Image Guiding Solutions

Vascular surgery

Upgrade your system workstation and applications, enhance your clinical practice

GE HealthCare

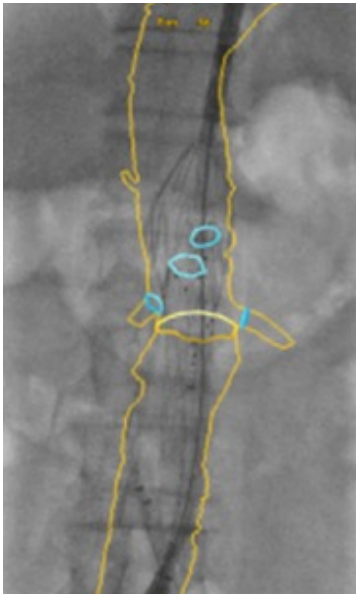
Vascular surgery upgrade: what added value for your practice?

Precise navigation, radiation dose, contrast media procedures planning and guidance - are these issues you face when dealing with complex vascular surgery?

Consider upgrading your system with ASSIST*, the comprehensive versatile suite to help address your main challenges and improve outcomes in endovascular and percutaneous procedures.

Standard and complex aortic procedures

EVAR procedure usually requires a lot of DSA acquisition to get a contrast media, leading to operator and patient exposure to a dose of X-rays that is always too high.



Your upgraded solution: EVAR ASSIST 2[1]

Guided workflow for EVAR planning and fusion guidance

Combine anatomical measurement, endograft sizing and fusion preparation in one setting.
Get access to automatic 3D fusion of ostia contours, vessel outline, gantry angulation presentation.
Make use of a digital zoom to magnify without increasing dose.

Your win

Precise device placement and contrast media at very low radiation dose

Your outcomes

Lower median DAP vs. published literature[2] **x12**

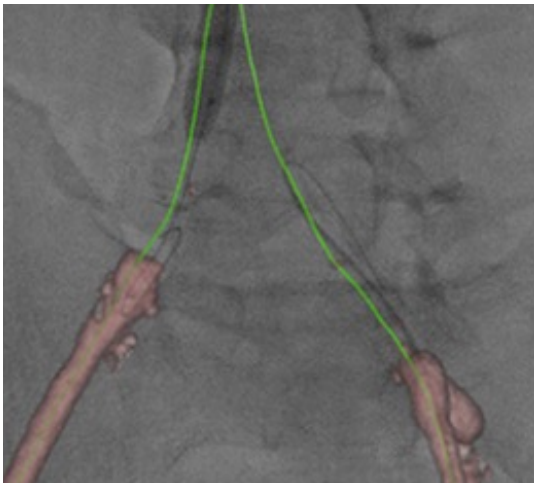
Median contrast volume[2] **47 mL**

> The absence of magnification is something very important because since we use EVAR ASSIST fusion every day, we will use digital zoom as well as collimation, and then fusion for the positioning, so all of this put together has a big impact on the dose level in the end.

Dr. Stéphan Haulon,
Head of Vascular & Aortic Surgery,
Hôpital Marie Lannelongue, France
User of a Discovery™ IGS 730 hybrid OR room

Complex peripheral occlusion

Navigating devices in the context of complex peripheral vascular treatment such as chronic total occlusion is challenging.



Your upgraded solution: Vessel ASSIST[3,4]

Planned and guided endovascular Chronic Total Occlusion (CTO) cases

Take advantage of automatic extraction of bone, vessel and calcifications.
Succeed in easily editing vessel centerlines and bridge them through occlusions.
Profit from fusion guidance with virtual tracks at any gantry location, to overlay on live fluoroscopy.

Your win

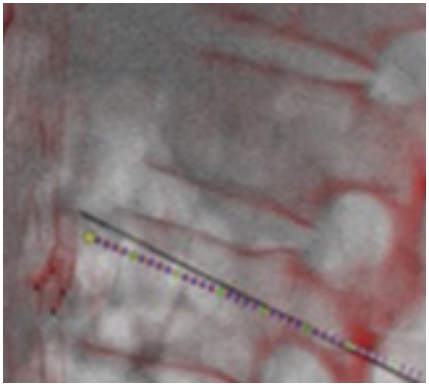
Smart support to guide catheter with confidence for accurate recanalization

Your outcomes

96.9%
Technical success rate for recanalization[5]

Trans-lumbar embolization of type II endoleaks

Precisely navigating the needle during endoleak management is essential for operating with more confidence.



Your upgraded solution: Needle ASSIST[6]

Real-time visualization of needle positions in the 3D space

Use trajectory planning to define optimal needle entry points and pathways.
Benefit from virtual needle trajectory fusion and easy switch from bull's eye to progression views.
Have the advantage of fusion guidance with virtual tracks at any gantry location, to overlay on live fluoroscopy.

Your win

Precise needle placement

Your outcomes

85% Sac size reduction or no change[7]

Low recurrence rate of T2L[7]

> "Thanks to Needle ASSIST, we are able to reach the sac at the location of the leak with millimetric accuracy."

Dr. Nicolas Louis, Vascular surgeon,
Hôpital Privé Les Franciscaines, France
User of an Innova™ IGS 530

Stay technologically and clinically current with access the latest applications

Your upgrade package to stay at the forefront of technology

IGS workstation upgrade

AW Workstation

Get access to the full ASSIST suite at table side

You buy

- Operating system hardware and software upgrade
- Innova enhanced Volume Viewer
- Reconstruction engine evolution
- Applications refresh

You get

- Intuitive user interface
- Simplified workflow
- Increased storage capability
- Cybersecurity risk reduction
- 20% faster processing[12]

+

Hybrid OR imaging upgrade

New ASSIST, 2D, 3D applications

Aortic procedures

- EVAR ASSIST 2
- 3DCT HD
- Needle ASSIST
- Digital Pen

Peripheral procedures

- Vessel ASSIST
- Innova Breeze
- Digital Pen

2D and 3D applications to augment your imaging outcomes

Boost your clinical practice and confidence with cutting-edge apps

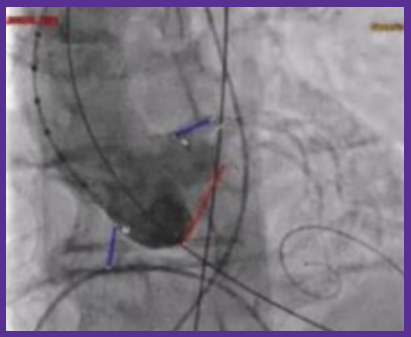
Area of interest

Digital Pen[8]

Highlight area of interest on 2D images

Your win

- Landmarks in the moving images based on table and gantry movements
- A pen integrated at table side for your comfort and ease of use



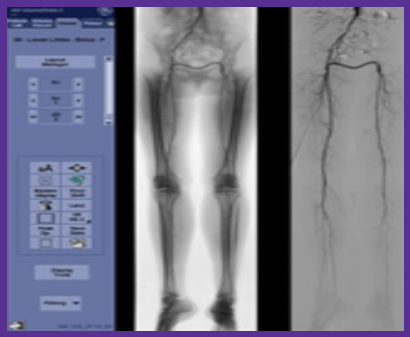
Bolus chasing

Innova Breeze[9]

Vascular flow, lesion severity assessment

Your win

- Automatic mask acquisitions with table repositioning for the injected acquisition
- Table speed control based on bolus arrival with real-time display on the screen



3D visualization

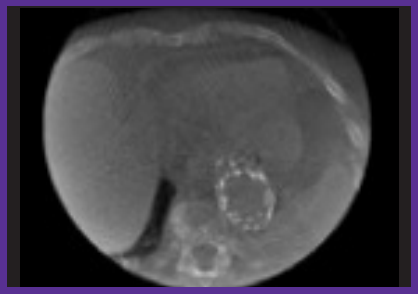
CBCT HD[10,11]

Body structures high quality imaging for immediate post-op assessment

Your win

Different rotation speeds for motion artefact correction**

	3D CT	3D CTHD
Spin duration	5 sec.	5, 7, 13 sec.
Frame rate	50 fps	
Reconstructed 3D model resolution	512x512x512 256x256x256	



> “Digital Pen is useful to measure the length and diameter of lesions, identify areas of interest: vessels, bifurcation that can then serve as a roadmap, position the system without X-Ray at any time of the procedure in relation to an area of interest.”

Dr. Sébastien Véron, Vascular and endovascular surgeon, Hôpital Privé de la Loire, France

User of an Allia™ IGS 5 Hybrid room

Disclaimers:

*The Vascular surgery upgrade includes an AW VS7 with Z4G4, Vessel ASSIST, Needle ASSIST and EVAR ASSIST 2. These applications are sold separately.

**CBCT data from Product Data Sheet.

Dr. Stéphan Haulon, Dr. Nicolas Louis and Dr. Sébastien Véron are paid consultants for GE HealthCare and were compensated for participation in these testimonials. The statements by Dr. Stéphan Haulon, Dr. Nicolas Louis and Dr. Sébastien Véron described here are based on their own opinions and on results that were achieved in their unique setting. Since there is no “typical” hospital and many variables exist, i.e. hospital size, case mix, etc. there can be no guarantee that other customers will achieve the same results.

1. EVAR ASSIST 2 solution includes FlightPlan for EVAR CT, EVAR Vision and requires AW workstation with Volume Viewer, Volume Viewer Innova, Volume Viewer Innova enhanced, VesselIQ Xpress, Autobone Xpress. These applications are sold separately.
2. Hertault A, et al., Impact of Hybrid Rooms with Image Fusion on Radiation Exposure during endovascular Aortic Repair, Eur J Vasc Endovasc Surg 2014;48(4):382e90. Literature survey involving both GE HealthCare and non-GE HealthCare equipment. In clinical use, the results of dose reduction techniques will vary depending on the clinical task, patient size, anatomical location and clinical practice.
3. Vessel ASSIST solution includes Vision 2, VesselIQ Xpress, Autobone Xpress and requires AW workstation with Volume Viewer, Volume Viewer Innova, Volume Viewer Innova enhanced. These applications are sold separately.
4. Vessel ASSIST - https://www.youtube.com/watch?v=cdbHAautVqs The statements by GE HealthCare’s customers described here are based on results that were achieved in the customer’s unique setting. Since there is no ”typical ” hospital and many variables exist i.e. hospital size, case mix, there can be no guarantee that other customers will achieve the same results.
5. N Louis et al., Contribution of the Circles of Planning under 3D Fusion of Images to Treat Chronic Arterial Occlusions, Annals of Vascular surgery, November 2018, Volume 53, Pages 27–28. The recanalization was direct transluminal in 58.5%, subintimal in 30.8% and required the use of an echo-guided system of reentry in 7.6%.
6. Needle ASSIST solution includes TrackVision 2, Stereo 3D and requires AW workstation with Volume Viewer, Volume Viewer Innova, Volume Viewer Innova enhanced. These applications are sold separately.
7. Rhee et al., Multicenter Experience in Translumbar Type II Endoleak Treatment in the Hybrid Room With Needle Trajectory Planning and Fusion Guidance, Journal of Vascular Surgery, August 2018, Volume 68, Issue 2, Pages 12–13. In 18 patients, the sac reduced in size and there was no change in the sac size in 4 patients after the procedure. Therefore 22/26 patients (85%) had AAA sac size reduction or no change.
8. Digital Pen option requires AW workstation with Volume Viewer, Volume Viewer Innova and Volume Viewer Innova Enhanced, HeartVision 2 or Vision 2. These applications are sold separately.
9. Innova Breeze runs on IGS. AW workstation is required if Advantage Paste is used.
10. CBCT HD is an option sold separately. Includes 3DXR. Requires AW workstation and Volume Viewer.
11. CBCT fusion with CTA is done using Integrated Registration. Integrated Registration requires an AW workstation with Volume Viewer and Volume Viewer Innova. This application is sold separately.
12. AW Workstation - As compared to previous AW system. Based on CPU specifications, memory speeds and PassMark® Software CPU Performance Test benchmark results (www.cpubenchmark.net/high_end_cpus.html). Not all applications may achieve this improvement.

JB31621XX

GE HealthCare