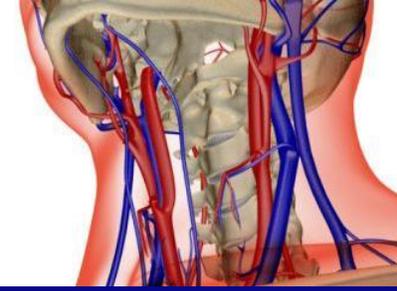


Visualize:Vascular



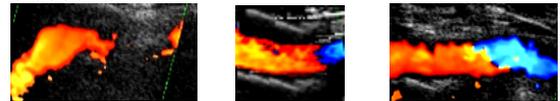
Generating focused 3D rendering from 2D standard ultrasound images, *Visualize:Vascular*[™] effectively tracks the true lumen in arterial pathways. It focuses on the lumen and residual lumen by essentially removing the other image content revealing a 3D rendering of the active area through which the blood can flow and provides direct luminal measurements to calculate luminal reduction directly from ultrasound imaging.

Salient Imaging's patented algorithm technology uses pattern recognition to highlight regions of interest such as the residual lumen in a vessel. The technology reveals the true lumen from the vessel walls and anything that might be trapped against or included in the walls such as plaque, hemorrhagic eruptions, intima-media thickening or other types of lesions.

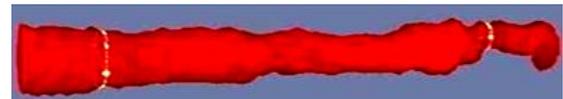
Pattern recognition views image content similar to the way that the eye observes information using grey scale, contrast and sharpness to determine the pattern within the image. It then uses the pattern to identify the interfaces between the lumen and its neighboring components.

Visualize:Vascular uses images acquired especially for 3D Rendering. The images are gathered as 10 second cine loops captured when scanning over the area of concern in transverse mode. All images must be obtained using Salient's Data Acquisition Protocol.

Ultrasound:



Visualize:Vascular:



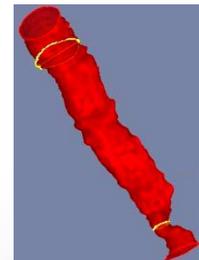
Distal

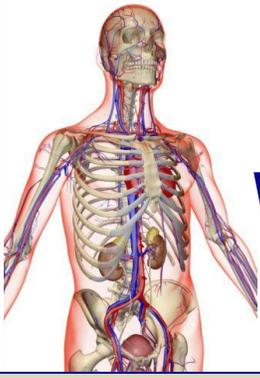
Mid

Proximal

B-mode ultrasound images of pICA, mICA and dICA in the top views show some plaque visible in the pICA. The lower view is of the same study using *Visualize:Vascular* which automatically measures luminal reduction at 76%. Visualize clearly shows a chunk of plaque on the right as the gray encroaching into the lumen. Note that the 3D also shows a sleeve that continues to the mid ICA. The vessel returns to normal width in the distal ICA.

Discrete views in ultrasound show individual segments while *Visualize* gives the complete picture, from any direction in 3D:





Visualize:Vascular

Visualize:Vascular is a software algorithm platform provided as a service that processes ultrasound images received in DICOM format. The results can be displayed in 2D or 3D. The system automatically generates results showing the active luminal pathway and summarizes luminal diameters for the targeted vessel segment. *Visualize:Vascular* generates DICOM SC, DICOM SR or encrypted PDF formats which can be printed directly, sent to a DICOM destination or archived on PACS for later review. Visualize has US FDA clearance.



Ultrasound measures velocities which are used to categorize the level of concern into brackets.

- In this case, there is color drop out in the ultrasound causing the velocity measurement to be made further to the left.
- Doppler velocities indicate that the patient has Moderate Stenosis, 50-60%.



Visualize images through the entire segment and automatically calculates the discreet luminal reduction by finding the maximal and minimal points in 3D, shown in yellow.

- *Visualize* data reveals that the patient has 85% Luminal Reduction which is defined as Severe Stenosis using the NASCET criteria.



MRA confirms that the patient has Severe Stenosis.

The ultrasound image shows that there is plaque present. *Visualize:Vascular* reveals the salient detail, proving that the plaque is significant using the same ultrasound equipment in the convenience of the office.

3D rendering can help physicians and clinicians better understand complex situations such as partial occlusions, tortuosity and other conditions which can cause luminal reduction. This information is useful in identifying concerns and facilitating tracking patients with vascular conditions. *Visualize:Vascular's* 3D rendering is intended to be used as a secondary diagnostic procedure by all physicians monitoring vascular health; including general practitioners, cardiologists, radiologists, vascular surgeons, pain management specialists, and vascular technologists.

SalientTM Imaging

*Critical Diagnostic Focus
in Medical Images*

One Elm Street
Milford, NH 03055
603-272-6066
www.salientimaging.com