

Automated parcellation and atlasing of the human subcortex with ultra high-resolution quantitative MRI

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Supplementary table 1: Performance comparison between MASSP and MASSP2.0

Structure	Dice overlap		dilated Dice overlap		boundary distance (mm)	
	MASSP	MASSP2.0	MASSP	MASSP2.0	MASSP	MASSP2.0
STN	0.65	0.72	0.92	0.92	0.64	0.54
SN	0.81	0.82	0.98	0.97	0.47	0.46
RN	0.87	0.88	0.99	0.99	0.34	0.33
GPI	0.70	0.77	0.91	0.93	0.80	0.59
GPe	0.80	0.82	0.96	0.95	0.60	0.56
Tha	0.87	0.87	0.97	0.96	0.74	0.75
LV	0.85	0.92	0.93	0.98	1.88	0.58
3V	0.74	0.83	0.89	0.96	0.70	0.47
4V	0.87	0.86	0.95	0.97	0.57	0.53
Amg	0.72	0.76	0.89	0.88	1.03	0.98
ic	0.75	0.78	0.92	0.93	0.89	0.77
VTA	0.57	0.64	0.86	0.89	0.75	0.51
fx	0.53	0.73	0.76	0.94	2.07	0.45
PAG	0.64	0.73	0.90	0.92	0.67	0.51
PPN	0.50	0.59	0.80	0.84	1.04	0.70
CI	0.49	0.55	0.79	0.83	1.18	0.69

Dice overlap is calculated between the MASSP algorithms and manual delineations. Note that MASSP delineations were based on 0.64 x 0.64 x 0.70 mm³ scans only, and the MASSP2.0 delineations were performed on the combined information of the 0.64 x 0.64 x 0.70 mm³ and the 0.5 x 0.5 x 0.5 mm³.

Supplementary table 2: Performance of MASSP2.0 across the adult lifespan

Structure	Dice overlap (sem)	dilated Dice overlap (sem)	n
STN_l	0.58 (0.05)	0.83 (0.04)	11
STN_r	0.64 (0.05)	0.86 (0.04)	11
SN_l	0.81 (0.02)	0.95 (0.01)	11
SN_r	0.81 (0.02)	0.95 (0.02)	11
RN_l	0.85 (0.02)	0.97 (0.01)	11
RN_r	0.87 (0.01)	0.98 (0.01)	11
GPI_l	0.70 (0.02)	0.87 (0.02)	11
GPI_r	0.71 (0.04)	0.87 (0.04)	11
GPe_l	0.78 (0.02)	0.92 (0.01)	11
GPe_r	0.78 (0.01)	0.92 (0.01)	11
Tha_l	0.88 (0.11)	0.96 (0.00)	9
Tha_r	0.88 (0.11)	0.97 (0.00)	9
Amg_l	0.70 (0.04)	0.82 (0.04)	11
Amg_r	0.71 (0.03)	0.83 (0.03)	11

Dice overlap is calculated between the MASSP2.0 algorithm and manual delineations for a subset of structures and participants with an age distribution across the entire adult lifespan.