

# Resource Summary Report

Generated by [SPARC SAWG](#) on Sep 17, 2026

## Diffusional Kurtosis Estimator

RRID:SCR\_009563

Type: Tool

### Proper Citation

Diffusional Kurtosis Estimator (RRID:SCR\_009563)

### Resource Information

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

**Proper Citation:** Diffusional Kurtosis Estimator (RRID:SCR\_009563)

**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:** 20260912T200014+0000

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## Ratings and Alerts

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

No alerts have been found for Diffusional Kurtosis Estimator.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 8 mentions in open access literature.

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

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.

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

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.

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