Navix launches Visualize:Vascular™ with partner Medipattern® to effectively track the active intraluminal arterial pathway to the brain. It allows the clinician to select a region of interest focusing on the residual lumen in the carotid arteries by essentially removing the other image content revealing a 3D visualization of the active conduit through which the blood can flow to the brain. Visualize:Vascular renders the 3D visualization from the information in each 2D frame within a cine clip and provides luminal measurements.

“Visualize:Vascular allows me to see the structure of the open space in the artery, the residual lumen, which is available for blood flow to the brain. This can be seen in both two and three dimensions which helps us to pinpoint the area of critical narrowing in the blood vessel. The beauty of this technology is that it is totally non invasive and can serve as an adjunct to standard duplex ultrasound…. Clinically this is a tremendous asset for us and will ultimately lead to improved patient care.”

- Francis J. Porreca, MD, FACS, RPVI, Director of Vascular Surgery Weiler Division of Montefiore, The University Hospital of the Albert Einstein College of Medicine

Medipattern’s patented technology platform uses pattern recognition to highlight regions of interest, such as the lumen, in a vessel. Pattern recognition technology views image content similar to the way that the eye sees: grey scale, contrast and sharpness, to determine the pattern within the image. The technology reveals the arterial lumen from the vessel walls and any other materials that might be trapped against the arterial walls. Visualize finds the maximum and minimum points which can be viewed along the length of the 3D rendering and measures luminal diameter or cross sectional area to aide in calculating luminal reduction.
Visualize:Vascular is a software application package designed to view and quantify image data acquired from commercially available ultrasound systems.

See 3D from 2D

The results can be displayed in 2D or 3D. The system automatically generates reports showing the active luminal pathway summarizing luminal diameters and the cross sectional area of the lumen for the targeted vessel segment. Visualize:Vascular uses images acquired in conjunction with a cerebrovascular exam. The images are gathered during a 10 second transverse cine clip from the clavicle to the mandible. All images must be obtained using the Data Acquisition Protocol provided by Medipattern.

Visualize:Vascular is intended for use by cardiologists, radiologists, vascular surgeons and vascular technologists. Visualization can help physicians and clinicians better understand complex situations such as tortuosity, partial occlusions, and luminal reduction in 2D and 3D. The active lumen shows the pathway of vital flow to the brain. This information is useful in identifying concerns and tracking patients with concerns.

Visualize:Vascular is a software package that can be loaded on any Windows® 7 or XP PC. It processes ultrasound images received in DICOM format via a DICOM network or it can import DICOM formatted images from removable media. Visualize:Vascular generates a separate report in PDF, DICOM PDF, DICOM SC, DICOM SR formats which can be printed directly, sent to a DICOM destination or archived on PACS for later review. Visualize is commercially available in the USA. Medipattern is an ISO 13485:2003 compliant company. The US FDA has cleared Visualize:Vascular for commercial use by a licensed practitioner in the USA.