

Case Study: 3D *Visualize* Shows More Detail in the ICA

Concern: Patient has history of moderate atherosclerosis and has been monitored with Carotid Duplex Ultrasound exams every 6 months for years. This exam places the patient in the next higher category. The vascular ultrasound results have quite a range from 210 to 276 cm/sec., the lower end of the range is essentially the same category. Is the patient slowly creeping up, is there a major change or is this exam anomalous?

Ultrasound images in the area of concern show the presence of plaque as previously noted which explains the turbulence. There is also heavy surrounding shadow which might be occluding more plaque buildup. It is difficult to interpret.

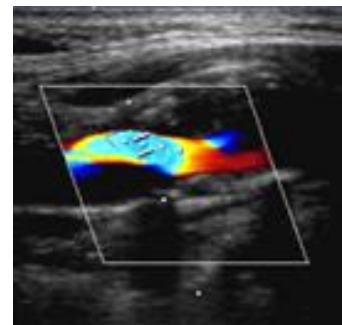
More imaging is needed to make a final diagnosis. 3D *Visualize* uses grey scale imaging to provide more detail. *Visualize* places the patient two categories higher than the previous exam. CTA was later performed corroborating the results from *Visualize*. *Visualize* is another valuable tool for ultrasound.

Summary:

Left ICA	Carotid Duplex		<i>Visualize: Vascular™</i>	CTA
	PSV/EDV	Stenosis	Stenosis	Stenosis
Measured Results	224/95	70-79%	81%	81%
Category		Severe	Critical	Critical

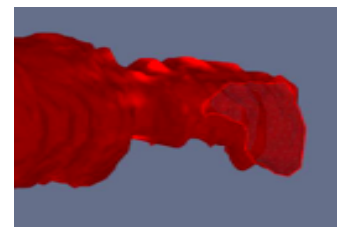
Carotid Duplex Exam:

Left ICA (PSV/EDV)	
D CCA	77/19
P ICA	210/84 224/95 276/90
M ICA	195/44
D ICA	150/34



Visualize:Vascular™ 3D Rendering Exam:

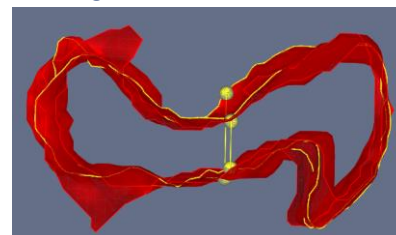
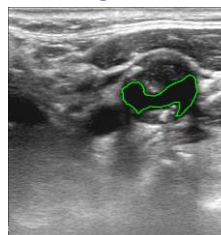
Left ICA	
<i>Visualize:</i>	81%



Original TRV:



Showing *Visualize* algorithm segmentation:



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1/1

Visualize: Vascular Report

Patient Name [REDACTED]
 MRN [REDACTED]
 DOB (Age) 6/7/1939 (75 years)
 Sex Male
 Date Reported 6/17/2014

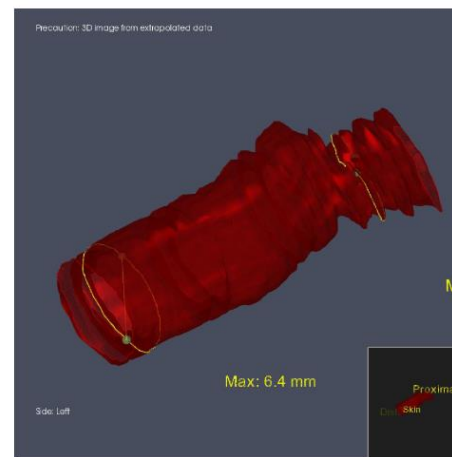
Exam Date 6/16/2014
 Accession Number [REDACTED]
 Exam Type 76377 3D Reconstruction
 Report Author [REDACTED]
 Referring Physician [REDACTED]

④ Finding - L ICA

Vessel Segment: Transverse - L ICA - 3D Reconstruction

3D #1

3D #2



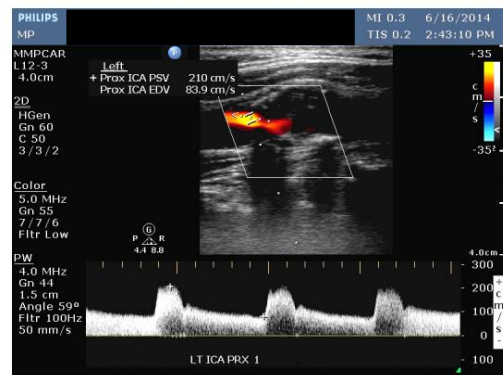
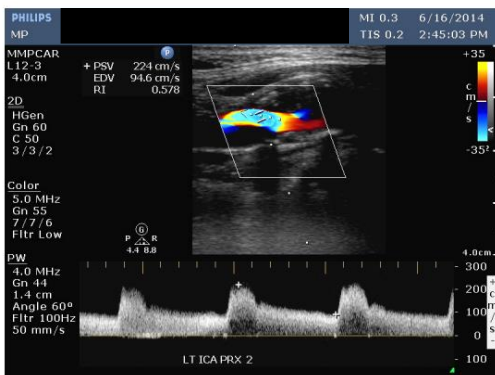
Luminal diameter: Min 1.2, Max 6.4 mm

Luminal reduction: 81% *

Vessel Segment: Sagittal - L ICA - Observations

Series 1 Image 30

Series 1 Image 28



Results from *Visualize:Vascular* for this case study