



## GE Healthcare Introduces Omni Legend: A First-of-its-Kind All-Digital PET/CT System to Drive Efficiency, Enhance Diagnostics, and Deliver on Precision Medicine

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- *Omni Legend is an innovative, breakthrough technology built from the ground up to harness the power of an advanced digital detector capable of producing high-resolution images and exceptional image quality with enhanced clinical efficiency*
- *The Omni PET/CT platform accommodates patients across more care areas and offers a scalable design to easily enable future-ready capabilities and multi-dimensional scalability*
- *The new system is designed with Precision DL<sup>[i]</sup> – a new deep learning image processing software – and the flexibility to scan beyond FDG with new, emerging tracers that can enable different procedures such as the diagnostics portion of theranostics imaging*

**Chicago, U.S. and Barcelona, Spain – October 16, 2022** – At the European Association of Nuclear Medicine (EANM) Annual Meeting, GE Healthcare proudly introduces Omni Legend<sup>[i]</sup>, the first system on its all-new, all-digital PET/CT platform. This cutting-edge system features a brand-new category of digital BGO (dBGO) detector material with a small crystal size that delivers more than two times the sensitivity of prior digital scanners<sup>[ii]</sup>, enabling faster total scan times<sup>[iii]</sup> and impressive small lesion detectability<sup>[iv]</sup>. It is designed to improve operational efficiency, enhance the patient experience, and increase diagnostic power, ideally helping to enable improved patient outcomes.

Additionally, the system's theranostics <sup>[v]</sup> capabilities and ability to image short life tracers, as well as dynamic protocols<sup>[vi]</sup>, help empower clinicians with greater clinical information across more oncology, cardiology, and neurology procedure types than ever before.

"Sensitivity and image quality are everything in PET/CT," explains John Kennedy, Ph.D., Chief Physicist, Nuclear Medicine Department, Rambam Health Care Campus, and Lecturer at Technion – Israel Institute of Technology<sup>[vii]</sup>. "Omni Legend delivers on both – meeting all our image quality criteria for oncology and providing impressive sensitivity to image high count tracers for cardiac and neuro imaging, which helps better inform patient diagnoses and monitoring. Also, we have been able to increase patient throughput by more than a third thanks to the system's fast total scan times – even achieving 35 patient scans in a 9.5-hour shift – and reduce dose by 40% versus the previous equipment that was installed. This not only enables better patient access and experience but also allows us to increase overall hospital efficiency<sup>[viii]</sup>."

As the pace of change in healthcare continues to increase, health plan leaders cite managing costs and driving operational efficiency as the top two challenges they face today<sup>[ix]</sup>. This is consistent with comments by global Molecular Imaging departments, which note operational efficiency as a top barrier to growing PET/CT procedure volumes<sup>[x]</sup>.

Omni Legend is GE Healthcare's response to these growing challenges, helping healthcare systems overcome today's barriers with a collection of intuitive workflow solutions enhanced by artificial intelligence (AI), including its new Precision DL<sup>[i]</sup> solution for deep learning image processing in PET/CT as well as its AI-based Auto Positioning Camera.

"Having access to high-quality images to determine patient care is foundational to administering quality healthcare," adds Prof. Zohar Keidar, Director of Nuclear Medicine & the PET/CT Department at Rambam and an Associate Clinical Professor at the Technion Faculty of Medicine<sup>[vii]</sup>. "With this in mind, a department like ours – which has a very heavy workload – requires a system that enables flexibility for emergency cases, in addition to our already packed schedules. Omni Legend provides that flexibility. Within a few short weeks/months, we were able to increase our number of scans by 150 percent – going from 30 to 45 patient scans per day. We used to have a long wait list; but today, if something is urgent, we can quickly scan a patient while keeping our other scheduled appointments<sup>[viii]</sup>. And the system's clinical protocols afford us additional flexibility, allowing us to stage patients on any scanner, regardless of the system the patients was previously scanned on – affording us new opportunities in fleet management."

More than a new processing technique, Precision DL<sup>[i]</sup> is engineered using Deep Learning with a sophisticated deep neural network trained on thousands of images created with different reconstruction methods. It was designed to provide the image quality performance benefits most associated with hardware-based Time-of-Flight, such as better contrast-to-noise ratio, contrast recovery, and quantitative accuracy.

The capabilities of Omni Legend are further elevated by the inclusion of Q.Clear (BSREM), GE Healthcare's pioneering PET image reconstruction technology, and MotionFree, the company's proven, deviceless respiratory motion correction technology. Q.Clear helps to ensure reliable quantification, while MotionFree operates seamlessly in the background to correct respiratory motion artifacts for all patient types.

Furthermore, the new system's operational efficiency solutions help improve the PET/CT imaging experience for both the technologist and the patient with convenient features that provide:

- A fast data quality assurance process that saves time with streamlined calibration;
- Simplified protocol selection on the gantry touchscreen and a new user interface to enable an easy PET/CT process from start to finish; and
- Enhanced patient positioning capabilities as a result of AI-based Auto Positioning that automatically centers the patient for a completely hands-free positioning experience.

This streamlined patient setup frees up technologists to focus on making patients feel more comfortable. Omni Legend also features LED ambient lighting to encourage a calming mood as well as a graphic pattern for the patient to view in the system to help in both alleviating stress and reducing

movement for nervous patients.

"We built our scalable Omni platform from the ground up to meet the needs of our customers and their patients today and in the future," shares Jean-Luc Procaccini, President & CEO, Molecular Imaging & Computed Tomography, GE Healthcare. "With the patient in mind, we leaned on our longstanding technological leadership and strong clinical collaborations to enhance the scan experience with entirely new components designed to help improve clinical outcomes. The result is an all-digital detector, a cutting-edge deep learning solution, and workflow enhancements to help enable more personalized care."

Omni Legend was designed with theranostics in mind, enabling clinicians to reach new levels of sensitivity and detectability for incredibly clear images. Already, the system boasts the highest sensitivity per cm in the market<sup>[xi]</sup> and images Gallium 68 for diagnosis, staging, or restaging.

Future-ready capabilities include a multi-directional, upgradable platform that can potentially expand in each of the core dimensions of PET/CT imaging, including axial field-of-view, digital detector technology, software, CT capabilities, and imaging of new tracers.

For more information about GE Healthcare's new Omni PET/CT platform and Omni Legend system, visit [gehealthcare.com](https://www.gehealthcare.com).

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<sup>[i]</sup> 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.

<sup>[ii]</sup> Omni Legend 32 cm has up to 2.2 increase in system sensitivity as compared to Discovery MI 25 cm. Measurement follows NEMA NU 2-2018.

<sup>[iii]</sup> Up to 53% reduction of PET scan time on Omni Legend 32 cm compared to Discovery MI 25 cm, as demonstrated in phantom testing.

<sup>[iv]</sup> Omni Legend 32 cm increases small lesion detectability 16% on average and up to 20%, as compared to Discovery MI 25 cm with matched scan time/injected dose, as demonstrated in phantom testing using a model observer with 4 mm lesions; average of different reconstruction methods.

<sup>[v]</sup> Omni Legend is capable of imaging the diagnostics portion of Theranostics

<sup>[vi]</sup> Short life tracers such as Rubidium-82 used in PET cardiology scans. For dynamic protocols such as Whole Body Dynamic Acquisition, the Dynamic IQ processing application is required. Dynamic IQ is CE marked. It is 510(k)-pending with the U.S. FDA. Not cleared or approved by the U.S. FDA. Not for sale in the US.

<sup>[vii]</sup> Not a consultant for GEHC: The statements by GE's customers described here are based on their own opinions and on results that were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist, i.e. hospital size, case mix, etc. there can be no guarantee that other customers will achieve the same results.

<sup>[viii]</sup> GE Healthcare does not warrant or guarantee these results. Ability to achieve such results is dependent on factors specific to each customer.

<sup>[ix]</sup> "HealthEdge Survey Highlights Growth Opportunities and Challenges for Health Plan Leaders." HealthEdge. 9 April 2022. <https://www.healthedge.com/about-us/news-events/press-releases/healthedge-survey-highlights-growth-opportunities-and-challenges-for-health-plan-leaders>

<sup>[x]</sup> Data on file.

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