



Precision DL^{*}

ENHANCE YOUR IMAGING WITH DEEP LEARNING



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Enhance your imaging with deep learning

We're living in the age of artificial intelligence. From search engines to self-driving cars, AI is all around us, improving everyday life. In the world of healthcare, AI can help lead to greater diagnostic confidence and help improve patient outcomes. But what if AI could help advance PET/CT imaging? Now it can.

Introducing Precision DL^{*}

Precision DL^{*} is our innovative deep learning software that is engineered to provide increased small, low-contrast lesion detectability compared to our conventional Time-of-Flight PET/CT scanner.¹

WHERE IS AI COMMONLY USED?



Self-driving cars

HOW DOES TIME-OF-FLIGHT WORK?

Time-of-Flight calculates where the point of a positron annihilation event took place along the line of response between two opposing PET detectors. This helps lead to better small lesion detectability and higher contrast, even in bariatric patients.

WITHOUT TIME-OF-FLIGHT



The power of deep learning

We know that with hardware-based Time-of-Flight there is better contrast-to-noise ratio and contrast recovery that enhances the final image quality. Precision DL^{*} uses the power of deep learning image processing to give you these image quality performance benefits, without the need to invest in more hardware.

It does this using a convolutional neural network, which is designed to analyze large quantities of PET/CT images and learn the characteristics of each one.

CONVOLUTIONAL NEURAL NETWORK



Meet the digital future of Time-of-Flight

Precision DL^{*} is trained with thousands of PET images made using multiple reconstruction methods, including Time-of-Flight. When analyzing your scan data, Precision DL^{*} is designed to find those image characteristics in real-time and apply the information to both current and future data sets.

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WHAT DO YOU GET WITH DEEP LEARNING?

High-sensitivity, high-resolution images further enhanced with the image quality performance characteristics of Time-of-Flight.





WILL THE IMAGES WORK FOR MY NEEDS?

Since Precision DL^{*} is not bound by the constraints of conventional hardware-based Time-of-Flight, you can choose from a low, medium or high strength, tailoring the result to your specific clinical preference.





PRECISION DL*





TIME-OF-FLIGHT







The future starts now

Precision DL^{*} is designed to help deliver incredibly clear images to enable great diagnostic confidence. One of our primary goals is to make state-of-the-art imaging accessible to more practices than ever before. That is the real advantage of moving fully into the future of AI. A future that is available today.

IMPROVED CONTRAST RECOVERY AND CONTRAST-TO-NOISE RATIO²

Up to

28% improvement in contrast recovery 64% improvement in contrast-to-noise ratio

Up to

EXCELLENT SMALL LESION DETECTABILITY¹

42%

increase in small, low-contrast lesion detectability

IMPROVED QUANTITATION ACCURACY³

14%

improvement in feature quantitation accuracy



About GE Healthcare:

GE Healthcare is the \$18 billion healthcare business of GE (NYSE: GE). As a leading global medical technology and digital solutions innovator, GE Healthcare enables clinicians to make faster, more informed decisions through intelligent devices, data analytics, applications and services, supported by its Edison intelligence platform. With over 100 years of healthcare industry experience and around 50,000 employees globally, the company operates at the center of an ecosystem working toward precision health, digitizing healthcare, helping drive productivity and improve outcomes for patients, providers, health systems and researchers around the world.

Follow us on Facebook, LinkedIn, Twitter, and Insights for the latest news, or visit our website www.gehealthcare.com for more information. *Omni Legend and Precision DL are CE marked. Omni Legend is 510(k)cleared by the U.S. FDA. Precision DL is 510(k)-pending with the U.S. FDA. Not available for sale in the United States. Any clinical image shown that was processed with Precision DL was obtained from an investigational device, limited by U.S. law to investigational use.

¹At matched scan time and injected dose. Detectability using clinical data with an inserted 8 mm diameter liver lesion of known location and 2:1 contrast using a CHO model observer, comparing SNR from Omni Legend 32 cm with QCHD and Precision DL to SNR from Discovery[™] MI 25 cm with QCFX.

²Compared to non-ToF reconstruction. Contrast recovery (CR) and contrast-to-noise (CNR) demonstrated using clinical data with inserted lesions of known size, location and contrast. Using data from Discovery MI, CR was measured using High-Precision DL and QCHD. CNR was measured using Low-Precision DL and QCHD.

³ Compared to Discovery MI with Time-of-Flight 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.