

**Biograph Trinion PET/CT**

**Future-forward by design**

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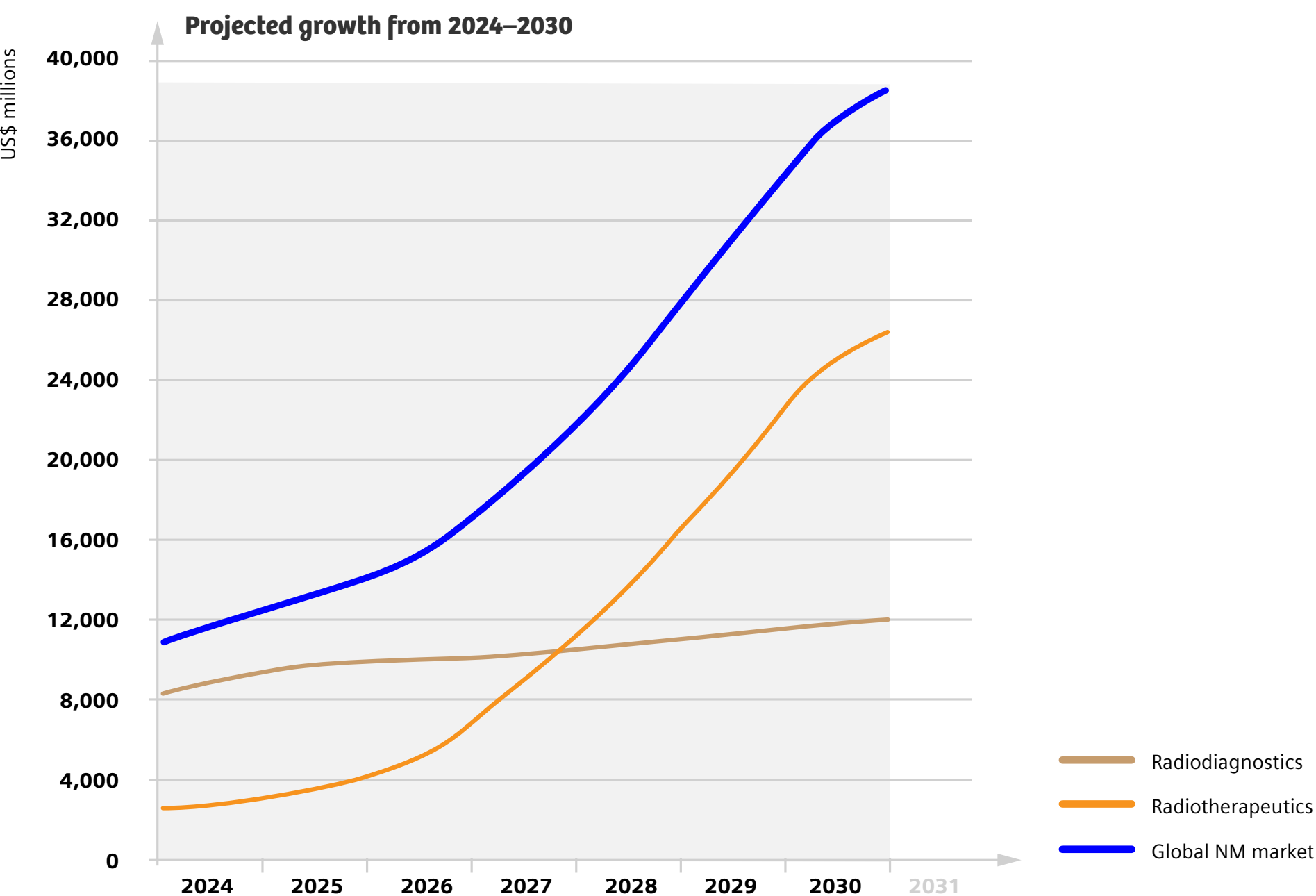
# Opportunities for high-performance PET/CT

While oncology indications continue to account for the majority of PET/CT scans, cardiology and neurology imaging are on the rise. Theranostics and therapies for Alzheimer’s disease along with new PET radiopharmaceuticals are further fueling the demand for molecular imaging.

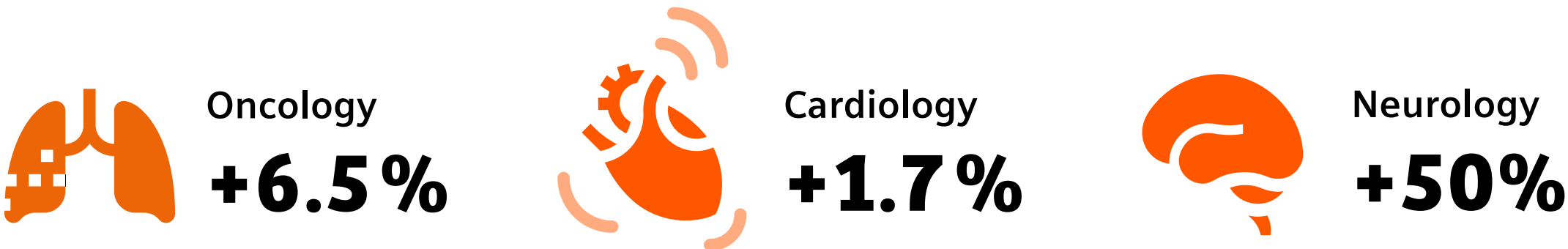
To stay successful in this dynamic landscape, it is crucial to be well prepared for the future with a scalable PET/CT system that can exceed the average scanner lifecycle and allow healthcare providers to expand patient access to more imaging services—now, and for the next generation.

## Significant growth in PET/CT radiotracers<sup>1</sup>

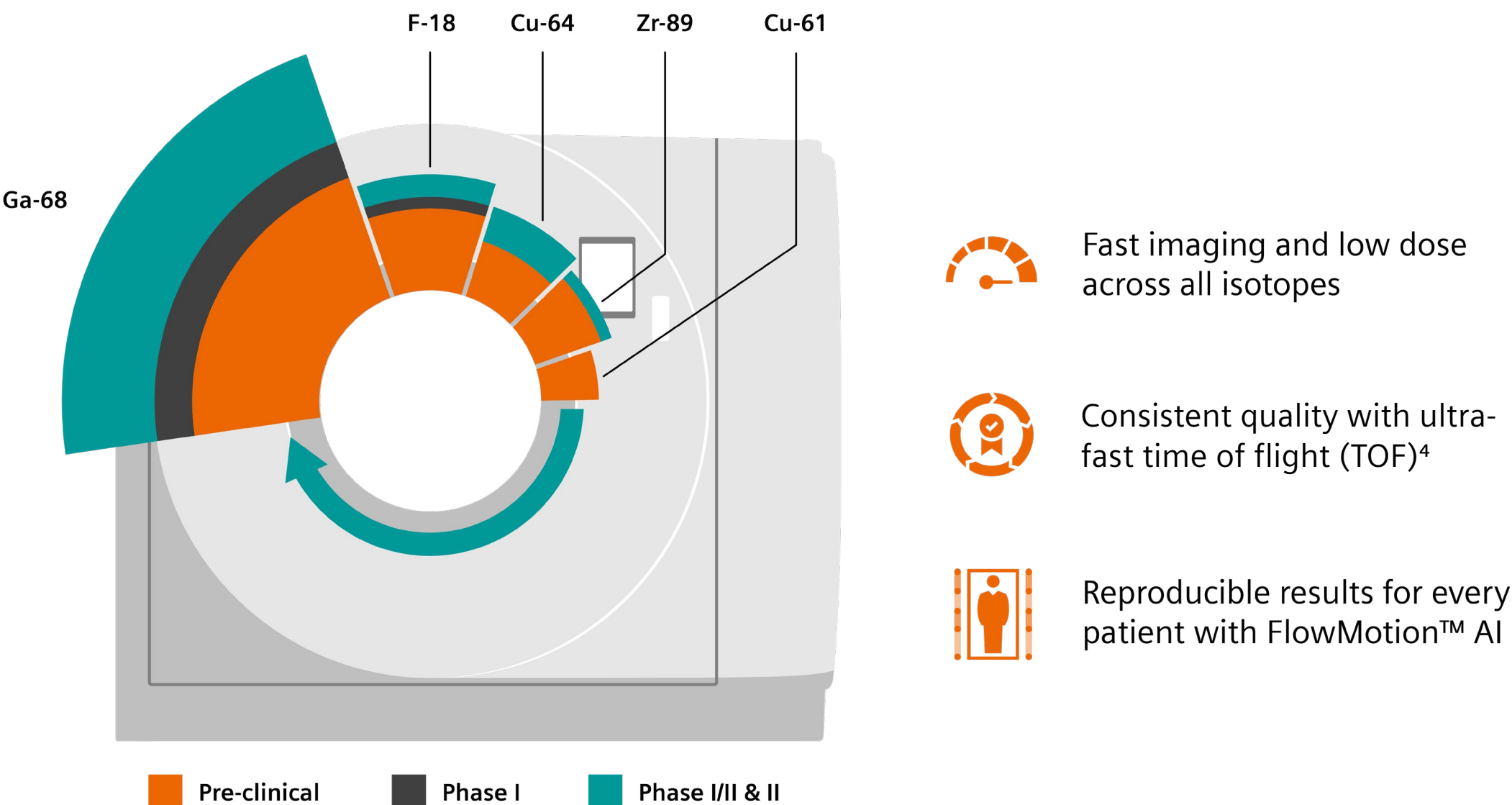
Radiodiagnostics and radiotherapeutics evolution, 2024–2030



## Growing clinical demand<sup>2</sup>



## Novel radiotracers in theranostics<sup>3</sup>

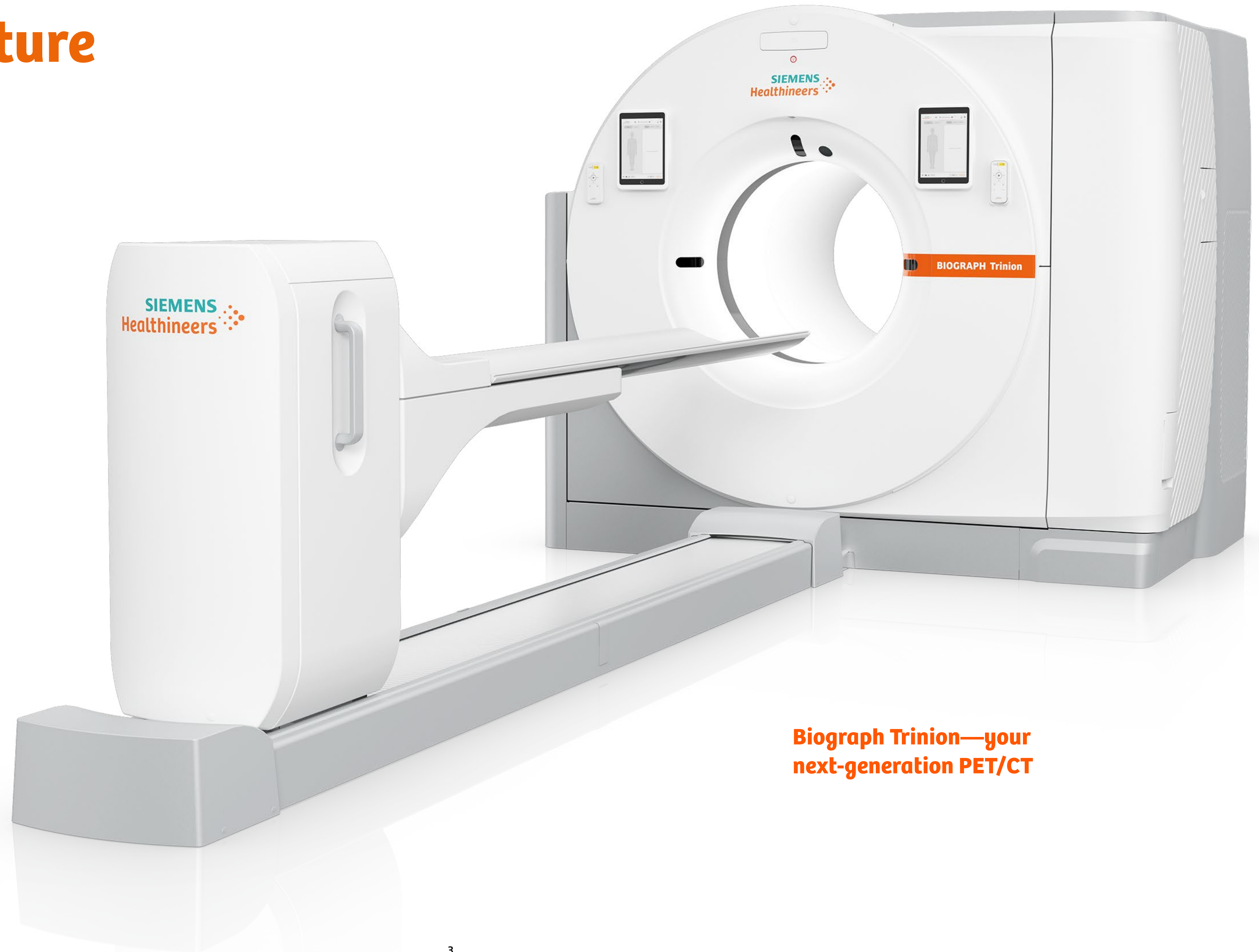


# Step into the future

Launch your future forward with a PET/CT that puts you confidently ahead of the curve and easily adapts to evolving clinical possibilities: Biograph Trinion™<sup>5</sup> with myExam Companion™.

Biograph Trinion PET/CT fully integrates best-in-class hardware and software<sup>6</sup> to create one high-performance platform. A brand-new imaging experience puts patients more at ease, while users gain efficiency from a modern design and AI-supported workflow. Always the right fit, Biograph Trinion provides a sustainable investment from today onward—delivering reduced costs through its compact footprint, automated energy-saving features, and on-site scalability.

**The future of PET is yours with the unmatched accessibility and performance of Biograph Trinion.**



**Biograph Trinion—your  
next-generation PET/CT**



# One, high-performance platform

Progress your PET/CT imaging with the speed and precision that results from one platform that fully integrates a best-in-class trio of PET, CT, and syngo.via software<sup>6</sup>. With its innovative LSO-based digital detector, built-in scalability, next-level CT, and integrated intelligent imaging capabilities, Biograph Trinion helps you step confidently into the future.



*“With Biograph Trinion, we’ve been able to reduce scan time. Before, it took 20 minutes to get a full PET/CT on a patient. Now, I can routinely scan in under 10 minutes. And that’s also with a 50% reduction in dose.”<sup>7</sup>*

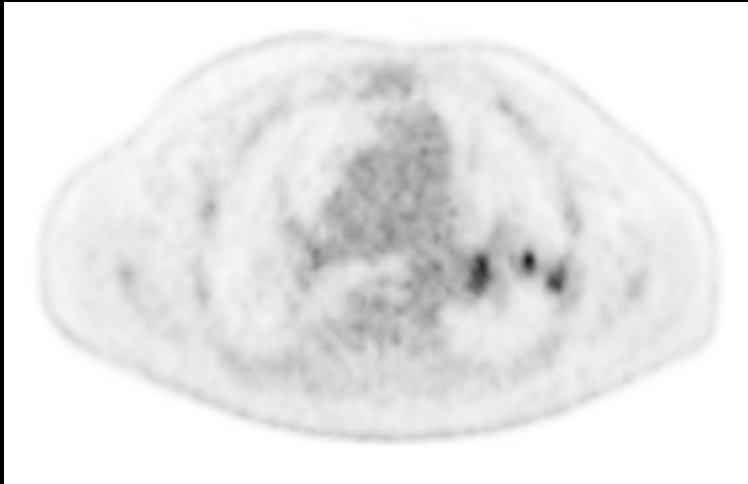
Russell L Roberts, Jr., MD, Nuclear medicine physician, Rome Imaging Center, Rome, Georgia, USA.

Advanced software

Advanced PET technology

Advanced CT technology

PET



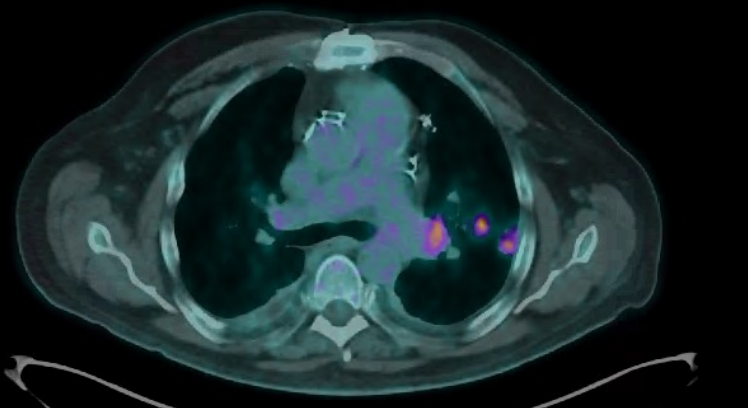
Make confident diagnostic decisions backed by improved small lesion detectability and effective sensitivity.

CT



Offer patients the latest in diagnostic image quality, speed, and dose reduction with next-level CT.

PET/CT



Have intelligent imaging tools and advanced reading solutions for molecular imaging and CT at your fingertips.

# Clinical impact

With its ultra-fast TOF<sup>4</sup>, Biograph Trinion PET/CT allows you to adjust scan time and use any radiotracer. FlowMotion AI, combined with OncoFreeze™ AI<sup>8</sup> gives you high-quality, motion-free images without the need for external gating devices. The result? A complete imaging solution for oncology, neurology, cardiology, theranostics, and more.



*“Everyone in my group of 21 radiologists has been blown away. I am finding tiny lesions that are two millimeters to four millimeters at least three or four times a week that normally we would have not seen.”<sup>7</sup>*

**Russell L Roberts, Jr., MD**, Nuclear medicine physician, Rome Imaging Center, Rome, Georgia, USA.



# New imaging experience

Go beyond with an unprecedented PET/CT imaging experience. Biograph Trinion helps you keep the well-being of your patients and staff in focus while benefiting from a highly efficient department workflow.

## Increase patient well-being

Biograph Trinion PET/CT is designed to provide a streamlined, personalized scanning experience, offering features that work with you and help put your patients at ease by creating a relaxing, more comfortable atmosphere.



*“I had one patient who used to take anxiety medication before his exams but felt he did not need to after seeing the Biograph Trinion. He had high praise for it, and said the moodlights were comforting for him, and it was an enjoyable experience.”*

Melissa L Bishop, LPN, Nurse, Rome Imaging Center, Rome, Georgia, USA.



### Patient moodlight

Patients can choose from seven colors to create a more calming environment.



### Flared bore

Help reduce claustrophobia and enhance comfort with a flared tunnel design.



### Patient table

Keep patients comfortable with a fast, cantilevered bed that supports up to 600 lb (272 kg).



### Patient monitoring camera

Help give your patients peace of mind by closely observing and communicating with them as needed throughout the scanning process.



### Scan&GO flexible workflow

Gain more freedom to move about the room while staying focused on your patient by accessing the procedure on the tablet or via the wireless remote control.



### IV pole and paper roll holder<sup>10</sup>

Create a clean environment for your patients with the integrated paper roll holder and IV pole.



### Auto unload

Shorten the time patients spend on the table and help minimize radiation exposure with one-click unload.

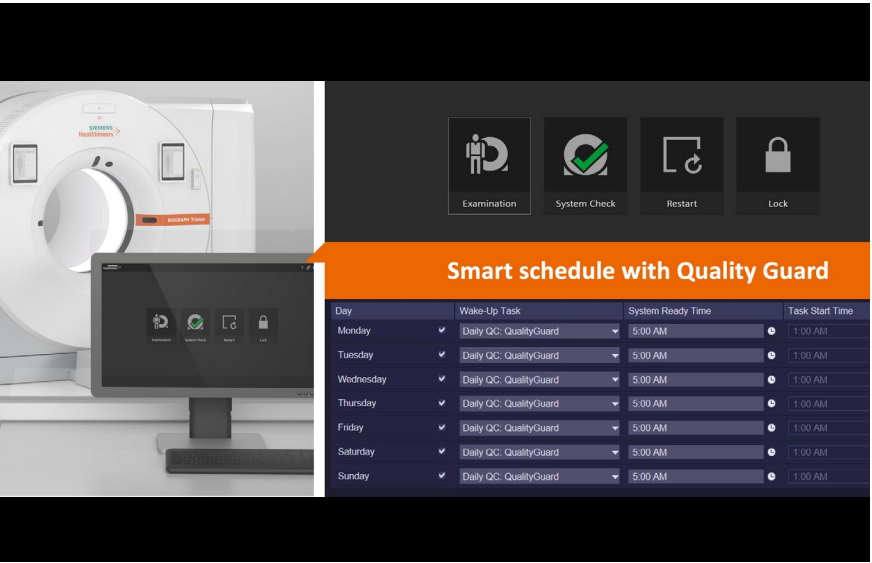
## Focus on user experience

PET/CT imaging can be complex. With its AI-based features and myExam Companion intelligent imaging solutions, Biograph Trinion works for you by automating workflow steps—for consistent, fast results and a more fulfilling user experience.



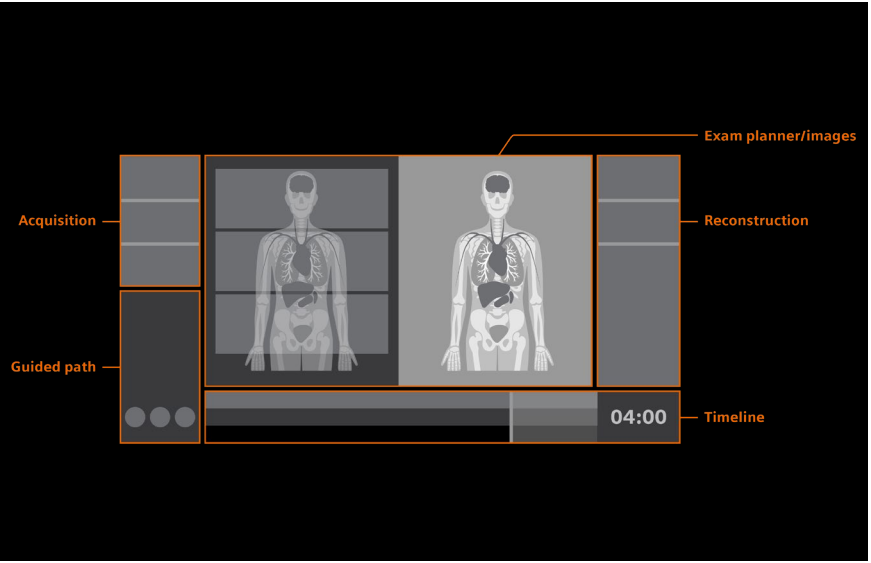
*“Changing parameters is very easy for me, and I think that everyone has really caught on quickly.”*

**Betty Harrell, R.T.(R)(N)(ARRT)**, Chief nuclear medicine technologist, Rome Imaging Center, Rome, Georgia, USA.



### Automated quality control (QC)

Increase productivity. Smart schedule allows you to set up time for the system to be scan-ready and QualityGuard™<sup>10</sup> automatically performs daily QC.



### Integrated simplified user interface (UI)

Focus on relevant tasks. The intuitive UI simplifies system operation by providing guidance and automating steps, supporting consistent and reproducible results no matter who is performing the scan.

### Modern, clutter-free environment

Enjoy a clean workspace. With Biograph Trinion, the computers are integrated inside the gantry. This means more space for you in the control room, no computers under your desk, and less heat generation due to an efficient, air-cooled design.

## Intelligent imaging with myExam Companion

myExam Companion intuitively guides users of all experience levels through any procedure—helping them efficiently achieve reproducible results and unlock the full potential of Biograph Trinion PET/CT.

# Always the right fit

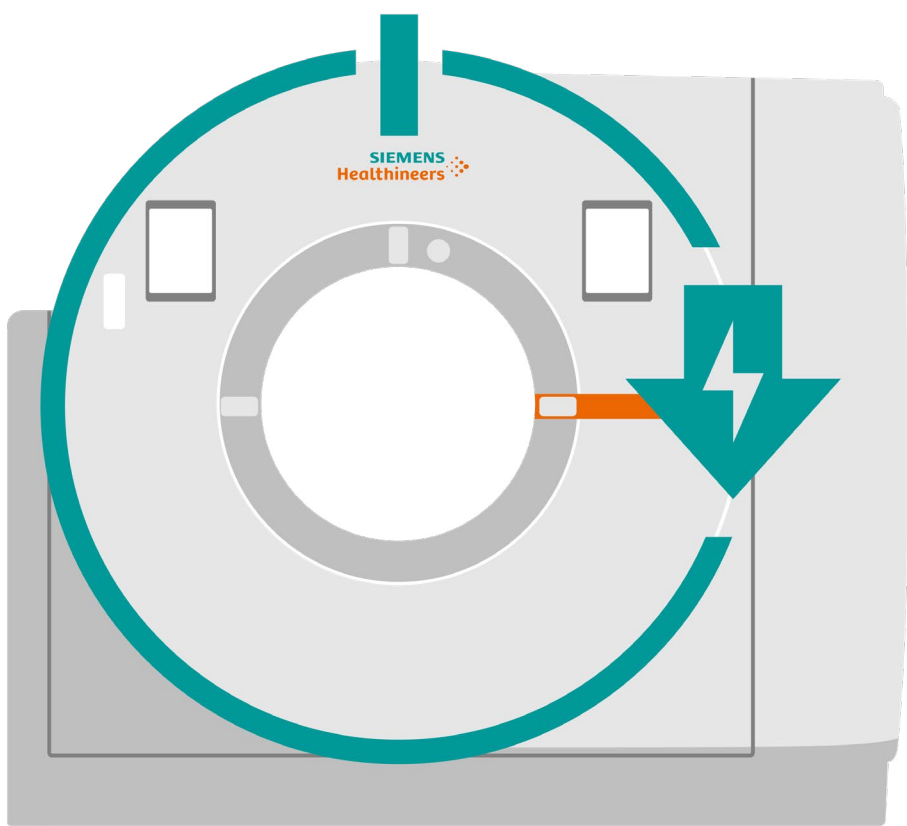
Be ready from day one and give your future a jump-start with a system that meets growing clinical demands with ease. Biograph Trinion PET/CT is a sustainable investment that moves you ahead for years to come.

### An innovative system design

Optimize your space. Biograph Trinion offers a compact footprint, built-in computers, and power-efficient, air-cooled design. The system can be installed in most existing rooms with minimal renovation costs. And you can easily configure it to newly designed spaces.

### Reduced downtime and power consumption

Save time and resources. Biograph Trinion automatically powers off overnight for significant energy savings. You can schedule the system to turn on and perform a daily quality check—so it is ready to scan when you are. And remote monitoring ensures your system is serviced when it is convenient.



Auto-off feature:  
Turn your system off overnight  
without affecting workflow



< 15 MWh per year  
energy consumption



Save at least 46% in  
power consumption<sup>11</sup>

### Flexible room design

Be ready for changing needs. Because the power generator is integrated into the gantry, there is no need for a technical room.





**Scalable performance**

Keep pace with changing demands. Whether you need to scale your PET, CT, or clinical capabilities, you can easily adapt Biograph Trinion at any time and within your existing space. Always the right fit, the PET/CT scanner is a sustainable investment that moves you ahead from today onward.

*“I think this system is a platform that will carry you into the future. If you want to expand performance, you can add axial field of view and extend it very cost-effectively.”*

Gregory Gray, Project manager, PET/CT, Siemens Healthineers Molecular Imaging, Knoxville, Tennessee, USA.

**Scale the axial field of view—in the same room**

Easily scale your PET axial field of view on-site to quickly boost your system’s performance and continue expanding patient access to new imaging opportunities.



**A sustainable investment**



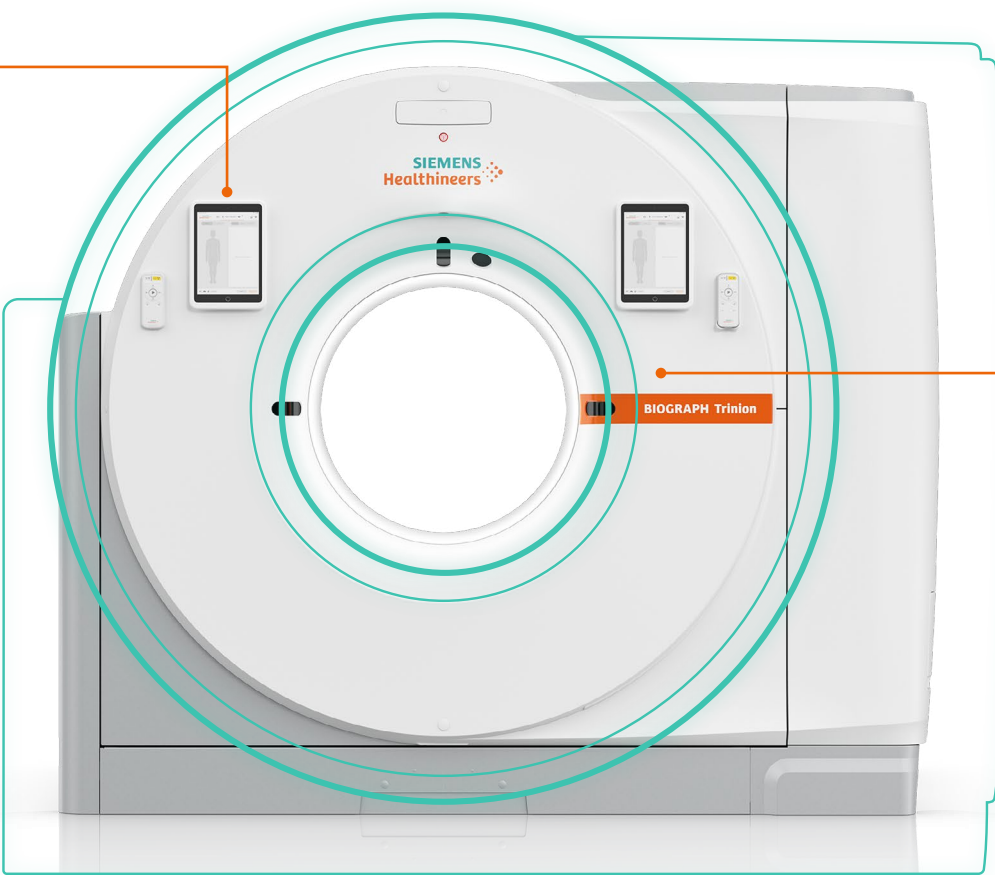
**Operation**

Increase efficiency with Smart powersave mode, fast scans, and lower dose



**Installation**

Install and upgrade within your existing space



**Upgradability**

Grow your clinical possibilities and patient throughput

Ready when you are. Biograph Trinion is upgradable on-site, allowing you to expand your PET/CT capabilities without having to invest in a completely new system.

# The future-forward design of Biograph Trinion

Fully integrated hardware and software, a brand-new imaging experience for patients and users, and future-forward scalability—Biograph Trinion is a powerful platform that meets your next-generation PET/CT imaging needs.

## Technical specifications—PET

Crystal size	4 x 4 x 20 mm
Ultra-fast TOF performance <sup>4</sup>	239 ps
Scalable axial field of view	18 cm, 24 cm <sup>12</sup>
Effective sensitivity <sup>13</sup>	up to 128 cps/kBq <sup>14</sup>
Effective peak NEC rate <sup>13</sup>	up to 1,270 kcps ≤ 25 kBq/cc <sup>14</sup>
Air-cooled design	
LSO-based digital detectors	

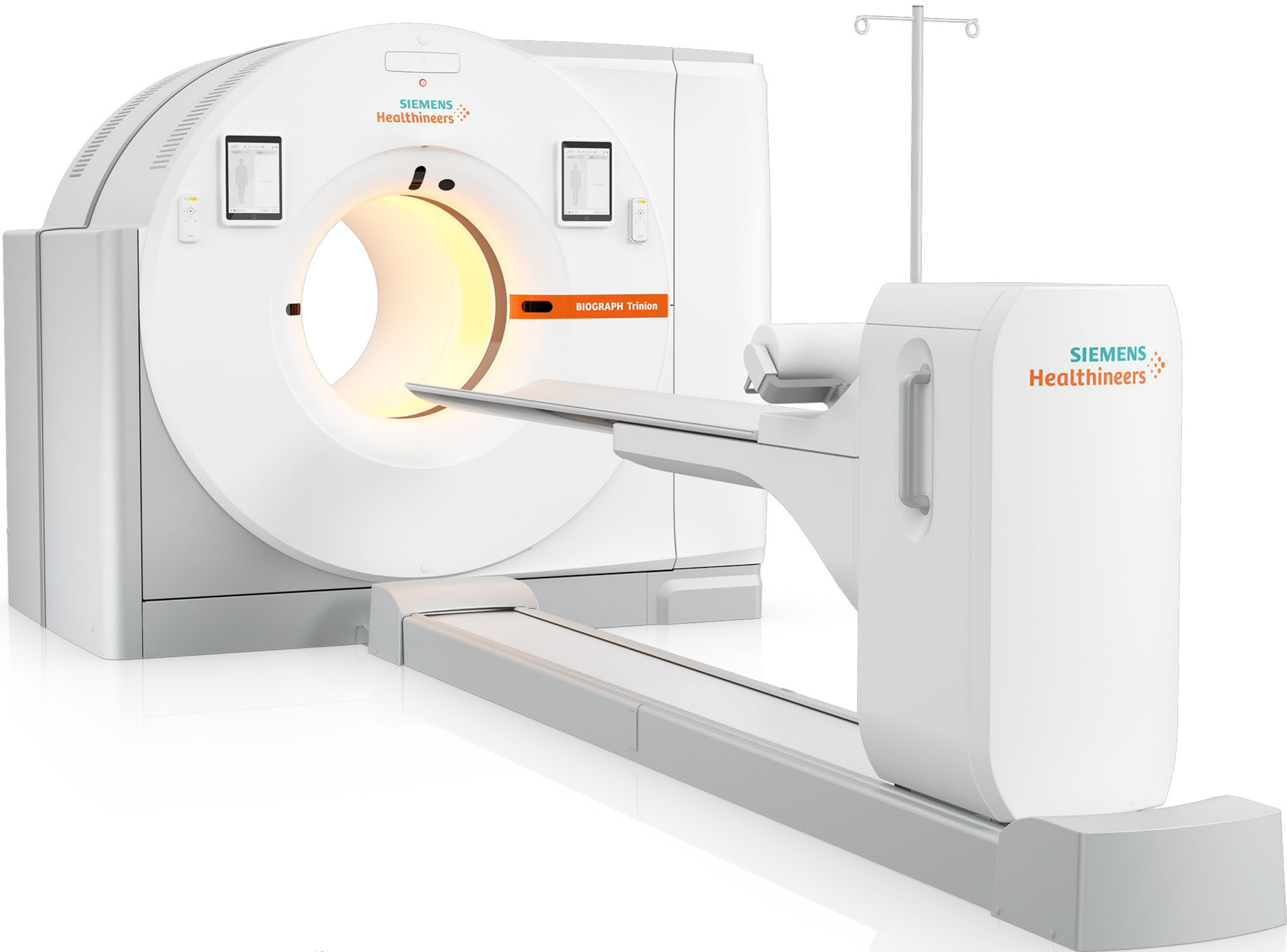
## Technical specifications—CT

CT slices	64/128
Rotation times	up to 0.33 s <sup>10</sup>
Tube current	up to 825 mA
Maximum power	75 kW (187 kW with SAFIRE)
Athlon™ X-ray tube	
Tin Filter	
Stellar detector	



*“This is a near future-proof machine. It’s scalable for whatever you’re going to need. It allows you to image all radiotracers and image them very well. And the patients are on and off the table in a much more comfortable setting.”<sup>7</sup>*

**Russell L Roberts, Jr., MD**, Nuclear medicine physician, Rome Imaging Center, Rome, Georgia, USA.



Biograph Trinion PET/CT

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<sup>1</sup> MEDraysintell. Clinical Radiopharmaceuticals Report & Directory – Edition 2023. September 2023:92)

<sup>2</sup> IMV Science & Medicine Group. PET Imaging Market Summary Report presentation. February 2024:28)

<sup>3</sup> Based on internal analysis. Data on file.

<sup>4</sup> Ultra-fast time of flight (TOF) is defined as less than 275 picoseconds (ps). Data on file.

<sup>5</sup> Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

<sup>6</sup> Data on file.

<sup>7</sup> 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, sample mix, case mix, level of IT, and/or automation adoption) there can be no guarantee that other customers will achieve the same results.

<sup>8</sup> OncoFreeze AI is not commercially available in all countries. Future availability cannot be guaranteed.

<sup>9</sup> iMAR is designed to yield images with a reduced level of metal artifacts compared to conventional reconstruction if the underlying CT data is distorted by metal being present in the scanned object. The exact amount of metal artifact reduction and the corresponding improvement in image quality achievable depends on numerous factors, including composition and size of the metal part within the object, patient size, anatomical location, and clinical practice. It is recommended to perform iMAR reconstruction in addition to conventional reconstruction.

<sup>10</sup> Optional.

<sup>11</sup> Compared to other air-cooled Biograph™ PET/CT systems.

<sup>12</sup> Scalable axial field of views beyond 18 cm and 24 cm are not yet commercially available.

<sup>13</sup> With time of flight.

<sup>14</sup> Data calculated with 35-cm phantom.

All clinical images in this brochure are courtesy of Rome Imaging Center, Rome, Georgia, USA.

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