



## Going Digital: New Advances in Mammography

By KEITH TAO, M.D., M.D.

This truly is a "digital" age in which we live — everything from our televisions to cameras and picture frames to birthday cards is digital. Medicine, too, has taken advantage of digital advances, and the benefits of digital mammography over the traditional film-based tests are impressive.

Although breast X-rays have been done for more than 70 years, modern mammography has only existed since 1969. Much like the transition from yesterday's film cameras to today's digital cameras, digital mammography offers cutting-edge technology and immense advantages to both radiologists and patients in breast imaging.

Technology for Your Health Digital mammography is a fantastic, innovative solution to the diagnostic and productivity limitations of the old tried-and-true film mammography. The new equipment creates the fastest, sharpest, best contrast and fully maneuverable images at a fraction of the radiation dose.

### Benefits of Digital Mammography

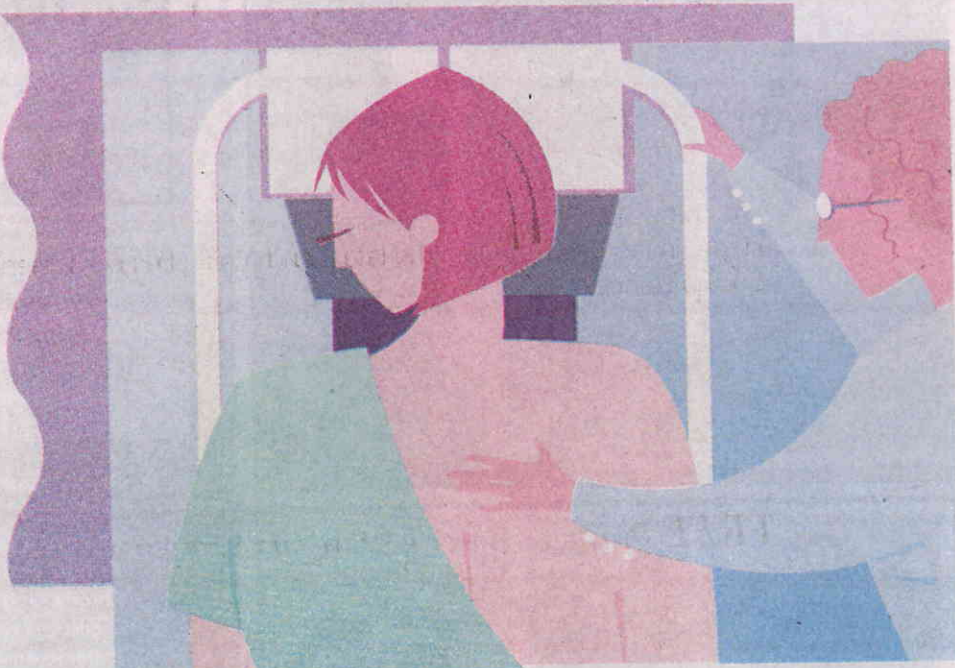
The landmark Digital Mammographic Imaging Screening Trial (2001-2005) found that digital mammography is more accurate and cost-effective as

a cancer screening tool in women with dense breasts and women in the peri- and pre-menopausal age groups. This amounts to 60 percent of women under 50 years of age and 40 percent of women older than 50.

In summary, digital mammography offers:

- the highest resolution and full capability to enhance images obtained.
- an efficient way for storing, archiving and transmitting mammograms as computerized digital files rather than the bulky, degradable X-ray films.
- an instantaneous viewing of the images obtained, reducing the need for callbacks for radiologists.
- a larger field of view, which is particularly important for larger-breasted patients and women with breast implants who often require extra images when using film-based mammography.
- significantly reduced radiation.

It is important to note that even digital mammography has its limitations. Normal dense breast tissue can still hide 10 to 15 percent of breast cancers. The digital images, however, offer improved capability to detect subtle abnormalities, including the use of dedicated software (Computer Aided Detection or CAD) designed to



automatically scan the breasts for masses, distortions or calcifications.

### Can Breast Cancer be Found Early?

Breast cancer is the most common cancer among women in California, regardless of race or ethnicity, according to the American Cancer Society. Nationally, one in eight women will develop breast cancer during their lifetime. However, when diagnosed early, five-year survival rates are near 100 percent.

Thanks to technology advances, we are now detecting breast cancer in

women at earlier, more treatable stages. Finding breast cancer while it can still be treated saves many thousands of lives each year and digital mammography is helping to make early detection easier.

In 2004, 57 percent of women of screening age reported that they had a mammogram in the past year, compared to only 39 percent in 1997. That's certainly a promising trend, although recent studies indicate leveling off in mammography screening rates across the nation.

### Be Proactive with Your Health

Current screening guidelines advise that all women should have their first mammogram by age 40 and every one to two years thereafter. This can reduce the risk of dying of breast cancer by 20 to 25 percent for women aged 40 years or older. This is particularly true in women with high risks such as a family history of breast cancer.

Women in their 20s and 30s should have a clinical breast exam as part of their annual health examination. It is also ben-

eficial for women starting in their 20s to learn how to do a breast self exam.

Sutter Regional Medical Foundation (SRMF) is one of 39 percent of breast-imaging centers to offer digital mammography services, according to the American College of Radiology. This advanced and potentially life-saving technology is available at SRMF's Fairfield, Vacaville and Vallejo care centers.

*Keith Tao, M.D., is medical director of radiology at Sutter Regional Medical Foundation Diagnostic Imaging Centers.*