New technology offers an alternative to MRIs

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Millions of women are successfully screened every year for breast cancer with mammograms. But for some women, mammography does not detect all cancers.

ELIZABETH LARA/STAFF PHOTOGRAPHER

Dr. Lisa Weinstock uses gamma imaging at her Ridgewood practice.

For these women, magnetic resonance imaging, MRI, is often recommended. But MRIs are expensive, and subject to strict insurance company review. They also yield many false positives and lead to sometimes unnecessary and stressful biopsies.

Now an alternative technology, called molecular breast imaging, is emerging as an adjunct to mammography for high-risk women and those who cannot undergo MRIs. It has proved successful in some studies at identifying small cancers and those not detectable via mammography. It costs much less than an MRI, is more comfortable for the patient, and has less chance of producing a false-positive result.

The technology, also known as breast-specific gamma imaging, relies upon a fundamentally different approach than mammography. Rather than producing a detailed X-ray of the structure of the breast, the image shows “hot spots” where the cells function differently. The patient is injected with a radioactive tracer isotope, which is metabolized at a higher level by breast cancer cells than other cells.

Breast-specific gamma imaging “can identify the most difficult-to-detect breast cancer — invasive lobular carcinoma,” said Dr. Rachel Brem, the author of two recent studies and director of the breast imaging and interventional center at The George Washington University Medical Center in Washington. That type of cancer affects 10 percent of all newly diagnosed women.

“It also can help us detect additional lesions of all types of breast cancer in women whose mammograms show only one suspicious lesion,” she said. Brem is a shareholder and

member of the board of managers of Dilon Technologies, manufacturer of the equipment, according to disclosures included with the research.

Breast-specific gamma imaging is approved by the federal Food and Drug Administration and is covered, in most cases, for Medicare beneficiaries. But some insurers regard it as investigational because the research is based on relatively small groups of patients. Although the equipment costs a fraction of what an MRI costs, few hospitals have acquired it.

In North Jersey, the technology is available at two private breast-imaging practices: Women's Digital Imaging in Ridgewood and
the Montclair Breast Center.

"Every piece of information gives you another part of the picture," said Dr. Lisa Weinstock, radiologist and owner of Women's Digital.

She incorporates gamma imaging for high-risk patients in her practice. "It's like a puzzle. Nothing is perfect; there's no ideal tool out there, but together it's very helpful."

She adds that when the result is negative, "It's great, because you can really tell someone, 'We know as best we can know that it's not cancer.'"

Gammagrams, as they are called, are not used as a screening tool for everyone.

They are used specifically for women at high risk of breast cancer, those who have already been diagnosed and are checking for other cancers before a treatment plan is developed, and those whose mammograms are suspicious and hard to read because of scar tissue, implants or cysts. Other candidates include those who need an MRI but can't undergo one because they have pacemakers or kidney problems, or are obese or claustrophobic.

The procedure "is much easier for women and much less expensive," Brem said. "Every woman can have BSGI, but not every woman can have an MRI."

The isotope injected is the same one used for cardiac stress tests. The images are produced by a high-resolution gamma camera. If the doctor is available, they can be read on the spot.

"It took about 90 minutes to two hours," said a River Vale woman who had the test in September. She has a history of breast cancer, but cannot undergo MRI because of the stress of the contrast dye on her kidneys. Less compression is used to produce the images, which require that the woman sit still for about 10 minutes for each image. Four views are typically taken.

Another woman, who travels from Brooklyn to Ridgewood for her breast-imaging appointments, has very dense, cystic breasts that make it difficult for a radiologist to read her

mammograms. She had numerous biopsies since her teenage years, all of them negative. But without a history of breast cancer, her insurer denied coverage for an MRI. When Women's Digital obtained the Dilon "Gamma Camera," she was one of the first patients to use it.

Much to the surprise of both doctor and patient, "something lit up, like a hot spot," on the gamma images, said the patient, Peggy Shorr. With that suspicious finding, her insurer approved an MRI; the MRI led to a biopsy showing ductal carcinoma in situ.

Eventually, the gamma imaging may prove to be a widely used, lower-cost alternative to MRIs.

For now, although recent studies are "promising, patient populations were small and focused," according to the most recent Aetna coverage policy. "Randomized, controlled studies are needed to evaluate the effectiveness" of the new technology.

Says Brem: "It takes a very long time for a procedure to be adopted in wide use. This is a wonderful technology. It has really saved women's lives."