



All You Can Do with Medical Imaging

All-in-one Medical Imaging Solution for Analysis,
3D Modeling and Digital Twin

MEDIP^{PRO}



All-in-one Solution for Segmentation and Image Analysis

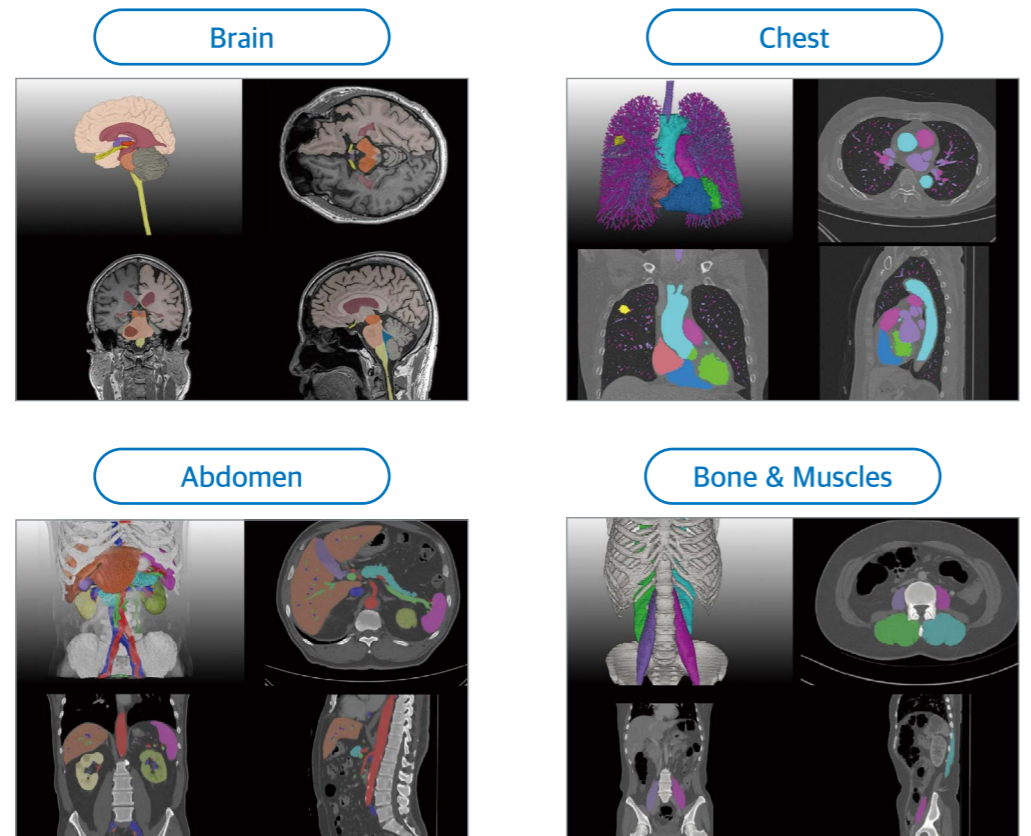


MEDIP PRO is a comprehensive software that processes medical images, enabling image analysis, 3-dimensional construction, modeling, and design with its automatic artificial intelligence (AI) segmentation technology at its core. It supports files of various formats, such as DICOM, OBJ, STL, 3MF, and VTK. All working files can be saved in MEDIP PRO file extension (.mip), which facilitates an optimal working environment for specialized medical image processing.

- All DICOMS (X-ray, CT, MR)
- NII (Mask, HU)
- 3D Files (OBJ, 3MF, VTK)
- 3D Printing (STL)

AI Segmentation (over 100 organs)

MEDIP PRO is equipped with One-Click Segmentation, which helps auto-segmentation and extracts virtually all human body components in medical images (CT and MR) including patients' organs and pathologic lesions.



Customizable Deep-learning Engine

Users can request customizing segmentation. We can create and utilize customized deep-learning engine modules from the masks obtained from regional segmentation.

- Specialized Segmentation
- Customized Module Construction

3D Visualization Process

MEDICAL IP establishes a vertical integration of technologies in the FDA-approved MEDIP PRO software for the multimodal materialization of patient-specific anatomy ranging from medical image processing, AI automated volumetric segmentation, CAD/CAM modeling, and Visual Printing to AR and VR technologies.

Visual Printing & AR Content

<Segmentation & Modeling for 3D Mesh Data>

<Visual Printing & AR Content>

NVIDIA OMNIVERSE is NVIDIA's cutting-edge real-time 3D graphics platform for facilitating digital twinning. MEDICAL IP and NVIDIA collaborated to introduce medical image-driven digital twinning in the OMNIVERSE platform. The collaborative innovation enables rapid prototyping of medical image-driven digital twins offering a state-of-the-art realistic rendering, various physical simulations, and multi-user connections.

Medical Image

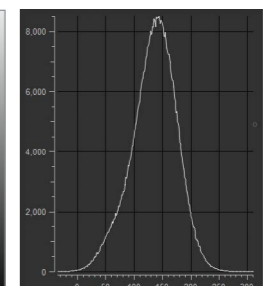
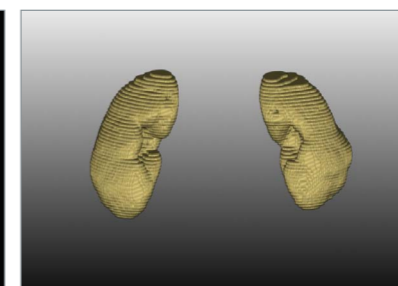
MEDIP PRO (Segmentation)

MEDIP PRO (CAD/CAM)

NVIDIA Omniverse (Ray-tracing)

Semi-automatic Segmentation (Draw Cut)

Draw Cut is a semi-automatic 3D segmentation Tool based on Foreseed and Backseed functions and enables fast and accurate segmentation of the massive learning data using the semi-automatic extraction of Interest of Region (ROI) function.



Category	Value
Size and Shape (k)	Calculate
Mesh volume	47608 (6917)
Voxel volume	47677 (5423)
Surface area	66074 (2510)
Surface area to	8 (1383)
Sphericity	8 (1628)
Maximum 3D d.	229 (6967)
Maximum 2D d.	238 (1548)
Minimum 2D d.	223 (525)
Maximum 2D d.	113 (7542)
Major axis length	217 (8742)
Minor axis length	106 (3294)
Least axis length	61 (7213)
Ellipsoid	8 (3307)
Features	8 (1918)
Shape-based(2D)	Calculate
Mesh surface	22 (417)
Pixel surface	24 (9122)
Perimeter	43 (3579)
Perimeter 1d (m)	1 (1623)
Sphericity	8 (4199)
Maximum 2D d.	10 (1098)
Major axis length	8 (668)
Features copy	Features calculate

Measurement and Texture Analysis (over 130 kinds)

Textures of segmented regions can be quantified to enable measurement and analysis of complex information embedded in medical images that cannot be obtained from visual observation. Analyzed data can be used in characterizing diseases and predicting treatment efficacy and prognosis under various clinical conditions.