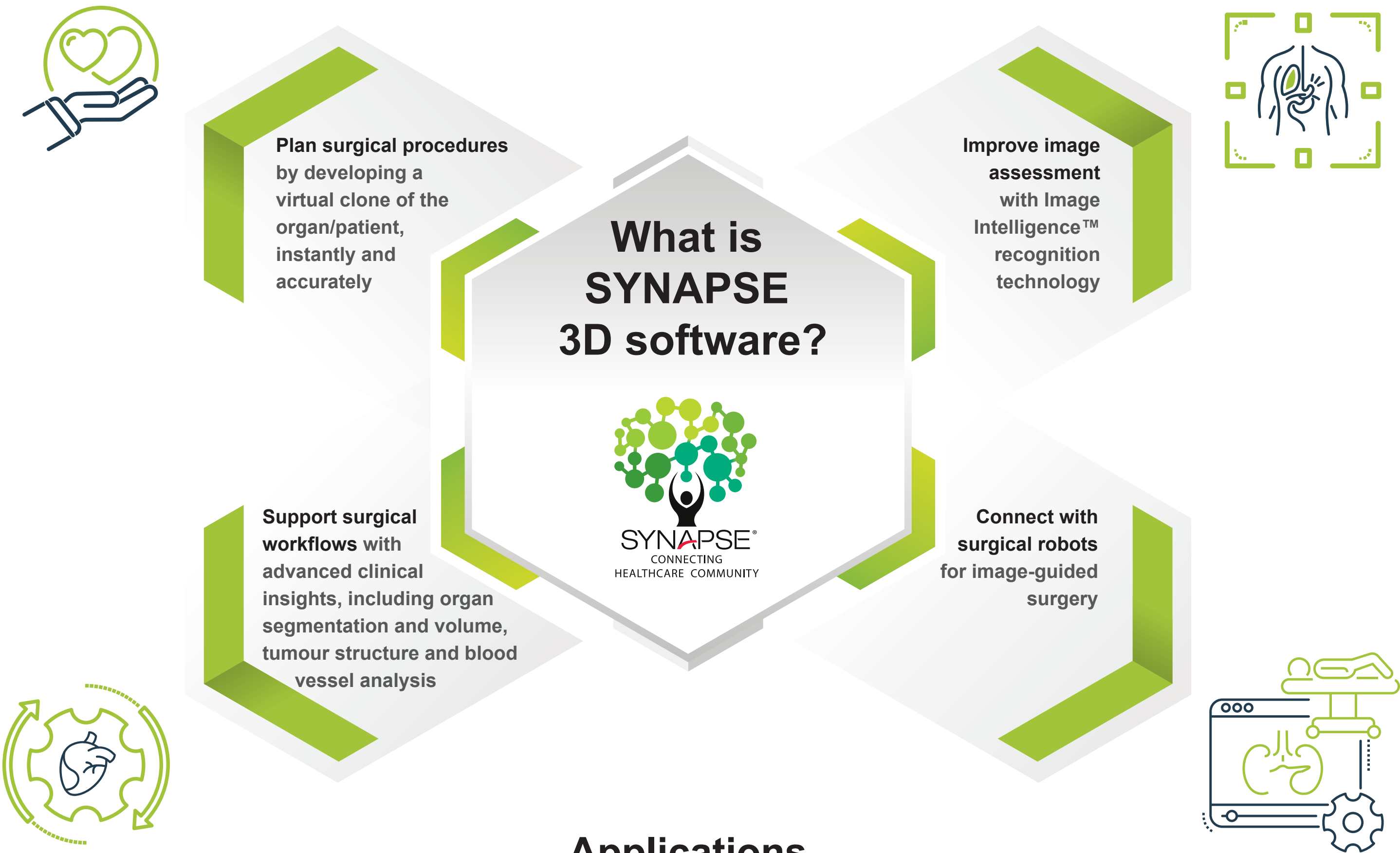


SYNAPSE 3D software: surgical planning for every patient, without data transfer.

MAKING THE COMPLEX SIMPLE

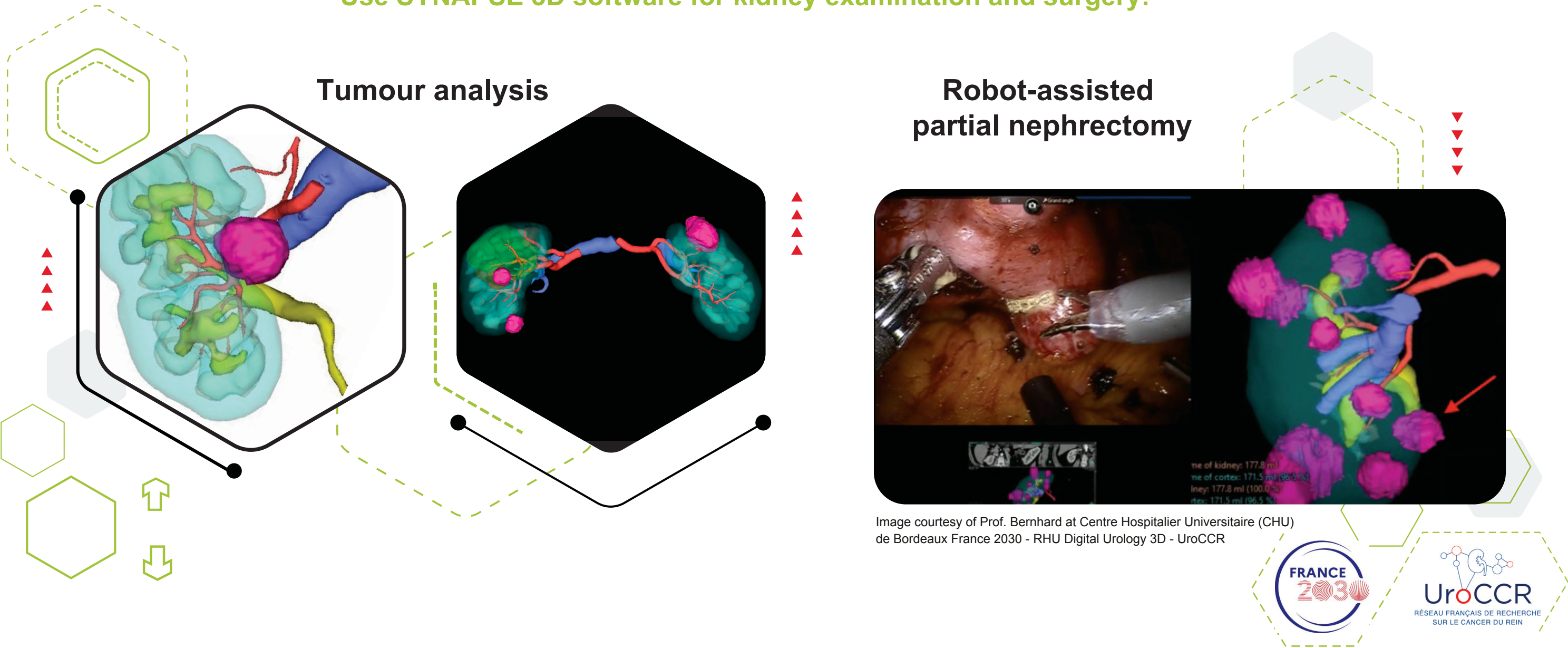
SYNAPSE 3D™ software is a surgical planning tool designed to enhance medical images, guiding surgeons with accurate data to simulate complicated procedures, and helping to improve patient outcomes with increased precision.



Applications

Speciality areas include urology, pulmonology, gastroenterology, oncology, neurology and cardiology.

Use SYNAPSE 3D software for kidney examination and surgery:



What are the benefits?

- Achieve precise negative margins in tumour resection:
 - Help reduce the chance of recurrent pathology
 - Help retain the maximum amount of healthy tissue
- Identify anatomical variations to analyse patient variability
- Help reduce surgery time
- Achieve better patient outcomes with more conservative procedures
- Easy to use with no prior knowledge of the software

Securely integrate into existing workflows, without disruption

- Optimise your medical images using SYNAPSE 3D software
- Safely store them within your facility's PACS, ensuring data security and compliance with GDPR
- Images are easily accessible to clinicians when they need them

Preoperative Simulation for Nephrectomy Automatic Extraction of Kidney and Vessels for 3D Visualization

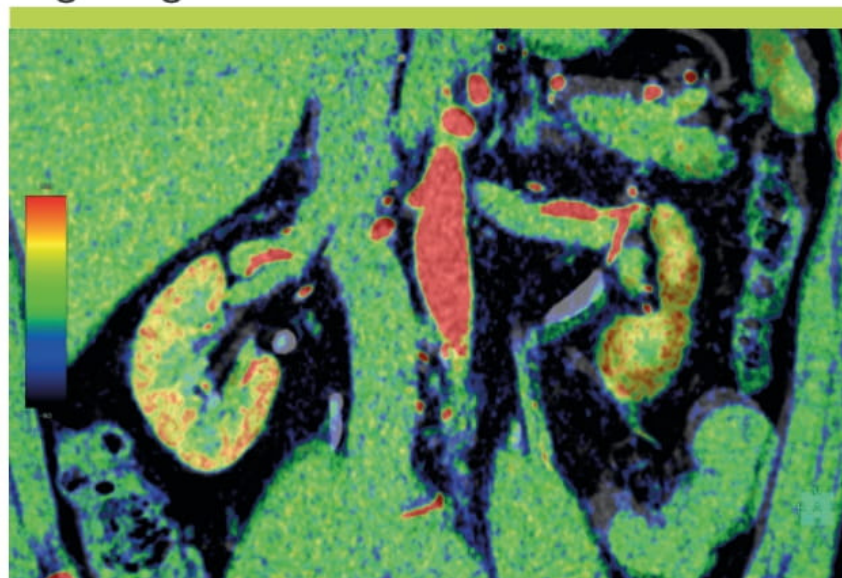
Recommended Image ➤ Contrasted CT images. Early artery phase and urinary phase

Analysis image conditions ➤ Kidney, ureters

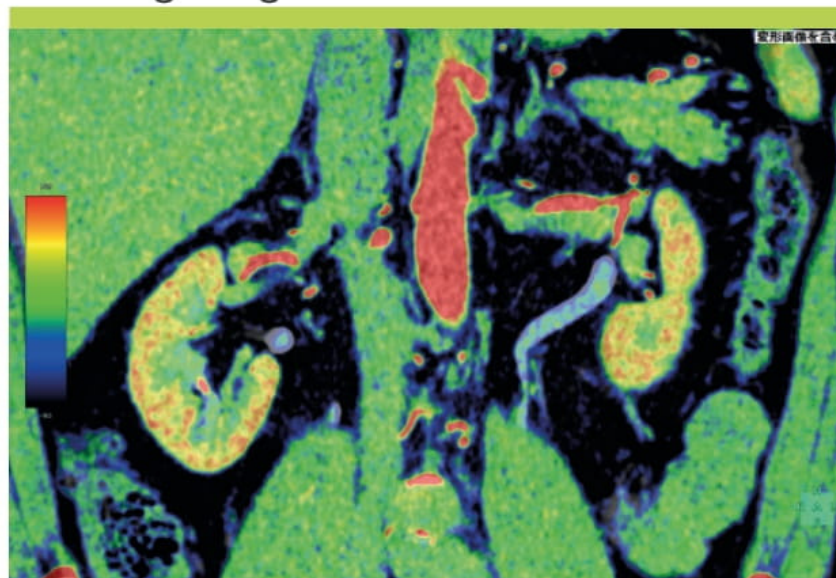
Automatic segmentation of kidney (cortex, medulla) and vessels; Ureters and tumor 3D image for nephrectomy pre-operative simulation.

➤ Non - rigid Registration

Rigid registration (linear)

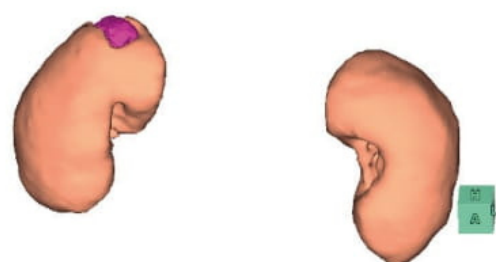


Non-Rigid registration (deformable)

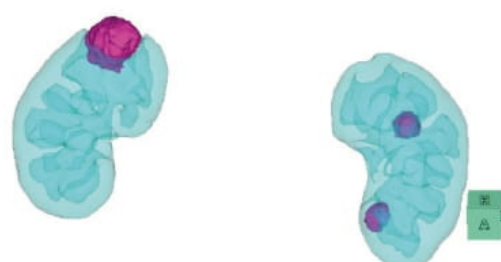


➤ One-click Extraction

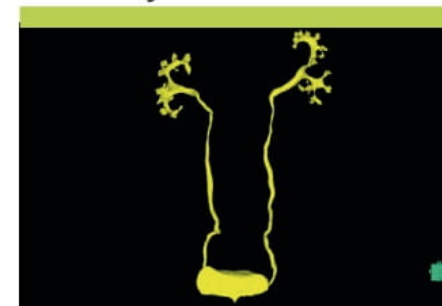
Kidney



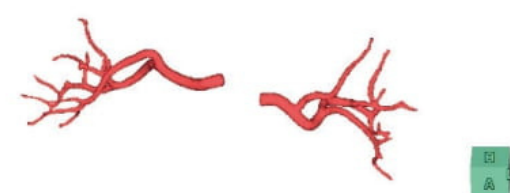
Kidney Cortex



Urinary Tract



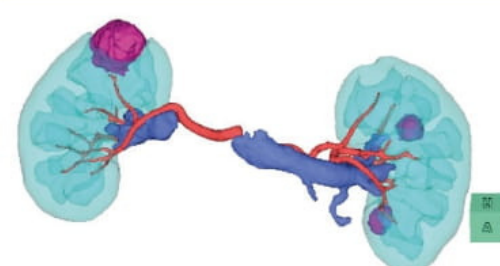
Renal Artery



Renal Vein



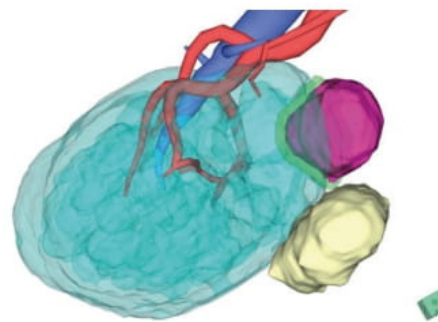
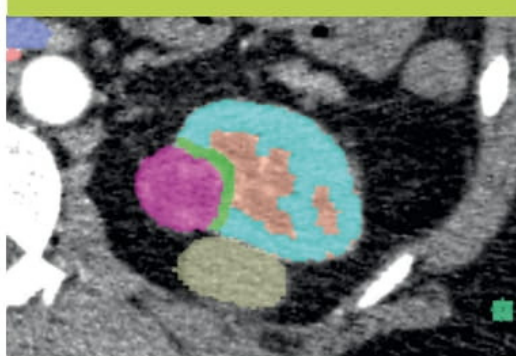
3D Fusion Image



Able to extract each parts for creating 3D image.

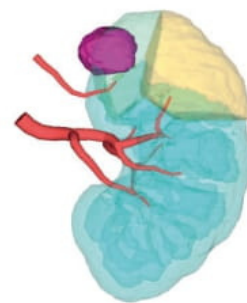
Preoperative simulation of partial nephrectomy

Tumor Scoop Simulation



Simulate tumor removal scoop with single-click on tumor.

Clamped Nephrectomy Simulation



CSimulated partial nephrectomy simulating post-operation renal functionality by extracting artery territory.

Variety of Views for Preoperative Simulation

Visualization of VR and surface to view vessels and calices which can be exported as .stl file for 3D printing.

VR



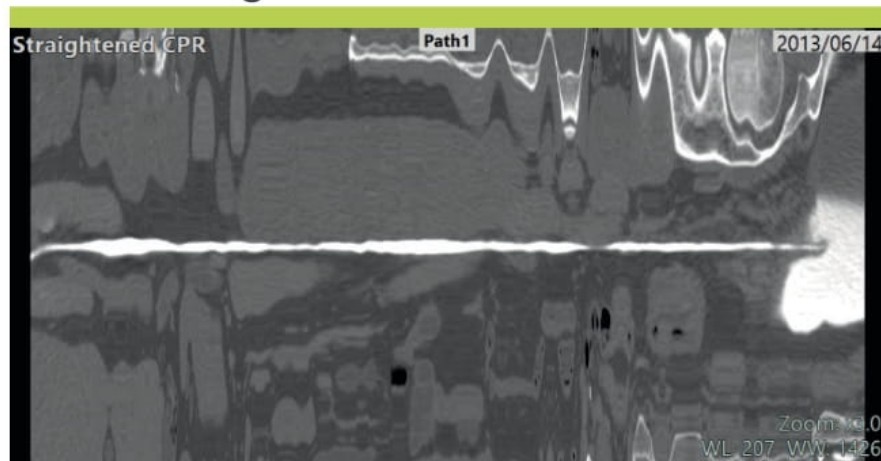
Surface View



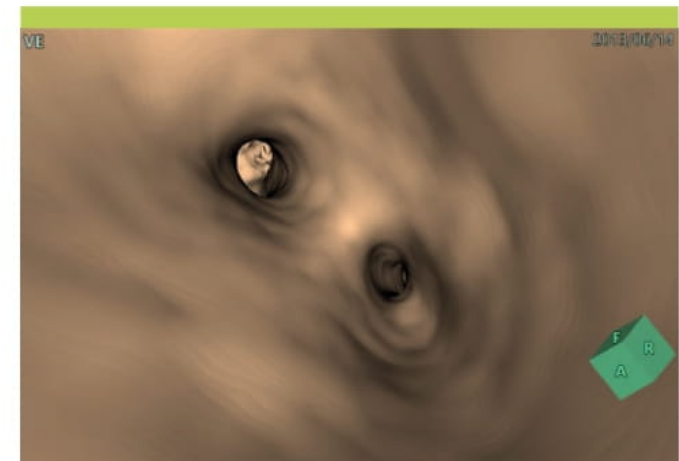
Other Functionality

3D Basic tools such a ureter straight CPR and VE View

Ureter Straight CPR



Ureter VE View



These views can be used for observing ureteral calculus and cancer invasion