

Fiducial 1	Fiducial 2	PD Distance	Oasis-1 Distance	Pairwise Difference	Percent Difference
L AL temporal horn	L inferior AM temporal horn	9.6 ± 2.5	12.4 ± 1.7	2.82	29.56
PMJ	Superior interpeduncular fossa	9.3 ± 1.2	11.8 ± 1.3	2.48	26.52
Infracollicular sulcus	Pineal gland	10.2 ± 1.1	12.1 ± 1.2	1.90	18.70
PMJ	R inferior LMS	14.8 ± 1.1	12.2 ± 1.0	-2.56	-17.30
PMJ	L inferior LMS	14.6 ± 1.0	12.2 ± 0.8	-2.41	-16.44
PMJ	R MB	13.4 ± 1.2	15.4 ± 1.4	2.01	15.07
PMJ	L MB	13.3 ± 1.2	15.2 ± 1.3	1.98	14.96
L superior LMS	L indusium griseum origin	17.2 ± 1.9	19.5 ± 2.3	2.33	13.52
R inferior AM temporal horn	L inferior AM temporal horn	46.7 ± 3.7	40.7 ± 4.3	-6.02	-12.88
PMJ	Intermammillary sulcus	13.0 ± 1.2	14.6 ± 1.4	1.51	11.56
Intermammillary sulcus	L inferior AM temporal horn	27.2 ± 2.2	24.0 ± 2.7	-3.12	-11.48
R superior LMS	R indusium griseum origin	16.6 ± 1.9	18.5 ± 1.7	1.86	11.16
L superior AM temporal horn	R inferior AM temporal horn	45.2 ± 3.2	40.3 ± 3.6	-4.90	-10.84
R superior AM temporal horn	L inferior AM temporal horn	44.6 ± 3.1	39.8 ± 4.0	-4.74	-10.63
L inferior LMS	L superior AM temporal horn	22.3 ± 1.8	19.9 ± 2.0	-2.32	-10.42
R inferior AM temporal horn	L olfactory sulcal fundus	44.7 ± 2.5	40.1 ± 2.6	-4.62	-10.35
L MB	L inferior AM temporal horn	25.2 ± 2.1	22.6 ± 2.4	-2.60	-10.31
Intermammillary sulcus	R inferior AM temporal horn	27.0 ± 2.4	24.3 ± 2.5	-2.69	-9.98
L inferior AM temporal horn	L olfactory sulcal fundus	28.5 ± 2.1	25.6 ± 2.3	-2.84	-9.98
R inferior AM temporal horn	R olfactory sulcal fundus	29.1 ± 1.8	26.3 ± 2.3	-2.83	-9.70
AC	L inferior AM temporal horn	32.7 ± 2.1	29.7 ± 2.4	-3.01	-9.20
Infracollicular sulcus	R superior LMS	14.5 ± 0.9	15.9 ± 0.9	1.34	9.20
AC	R inferior AM temporal horn	32.5 ± 2.3	29.6 ± 2.3	-2.94	-9.05
R inferior LMS	L superior AM temporal horn	37.1 ± 2.3	33.8 ± 2.5	-3.27	-8.82
L inferior AM temporal horn	R olfactory sulcal fundus	44.5 ± 2.7	40.7 ± 3.1	-3.83	-8.60
L inferior LMS	Intermammillary sulcus	25.2 ± 1.5	23.2 ± 1.4	-2.03	-8.03
R superior AM temporal horn	L olfactory sulcal fundus	42.6 ± 2.4	39.3 ± 2.7	-3.30	-7.73
R inferior LMS	Intermammillary sulcus	25.3 ± 1.6	23.3 ± 1.7	-1.95	-7.69
R inferior LMS	L inferior AM temporal horn	42.7 ± 2.6	39.4 ± 2.5	-3.28	-7.67
AC	L olfactory sulcal fundus	20.8 ± 1.2	19.3 ± 1.3	-1.47	-7.10
L inferior LMS	L MB	24.3 ± 1.5	22.7 ± 1.3	-1.65	-6.79
Superior interpeduncular fossa	L olfactory sulcal fundus	34.1 ± 1.8	31.8 ± 2.1	-2.30	-6.76
L inferior LMS	L olfactory sulcal fundus	47.6 ± 2.6	44.4 ± 2.8	-3.17	-6.66
R superior LMS	L inferior AM temporal horn	44.1 ± 2.8	41.3 ± 2.5	-2.84	-6.44
R inferior LMS	L olfactory sulcal fundus	53.2 ± 2.6	49.9 ± 2.5	-3.33	-6.26
R superior LMS	L olfactory sulcal fundus	50.2 ± 2.5	47.1 ± 2.3	-3.13	-6.23
R inferior LMS	L MB	26.4 ± 1.6	24.8 ± 1.6	-1.59	-6.03
AC	R superior LMS	32.0 ± 1.9	30.1 ± 1.2	-1.90	-5.95
AC	L inferior LMS	37.3 ± 2.0	35.1 ± 1.8	-2.20	-5.89
AC	R inferior LMS	37.4 ± 2.1	35.3 ± 1.9	-2.05	-5.49

Online Resource 4 - List of all mean pairwise distances (mm) ± standard deviation that are significantly different between OASIS-1 subjects and Parkinson's disease patients. Significance is determined by Wilcoxon rank-sum tests with Bonferroni correction, significance threshold of 0.05/496. AC, anterior commissure; AL, anterolateral; AM, anteromedial; CC, corpus callosum; IPF, interpeduncular fossa; MB, mammillary body; LMS, lateral mesencephalic sulcus; LV, lateral ventricle; PC, posterior commissure; PMJ, pontomesencephalic junction.