

Resource Summary Report

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[ExploreDTI](#)

RRID:SCR_001643

Type: Tool

Proper Citation

ExploreDTI (RRID:SCR_001643)

Resource Information

URL: <http://www.exploredti.com/>

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Description: A graphical toolbox developed in Matlab for exploratory diffusion (tensor) MRI and fiber tractography. It includes diffusion reconstruction approaches, analysis and visualization tools for fiber tractography, atlas based segmentation, and connectivity networks. It also provides a wide range of quality assessment and pre-processing tools. Main features: * Visualization of scalar and vector maps of various diffusion tensor properties * Display of principal diffusion vectors, cuboids, and ellipsoids with several color-encodings * Deterministic (streamline) and 'probabilistic' (wild-bootstrap) fiber tractography * Clustering of fiber tracts * Data quality assessment tools * HARDI reconstructions (Q-ball and spherical deconvolution imaging) * Tract-specific measurements * Tract-segment analysis * Motion / distortion correction (with B-matrix rotation!) * Other cool stuff... (see publication link)

Abbreviations: ExploreDTI

Synonyms: Explore DTI

Resource Type: image processing software, software toolkit, image analysis software, software resource, software application, data processing software

Keywords: diffusion mri, fiber tractography, dti, matlab, visualization, segmentation, connectivity network, quality assessment, pre-processing

Availability: Free, Freely Available

Resource Name: ExploreDTI

Resource ID: SCR_001643

Alternate IDs: nlx_153916

Record Creation Time: 20220129T080208+0000

Record Last Update: 20260808T185742+0000

Ratings and Alerts

No rating or validation information has been found for ExploreDTI.

No alerts have been found for ExploreDTI.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 320 mentions in open access literature.

Listed below are recent publications. The full list is available at [NIF](#) .

Filimonova E, et al. (2026) Multimodal brain MRI and clinical data in olfactory groove meningioma: a prospective data report. *Frontiers in radiology*, 6, 1809871.

Jellema PEJ, et al. (2026) Evaluation of tractography parameters for dentato-rubro-thalamic tract reconstruction during pediatric posterior fossa tumor surgery. *Magma (New York, N.Y.)*, 39(2), 275.

Bernabéu-Sanz Á, et al. (2026) Fronto-caudate and callosal microstructural alterations: unveiling multimodal MRI biomarkers in early Parkinson's disease. *The British journal of radiology*, 99(1180), 802.

Xu X, et al. (2026) Structural Connectivity Disruption and Structural-Functional Decoupling in Working Memory Networks Across Pre-Dialysis and Maintenance Hemodialysis End-Stage Renal Disease Patients. *CNS neuroscience & therapeutics*, 32(1), e70761.

Vlegels N, et al. (2026) Critical and non-critical connections not differently associated with either Alzheimer's disease or vascular pathologies. *medRxiv : the preprint server for health sciences*.

Colaes R, et al. (2026) Evaluating the T1w/FLAIR ratio as a proxy for myelin: Associations with myelin water Imaging, diffusion metrics, and cognition. *Neuroradiology*, 68(5), 1403.

Boons JHC, et al. (2026) Loss of microstructural integrity in left hemispheric white matter tracts is associated with poorer digits in noise understanding. *GeroScience*, 48(1), 1063.

Nabulsi L, et al. (2026) Structural Brain Network Alterations in Relation to Treatment and Illness Severity in Bipolar Disorder. *bioRxiv : the preprint server for biology*.

Ouyang Y, et al. (2026) Puerarin Attenuates White Matter Injury and Blood-Brain Barrier Disruption After Intracerebral Hemorrhagic Stroke via cGAS-STING Axis. *Biology*, 15(3).

Manzanera Esteve IV, et al. (2026) Diffusion MRI as A Biomarker for Monitoring Recovery After Surgical Repair of Traumatic Peripheral Nerve Injuries: A Longitudinal Case Series. Research square.

Nivins S, et al. (2025) Sex-specific white matter alterations in children exposed to high pregestational BMI. Obesity (Silver Spring, Md.), 33(6), 1113.

Haker R, et al. (2025) Characterization of Brain Abnormalities in Lactational Neurodevelopmental Poly I:C Rat Model of Schizophrenia and Depression Using Machine-Learning and Quantitative MRI. Journal of magnetic resonance imaging : JMIR, 61(5), 2281.

Laamoumi M, et al. (2025) A taxonomic guide to diffusion MRI tractography visualization tools. NMR in biomedicine, 38(1), e5267.

Eed A, et al. (2025) MRI investigation of orientation-dependent changes in microstructure and function in a mouse model of mild traumatic brain injury. Acta neuropathologica communications, 14(1), 8.

Drenthen GS, et al. (2025) Diffusion Tensor Imaging Reveals Altered Centrality of Pain-Related Regions in SCN9A-Associated Small Fiber Neuropathy. Journal of neuroimaging : official journal of the American Society of Neuroimaging, 35(6), e70105.

Madden M, et al. (2025) Jugular Foramen Syndrome: Concurrent Neurological Deficits, Advanced Imaging Findings, Underlying Diagnoses, and Outcomes in 14 Dogs (2016-2024). Journal of veterinary internal medicine, 39(3), e70088.

Varga A, et al. (2025) Temporal changes and implications of diffusion tensor imaging metrics and cerebral white matter volume in patients undergoing carotid endarterectomy - a prospective study. Neuroradiology, 67(4), 943.

Royo J, et al. (2025) Evidence for an Evolutionary Continuity in Social Dominance: Insights from Nonhuman Primate Tractography. The Journal of neuroscience : the official journal of the Society for Neuroscience, 45(33).

Meindl T, et al. (2025) Assisted Parkinsonism Diagnosis Using Multimodal MRI-The Role of Clinical Insights. Brain and behavior, 15(1), e70274.

Zhou M, et al. (2025) Oscillating gradient spin echo diffusion time effects implicate variations in neurite beading for the heterogeneous reduced diffusion in human acute ischemic stroke lesions. Magnetic resonance in medicine, 94(5), 2158.