

Supplementary Table – Web only file

Author, year	Disease features included	When measured	Number of clusters sought	Subtypes identified
Graham, 1999[4]	Age at onset Disease duration Alternate finger tapping UPDRS motor UPDRS Activities of daily living Depression Cognitive battery Time to dyskinesias Time to falls Time to fluctuations	Variable	Not stated	Short duration (mean 5 years) 1: good motor control without cognitive impairment 2: good motor control, executive cognitive deficits 3: older age at onset, poor motor control + complications, mild cognitive impairment Longer duration (mean 14 years) 1: poor motor control, no cognitive impairment 2: poor motor control, moderately severe cognitive impairment
Gasparoli 2002[5]	UPDRS motor score at 5 years Dyskinesias at 5 years Motor fluctuations at 5 years	At 5 years duration	2	1. Rapid progression 2. Slow progression
Dujardin 2004[3]	-UPDRS-III score -“Interference cost” index of the Stroop word colour test -Number of different words named in the alternating word fluency test -Number of words correctly free recalled - Free and cued word list recall -Mattis Dementia Rating Scale score -Number of different words named in the semantic word fluency test	Three years post diagnosis	2, maximum not stated	1. Mild motor impairment, relatively preserved cognition 2. “Reduced overall cognitive efficiency, an exacerbated subcortical frontal syndrome and more severe motor dysfunction”

	-Delayed free recall -Ten SPECT scan regions of interest			
Lewis 2005[6]	Age at onset Levodopa dose >1gm or <1gm per day Motor phenotype score (Tremor score/non-tremor UPDRS score) Mini Mental State Examination National Adult Reading Test Pattern recognition memory Tower of London Beck Depression Inventory Total UPDRS/disease duration	Variable	2-5	1. Young onset 2. Non-tremor dominant, with cognitive impairment and depression 3. Rapid progression without cognitive impairment 4. Tremor dominant
Schrag 2006[7]	Age at onset Age Dementia Fluctuations Dyskinesias Hoehn and Yahr score per year	Variable	2-5	1. Young onset 2. Older onset, more rapid progression, less dyskinesias and fluctuations
Post 2008[8]	Age Age of onset Levodopa responsive UPDRS item sum Levodopa poorly responsive UPDRS item sum Anxiety and depressive symptoms (HADS) Mini Mental State Examination UPDRS motor score/disease duration	Newly diagnosed	2 and 3	1. Young onset with slow progression 2. Intermediate age onset with anxiety and depression 3. Oldest onset
Reijnders 2009[9]	UPDRS tremor score UPDRS bradykinesia/rigidity score	Variable	2-5	1. Rapid progression 2. Young onset with motor complications

	<p>UPDRS PIGD score</p> <p>Motor complications: UPDRS part IV</p> <p>Age at onset</p> <p>Mini Mental State Examination</p> <p>Depressive symptoms (MADRS)</p> <p>Apathy (UPDRS item 4)</p> <p>Hallucinations (UPDRS item 2)</p> <p>UPDRS total/disease duration</p>			<p>3. Non-tremor dominant and psychopathology</p> <p>4. Tremor dominant</p>
<p>Van Rooden 2011[10]</p>	<p>Tremor</p> <p>Bradykinesia/rigidity</p> <p>On freezing, speech, swallowing</p> <p>Postural Instability Gait Disorder</p> <p>Cognitive impairment (SCOPA-Cog)</p> <p>Psychotic symptoms</p> <p>Autonomic dysfunction (SCOPA-AUT)</p> <p>Depressive symptoms (HADS)</p> <p>Daytime sleepiness (SCOPA-SLEEP)</p> <p>Sleep dysfunction (SCOPA-SLEEP)</p> <p>Motor fluctuations</p> <p>Dyskinesias</p>	<p>Variable (adjusted for disease duration)</p>	<p>Not stated</p>	<p>1: Mild all domains, young</p> <p>2. Severe motor complications, sleep and depressive symptoms, youngest</p> <p>3. Medium severity, older</p> <p>4. Most severe, except mild tremor, prominent motor complications, older.</p>
<p>Liu 2011[11]</p>	<p>Age</p> <p>Age at onset</p> <p>Disease duration</p> <p>Hoehn and Yahr stage</p> <p>Tremor (UPDRS)</p> <p>Rigidity (UPDRS)</p> <p>Bradykinesia (UPDRS)</p> <p>PIGD score</p>	<p>Variable</p>	<p>3-5</p>	<p>1. Non-tremor dominant</p> <p>2. Rapid disease progression</p> <p>3. Young onset</p> <p>4. Tremor dominant</p>

	Ratio of tremor to non-tremor score (UPDRS) Mini Mental State Examination Depressive symptoms (HAM-D) Sleep quality (PSQI) Constipation Fatigue severity scale score Motor complications (UPDRS IV) UPDRS total/disease duration UPDRS motor/disease duration UPDRS ADL/disease duration			
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