



# Sustainable molecular imaging solutions for a resilient tomorrow

NM/CT 870 DR





# 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.



## NM/CT 870 DR helps create a resilient tomorrow.

Our NM/CT 870 DR SPECT/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

- Compliance with IEC60601-1-9: Requirements for Environmentally Conscious Design
- Compliance with RoHS: Restriction of Hazardous Substances Directive
- Waste management (WEEE passport)
- Most of the material used in the system and system packaging is recyclable.
- Parts are eligible for harvesting.

### Improving outcomes

- SwiftScan for SPECT and planar imaging can reduce scan time up to 25%.<sup>1</sup>
- Workflow productivity for streamlined imaging procedures including camera/patient setup, acquisition, processing, and archiving
- CT Dose reduction techniques: ASiR, Smart mA



<sup>1</sup> Compared to LEHR collimator, with Step & Shoot scan mode (for SPECT)/without Clarity 2D (for Planar). As demonstrated in phantom testing using a bone scan protocol, Evolution processing (for SPECT), and a model observer. Because model observer results may not always match those from a human reader, the actual time/dose reduction depends on the clinical task, patient size, anatomical location, and clinical practice. A radiologist should determine the appropriate scan time/dose for the particular clinical task.



# Contributing to a healthier planet

**More than half of the healthcare sector’s climate footprint, approximately 53%, is attributable to energy use.<sup>2</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.

### Recyclable

Materials are recycled according to the WEEE Passport.

### Reduce the use of hazardous substances

EU RoHS directive 2011/65/EU

## Manufacturing

Through our environmental reviews, we also focus on implementing renewable energy and reducing waste.

### Renewable energy

95% of materials used in the system are recyclable.<sup>3</sup>

<sup>2</sup> Health care climate footprint report | Health Care Without Harm (noharm-uscanada.org)

<sup>3</sup> Data on file.



## Packaging

GE Healthcare imaging equipment has a robust and multi-sourced supply chain for systems and spare parts across all product portfolios.

### Improved Packaging

The packaging is a mixture of recyclable wood and corrugated cardboard. We are taking further steps to reduce the percentage of wood used in packaging materials.



## 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

The minimum height on patient table is 59 cm to facilitate patient loading and unloading from a wheelchair or stretcher.

RCU position and height

### Reduce noise

The system complies with IEC60601-1 where noise is less than 80dB.

### Guidance for product utilization

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

### Reduce energy consumption during use

When the system is idle, standby mode can be utilized to reduce power consumption by up to 70% relative to the idle state.



## Product utilization (Cont.)

### Power consumption

Standby mode: 1.9kVA (for hybrid systems); 1kVA for nuclear medicine-only systems

Energy Savings Mode (ESM): ESM is relevant for only the CT part of this system. The nuclear medicine part of this system utilizes standby mode.

Idle: 6kVA (for hybrid systems); 1.8kVA for nuclear medicine-only systems

SPECT scan (typical): 10.5kVA

CT scan (typical): Low-dose CT scan for attenuation correction: 12kVA; CT diagnostic scan: 25kVA

### Reduce consumable energy utilization

Maintain quantitative SPECT accuracy when corrected by low-dose CT with Q.AC.<sup>4</sup>

<sup>4</sup> Quantitative accuracy defined as equivalence to well counter-measured injected activity in a test phantom. Equivalence means <11% difference when comparing measured counts in SPECT studies corrected by Q.AC-reconstructed CTAC to measured counts in studies corrected by benchmark reconstructed CTAC. Measured counts are defined as average within identical ROIs positioned on SPECT reconstructed slices of homogenous 99mTc solution phantom study.



## 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>5</sup>

94–96% of most systems are reused, refurbished, or recycled, extending the lifetime of each product.<sup>5</sup>

### Waste reduction

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

<sup>5</sup> Products within MR, CT, nuclear medicine, and PET/CT systems 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

SwiftScan for SPECT and planar imaging can reduce scan time by up to 25%.<sup>6</sup>

Evolution technology changes the relationship between dose, image quality, and time by applying a resolution recovery algorithm that models the collimator-detector response, resulting in up to half the scan time or up to half the dose while delivering the same image quality as from a full-time or full-dose scan.<sup>7</sup>

Q.Volumetrix AI (absolute quantification), Q.Lung (AI), and Q.Thera<sup>8</sup> provide personalized care and cutting-edge AI.

SmartConsole, a network-capable image processing sub-system for nuclear medicine, enables you to automate SPECT/CT reconstruction, simplify complex hybrid imaging and quantitative protocols, and generate high-quality hybrid images.

### Keep your imaging equipment up to date with advanced clinical applications

Smart Subscription protects your equipment from obsolescence and keeps your system at its best. It improves patient outcomes and productivity due to improved functionality and easy access to innovation.

<sup>6</sup> Compared to LEHR collimator, with Step & Shoot scan mode (for SPECT)/without Clarity 2D (for Planar). As demonstrated in phantom testing using a bone scan protocol, Evolution processing (for SPECT), and a model observer. Because model observer results may not always match those from a human reader, the actual time/dose reduction depends on the clinical task, patient size, anatomical location, and clinical practice. A radiologist should determine the appropriate scan time/dose for the particular clinical task.

<sup>7</sup> As demonstrated in phantom testing using a model observer. For SPECT, compared to using the LEHR Collimator and a SPECT Step & Shoot acquisition. For Planar, compared to using LEHR without Clarity 2D.

<sup>8</sup> Not all products or features are available in all geographies.



## Advancing clinical outcomes (Cont.)

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

Improved small lesion detectability with SwiftScan SPECT and SwiftScan Planar.

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**Precision health**

Q.Thera for personalized healthcare is an end-to-end solution for Theranostics treatment planning, empowered by AI.<sup>9</sup>

<sup>9</sup> Not all products or features are available in all geographies.



## 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™, a secure cloud-based asset maintenance and management software application, provides data and analytics on asset status, location, maintenance history, utilization, and planning.

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### **Reduce downtime**

Smart QC capabilities provide monitored detector stability and calibration improvements to reduce system downtime and provide easy recovery in case of a QC failure.

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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

Scan ranges are easy to set with an interactive bedside ruler and positioning lights.

### Reduce exam time

Reduce dose or scan times by up to 25 percent with the increased sensitivity of SwiftScan Planar and SwiftScan SPECT.<sup>10</sup>

### Ease of use

SmartConsole automates SPECT/CT reconstruction, simplifies the workflow for complex hybrid and quantitative protocols, and allows technologists to review results directly at the scanner console.

The Ignite user interface allows you to pre-program three-step protocols, so you can select the patient, study, and process images in a matter of seconds.

### 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> Compared to LEHR collimator, with Step & Shoot scan mode (for SPECT)/without Clarity 2D (for Planar). As demonstrated in phantom testing using a bone scan protocol, Evolution processing (for SPECT), and a model observer. Because model observer results may not always match those from a human reader, the actual time/dose reduction depends on the clinical task, patient size, anatomical location, and clinical practice. A radiologist should determine the appropriate scan time/dose for the particular clinical task.



**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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