

GE Healthcare

High-quality, flexible breast care from screening through biopsy

Mercy Regional Health Center
Women's Imaging Center



Mercy Regional Health Center is a 150-bed, private, not-for-profit, acute-care facility. Its more than 100 physicians and 700 employees serve Manhattan, Kansas and surroundings with numerous health and wellness services. Services include digital mammography with computer-assisted detection, ultrasound and stereotactic breast biopsy.

The Women's Imaging Center performs approximately 10,000 screening mammograms and 150 stereotactic biopsies per year.

Cost-effective solution

The Women's Imaging Center at Mercy Regional uses two digital mammography systems and an add-on stereotactic biopsy unit in what radiologist Greg Welle, M.D., considers an ideal set-up for efficient, cost-effective breast care.

The arrangement lets the staff perform biopsies as part of their regular workflow without the expense of a dedicated biopsy room. One room houses a Senographe® Essential mammography system and the other a Senographe DS with the add-on interventional device. Both rooms are used full-time for screening mammography, except that the Senographe DS room is used for biopsies one morning a week.

The add-on unit is set up for biopsies in the decubitus position, which Welle and colleagues consider ideal for clinicians and more comfortable for patients than prone or seated positions.



Greg Welle, M.D.,
radiologist

Investing wisely

"We perform five or less stereotactic procedures per week, so it doesn't make sense to have a dedicated room or space for biopsies that would sit empty most of the time," Dr. Welle says. "When you have a set amount of capital to invest in equipment, your goal is to keep that equipment functional as much of the time as possible."

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– Greg Welle, M.D., radiologist

"It's a bad return on investment if you invest in a prone biopsy system, lease space for that, and use it just a few hours a week. That's especially true in breast imaging, where margins are tight. We use our Senographe DS room two to four hours a week for biopsies, and the rest of the time it's available for screening mammography. I think this is a good example of how breast imaging centers can invest wisely in imaging equipment and get a return on their investment."

Full-field digital mammography offers clinical advantages, too, Welle observes. Outstanding image quality is offered at low dose and the system provides consistency between screening mammography and biopsy images.



"It's ideal to use the same equipment interface when it comes to finding an abnormality and deciding to biopsy it because it's abnormal or suspicious," says Dr. Welle. "We're able to biopsy on the same system we found the abnormality on, instead of finding it on one piece of equipment and performing the biopsy on another."

"Some of these abnormalities are subtle, and when you try to find them on a different piece of equipment, things end up looking different. It's an advantage to have the same user interface for screening and diagnosis as for stereotactic biopsy."

With the Senographe Essential's larger field of view, we can usually image larger-breasted women with just the standard four pictures. It's fast, and it minimizes radiation dosage.

– Jeanice Janke, chief technologist

High flexibility

By having both the Senographe DS and the Senographe Essential with its larger field of view, the Women's Imaging Center has the flexibility to image a wide range of patients. "It's an advantage having both available," notes chief technologist Jeanice Janke.

For patients imaged previously on analog systems, the size of the film determines which mammography system to use. Breast size primarily determines whether new patients are imaged on the Senographe Essential or the Senographe DS. "With the Senographe Essential's larger field of view, we can usually image larger-breasted women with just the standard four pictures. It's fast, and it minimizes radiation dosage." Janke also notes that the digital systems have increased patient throughput. The equipment even accommodates special cases. Welle notes that other sites have referred a few patients who had back disorders and could not tolerate prone biopsy. A few others have been referred because they exceeded the weight limit for prone tables. (The decubitus table at Mercy has a 1,000-pound limit.)



Jeanice Janke,
chief technologist

Easy on and off

Set-up for biopsies is simple, Janke observes. "The interventional device is easy to put together," she says. "It slips on as a unit. It's easy for the patient to lie down. We're not spending a lot of time getting the biopsies done."

To perform a follow-up mammogram, the technologist simply detaches the interventional unit, replaces the bucky, and takes the images. The interventional unit is then put back on and readied for the next patient. "This saves us from having to interrupt workflow in the other room to perform the follow-up mammograms," Janke says.

Dr. Welle notes that Mercy Regional chose GE Healthcare equipment in part for the company's experience with digital mammography and its commitment to the concept of add-on biopsy devices.

"Very few imaging centers have justification for a dedicated unit," he says. He cites an article in the *American Journal of Radiology* in which the authors surveyed breast imaging centers nationwide and found that on average they performed four to five stereotactic biopsies per week.

This allows us great flexibility. There are few scenarios we can't deal with. We get a combination of digital image quality, patient comfort, and cost-effectiveness. This is the way to go.

– Greg Welle, M.D., radiologist

"The Senographe Essential/Senographe DS set-up, in my opinion, is probably the prototype for facilities that perform 4,000 to 15,000 mammograms per year," Dr. Welle says. "You can do all of the screening, all the diagnoses, and all the biopsies with those two pieces of equipment. I believe it's an ideal set-up."

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