Resource Summary Report

Generated by ASWG on Apr 30, 2025

3D Slicer

RRID:SCR_005619
Type: Tool

Proper Citation

3D Slicer (RRID:SCR_005619)

Resource Information

URL: http://slicer.org/

Proper Citation: 3D Slicer (RRID:SCR_005619)

Description: A free, open source software package for visualization and image analysis including registration, segmentation, and quantification of medical image data. Slicer provides a graphical user interface to a powerful set of tools so they can be used by end-user clinicians and researchers alike. 3D Slicer is natively designed to be available on multiple platforms, including Windows, Linux and Mac Os X. Slicer is based on VTK (http://public.kitware.com/vtk) and has a modular architecture for easy addition of new functionality. It uses an XML-based file format called MRML - Medical Reality Markup Language which can be used as an interchange format among medical imaging applications. Slicer is primarily written in C++ and Tcl.

Abbreviations: Slicer

Synonyms: Slicer, 3D Slicer: A multi-platform free and open source software package for visualization and medical image computing, 3D Slicer, 3DSlicer

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

Keywords: birn, diffusion, functional, na-mic (ncbc), nifti-1 support, registration, segmentation, visualization, volume, warping

Funding: NIH ;
NCRR ;
NIBIB ;
NCI ;

US Army ;
Telemedicine and Advanced Technology Research Center

Availability: 3D Slicer License

Resource Name: 3D Slicer

Resource ID: SCR_005619

Alternate IDs: nif-0000-00256

Alternate URLs: http://www.nitrc.org/projects/slicer

Record Creation Time: 20220129T080231+0000

Record Last Update: 20250430T055349+0000

Ratings and Alerts

No rating or validation information has been found for 3D Slicer.

No alerts have been found for 3D Slicer.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 1809 mentions in open access literature.

Listed below are recent publications. The full list is available at ASWG.

Chen K, et al. (2025) Habitat radiomics based on CT images to predict survival and immune status in hepatocellular carcinoma, a multi-cohort validation study. Translational oncology, 52, 102260.

Brun H, et al. (2025) Comparing assisting technologies for proficiency in cardiac morphology: 3D printing and mixed reality versus CT slice images for morphological understanding of congenital heart defects by medical students. Anatomical sciences education, 18(1), 68.

Wan Q, et al. (2025) Comparative analysis of deep learning and radiomic signatures for overall survival prediction in recurrent high-grade glioma treated with immunotherapy. Cancer imaging : the official publication of the International Cancer Imaging Society, 25(1), 5.

Picci G, et al. (2025) Anterior pituitary gland volume mediates associations between adrenarche and changes in transdiagnostic symptoms in youth. Developmental cognitive neuroscience, 71, 101507.

Bilgin M, et al. (2025) Computed Tomography-Image-Based Glioma Grading Using Radiomics and Machine Learning: A Proof-of-Principle Study. Cancers, 17(2).

Zhou K, et al. (2025) Association between impaired diffusion capacity and small airway dysfunction: a cross-sectional study. ERJ open research, 11(1).

Okar SV, et al. (2025) High-Field-Blinded Assessment of Portable Ultra-Low-Field Brain MRI for Multiple Sclerosis. Journal of neuroimaging : official journal of the American Society of Neuroimaging, 35(1), e70005.

Giraudo C, et al. (2025) Automatic assessment of body composition in children with lymphoma: results of a [18F]FDG-PET/MR study. European radiology, 35(1), 341.

Borde T, et al. (2025) Smart goggles augmented reality CT-US fusion compared to conventional fusion navigation for percutaneous needle insertion. International journal of computer assisted radiology and surgery, 20(1), 107.

Krokhmal A, et al. (2025) A comparative study of experimental and simulated ultrasound beam propagation through cranial bones. Physics in medicine and biology, 70(2).

Wang Y, et al. (2025) MRI-based deep learning and radiomics for predicting the efficacy of PD-1 inhibitor combined with induction chemotherapy in advanced nasopharyngeal carcinoma: A prospective cohort study. Translational oncology, 52, 102245.

Ye K, et al. (2025) Machine learning-based radiomic features of perivascular adipose tissue in coronary computed tomography angiography predicting inflammation status around atherosclerotic plaque: a retrospective cohort study. Annals of medicine, 57(1), 2431606.

Kim Y, et al. (2025) Age-related morphological changes of the pubic symphyseal surface: using three-dimensional statistical shape modeling. Scientific reports, 15(1), 494.

Qian L, et al. (2025) CECT-Based Radiomic Nomogram of Different Machine Learning Models for Differentiating Malignant and Benign Solid-Containing Renal Masses. Journal of multidisciplinary healthcare, 18, 421.

Lee Y, et al. (2025) Integrating deep learning and machine learning for improved CKD-related cortical bone assessment in HRpQCT images: A pilot study. Bone reports, 24, 101821.

Villoria EM, et al. (2025) Unilateral cleft lip and palate patients present cranial base modifications: a cross-sectional study. Brazilian oral research, 39, e004.

Sato N, et al. (2025) Chloroplasts with clefts and holes: a reassessment of the chloroplast shape using 3D FE-SEM cellular reconstruction of two species of Chlamydomonas. Protoplasma, 262(1), 207.

Grzybowski G, et al. (2025) Intraoperative Real-Time Image-Guided Fibular Harvest and

Mandibular Reconstruction: A Feasibility Study on Cadaveric Specimens. Head & neck, 47(2), 640.

Kim S, et al. (2025) Automated Audit and Self-Correction Algorithm for Seg-Hallucination Using MeshCNN-Based On-Demand Generative AI. Bioengineering (Basel, Switzerland), 12(1).

Sarah R, et al. (2025) Characterization and Machine Learning-Driven Property Prediction of a Novel Hybrid Hydrogel Bioink Considering Extrusion-Based 3D Bioprinting. Gels (Basel, Switzerland), 11(1).