



GE HealthCare Highlights Commitment to Delivering Better Patient Experiences and Outcomes Through Deep Learning at RSNA 2023

November 29, 2023

GE HealthCare is proud to announce the addition of True Enhance DL to its Effortless Recon DL portfolio

CHICAGO--(BUSINESS WIRE)--Nov. 29, 2023-- Through its leading imaging solutions and commitment to innovation, GE HealthCare (NASDAQ: GEHC) remains at the forefront of leveraging deep learning, a subset of artificial intelligence (AI), to benefit a multitude of clinicians and patients. True Enhance DLⁱ for CT is the latest addition to GE HealthCare's growing Effortless Recon DL portfolio of deep learning-based solutions – which also includes AIR Recon DL for MR and PET/MR, Sonic DL for MR, TrueFidelity DL for CT, Precision DL for PET/CT, and Helix for X-ray – with the goal of improving image quality and helping to better inform clinical decision-making for improved patient outcomes.

When diagnosing patients in areas where every second counts, like neurology, oncology and cardiology, clinicians need fast, clear and reliable imaging technologies. GE HealthCare is committed to using deep learning to accelerate and improve diagnostics through efficient workflows and faster exam times. These technologies have benefited millions of patients globally.

“The potential of deep learning to create more efficient workflows and allow more patients to receive essential medical imaging services without compromising quality is boundless,” said Jan Makela, President & CEO of Imaging at GE HealthCare. “GE HealthCare aims to address critical challenges in the imaging field such as workflow inefficiencies, staff burnout and shortages, and the need for broader access to state-of-the-art imaging. We're proud to be at the forefront of deep learning integration and to share our Effortless Recon DL portfolio of solutions driven by this game-changing technology at RSNA 2023.”

Innovations from GE HealthCare in molecular imaging and computed tomography (MCT), magnetic resonance (MR) and x-ray that leverage deep learning are making state-of-the-art imaging accessible to healthcare practices and their patients across multiple care areas. These include:

- **True Enhance DL**ⁱⁱ uses a dedicated Deep Neural Network (DNN) designed to generate deep learning-based monochromatic-like images from single-energy X-ray. It is designed to enhance contrast resolution for confident diagnosis, especially for challenging oncology cases or pulmonary embolism evaluation. The AI-based solution aims to provide clinicians a simple workflow and incredible image quality without a radiation penalty.
- **TrueFidelity DL** is available across the company's Revolution Apex and Revolution Ascend platforms, leveraging a DNN to generate high-definition, low-noise CT images with exceptional sharpness, low-contrast image quality with preferred noise textureⁱⁱⁱ, at the same dose.^{iv} GE HealthCare is also excited to expand TrueFidelity DL to lung and extremity at this year's show. Exclusively available on Revolution Apex platform, these new features enable high resolution imaging to increase visual sharpness with reduced noise for confident reporting and accepted image texture.
- **Precision DL** is a deep learning-based image processing software designed to enhance image quality in PET/CT scans, providing clinicians with a powerful tool to aid in precise diagnoses and treatment planning with the image quality performance benefits typically associated with hardware-based Time of Flight (ToF) reconstruction, including improved contrast-to-noise ratio, contrast recovery,^v and quantitative accuracy.^{vi}
- **AIR Recon DL** is a pioneering deep-learning image reconstruction technique that helps improve image sharpness and enables reduced exam times by up to 50% without compromising image quality^{vii}. These features help to enhance workflow efficiency and productivity for healthcare professionals, reduce the need for repeat scans, enable faster diagnoses, and enhance patient experience. With expansion from 2D to **3D and PROPELLER** imaging sequences, AIR Recon DL expands to nearly all MRI clinical procedures, covering all anatomies. AIR Recon DL has been used by an estimated 16 million patients worldwide to date.^{viii}
- **Sonic DL** is a deep learning breakthrough designed to accelerate MRI exams. For cardiac imaging, Sonic DL has the ability to acquire high-quality MR images up to 12 times faster than conventional methods, enabling cardiac imaging within a single heartbeat.^{ix}
- **Helix Advanced Image Processing** is an innovation in X-ray technology that revolutionizes diagnostic imaging quality by consistently delivering images with appropriate detail, contrast, and latitude to enable radiologists to visualize key clinical details.

For more information on GE HealthCare and these innovative solutions at RSNA, visit Booth 7326 or the [RSNA 2023 events page](#).

About GE HealthCare Technologies Inc.

GE HealthCare is a leading global medical technology, pharmaceutical diagnostics, and digital solutions innovator, dedicated to providing integrated solutions, services, and data analytics to make hospitals more efficient, clinicians more effective, therapies more precise, and patients healthier and happier. Serving patients and providers for more than 100 years, GE HealthCare is advancing personalized, connected, and compassionate care, while simplifying the patient's journey across the care pathway. Together our Imaging, Ultrasound, Patient Care Solutions, and Pharmaceutical

Diagnostics businesses help improve patient care from diagnosis, to therapy, to monitoring. We are an \$18.3 billion business with 50,000 employees working to create a world where healthcare has no limits.

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ⁱ True Enhance DL is 510(k)-pending with the U.S. FDA. Not available for sale in the United States

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ⁱⁱⁱ As demonstrated in a clinical evaluation consisting of 40 cases and 6 physicians, where each case was reconstructed with both DLIR and ASiR-V and evaluated by 3 of the physicians. In 92% of the reads, DLIR's noise texture was rated better than ASiR-V's. This rating was based on each individual reader's preference.

^{iv} Image quality comparisons were evaluated by phantom tests of MTF, SSP, axial NPS, standard deviation of image noise, CT Number accuracy, CNR, and artifact analysis. Additionally, LCD was demonstrated in phantom testing using a model observer with the head and body MITA CT IQ Phantoms (CT191, CT189 The Phantom Laboratory). DLIR-H and ASiR-V reconstructions were performed using the same raw data.

^v Precision DL with Omni Legend 32cm data improves Contrast Recovery (CR) by 11% on average and Contrast-to-Noise Ratio (CNR) by average of 23% as compared to non-ToF reconstruction. CR and CNR demonstrated using clinical data with inserted lesions of known size, location, and contrast. Using data from Omni Legend 32 cm, CR and CNR were measured using High Precision DL and QCHD.

^{vi} Precision DL with Omni Legend 32cm improves feature quantitation accuracy by 14% as compared to Discovery MI with ToF reconstruction, at comparable noise level. Quantitation accuracy demonstrated using clinical data with inserted lesions of known size, location, and contrast (ground truth). Feature SUVmean from Omni Legend 32 cm with High Precision DL compared to SUVmean from Discovery MI 25 cm with QCFX.

^{vii} GE HealthCare Data on File

^{viii} calculated by IB data with estimation 20 scans per day, 5.5 working day in a week, fully start using AIR™ Recon DL 4 weeks after delivery, as of Oct 31, 2023.

^{ix} GE HealthCare Data on File

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