



## Better Images, Lower Dose, and Increased Referrals

**Hamot Medical Center & Siemens Digital  
Mammography Offerings**

Case Study

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“I would never go without our Siemens digital mammography system,” says Carol Ann Lyons, MD, medical director of Hamot for Women at Hamot Medical Center in Erie, PA. Dr. Lyons and her staff began the transition from analog to digital mammography in 2006. “We wanted to make the change from analog to digital because we believed our images would be better, and they are,” says Dr. Lyons.

Hamot Medical Center is a 351-bed hospital nestled in Erie, PA, the fourth largest city in Pennsylvania with a population of slightly greater than 100,000. The hospital takes women’s services very seriously, having invested in state-of-the-art technology and providing a team approach to care. On the technology side, Hamot for Women utilizes Siemens MAMMOMAT® *Novation*<sup>DR</sup> for all its digital mammography and ACUSON Antares™ ultrasound units with elastography for breast sonography, and it performs breast MRI and MRI-guided biopsies on a 1.5T MAGNETOM® Avanto magnet. Hamot’s breast team members possess experience specific to women’s health. For example, all digital mammograms and breast MRI exams are interpreted by dedicated breast radiologists. Surgery is performed by highly trained and experienced breast surgeons. For those patients diagnosed with breast cancer, two nurse navigators help guide them through the process, from diagnosis to treatment, explaining procedures, answering questions, and providing support. Medical and radiation oncologists, with a keen interest in breast cancer, round out Hamot’s breast health team, providing up-to-date treatment on an individual basis.

### A Smooth Transition

With this strong commitment to women’s health as its foundation, Hamot’s key decision-makers reviewed several digital mammography systems. “Ultimately, it was between two vendors,” says Dr. Lyons. “Siemens had the better package. In particular, we liked the workstation on the Siemens MAMMOMAT *Novation*<sup>DR</sup>. I like simple things. The Siemens workstation is more user friendly.”

“The idea of moving from analog to digital may seem daunting to some, but for us it was not painful at all,” continues Dr. Lyons. “The installation and transition went very well. It does take some time for the radiologists to become accustomed to digital images. There is so much more information and on a larger scale than with analog technology. Calcifications, for instance, are better seen with digital mammography. It makes you wonder what you simply could not see on the prior studies with the analog systems.”

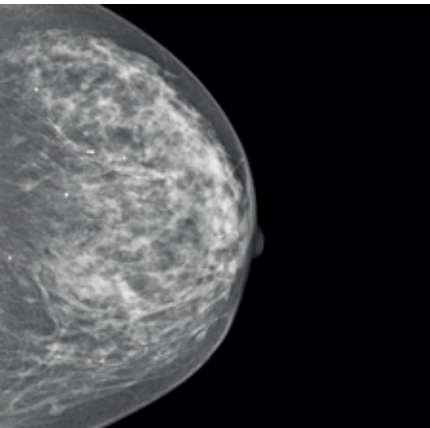
### Better for All Breast Types

Admittedly, an analog mammogram is still better than no mammogram at all. However, from a clinician’s perspective, the depth and clarity of a digital image improves confidence and enables the opportunity for better patient care. “You see greater detail with digital, in both fatty and dense breasts. There is greater dynamic range with digital technology so that you can see through subcutaneous fat as well as dense glandular parenchyma uniformly. In my opinion, digital images are better, certainly for dense breast tissue, but I also prefer them in moderately dense and even in the fatty breast. Basically, I prefer digital images for all breast types,” says Dr. Lyons.

“With analog, if you can see through the subcutaneous fat, you will not be able to properly image the dense breast parenchyma. Conversely, if you penetrate the thick breast tissue, you will overexpose the fatty subcutaneous region,” continues Dr. Lyons. “With digital, you can see both dense and fatty tissue optimally.”

### Excellent Patient Positioning

Siemens MAMMOMAT digital mammography system is equipped with a large format detector (24 cm x 29 cm) for imaging virtually all breast sizes. In addition, the isocentric and motorized movements of its swivel arm allow fast and accurate image acquisition in all projections. With it, Dr. Lyons notes that her technologists are able to obtain excellent positioning, enabling them to get better and more detailed views.



Patients are pleased too. “Our patients are very impressed with our digital technology,” says Dr. Lyons, “and they really like the throughput. Many of our patients are busy women on a schedule. If they are a screening study, they typically come in and go out, amazed at how quickly their mammogram can be completed.”

### Advanced Technology Yields Lower Dose

“Since many of our patients are young women,” continues Dr. Lyons. “I feel better using the Novation system because of its dose-saving features.” Siemens features exclusive dual anode technology, which offers three anode/filter combinations that match breast density and thickness—Mo/Mo, Mo/Rh, and W/Rh. With the system’s Tungsten technology and high mA output, even dense breasts can be examined with shorter exposure times. This saves dose while maintaining high image quality.

### The Result—More Throughput, More Referrals

After an exposure is taken, the image is transferred to the Acquisition Workstation, where it is displayed for Hamot’s technologist to review before moving on to the next exposure. This can reduce the examination time per patient as well as recall rates. “It is also extremely helpful for needle-wire localizations, cutting our procedure time in half,” notes Dr. Lyons.

Hamot’s physicians review and evaluate acquired images and prepare diagnostic reports on the *syngo*® MammoReport breast care workplace. Here, images and previous examinations, even from other modalities, can be viewed, which helps physicians assess potential abnormalities. “Callbacks are diminished with the image manipulation on this system. You can brighten, darken, and magnify. We can easily toggle between old and new mammograms to note differences,” says Dr. Lyons.

Although Hamot Medical Center has not marketed its digital system to potential patients, word has clearly gotten out. “Our patient volumes have increased,” says Dr. Lyons. “Women are educated. They want digital mammography. Currently, we are doing about 30 exams a day on the unit we have and are about to receive our second MAMMOMAT Novation<sup>DR</sup> system within the month. This will enable us to increase our patient volumes and also assist in our scheduling of diagnostic mammograms, as well as our needle-wire localization procedures.”

“The system is very user friendly. Our technologists are able to get very nice oblique and craniocaudal views, including more posterior tissue, than we had with analog units. I particularly like our digital mammography unit for imaging patients with implants and seeing more of the tissue around the implant on both views, which include the implant as well as the implant displaced or ‘Eklund’ views,” says Dr. Lyons.

“This digital phase of our growth—the addition of Siemens digital mammography—has offered a huge improvement in patient care,” continues Dr. Lyons. “I absolutely love this system.”

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