

Synapse 3D Clinical Application

# Pancreas Analysis

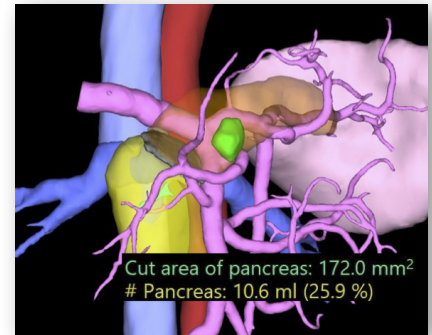
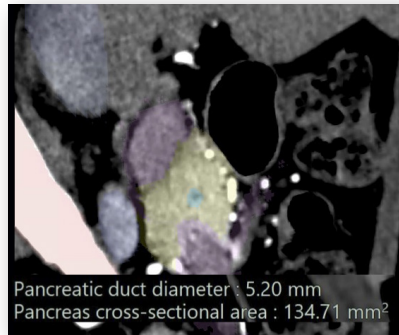
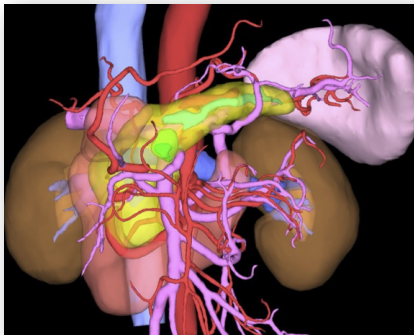
Automatically segment and extract the pancreas and nearby vessels and regions from contrast-enhanced CT images to display results in 3D for preoperative planning. The remnant pancreas volume and resection plane area can also be observed.

- Recommended image type      ▶ Contrast-enhanced CT images (up to three phases)
- Analysis target                    ▶ Pancreas

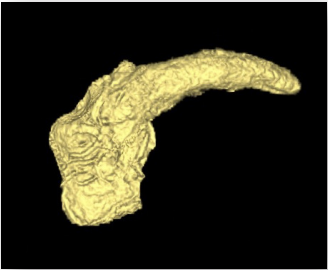
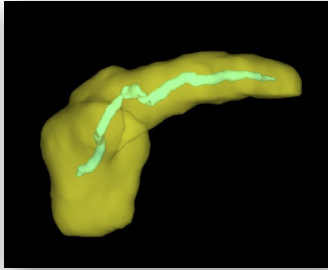


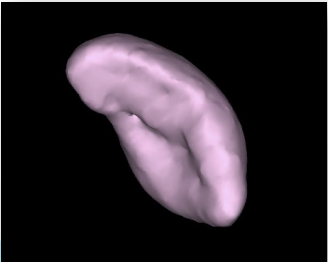
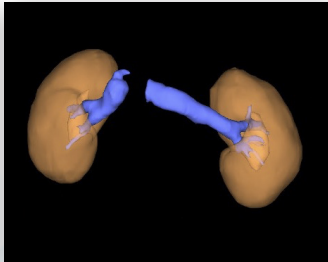
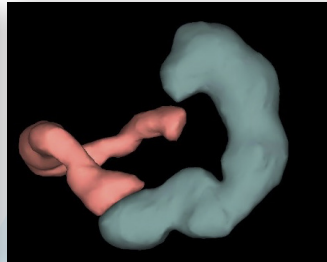
## VARIOUS DISPLAYS FOR PREOPERATIVE PLANNING

Automatically extract vessels and regions for assistance with preoperative planning and volume calculation for pancreatectomy.

- Display pancreas' peripheral region.
- Measure resection plane and pancreatic duct diameter.
- Calculate volume of remnant pancreas.

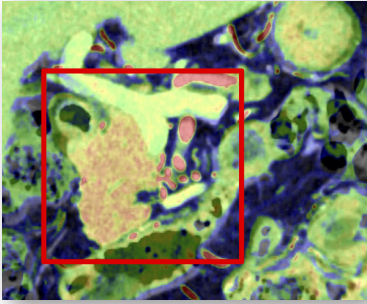


## AUTOMATIC SEGMENTATION

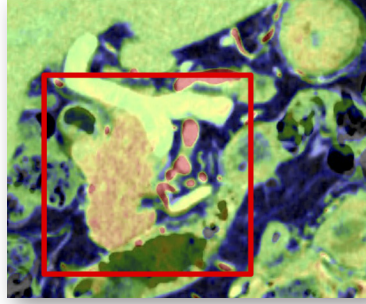
■ Pancreas	■ Pancreatic duct	■ Portal veins	■ Arteries
			
■ Spleen	■ Kidney/renal vein	■ Stomach/duodenum	<ul style="list-style-type: none"> <li>• Use deep learning functionalities trained by arterial and portal phase CT images to segment pancreatic parenchyma, duct, portal veins, arteries, etc.</li> </ul>
			

## IMAGE REGISTRATION

### Rigid registration (linear)



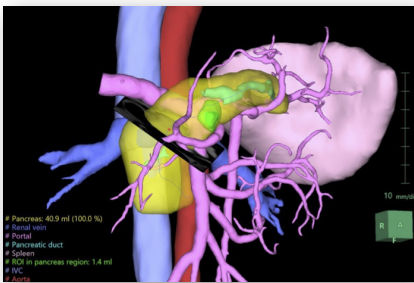
### Non-rigid registration (deformed)



- See more accurate registration.

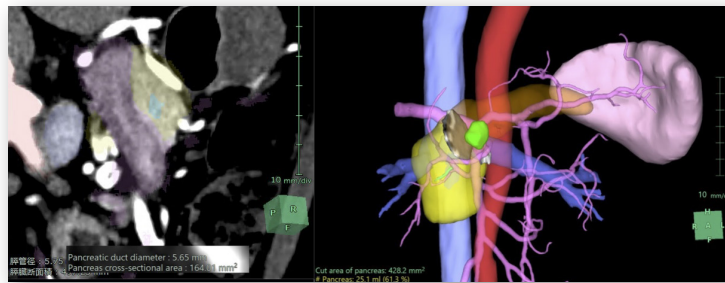
## RESECTION PLANNING

### Resection planning



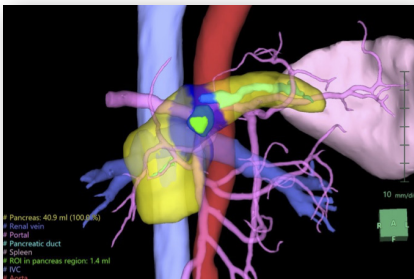
- Access from any position by moving 3D orthogonal plane.

### Resection plane



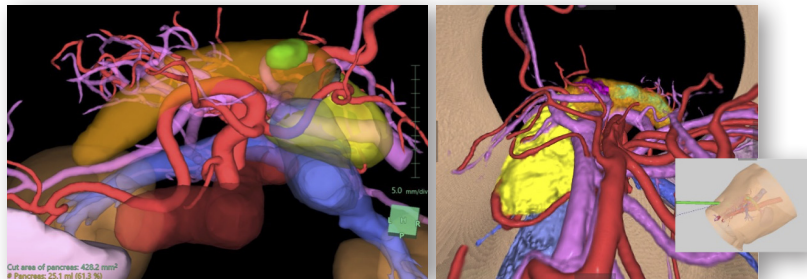
- View in 2D or 3D. Display orthogonal cross-section view to measure resection plane and pancreatic duct diameter.

### Margin



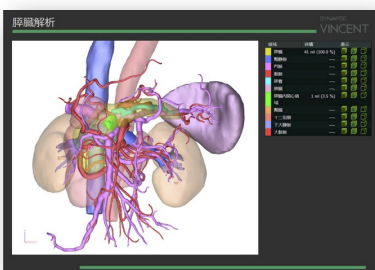
- Set pancreas as region of interest and adjust distance.

### Operation simulation



- Adjust to an appropriate angle for presurgical planning. Resection simulation information can also be launched in the Endoscope Simulator.

### Export as 3D PDF



- Use the surface option to export pancreas analysis results as 3D PDF for use in operating room.

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