



# Sustainable molecular imaging solutions for a resilient tomorrow

Discovery™ IQ Gen 2





# Creating a more sustainable future requires we care for the planet and its inhabitants.

It is essential that we continue to drive progress toward early, precise, and accessible diagnosis and treatment of more patients. For the planet, it is critical that we do so with a reduced impact on precious and rare resources that are imperative to life. We believe that the advancement of precision health, greater digitization of healthcare, and increased access to quality care are fundamental to accomplishing this goal.

We support carbon policies that reduce greenhouse gas emissions and promote sustainable development. We are committed to achieving net zero by 2050 and are part of the UN-backed “Race to Zero,” with a goal of reducing emissions based on the Paris Agreement. We’ve also set a public goal to achieve a 50% reduction in our own operational emissions by 2030. As a result of these efforts, we want to enable a more sustainable health system by addressing not only the environmental impacts of our products but also the challenges healthcare professionals and their patients face with resilient, digital options.



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**We deliver sustainable,  
intelligently efficient  
solutions for a resilient  
tomorrow.**

Building a healthier world to  
help improve access to care and  
enable better patient outcomes.



**Green**

Using fewer resources for a healthier planet.

**Digital**

Transforming healthcare through innovation.

**Resilience**

Building flexibility and dependability across healthcare systems.



## Discovery™ IQ Gen 2 helps create a resilient tomorrow.

Our Discovery™ IQ Gen 2 PET/CT system and its services help ensure that radiology professionals and the patients they serve have the technology necessary to create a sustainable and resilient tomorrow.

### Reducing environmental impact

- MotionFree digital respiratory motion management solution
- Remote patient landmark and positioning with AutoIN
- Xstream Injector is a powerful, integrated injection option that starts the injection process in synchronization with “Start Scan.”
- Scalability up to a 25 cm axial field of view

### Improving outcomes

- Up to a 30% improvement in quantitation accuracy (SUVmean) compared to non-motion corrected data<sup>1</sup>, up to a 67% improvement in lesion volume measurements<sup>2</sup>, and up to 11 minutes saved in patient setup time compared to an external gating device with MotionFree<sup>3</sup>
- Helps to reduce technologist exposure to radiation and contagious diseases and improves imaging workflow
- Simplified exam workflow



<sup>1</sup> As demonstrated in phantom testing using a typical and fast respiratory model and OSEM reconstruction. Quantitative accuracy improvements are based on SUVmean.

<sup>2</sup> Compared to non-processed (STATIC, no motion-correction) data. As demonstrated in phantom testing using a typical and fast respiratory model, 18 mm Ge-68 spheres, and OSEM reconstruction.

<sup>3</sup> Based on clinical practice at University Hospital Zurich, using 5-Ring PET/CT with MotionFree and RPM. These results are for illustrative purposes only and represent specific customer experiences; actual results could vary depending on clinical practice and circumstances.



## Contributing to a healthier planet

**More than half of the healthcare sector's climate footprint, approximately 53%, is attributable to energy use.**<sup>4</sup> As a result, we have strengthened our commitment to environmentally conscious design and sustainable practices across our product manufacturing, sourcing, distribution, installation, and service operations. This includes improving energy efficiency, optimizing the use of limited or rare materials, providing digitally enabled and remote predictive and maintenance service throughout the product lifespan, and offering refurbishment and recycling options at the end of product life.

### **GE Healthcare environmental management system is ISO 14001 certified**

Our production and service operations align to ISO 14001 standards.

### **We're committed to environmental product design**

This product conforms with IEC60601-1-9:2007.

### **Materials**

GE Healthcare reviews the environmental aspects of the material supply used within our products to increase recyclability and decrease the use of hazardous substances, when possible.

### **Reduce the use of hazardous substances**

EU RoHS directive 2011/65/EU



<sup>4</sup> Health care climate footprint report | Health Care Without Harm (noharm-uscanada.org)



## Product utilization

Our imaging products are designed to help enable energy efficiency through dedicated features and advanced applications to reduce the environmental impact.

### Patient setup and positioning

AutoIN is our remote landmarking and table positioning feature that helps reduce your technologists' exposure to radiation by allowing patient positioning from the console.<sup>5</sup>

MotionFree digital respiratory motion management eliminates the need for a gating device. Solutions with a gating device are cumbersome and take time to set up, which leaves technologists having to prioritize situations in which to use it. As a result, only a small percentage of overall procedures affected by motion receive the benefits of motion correction.

### Guidance for product utilization

Instructions are provided for use of the equipment to minimize the environmental impact during installation, use, and operation.

### Reduce energy consumption during use

Utilize standby power mode to reduce energy consumption by 70% when the system is idle.

### Power consumption

Standby mode:	1.6 kW
Energy Savings Mode:	3.8 kW
Idle:	5.1 kW
PET scan (typical):	6 kW
CT scan (typical):	21 kW

<sup>5</sup> AutoIN may minimize the radiation dose to technologist and time spent to position the patient from the scanning room.



## End of product life

We are increasingly putting our retired products' materials back into the supply chain to maximize efficient use and minimize unnecessary waste. This circularity model enables our imaging products to extend their clinical impact through longer lifespans while reducing the environmental footprint. Additionally, we offer our customers partnered support for upgrades and services throughout a product's lifespan to maintain optimal performance and help drive better patient outcomes.

Our refurbishment programs involve an extensive inspection and testing process, designed to bring equipment back to its original certified manufacturing specifications. If the system is not suitable for refurbishment, eligible parts are harvested for reuse after quality and performance testing, while the rest are returned to dedicated recycling facilities.

### Guidance for end of lifecycle

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Equipment instructions are provided to minimize the environmental impact for disposal or recycling.

### Upgrades

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Hardware and software options are provided as a solution to extend the product lifespan.

### Parts harvesting and refurbishment: options are provided to reduce waste and environmental impacts while extending imaging access to less advantaged regions.

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CT and SPECT system parts are eligible for assessment through the refurbishment program, in which they are assessed for refurbishment, harvesting, or recycling at the appropriate time in the lifespan.<sup>6</sup>

94–96% of most systems are reused, refurbished, or recycled, extending the lifetime of each product.<sup>6</sup>

### Waste reduction

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This system is in accordance with Waste Electrical and Electronic Equipment (WEEE) regulations.

<sup>6</sup> Products within MR, CT, nuclear medicine, and PET/CT are eligible for refurbishment, although whether a system is actually refurbished versus harvested for parts or otherwise recycled or reused is dependent on the state of the system when GE Healthcare takes possession of it. Data on file.



## GE Healthcare product stewardship commitment

For more than 20 years, GE Healthcare's GoldSeal program has played a vital role in reducing medical imaging equipment waste by promoting and enabling the reuse of equipment and parts from de-installed imaging systems. After undergoing an extensive inspection and testing process, GoldSeal equipment is refurbished to meet the original system specifications. Buyers of GoldSeal MRI, CT, or PET/CT products can save on the acquisition costs associated with buying new equipment. Machines deemed unsuitable for GoldSeal refurbishment are dismantled at end of life, and after successfully passing acceptance testing criteria, specific parts are harvested for reuse. Where harvesting is not appropriate, GE Healthcare recycles about 94–96% of most systems. In a typical year, GoldSeal refurbishes approximately 8,000 pieces of imaging machines and ultrasounds.

### NEW PRODUCT PURCHASE OR LEASE

#### GOLDSEAL PROGRAM: LEASE RETURN PRODUCT OR BUYBACK

- Comprehensively refurbished and/or remanufactured
- Updated with new software
- Recertified following all FDA requirements
- Equipment backed with 1 year, same-as-new equipment warranty

#### RECLAIM FOR PARTS AND MATERIALS

Identify parts for refurbishing and/or repurpose

#### END OF LIFE

About 94–96% of most systems are recycled, substantially reducing the volume of waste en route to landfills.





## Digitizing healthcare through transformative innovations for a resilient tomorrow

We are committed to investing in digital capabilities that help accelerate clinical decision making, optimize imaging operations, and drive efficiencies in exam workflows, all of which can improve patient outcomes. Enabling digital transformation will further enhance our predictive and maintenance service operations for the life of your products.

**We are also dedicated to driving a more resilient and sustainable future in healthcare.** Many factors, including the pandemic, climate-related weather disasters, and supply-chain issues amplified this need. Managing operations through these challenges requires resilience and perseverance.

### Advancing clinical outcomes

Advanced applications and cutting-edge AI tools provide personalized data to drive actionable insights, helping healthcare professionals make fast, accurate clinical decisions for care pathways.

#### Gain actionable clinical insights quicker for earlier diagnosis

MotionFree digital respiratory motion correction provides up to a 30% improvement in quantitation accuracy (SUVmean) compared to non-motion corrected data<sup>7</sup> and up to a 67% improvement in lesion volume measurements<sup>8</sup>

#### Help improve patient outcomes with improved image quality

Q.Clear delivers up to 2x improvement in PET quantitation accuracy (SUVmean) and up to a 2x improvement in signal-to-noise ratio.<sup>9</sup>

<sup>7</sup> As demonstrated in phantom testing using a typical and fast respiratory model and OSEM reconstruction. Quantitative accuracy improvements are based on SUVmean.

<sup>8</sup> Compared to non-processed (STATIC, no motion-correction) data. As demonstrated in phantom testing using a typical and fast respiratory model, 18 mm Ge-68 spheres, and OSEM reconstruction.

<sup>9</sup> Data on file (DOC1779276).



## Optimizing imaging operations

Our AI-based and advanced digital solutions are designed to increase efficiencies across the radiology spectrum without increasing the administrative and training burden on radiologists and technologists.

### Increase productivity and consistency

iCenter™ is a secure, cloud-based asset management tool that provides analytics on a system's status, use, and service activities to help monitor patient and exam volume trends.

DoseWatch™ automatically detects outliers in dosing data and provides insight into their root causes while easily documenting these anomalies for review.

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### Reduce downtime

OnWatch™ enables predictive service to digitally track key system metrics and detect any anomalies. It sends proactive alerts to a remote engineer, who either makes the repair online or schedules a service call.

Tube Watch™ is a predictive solution designed to remotely monitor tubes and predict failures before any disruption occurs to your CT systems. The service enables systems to be monitored remotely 24/7 and to be fixed at a more convenient time. Tube Watch allows proactive part(s) delivery and service scheduling to help maximize uptime by getting the scanner restored quickly.

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### Cybersecurity

GE Healthcare's Design Engineering Privacy and Security (DEPS) process follows GDPR, HIPAA, NIST 800-53, NIST 800-30, ISO 27001, and NIST CSF requirements.



## Enabling intelligent exam workflows

Intelligent automation features help to drive consistency, enable fast, easy exams, and improve workflow with fewer resources, all while achieving similar or improved outcomes.

### Reduce setup time

MotionFree digital respiratory motion correction avoids adding up to 11 minutes to patient setup time compared to an external gating device.<sup>10</sup>

### Reduce exam time

A scalable FOV of up to 25 centimeters provides a 6x increase in sensitivity<sup>11</sup>, allowing reduction in injected PET dose and reduction in scan time.

### Ease of use

AutoIN is our remote landmarking and table positioning feature that helps reduce your technologists' exposure to radiation by allowing patient positioning from the console.<sup>12</sup>

### Cleanability

Our equipment is designed to be cleaned and disinfected easily. We continue to test and approve new cleaning and disinfecting agents. Visit [Cleaning.GEHealthcare.com](https://www.gehealthcare.com/cleaning) for updates.

<sup>10</sup> Based on clinical practice at University Hospital Zurich, using 5-Ring PET/CT with MotionFree and RPM. These results are for illustrative purposes only and represent specific customer experiences; actual results could vary depending on clinical practice and circumstances.

<sup>11</sup> As compared to Discovery IQ with a 15 cm axial field of view

<sup>12</sup> AutoIN may minimize the radiation dose to technologist and time spent to position the patient from the scanning room.



**Building a healthy world to help enable better patient outcomes.**

GE Healthcare is a member of COCIR, the European Trade Association representing the medical imaging, radiotherapy, health ICT, and electromedical industries.\*\*

*\*\*<https://www.cocir.org/about-cocir/members.html>*

*Not all products or features are available in all geographies. Check with your local GE Healthcare representative for availability in your country. Not all features are included in the standard system configuration. Check with your local GE Healthcare representative.*

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