

By Dr. Barbara Ward

The Fight Against Breast Cancer

For most women, breast cancer is a scary disease. Despite a recent decline in the number of newly diagnosed breast cancers, it is estimated that one out of eight American women will develop breast cancer during their lifetime. Suffice it to say, that is a huge number of women! Nearly everyone has a relative, friend or co-worker who has had breast cancer.

With breast cancer all around us, what can we do to help fight this dreaded disease? One way is to join the Susan G. Komen Pittsburgh Race for the Cure, www.pittsburghraceforthecure.org, held every Mother's Day. The Race raises money to fund breast cancer research, education and screening. A portion of the money raised goes to the internationally renowned Susan G. Komen Race for the Cure foundation, and the rest remains in Western Pennsylvania to promote breast health and research locally. For uninsured and underinsured women in our area, the Mammography Voucher Program, www.mammographyvoucherprogram.org, funded by the Komen Race for the Cure, provides free mammograms and diagnostic services that might have otherwise been skipped because of the cost.

Although the key to prevention of breast cancer has been elusive, the best chance for survival is early detection and treatment. As many of our patients ask, what new diagnostic tools are currently available to aid in the early diagnosis of breast cancer? Mammography remains the only clinically proven screening test for breast cancer and is usually the initial test. However, there are often diagnostic challenges in interpreting mammograms due to the complexity of the breast tissue and additional, complementary tests may be necessary. Ultrasound and Magnetic Resonance Imaging (MRI) may be recommended.

In general, the primary way these tests evaluate the breast tissue is by how it looks – drawing conclusions about any underlying abnormalities by changes in appearance. MRI secondarily assesses the activity of the breast cells by monitoring blood flow, but it remains basically an anatomic test.

A relatively new imaging technique known as Breast-Specific Gamma Imaging (BSGI)



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detects cellular changes regardless of the breast tissue density. BSGI is a functional test – giving us a picture of just how the cells are behaving. As a molecular imaging test (another example is positron emission tomography or PET, for short), it looks at metabolism at the cellular level.

BSGI utilizes a special camera that takes pictures without compressing the breast. A small amount of a tracing agent is injected into an arm vein and is absorbed by all the cells of the body. Because cancer cells have higher metabolic activity, the tracing agent usually concentrates more in these cells than in normal cells. This difference is shown on the pictures as a dark spot in the breast.

BSGI is particularly useful for patients who have dense breast tissue, an area of concern on a mammogram, a newly diagnosed breast cancer (to look for other suspicious areas), a lump that can be felt but not seen with a normal mammogram and ultrasound, breast implants, and scarring from previous surgery. Because MRI can be used for some of these conditions, BSGI is especially suited to those patients who cannot undergo an MRI examination (for example, pacemaker, aneurysm clip, or claustrophobia). Preliminary studies indicate that BSGI has high sensitivity (ability to detect breast cancer) and a low false-positive rate (ability to avoid unnecessary biopsies).

For more information about the full range of breast imaging services we provide, including BSGI, visit our website at weinsteinimaging.com. ■

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