

**SUPPLEMENTARY MATERIAL**

**A. Specification of contact balance (CB)**

1. Matrix of CB according to the longitudinal position (longitudinal CB): symmetric (blue square) and asymmetric (yellow diamond); posterior (post, gray case) and non-posterior (non-post, white case).

position	ant	in-between	interant	in-between	interpost	in-between	post
ant	□	□	□	◇	◇	◇	◇
in-between	□	□	□	□	□	◇	◇
interant	□	□	□	□	□	◇	◇
in-between	□	□	□	□	□	□	□
interpost	◇	□	□	□	□	□	□
in-between	◇	◇	□	□	□	□	□
post	◇	◇	◇	◇	□	□	□

2. Matrix of CB according to the transversal position (transversal CB): symmetric (blue circle) and asymmetric (yellow triangle); superolateral (gray case) and non-superolateral (white case).

position	in-between	suplat	in-between	supmad	in-between	inmed	in-between	inflat
in-between	○	○	△	△	△	△	△	○
suplat	○	○	○	△	△	△	△	△
in-between	△	○	○	○	△	△	△	△
supmad	△	△	○	○	○	△	△	△
in-between	△	△	△	○	○	○	△	△
inmed	△	△	△	△	○	○	○	△
in-between	△	△	△	△	△	○	○	○
inflat	○	△	△	△	△	△	○	○

**B. Table of patient CB.** Baseline and 1 year characteristics of patients according to patient CB (sym-p, asym-p; n, collected data out of 92; values  $\pm$  standard error); p values of differences (significant, bold italic) between settings ( $\Delta$  pat\_CB); 1 year versus baseline ( $\Delta$  P#postpre); dopa effect, at baseline and 1 year, and baseline\_dopa effect – 1 year\_dopa-effect<sup>(a)</sup>; at 1 year, stim effect and dopa effect – stim effect<sup>(b)</sup>.

characteristics	baseline					1 year									
	sym-p		asym-p		$\Delta$ pat_CB p value	sym-p		asym-p		$\Delta$ pat_CB p value	$\Delta$ P#postpre p value	$\Delta$ #sym-p p value (n)	$\Delta$ #asym-p p value (n)		
	mean $\pm$ SD	n	mean $\pm$ SD	n		mean $\pm$ SD	n	mean $\pm$ SD	n						
age (y)	61.0206 $\pm$ 6.9763	64	60.4951 $\pm$ 6.6883	28	0.659										
gender (female)	28	64	14	28	0.371										
disease duration (y; quartile)	10.3968 $\pm$ 3.5855	63	10.6071 $\pm$ 4.3575	28	0.8329										
LED (mg)	1280.79 $\pm$ 473.8679	62	1104.5 $\pm$ 482.4856	25	0.1622	<b>1124.281<math>\pm</math>545.4029</b>	56	<b>835.625<math>\pm</math>479.0521</b>	24	<b>0.0195</b>	0.4601	<b>0.0242 (55)</b>	<b>0.0015 (22)</b>		
stimulation voltage (V)	left right		n.a.			2.9428 $\pm$ 1.0062	63	2.6846 $\pm$ 0.7867	26	0.202		n.a.			
Hoehn & Yahr score	on-period off-period	1.7627 $\pm$ 0.8776 2.2704 $\pm$ 0.7335	59 61	1.8541 $\pm$ 0.9146 2.6 $\pm$ 0.75	24 25	0.9534	<b>2.0784<math>\pm</math>0.8023</b>	51	2.2727 $\pm$ 0.6310 2.5681 $\pm$ 0.7447	22 22	0.4560 0.6777	0.8447 0.4337	<b>0.0118 (47)</b> 0.1363 (52)	0.0580 (19) 0.7389 (21)	
ADLs (UPDRS II)	on-period off-period	4.7719 $\pm$ 4.2521 16.3620 $\pm$ 5.4304	57 58	4.4565 $\pm$ 3.4703 16.3695 $\pm$ 6.0456	23 23	0.9234	<b>10<math>\pm</math>5.7560</b>	50	<b>9.305<math>\pm</math>5.1669</b>	20	0.8656 0.7156	0.7979 0.4629	<b>&lt;0.0001 (48)</b> 0.4583 (47)	<b>&lt;0.0001 (20)</b> 0.6268 (20)	
UPDRS II-5 speech	on-period off-period	0.4126 $\pm$ 0.7542 1.0476 $\pm$ 0.9743	63 63	0.5357 $\pm$ 0.7444 1.2962 $\pm$ 0.9120	28 27	0.3274 0.2155	<b>1.4649<math>\pm</math>1.1013</b> <b>1.8392<math>\pm</math>1.0184</b>	57 56	<b>1.5208<math>\pm</math>1.0982</b> <b>1.7708<math>\pm</math>1.0630</b>	24 24	0.8144 0.7152	0.8446 0.4315	<b>&lt;0.0001 (56)</b> <b>&lt;0.0001 (55)</b>	<b>0.0001 (24)</b> <b>0.0328 (23)</b>	
UPDRS II-14 stamping	on-period off-period	0.1810 $\pm$ 0.4654 1.0862 $\pm$ 1.1740	58 58	0.2 $\pm$ 0.5 0.92 $\pm$ 1.2556	25 25	0.9311 0.4056	<b>0.5<math>\pm</math>0.7549</b> <b>1.8392<math>\pm</math>1.0184</b>	51 50	<b>0.3636<math>\pm</math>0.7895</b> 1.2045 $\pm$ 1.2785	22 22	0.2836 0.7152	0.4290 0.4342	<b>0.0006 (49)</b> 0.8285 (48)	<b>0.0457 (49)</b> 0.2100 (21)	
UPDRS IV-dyskinesia A32 (%)		1.7177 $\pm$ 0.1087	62	1.8571 $\pm$ 0.1040	28	0.4487	<b>0.2807<math>\pm</math>0.7008</b>	57	<b>0.0833<math>\pm</math>0.2823</b>	24	0.2058	0.4566	<b>&lt;0.0001 (55)</b>	<b>&lt;0.0001 (24)</b>	
UPDRS IV-dyskinesia A33 (disability)		1.7983 $\pm$ 1.1923	62	1.3928 $\pm$ 0.9164	28	0.0656	<b>0.1578<math>\pm</math>0.5602</b>	57	<b>0.0833<math>\pm</math>0.2823</b>	24	0.8988	0.0483	<b>&lt;0.0001 (55)</b>	<b>&lt;0.0001 (24)</b>	
UPDRS IV-fluctuations B39 (%off)		1.6031 $\pm$ 0.7304	63	1.5892 $\pm$ 0.5279	28	0.7052	<b>1.0701<math>\pm</math>0.6508</b>	57	<b>1<math>\pm</math>0.6593</b>	24	0.6087	0.5857	<b>0.0002 (56)</b>	<b>0.0022 (24)</b>	
PDQ-39	mobility 1–10 activities of daily living 11–16 emotional well-being 17–22 stigma-depression 23–26 social support 27–29 cognition 30–33 communication 34–36 bodily discomfort 37–39	19.0212 $\pm$ 8.6035 10.0638 $\pm$ 4.8651 8.8095 $\pm$ 4.9742 6.1521 $\pm$ 3.5211 2.0227 $\pm$ 2.4730 5.2127 $\pm$ 2.5532 3.1363 $\pm$ 2.1630 5.8181 $\pm$ 2.7132	47 47 42 46 44 47 44 44	16.1666 $\pm$ 9.1588 9.2608 $\pm$ 4.3507 9 $\pm$ 5.0615 6.7083 $\pm$ 3.4068 3.2380 $\pm$ 2.9984 3.625 $\pm$ 2.8408 4.0869 $\pm$ 2.0430 5.6521 $\pm$ 3.4851	24 23 22 24 21 24 23 23	0.2189 0.5723 0.8261 0.5259 0.1401 0.0130 0.1006 0.9363	15.2 $\pm$ 8.1486 7.2352 $\pm$ 3.6850 <b>7.3437<math>\pm</math>4.3150</b> <b>3.9142<math>\pm</math>3.5427</b> 1.7410 $\pm$ 2.1903 <b>4.8055<math>\pm</math>2.4473</b> <b>4.6111<math>\pm</math>2.4293</b> <b>4.7714<math>\pm</math>2.5905</b>	35 34 32 35 31 36 36 35	16.75 $\pm$ 10.8135 8.5384 $\pm$ 5.5470 7.8333 $\pm$ 4.9512 5.2307 $\pm$ 3.3703 2.1818 $\pm$ 2.4007 <b>2.7692<math>\pm</math>2.3149</b> 3.3076 $\pm$ 2.6890 4.3846 $\pm$ 3.5009	12 13 12 13 11 13 13 13	0.9028 0.5193 0.7607 0.5338 0.5319 <b>0.0147</b> 0.1438 0.6651	0.3317 0.3807 0.9842 0.5338 0.3398 0.5308 <b>0.0354</b> 0.6788	0.1353 (29) 0.0646 (28) <b>0.0325 (23)</b> <b>0.0154 (28)</b> 0.6013 (27) 0.4352 (29) <b>0.0097 (27)</b> <b>0.0104 (27)</b>	0.9645 (11) 0.8932 (11) 0.2396 (10) 0.3653 (12) 0.2540 (9) 0.2153 (12) 0.5367 (12) 0.0575 (12)	
UPDRS III total	DOPA-OFF DOPA-ON dopa effect DOPA-OFF STIM-OFF DOPA-ON STIM-OFF dopa effect (%) <sup>a</sup> DOPA-OFF STIM-ON stim effect (%) <sup>b</sup> DOPA-ON STIM-ON overall effect (%)	30.2578 $\pm$ 8.10492 9.5873 $\pm$ 5.5529 69.1111 $\pm$ 11.7564	64 63 63	35.1481 $\pm$ 11.7790 9.6428 $\pm$ 6.2743 72.2451 $\pm$ 13.9569	27 28 27	0.0894 0.8938 0.1500	<b>36.8125<math>\pm</math>14.7189</b> <b>15<math>\pm</math>9.7277</b> <b>58.6987<math>\pm</math>18.1604</b> 22.8015 $\pm$ 11.4994 <b>38.1385<math>\pm</math>17.259</b> 14.2572 $\pm$ 8.5794 61.6504 $\pm$ 14.5691	64 40 40 63 25 59 59	<b>40.76<math>\pm</math>10.6606</b> <b>16.625<math>\pm</math>10.2865</b> <b>61.1078<math>\pm</math>19.6862</b> 24.6 $\pm$ 8.2701 <b>39.1034<math>\pm</math>15.6238</b> 14.6521 $\pm$ 7.2259 64.1182 $\pm$ 14.7928	25 20 20 25 25 23 23	0.1012 0.6434 0.6663 0.2569 0.4906 0.7100 0.6312	0.5148 0.4092 0.9274 n.a. 0.7657 n.a. n.a.	<b>&lt;0.0001 (64)</b> <b>&lt;0.0001 (39)</b> <b>0.0008 (20)</b> n.a. <b>&lt;0.0001 (40)</b> n.a. n.a.	<b>0.0223 (241)</b> <b>0.0016 (19)</b> <b>0.0096 (19)</b> n.a. <b>0.0019 (20)</b> n.a. n.a.	
III-18 speech	DOPA-OFF DOPA-ON dopa effect DOPA-OFF STIM-OFF DOPA-ON STIM-OFF dopa effect (%) <sup>a</sup> DOPA-OFF STIM-ON stim effect (%) <sup>b</sup> DOPA-ON STIM-ON overall effect (%)	0.8281 $\pm$ 0.6797 0.5238 $\pm$ 0.6685 40.5303 $\pm$ 52.0134	64 63 44	0.7142 $\pm$ 0.6586 0.4821 $\pm$ 0.5689 26.4705 $\pm$ 53.3785	28 28 17	0.4738 0.9650 0.4058	<b>1.2656<math>\pm</math>0.8862</b> <b>1.0731<math>\pm</math>0.7463</b> <b>10.4166<math>\pm</math>3.81296</b> 1.3281 $\pm$ 0.9310 <b>-2.2435<math>\pm</math>3.80672</b> 1.2542 $\pm$ 0.8875 6.6666 $\pm$ 4.02303	64 41 36 64 52 59 50	<b>1.5<math>\pm</math>0.8485</b> <b>1.4<math>\pm</math>1.0462</b> 9.2592 $\pm$ 4.4098 1.6538 $\pm$ 0.9139 <b>-13.1944<math>\pm</math>31.7482</b> 1.6666 $\pm$ 0.8805 -9.7826 $\pm$ 42.7622	26 20 18 26 24 23 23	0.2688 0.3088 0.8262 0.1116 0.2242 0.0647 0.1206	0.1478 0.2400 0.8042 n.a. 0.0334 (36) n.a. n.a.	<b>0.0003 (64)</b> <b>&lt;0.0001 (40)</b> <b>0.0302 (23)</b> n.a. <b>0.0334 (36)</b> n.a. n.a.	<b>0.0001 (26)</b> <b>0.0001 (20)</b> 0.1127 (11) n.a. <b>0.0410 (18)</b> n.a. n.a.	
III-28 posture	DOPA-OFF DOPA-ON dopa effect DOPA-OFF STIM-OFF DOPA-ON STIM-OFF dopa effect (%) <sup>a</sup> DOPA-OFF STIM-ON stim effect (%) <sup>b</sup> DOPA-ON STIM-ON overall effect (%)	1.4062 $\pm$ 0.9589 0.7777 $\pm$ 0.7058 43.8580 $\pm$ 40.6496	64 63 54	1.3214 $\pm$ 0.8629 0.6964 $\pm$ 0.8315 53.125 $\pm$ 47.0643	28 28 24	0.7272 0.4701 0.3935	1.4921 $\pm$ 0.9150 0.9878 $\pm$ 0.9778 30.9803 $\pm$ 40.4064 1.375 $\pm$ 0.9385 <b>9.6066<math>\pm</math>25.2985</b> 1.0677 $\pm$ 0.9212 28.9 $\pm$ 37.8228	64 41 34 64 55 59 50	1.5576 $\pm$ 1.1164 <b>1.025<math>\pm</math>1.0572</b> 35.1851 $\pm$ 44.6075 1.4423 $\pm$ 1.0800 <b>6.0606<math>\pm</math>15.8910</b> 0.9791 $\pm$ 0.9833 35.7142 $\pm$ 42.5851	26 20 18 26 22 24 21	0.9480 0.9934 0.8309 0.9931 0.7409 0.5689 0.5786	0.3530 0.2427 0.4628 n.a. 0.3973 n.a. n.a.	0.6341 (64) 0.1932 (40) 0.3719 (28) n.a. <b>0.0016 (34)</b> n.a. n.a.	0.1668 (26) <b>0.0117 (20)</b> 0.0962 (17) n.a. <b>0.0086 (18)</b> n.a. n.a.	
III-29 postural stability	DOPA-OFF DOPA-ON dopa effect DOPA-OFF STIM-OFF DOPA-ON STIM-OFF dopa effect (%) <sup>a</sup> DOPA-OFF STIM-ON stim effect (%) <sup>b</sup> DOPA-ON STIM-ON overall effect (%)	0.6953 $\pm$ 0.7216 0.3571 $\pm$ 0.5034 47.5877 $\pm$ 51.0736	64 63 38	1.0178 $\pm$ 1.0044 0.3214 $\pm$ 0.4557 71.25 $\pm$ 37.8009	28 28 20	0.1481 0.8176 0.0926	<b>1.1562<math>\pm</math>1.0034</b> 0.5 $\pm$ 0.6020 <b>51.3440<math>\pm</math>43.2529</b> 0.8828 $\pm$ 0.7854 <b>22.0486<math>\pm</math>32.774</b> 0.5593 $\pm$ 0.6234 44.7674 $\pm$ 46.6830	64 41 31 64 48 59 43	1.0384 $\pm$ 0.8593 <b>0.75<math>\pm</math>0.8350</b> <b>45.3703<math>\pm</math>47.0730</b> 0.8076 $\pm$ 0.7358 <b>23.3333<math>\pm</math>37.2285</b> 0.6875 $\pm$ 0.8184 43.3333 $\pm$ 51.1276	26 20 18 26 20 24 20	0.6709 0.3231 0.5976 0.7228 0.9017 0.6744 0.8230	0.0408 <b>0.0407</b> <b>0.0321</b> n.a. 0.4100 n.a. n.a.	<b>0.0002 (64)</b> 0.3758 (40) <b>0.0088 (20)</b> n.a. <b>0.0006 (31)</b> <b>0.0258 (18)</b> n.a.	0.8716 (26) <b>0.0088 (20)</b> 0.0810 (14) n.a. <b>0.0006 (31)</b> <b>0.0258 (18)</b> n.a.	
III-30 walk	DOPA-OFF DOPA-ON dopa effect DOPA-OFF STIM-OFF DOPA-ON STIM-OFF dopa effect (%) <sup>a</sup> DOPA-OFF STIM-ON stim effect (%) <sup>b</sup> DOPA-ON STIM-ON overall effect (%)	1.5859 $\pm$ 0.8662 0.3015 $\pm$ 0.4797 80.7916 $\pm$ 29.4229	64 63 60	1.875 $\pm$ 1.3582 0.3214 $\pm$ 0.5965 86.1111 $\pm$ 25.1405	28 28 24	0.4453 0.7333 0.4946	1.6328 $\pm$ 0.9687 <b>0.5731<math>\pm</math>0.6476</b> <b>62.6666<math>\pm</math>34.6697</b> 1.1484 $\pm$ 0.8894 <b>33.8936<math>\pm</math>36.7308</b> 0.5847 $\pm$ 0.6769 64.6855 $\pm$ 34.6919	64 41 35 64 58 59 53	1.7692 $\pm$ 1.1156 <b>0.9<math>\pm</math>0.8522</b> <b>49.6666<math>\pm</math>40.1189</b> 1.4615 $\pm$ 0.9891 <b>14.2666<math>\pm</math>36.8086</b> 0.7916 $\pm$ 0.7790 51.8840 $\pm$ 40.3279	26 20 20 26 25 24 23	0.9201 0.1515 0.2010 0.2345 0.0614 0.2441 0.1973	0.9932 <b>0.0051 (40)</b> <b>0.0375 (34)</b> n.a. <b>0.0003 (35)</b> n.a. n.a.	0.9073 (26) <b>0.007 (20)</b> <b>0.0033 (17)</b> n.a. <b>0.0005 (20)</b> n.a. n.a.		



**D. Table of transversal CB.** Baseline and 1 year characteristics of patients according to transversal CB (sym-suplat, sym-non-suplat, asym-T; n, collected data out of 92; values ± standard error, SD); p values of differences (significant, bold italic) between settings ( $\Delta$  trans\_CB); 1 year versus baseline ( $\Delta$  T#postpre); dopa effect, at baseline and 1 year, and baseline\_dopa effect – 1 year\_dopa effect <sup>(a)</sup>; at 1 year, stim effect and dopa effect – stim effect <sup>(b)</sup>.

characteristics	baseline						1 year						$\Delta$ trans_CB	$\Delta$ T#postpre	$\Delta$ Basyn-suplat	$\Delta$ Basyn-non-suplat	$\Delta$ Basyn-T			
	sym-suplat		sym-non-suplat		asym-T		sym-suplat		sym-non-suplat		asym-T							p value	p value	p value (n)
	mean ± SD	n	mean ± SD	n	mean ± SD	n	mean ± SD	n	mean ± SD	n	mean ± SD	n	p value	p value	p value (n)	p value (n)				
age (y)	60.662±6.9668	71	67.0780±3.0732	4	60.2257±6.5631	17	0.125													
gender (female)	33	71	0	4	0	17	0.164													
disease duration (y; quartile)	10.1714±3.3491	70	14±5.4722	4	10.8235±4.9274	17	0.3128													
LED (mg)	1271.493±483.9956	68	1346.875±230.5733	4	1011.5±470.2659	15	0.1835	<b>1099.135±539.327</b>	61	1028.135±610.3598	4	790.3333±486.985	15	0.1305	0.9164	<b>0.0059 (59)</b>	0.2733 (4)	n.a. (14)		
stimulation voltage (V)	left right		n.a.																	
Hochs & Vahr score	on-period off-period	1.7538±0.8710 2.3050±0.7227	65 67	1.8333±0.7637 2.125±0.75	3 4	1.9333±0.9976 2.74±0.8194	15 15	0.8779 0.2394	<b>2.0535±0.7843</b> <b>2.4508±0.8747</b>	56 60	2.75±0.2886 <b>3.125±0.6291</b>	4 4	2.3076±0.6304 <b>2.5767±0.8278</b>	13 13	0.0670 0.1075	0.5136 <b>0.0295</b>	0.0272 (66)	0.083 (4)	n.a. (12)	
ADL <sub>a</sub> (UPDRS II)	on-period off-period	4.455±4.1483 16.2875±5.8009	62 63	6±1.6259 19±3.1622	4 4	5.262±3.9573 15.9642±5.1007	14 14	0.1479 0.2908	<b>9.4457±5.1391</b> <b>15.5073±4.4889</b>	53 52	<b>12.75±0.6168</b> 17.25±7.5	4 4	10.5538±5.6701 17.2307±7.7041	13 13	0.5254 0.5474	0.9068 0.0515	<b>&lt;0.0001 (51)</b>	<b>0.0003 (25)</b>	n.a. (13)	
UPDRS II-5 speech	on-period off-period	0.4±0.6894 1.0887±0.9439	70 70	0.75±1.5 1±1.4142	4 4	0.5882±0.7952 1.3125±0.9464	16 16	0.6253 0.6036	<b>1.4112±1.1506</b> <b>1.8023±0.4019</b>	62 61	1.75±0.9574 1.75±0.9574	4 4	<b>1.9±0.8823</b> <b>1.9±0.8385</b>	15 15	0.5223 0.9450	0.9251 0.9931	<b>&lt;0.0001 (61)</b>	0.0918 (4)	<b>0.0010 (15)</b>	
UPDRS II-14 stamping	on-period off-period	0.1484±0.4335 1.0937±1.2047	64 64	0.5±0.5773 1.25±0.9574	4 4	0.2666±0.5936 0.7333±1.2227	15 15	0.1347 0.3140	<b>0.4636±0.7867</b> 1.0555±1.0491	55 54	1±0.8164 1.25±1.2583	4 4	0.2857±0.6112 1.1071±1.3612	14 14	0.1466 0.9100	0.4361 0.1066	<b>0.0066 (53)</b>	0.1573 (4)	0.1573 (13)	
UPDRS IV-dyskinesia	A32 (%) A33 (disability)	1.7173±1.0483 1.7318±1.1649	69 69	1.5±0.5773 1.25±1.2583	4 4	2±1 1.5294±0.9432	17 17	0.3875 0.5325	<b>0.2580±0.6759</b> <b>0.1457±0.5385</b>	62 61	0±0 0±0	4 4	<b>0.1333±0.3518</b> <b>0.1333±0.3518</b>	15 15	0.6029 0.6980	0.7620 0.2626	<b>&lt;0.0001 (60)</b>	0.0633 (4)	<b>0.0011 (15)</b>	
UPDRS IV-irritation	B39 (boor)	1.5785±0.7000	70	1.75±0.9574	4	1.6470±0.9225	17	0.7059	<b>1.9158±0.6347</b>	63	1.25±0.5	4	<b>1.1429±0.7703</b>	14	0.9753	0.9390	<b>&lt;0.0001 (62)</b>	0.3173 (4)	<b>0.0257 (14)</b>	
PDQ-39	mobility 1–10	18.264±8.7709	53	22.25±4.2383	4	16.071±4.6831	14	0.4567	15.3333±8.7248	39	17±0	1	16.8571±10.4620	7	0.5506	0.2380	0.1403 (33)	0.3173 (1)	0.4004 (6)	
	activities of daily living 11–16	9.6923±4.5397	52	14.5±5.4467	4	8.8571±4.5885	14	0.1784	7.2±4.1962	35	5±0	1	8.375±4.9262	8	0.7274	0.0861	<b>0.0474 (31)</b>	0.3173 (1)	0.1967 (7)	
	emotional well-being 17–22	8.1875±5.1267	48	11.3333±4.6188	3	10.8461±3.9125	13	0.1745	7.2±4.1962	35	12±0	1	8.125±5.1391	8	0.4677	0.9617	<b>0.0215 (25)</b>	0.3173 (1)	0.3508 (7)	
	stigma-depression 23–26	5.8846±3.6976	52	8.5±1.2099	4	7.4285±2.9227	14	0.1382	4.026±3.5871	39	3±0	1	5.625±2.045	8	0.4033	0.6772	<b>0.0161 (32)</b>	0.3173 (1)	0.4461 (7)	
	social support 27–29	2.169±2.6222	50	0.8333±0.6773	3	4±2.8669	12	0.0410	1.8235±2.3556	34	0±0	1	2.2957±2.3603	7	0.4510	0.7838	0.3981 (30)	0.3173 (1)	0.5879 (5)	
	cognition 30–33	4.8679±2.8218	53	6.25±1.2583	4	3.5±2.4099	14	0.0571	4.625±2.5986	40	6±0	1	3.25±1.1649	8	0.6277	0.6118	0.1977 (33)	0.3173 (1)	0.5454 (7)	
	communication 34–36	3.24±2.1434	50	2.3333±2.0816	3	4.5±1.9903	14	0.0841	4.525±2.4388	40	2±0	1	3.25±1.9640	8	0.3190	1.1463	<b>0.0235 (31)</b>	0.2500 (1)	0.3805 (7)	
	body discomfort 37–39	5.8±3.8996	50	7±1	3	5.5711±3.5432	14	0.7517	4.5897±2.6922	39	6±0	1	4.875±3.7883	8	0.9465	0.7900	<b>0.0020 (31)</b>	0.2500 (1)	0.4428 (7)	
	DOPA-OFF	31.5633±11.0563	71	24.875±7.3640	4	34.0625±12.4503	16	0.3823												
	DOPA-ON	9.5±5.6875	70	11.3735±3.3008	4	9.6176±6.5990	17	0.5443												
dopa effect	<b>70.7909±11.4303</b>	70	<b>54.0377±7.7368</b>	4	<b>70.8186±15.3873</b>	16	<b>0.0311</b>													
UPDRS III total	DOPA-OFF STIM-OFF								<b>37.3428±14.4785</b>	70	<b>28.75±4.1129</b>	4	<b>43.0666±9.9442</b>	15	<b>0.6394</b>	0.0651	<b>&lt;0.0001 (70)</b>	0.2733 (4)	<b>0.0076 (14)</b>	
DOPA-ON STIM-OFF									<b>15.6447±10.2322</b>	44	<b>13.3333±7.3711</b>	3	<b>16.3866±9.2266</b>	13	0.8789	0.3673	<b>&lt;0.0001 (43)</b>	0.2763 (3)	<b>0.0058 (13)</b>	
dopa effect (%) <sup>a</sup>									<b>59.1422±18.4642</b>	64	<b>56.7923±20.3020</b>	3	<b>61.3440±19.5288</b>	0	0.9064	0.6067	<b>&lt;0.0001 (43)</b>	0.7815 (3)	0.1361 (12)	
DOPA-OFF STIM-ON									23.014±11.4226	69	20.75±7.4665	4	25.3666±7.3811	15	0.3733		n.a.			
stim effect (%) <sup>b</sup>									<b>38.3872±17.3279</b>	69	<b>27.3946±5.8353</b>	4	<b>41.4435±6.6999</b>	15	0.4523	0.9778	<b>&lt;0.0001 (44)</b>	0.1088 (3)	<b>0.0107 (13)</b>	
DOPA-ON STIM-ON									1.5307±0.6978	64	13.25±6.0207	4	13.25±6.0207	14	0.9811		n.a.			
overall effect (%)									61.6823±14.1274	64	54.5942±18.7327	4	67.5750±15.0595	14	0.2477		n.a.			
III-18 speech	DOPA-OFF	0.8028±0.6890	71	0.5±0.5773	4	0.8235±0.6359	17	0.6639												
	DOPA-ON	0.4714±0.6306	70	0.5±1	4	0.6764±0.5847	17	0.3152												
	dopa effect (%) <sup>a</sup>	44.3262±48.0635	47	0±141.4214	2	12.5±48.2653	12	0.2321												
	DOPA-OFF STIM-OFF								<b>1.2665±0.8817</b>	71	<b>1.25±0.5</b>	4	<b>1.7±0.8823</b>	15	0.1701	0.2191	<b>0.0001 (71)</b>	<b>0.0083 (4)</b>	<b>0.0033 (15)</b>	
	DOPA-ON STIM-OFF								<b>1.0335±0.7862</b>	45	1±0	3	<b>1.7307±1.0127</b>	13	0.0670	0.2309	<b>0.0001 (44)</b>	0.083 (4)	<b>0.0038 (15)</b>	
	dopa effect (%) <sup>b</sup>								<b>14.5209±0.1079</b>	39	3±0	3	<b>2.0833±34.4738</b>	12	0.4171	0.3990	<b>0.0125 (25)</b>	0.3173 (1)	0.5396 (8)	
	DOPA-OFF STIM-ON								1.3390±0.9352	71	1.25±0.5	4	1.5±0.902	15	0.6824		n.a.			
	stim effect (%) <sup>b</sup>								<b>-3.5919±38.6514</b>	58	0±0	4	<b>16.0714±30.3934</b>	14	0.2301	0.6557	<b>0.0039 (39)</b>	n.a. (3)	0.3510 (12)	
	DOPA-ON STIM-ON								<b>1.2538±0.8932</b>	65	<b>1.25±0.5</b>	4	<b>1.9642±0.8195</b>	14	<b>0.0297</b>		n.a.			
	overall effect (%)								4.6969±4.9268	55	0±0	4	-10.7142±30.5624	14	0.2510		n.a.			
III-28 posture	DOPA-OFF	1.3802±0.9653	71	1.5±0.5773	4	1.3529±0.8617	17	0.9021												
	DOPA-ON	0.7714±0.7054	70	1±0.8164	4	0.8176±0.8931	17	0.4093												
	dopa effect (%) <sup>a</sup>	44.0960±41.0708	59	37.5±47.8713	4	59.4444±47.8575	15	0.4277												
	DOPA-OFF STIM-OFF								1.5±0.9296	71	1.25±0.5	4	1.6333±1.2601	15	0.8089	0.5194	0.3983 (7)	0.3173 (4)	0.2010 (15)	
	DOPA-ON STIM-OFF								1.9888±0.9798	45	1.3333±0.5773	3	<b>0.9625±1.1629</b>	13	0.5742	0.3567	0.1024 (44)	n.a. (3)	<b>0.0246 (13)</b>	
	dopa effect (%) <sup>b</sup>								31.6666±0.6721	38	0±0	3	43.9391±7.3008	11	0.2444	0.6668	0.3581 (31)	0.3173 (3)	0.1435 (11)	
	DOPA-OFF STIM-ON								1.3802±0.9504	71	1.25±0.5	4	1.5±1.2100	15	0.9501		n.a.			
	stim effect (%) <sup>b</sup>								<b>9.4809±24.7160</b>	61	0±0	4	<b>6.9447±6.6034</b>	12	0.6828	0.2885	<b>0.0066 (38)</b>	n.a. (3)	<b>0.0267 (11)</b>	
	DOPA-ON STIM-ON								1.0461±0.9216	65	1.25±0.5	4	0.9642±1.117	14	0.6272		n.a.			
	overall effect (%)								30.2121±38.1518	55	0±0	4	44.4444±45.1335	12	0.1263		n.a.			
III-29 postural stability	DOPA-OFF	0.7115±0.7590	71	1±0.8164	4	1.088±1.0493	17	0.2560												
	DOPA-ON	0.3357±0.4794	70	0.625±0.75	4	0.3235±0.4657	17	0.6431												
	dopa effect (%) <sup>a</sup>	53.5714±49.5967	42	<b>41.6666±52.0416</b>	3	66.0256±43.3629	13	0.6559												
	DOPA-OFF STIM-OFF								<b>1.0915±0.9794</b>	71	1.5±0.7071	4	1.1666±0.9574	15	0.4994	0.4700	<b>0.0017 (71)</b>	0.0918 (4)	0.6571 (15)	
	DOPA-ON STIM-OFF								0.5555±0.6590	45	0.8333±0.2886	3	0.6153±0.8697	13	0.5596	0.3686	0.1284 (44)	0.1655 (3)	0.1129 (13)	
	dopa effect (%) <sup>b</sup>								45.8333±44.4878											

**E. Table of STN relation CB.** Baseline and 1 year characteristics of patients according to STN relation CB (sym-out, sym-non-out, asym-N; n, collected data out of 92; values ± standard error, SD); p values of differences (significant, bold italic) between settings (Δ STN\_CB); 1 year versus baseline (Δ STN#postpre); dopa effect, at baseline and 1 year, and baseline\_dopa effect – 1 year\_dopa effect <sup>(a)</sup>; at 1 year, stim effect and dopa effect – stim effect <sup>(b)</sup>.

characteristics	baseline										1 year													
	sym-out		sym-non-out		asym-N		Δ STN_CB		sym-out		sym-non-out		asym-N		Δ STN_CB		Δ STN#postpre		Δ Sym-out		Δ Sym-non-out		Δ Sym-N	
	mean ± SD	n	mean ± SD	n	mean ± SD	n	p value	mean ± SD	n	mean ± SD	n	mean ± SD	n	mean ± SD	n	p value	p value	p value (a)	p value (b)	p value (a)	p value (b)	p value (a)	p value (b)	
age (y)	61.4065±7.7305	38	60.3742±6.2950	41	60.7994±6.2050	13	0.598									n.a.								
gender (female)	17	38	19	41	6	13	1.000									n.a.								
disease duration (y; quartile)	10.9729±4.5733	37	9.9604±5.0561	41	10.7692±5.6549	13	0.712									n.a.								
LED (mg)	1314.176±446.7075	37	1191.942±532.6378	39	1082.841±362.9067	11	0.240	1225.792±601.5375	36	924.5833±506.483	33	761.3636±354.6125	11	0.017	0.0725	0.3177 (35)	0.0033 (33)	n.a. (9)						
stimulation voltage (V)	left right		n.a.					2.7297±0.8289	37	2.9775±1.0866	40	2.925±0.8236	12	0.5091	2.6864±0.9015	37	3.0461±1.0691	39	2.7333±1.0138	12	0.4871			
Hoehn & Yahr score	on-period off-period	1.875±0.75 2.4054±0.8727	36 37	1.7714±1.0098 2.2972±0.6816	37 37	1.5833±0.9003 2.4583±0.5418	12 12	0.6703 0.5321	2.1287±0.9021 2.5694±0.8713	35 36	2.1071±0.6288 2.4677±0.9213	28 31	0.6688 0.5387	2.25±0.5400 2.45±0.6851	10 10	0.6688 0.8294	0.5382 0.3723 (35)	0.0418 (34)	0.0559 (34)	n.a. (9)	n.a. (9)	n.a. (9)	n.a. (9)	
ADLs (UPDRS II)	on-period off-period	4.3055±3.2236 17.1081±5.1168	36 37	5.4411±5.0193 15.5588±5.5017	34 34	3.45±1.5356 16.35±7.4611	10 10	0.7599 0.5814	10.6212±4.7170 17.2575±6.6451	33 33	9.1379±6.7571 14.75±6.7116	29 28	0.5794 0.2274	8.825±3.8658 15±6.5954	8 8	0.2599 0.2274	0.5794 0.9372	0.0001 (33)	0.0010 (27)	n.a. (8)	n.a. (8)	n.a. (8)	n.a. (8)	
UPDRS II-5 speech	on-period off-period	0.2894±0.6110 1.1315±0.8055	38 37	0.575±0.8737 1.1282±1.0385	40 39	0.5384±0.6602 1.0709±0.9540	13 13	0.1782 0.09749	1.5277±0.9098 1.9305±0.8293	36 36	1.3857±0.2838 1.6617±1.1724	35 34	0.6678 0.5182	1.4657±1.0554 1.95±1.1654	10 10	0.6678 0.6333	0.2554 0.0001 (36)	0.0002 (34)	0.0072 (10)	0.0075 (10)	n.a. (9)	n.a. (9)		
UPDRS II-14 stamping	on-period off-period	0.1001±0.3148 0.5795±1.0383	37 37	0.3±0.6207 1.3428±1.2048	35 35	0.0909±0.3015 1±1.1832	11 11	0.2761 0.1252	0.9939±0.6092 1.0991±1.2019	33 33	0.5322±0.6459 0.955±1.0930	31 30	0.7095 0.4859	0.4444±1.0157 1.4444±1.1303	9 9	0.8898 0.1380	0.0047 (33)	0.0144 (28)	0.1580 (9)	0.2891 (9)	n.a. (9)	n.a. (9)		
UPDRS IV-dyskinesia	A32 (%) A33 (disability)	1.8243±1.1068 1.8513±1.0728	37 37	1.7±0.9114 1.7±1.1810	40 40	1.7692±1.1657 1.0769±0.9540	13 13	0.7735 0.0894	0.2222±0.7235 0.1388±0.5426	36 36	0.2571±0.5606 0.1428±0.4936	35 35	0.0561 0.1918	0.17±0.3162 0.1±0.3162	10 10	0.0561 0.0477	0.4459 0.0001 (35)	0.0001 (34)	0.0081 (10)	0.0312 (10)	n.a. (9)	n.a. (9)		
UPDRS IV-fluctuations	B39 (hoft)	1.6578±0.7081	38	1.525±0.6788	41	1.6538±0.5547	13	0.5244	1.1387±0.7231	36	1.0294±0.6269	34	0.8181±0.4045	11	0.4071	0.1926	0.0021 (36)	0.0147 (33)	0.0053 (11)					
mobility I-10	20±7.8740	28	16.875±9.2448	32	16.5454±9.8220	11	0.3556	16.0526±9.0766	19	15.1428±8.3383	21	15.7142±10.6726	7	0.9340	0.6859	0.1200 (16)	0.9304 (18)	0.5282 (6)						
activities of daily living 11-16	10.5714±4.4257	28	9.4062±4.8049	32	8.9±1.736	10	0.4058	8.5±4.1961	20	6.75±3.6544	20	7.871±6.0395	7	0.4059	0.8372	0.3389 (17)	0.2551 (17)	0.2785 (5)						
emotional well-being 17-22	10.2698±4.6143	23	8.4838±4.8088	31	6.9±8.013	10	0.2034	8.3157±4.3722	19	7.44582	19	6.3333±4.5898	6	0.5133	0.9492	0.0989 (13)	0.1075 (10)	0.0918 (4)						
stigma depression 23-26	7.3214±2.9571	28	5.5806±3.7038	31	6±3.6878	11	0.1716	4.2857±3.1817	21	4.25±3.9453	20	4.2857±3.2513	7	0.9618	0.3889	0.0083 (17)	0.6509 (17)	0.3951 (6)						
social support 27-29	2.2592±2.0679	27	2.4827±3.0778	29	2.6666±3.2787	9	0.9520	1.722±1.8086	18	2.1666±2.5952	18	1.333±2.4221	6	0.6458	0.6160	0.5281 (16)	0.8114 (16)	0.1615 (4)						
cognition 30-33	5.8214±2.8681	28	4.0624±2.2851	32	3.5454±2.8668	11	0.0170	4.7619±2.5779	21	4.0952±2.4770	21	3.2857±3.0396	7	0.4064	0.7517	0.1218 (17)	0.7404 (18)	0.5930 (6)						
communication 34-36	4.3333±2.1103	27	2.8333±1.9666	30	3±2.1662	10	0.0149	4.9047±2.0713	21	4.1904±2.8039	21	2.8714±2.5071	7	0.1373	0.8164	0.0468 (16)	0.2245 (16)	0.7389 (6)						
bodily discomfort 37-39	6.4841±2.6072	27	5.1666±2.8294	30	5.6±4.0879	10	0.2515	5.45±2.9819	20	4.2380±2.5865	21	3.7142±2.9277	7	0.2766	0.8108	0.0112 (16)	0.1142 (17)	0.1118 (6)						
DOPA-OFF	31.7763±11.4435	38	30.05±10.772	40	36.6153±11.8429	13	0.1711									n.a.								
DOPA-ON	10.2367±6.1017	27	8.8902±4.9831	41	10.10857	13	0.7445									n.a.								
dopa effect	69.4544±12.2630	37	69.2387±12.5870	40	74.2499±12.7742	13	0.3942									n.a.								
DOPA-OFF STIM-OFF								38.3815±14.4228	38	36.65±14.2389	40	40.9545±9.3740	11	0.5548	0.9775	0.0001 (38)	0.0006 (39)	0.2475 (11)						
DOPA-ON STIM-OFF								14.6562±10.1436	32	16.175±9.2952	20	17.3±16.8609	8	0.7034	0.0576	0.0004 (31)	0.0009 (29)	0.0117 (8)						
dopa effect (%) <sup>a</sup>								61.2619±16.9096	32	56.829±21.8122	20	59.1429±17.2928	8	0.8025	0.2236	0.0275 (34)	0.0100 (19)	0.0252 (8)						
DOPA-OFF STIM-ON								22.9459±16.6103	37	23.3875±11.2543	40	24.2727±9.4349	11	0.8903										
stim effect (%) <sup>b</sup>								40.0151±15.8197	37	36.2172±16.8564	40	41.0059±19.7245	11	0.2280	0.8888	0.0001 (32)	0.0075 (20)	0.0687 (8)						
DOPA-ON STIM-ON								14.2507±9.5211	30	14.1±8.8215	35	15±7.4378	10	0.8017										
overall effect (%)								62.6565±14.3102	37	61.9647±16.8288	35	62.5038±13.0819	10	0.9951										
DOPA-OFF	0.8684±0.6645	38	0.7560±0.6993	41	0.6923±0.6304	13	0.5856									n.a.								
DOPA-ON	0.5675±0.6888	37	0.5±0.6324	41	0.3846±0.5063	13	0.7756									n.a.								
dopa effect (%) <sup>a</sup>	38.8888±5.3021	27	33.9743±5.2383	26	37.5±51.7549	8	0.9453									n.a.								
DOPA-OFF STIM-OFF								1.1465±0.7387	38	1.1375±0.9472	40	1.5833±0.9731	12	0.1555	0.2874	0.0001 (38)	0.0161 (40)	0.0696 (12)						
DOPA-ON STIM-OFF								1.3125±0.7803	32	0.9523±0.9069	21	1.25±1.0350	8	0.2579	0.2448	0.0001 (31)	0.0123 (21)	0.0138 (8)						
dopa effect (%) <sup>a</sup>								4.7322±3.5803	30	11.4583±44.6047	16	27.0833±41.9632	8	0.4561	0.4864	0.0200 (21)	0.4233 (10)	0.1441 (4)						
DOPA-OFF STIM-ON								1.5203±0.7965	38	1.2375±1.0189	40	1.708±0.9876	12	0.1296										
stim effect (%) <sup>b</sup>								-1.0746±43.2716	35	-5.1724±28.2082	29	-11.8055±33.7957	12	0.7372	0.0882	0.1750 (30)	0.0836 (16)	0.0293 (8)						
DOPA-ON STIM-ON								1.5135±0.8373	37	1.1857±0.9783	35	1.5±0.8062	11	0.2386										
overall effect (%)								-0.9803±43.8453	34	5.0595±37.4975	28	-3.476±07±46.6964	11	0.9320										
DOPA-OFF	1.3421±0.9161	38	1.4146±0.9993	41	1.3846±0.7679	13	0.9583									n.a.								
DOPA-ON	0.6756±0.6889	27	0.8808±0.8130	41	0.8076±0.7510	13	0.7880									n.a.								
dopa effect (%) <sup>a</sup>	49.7196±42.4765	32	42.4019±42.4605	34	50.6944±46.1194	12	0.7212									n.a.								
DOPA-OFF STIM-OFF								1.6184±0.9258	38	1.425±1.0349	40	1.4583±0.9404	12	0.5786	0.5799	0.1286 (38)	0.8343 (40)	0.9033 (12)						
DOPA-ON STIM-OFF								1.1093±0.8118	32	0.8571±1.0141	21	0.9375±0.9425	8	0.4005	0.4665	0.0204 (34)	0.5271 (21)	0.2113 (8)						
dopa effect (%) <sup>a</sup>								33.4523±40.2715	28	31.25±44.2530	16	31.25±45.8062	8	0.9002	0.3788	0.1061 (26)	1.1 (2)	0.2587 (7)						
DOPA-OFF STIM-ON								1.4342±0.9875	38	1.3625±0.9999	40	1.375±0.9323	12	0.9061										
stim effect (%) <sup>b</sup>								14.8039±16.9250	34	3.3854±11.7722	32	4.5454±15.0755	11	0.1991	0.6927	0.0048 (28)	0.0149 (16)	0.0849 (8)						
DOPA-ON STIM-ON								1																

