

GE Healthcare



**Innova IGS 540**

Single plane Image Guided System for interventional and oncology imaging



See. Your way. Clearly.

Innova\* IGS 540 is a floor-mounted system that boasts one of the largest fields of view for vascular and interventional imaging.



With its 41 x 41 cm (16.1 in) square flat-panel digital detector, Innova IGS 540 provides extensive body coverage for peripheral and abdominal procedures.

It is designed from the ground up to provide the image clarity you need while helping you keep dose as low as possible. It includes features like Dose Personalization<sup>1</sup>, which gives you the tools to choose from up to five automatic exposure preferences<sup>2</sup> for your system. You can also modify any of these preferences<sup>3</sup> in any clinical protocol to enable multi-procedure, multi-user customization and thus supports well-informed decisions.

**Empowered with more than 20 advanced applications, you can plan, guide and assess complex procedures with confidence.**

These include angioplasties in thin anatomies accurately planned on the Advantage Workstation, and uterine fibroid embolization with live 3D guidance of catheters in the anatomy.



# Excellent anatomical coverage

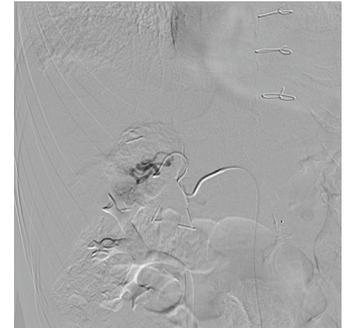
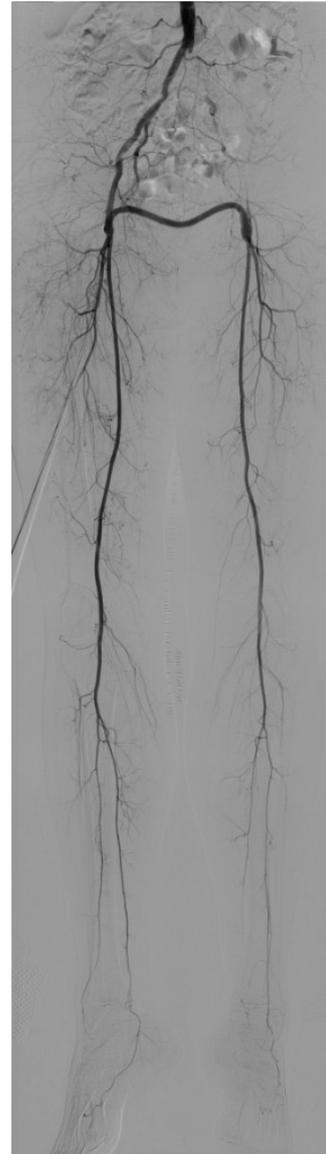
The Innova IGS 540 with its 41 x 41 cm (16.1 in) square flat-panel digital detector boasts one of the largest fields of view for vascular and interventional imaging. It can cover large anatomies, such as both legs simultaneously, with fewer runs than smaller detectors, enabling efficient use of contrast and dose.

## Superb image quality with high Detectable Quantum Efficiency (DQE)

The proprietary angiography flat-panel detector offers one of the industry's highest ratings for Detectable Quantum Efficiency (DQE), a parameter internationally acknowledged as an index of detector performance in contrast- and dose-limited imaging performed in clinical studies. High DQE enables better-quality images at the same dose, or the same quality image at a lower dose.

Mode @ Dose/Fr	GE Innova IGS 540 41 x 41 cm
DQE values at average fluoro and record dose operating points	
Record e.g. DSA 175 nGy (20 uR)	77%
Fluoro 8.8 nGy (1 uR)	70%
Additional DQE values at minimum fluoro dose operating point	
Fluoro 2.2 nGy (0.25 uR)	54%

**Note:** DQE values given are typical at  $f = 0$  cycles/mm with RQ.45 conditions as defined by IEC6222-1-3 standards



InnovaBreeze showing both leg bolus capture

Complex liver embolization

Renal aneurysm

Iliac angioplasty

# Right dose by design

GE systems are designed from the ground up using the tried and trusted GE imaging chain. They are optimized to provide the image clarity you need while helping you keep dose as low as possible. Our dose-reduction features empower you to easily optimize and personalize dose settings from the tableside, while maintaining clinical detail needed to help you make well-informed decisions. But improving dose management takes a strategy – what we call the GE Blueprint. It includes low-dose imaging technologies for minimally invasive procedures, but also considers the people, culture and processes around them.



Dose Map<sup>1</sup> records and displays the estimated local cumulated dose during procedures performed on your GE Healthcare angiographic system. The calculation and the cumulated local dose is displayed upon user request or upon configured threshold and provides a visualization of the distribution of the local cumulated dose all along the exam as well as the current projection of the beam.



Innova Dose Reports<sup>1</sup> provide dose summaries from each interventional system and delivers periodic dose reports by e-mail. You can view dose profiles for specific patient exams<sup>4</sup> that have exceeded the threshold you define and dose-by-procedure reports, identify high-dose cases, and help monitor patient radiation dose levels versus published dose reference levels. Critical information is combined in comprehensive reports to illustrate procedure utilization, dose usage details per procedure, monthly dose utilization trends, benchmarking and more.



InnovaSense\*<sup>1</sup> is an advanced patient contouring technology that uses an intelligent detector to assess movement of the gantry and select the best position for the image receptor relative to the patient. By reducing the distance from the receptor to the patient, the system optimizes imaging geometry and helps reduce radiation exposure.



# Benefits

## All-in-one large display monitor<sup>1</sup>

The full-color, medical grade large display lets you view multiple images from multiple sources. Get up to 120 customized layouts, easily changeable at tableside with the Central touchscreen. Zoom in comfortably without loss of detail or pixilation to get the clinical focus you need.

## Innova<sup>IQ</sup> table

The Innova<sup>IQ</sup> table is a fully motorized tilting table featuring effortless, automated and flexible positioning functionalities such as fully motorized longitudinal and lateral motions even when tilted and variable force positioning that allows for smooth and precise motion over the complete range of speeds. Table rails make it easy to attach accessories for patient comfort.

## Simple, centralized, automated controls

Control your system and images with integrated, intuitive tableside controls. With simple menus, the Central touchscreen lets you control most system functions, configure the system, modify imaging parameters, control your large display monitor, and manipulate advanced applications – all at the tableside. The comfortable, easy-to-grasp control knob makes it easy to pan the table, position the gantry, and perform procedures.



## Brilliant machine. Support that never sleeps.

We created OnWatch<sup>1</sup> to maximize your efficiency by helping to ensure that your angiography system is operating when you need it to. OnWatch service measures key parameters from your equipment. It looks ahead to help limit disruption from unplanned downtime, creating a less stressful experience for you, your staff and your patients. This visionary technology drives progress in patient care, enhances efficiency and can help minimize the costs associated with downtime.



# Advanced applications

## **Innova 3D<sup>1</sup>**

### **Perform 3D imaging in the interventional lab**

Innova 3D is an acquisition mode that provides 3D imaging from rotational angiography, allowing you to clearly visualize complex vasculature in the interventional lab. It provides high-contrast 3D images that show fine spatial resolution through a full range of tissue densities. It is automatically reconstructed using your preferred parameters on the Advantage Workstation, giving you access to a full range of analysis tools.

## **InnovaBreeze<sup>1</sup>**

### **Simplify and automate bolus chasing**

InnovaBreeze\* is a subtracted peripheral vascular imaging technique that lets you follow the contrast bolus in real time using variable panning speed control. You can capture the bolus in both legs while imaging thin vessels with high quality. Divided pixel shift helps you adjust each leg separately and compensate for patient movements.

## **Blended Roadmap<sup>1</sup>**

### **Navigate clearly in complex anatomy**

This fast, easy, and potentially dose- and contrast-saving roadmapping application superimposes any Digital Subtracted Angiography or InnovaBreeze\* bolus image with 2D fluoroscopy, helping you view the advancement of guidewires and devices through vessels. Real-time pixel shifting quickly corrects for patient movement. Vessel transparency and image landscaping can be separately adjusted on the fly during fluoroscopy, all from the Central touchscreen.

## **Innova Vision<sup>1</sup>**

### **Live 3D guidance**

Innova Vision overlays 3D prepared datasets from CT, MR or 3D rotational images on live fluoroscopic images in a single click. This 3D roadmapping application helps you guide devices in complex anatomies.

## **Innova TrackVision<sup>1</sup>**

### **Progress with confidence**

Innova TrackVision provides live 3D needle guidance during your procedures. It lets you advance the needle down a planned trajectory overlaid on live fluoroscopy and visualize any deviations from the desired path.

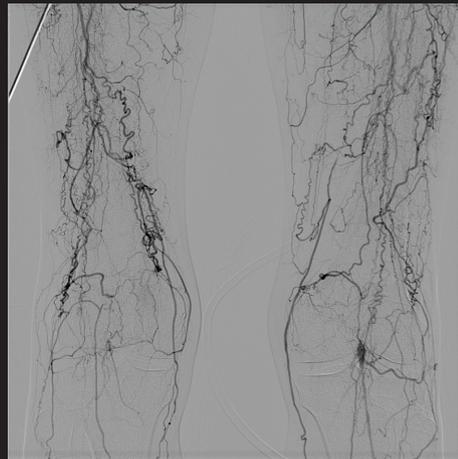
## **FlightPlan for Liver<sup>1</sup>**

### **A breakthrough in liver embolization**

FlightPlan for Liver helps you plan your liver embolization procedures. It automatically highlights vessels traveling from the catheter tip to the vicinity of a hypervascular lesion.



Innova 3D



InnovaBreeze



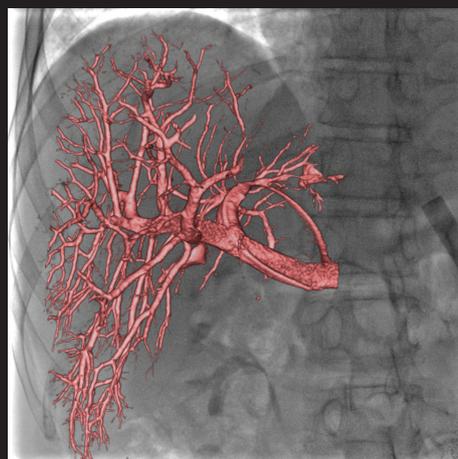
FlightPlan for Liver



Blended Roadmap



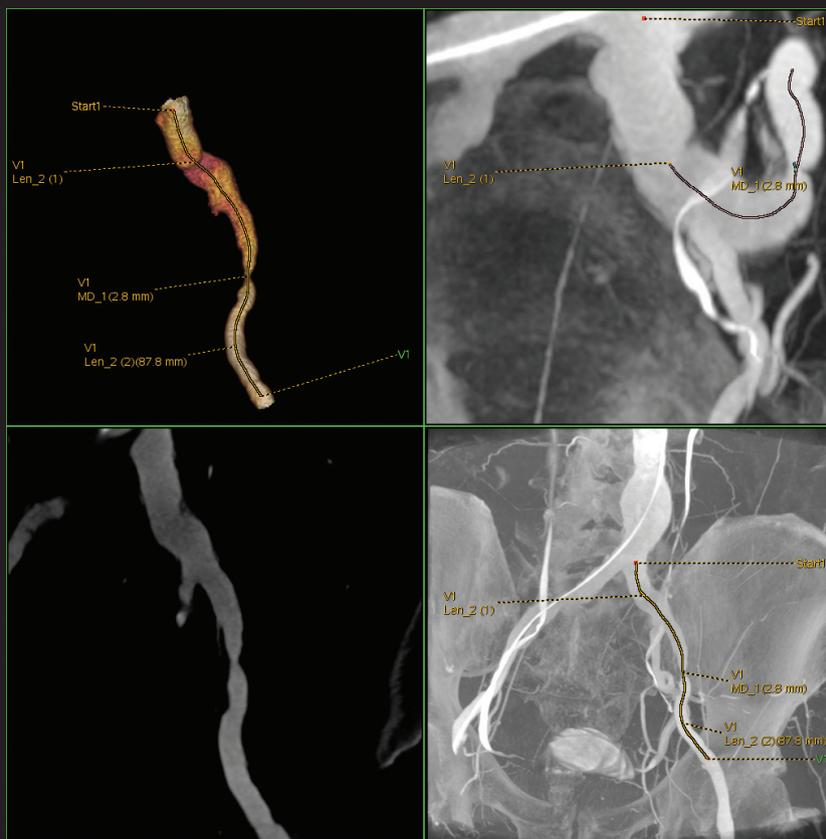
Innova TrackVision



Innova Vision

# Plan, guide and assess iliac angioplasty procedures with confidence

When you are about to perform an angioplasty procedure, it is important to understand vessel patency to help ensure that you can guide and position your devices optimally. The planning phase will also help in selecting stent needed to restore correct blood flow. For the remainder of the procedure, you can focus on the stent placement and controlling appropriate deployment with the tools you use every day.



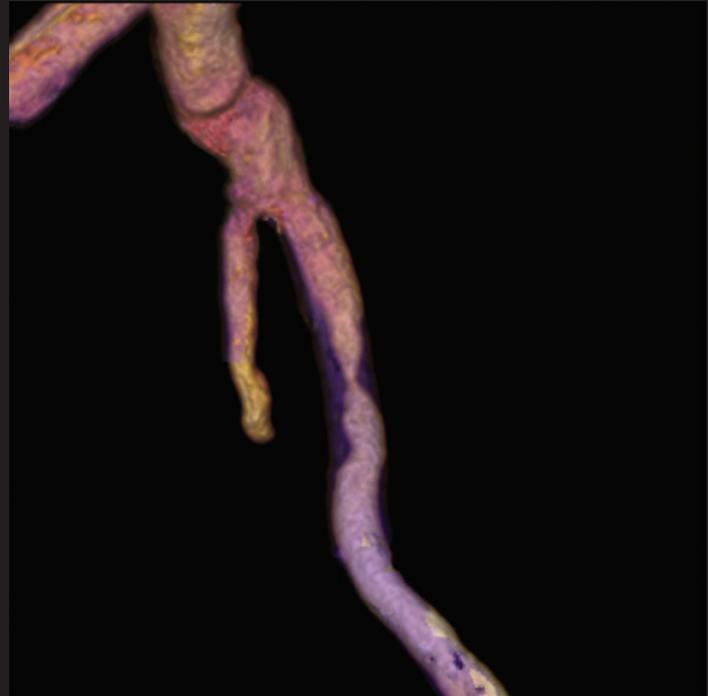
## Plan

Plan your procedure with VessellIQ\* Xpress to check that the vessel diameter is large enough to allow an endovascular approach. Determine the stent length and diameter on the straightened and cross-sectional views of the vessel.



### Guide

Guide your catheter and stent through the vessel with Blended Roadmap based on a previously acquired image to help save contrast and dose.

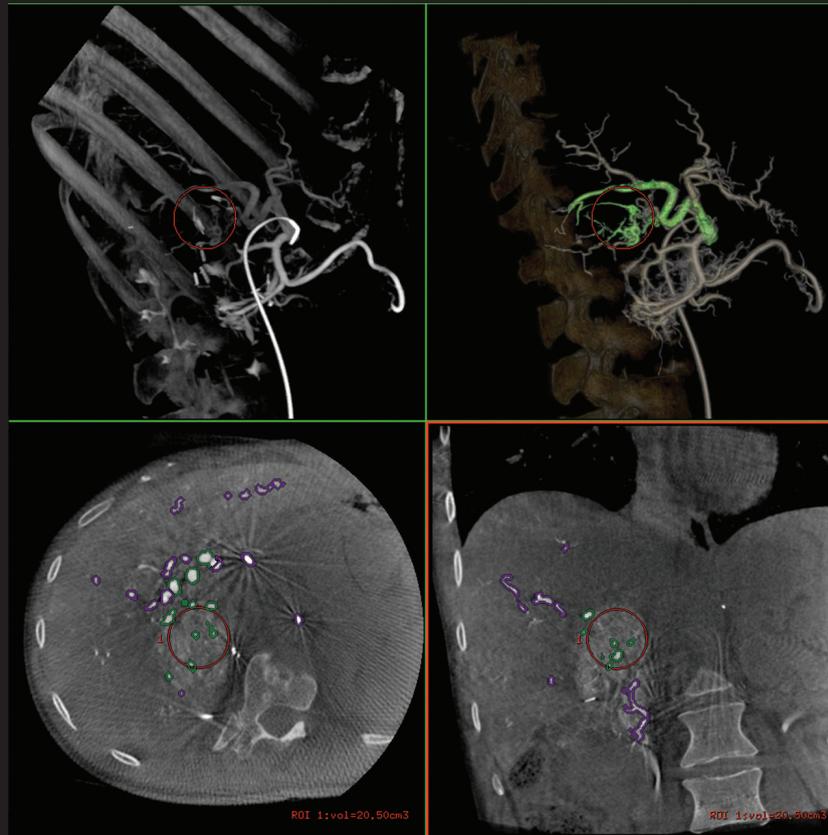


### Assess

Assess stent deployment and positioning with Integrated registration, comparing the pre-operative 3D acquisition with the post-operative 3D image.

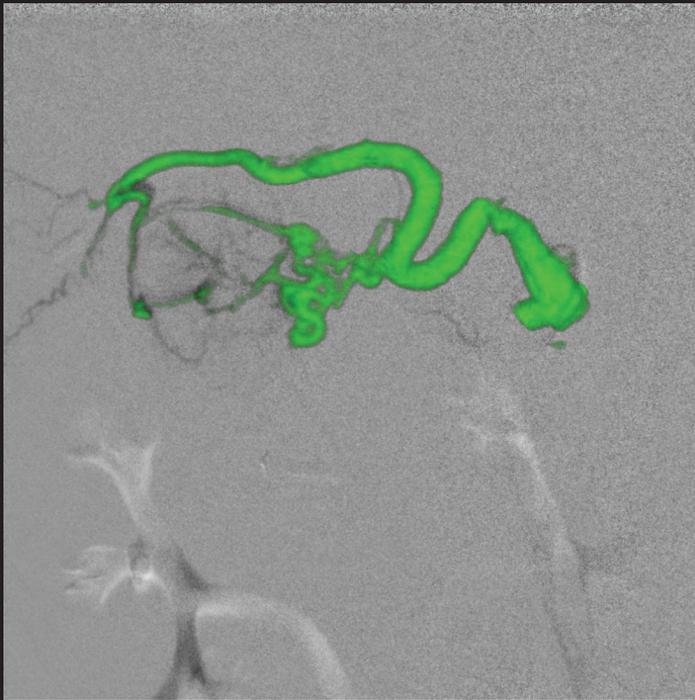
# Plan, guide and assess liver embolization with confidence

To deliver therapeutic material to tumors during trans-arterial chemoembolization therapy, it is essential to identify the liver vessels accurately. But the liver's complex vasculature can make precise identification of tumor-feeding vessels in 2D and 3D images a challenge, often requiring significant time, radiation, and contrast media.



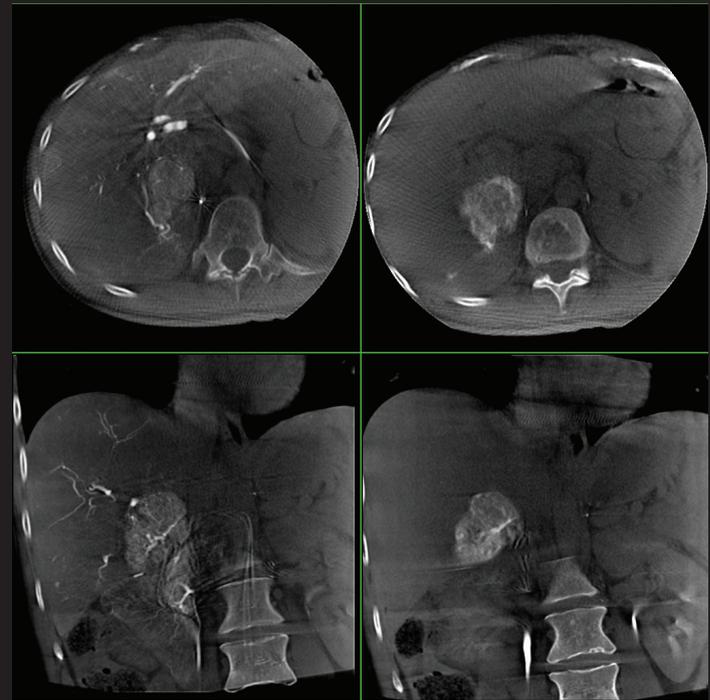
## Plan

FlightPlan for Liver helps you plan your liver embolization procedure. It automatically highlights vessels traveling from the catheter tip to the vicinity of a liver hypervascular lesion.



### Guide

Once ready, you can send the FlightPlan for Liver 3D model to Innova Vision with a single click and use it as a 3D roadmap to guide catheters across tortuous vessels and bifurcations, helping you perform the embolization with confidence.

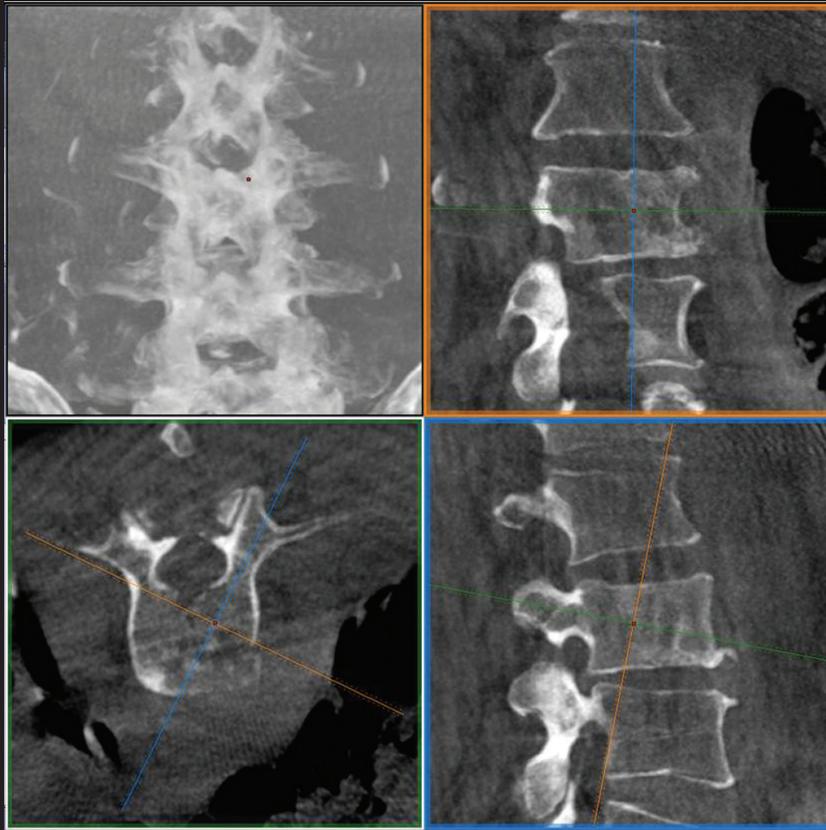


### Assess

A post-operative Innova CT helps you determine the success of the embolization.

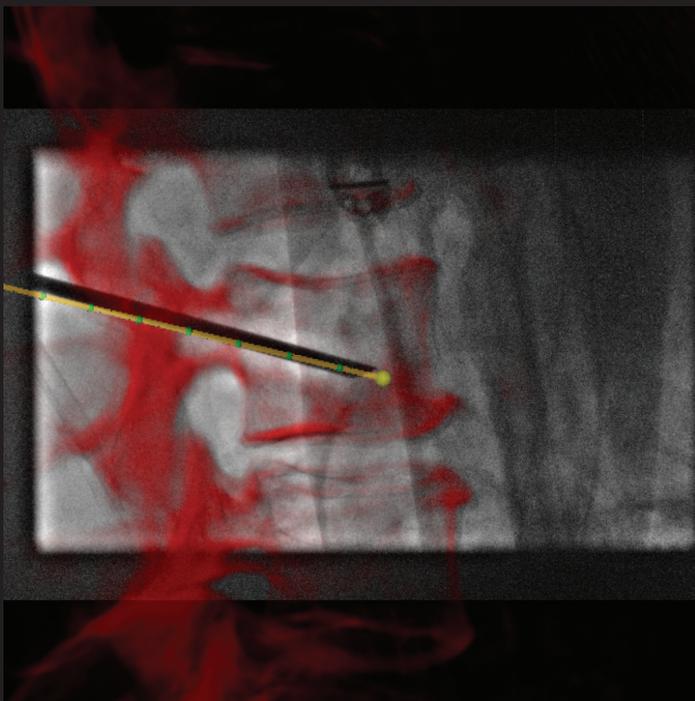
# Plan, guide and assess needle procedures with confidence

Performing needle procedures in the interventional suite frees up your CT system and helps provide better access to the patient. However, under fluoroscopic guidance, it may be challenging and time-consuming to find the right entry point and advance the needle while avoiding critical structures.



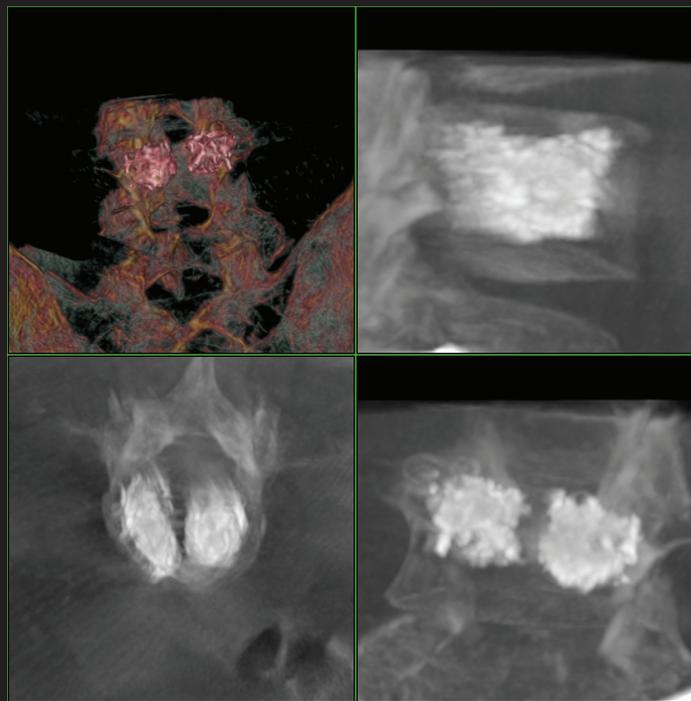
## Plan

With Volume Viewer and Trajectory Planning, you can plan the procedure using outstanding 3D information and determine the optimal skin entry points and needle paths.



### Guide

With Innova TrackVision, you can guide your needle along the trajectory that will follow the C-arm angulation and table movement. Plus, a dedicated algorithm overlays the bone anatomy and helps you correct for even small patient motion, enabling accurate needle trajectory registration at any time during your procedure.



### Assess

At the end of the procedure, when the cement has been injected, an Innova CT acquisition will help you see the cement implantation in 3D and thus confirm procedure completion.

## About GE Healthcare

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter - great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

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Data subject to change.

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In clinical use, the results of the application of dose reduction techniques will vary depending on the clinical task, patient size, anatomical location and clinical practice. The interventional radiologist, assisted by a physicist as necessary has to determine the appropriate settings for each specific clinical task.

1 - Option. May not be available in all countries. Refer to your sales representative.

2 - Except in following countries: Germany, Switzerland, Austria, New Zealand where that list is limited to 3 preferences

3 - by requesting it to your entity responsible for the servicing of your equipment

4 - No personal data are accessible to outside the HCP responsible for the patient



imagination at work