

Resource Summary Report

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Diffusional Kurtosis Estimator

RRID:SCR_009563

Type: Tool

Proper Citation

Diffusional Kurtosis Estimator (RRID:SCR_009563)

Resource Information

URL: <http://musc.edu/cbi/dki>

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Description: A software tool for post-processing diffusional kurtosis imaging (DKI) datasets. DKE consists of a suite of command-line programs along with a graphical user interface (GUI). DKE is currently supported on 32- and 64-bit Windows platforms. Given a set of diffusion-weighted images acquired following a valid DKI protocol, DKE generates a set of kurtosis (axial, mean, radial) parametric maps. DKE also generates diffusivity (axial, mean, radial) and fractional anisotropy maps using both DKI and diffusion tensor imaging signal models. DKE features include: DICOM and NIfTI format support, interactive (GUI) as well as batch mode (command-line) processing, and rigid-body motion correction. DKE implements the methods described in the following paper: Tabesh A, Jensen JH, Ardekani BA, and Helpern JA. Estimation of tensors and tensor-derived measures in diffusional kurtosis imaging. *Mag Reson Med*. 2011 Mar;65(3):823-36. <http://www.ncbi.nlm.nih.gov/pubmed/21337412>

Abbreviations: DKE

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

Defining Citation: [PMID:21337412](#)

Keywords: application, c++, dicom, matlab, microsoft, modeling, magnetic resonance, nifti, quantification, super tensor, win32 (ms windows), windows, windows vista, windows xp

Availability: DKE License

Resource Name: Diffusional Kurtosis Estimator

Resource ID: SCR_009563

Alternate IDs: nlx_155744

Alternate URLs: <http://www.nitrc.org/projects/dke>

Record Creation Time: 20220129T080253+0000

Record Last Update: 20260905T133003+0000

Ratings and Alerts

No rating or validation information has been found for Diffusional Kurtosis Estimator.

No alerts have been found for Diffusional Kurtosis Estimator.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 8 mentions in open access literature.

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

Zhong T, et al. (2025) Preoperative prediction of brain invasion in meningiomas: a comparison of diffusion kurtosis imaging and diffusion tensor imaging. BMC neurology, 25(1), 422.

Sun Q, et al. (2025) Assessment of microstructural abnormalities in gray and white matter of minimal hepatic encephalopathy patients using diffusion kurtosis imaging and their associations with neurocognitive dysfunction. Frontiers in human neuroscience, 19, 1600100.

Huang Y, et al. (2025) Added prognostic value of histogram features from preoperative multi-modal diffusion MRI in predicting Ki-67 proliferation for adult-type diffuse gliomas. Quantitative imaging in medicine and surgery, 15(9), 8423.

Zhu R, et al. (2024) Diffusion and functional MRI reveal microstructural and network connectivity impairment in adult-onset neuronal intranuclear inclusion disease. Frontiers in aging neuroscience, 16, 1478065.

Wu B, et al. (2023) White Matter Microstructural Alterations over the Year after Acute Ischemic Stroke in Patients with Baseline Impaired Cognitive Functions. Neural plasticity, 2023, 6762225.

Chu X, et al. (2022) Comparison of brain microstructure alterations on diffusion kurtosis imaging among Alzheimer's disease, mild cognitive impairment, and cognitively normal individuals. Frontiers in aging neuroscience, 14, 919143.

Yao S, et al. (2022) Topologic Efficiency Abnormalities of the Connectome in Asymptomatic Patients with Leukoaraiosis. *Brain sciences*, 12(6).

Zhou J, et al. (2022) Diffusion kurtosis imaging in patients with tissue-negative transient ischemic attack. *Frontiers in neurology*, 13, 1052310.