GE Healthcare at RSNA 2017: New offerings improve patient experience, enable better clinical results, increase operational efficiency

- *SIGNA Premier wide bore 3.0T MRI system can enable up to 60 percent faster scan times with 2x the image resolution, and introduces AIR technology to increase patient's comfort with "blanket-like" coils*
- *4 out of 5 patients said Senographe Pristina Dueta patient-assisted compression made their mammograms more comfortable and more than half said it led to less anxiety*
- *Centricity Universal Viewer increases workflow efficiency by up to 40 percent by utilizing patient priors*

CHICAGO – November 25, 2017 – At the 2017 edition of the Radiological Society of North America's annual meeting (RSNA), GE Healthcare will deliver on its commitment to be the leading provider of outcome-based imaging solutions by introducing new technologies, services, and digital solutions designed to improve patient experience, increase clinical confidence and heighten productivity.

"We're pleased to showcase a range of innovations at this year's RSNA. These are technologies that we've developed in close collaboration with our partners and customers," said Kieran Murphy, President and CEO of GE Healthcare. "GE Healthcare's focus is to leverage our medical, engineering and digital expertise to drive precision health and enhanced clinical outcomes."

With the largest installed base globally, strong application leadership and more than 25 years of proven deep learning and artificial intelligence expertise, GE Healthcare is leveraging digital to realize clinical and operational outcomes across the healthcare industry. By combining software applications with best in class medical devices and services, GE is committed to help administrators and clinical staff deliver better patient outcomes more efficiently.

At the heart of our approach is GE's Applied Intelligence - the analytics and artificial intelligence brain that powers GE Healthcare's leading applications, devices and services. In a healthcare delivery network, Applied Intelligence becomes the thread that flows between the machines and software to help unlock organizations' full potential with insights.

With more than 200 imaging applications across GE Healthcare's imaging portfolio, the company's digital journey is well underway. GE Healthcare will showcase its accelerated digital commitment as well as the new AI-infused imaging applications, powered by GE Healthcare's Applied Intelligence, at RSNA in the digital showcase inside the GE booth.

Improving Patient Experience

Magnetic Resonance is highly effective at imaging patients, but traditional coils can be bulky, heavy and rigid, causing discomfort to patients and technologists. GE Healthcare's new suite of RF coils, **AIR Technology**, are now commercially available on **SIGNA Premier**, and are 60 percent lighter on the patient. The ultra-lightweight design makes it easier for the technologist to position the patient and addresses several clinical needs. AIR Coils look like a blanket and fit 99.9 percent of patients, with technology engineered for higher density channel count and increased SNR. **SIGNA Premier** wide bore 3.0T MRI system, now commercially available in the United States, features GE Healthcare's latest, short-bore, high-homogeneity 3.0T superconductive magnet; the most powerful gradient system GE Healthcare has ever developed for a wide bore 3.0T system; and a new, digital RF transmit and receive architecture. It enables 2x faster whole-body imaging compared to conventional scans, and 60 percent

faster[1] images.

Senographe Pristina Dueta is an industry-first patient-assisted mammography device that literally puts women in control of their own mammograms. Designed by women for women, an innovative wireless remote control allows patients to manage their own compression, under the supervision of a technologist, during the exam performed on GE Healthcare's newest mammography system, **Senographe Pristina** After the breast is properly positioned by the technologist, the patient has the option to adjust her compression using Pristina Dueta. Studies in Europe show 4 out of 5 patients using Pristina Dueta said it made the exam more comfortable, and more than half said the device led to less anxiety. Clinical evidence used in the FDA evaluation and clearance of Pristina Dueta shows use of the device does not compromise image quality or increase exam time. For women with dense breast tissue, supplemental screening may be recommended. The **Invenia ABUS** (Automated Breast Ultrasound System) is proven to increase invasive cancer detection by 55 percent and is the only FDA-approved ultrasound system for dense breast tissue screening when used in addition to mammography.

SenoBright HD is a next-generation Contrast Enhanced Spectral Mammography (CESM) diagnostic exam intended for patients who have just had an inconclusive mammogram or ultrasound, or are at high risk of breast cancer. SenoBright HD exams are performed at the same time, same location, and with the same mammography equipment – Senographe Pristina - enabling the entire exam to take less than seven minutes. As compared to the first generation CESM, SenoBright HD delivers clearer images and improves acquisition time by 40 percent in women with large breasts. CESM provides high specificity to reduce false-positives and helps prevent unnecessary exams. Images are immediately available for review following the exam.

Enabling Better Clinical Outcomes

Helix advanced imaging processing is a revolutionary platform that features advanced image processing, ultra-high resolution digital detectors, powerful analytics and intelligent systems. Helix delivers sharp detail at low dose and consistent performance in X-ray, despite variations in exposure technique and patient anatomy. The power of Helix coupled with **FlashPad HD** digital detectors improves contrast detectability by up to 40 percent due to ultra-high resolution, enhanced noise control and advanced image processing. The new **Discovery XR656HD** premium fixed digital radiographic system features Helix and an expanded suite of workflow automation and analytics tools. It is designed to eliminate unnecessary X-ray image adjustments and repeated exams. It gives technologists and radiologists sharp detail – with up to 4x higher definition in each image when using FlashPad HD detectors – and the balanced contrast and brightness needed at a low dose, right from the very first image.

LOGIQ S8 XDclear 2.0 is a lightweight, portable ultrasound system designed for a wide range of applications including abdominal, small parts, breast, vascular, OB/GYN, cardiology, pediatrics, musculoskeletal, urology and more. Integrated with FibroScan® technology from Echosens and Shear Wave technology, the LOGIQ S8 XDclear 2.0 can help diagnose liver disease quickly and non-invasively, assess fibrosis stage in chronic liver disease and monitor treatment.

OEC Elite CFD with vascular applications is the first premium mobile C-arm offering with both a 31 cm and 21cm CMOS flat panel detector. It is designed to produce high image quality at a low dose with a 14 percent improvement over an image intensifier in line pair resolution at normal dose. The OEC Elite CFD produces crisp, clean images, enabling better imaging confidence by allowing surgeons to see greater

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[1] As compared to previous generation 3T wide-bore platforms.

differentiation between a patient's anatomy, such as bone, organs and skin and exceptional vessel detail in even the toughest vascular procedures with a tiny 0.008" guidewire.

High-quality cone-beam computed tomography (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; the time-consuming and tedious nature of the procedures; and a susceptibility to artifacts. GE 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**; **Motion Freeze**[2], a new, pioneering solution that can help compensate for involuntary respiratory motion artifacts that threaten CBCT quality, reducing the likelihood of unusable acquisitions; **Liver ASSIST**[3], a software solution that helps identify vessels feeding liver tumors for liver embolization; **INTERACT Active Tracker**[4], software feature that enables multi-modality fusion imaging in ablation procedures (fluoroscopy and ultrasound) to create a comprehensive 3D view of liver tumors; and **Needle ASSIST**[5], providing real-time visualization of needle positions in the 3D space.

Achieving Operational Efficiency

It can take up to 230 mouse clicks to access reject data and up to seven hours to calculate a department's reject percentage for a mid-sized hospital. **X-ray Quality App featuring Repeat/Reject Analytics** software can help avoid that time and effort by automatically identifying and analyzing the root causes of rejected X-ray images for quick and easy review. Helping to identify the root cause of rejected images can reduce unnecessary radiation exposure to patients and manual work required to measure repeat/reject rates. In addition, reducing non-value add imaging may increase capacity for additional diagnostic exams in an imaging department.

Today radiologists waste an estimated 19 percent of their time having to use multiple systems. To address this challenge, GE Healthcare's **Centricity Universal Viewer** has been shown to increase reading efficiency by up to 40 to 50 percent at imaging centers around the world. The new native breast screening and diagnostic workflows provide a single viewer which can be used for all modalities. By utilizing patient priors, including CT, MRI and Tomosynthesis, as well as other patient reports such as clinical notes and pathology reports, in the diagnosis, Centricity Universal Viewer helps to increase workflow efficiency and support more confident diagnoses.

Imaging Related Clinical Context, developed in partnership with University of Pittsburgh Medical Center,[6] delivers relevant patient clinical content in context, including EMR data such as surgical notes, pathology reports and clinical notes, directly to the radiologist and embedded in their existing workflow. With a deep learning algorithm that learns as radiologists provide input, physicians will be able to more quickly reach a confident diagnosis based on a more complete picture of the patient's full medical condition.

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[2] *The improvement related to Motion Freeze depends on the acquisition conditions, table position, patient, type of motion, anatomical location and clinical practice. Motion Freeze is an optional feature of 3DXR (part of GE vascular systems IGS 5, IGS 6 and IGS 7 or IGS 7OR).*

[3] *Liver ASSIST solution includes Hepatic VCAR, FlightPlan For Liver and Integrated Registration which can be use independently and requires AW workstation with Volume Viewer, Volume Viewer Interventional. These applications are sold separately.*

[4] *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 OmniTRAXTM Active Patient Tracker.*

[5] *NEEDLE ASSIST solution includes TrackVision 2, stereo 3D and requires AW workstation with Volume Viewer, Volume Viewer Innova. These applications are sold separately.*

[6] *UPMC is a collaboration partner of GEHC and as a result, has a financial interest in the development and commercialization of certain GEHC next generation imaging products.*

GE Healthcare's patented deep learning-based **Smart Reading Protocols** aims to ensure each radiologist's protocols are always automatically hung in the same way. SRP increases radiologist productivity by learning each user's or group's reading tendencies to automate image setup including launching advanced visualization and other applications.

New to GE's Revolution family of CT scanners, the **Revolution Frontier** enables effortless, effective diagnoses and provides easy access to advanced clinical applications to allow the clinician to quickly and simply customize the scan to the needs of the patient. The system includes an optimized imaging chain for faster and higher quality processing, and our ASiR-V next-generation iterative reconstruction to provide superior image quality. With Revolution Frontier, GSI Pro takes spectral imaging to the next level through 2x faster reconstruction. Scans using GSI Pro can deliver tissue characterization, contrast dose reduction, metal artifact reduction and quantitative information about chemical composition, providing an unmatched spectral capability across the full field of view.

GE Healthcare's newest mobile X-ray product, the **Optima XR240amx with FlashPad HD digital detectors**, enables clinicians to see exceptionally fine detail in all anatomies and has a reliable and maneuverable design and small footprint for complex care environments. It is the highest resolution, pediatric-capable mobile X-ray system in the industry and offers seamless X-ray imaging support for carefully controlled neonatal environments. Both the system and detectors have dependable power management technology allowing two detectors to be charged simultaneously in-bin, with or without grids attached, taking the guess work out of detector battery charging. The system can support imaging 50 patients over 9.5 hours.[7]

Tube Watch is a predictive solution designed to help remotely monitor tubes and predict failures before any disruption occurs. The service enables systems to be repaired remotely or at a more convenient time. Tube Watch allows proactive part delivery and service scheduling to help eliminate unplanned disruption and potentially reduce downtime by up to 75 percent.[8] Tube Watch helps anticipate CT failure before it happens, turn unplanned downtime into planned service, reduce operational downtime, and enhance patient and staff satisfaction.

Focused on the power of digital to enable better outcomes, **Smart Subscription** provides customers with continuous access to the latest imaging software updates, through an automatic downloaded to their CT scanners from the cloud. Smart Subscription offers flexible options for smarter budgeting, giving health systems, hospitals and clinics the opportunity to standardize applications across all CT units, and can select only the tools they need, with an option to add or remove tools at any time. With Smart Subscription, customers can be confident that their GE CT scanners will be up to date with the latest imaging software for the life of the system.

The full GE Healthcare RSNA 2017 press kit can be found here. Not all products are available in all countries.

About GE Healthcare
Harnessing data and analytics across hardware, software and biotech, GE Healthcare is the $18 billion healthcare business of GE (NYSE: GE). As a leading provider of medical imaging equipment, with a track

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[7] *Assuming 50 patients (100 exposures), 5 min per exam, 2 exposures per patient, 4 min between patients, Travel time 60 minutes, Intermediate charging 60 min.*
[8] *Percentage noted is based on various assumptions, including but not limited to the use of Tube Watch consistent with the Tube Watch terms and conditions, timely receipt of the tube-health notice, parts and labor availability, immediate access to customer's equipment, and may not be typical of every customer's experience.*

record of more than 100 years in the industry and more than 50,000 employees across 100 countries, we transform healthcare by delivering better outcomes for providers and patients. Follow us on [Facebook](#), [LinkedIn](#), and [Twitter](#) or [The Pulse for latest news](#).

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Media Contact
Holly Roloff, 414-429-6998
Holly.roloff@ge.com