Sustainable mammography solutions for a resilient tomorrow

Senographe Pristina™

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.

We are committed to achieving **net zero** emissions by 2050.

We’ve set a public goal of a **50% reduction** in our own operational emissions by 2030.

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.

Senographe Pristina™ helps create a resilient tomorrow.

Our Senographe Pristina™ 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

- 40% of the system material in Senographe Pristina is recyclable.[1]
- Ergonomic design reduces strain on technologists and improves patient experience by easing anxiety.[2]
- Our North Greenbush, NY, digital mammography production facility received USGBC LEED Gold Certification.[3]

Improving outcomes

- Digital mammography helps increase breast cancer detection by 21% compared with computed radiography.[4]
- Reshape the mammography experience with comfort, confidence, and clarity.
- Senographe Pristina™ 3D mammography delivers superior diagnostic accuracy[5] for screening or diagnostic mammograms.

[1] Data on file. GE Healthcare 2022. Values based on weight.
[2] IPSOS Technologists Study sponsored by GE Healthcare, conducted with 50 users in Japan and the European Union, from July 2017 to April 2018.
[3] https://www.reliableplant.com/Read/18055/ge-healthcare-opens-$165m-production-facility-in-ny
[4] Chiarelli et al, radiology 2013
[5] Superior diagnostic accuracy demonstrated in a reader study comparing the ROC AUC of GE screening protocol (V-Preview + 3D CC/MLO with 3D in STD mode) to that of 2D FFDM alone. V-Preview is the 2D synthesized image generated by GE Seno™ Iris mammography software from GE DBT images. FDA PMA P130020 http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpma/pma.cfm?id=P130020.

Contributing to a healthier planet

More than half of the healthcare sector's climate footprint, approximately 53%, is attributable to energy use.[6] 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.

[6] Health care climate footprint report | Health Care Without Harm (noharm-uscanada.org)

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	40% of the system material in Senographe Pristina is recyclable.[7]
Reduce the use of hazardous substances	EU RoHS directive 2011/65/EU
	REACH (EC) 1907-2006
	First mammography system to generate high-quality images with an X-ray tube that does not contain lead or oil.[8]
Chemical avoidance	Through the shift to digital solutions, GE's digital mammography systems eliminate the need for film and chemicals in film processing used by analog mammography systems. Replacing a GE analog mammography system that processes 27,400 films per year with a GE digital mammography system can save up to 410 gallons (1,500 L) of fixer and developer annually.[9]

[7] Data on file. GE Healthcare 2022. Values based on weight.
[8] Per GE innovation. Data on file, technique using the latest technology in shielding and material science.
[9] Digital mammography enables digital image review on a monitor, thereby eliminating x-ray film and chemicals used by a film processor.

Manufacturing

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

Renewable energy	Our North Greenbush, NY, digital mammography production facility targets to become carbon neutral by the end of 2022, by procuring electricity from a New York solar developer under NY State Community Distributed Generation program.
Green Building Community	Our North Greenbush, NY, digital mammography production facility received USGBC LEED Gold Certification.[10]
Natural resources	Transforming innovation over the history of developing mammography and replacing an analog mammography system with a digital mammography system reduces water utilization by up to 8,000 gallons (31,000 L) compared to an analogy system that processed 27,400 films per year.[11]

[10] https://www.reliableplant.com/Read/18055/ge-healthcare-opens-$165m-production-facility-in-ny

[11] By replacing film with digital images, GE digital mammography system eliminates the need to develop film and reduces the water associated with developing film.

Packaging

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

Improved Packaging

Our gantry packaging is designed to be recyclable.

Product utilization

Our imaging products are designed to help reduce the environmental impact.

Ergonomically designed

Patient setup and positioning

The design eases patient anxiety with 50% of patients stating they were not at all anxious during the exam.[12]

37% of patients stated they were less anxious compared to previous exams.[12]

97% of patients stated they were less anxious or not anxious at all thanks to gantry design.[12]

Reduce staff burden

Increase technologist confidence with the new ergonomic design, and reduce physical strain with dedicated functionalities for easier patient positioning during the mammogram.[13]

[12] IPSOS Patient Satisfaction Study sponsored by GE Healthcare, conducted with 315 patients across 2 sites in Europe
[13] IPSOS Technologists Study sponsored by GE Healthcare, conducted with 50 users in Japan and the European Union, from July 2017 to April 2018

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	Equipment instructions are provided to minimize the environmental impact for disposal or recycling.
Upgrades	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.	Mammography system parts are eligible for assessment for the refurbishment program, in which they are assessed for refurbishment, harvesting, or recycling at the appropriate time in the lifespan.[14] 12% of new detector production has repurposed previously created detectors to reduce waste.[15]
Waste reduction	This system is in accordance with Waste Electrical and Electronic Equipment (WEEE) regulations.

[14] System parts 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.
[15] Values based on 2021 repaired detectors vs new detectors produced.

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.

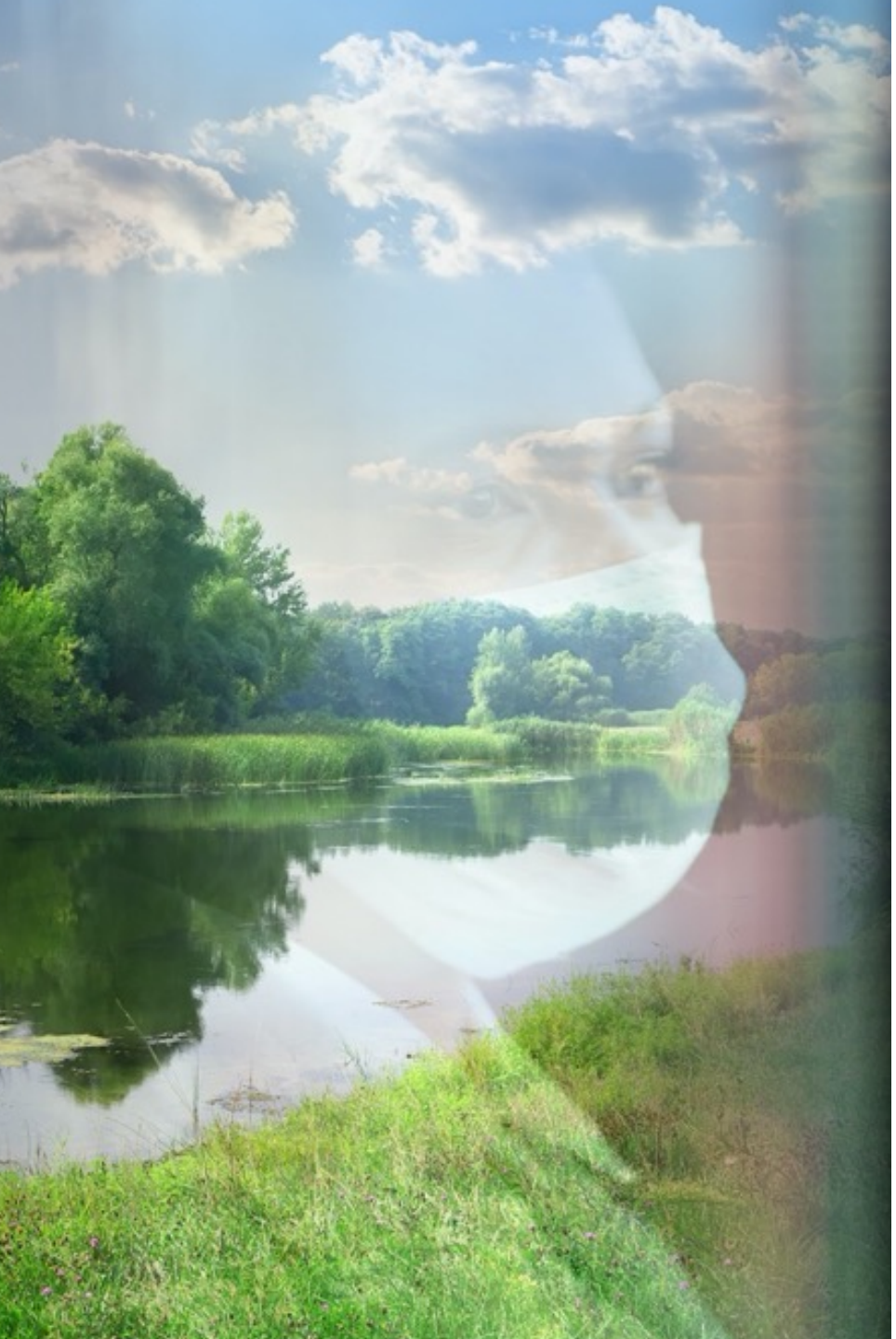
We are also dedicated to driving a more resilient and sustainable future in healthcare. Many factors, including the pandemic, climate-related weather disasters, and supply-chain issues amplified this need. Managing operations through these challenges requires resilience and perseverance.

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	Significantly reduce acquisition time by up to 40% in large breasts with SenoBright™ HD contrast enhanced spectral mammography (CESM).[16] SenoBright HD provides high specificity to reduce false-positives and help prevent unnecessary exams. Additionally, it delivers high sensitivity for more accurate breast cancer diagnosis.
	Remote connectivity solutions to streamline your needs for secure serviceability, review, and troubleshooting of the system.
Keep your imaging equipment up to date with advanced clinical applications	The Senographe Pristina platform is upgradeable to advanced applications.

[16] Data on file. GE Healthcare 2017

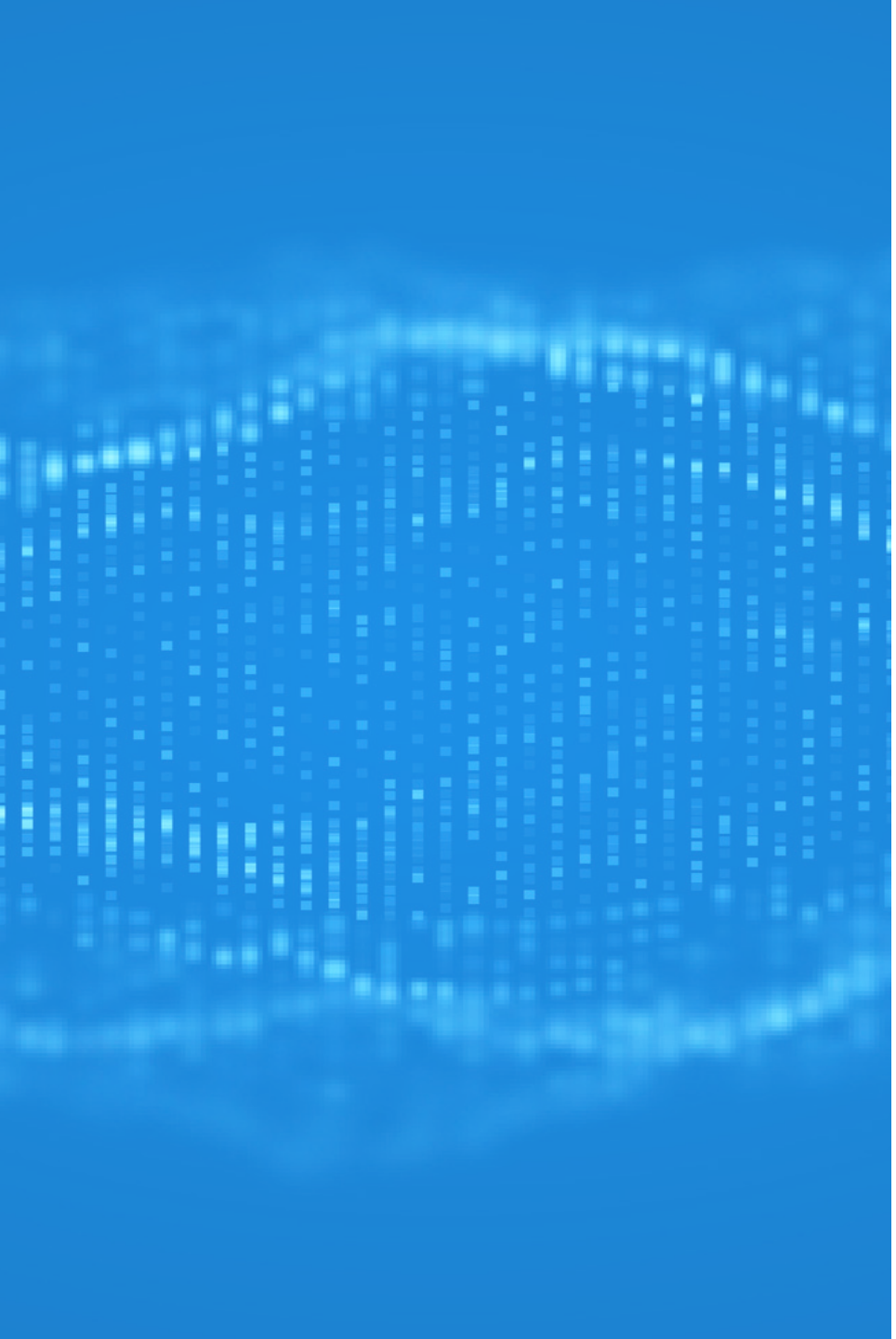


Advancing clinical outcomes (Cont.)

Help improve patient outcomes with improved image quality	Senographe Pristina sets the bar high for diagnostic confidence and performance, leveraging the Senographe™ family's widely recognized image quality. GE Digital Breast Tomosynthesis delivers superior diagnostic accuracy at the same dose as 2D FFDM,[17] the lowest patient dose of all FDA approved DBT systems.[18]
Drive advancements with precision health	Senographe Pristina 3D mammography delivers superior diagnostic accuracy[17] for screening or diagnostic mammograms.

[17] Superior diagnostic accuracy demonstrated in a reader study comparing the ROC AUC of GE screening protocol (V-Preview + 3D CC/MLO with 3D in STD mode) to that of 2D FFDM alone. V-Preview is the 2D synthesized image generated by GE Seno Iris™ mammography software from GE DBT images. FDA PMA P130020 http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpma/pma.cfm?id=P130020.

[18] Comparison of patient dose delivered by FDA approved DBT devices as of February 2018 for a breast of average density, based on data presented in [1-2] and data on file. Device comparison includes GE SenoClaire™, GE Senographe Pristina 3D in STD mode, Hologic Selenia Dimensions, Siemens Mammomat Inspiration, Fuji Aspire Cristalle [1. Bouwman, R. W. and al., et. 2015, Physics in Medicine & Biology, pp. 7893-7907; 2. NHSBSP Equipment Reports 1306, 1404, 1307, and on Fujifilm AMULET Innovality.]



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	Improve patient throughput by 55%, utilizing rapid image acquisition and display with this digital mammography system. Senographe Pristina 3D reduces recall rate at equivalent sensitivity.[19]
	Weekly quality checks can be performed within 15 minutes.[20]
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.

[19] According to AJR publication (July 2006), screening mammography acquisition time averaged 21.6 minutes for screen film and 14.6 minutes for digital examinations.
[20] Per system. For Senographe Pristina 2D & 3D. Data on file. GE Healthcare 2020

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 exam time	Streamline contrast enhanced guided biopsy with Serena Bright™ HD. You no longer need to leave the mammography suite to biopsy lesions identified with contrast. The breast biopsy procedure, including clip placement, is completed within 15 minutes.[21]
Ease of use	Reinventing the mammography experience to make technologists' jobs easier.
	The console and gantry are ready to use within a few minutes after startup.
	The image contrast can be modified when needed, among six levels available, to accommodate user preferences.
	The acquisition console, well-aligned with other GE Healthcare products, minimizes the learning curve.
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* for updates.

[21] Data on file. 2020 GE Healthcare. Time from first to last image.

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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