

Supplementary Table 1. Area of the HCN at each slice level and imaging modality in both groups

Imaging modality	Slice level	HD			AD			PD			DRPLA			NCNS			P value
		Mini	Median	Maxi	Mini	Median	Maxi	Mini	Median	Maxi	Mini	Median	Maxi	Mini	Median	Maxi	
		(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	
T2WI	caudal	45.5	55.2	80.5	83.7	98.2	108	83.5	98.4	115	86.6	91.9	111	80.4	99.7	126	4.63×10 ⁻⁶
	rostral	34.8	61.8	84.9	88.4	104	113	92.1	104	124	97.1	100	117	89.2	112	153	3.75×10 ⁻⁷
T1WI	caudal	35.3	52.1	75.8	83.7	95.6	108	83.3	97.9	116	86.2	94.7	111	79.2	99.3	118	4.26×10 ⁻⁵
	rostral	32.8	47.4	81.9	88.5	102	115	91.0	103	122	98.0	101	116	91.7	111	148	3.39×10 ⁻⁶
FLAIR	caudal	46.0	56.8	79.1	84.9	98.1	107	83.5	98.1	113	86.8	94.5	111	74.4	96.6	121	6.46×10 ⁻⁵
	rostral	40.2	65.7	79.9	88.8	104	115	90.2	104	155	98.0	101	116	92.6	107	129	1.48×10 ⁻⁵

HCN, head of caudate nucleus; HD, Huntington’s disease; AD, Alzheimer’s disease; PD, Parkinson’s disease; DRPLA, denratrubral-pallidoluysian atrophy; NCNS, non-neurodegenerative disorders in the central nervous system; Mini, minimum; Maxi, maximum; T2WI, T2-weighted images; T1WI, T1-weighted images; FLAIR, fluid attenuated inversion recovery

Supplementary Table 2. Correlation analysis of MRI modality with clinical factors

	Age at MRI		Age of onset		Disease duration		Number of CAG repeat	
	ρ	<i>P</i> value	ρ	<i>P</i> value	ρ	<i>P</i> value	ρ	<i>P</i> value
T2WI caudal	-0.20	0.58	-0.25	0.49	-0.41	0.24	0.15	0.73
T2WI rostral	0.07	0.84	0.16	0.64	-0.61	0.046*	0.17	0.69
T1WI caudal	0.10	0.81	-0.03	0.95	0.07	0.85	0.25	0.59
T1WI rostral	-0.22	0.54	-0.18	0.63	-0.37	0.30	0.34	0.45
FLAIR caudal	-0.13	0.74	0.20	0.61	-0.11	0.78	0.32	0.44
FLAIR rostral	-0.25	0.52	0.17	0.68	-0.31	0.43	0.29	0.48

ρ ; Spearman's rank correlation coefficient *: $P < 0.05$.

MRI, magnetic resonance imaging; T2WI, T2-weighted images; T1WI, T1-weighted images; FLAIR, fluid attenuated inversion recovery