GE Healthcare

Planning, preparation are key factors in successful implementation of Contrast-Enhanced Spectral Mammography

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Preparing your mammography facility to begin offering Contrast-Enhanced Spectral Mammography (CESM) is a simple process—especially when you plan ahead.

Taking some key steps early on can help a facility make the transition to CESM with greater ease, says Becky Testerink, RTR(M)(QM), RDMS of Eastern Radiologists, Inc. in Greenville, North Carolina.

Testerink is Manager of Eastern Radiologists' Breast Imaging Center, a freestanding breast imaging facility in eastern North Carolina and the central hub of The Eastern Radiologists Breast Imaging Network, a group of 14 mammography sites throughout the region.

Performed as an adjunct to inconclusive mammography and ultrasound, GE's SenoBright* Contrast-Enhanced Spectral Mammography highlights areas of unusual blood flow patterns, which may be cause for increased suspicion. "We looked at CESM as an additional tool to help us get information needed to provide answers to our patients faster," Testerink says.

Evaluating the investment

As a private practice, Eastern Radiologists decided to first do a pro forma to evaluate CESM's potential value to the facility. "What I wanted to know was whether CESM was a good investment for us." Testerink notes.

Testerink worked with other departments, including Eastern Radiologists' CT department and billing department. Based on the information Testerink obtained, she was able to perform calculations that helped the facility evaluate the potential value of its investment in CESM.

Senographe Essential

Preparing the facility

From injecting contrast and storing supplies, to allotting physical space and training staff members, several logistical and operational factors then needed to be addressed to implement the CESM technology.

Space was needed near the mammography room to start the IV and give the injection. The room was furnished with an injection chair, shelving for supplies, a sharps disposable container, and a floor covering, since the room was carpeted.

"We were fortunate in that there was a room adjacent to where we do our mammograms," Testerink notes. "So we were able to store our injector and stock the supplies we needed—needles, tourniquets, tape, gauze pads, Band-Aids, underpads, sodium chloride, alcohol prep pads, disinfecting wipes, things like that. We were able to do all of that in one room, which can also be used for other purposes when we're not prepping a patient."

Learning contrast

Staff training was done in two stages. The first step involved training specific to the administration of contrast, including the contrast injection itself. "Here, too, we were fortunate in that we have a CT department in house, so we were able to learn from them," Testerink says. "I sent all of my techs—myself included—over to our CT department to get some practice on giving injections, Although we're all technologists, we're basically mammographers—most of us hadn't done injections in years. So we had to relearn how to do the needle stick and inject into the patient's arm."

Each technologist spent about four hours training with the CT department, and then an additional 30-60 minutes training on the injector with a staff member who had experience with the unit.

"We also ensure that our technologists performing CESM procedures are educated on our policies regarding contrast injection and contrast reaction," says Testerink. "For us, there's certain criteria we must satisfy. For example, we measure the creatinine level in the blood. If a facility has a CT or an MR department, then they probably already have these policies in place."

Learning CESM

The next phase of training was focused specifically on CESM. The Eastern Radiologists technologists spent a couple of hours with a GE applications specialist learning the procedure, and actually did their first patients with the specialist present.

"We found learning a CESM procedure to be very, very easy—it's basically just taking a mammogram," Testerink notes. "You just have to be sure you understand the uptake process, since it's a timed procedure. But when they load the software on the unit, the timer is right there. So once you learn what your timeframe is—which is very easy to get—it's not a problem."

"We ensure that each staff member involved in contrast injection is trained on the signs of contrast reaction and the facility's policy and plan of action if a reaction occurs," says Testerink. "It is our practice to always have ready access to a crash cart when injecting contrast."

Installation and testing

Installation of the SenoBright CESM upgrade took about a day, with another day allotted to physicist testing. Once a mammography system has been upgraded to handle CESM studies, a physicist must test the unit and do a full report on it before it is used on a patient. "We have a physicist hired who knows our equipment and comes in to do our testing," Testerink says.

"Because we have three mammography systems here, we didn't have to block out our entire mammogram schedule for the CESM installation and testing on the one unit," Testerink adds.

Marketing CESM

"Marketing our CESM addition is important to us," Testerink notes. "Since functional imaging is so new, we believe it is critical that the medical community close by knows what it is and that it is available."

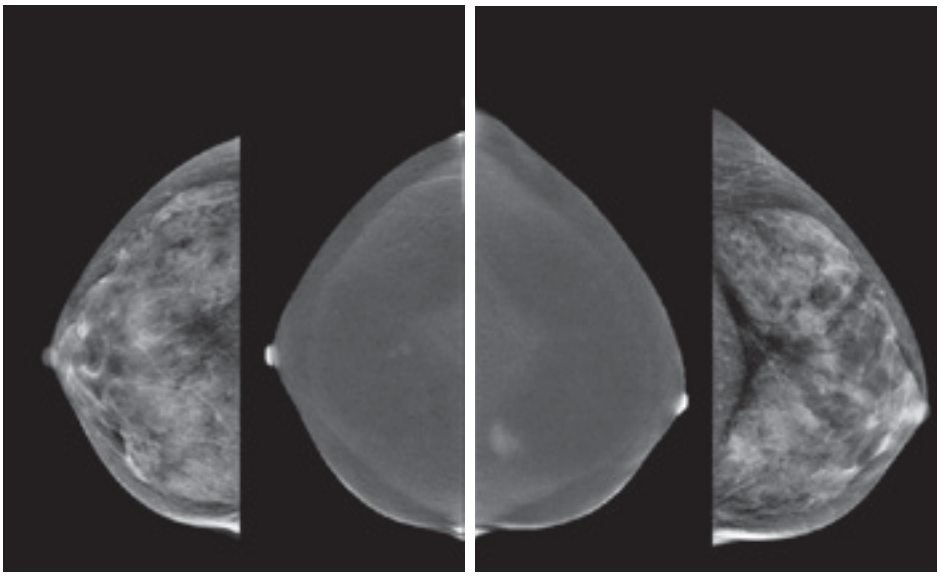
Educating referring physicians is important for getting patients scheduled, and Eastern Radiologists has sent letters to its top referrers announcing they now have SenoBright.

"We also are calling referring physicians who have patients coming back for a six-month follow-up, letting them know that certain patients may benefit from the CESM procedure," Testerink says.

In addition, informing the public of the new technology makes them aware that the facility wants to offer exceptional resources to its patients. "One of our physicians was on a local morning television show, explaining what CESM is and how it can benefit the patient," says Testerink.

"I think it's important to note that CESM is basically a mammogram with an injection," Testerink says. "Some may think it's a big ordeal with a big learning curve. It's not. It's very simple and goes very quickly."

"But I can't stress enough the importance of being prepared before you start doing patients," she adds. "It's just made it so much easier for us."



A palpable mass in this patient's breast was occult on a standard mammogram and visualized on ultrasound. SenoBright mammography helped the physician localize the lesion, gave a global view of the same breast (which was otherwise clean), and helped the physician detect two very small fibroadenomas in the contralateral breast, which were confirmed with second-look ultrasound.

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