

Direct visualization and characterization of the human zona incerta and surrounding fiber tracts



JC Lau^{1,2,3,4}, Y Xiao^{2,3}, RAM Haast^{2,3}, G Gilmore^{1,4}, Kamil Uludag^{7,8,9}, KW MacDougall¹, RS Menon^{2,3,6}, AG Parrent¹, TM Peters^{1,2,3,4,6,&}, AR Khan^{1,2,3,4,5,6,&}

¹Department of Clinical Neurological Sciences, Division of Neurosurgery, ²Imaging Research Laboratories, Robarts Research Institute, ³Centre for Functional and Metabolic Mapping, Robarts Research Institute, ⁴School of Biomedical Engineering, ⁵Brain and Mind Institute, ⁶Department of Medical Biophysics, Western University, London, Ontario, Canada

⁷IBS Center for Neuroscience Imaging Research, ⁸Department of Biomedical Engineering, N Center, Sungkyunkwan University, South Korea

⁹Techna Institute and Koerner Scientist in MR Imaging, University Health Network, Toronto, ON, Canada

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OHBM 2020

Abstract # 1856

Background

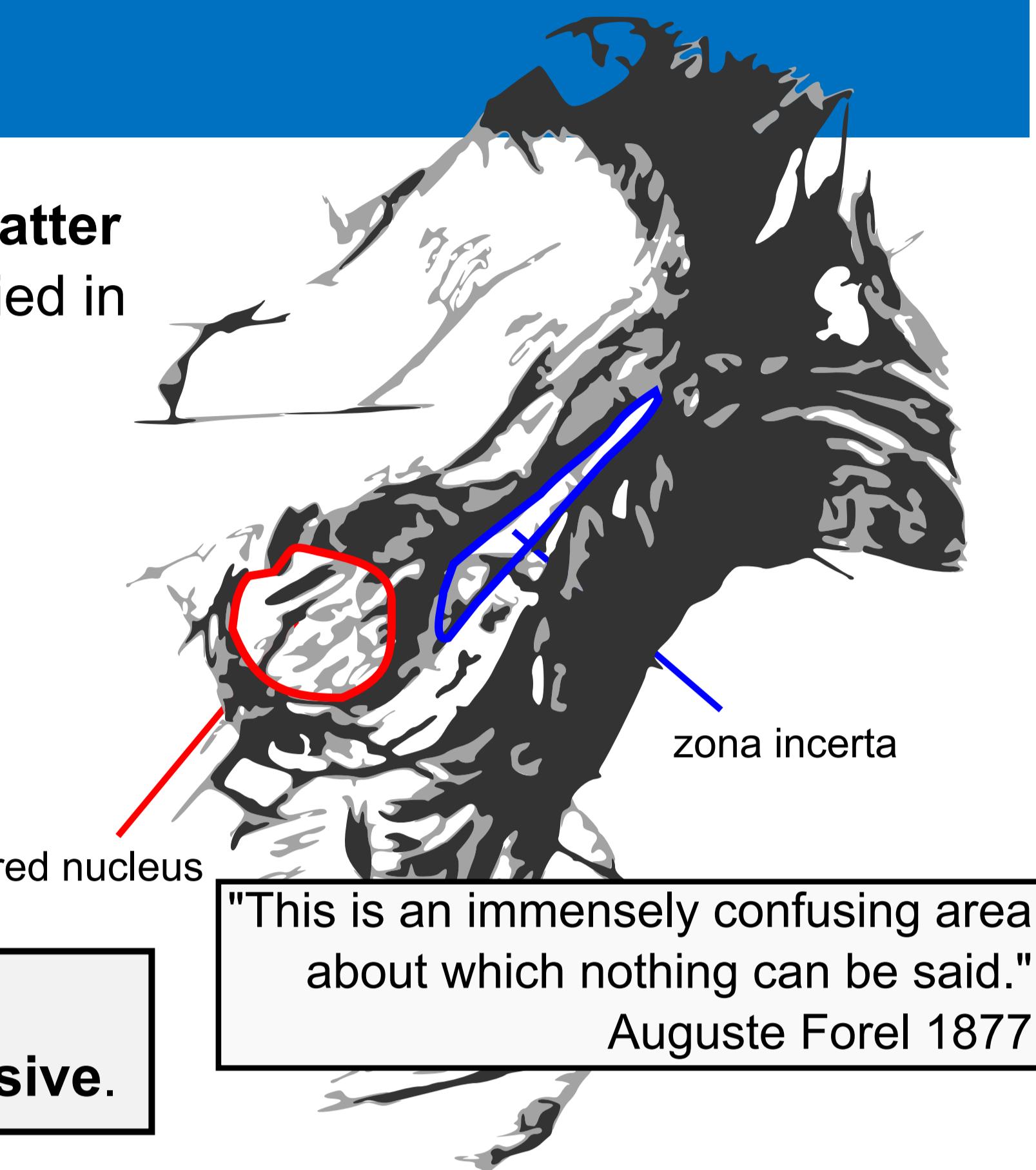
The **zona incerta** is a small gray matter region of the deep brain first identified in the 19th century.

What is known:

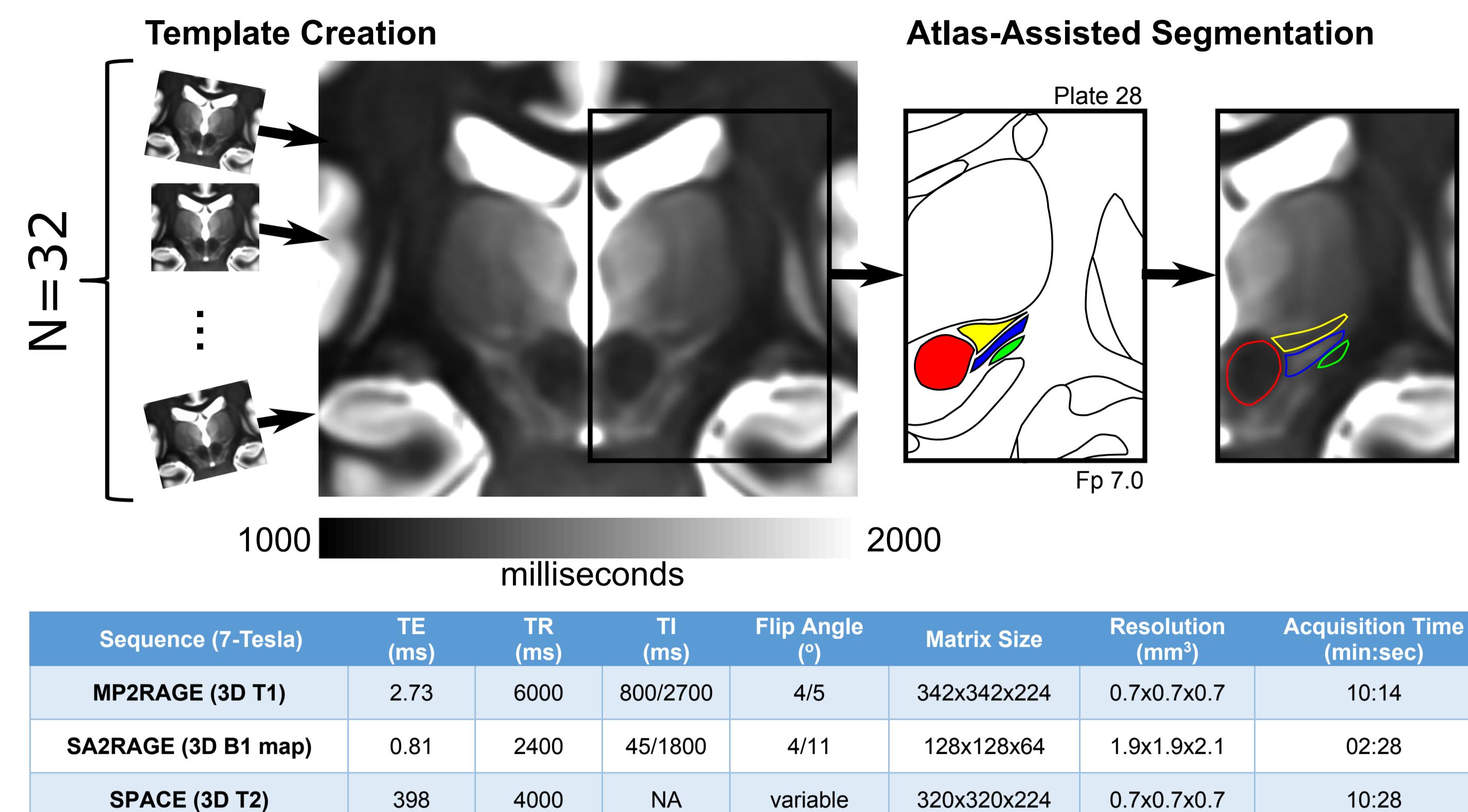
- diverse chemical expression*
- widespread connections*
- effective target for tremor

*cytoarchitectonic and tract tracing studies in experimental animals

Direct in vivo visualization and characterization has remained elusive.

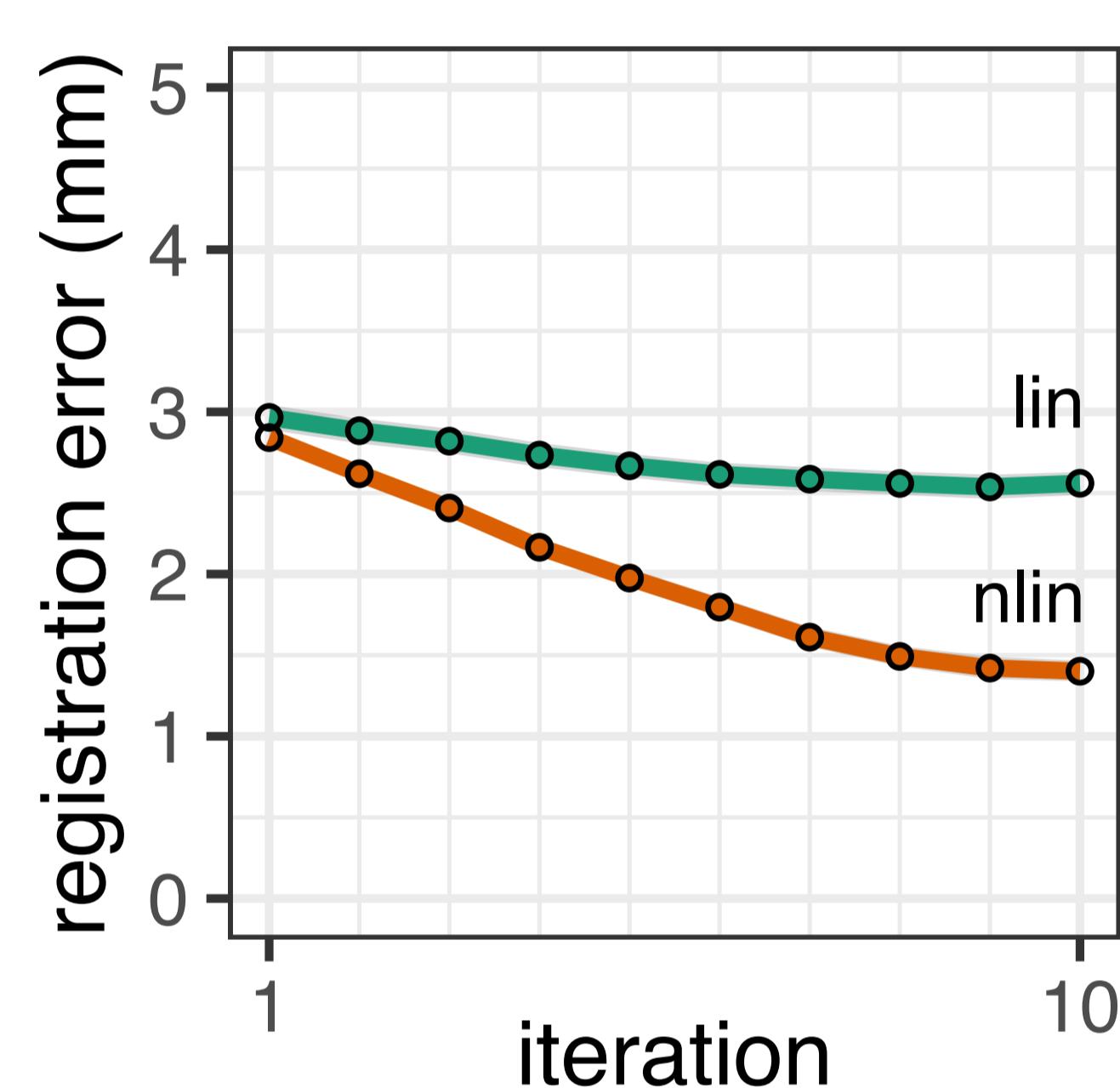


Methods

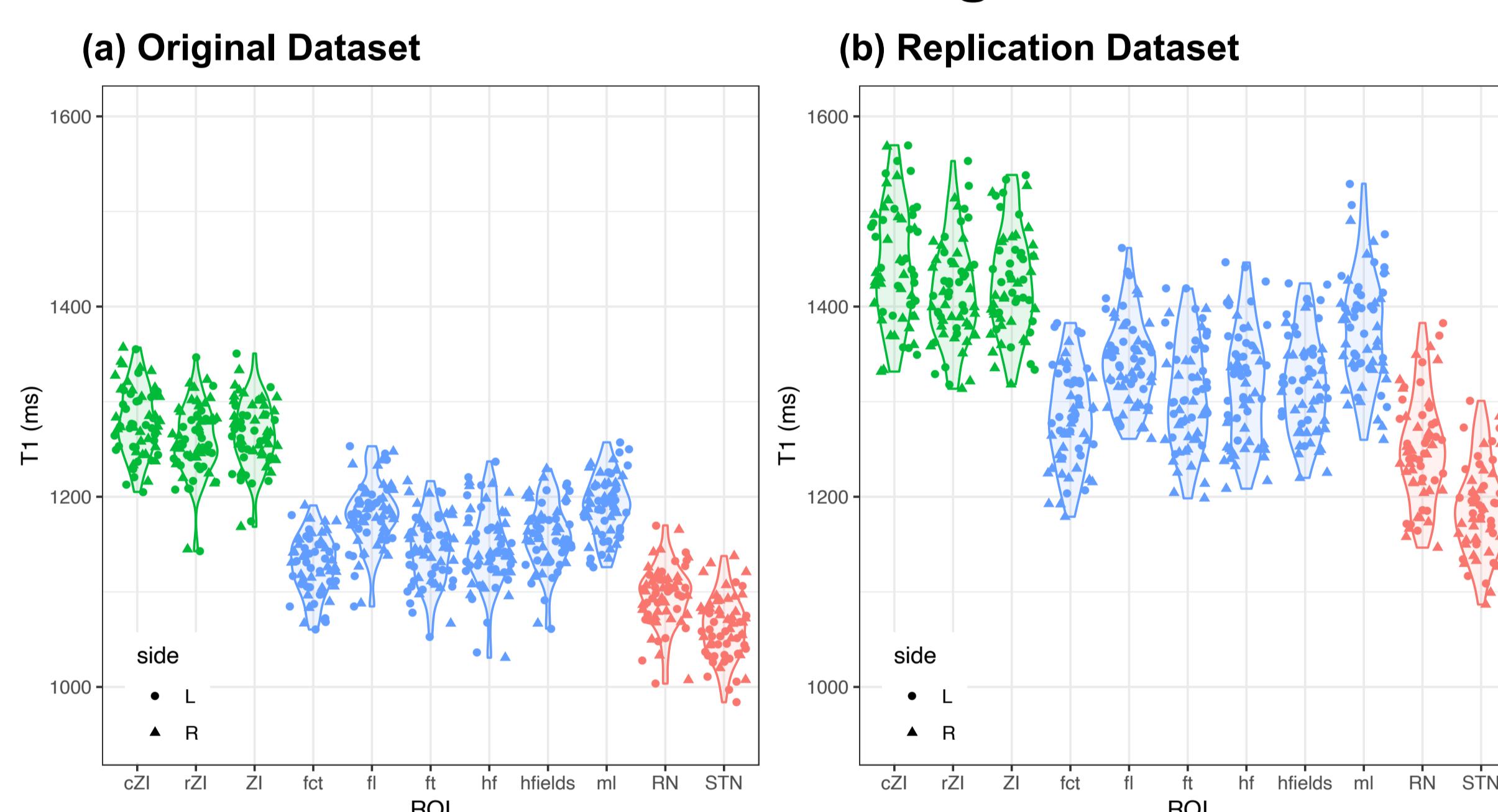


Results

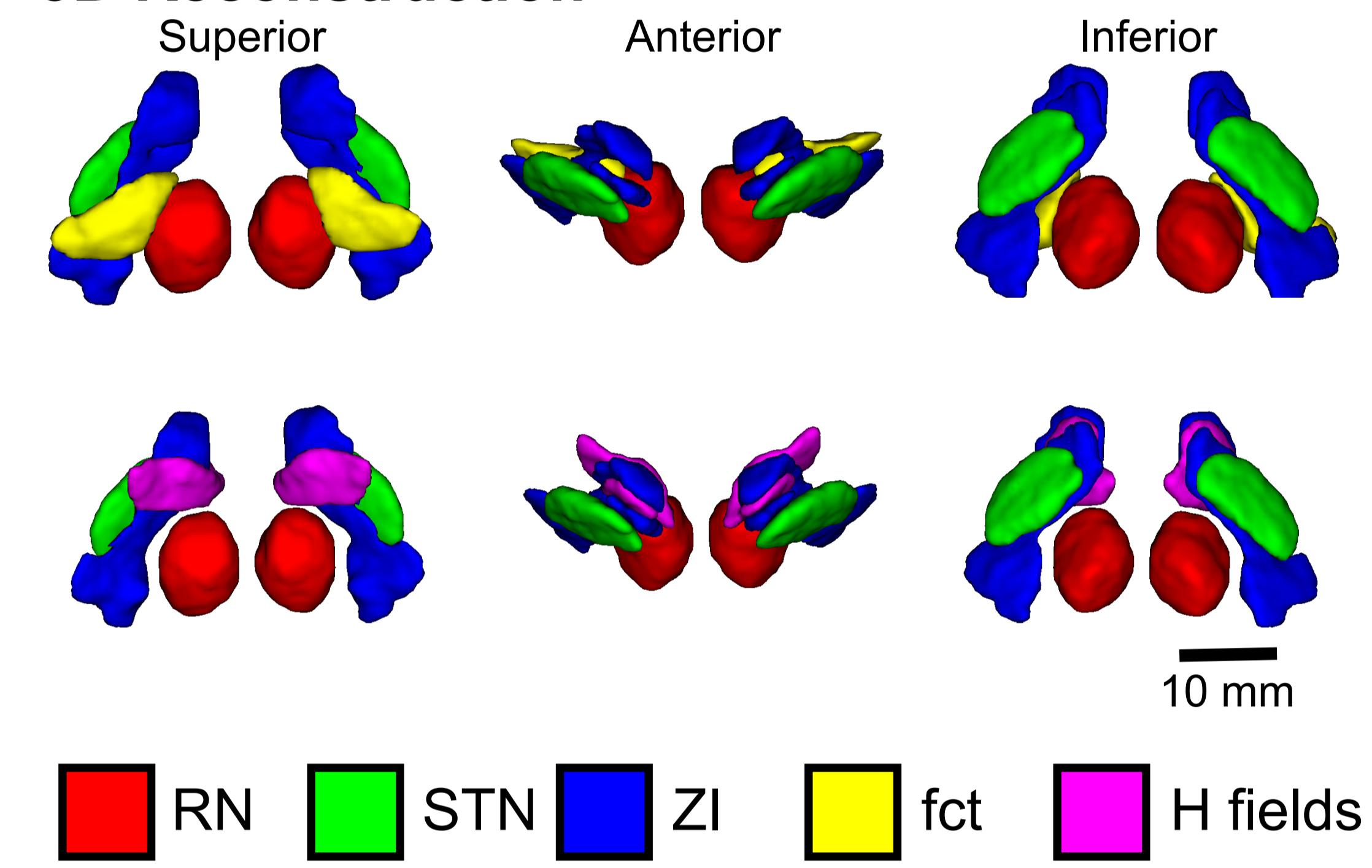
Template Validation



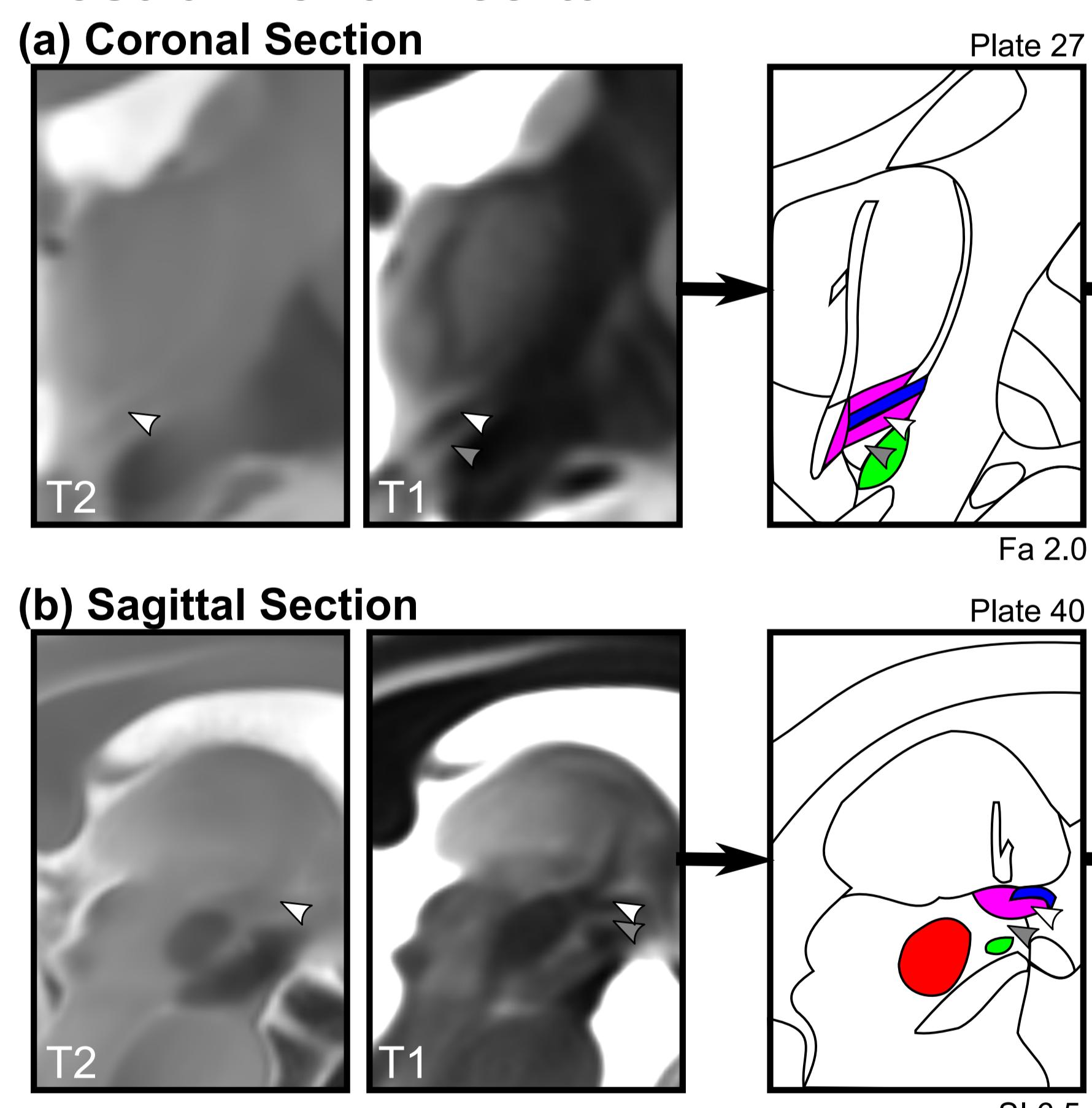
T1 values in the zona incerta region



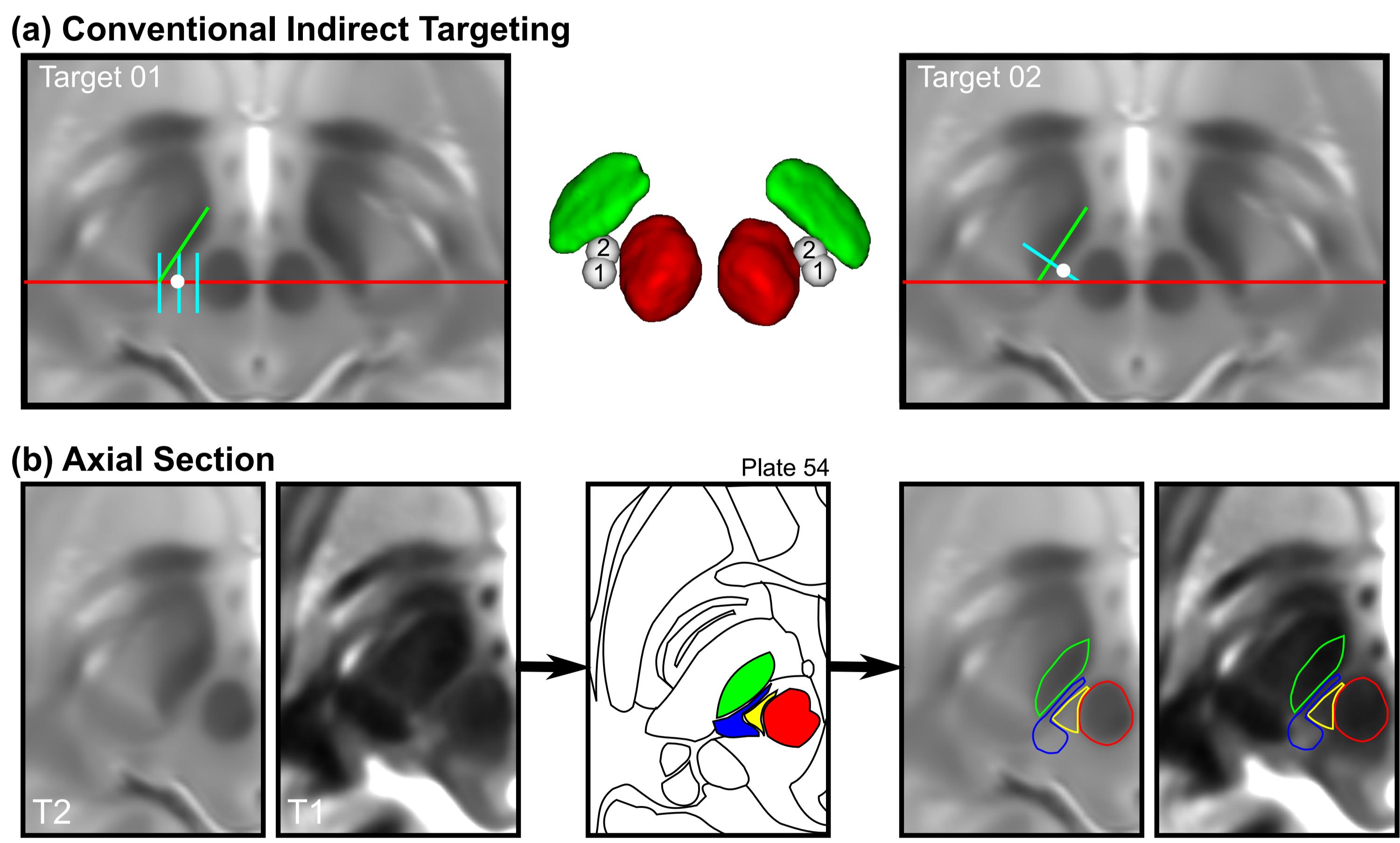
3D Reconstruction



Rostral Zona Incerta



Caudal Zona Incerta / Posterior Subthalamic Area



Direct visualization of the human zona incerta is possible in vivo using high-resolution T1 mapping at 7-Tesla.

(c) Comparing Direct Visualization with Indirect Targeting

