

Supplementary Table 1: Change in MDS-UPDRS item score from baseline

MDS-UPDRS	n	Baseline score		Score change from baseline at week12	
		Average	SD	Average	SD
1.1 Cognitive impairment	11	0.0	0.0	0.0	0.0
1.2 Hallucinations and psychosis	11	2.7	0.5	-2.4	0.8
1.3 Depressed mood	11	1.8	1.1	-0.5	1.1
1.4 Anxious mood	11	2.5	0.5	-0.6	0.7
1.5 Apathy	11	1.8	0.6	-0.8	0.8
1.6 Features of dopamine dysregulation syndrome	11	0.0	0.0	0.0	0.0
1.7 Sleep problems	11	1.6	1.4	-0.4	1.2
1.8 Daytime sleepiness	11	1.9	1.3	-0.4	0.8
1.9 Pain and other sensations	11	1.2	0.9	0.3	1.0
1.10 Urinary problems	11	1.4	1.4	-0.2	0.6
1.11 Constipation problems	11	1.7	1.1	-0.2	0.6
1.12 Light headedness on standing	11	1.1	0.9	-0.4	0.8
1.13 Fatigue	11	1.5	0.9	-0.5	0.8
2.1 Speech	11	1.5	1.2	-0.1	0.5
2.2 Saliva and drooling	11	1.6	1.5	-0.3	1.0
2.3 Chewing and swallowing	11	0.6	1.0	0.0	0.8
2.4 Eating tasks	11	1.0	0.9	-0.1	0.3
2.5 Dressing	11	1.4	1.5	0.1	0.3
2.6 Hygiene	11	1.2	1.2	0.1	1.3
2.7 Handwriting	11	1.3	1.0	0.4	0.7
2.8 Doing hobbies and other activities	11	1.7	1.3	0.0	0.8
2.9 Turning in bed	11	0.8	1.0	0.6	1.3
2.10 Tremor	11	1.3	0.8	0.1	0.5
2.11 Getting out of bed, a car, or a deep chair	11	1.9	1.4	-0.2	0.9
2.12 Walking and balance	11	2.1	1.4	-0.3	0.6
2.13 Freezing	11	1.7	1.6	-0.2	0.6
3.1 Speech	11	0.0	0.0	0.0	0.0
3.2 Facial expression	11	1.8	0.4	-0.1	0.3
3.3 Rigidity Neck	11	1.9	0.3	-0.2	0.4
3.3 Rigidity Right upper extremity	11	0.7	0.8	-0.3	0.5
3.3 Rigidity Left upper extremity	11	1.0	0.9	-0.5	0.7
3.3 Rigidity Right lower extremity	11	1.6	0.5	0.0	0.0
3.3 Rigidity Left lower extremity	11	1.9	0.3	0.1	0.3
3.4 Finger Tapping Right	11	1.1	0.7	0.0	0.0
3.4 Finger tapping Left	11	1.5	0.5	0.0	0.0
3.5 Hand movements Right	11	1.2	0.6	0.0	0.0
3.5 Hand movements Left	11	1.5	0.5	-0.1	0.3
3.6 Pronation-supination movements of hands Right	11	1.2	0.6	0.0	0.0
3.6 Pronation-supination movements of hands Left	11	1.5	0.5	-0.1	0.3
3.7 Toe tapping Right	11	1.3	0.6	0.0	0.0
3.7 Toe tapping Left	11	1.5	0.5	0.0	0.0
3.8 Leg agility Right	11	1.3	0.6	0.0	0.0
3.8 Leg agility Left	11	1.5	0.5	0.0	0.0
3.9 Arising from chair	11	0.4	0.8	0.0	0.0
3.10 Gait	11	0.7	0.9	0.0	0.0
3.11 Freezing of gait	11	0.0	0.0	0.0	0.0
3.12 Postural stability	11	0.0	0.0	0.0	0.0
3.13 Posture	11	1.5	0.5	0.0	0.0

3.14 Global spontaneity of movement (Body bradykinesia)	11	2.0	0.0	-0.2	0.4
3.15 Postural tremor of hands Right	11	1.2	0.8	-1.0	0.8
3.15 Postural tremor of hands Left	11	1.5	0.8	-1.2	0.9
3.16 Kinetic tremor of hands Right	11	0.0	0.0	0.0	0.0
3.16 Kinetic tremor of hands Left	11	0.0	0.0	0.0	0.0
3.17 Rest tremor amplitude Right upper extremity	11	0.1	0.3	-0.1	0.3
3.17 Rest tremor amplitude Left upper extremity	11	0.5	1.0	-0.4	0.8
3.17 Rest tremor amplitude Right lower extremity	11	0.4	0.8	-0.4	0.8
3.17 Rest tremor amplitude Left lower extremity	11	0.0	0.0	0.0	0.0
3.17 Rest tremor amplitude Lip/Jaw	11	0.0	0.0	0.0	0.0
3.18 Constancy of rest tremor	11	1.0	1.2	-0.8	1.0
4.1 Time spent with dyskinesias	11	0.1	0.3	0.0	0.0
4.2 Functional impact of dyskinesias	11	0.1	0.3	0.0	0.0
4.3 Time spent in the off state	11	0.5	0.5	0.0	0.0
4.4 Functional impact of fluctuations	11	0.6	0.8	-0.2	0.4
4.5 Complexity of motor fluctuations	11	0.5	0.5	0.0	0.0
4.6 Painful off-state dystonia	11	0.0	0.0	0.0	0.0

MDS-UPDRS, Movement Disorder Society-sponsored revision of the Unified Parkinson's Disease Rating Scale; SD, standard deviation

Supplementary Table 2: Change in BDI-II item score from baseline

BDI-II	n	Baseline score		Score change from baseline at week12	
		Average	SD	Average	SD
1. Sadness	11	0.9	0.7	-0.5	0.5
2. Pessimism	11	1.0	0.9	-0.1	1.0
3. Past failure	11	0.4	0.7	0.2	1.3
4. Loss of pleasure	11	0.5	0.7	0.1	0.9
5. Guilty feelings	11	0.4	0.9	0.0	0.4
6. Punishment feelings	11	0.8	1.2	-0.5	1.5
7. Self-dislike	11	1.0	0.9	0.2	1.0
8. Self-criticalness	11	1.0	0.9	-0.3	1.1
9. Suicidal thoughts or wishes	11	0.5	0.9	-0.1	1.4
10. Crying	11	0.9	0.9	-0.4	1.2
11. Agitation	11	0.7	1.0	0.4	1.5
12. Loss of interest	11	0.7	1.0	-0.2	1.1
13. Indecisiveness	11	0.6	0.7	0.3	1.3
14. Worthlessness	11	0.7	1.0	-0.1	0.7
15. Loss of energy	11	1.0	0.6	0.3	1.0
16. Changes in sleeping pattern	11	0.7	0.9	-0.2	0.9
17. Irritability	11	0.7	1.0	-0.4	0.8
18. Changes in appetite	11	0.5	0.7	0.1	0.7
19. Concentration difficulty	11	1.0	1.0	-0.1	1.2
20. Tiredness or fatigue	11	1.0	0.9	0.2	0.8
21. Loss of interest in sex	11	0.1	0.3	-0.1	0.3

BDI-II, Beck Depression Inventory-II; SD, standard deviation

Supplementary Table 3: Change in JESS item score from baseline

JESS	n	Baseline score		Score change from baseline at week12	
		Average	SD	Average	SD
1. Sitting and Reading	11	1.2	1.1	-0.3	0.5
2. Watching TV	11	1.2	1.0	-0.1	1.1
3. Sitting inactive in a public place (i.e., a theatre)	11	1.2	1.3	-0.2	0.6
4. As a car passenger for an hour without a break	11	1.2	1.2	0.0	1.0
5. Lying down to rest in the afternoon	11	1.7	1.1	-0.5	0.9
6. Sitting and talking to someone	11	0.9	1.0	0.0	1.3
7. Sitting quietly after lunch without alcohol	11	1.6	1.0	-0.3	0.5
8. In a car, while stopping for a few minutes in traffic	11	1.1	1.1	-0.4	0.8

JESS, Japanese version of the Epworth Sleepiness Scale; SD, standard deviation

Supplementary Table 4: Change in MMSE item score from baseline

MMSE	n	Baseline score		Score change from baseline at week12	
		Average	SD	Average	SD
1. Orientation to time	11	4.6	0.5	-0.3	1.1
2. Orientation to place	11	4.8	0.6	0.1	0.7
3. Registration	11	3.0	0.0	0.0	0.0
4. Attention and calculation	11	3.6	1.3	0.2	1.7
5. Recall	11	2.4	0.5	-0.3	0.6
6. Naming	11	2.0	0.0	0.0	0.0
7. Repetition	11	1.0	0.0	0.0	0.0
8. Comprehension	11	2.8	0.6	-0.1	0.5
9. Reading	11	1.0	0.0	0.0	0.0
10. Writing	11	0.9	0.3	-0.1	0.3
11. Drawing	11	0.8	0.4	-0.1	0.3

MMSE, Mini-Mental State Examination; SD, standard deviation

Supplementary Table 5: Dose of combined medications

Combined medications, mg	Baseline			Week 12		
	n	Average	SD	n	Average	SD
L-DOPA	11	354.5	123.4	11	354.5	123.4
<b>LEDD</b>						
<b>Total</b>	11	764.9	342.1	11	585.8	288.0
<b>Dopamine agonist - cancellation</b>	5	809.7	368.9	5	595.7	370.6
<b>Dopamine agonist – dose reduction</b>	6	727.5	348.6	6	577.5	236.3
<b>Dopamine agonist</b>						
<b>Ropinirole hydrochloride</b>	7	10.0	3.8	4	7.0	2.0
<b>Cancellation</b>	3	8.0	5.3	0	-	-
<b>Dose reduction</b>	4	11.5	1.9	4	7.0	2.0
<b>Rotigotine</b>	4	22.5	9.7	3	18.0	15.6
<b>Cancellation</b>	1	18.0	-	0	-	-
<b>Dose reduction</b>	2	18.0	6.4	2	9.0	0.0
<b>Pramipexole hydrochloride hydrate</b>	1	0.5	-	0	-	-
<b>Cancellation</b>	1	0.5	-	0	-	-

<b>Dose reduction</b>	0	-	-	-	-	-
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SD, standard deviation; LEDD, levodopa equivalent daily dose