

Resource Summary Report

Generated by [PRECISE-TBI](#) on Sep 17, 2026

Atrophy Simulation Package

RRID:SCR_006046

Type: Tool

Proper Citation

Atrophy Simulation Package (RRID:SCR_006046)

Resource Information

URL: <http://www.rad.upenn.edu/sbia/>

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Description: THIS RESOURCE IS NO LONGER IN SERVICE. Documented on June 2, 2023. Software package used to simulate brain images with local growth / atrophy within a prescribed spherical region. Specifically, given an input image and its segmented image, the location of the center of the spherical region, and the radius of that sphere, it simulates new images that have tissue growth or shrinkage within that pre-specified brain region according to given rates (atrophy for rates less than one and growth for rates greater than one). The algorithm uses an iterative procedure that tries to achieve the given level of volumetric change for brain tissues within the region, by seeking a smooth deformation field, whose Jacobian determinants match the prescribed volume change rate within the region. Note that in the current software, the simulation of growth or atrophy for brain tissue requires that the input spherical region has to cover some CSF or background regions.

Abbreviations: Atrophy Simulation

Resource Type: simulation software, software application, software resource

Defining Citation: [PMID:15250639](#), [PMID:16689268](#), [PMID:16997578](#)

Keywords: neuroimaging, brain, topology, atrophy, mri, deformation, image registration, brain modeling, biomedical imaging, volume measurement, model, morphology, tissue atrophy, brain tissue

Availability: THIS RESOURCE IS NO LONGER IN SERVICE

Resource Name: Atrophy Simulation Package

Resource ID: SCR_006046

Alternate IDs: nif-0000-00265

Record Creation Time: 20220129T080234+0000

Record Last Update: 20260912T195634+0000

Ratings and Alerts

No rating or validation information has been found for Atrophy Simulation Package.

No alerts have been found for Atrophy Simulation Package.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 1 mentions in open access literature.

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

Smith CL, et al. (2015) Expanding the mammalian phenotype ontology to support automated exchange of high throughput mouse phenotyping data generated by large-scale mouse knockout screens. Journal of biomedical semantics, 6, 11.