

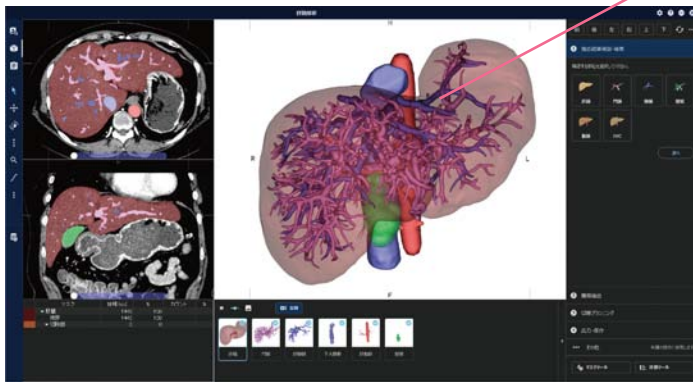
Surgical Imaging



Using contrast CT data of the liver, the liver parenchyma and vascular structures are automatically extracted with speed and precision. The streamlined workflow enables intuitive tools to segment tumors and resection planning in multiple ways, including dividing by portal or hepatic veins, and displays of volume measurements. All segmentations are stored as individual volumes that are color-coded and can be superimposed in any combination. This enables clear and immersive visualizations that assist in surgical planning.

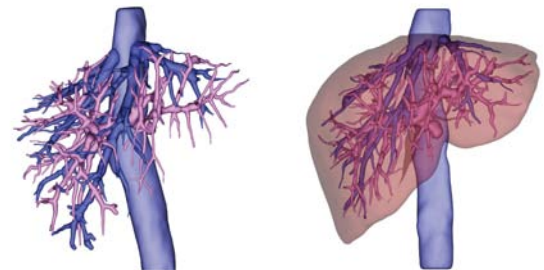
Inspiring visualization

Anatomical vasculature is automatically extracted from the arterial, portal and delayed phases of the CT images. By specifying the resection area, the cut surface envisioned by the surgeon is easily visualized.



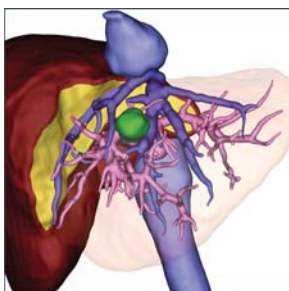
Automatic extraction of liver parenchyma, portal and hepatic veins

REVORAS automatically extracts the vasculature from CT images with high accuracy, reducing time and effort required for analysis.

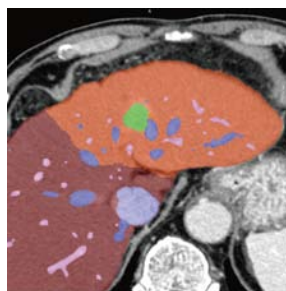


Define a realistic cut plane

Simulate a more realistic cut plane using a free-curve surface by plotting definition points either within the liver, or on the surface.



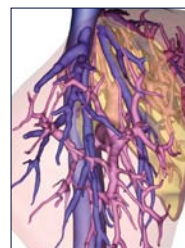
Plot on liver surface



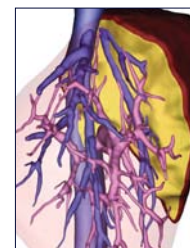
Plot within liver structure

Visualize the simulated resection area in multiple ways

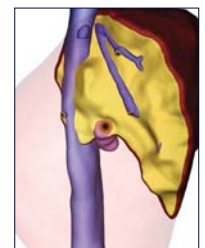
Understand the simulated resection area better by superimposing the structures in different combinations, changing the transparency, and displaying the stump view of the vessels on the cut surface.



Resection area including vasculature



Cut surface display with transparency adjustment



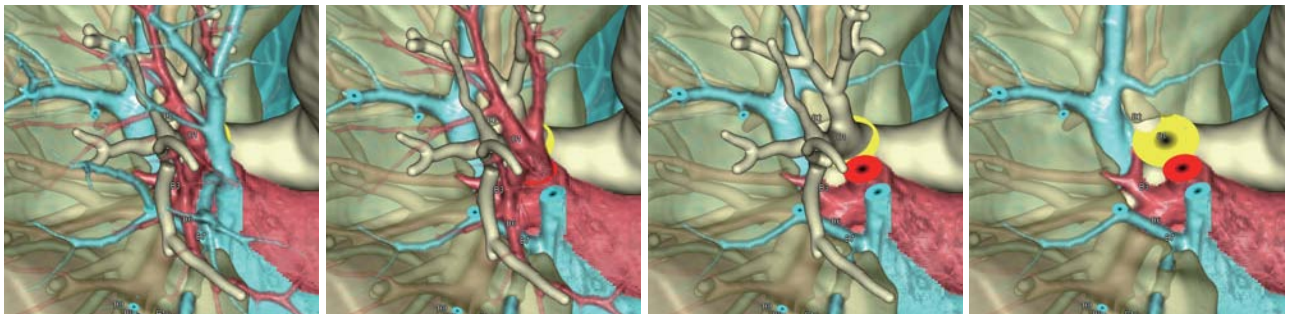
Stump view

Easy. Accessible. Imaging tools for surgeons

3D simulation images are not fully utilized in surgery due to the time 3D segmentation takes. REVORAS was developed to solve these issues for surgeons.

Stump display supports understanding of patient's arteriovenous/bronchial anatomy

The stump of the blood vessels and bronchi to be dissected can be visualized, enabling simulated images of the actual surgical procedure. The display of the dissected vessels can be toggled on and off, and the intersegmental plane can also be adjusted.



Prior to dissection

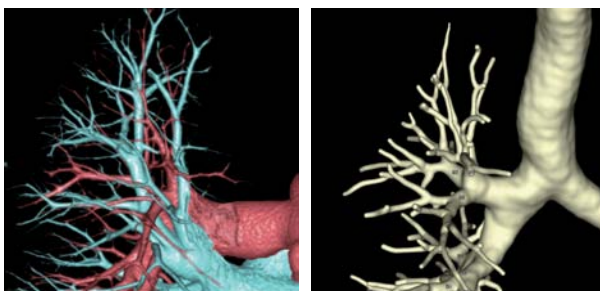
After pulmonary vein dissection

After dissection of the pulmonary artery and vein

After bronchial and pulmonary arteriovenous dissection

High-precision automatic extraction

Upon opening data, the bronchi, pulmonary arteries and veins are automatically extracted, reducing time and effort for analysis.

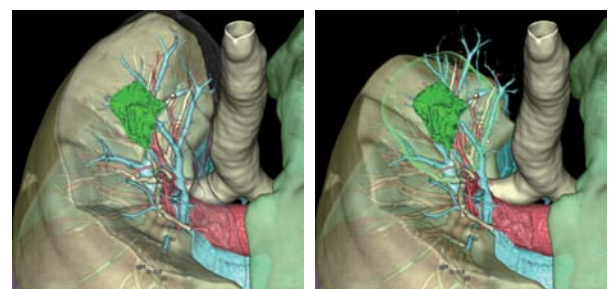


Pulmonary arteries and veins

Bronchi

Multiple methods for simulating segmentectomy

Automatic segmentation of the resected area can be simulated based on the lesion position, specified margin, or manually designated branches of the bronchi or pulmonary artery.



Automatic segmentation according to tumor position

Automatic division based on specified margin

AI-Driven Innovation for Advanced Surgical Planning

In the ever-evolving field of surgery, precision and efficiency are critical. **Ziosoft** empowers surgeons with **AI-driven medical imaging technology**, designed to help transform pre-surgical planning and optimize patient outcomes.

Addressing Key Surgical Challenges

- Developing a **comprehensive surgical plan** is time-intensive, impacting workflow.
- **Accuracy and precision** are essential for successful procedures.
- **Preserving organ function** while ensuring "clean margins" is a priority.
- Achieving **optimal surgical outcomes** requires comprehensive advanced visualization and planning.

Why Choose Ziosoft?

With over two decades of expertise, **Ziosoft** enables the way in **multi-modality AI-powered medical imaging** for next-generation surgical therapies. REVORAS software **automatically generates high quality 3D models** from CT and MRI scans, equipping surgeons with **intuitive, real time visualization tools** for more confident decision-making.

Transforming Surgical Planning with AI

- **Real-time 3D imaging** enhances pre-surgical preparation.
- **AI-powered segmentation** improves anatomical visualization.
- **Quantitative image analysis** unlocks deeper clinical insights.
- **Color mapping** enhances visibility for critical structures.
- **Organ-sparing precision** supports better patient outcomes.

The Future of Surgical Planning

Ziosoft continues to **push the boundaries of AI-driven imaging**, offering a constantly evolving **portfolio of applications** for **efficient disease analysis and next-generation surgical planning**. REVORAS helps surgeons to **plan with more confidence**—today and into the future.



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