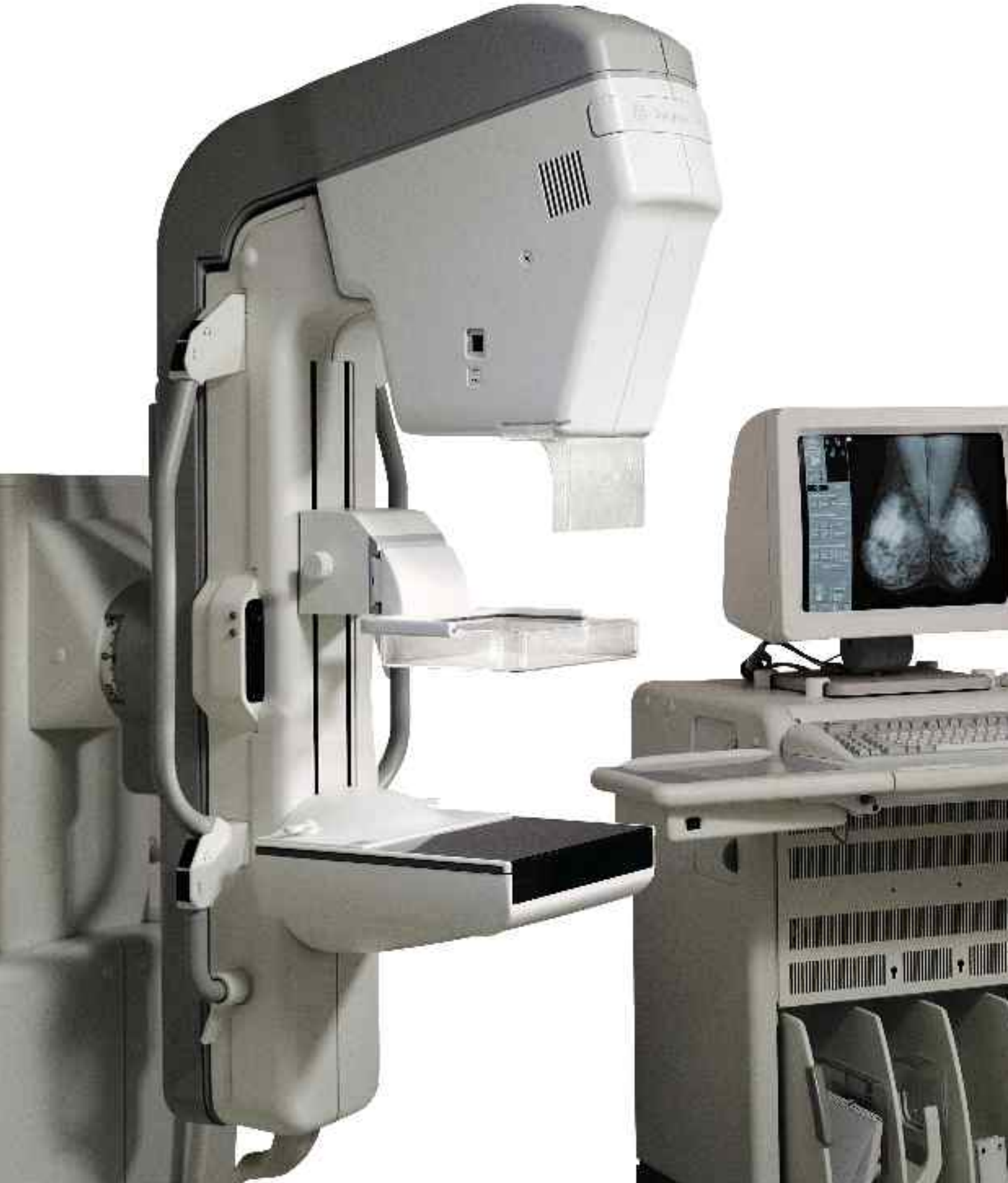
GE Healthcare

Senographe 2000D

Full-field digital mammography system



Digital has arrived.

The Senographe® 2000D Full-Field Digital Mammography (FFDM) system gives you a unique competitive advantage. That's because it arms you with a revolutionary combination of capabilities that change breastcare forever.

For the clinician, it allows new efficiencies and better care. For the administrator, it provides the competitive edge in the fight for patient volume. And for the patient, its accuracy and speed bring peace of mind.

Speed and efficiency

- Virtually instantaneous review
- Reduced exam times
- Networking and archiving capabilities
- One-view visualization of all areas of the breast, despite varying density
- Customizable viewing protocols for each physician

Reliability of information

- Stable, reproducible image quality over time
- No more original films to lose

Improved patient care

- Reduced call backs – image can be manipulated to enhance over-exposure
- Better tissue visibility at skin line than film
- Lower dose in dense breast tissue than film

Simplified by digital.

Like conventional mammographic exams, the full-field digital mammogram begins with the exposure – acquired on the Senographe 2000D's intuitive gantry, designed for comfort and convenience.

- Soft colors and a slim profile help relieve patient anxiety.
- A streamlined tube head, face shield and the slim Revolution™ digital detector facilitate ease of positioning.
- AutoCell eliminates the need for photocell placement by using individual pixels to automatically determine the densest portion of the breast early in the exposure.
- AutoMark automatically marks the image with the appropriate anatomical position marker.

A Revolution in digital detectors.

The Senographe 2000D's breakthrough Revolution digital detector – the industry's only single-piece, flat panel, amorphous silicon detector – is specifically designed for image quality and reliability.

The product of an 11-year investment by GE, this revolutionary panel offers industry-leading Detective Quantum Efficiency, or DQE – today's standard measurement of image quality in digital X-ray. With a DQE higher than traditional film/screen combinations, the Revolution detector offers outstanding object detectability, even on low-contrast objects, at low dose.

Thanks to the detector's thin profile, there's no need to compromise on traditional positioning techniques. In the CC view, for example, you can easily image the posterior breast tissue. In the medio lateral oblique, the infra mammary fold can be easily imaged.

The Revolution detector's single-piece structure ensures that no information is lost, as can happen in tiled systems. So it delivers full image quality without the risk of artifacts, while ensuring exceptional reliability.

Each Revolution detector is manufactured with the highest quality methods to Six Sigma standards – all under one roof to ensure total quality control over the entire manufacturing process.

Delivering exceptional image quality as it streamlines workflow.

The Senographe 2000D delivers exceptional image quality, easily and intuitively.

It also streamlines the radiological process from the first patient contact through the delivery of results. Immediate image review potentially reduces exam time in high-throughput facilities, leaving more time for patients and diagnosis.

So you can optimize your department workflow. Take full advantage of digital imaging speed. And consolidate exam rooms or replace film processing rooms.

Facilitate better

Enhanced dose management

The Senographe 2000D features GE's exclusive, patented bi-metal mammography tube, with a rhodium anode track and filter for superior penetration of dense breast tissues. Rhodium's higher X-ray spectrum provides the Revolution detector with all the signal it needs at lower than usual radiation doses for dense breast tissue. A unique Inner Focusing Cone also minimizes extra-focal radiation for consistently excellent image quality.

Fast, consistent results

Our exclusive Automatic Optimization of Parameters (AOP) program utilizes the Revolution detector's fast readout capability. A unique algorithm automatically determines the optimum breast tissue parameters for consistent results.

Optimized image clarity and magnification

The Senographe 2000D's grid system virtually eliminates scatter after penetration, maintaining signal integrity for maximum image quality. Utilizing AOP, the grid motion is timed to a single pass for each exposure to optimize grid motion for each patient. The easily removed grid allows for a true geometric magnification.

Automation for greater efficiency

In approximately 10 seconds after an exposure, the image is displayed on a 1K-x-1K Acquisition Workstation monitor to quickly verify correct positioning.

Automatic background archiving of up to 1500 images online minimizes interruptions. At the exam's completion, images are sent automatically to the Review Workstation, the archive system and the printer for greater efficiency.

patient care.

A customizable review workstation that's integrated and easy to use

On the Senographe 2000D Review Workstation, two high-resolution 2K x 2.5K monitors display the entire breast at full resolution.

This uniquely designed user interface simulates the way films are read today. Its image-enhancing tools do things never before possible on film.* Up to 1500 images can be stored online for immediate review, with prints available via a laser printer.

Patented GE Tissue Equalization software optimizes demonstration of both the skin line and dense glandular tissue in a single view – not possible on traditional analog film systems. For optimum display, Auto Contrast algorithms calculate each image's brightness and contrast values. Pre-sets and manual modes make viewing easy.

Designed for DICOM

What's more, the Senographe 2000D Review Workstation can be interfaced anywhere on a DICOM network. An exam of four images can be sent to the Review Workstation every minute. A study can be read promptly, any further views ordered immediately and results delivered quickly to minimize patient waiting. Final images can also be easily sent to surgery for procedural planning or to a specialist for a second opinion.

The entire system is integrated to provide mass, long-term image storage, easy retrieval and networking. Additional archiving is possible on the hospital PACS system or optional dedicated archive system utilizing CDs or DLT.

* Final interpretations of examinations are done on hard copy film images produced by GE recommended laser cameras.

Connecting mammography

Designed specifically for mammography on GE's proven Advantage Windows computer platform, the Senographe 2000D takes advantage of the latest GE developments in processing, connectivity and networking:

- Review of mammography exam results anywhere over a DICOM network
- Mass archiving on DICOM PACS or image archive systems
- Unlimited image printing on high-resolution laser cameras
- Image communication flexibility through interchange media (CD-R)
- Retrieval of patient information from any HIS/RIS DICOM-compliant system through the DICOM Modality Worklist
- Telemammography and much more

to tomorrow.

The Senographe 2000D lets you maintain your long-established work habits. It simulates conventional film-manipulation techniques through an advanced digital toolkit that simplifies analysis and improves image detail.

One-touch keypad

At the touch of a button, the Senographe 2000D Review Workstation offers you:

- Automatic image processing
- Electronic magnifying glass
- Zoom and roam
- Image inversion
- Flip and rotate
- Text annotations and graphics
- Measurements
- Contrast and brightness controls

Accommodating individual preferences

Since no two physicians share precisely the same viewing preferences, the Senographe 2000D Review Workstation lets users customize image display and review. You can define your preferred parameters by variables such as:

- Display format
- Filter for selected list of patient exams
- Sorter for classification of patient exams
- Annotation settings
- Auto-transfer settings

Changing breastcare forever.

Your platform for advanced applications

With its low-noise image quality and speedy acquisition, the Senographe 2000D sets the stage for future advanced applications in digital mammography when they become available.

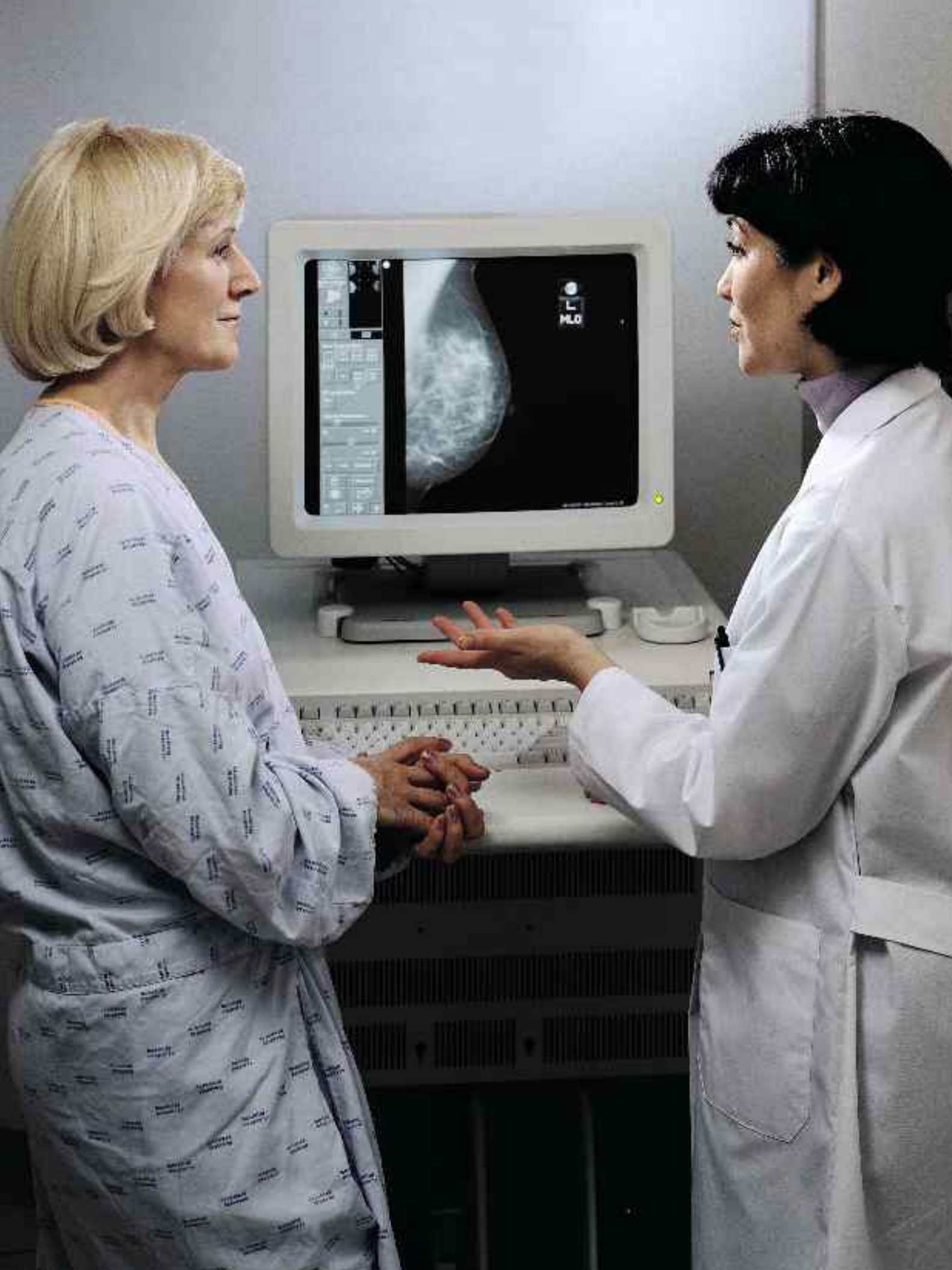
Research in the areas of: Computer Aided Detection (CAD), Contrast Media Mammography (CMM), 3D Reconstruction and Tomosynthesis is underway at leading breastcare facilities around the globe with the Senographe 2000D.*

Computer-Aided Detection (CAD)

Computer-aided image analysis will eliminate the cumbersome manual digitization needed for film-based CAD.

A product design that is uniquely capable of advanced applications research, the Senographe 2000D brings you confidence in obsolescence protection and a continuum of leadership in digital mammographic capability.

* Works-in-Progress research of potential clinical applications. FDA clearance required for all new applications.


L
MLO

For more than 100 years, healthcare providers worldwide have relied on GE Healthcare for medical technology, services, and productivity solutions. So no matter what challenges your healthcare system faces, you can always count on GE to help you deliver the highest quality healthcare. For details, please contact your GE representative today.

GE Healthcare
3000 North Grandview
Waukesha, WI 53188
U.S.A.

www.gehealthcare.com

imagination at work

WHC-0109-11.05-EN-US