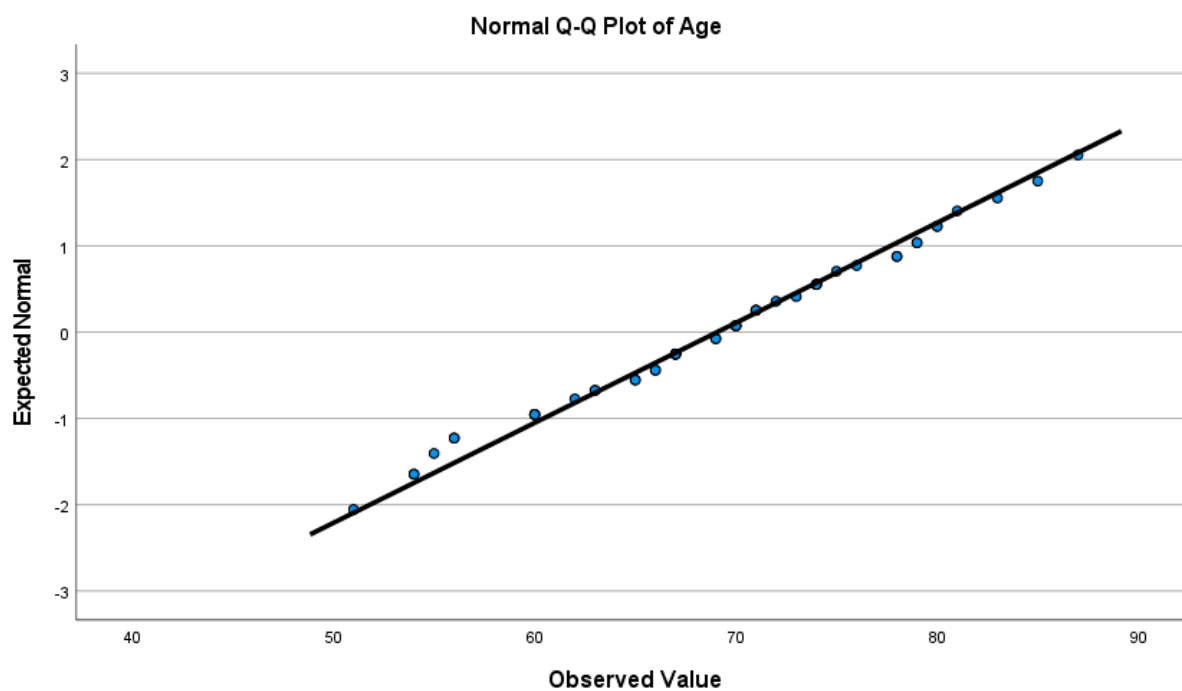
\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction; UA = uric acid

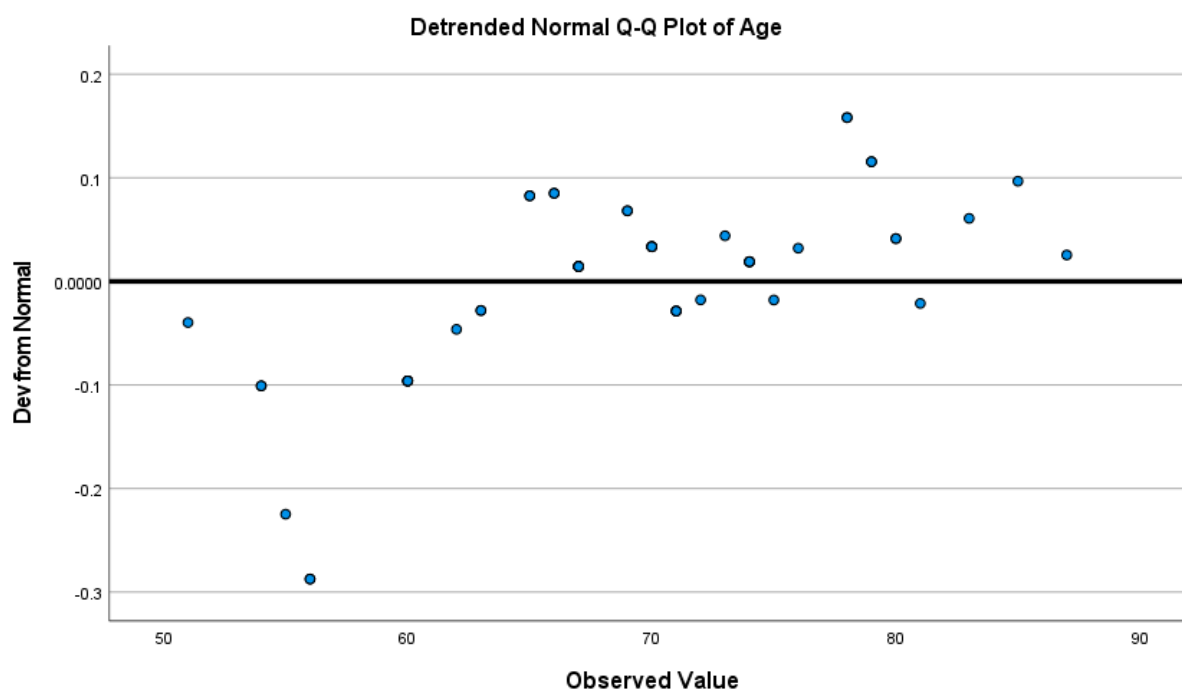
(UA = uric acid)



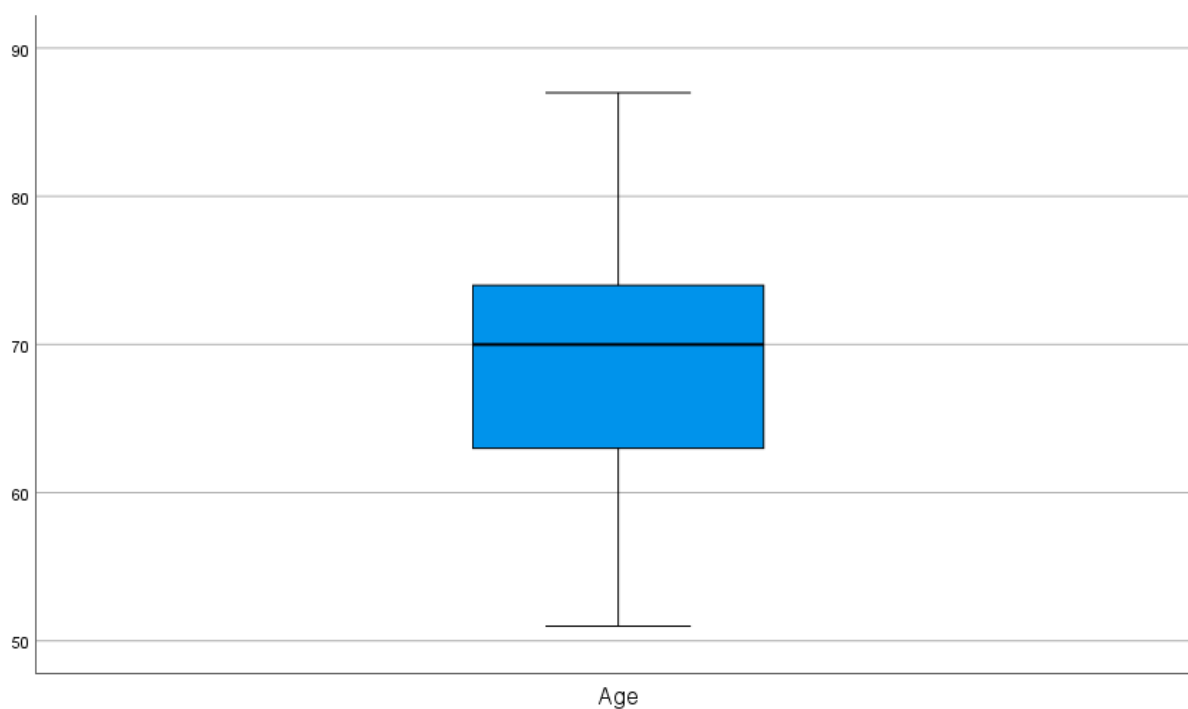
**Supplementary Figure S1.** Histogram showing normality of age for the included Parkinson’s disease patients, in SPSS® Subscription



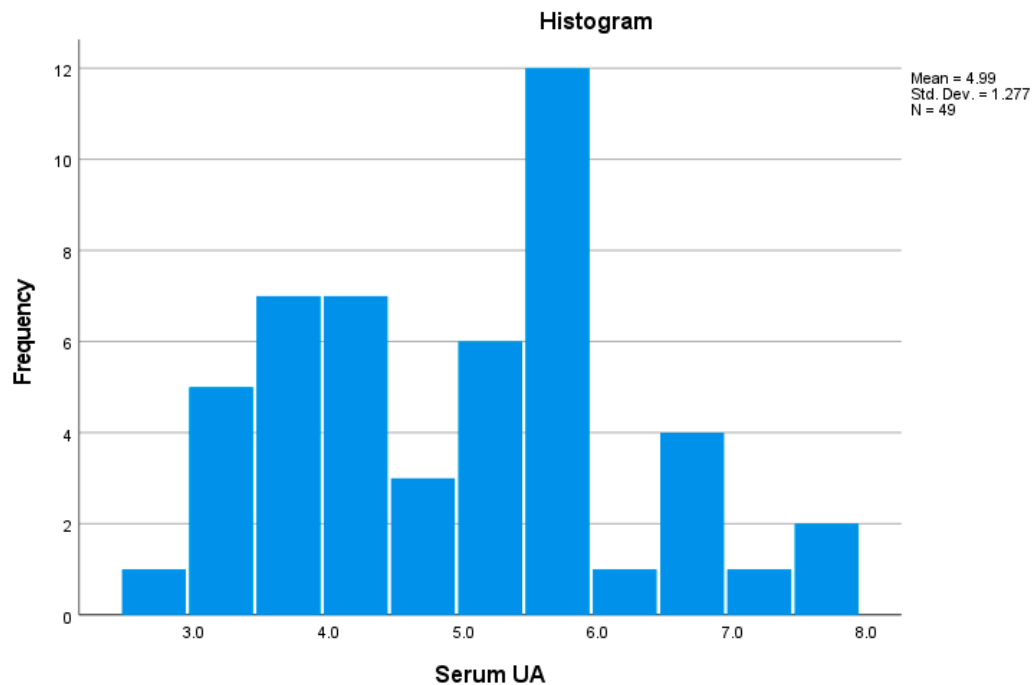
**Supplementary Figure S2.** Normal Q-Q plot showing normality of age for the included Parkinson's disease patients, in SPSS® Subscription



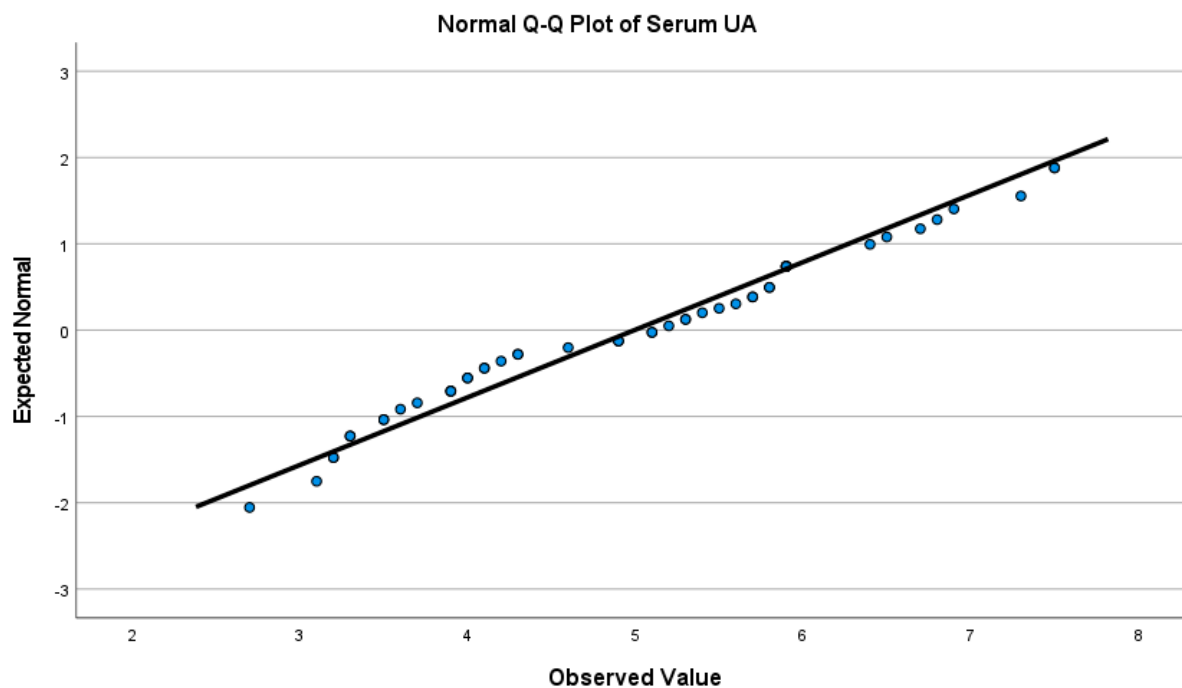
**Supplementary Figure S3.** Detrended normal Q-Q plot showing normality of age for the included Parkinson's disease patients, in SPSS® Subscription



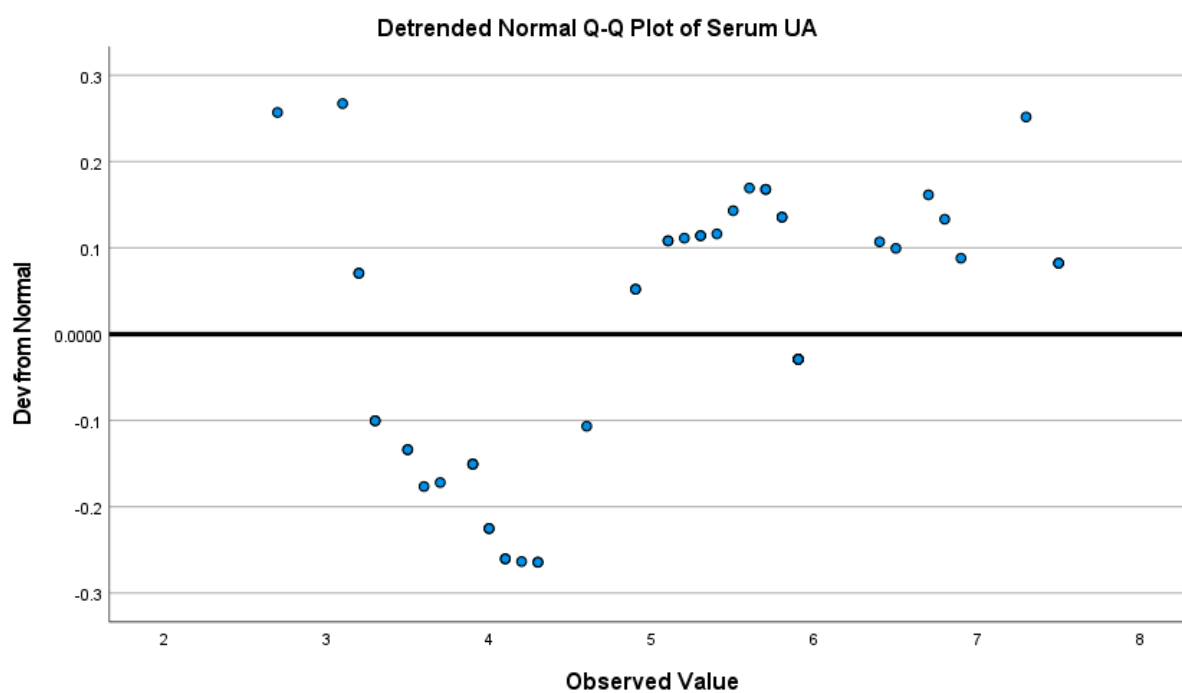
**Supplementary Figure S4.** Boxplot showing normality of age for the included Parkinson's disease patients, in SPSS® Subscription



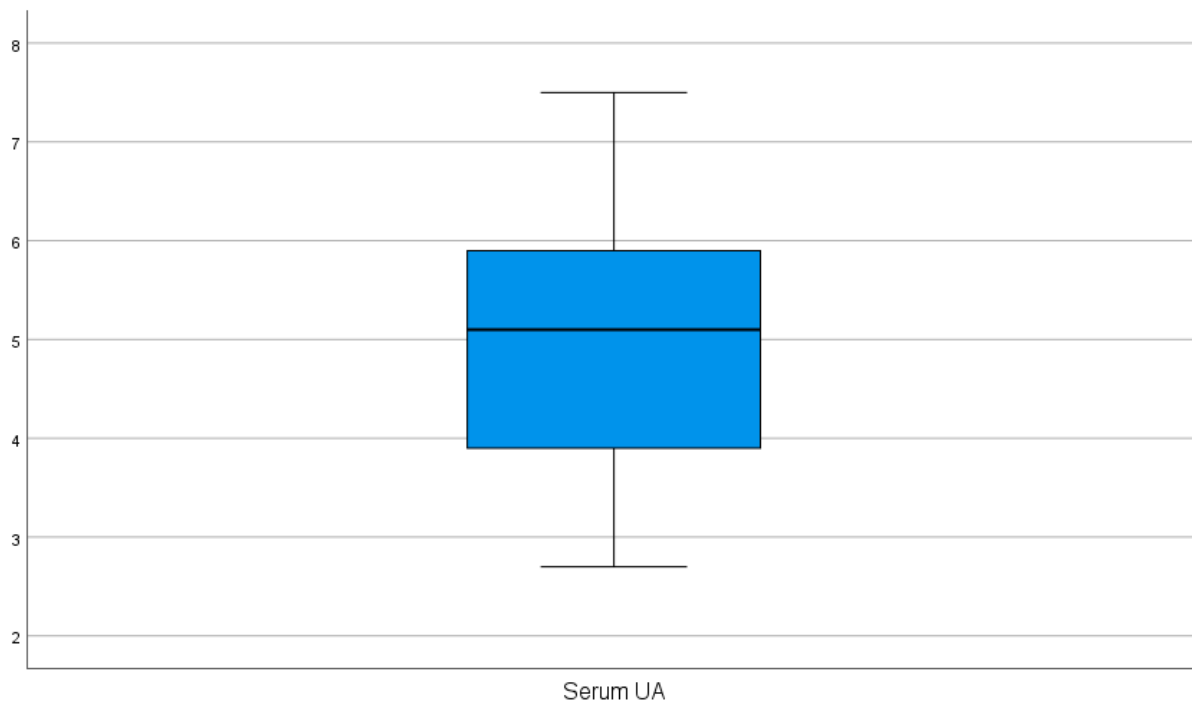
**Supplementary Figure S5.** Histogram showing normality of serum uric acid for the included Parkinson's disease patients, in SPSS® Subscription (UA = uric acid)



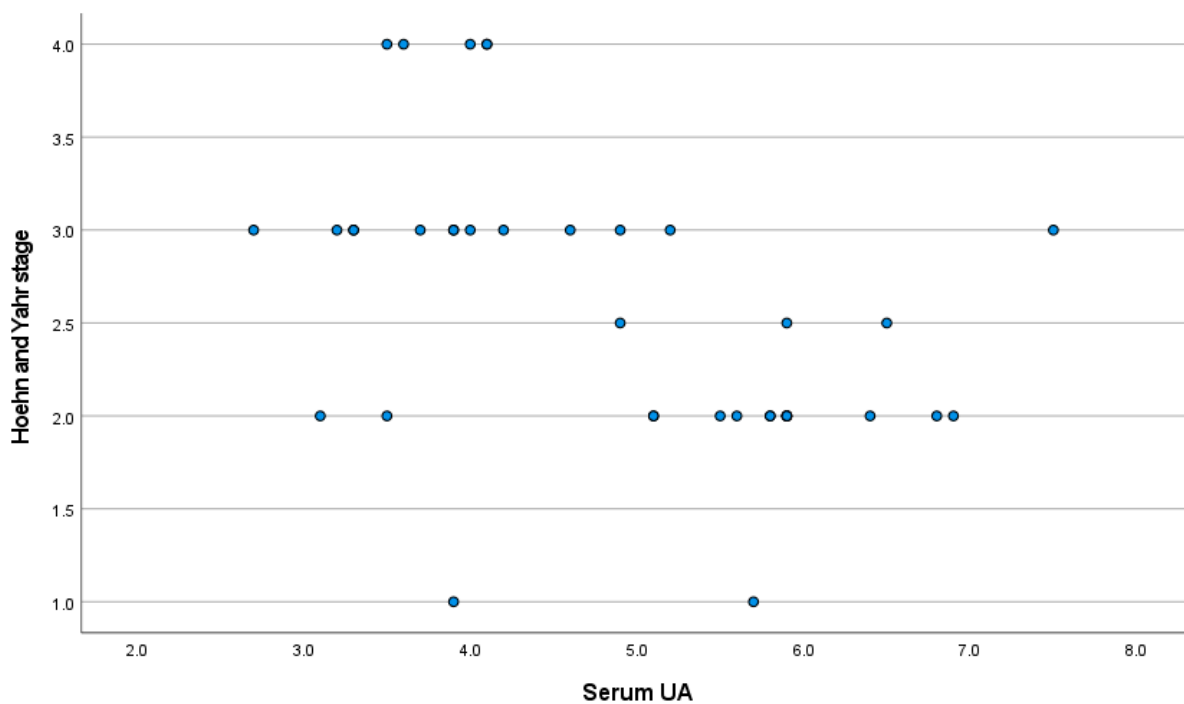
**Supplementary Figure S6.** Normal Q-Q plot showing normality of serum uric acid for the included Parkinson's disease patients, in SPSS® Subscription  
(UA = uric acid)



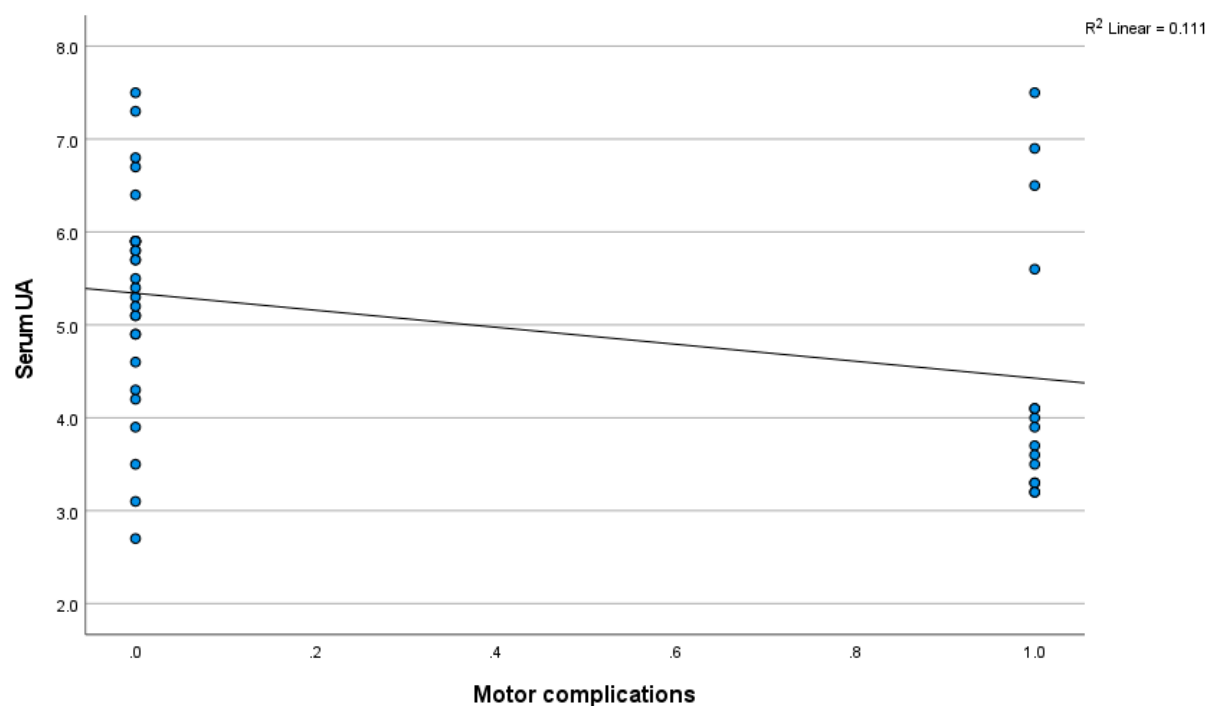
**Supplementary Figure S7.** Detrended normal Q-Q plot showing normality of serum uric acid for the included Parkinson's disease patients, in SPSS® Subscription  
(UA = uric acid)



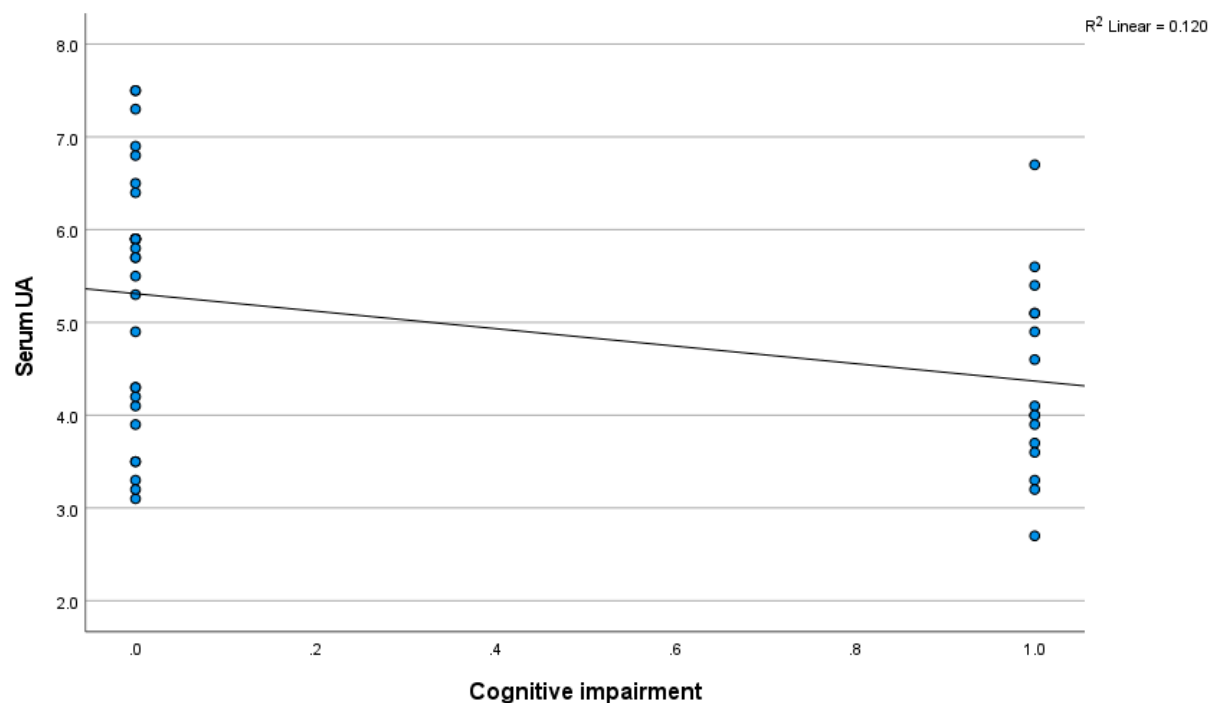
**Supplementary Figure S8.** Boxplot showing normality of age for the included Parkinson's disease patients, in SPSS® Subscription  
(UA = uric acid)



**Supplementary Figure S9.** Spearman graph showing correlation between lower level of serum uric acid and the Hoehn and Yahr stage.  
(UA = uric acid)



**Supplementary Figure S10.** Point-biserial correlation graph showing association between lower level of serum uric acid and presence of motor complications.  
(UA = uric acid)



**Supplementary Figure S11.** Point-biserial correlation graph showing association between lower level of serum uric acid and presence of cognitive impairment.  
(UA = uric acid)