

# Catching the Digital Wave

## Digital Mammography in the Marketplace

By Dan Harvey

**A** sharp focus has fallen on digital mammography as a potentially more effective method of breast cancer screening than standard film-screen mammography. Findings from the Digital Mammographic Imaging Screening Trial (DMIST) were published last fall and indicated that, for some women, digital mammography was indeed more effective in detecting breast cancer than film mammography. Specifically, results of the large-scale trial—which was funded by the National Institutes of Health and the National Cancer Institute and conducted by the American College of Radiology Imaging Network—revealed that film-based mammography and digital mammography provide overall similar diagnostic accuracy; however, digital mammography proved better in premenopausal and perimenopausal women, women under the age of 50, and women with dense breast tissue.

Though the results designate benefits limited to subsets of the female screening population, the numbers provide cause for optimism, especially when you consider that 45% of all women screened have dense breast tissue. Further, in the subsets, digital mammography demonstrated a 70% detection rate compared

with 55% for film-screen mammography. Though digital mammography won't always provide an advantage, it could at least help healthcare professionals direct some women to the most effective screening technologies.

### The Consumer's Voice

The findings were widely disseminated in the medical literature as well as mainstream news outlets. As such, it was expected that the news would increase consumer demand for the technology. As it turned out, across the country, degrees of demand proved somewhat variable, but that may be only because—as some digital mammography providers point out—women had already expressed avid interest in the technology even before DMIST results were publicized.

Murray Rebner, MD, director of the Vattikuti Digital Breast Diagnostic Center at Beaumont Hospital in Royal Oak, Mich., says the center experienced a “minor blip” in requests for digital mammography after the DMIST results were released. “There was an initial rush, some from the public and some of our referring physicians, but things quickly quieted down,” he says.

This may be due to the fact that Beaumont, which was one of the participating sites in the DMIST study, had been using the technology for nearly five years. Rebner was sold on digital mammography even before DMIST. "I already felt that it provided superior image quality for dense-breasted patients," he states.

Plus, Rebner recognized the secondary benefits such as the teleradiological, teleconsultation, and archiving capabilities, as well as elimination of film. "Also, every other facet of our practice had already gone digital," he adds.

Janet M. Storella, MD, medical director of the GCM-Suburban Imaging Center in Bethesda, Md., reports a different experience. Storella witnessed what she termed a "serious" increase in interest. "As soon as the DMIST results were widely publicized, we started getting specific requests for digital mammography at a much higher rate," she says.

Storella says the GCM center has offered digital mammography for approximately 1.5 years. As with the Beaumont center, deployment was a matter of consistency. "Our site is a state-of-the-art, all-PACS environment," she says. "We made a commitment to advance with digital technology as much as we could in all parts of our practice."

Melissa Scheer, MD, founder and director of Woman's Imaging of Northern Westchester in Mount Kisco, N.Y., also noticed a notable surge in interest following the release of DMIST results. "There was a definite increase that followed all of the media attention," she says. But Scheer adds that women had already been seeking out the facility's services, as it was the only one in the area to provide digital mammography. Scheer opened her practice in late 2003 and has been using digital mammography technology since January 2005—well before the DMIST results were released. "My practice is new, but I had already been exposed to digital mammograms, and I felt that the image quality was better than film, particularly for dense-breasted women, even before the DMIST results," she says.

## A Bigger Picture

Michael Silver, PhD, also saw an increased interest—from a much broader perspective. Silver is vice president of Sg2, a

national healthcare research, consulting, and education company headquartered in Skokie, Ill. He heads the company's business and research in imaging services and related technologies, and his company consults with many sites throughout the country. In the wake of DMIST, some of what he has seen and heard suggests that digital mammography could have a substantial impact on the business end of breast imaging. For instance, he recently spoke with a radiology administrator at an Ohio clinic who revealed that her annual budget planning had been disrupted because of the increased consumer demand. "The feeling was that they *had to* add the equipment," he says.

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— Michael Silver, PhD, vice president of Sg2

Elsewhere, some sites already equipped with digital mammography experienced a word-of-mouth increase in business as a result of the DMIST publicity. "They got quite a number of phone calls, asking if they had the technology or not," Silver reveals.

He also noticed an interesting side effect: A marked defensiveness on the part of facilities that don't yet offer the technology. "When we do projects at hospitals, and we talk to people within the radiology departments and ask if they have digital mammography, they get defensive," he says, "and that indicates to me that they have heard that question quite a few times."

Though the increased inquiries demonstrated widespread awareness about digital mammography technology, they didn't always reflect a complete understanding about its capabilities. While some women

recognized that digital mammography benefited some women more than others, others had higher—and maybe unrealistic—expectations. As Rebner remarks, "Digital mammography isn't a panacea that is going to find every cancer."

## Consumer Expectations

Kathleen M. Clark, RT(R)(CV)(M), chief technologist in the radiology department at Shore Memorial Hospital, a 300-bed community hospital in Somers Point, N.J., pays close attention to consumer attitudes. Her site was one of the first to install digital mammography in its region. Shore has been using it for nearly four years and also participated in the DMIST study. Clark often travels to explain the technology to the public. She's acutely aware of the misconceptions about digital mammography that circulated even before the DMIST results. One of the biggest involves the compression issue. "When women hear about this, this first thing they think is that they won't have to get 'squeezed,'" she reveals. "So, one of the first things I tell people is that that impression is wrong. People think that because it's new technology, it works differently than the film screen, but it is still basically the same principle. You still have to get the best possible compression to get the best possible picture."

One problem leading to misconceptions, as Silver sees it, is that some consumers have a difficult time truly evaluating the benefits of digital mammography. "They hear the word 'digital' and they take that to mean 'better,' which can be true, but they're thinking in terms of something like an analog cell phone vs. a digital cell phone," he explains. "That is, digital is newer, so they think it automatically has to be better."

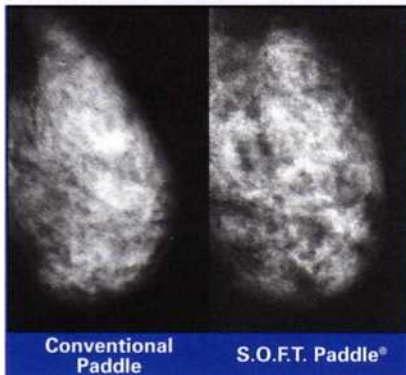
Scheer became aware of the same sort of thinking. "Some women just see on the news that 'digital' is better and so, as consumers, they want it," she says, "but they don't really understand whether it is really right for them. As DMIST indicated, digital mammography has more value for a specific population of women."

Similarly, Silver reports that some women—when apprised of the DMIST results in the mainstream media—heard the message loud and clear that digital mammography had higher value for only cer-

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tain women. Rebner says that in the Detroit area he serves, inquiring women seemed fully aware of both the benefits and limitations of digital mammography. "We have a well-educated local population," he says. "Once the results came out, they were able to make up their own minds whether they were good candidates."

Likewise, Storella reports that the women in her suburban Washington service area are savvy and educated on health issues and medical advancements. "When people called, their questions showed that they understood the specific indications included in the DMIST results," she says. "The calls we were getting were from people who fit in those three categories, so I wouldn't say we were getting calls from people with unrealistic expectations."

### Cost Issues

As Rebner and Scheer suggest, in some areas, interest in digital mammography was quite palpable even before the DMIST results. However, implementation it is not

a matter of simply responding to consumer demands. Currently, less than 10% of the 10,000 breast cancer-screening facilities in the United States offer digital mammography. One of the main reasons for that low percentage is cost.

The technology's steep price tag combined with its modest reimbursement have hindered more widespread implementation. As Storella points out, digital mammography systems can cost as much as three or four times the amount of an analog machine. Facilities must look at how they can recoup some of that substantial initial outlay.

As has been pointed out, digital mammography does offer some cost benefits. Over the long term, these economic advantages—which can include increased patient throughput and cost savings realized with the elimination of film—may help product purchasers offset the added cost. For some, just the benefits reaped from eliminating film can be remarkable. "It has saved us hundreds of thousands of dollars," remarks Clark.

However, Storella points out that the impact of such savings could be greatly reduced or even cancelled out by expenses incurred with digital mammography because the technology generates a different set of costs. She sees three main considerations. First, film isn't completely eliminated. "You can say that you don't have film anymore; however, the rest of the world still uses film, so you'll still end up printing some film," she says.

Second, there are the new storage requirements. "Digital requires a different kind of storage, and a lot of it, because you're dealing with huge data sets," she says.

The third cost factor is IT requirements. "Instead of having people who handle film and file jackets and the like, you need IT people to manage all of your information technology," says Storella.

### Inevitable, But When?

While it's not clear how fast it will happen, the move toward digital mammography appears inexorable. When old analog

systems wear out and replacement looms, people will be looking toward digital. But transition will occur methodically.

"While I feel it is inevitable, I think it will take five to 10 years for most facilities to convert," says Rebner. "It is going to be expensive, and it will have to involve alterations in terms of reimbursement and the price from the manufacturers."

As it is anywhere throughout the health-care system, reimbursement brings its own set of complexities. Reimbursement rates can significantly impact the speed with which digital mammography spreads through the field. "Medicare and several of the larger insurance companies do pay more for digital than for analog," explains Storella. "Right now, we get paid more money for doing digital and that helps offset the higher costs that we have for providing the service. So, if a site does a financial analysis, looking at its volumes and possible increased revenues by going digital, then it can figure out if it can make that transition without taking a big financial hit."

Some places that have high volume and an appropriate payor mix will justify the financial cost sooner. The reverse is true for places with lower volume. "Right now, Medicare and people who follow the Medicare fee schedules pay more for digi-

tal, but maybe they won't later on," Storella points out. "What's not to say that a big payor wouldn't look at the DMIST results, pointing out the increased sensitivity [for women in the three subsets], and then agree to pay [more] for women in those categories but not for other women. They could make that argument. So I don't know what will happen with various payors over the next five to 10 years, as more and more practices are switching to digital."

But as Storella suggests, and as Rebner concurred, the transition will take place, slowly but surely. Silver says facilities should start planning now for a future that is not so distant. "The DMIST study was the 'on switch,' and now facilities realize it's time to take digital mammography beyond the discussion phase," he says. "It's time to start thinking of the equipment either as a replacement of old technology or as an expansion of services."

### Competitive Forces

Expansion of services is a key phrase, and implementation is becoming a matter of quality and competition. The issue for both hospitals and physicians is being able to offer the best, Silver points out. Scheer agrees. "I wanted to provide the best quality, as my patient population in-

cludes many young, thin women with dense breast tissue."

"We didn't buy digital mammography to make money off it," Clark emphasizes. "We just felt that it was the best technology to bring to the women."

As Clark indicates, digital mammography is not a major new revenue stream for a facility. However, at the same time, it can serve as a good marketing tool, especially for the larger facilities. As Storella explains, "Most breast centers are part of a larger hospital system. The financial reasoning is that mammography is something of a loss leader, but it is a funnel to bring breast cancer patients into the system. Once they're in the system you make up those revenues further down the line with things such as radiation therapy, chemotherapy, or other imaging techniques."

"Strategically, this is very important for hospitals," agrees Silver. "Digital mammography may not be their big-ticket item, such as CT or MRI or PET/CT, but they still need to offer it, even though, by itself, it may not be a big financial driver."

Before the DMIST results were released, many facilities were reluctant to invest in digital mammography technology. Not only was the cost high, but there was uncertainty about its effectiveness compared with film mammography systems. But the results demonstrated that for some women in the breast cancer screening population, digital mammography clearly provided imaging advantages.

Even before the DMIST results were publicized, women were expressing interest in the availability. Demand only increased following the widespread release of the results. As such, more practices and facilities are feeling the pressure to convert to digital mammography. Now, for the most part, adoption of the technology seems more a question of "when" than "if." Because of issues such as cost, transition will come slow, but it appears inevitable.



— Dan Harvey is a freelance writer based in Wilmington, Del., and a frequent contributor to **Radiology Today**.



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