

	PATIENT	TOTAL UPDRS III SCORE	YEARS SINCE DIAGNOSIS	GENDE R	AGE	DIAGNOS IS	TARGET
1	'bG02UC'	32	7	M	63	PD	Gpi
2	'bG03UC'	-	14	F	78	PD	Gpi
3	'bG03UT'	26	5	M	42	PD	GPI
4	'bG06UC'	16	8	M	65	PD	Gpi
5	'bG07UC'	35	9	M	66	PD	Gpi
6	'bG07UT'	53	2	M	68	PD	GPI
7	'bG08UT'	17	6	M	64	PD	GPI
8	'bG09UC'	48	17	M	63	PD	Gpi
9	'bG09UT'	33	8	F	60	PD	GPI
0	'bG10UC'	31	5	M	72	PD	Gpi
1	'bG10UT'	17	9	F	71	PD	GPI
2	'bG11UT'	-	2	M	53	PD	GPI
3	'bG12UC'	29	4	F	76	PD	Gpi
4	'bG12UT'	36	7	M	71	PD	GPI
5	'bG13UC'	27	9	M	59	PD	Gpi
6	'bG13UT'	34	10	M	68	PD	GPI
7	'bG14UT'	35	1	M	59	PD	GPI
8	'bG15UT'	35	2	M	74	PD	GPI
9	'bG16UT'	48	10	M	66	PD	GPI
0	'bG17UC'	43	11	M	72	PD	Gpi
1	'bG17UT'	52	9	F	70	PD	GPI
2	'bG18UC'	39	21	F	67	PD	Gpi
3	'bG18UT'	62	8	M	67	PD	GPI
4	'bG19UC'	74	15	M	58	PD	Gpi
5	'bG20UC'	33	7	M	60	PD	Gpi
6	'bG20UT'	44	6	M	78	PD	GPI
7	'bG21UC'	53	7	M	52	PD	Gpi
8	'bG22UC'	18	5	M	57	PD	Gpi
9	'bG24UC'	22	5	M	60	PD	Gpi
0	'bG25UC'	40	12	M	70	PD	Gpi
1	'bG26UC'	48	19	M	69	PD	Gpi
2	'bG27UC'	30	7	F	61	PD	Gpi
3	'bG28UC'	38	6	M	61	PD	Gpi
4	'bG29UC'	69	12	F	73	PD	Gpi
5	'bG30UC'	51	11	F	57	PD	Gpi
6	'bG38UC'	34	8	F	64	PD	Gpi
7	'bG63UC'	32	10	M	68	PD	Gpi
8	'bG70UC'	-	14	M	57	PD	GPI
9	'bG71UC'	28	6	M	71	PD	GPI
0	'bG72UC'	28	16	M	80	PD	GPI
1	'bS02UC'	26	8	M	66	PD	STN
2	'bS02UT'	23	12	M	73	PD	STN

3	'bS03UT'	18	1	F	59	PD	STN
4	'bS06UT'	43	2	F	68	PD	STN
5	'bS07UT'	52	9	F	68	PD	STN
6	'bS08UT'	43	9	F	59	PD	STN
7	'bS09UT'	-	4	M	43	PD	STN
8	'bS10UT'	-	1	F	66	PD	STN
9	'bS11UT'	12	4	M	58	PD	STN
0	'bS12UT'	-	0	F	67	PD	STN
1	'bS13UT'	48	0	M	64	PD	STN
2	'bS14UT'	54	8	M	66	PD	STN
3	'bS15UT'	44	8	M	63	PD	STN
4	'bS16UT'	42	3	F	64	PD	STN
5	'bS17UT'	105	10	M	64	PD	STN
6	'bS18UC'	31	5	M	61	PD	STN
7	'bS18UT'	46	2	M	53	PD	STN
8	'bS19UC'	71	16	F	59	PD	STN
9	'bS19UT'	40	4	M	78	PD	STN
0	'bS20UC'	18	11	M	68	PD	STN
1	'bS20UT'	26	5	M	52	PD	STN
2	'bS21UT'	49	9	M	63	PD	STN
3	'bS22UT'	58	10	M	76	PD	STN
4	'lG01UT'	42	8	F	76	PD	GpI
5	'lG02UT'	70	1	M	66	PD	GpI
6	'lG04UT'	28	4	M	72	PD	Gpi
7	'lS01UT'	-	5	M	66	PD	STN
8	'lS02UT'	48	5	M	76	PD	STN
9	'rG01UC'	NA	NA	M	61	PD	Gpi
0	'rG02UT'	NA	NA	M	66	PD	GpI
1	'rG03UT'	NA	NA	M	72	PD	Gpi
2	'rS01UT'	NA	NA	M	64	PD	STN
3	'rS02UT'	NA	NA	F	60	PD	STN
4	'rS03UT'	NA	NA	M	74	PD	STN
5	'rS04UT'	NA	NA	M	51	PD	STN
6	'rT01UT'	NA	NA	F	82	ET	ViM
7	'rT02UT'	NA	NA	M	70	ET	ViM
8	'bT01UT'	NA	NA	F	38	ET	ViM
9	'bT02UT'	NA	NA	M	69	ET	ViM
0	'bT03UT'	NA	NA	F	62	ET	ViM
1	'bT04UT'	NA	NA	F	62	ET	ViM
2	'bT05UT'	NA	NA	F	67	ET	ViM
3	'bT06UT'	NA	NA	M	67	ET	ViM
4	'bT07UT'	NA	NA	M	82	ET	ViM
5	'bT08UT'	NA	NA	F	67	ET	ViM
6	'bT09UT'	NA	NA	M	71	ET	ViM

7	'bT10UT'	NA	NA	M	40	ET	ViM
8	'bT11UT'	NA	NA	M	65	ET	ViM
9	'bT12UT'	NA	NA	F	64	ET	ViM
0	'IT01UT'	NA	NA	M	65	ET	ViM
1	'IT02UT'	NA	NA	M	74	ET	ViM
2	'IT03UT'	NA	NA	F	73	ET	ViM

Table 1

	Physiology Exp var	UPDRS exp var	Number of Sig LV
Power ECoG top 20% variance	73	38	5
Power ECoG bottom 20%variance	0	0	0
Power Lead GPi top 20% variance	49	26	4
Power Lead GPi bottom 20% variance	21	4	1
Power Lead STN top 20% variance	0	0	0
Power Lead STN bottom 20% variance	0	0	0
Coherence ECoG GPi top 20% variance	51	63	7
Coherence ECoG GPi bottom 20%variance	0	0	0
Coherence ECoG STN top 20% variance	0	0	0
Coherence ECoG STN bottom 20%variance	0	0	0
Coherence Lead G Pi top 20% variance	85	70	9
Coherence Lead G Pi bottom 20%variance	37	29	2
Coherence Lead S TN top 20% variance	19	34	4
Coherence Lead S TN bottom 20%variance	0	0	0

Table 2.

	ECoG power	ECoG power	GPI Power	GPI Power	STN Power	STN Power	ECoG GPI Coh2	ECoG STN Coh	Lead GPI Coh	Lead STN Coh
Number of clusters	9	2	8	2	6	6	2	2	2	2
MANOVA p-value	$2.8 * 10^{-5}$	0.778	0.015	0.047	$5.3 * 10^{-25}$	0.340	0.040	0.096	0.210	0.557
BH-corrected p-value	0.0001	0.778	0.050	0.094	0.0000	0.425	0.094	0.159	0.300	0.619

Table 3.

	ECoG power	ECoG power	GPI Power	GPI Power	STN Power	STN Power	ECoG GPI Coh	ECoG STN Coh	Lead GPI Coh	Lead STN Coh
Number of clusters	9	2	8	2	6	2	2	2	2	2
Years Since Diagnosis	0.756	0.925	0.679	0.820	0.660	0.489	0.040	0.328	0.059	0.945
age	0.461	0.794	0.555	0.707	0.477	0.764	0.350	0.273	0.185	0.782
Total Score	0.301	0.791	0.060	0.151	0.612	0.403	0.517	0.815	0.612	0.050
Ipsi Brady	0.167	0.891	0.973	0.375	0.618	0.608	0.964	0.608	0.377	0.492
Ipsi Rigidity	0.056	0.838	0.874	0.884	0.243	0.318	0.982	0.377	0.243	0.563
Ipsi Tremor	0.057	0.824	0.193	0.439	0.542	0.873	0.592	0.784	0.458	0.910
Cont Brady	0.413	0.912	0.996	0.218	0.596	0.625	0.591	0.807	0.683	0.860
Cont Rigidity	0.403	0.620	0.900	0.353	0.020	1.000	0.752	0.981	0.115	0.816
Cont Tremor	0.309	0.668	0.065	0.722	0.505	0.092	0.853	0.186	0.320	0.181

Table 4.

	ECoG power	GPI Power	STN Power	ECoG GPI Coh	ECoG STN Coh	Lead GPI Coh	Lead STN Coh
Years Since Diagnosis	1%	1%	0%	11%	3%	25%	3%
age	19%	0%	2%	4%	1%	18%	3%
Total Score	1%	34%	72%	1%	24%	4%	34%
Ipsi Brady	6%	0%	0%	6%	4%	8%	9%
Ipsi Rigidity	6%	0%	9%	3%	7%	4%	9%
Ipsi Tremor	10%	6%	4%	2%	4%	5%	0%
Cont Brady	1%	6%	1%	5%	1%	3%	5%
Cont Rigidity	1%	0%	3%	16%	7%	22%	6%
Cont Tremor	13%	5%	11%	1%	11%	3%	5%
MANOVA	62%	67%	97%	80%	78%	90%	85%

Table 5.