

Small yet mighty mammography center becomes a 3D leader

By Dave Pearson

HealthImaging.com

She did it once then and she's done it again. In 1989, Mary Lou Catania, RN, brought modern mammography to the women of California's Monterey Peninsula when she founded the Mammography Center of Monterey. It was a bold move: She had limited resources and no direct experience working in radiology, much less running a business. What she did have was her own need to be screened for breast cancer—and her realization that the only technology offered locally was old-and-fading, xeromammography.

“Things happen in life,” Catania recalls. “I was a widow, I had three young boys to raise, and I was no longer able to practice nursing due to an arm injury. I knew enough to find a need and fill it.”

Nearly three decades later, she made the decision to upgrade the center's equipment to state-of-the-art 3D breast imaging. She'd been thinking about taking this next step, and researching 3D mammography, for several years. She was preparing to purchase a system when she heard Fujifilm had received FDA premarket approval for its ASPIRE Cristalle digital breast tomosynthesis (DBT) option this past January. The contact who told her about this development suggested she hold off until she'd looked further into it.

Very soon after, she says, she knew the time had come to make another bold move with the six-employee Mammography Center of Monterey. Catania did due diligence—speaking at length with a radiolo-



Mary Lou Catania, RN

gist familiar with the package as well as a Fujifilm representative knowledgeable about all things 3D mammography—and then acquired Fujifilm's ASPIRE Cristalle system with the DBT option pre-installed.

The system went live in the spring. It's been a new beginning for the center ever since, Catania told Imaging Innovation in a phone interview.

“Prior to the decision to move to 3D, our volumes had gone down tremendously,” she says, explaining that the downturn owed to suddenly hot competition

on top of the center's need to close shop and renovate before installing new equipment. "Now we are quickly building back up, and the Fujifilm 3D technology has gone beyond anything I could have imagined."

The opposite of buyer's remorse

In 2017 as in 1989, Catania launched a new era of breast imaging on the Monterey Peninsula with herself as the patient. She was the first of many to be imaged with the ASPIRE Cristalle. The experience gave her a decided sense of "buyer's satisfaction."

"First of all, they all call their paddles comfortable. I've been through them all, and nothing has ever really been comfortable," Catania says. "But the Fujifilm Comfort Paddle was like a soft pillow. I couldn't believe it. I thought maybe it wasn't compressing, but it was. The experience was unreal."

As for image quality, one of the breast radiologists who reads exams for the center had been reading for an hour or so on the ASPIRE Cristalle's first day when Catania went in to see what she thought. Catania vividly remembers the rad's response. "She said, 'I absolutely love this machine. I see everything I need to see. Look at this dense breast. I don't need to do an ultrasound!' Oh my, she was amazed."

Catania adds that the center's technologists were equally impressed with the 3D "movies" and pleasantly surprised at how easy the ASPIRE Cristalle is to operate. It helped that the Fujifilm specialist who went onsite to train them had the human touch to go with her technical expertise.

Improved images, reduced radiation

One of the three technologists is Kelly Cowan, an experienced breast-imaging professional who started her career back in 1988. After taking some years away to raise her family, she went to work for a community hospital and then landed with the Mammography Center of Monterey soon after the ASPIRE Cristalle

installation. Cowan seconds Catania's praise for the equipment training, adding that the machine is "very easy to learn and use," and she doesn't have to pause to think when asked what's most important to her as a technologist.

"If you don't have image quality, you're not taking care of your patients," she says. "You need to give the radiologist the information needed to make the diagnosis."

Cowan recalls the first patient case that made her realize the ASPIRE Cristalle's crisp 3D images can make an immediate impact on patient care. "I looked at this patient's images in 2D and thought, OK, there's a little bit of dense tissue, but otherwise this looks normal to me," she says. "Then we went through the tomo, and there was clear calcification, which turned out to be cancer. The 3D cut right through the depths of the dense tissue to show it. I was just wowed."

She's also as delighted as Catania with the Comfort Paddle technology. And, while the installation is still fairly new and hasn't yet produced a lot of performance data to review, she likes what she's hearing about radiation reduction.

"For our 2D images, the physicist said we're exposing our patients to about half the radiation dose that our old machine put out," she says. "The machine is collimated down to the area of interest, and there is generally not a lot of scatter, so the patient is well protected."

The patients are also happy with how fast they're in and out, Cowan says, thanks to the ASPIRE Cristalle's image-acquisition process being noticeably quick and efficient. There's no need for patients to hold their breath, as with the prior system, for example, so there's nearly always time to show them the 3D, educate them on dense breast tissue and take any questions before they go.

Topnotch technology

The user-friendliness for technologists is consistent with the ASPIRE Cristalle's top-to-bottom incorporation of leading-edge design and engineering that doesn't need advanced offsite training to leverage.

According to published materials, the ASPIRE Cristalle's DBT option works by moving the x-ray tube through an arc around the breast so as to acquire a series of low-dose image slices of the breast at different angles. An algorithm reconstructs the acquired images into a series of high-resolution, 1-millimeter slices that can be displayed individually or dynamically, in a movie-like "cine" mode.

The result is a 3D view that lets the radiologist see through tissue with a practically unobstructed view, identifying lesions that might be difficult to see in traditional 2D mammography images due to overlapping breast structures.

"This will bring a new level of diagnostic confidence in screening," the materials state, "especially for those suspect lesions hidden by layers of breast tissue or at the very early stages which are more difficult to visualize with traditional 2D only."

Low dose, high quality and complete patient comfort

Looking ahead, Catania has no immediate plans to expand but is open to the idea of adding evening and Saturday hours. If business really picks up, she would even consider making use of some adjacent office space to, at some point, add a second ASPIRE Cristalle with DBT.

"I'm not afraid to grow this business if the opportunity takes shape," she says. "Everyone who works with this technology is so excited. I've seen 3D on other vendors' technologies, but it wasn't like this."

"Even one of the physicians in Salinas called," Catania adds. "She told us she'd canceled her appointment in Salinas to have her mammogram done here. We had

sent her a brochure out explaining to her about 3D, and that was all she needed to see."

And so it goes: Catania has done it for the women of the Monterey Peninsula before and, clearly, she's doing it again.