New Technology for Earlier Detection of Breast Cancer

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A Valley healthcare provider is a leading force in breast cancer research and early detection technology.

More than likely, you or someone you know has been affected by breast cancer at some point in their lives. It is the most common form of cancer among women in the United States. However, if detected early, there is a 98 percent chance of survival.

Recognized by The American College of Radiology as Breast Imaging Centers of Excellence, Scottsdale Medical Imaging, Ltd. has been, and continues to be, on the leading-edge of researching and implementing state-of-the-art imaging technology combined with subspecialized and fellowship-trained breast imaging radiologists to provide women the highest level of expertise in breast cancer detection.

SMIL offers the most innovative imaging technology available, including new 3-D digital mammography, breast MRI, minimally invasive breast biopsies, and the innovative PEM (Positron Emission Mammography).

3-D Digital Mammography
Beginning in September, SMIL will be one of the first healthcare providers in the nation to offer breast tomosynthesis, otherwise known as 3-D mammography, the latest advance in breast cancer screening. 3-D imaging allows radiologists to see through dense and overlapping tissue in the breast, sometimes a limiting factor on regular 2-D mammograms. Early clinical trials of this promising new FDA-approved technology suggest increased cancer detection rates and a reduction in the number of false positive results.

When a patient requests a 3-D mammogram, the experience is similar to the current standard of care 2-D digital mammogram in terms of compression and positioning. The mammogram camera rotates over the breast in an arc obtaining both the 2-D images as well as 3-D information.

SMIL is proud to have been involved in the pre-FDA national research trials and was the only medical imaging provider in Arizona to be using this technology for research two years prior to the FDA's approval in February 2011. As a result, SMIL's team of eight breast tomosynthesis radiologists have a combined 16-year body of experience. SMIL is continuing to research this technology to provide cutting-edge, yet data-driven care by partnering with academic medical centers across the country to scientifically validate the efficacy of this new technology. Discuss with your doctor if a 3-D mammogram is right for you.

MRI
In conjunction with mammography, breast MRI is utilized for patients at high-risk for breast cancer (i.e., strong family history of breast cancer or known BRCA gene). In fact, breast MRI has been proven to reduce mortality (death rates from breast cancer) in these patients. MRI is so exquisitely sensitive at detecting subtle changes that radiologists are now finding cancer earlier than they have ever been able to find it before.

Needle Biopsies
One of the most significant advances in diagnosing breast tumors has been needle biopsies. Rather than a woman having to undergo surgery, radiologists can perform a variety of minimally invasive needle biopsies that involve only a small incision, performed in an outpatient setting, and provide the patient an accurate and quick diagnosis.

PEM
SMIL is the only imaging provider in Arizona to offer PEM (Positron Emission Mammography) a 3-D molecular imaging exam that can detect breast cancer as small as a grain of rice. Cancerous cells absorb and accumulate sugar much faster than healthy tissue, which is what a PEM scan keys in on. A sugar-based radiotracer is injected into the abnormal tissue. PEM then takes a "snapshot" of the cellular activity within the mass to not only reveal the shape, size and location of a suspicious mass, but to also provide more than 90 percent accuracy in identifying if the mass is cancerous.

PEM is typically used as a complement to breast MRI – combined the two studies provide the highest overall accuracy rates in sensitivity and specificity. Using the information from a PEM scan allows physicians to determine the best treatment options and helps doctors locate and remove all suspicious tissue during surgery.

Radiologist Christopher May believes in this new technology. "Our own experience with PEM confirms what research studies have shown — while it does not replace an MRI, it is an excellent technique to use in addition to MRI in these women," May says. "It most significantly helps to cut down on the number of false alarms that lead to negative biopsies, and also will occasionally find a cancer that cannot be seen well with

other methods. We expect it to become a routine and valuable tool in our breast imaging practice."

To schedule your annual screening mammogram, call SMIL at 480.425.5030 or book your appointment online www.getamammo.esmil.com.