

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

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: 20260905T132437+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 [Kravitz](#) .

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.

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.

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*.

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.

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.

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).

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*.

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.

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.

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.

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.

Denier N, et al. (2025) Brain Connectivity of the Cingulate Cortex in Alcohol Use Disorder: Exploring Its Association With Mindfulness. Addiction biology, 30(10), e70036.

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).

Fitzgerald J, et al. (2025) Evidence of neurocognitive and resting state functional connectivity differences in carriers of NRXN1 deletions. Journal of neurodevelopmental disorders, 17(1), 62.