Precision DL

Deep learning-based image processing software for GE HealthCare's Omni Legend PET/CT system, significantly enhancing image quality and small lesion detectability.

Overview

Precision DL is an innovative deep learning (DL) image processing software developed by GE HealthCare, and a key component of its Effortless Recon DL portfolio. It is exclusively available on the all-digital Omni Legend PET/CT system. The software leverages an advanced deep neural network, trained using thousands of images from multiple reconstruction methods, including Time-of-Flight (ToF), to deliver image quality benefits traditionally associated with hardware-based ToF reconstruction, but without the need for additional hardware investment.

Key Benefits and Capabilities:

Precision DL is engineered to provide greater diagnostic confidence and improve patient outcomes by enhancing image quality. It achieves this through several key performance improvements:

Enhanced Small Lesion Detectability: Provides up to a 42% average increase in small, low-contrast lesion detectability.
Improved Image Quality: Offers an average improvement in Contrast-to-Noise Ratio (CNR) and Contrast Recovery (CR), with reported improvements of up to 28% and 11% respectively.
Quantitative Accuracy: Improves feature quantification accuracy by 14% on average.
Flexible Reconstruction: Allows clinicians to choose from low, medium, or high strength settings to tailor the result to their specific clinical preference.
Workflow Integration: Works seamlessly with the Omni Legend's AI-enhanced workflow solutions, such as the AI-based Auto Positioning Camera, to improve operational efficiency and patient throughput.
Target Users and Use Cases:

Precision DL is primarily used by nuclear medicine specialists, radiologists, and oncologists in enterprise-level hospitals and imaging centers. Its primary use cases span multiple clinical areas, including:

Oncology: Enhancing the ability to spot small lesions for early diagnosis, staging, and monitoring of cancer.

Cardiology & Neurology: Providing high-sensitivity images for procedures involving new and short-life tracers.

Theranostics: Supporting the diagnostic portion of combined diagnostic and therapeutic interventions.

Dose Reduction: The enhanced sensitivity and image quality allow for faster scan times and lower radiation doses for patients.

Key Features

- Deep Learning Image Reconstruction
- Enhanced Small Lesion Detectability (up to 42% increase)
- Improved Contrast-to-Noise Ratio
- Quantitative Accuracy Improvement
- Hardware-Independent Time-of-Flight (ToF) Performance
- Selectable Reconstruction Strength (Low/Medium/High)
- AI-Enhanced Workflow Integration

Pricing

Model: enterprise

Part of the Effortless Recon DL portfolio, typically licensed as a feature/upgrade for the GE HealthCare Omni Legend PET/CT system. Contact GE HealthCare for specific enterprise pricing.

Target Company Size: enterprise

Integrations

GE HealthCare Omni Legend PET/CT, AIR Recon DL (for MR), TrueFidelity (for CT), Helix DL (for X-ray)

Compliance & Certifications

FDA 510(k) Clearance, CE Mark