



# PIPER BREAST CENTER *Communiqué*

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## **COMPUTER-AIDED DETECTION - A NEW MAMMOGRAPHY TOOL**

*By Deborah L. Day, MD*

New mammography computer technology has become available at the Piper Breast Center in the last year – computer-aided detection (CAD). This technology serves as a second read for mammograms. Studies have shown that the cancer detection rate can be improved 15 to 20 percent using CAD. Piper Breast Center has been steadily increasing the CAD capabilities and can now use it on all our screening mammograms – those acquired digitally and using film.

The CAD process takes several steps. The mammogram is taken in the usual manner. If routine film mammograms are used, the films are passed through a digitizer and analyzed to detect specks of calcifications and masses, which are the most common signs of cancer in a mammogram. The radiologist reads the mammogram in the usual way and then views a special screen displaying the computer-generated images where areas of concern are marked. CAD evaluation of digital mammograms is simpler since the image is already in digital form. The radiologist just activates the CAD program and the

marks appear on the mammogram images displayed on the work station screen.

CAD indicates suspicious calcifications and masses as well as benign-appearing calcifications or overlapping tissues mimicking a mass. It is up to the radiologist to decide which areas look suspicious enough for further evaluation. CAD evaluation averages two marks per patient. Fortunately, the radiologist is able to rule out suspicious findings in the majority of areas marked by CAD, making it necessary to only call back approximately 1 of every 15 women who come for screening. The CAD technology may also miss some mammographic abnormalities that are cancer. Recognizing these limitations, the radiologist must diligently evaluate the whole breast and not become too reliant on this aid.

In conclusion, CAD is a powerful new tool that can aid in the detection of early breast cancers. We now have the capability to offer this to all women who have screening mammograms at the Piper Breast Center.

## **Did You Know ...**

*~ By Stephanie Remark, RT(R)(M)*

Adequate compression is needed to provide a good mammogram. Compression not only assists the radiologist in reading the mammogram, but it decreases the already low dose of radiation to the breast.

Since breast tissue becomes more tender just before or during a menstrual period, the best time to schedule a mammogram is within the first week after your period.



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## UNDERSTANDING BREAST PAIN

~ By Margit Bretzke, MD

Breast pain is extremely common and one of the most frustrating conditions to deal with from both a patient and a physician perspective. Most pain is physiologic and normal, and is often related to hormonal fluctuations. It may be only in one breast or it may be in both, the pain varies with each patient. Therefore, it is reasonable for a patient to monitor her pain through one or two menstrual cycles to see if it resolves on its own. If the pain does not subside, the physician may screen for disease by performing a breast examination and mammogram.

If a patient has localized pain in one area, ultrasonography may also be useful.

If there is not a disease that is causing the breast pain, it then may not have an obvious 'cure,' which can be frustrating. As a general recommendation, physicians at Piper Breast Center suggest patients eliminate all caffeine and add Vitamin E or an evening dose of oil of primrose. To reduce breast pain, ibuprofen can also be used. With these recommendations, we are sensitive to not making the treatment worse than the problem.

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## THE PIPER BREAST CENTER IS ONLINE!

The Piper Breast Center is at your fingertips – we are online at Abbott Northwestern Hospital's Web site. To access our Web site, go to [www.abbottnorthwestern.com](http://www.abbottnorthwestern.com), and find Piper Breast Center under the 'Services & Programs' menu.

also on the Web site, as well as a patient's story, links to educational Web sites and directions to the Piper Breast Center.

Please visit our Web site and let us know what else you would like to see!

Here you'll find information on our staff, treatment planning, screening and diagnostics, the breast health clinic and low cost mammography. The current and past issues of *Communiqué* are



## TYPES OF BREAST BIOPSIES

~ By Tammy Fox, MD,  
and Diane Stoller, MD

Finding a breast lump or being called back for an abnormal mammogram can be very scary. Often, a clinical breast examination or further breast imaging by a health care professional can determine that the finding is benign (non-cancerous). In other cases, a breast biopsy is necessary for further evaluation.

A breast biopsy is a procedure in which tissue is removed for evaluation of an abnormality that was found on a mammogram, ultrasound or a physical examination. There are two main types of breast biopsies: surgical and image-guided needle biopsies. The choice of biopsy varies, depending on the abnormality and patient preference.

A surgical or excisional biopsy is performed by the surgeon who anesthetizes the area locally then makes an incision directly over the lesion. The abnormality is usually completely removed. If there is a lump that can be felt, the surgeon directs the biopsy by touch. If the abnormality is seen only on a mammogram or ultrasound, a wire localization may be necessary. In a wire localization procedure, the radiologist guided by mammography or ultrasound places a thin, flexible wire in the area of concern. The surgeon uses this wire to locate the abnormality at the time of excision.

An image-guided needle biopsy, either stereotactic or ultrasound-guided, is another type of breast biopsy. This is performed by the radiologist, who uses mammography or ultrasound as a guide. If the abnormality can only be seen on a mammogram, a stereotactic needle biopsy is done. A special computer aids in pinpointing the area of concern. Calcifications are generally biopsied using stereotactic technique. Most masses, however, can be seen on ultrasound and are biopsied using ultrasound-guided biopsy. In both image-guided biopsies, multiple tissue samples are obtained through a special needle. Typically the area of concern is only sampled, but a small abnormality may be completely removed.

Both surgical and image-guided biopsies are commonly performed. Both are accurate and have similar low complication rates. The tissue from any biopsy is evaluated microscopically by a pathologist. Piper Breast Center professionals work closely with the patient and her doctor to decide if a biopsy is needed and to determine the appropriate treatment.

*Communiqué* is produced for friends of Abbott Northwestern's Piper Breast Center, 800 East 28th Street, Minneapolis, MN 55407-3799, 612-863-3150.

Medical editor ~ Beverly Trombley, MD