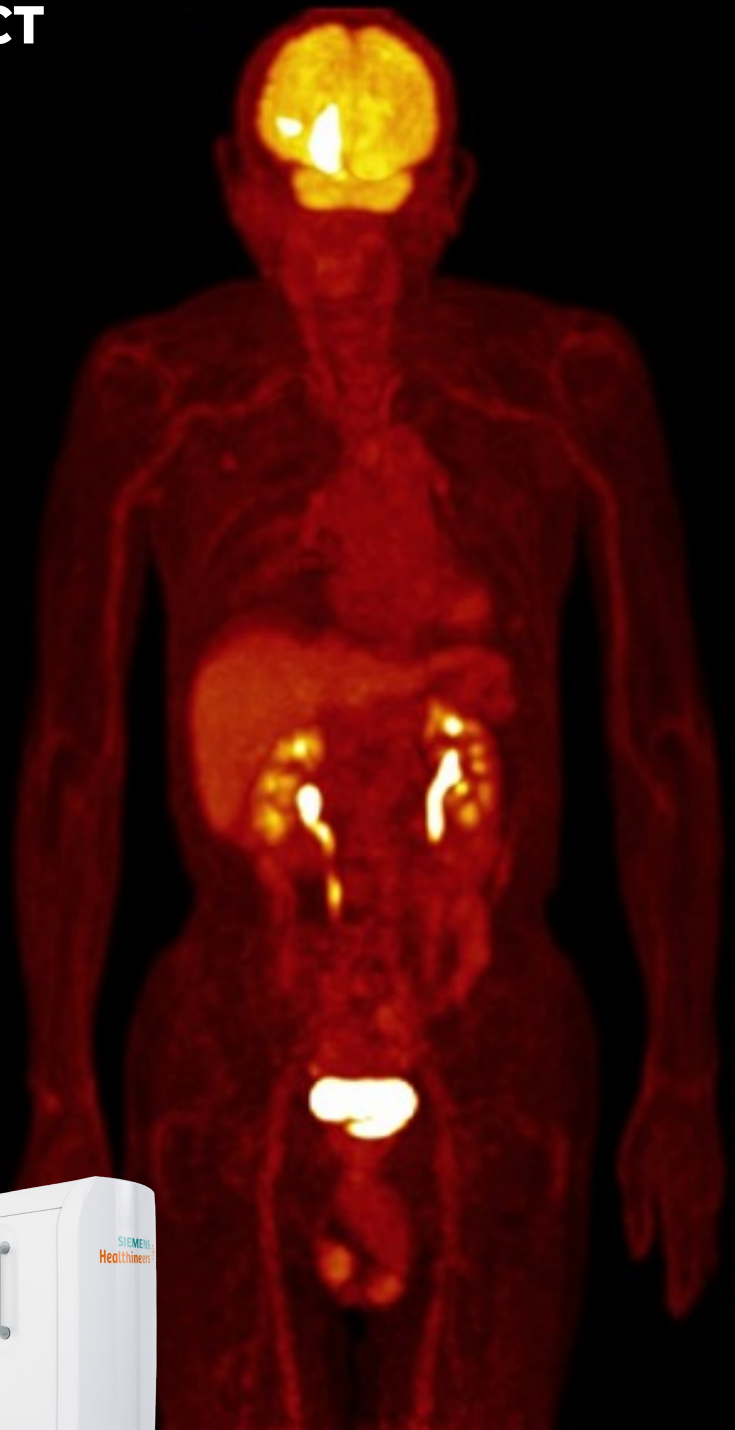


**Biograph Horizon PET/CT**

**Ready  
for more**

[siemens-healthineers.com/biographhorizon](https://siemens-healthineers.com/biographhorizon)



**SIEMENS**  
Healthineers 

# Innovative technology for better care

The demand for value-based care continues to grow. Technological advancements lead to greater potential for an earlier diagnosis and a more definitive treatment strategy, helping to improve patient outcomes. In response, healthcare providers are finding ways to reshape care pathways while driving down long-term asset costs.

**Biograph™ Horizon helps you offset these expenses, expands your clinical capabilities, and simplifies your operations.**



Increase your options with the advances and efficiencies of Biograph Horizon. With technologies that set the standard in PET/CT, Biograph Horizon offers you premium performance at an attractive level of investment. Increased flexibility lets you bring high-quality care to more patients and address a wide variety of clinical indications. Intelligent imaging capabilities streamline scans, saving you time while offering reproducibility and standardization for advanced results.

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**Technology that elevates performance**

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**Performance that creates opportunity**

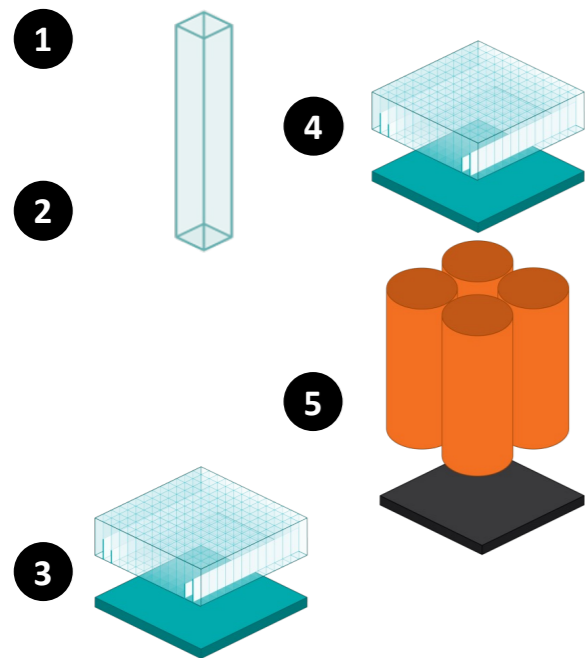
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**Opportunity that advances your results**

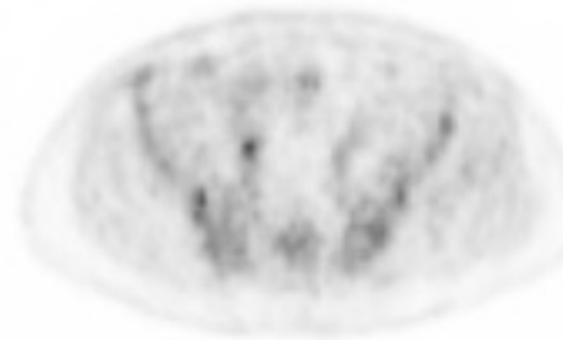
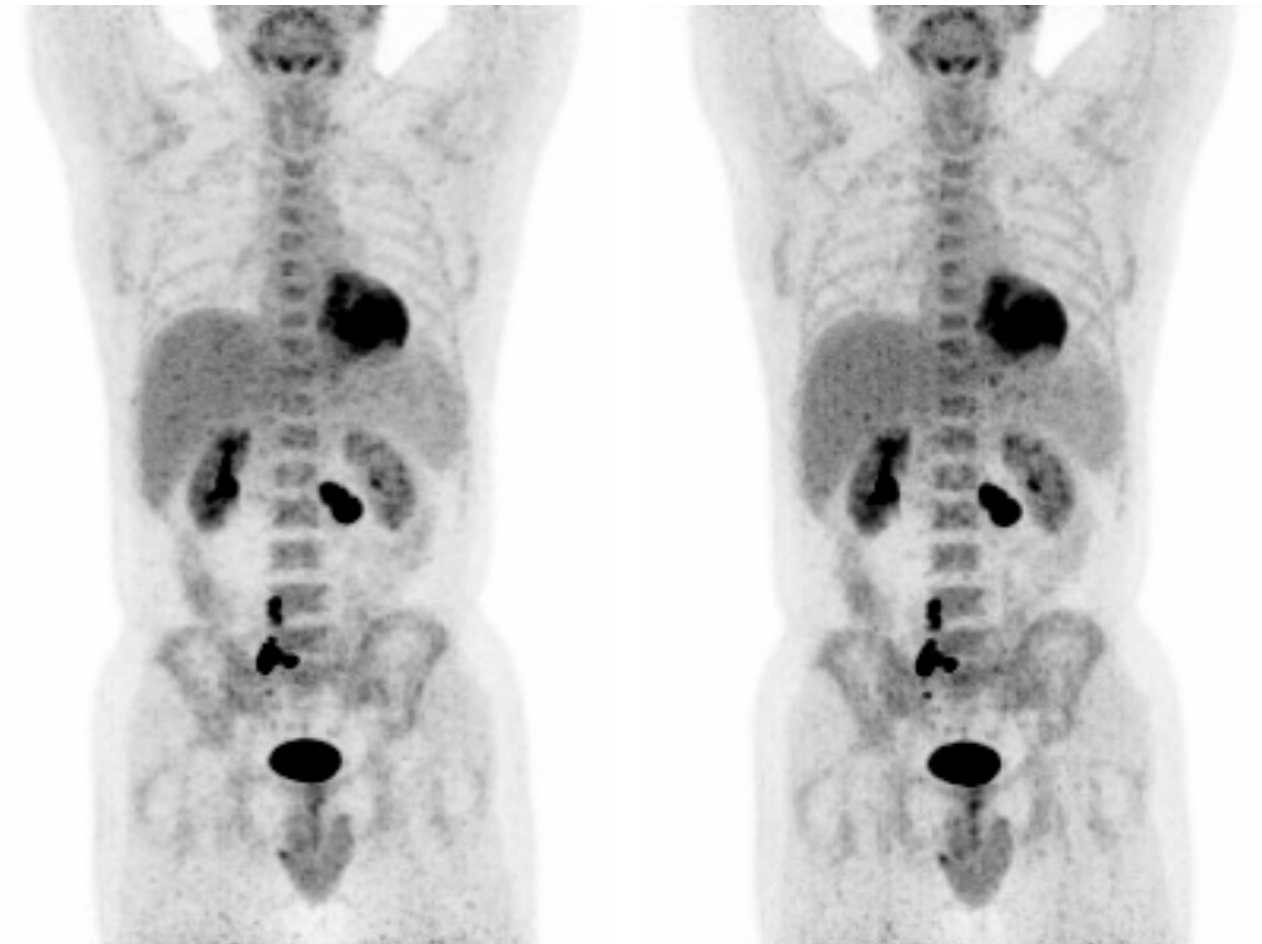
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# Technology that elevates performance

Biograph Horizon digital detectors give you PET/CT imaging with high 78-mm<sup>3</sup> volumetric resolution<sup>1</sup> due to the small, 4 x 4-mm lutetium oxyorthosilicate (LSO) crystal elements, and the ability to offer true time of flight (TOF) for performance and clinical advantages. Dedicated CT solutions, previously available only on stand-alone systems, provide high-quality imaging at low doses.



- 1 A fast, efficient scintillator**, LSO is grown and cut in-house through a vertically integrated manufacturing process, ensuring the highest product quality.
- 2 4 x 4 x 20-mm crystal elements** are individually selected and deliver high 78-mm<sup>3</sup> isotropic volumetric resolution; higher image resolution may result in improved lesion detectability.
- 3 Small, 4 x 4-mm crystals** with integrated light guidance arranged in a 13 x 13 matrix create a block that is combined with a light guide without partitions to spread light to photomultiplier tube (PMT) photosensors.
- 4 Biograph Horizon's digital LSO-based detectors** and high-speed electronics support true TOF for improved signal-to-noise ratio. This enables faster scans, lower injected dose, and better image quality.
- 5 Arranged with no gaps between detector blocks**, Biograph Horizon delivers an effective sensitivity of up to 26.5 cps/kBq<sup>3</sup> and an effective peak NEC rate of up to 366 kcps<sup>3</sup>.



non-TOF

TOF

# Advanced PET and CT in one platform

Biograph Horizon is built on technology that all together adds up to more. Our wide range of features expands your clinical capabilities and delivers excellent lesion detectability, spatial resolution, and quantification accuracy—letting you bring a higher standard of care to more patients.

Biograph Horizon offers a scalable and flexible range of PET and CT technologies available on a single platform. All advanced PET and CT features are field upgradable, which helps to keep your system up to date for many years.

## Experience more CT technologies<sup>2</sup>

### 16-/32-slice CT

Evaluate the smallest structures with optional 32-slice reconstruction featuring IVR (Interleaved Volume Reconstruction).

### SAFIRE

Enhance patient outcomes by delivering excellent image quality at very low doses.

### iMAR

Yield images with a reduced level of metal artifacts compared to conventional reconstruction.

### Dual energy

Combine tissue information with morphology using different kV levels.

### FAST CARE CT technologies

Optimize dose, image quality, and streamline workflow. Innovations include CARE Dose4D™, CARE kV, and more.

### Radiation therapy (RT) planning

Support RT workflow, including motion management solutions for precise therapy planning.



## Experience more PET technologies<sup>2</sup>

### TrueV

Extend the PET axial field of view from 16.4 to 22.1 and add 33% more detector elements, which results in 70% higher count rate performance<sup>1</sup>.

### ultraHD•PET

Improve image signal-to-noise by utilizing TOF combined with the resolution recovery of HD•PET. Enhance image quality and/or reduce patient acquisition time.

### FlowMotion™/FlowMotion AI

Create standardized imaging workflows for fast, reproducible, and personalized results with disease-based protocols that adjust to the patient's anatomy.

### Whole-body dynamic imaging

Simplify workflow for whole-body dynamic imaging that potentially enables new clinical PET applications.

### Multiparametric PET AI

Expand the available parameters and acquisition flexibility, facilitate more reproducible images, and enable absolute quantification.

### OncoFreeze™ AI

Locate and correct anatomy impacted by respiratory motion and increase clinical confidence without additional setup or patient interaction.

### Cardiac imaging

Complete myocardial blood flow (MBF) workflow with automated PET and CT data registration and fast reconstruction of dynamic datasets, simultaneously with acquisition.

### QualityGuard™

Use intrinsic radioactive properties of LSO to automatically calibrate the scanner—eliminating the need for an external source for daily and weekly PET quality control and saving technologist time.


# Performance that creates opportunity


Address a broader range of oncology, neurology, and cardiac indications using all commercially available PET tracers and unique features that elevate image quality, standardization, and clinical insights. From fast, low-dose PET/CT imaging to whole-body dynamic studies, Biograph Horizon is designed to support your clinical needs and research interests. Plus, the opportunity to incorporate advanced CT technology allows you to expand your diagnostic capabilities.


More than  
**3,900**  
Biograph Horizon  
studies per day<sup>6</sup>



**3X** increase   
in the adoption of <sup>68</sup>Ga-DOTATATE for  
neuroendocrine imaging since 2018.<sup>4</sup>

 **131%** increase  
in sites performing cardiac <sup>82</sup>Rb PET  
imaging in the U.S. from 2014 to 2021.<sup>4</sup>

 **5X** increase  
in the use of prostate-specific  
tracers since 2018.<sup>4</sup>

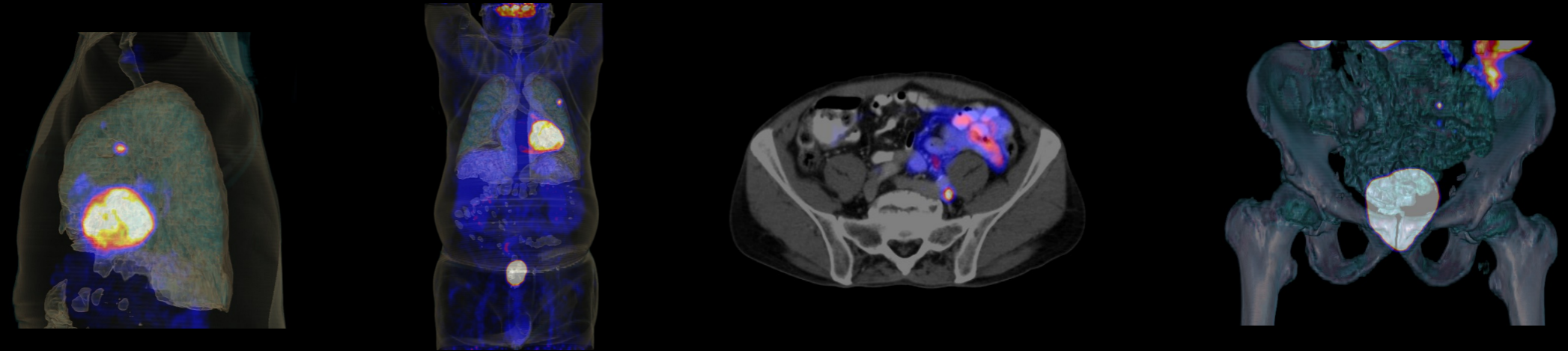
**87%**   
of RT sites that incorporate PET into  
their RT planning protocols.<sup>5</sup>



# Clinical versatility for unlimited opportunities

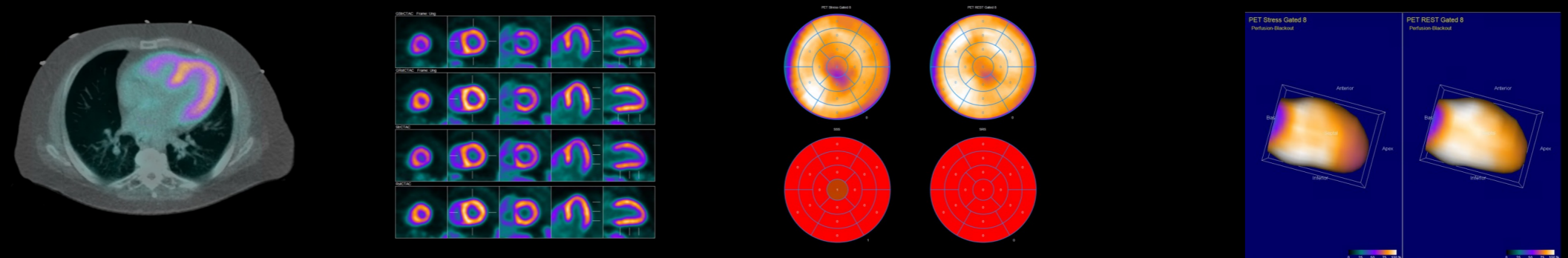
## Oncology

Biograph Horizon's ability to support low-dose, fast imaging enables a comprehensive oncology imaging workflow. Additionally, oncology-dedicated technologies like deviceless gating, whole-body dynamic imaging, and RT planning packages help to expand capabilities beyond traditional PET/CT imaging.



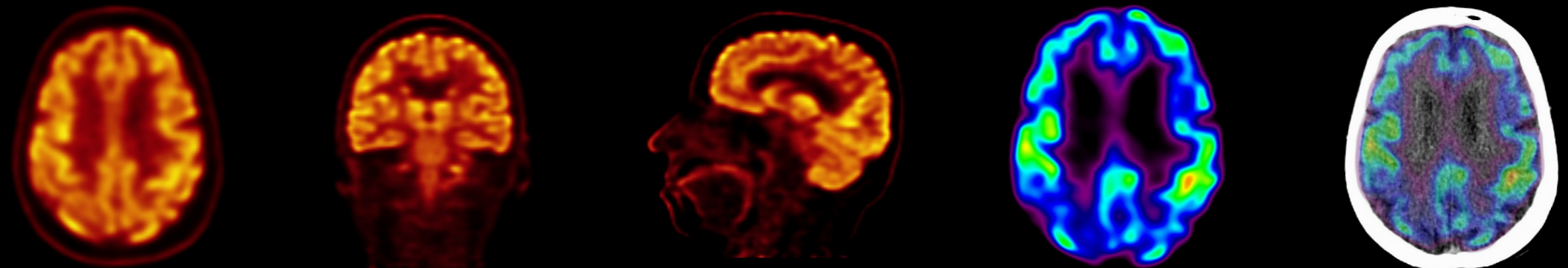
## Cardiology

Biograph Horizon's digital LSO-based detectors enable routine use of short-lived isotopes for cardiac imaging. Additionally, cardiac-dedicated features deliver automated PET and CT data registration and rapid reconstruction of dynamic datasets simultaneously with acquisition for a quick and reproducible workflow.



## Neurology

Biograph Horizon demonstrates precise delineation of cerebral anatomy with small elements, including 78-mm<sup>3</sup> volumetric resolution and a large 360 x 360 acquisition matrix.



# Opportunity that advances your results

Better support clinical routines with an enhanced patient and user experience. On top of its patient-friendly design, Biograph Horizon offers AIDAN—our intelligent imaging platform for Biograph PET/CT. With AIDAN, you can leverage the demanding processing power of AI-based solutions to perform PET/CT exams with more efficiency. Optimize clinical operations and the patient experience with just a click of a button.

**Short, 130-cm tunnel**  
Reduced patient claustrophobia and more room for patient positioning

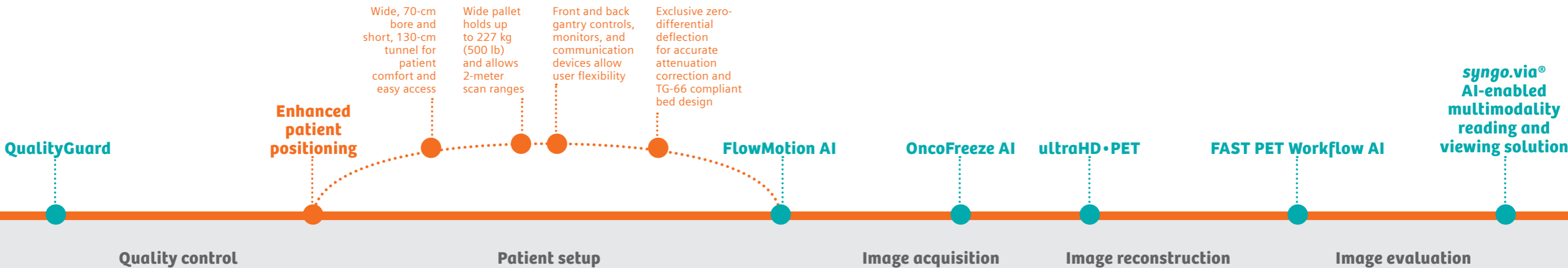
**70-cm bore size**  
Easy patient access and positioning of external accessories

**Large patient imaging**  
Wide pallet holds up to 227 kg (500 lb) and allows 2-meter scan ranges

**Exclusive bed design**  
Zero-differential deflection for accurate attenuation correction



## Streamlined workflow with intelligent imaging





*“Oncology scans with Biograph Horizon indicate good image quality and good lesion detection, even in difficult-to-image patients.”*

Professor Nagara Tamaki  
Kyoto Prefectural University of Medicine (KPUM)  
Kyoto, Japan



*“Not only did Biograph Horizon answer all our needs in terms of cost effectiveness and quality control, it also improved our daily practice with high-resolution images and great sensitivity.”*

Andre Luiz Alberti Leitao  
Medical Physicist  
Núcleos  
Brasília, Brazil



*“The AI features allow us to focus on a specific task, which usually is the patient. You want to spend time with them to make sure they’re OK and that they are getting the best solution they need for treatment.”*

Katie Morris  
Deputy Service Lead for Nuclear Medicine and PET/CT  
The Royal Marsden NHS Foundation Trust  
London, United Kingdom



*“The experience of using the Biograph Horizon PET/CT equipment has been very rewarding. In addition to the excellent quality of images provided by the technology, we have been able to conduct examinations offering lower doses of radiation to patients and, at the same time, faster acquisitions.”*

Gustavo do vale Gomes MD  
Diretor  
Núcleos  
Brasília, Brazil



# Ready for more

Set the standard in PET/CT  
with Biograph Horizon



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<sup>1</sup> Based on internal measurements available at time of publication. Data on file.

<sup>2</sup> Optional.

<sup>3</sup> With TrueV and time of flight option.

<sup>4</sup> IMV 2022 PET Imaging Market Summary Report.

<sup>5</sup> IMV 2020 Radiation Therapy Market Summary Report.

<sup>6</sup> Worldwide data on file.

The statements by Siemens Healthineers customers described herein are based on results that were achieved in the customer’s unique setting. Because there is no “typical” hospital or laboratory and many variables exist (eg, hospital size, samples mix, case mix, level of IT, and/or automation adoption) there can be no guarantee that other customers will achieve the same results.

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