



(T)EVAR Assist Solutions¹

Feel confident

Planning, guidance and follow-up of (T)EVAR cases may be delicate when dealing with complex anatomies.

Leveraging pre-operative imaging and planning data during the intervention may be difficult.

Under 2D fluoroscopic imaging, (T)EVAR procedures can require a significant amount of contrast media, prolonged radiation exposure, and time. A 3D view of vessels anatomy could help you perform complex interventional procedures.

Surveillance of the aneurysm sac with reliable measurements can be a challenge.

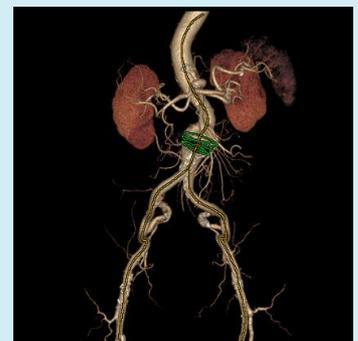
Overview

(T)EVAR Assist is an integrated solution to help plan, guided and follow-up (T)EVAR cases :

- Plan with VesselIQ Xpress and VVI, the AW CT vascular analysis software that delivers 0-click bone removal and tracking of the aorta as well as key anatomy measurements
- Guide with Innova Vision that overlays 3D datasets from CT, MR or 3D rotational images on live fluoroscopic images in a single click.
- Follow-up using semi-automatic sizing of the thrombus and compare mode

What's new

- Plan on CT Angiography using 0-click Bone Removal and tracking of the aorta
- 1-click overlay of 3D CTA prepared data on top of live fluoroscopic images
- Directly register from the control room or at table side CT models with only 2 fluoroscopy views for efficiency in procedure time and dose.
- Register in real time to C-arm and table movements, field of view, source-to-image distance
- Semi-automatic sizing of the thrombus



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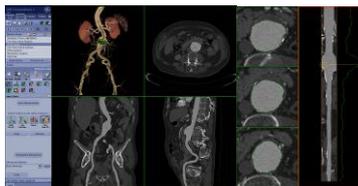


Features

1. Planning with VessellQ Xpress, VVI and Synchro3D

Aorta analysis

- 0-click unobscured vessels visualization and tracking of the aorta



- Pre-defined or manual measurements such as vessels length and diameter can be performed and reported.

Save State

- Save the current state of the application including:
 - 3D models
 - Vessel tracking
 - Measurements
 - Vessel contours.
- Saved state can be restored for
 - Future review or collaborative approach
 - Transfer to the PACS
 - Transfer to the AW workstation in the Angio suite to use the 3D models in Innova Vision.

Synchro3D

As user defines on 3D models the optimal viewing angle for endograft deployment, Synchro3D displays the matching C-arm angle to use on the interventional suite. During the intervention, this optimal angle can be sent from the AW to the C-arm.

Using the Follow-the-gantry mode, the 3D model orientation can also follow the gantry movements in real time

2. Live 3D guidance with Innova Vision

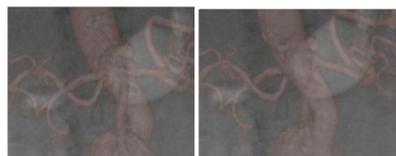
Multimodality Fusion

- Overlay 3D models from CT, MR or 3D rotational images on live fluoroscopic image.
- 3D models acquired in GE Angio suite are automatically registered when exported on live fluoroscopic images.
- Directly register CT and MR 3D models with only 2 fluoroscopy views for efficiency in procedure time and dose

Ease of use and enhanced visualization

- The position of the 3D model is adjusted in real time along the procedure, following the movement of the gantry, source-to-image distance, field of view, image flip, and table motion.
- A variety of tools enhance visualization and guidance capability:

- With BackView visualize a 3D model from the opposite side without losing registration on the fluoroscopy and moving the gantry:



- Adjust 3D model opacity and brightness
- Display user-defined landmarks.
- Digital Zoom

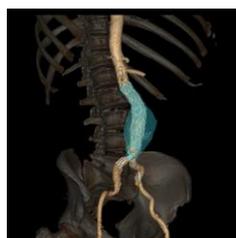
3. Aneurysm surveillance with VessellQ Xpress

Aneurysm sac assessment

- Assess the volume and diameter of the aneurysm sac using the semi-automatic thrombus detection that requires drawing contours on two images.
- The program performs contour detection for the vessel lumen and thrombus.
- Edit contours with a selection of drawing tools that interpolate to other slices for fast editing.
- Track condition progression over time with volume measurements of the thrombus.
- Additional measurements include maximum diameter and mean diameter

Multiple StudyComparison

You can compare a previous study with the current study visualization.



Innova Vision is intended to enable users to load 3D datasets and overlay and register in real time these 3D datasets with fluoroscopic or radiographic images of the same anatomy in order to support catheter/device guidance during interventional procedures.

System Requirements

- Volume Viewer
- AW VolumeShare 4
- In-room AW monitor

¹ (T)EVAR Assist Solution refers to Volume Viewer Innova, VessellQ Xpress, Synchro3D and Innova Vision

Indications for Use

VessellQ Xpress is a post processing application option for the Advantage Workstation (AW) platform, CT Scanner or PACS stations, which can be used in the analysis of 2D and 3D CT Angiography images/data derived from DICOM 3.0 compliant CT scans for the purpose of cardiovascular and vascular disease assessment. This software is designed to support the physician in assessment of vessel analysis, pre/post stent planning and directional vessel tortuosity visualization.

Innova Vision is intended to enable users to load 3D datasets and overlay and register in real time these 3D datasets with fluoroscopic or radiographic images of the same anatomy in order to support catheter/device guidance during interventional procedures.

Volume Viewer, including Volume Viewer Innova and Synchro3D, is medical diagnosis software that allows the processing, review, analysis, and communication of 3D reconstructed images and their relationship with originally acquired images from CT, MR, X-Ray Angiography, and PET scanning devices. The combination of acquired images, reconstructed images, annotations, and measurements performed by clinicians are intended to provide referring physicians with clinically relevant information for diagnosis, surgery, and treatment planning.

Multimodality Synchro3D is a software that allows to align the viewing incidence of the 3D model with the incidence of the X-ray beam on the X-ray gantry. This alignment is intended to:

- Position the gantry on the same incidence as the 3D model showing the optimal view angle of the anatomy for further X-ray acquisitions (so-called 3D Send Angles).
- Continuously and automatically display the 3D model on the same view as the current gantry position to determine the optimal incidence with and without X-ray. When performed without X-ray, it provides a dose-free preview of the anatomy (so-called Follow the Gantry).

Multimodality In-Room 3D software and Mouse device (optional device on Innova product) are intended to control the 3D model and the alignment functions from the X-ray table-side, thus optimizing the workflow and ergonomics of the intervention.

Regulatory Compliance

These products comply with the European Council Directive 93/42/EEC Medical Device Directive.



GE imagination at work