



version 1.0 release 15-Jun-2024

**Subject: job1937952**

Sex

UNKNOWN

Age

47.0

Report date

13-Jan-2026

Image orientation

Radiological

Scale factor

0.67

Total Intracranial Volume (cm<sup>3</sup>)

1193.70



## Nuclei segmentation

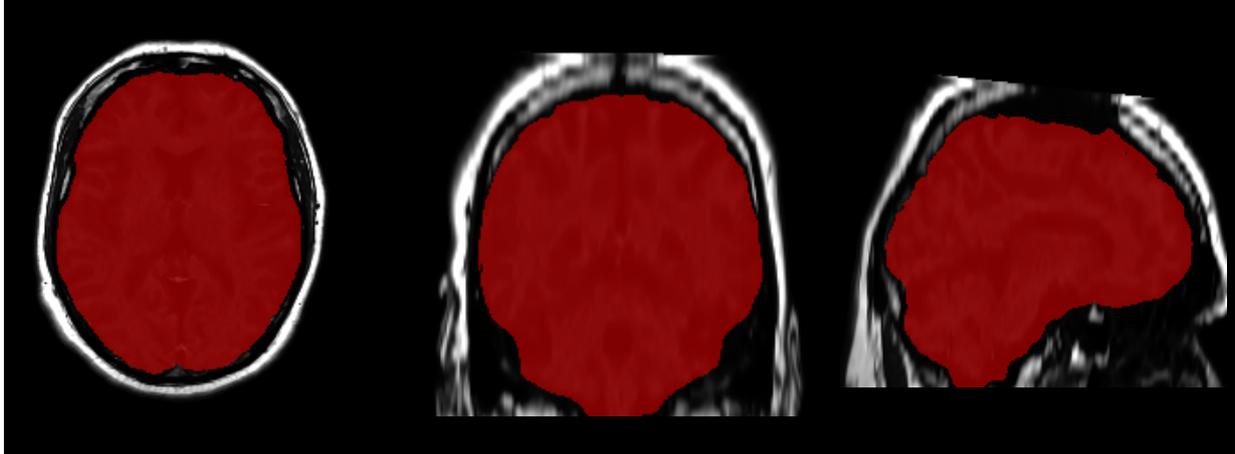
Nuclei*	Total (cm <sup>3</sup> /%)	Right (cm <sup>3</sup> /%)	Left (cm <sup>3</sup> /%)	Asymmetry (%)
<b>Thalamus</b>	9.38 / 0.786	4.59 / 0.384	4.79 / 0.402	-4.35
AVN	0.01 / 0.001	0.01 / 0.001	0.01 / 0.001	2.74
VAN	0.27 / 0.023	0.13 / 0.011	0.14 / 0.011	-1.88
VLAN	0.11 / 0.009	0.07 / 0.006	0.04 / 0.003	65.82
VLPN	1.09 / 0.091	0.60 / 0.050	0.49 / 0.041	19.87
VPLN	0.31 / 0.026	0.20 / 0.016	0.12 / 0.010	50.86
PN	1.79 / 0.150	0.86 / 0.072	0.93 / 0.078	-7.03
LGN	0.06 / 0.005	0.03 / 0.003	0.02 / 0.002	33.29
MGN	0.09 / 0.008	0.05 / 0.004	0.04 / 0.004	6.62
CN	0.15 / 0.013	0.08 / 0.007	0.07 / 0.006	7.96
MN	1.10 / 0.093	0.56 / 0.047	0.54 / 0.046	2.82
HN	0.03 / 0.003	0.02 / 0.002	0.01 / 0.001	35.04
MTN	0.07 / 0.006	0.03 / 0.002	0.04 / 0.003	-36.30
ISN	4.30 / 0.360	2.16 / 0.181	2.14 / 0.179	0.88

### \*Acronyms list

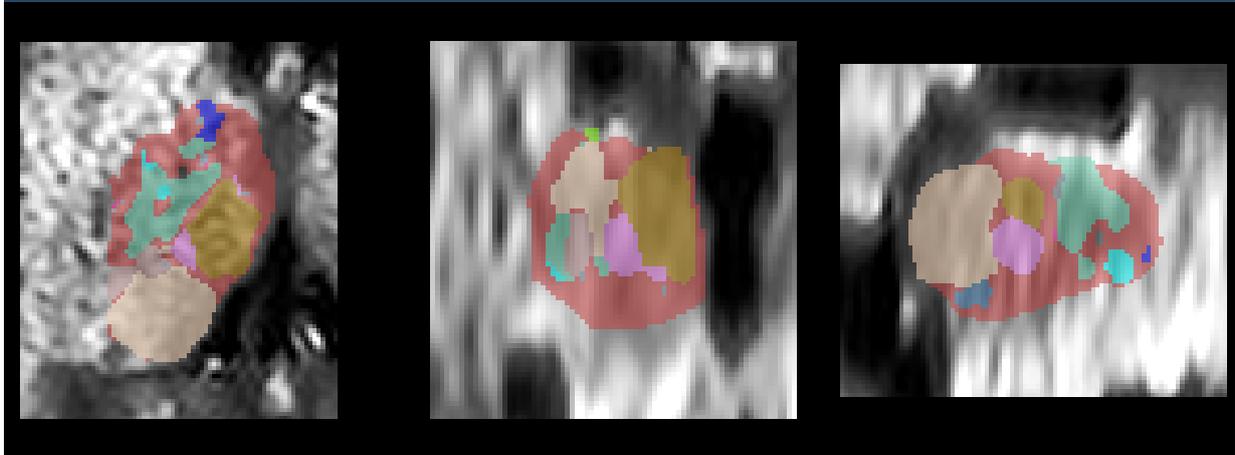
AVN	Anterior Ventral Nuclei	LGN	Lateral Geniculate Nuclei
VAN	Ventral Anterior Nuclei	MGN	Medial Geniculate Nuclei
VLAN	Ventral Lateral Anterior Nuclei	CN	Centromedian Nuclei
VLPN	Ventral Lateral Posterior Nuclei	MN	Mediodorsal Nuclei
VPLN	Ventral Posterior Lateral Nuclei	HN	Habenular Nuclei
PN	Pulvinar Nuclei	MTN	Mammillothalamic Tract Nuclei
		ISN	Intermediate Space Nuclei

Marina Ruiz-Perez, Sergio Morell-Ortega, Marien Gadea, Roberto Vivo-Hernando, Gregorio Rubio, Fernando Aparici, Mariam de la Iglesia-Vaya, Thomas Tourdias, Pierrick Coupé, José V. Manjón, *DeepThalamus: A novel deep learning method for automatic segmentation of brain thalamic nuclei from multimodal ultra-high resolution MRI*, arXiv Preprint arXiv:2401.07751 PDF

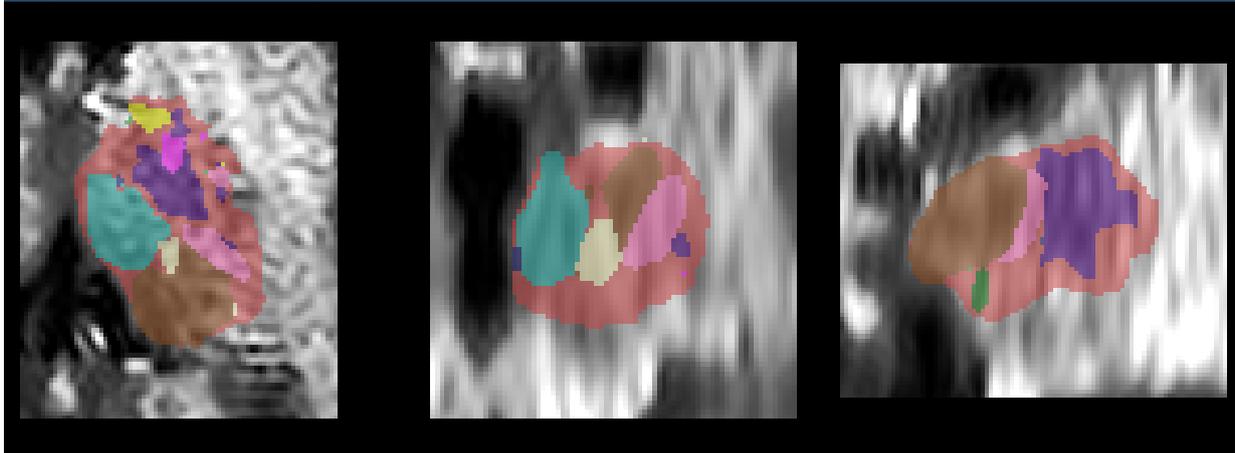
### Intracranial cavity segmentation



### Left Thalamus Nuclei segmentation



### Right Thalamus Nuclei segmentation



All the volumes are presented in absolute value (measured in  $\text{cm}^3$ ) and in relative value (measured in relation to the IC volume).

The Asymmetry Index is calculated as the difference between right and left volumes divided by their mean (in percent).

All the result images are located in the MNI space (neurological orientation).