

NEWS BRIEF

At RSNA 2017, GE Healthcare will showcase the continued advancements in the future of Interventional Radiology with new platforms and applications designed to help improve clinical outcomes.

GE unveils an integrated Liver Care Pathway to help improve assessment and management of the second frequent cause of cancer death, liver cancer.¹

GE Healthcare has made it a priority to develop technology that continually improves the assessment and management of liver care.

High-quality CBCT images are essential to improve the feasibility, effectiveness, and safety of challenging interventional radiology procedures. However, there are barriers to acquiring these images, including limited field of view; challenges with larger patients; the time-consuming and tedious nature of the procedures; and a susceptibility to artifacts, particularly respiratory motion artifacts. Now we can compensate for respiratory motion artifacts that threaten CBCT quality, reducing the likelihood of unusable images.

At GE, our scientists and engineers worked with physicians around the world to understand these challenges and develop a suite of solutions designed to surmount them. These include:

- **The Discovery IGS 7.**² Discovery is the heart of the angiography suite, allowing clinicians to obtain high-quality CBCT acquisitions with enhanced capabilities that provide complete workspace freedom. With one of the widest bores in the industry, the Discovery IGS offers an uninterrupted CBCT workflow. Discovery also provides collision-free CBCT imaging that allows clinicians to image large patients easily and perform CBCT acquisitions even for patients with their arms down and those who are intubated.
- **Liver ASSIST.**³ This liver-specific comprehensive software solution provides support in all stages of liver disease; from early onset embolization for surgical resection to palliative treatments such as endovascular embolization of the vessels feeding the tumor. Liver ASSIST through FlightPlan for Liver, improves the sensitivity of tumor-feeding vessels identification versus the use of either DSA or CBCT alone, by up to 97 %;^{4,5,6} being one of the highest in the industry.
- **INTERACT Active Tracker.**⁷ This clinical application for needle placement procedures enables multi-modality fusion imaging in ablation procedures (fluoroscopy and ultrasound) to create a comprehensive 3D view of liver tumors.
- **Needle ASSIST.**⁸ Needle ASSIST solution provides real-time visualization of needle positions in the 3D space. It can help medical professionals improve their accuracy, reduce dose, and support efficiency efforts when performing needle interventions, while having a limited impact on workflow. The potential reduction in dose and time ultimately helps increase the procedure volume in the angio-suite.

- **Motion Freeze** from GE Healthcare, a new software solution helps reduce involuntary respiratory motion artifacts in Interventional radiology by refining and increasing small contrasted structures in images that might otherwise have resulted in improved clinical outcomes in less time.

Cone-beam computed tomography (CBCT) is fast becoming the standard of care in many areas of interventional radiology. Yet an estimated 40%⁹ of interventional CBCT acquisitions must be discarded because of respiratory motion artifacts. Such artifacts reduce image quality, affecting the physician's ability to fully visualize the tumor's angioarchitecture.

Our new Motion Freeze **software helps salvage CBCT acquisitions by refining and increasing small contrasted structures in images that might otherwise have been discarded.** With this technology, clinicians have access to a fast, post-reconstruction option that can reduce retake CBCT acquisitions while supporting a streamlined clinical workflow and facilitating access to advanced clinical applications. This fully integrated solution is **available directly on GE Healthcare's AW workstation.**

Unwanted respiratory motion occurs when procedures are performed under local sedation. Some patients, particularly elderly patients, may have trouble holding their breath because of cognitive impairment, discomfort, or anxiety.

When this occurs, the radiologist is forced to choose between proceeding without 3D images or redoing the acquisition. A second acquisition is needed in 25% of CBCT affected by involuntary respiratory.⁹ Motion Freeze may reduce repetitive acquisitions resulting in potential time delays and diminished workflow efficiency, as well as subjecting the patient to another contrast media injection and radiation dose.

GE Healthcare introduces new, world-class INTERACT interoperability solutions for today's minimally invasive procedures.

The exponential growth of minimally invasive procedures over the past two decades is transforming medicine. But the growing complexity of such procedures, and the increasing multidisciplinary approach required, means that stand-alone imaging is no longer enough. A dynamic shift to high-end imaging suites is occurring, and GE Healthcare is helping lead the way with **INTERACT, our new comprehensive and dynamic interoperability solutions.**

By minimizing the barriers between hardware and software offerings, INTERACT unlocks the potential of each imaging approach, enabling exceptional results to address exceptional challenges. With INTERACT, interventional clinicians no longer need to choose—they can truly have it all. Synchronous, vivid,¹⁰ holistic imaging is required for the interventional procedures of today and tomorrow.

There are four solutions under INTERACT: **INTERACT CT, INTERACT MR, INTERACT General Imaging Ultrasound** and **INTERACT Cardiovascular Ultrasound.** All are designed to take imaging to the next level by working with our existing suite of GE interventional products and combining these with other modalities and solutions.

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In today's interventional suite, combining imaging modalities in a systemic, simple way, provides clinicians with the best of all worlds.

GE Healthcare and Getinge announce next generation in hybrid operating rooms, indicating greater clinical opportunities and improved workflow

GE Healthcare and Getinge announce the latest in image guided surgery for Hybrid Operating Rooms (OR). Combining the versatility of the Discovery IGS 7 OR² mobile robotic gantry with the Maquet Magnus OR table system, this new approach **brings intuitive 3D fusion image guidance and complete workspace freedom** for open, minimally invasive surgery and endovascular procedures. Together, the two function in tandem, with the gantry and table movements synchronized through a single user interface to achieve smooth and efficient workflow and an exceptional, technically sophisticated surgical suite.

This combined solution increases clinical breadth by covering the needs of virtually any surgical and interventional specialty, an exciting step into the innovative world of image-guided surgery.

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MEDIA CONTACT

Britta Kons
Britta.Kons@ge.com
M: +1 203 400 1892

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Footnotes:

- 1- <http://www.who.int/mediacentre/factsheets/fs297/en/>
- 2- Discovery IGS 7, Discovery IGS 7 OR cannot be placed on the market until they have received required market authorization. Refer to your sales representative.
- 3- Liver ASSIST solution includes Hepatic VCAR, FlightPlan For Liver and Integrated Registration which can be used independently and requires AW workstation with Volume Viewer, Volume Viewer Interventional. These applications are sold separately.
- 4- Computed Analysis of Three-Dimensional Cone-Beam Computed Tomography Angiography for Determination of Tumor-Feeding Vessels During Chemoembolization of Liver Tumor: A Pilot Study – Deschamps et al. Cardiovasc Intervent Radiol. 2010
- 5- Tracking Navigation Imaging of Transcatheter Arterial Chemoembolization for Hepatocellular Carcinoma Using Three-Dimensional Cone-Beam CT Angiography – Minami et al. Liver Cancer. 2014
- 6- Clinical utility and limitations of tumor-feeder detection software for liver cancer embolization. Iwazawa et al. European Journal of Radiology. 2013.
For more information
visit:http://www3.gehealthcare.com/en/products/categories/interventional_image_guided_systems/assist/flight_plan_for_liver
- 7- INTERACT Active Tracker is an optional feature of 3DXR (part of GE vascular systems IGS 5, IGS 6 and IGS 7 or IGS 7OR). This feature supports only one 'Active Tracker' type: the OmniTRAX™ Active Patient Tracker. 3DXR cannot be placed on the market or put into service until it has been made to comply with all required regulatory authorizations including the Medical Device Directive requirements for CE marking. INTERACT Active Tracker cannot be marketed in countries where market authorization is required and not yet obtained. Refer to your sales representative.
- 8- NEEDLE ASSIST solution includes TrackVision 2, stereo 3D and requires AW workstation with Volume Viewer, Volume Viewer Innova. These applications are sold separately
- 9- Up to 40% of CBCT acquisitions, are unusable due to involuntary respiratory motion artifacts, leading to a second acquisition in up to 25% of those cases.
Source: Based on the quantitative assessment of 6 recognized Interventional Radiologists specialized in the field of Interventional Oncology, using various intervention angiography systems from different vendors.
- 10- Eligible on the following devices: Vivid E95 and Vivid S70N