

WHAT TO EXPECT



## **Breast Tomosynthesis**

An additional screening tool  
in the fight against breast cancer

**HOLOGIC**<sup>®</sup>  
The Women's Health Company



## ► Screening for breast cancer

Doctors and scientists agree that early detection is the best defense against breast cancer. If we find cancer in its earliest stages, the chances of surviving it are good. Until now, the best way to do that has been with *digital mammography*.

Digital mammography uses a specially designed digital camera and a computer to produce an image that is displayed on a high-resolution computer monitor.

While digital mammography is still one of the most advanced technologies available today, it is only a two-dimensional picture of the breast. Since the breast is composed of pockets of dense tissue surrounded by fat, when x-rayed, it creates an image that looks something like a smoky haze. The overlapping tissue in the image makes it difficult to see tiny "spots", called microcalcifications, and other subtle signs of early cancer.

In some cases, the radiologist may ask you to come back for a follow-up examination such as a diagnostic mammogram to rule out any suspicious areas.

## ► An additional screening tool

For decades doctors have been searching for a technology to help them find very small cancers or rule out "false positives" and reduce the number of women who are called back for a diagnostic mammogram.

Scientists have developed a new technology called breast tomosynthesis, which has been shown in clinical studies to be superior to digital mammography.<sup>1,2</sup>

1. Data on file at Hologic

2. The Hologic Selenia Dimensions clinical studies presented to the FDA as part of Hologic's PMA submission that compared Hologic's Selenia Dimensions combo-mode to Hologic 2D FFDM

# Breast tomosynthesis

## A 3D mammogram

Breast tomosynthesis allows doctors to examine breast tissue one layer at a time. This exciting new technology has been recently FDA approved and is now available.

*Breast tomosynthesis* is a new technology in the fight against breast cancer. Breast tomosynthesis may be used in conjunction with traditional digital mammography as part of your annual screening mammogram to capture more breast images. Using breast tomosynthesis and digital mammography together for screening has been proven to reduce "call-backs".<sup>1,2</sup>

Breast tomosynthesis may also be used for a diagnostic mammogram if you happen to be called back for this type of exam.

### ► What is breast tomosynthesis?

*Breast tomosynthesis* uses high-powered computing to convert digital breast images into a stack of very thin layers or "slices"—building what is essentially a "3-dimensional mammogram".

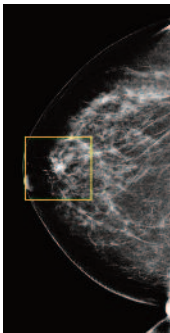
During the tomosynthesis part of the exam, the X-ray arm sweeps in a slight arc over the breast, taking multiple breast images in just seconds. Very low X-ray energy is used so your exposure is about the same as that of a traditional mammogram. A computer then produces a 3D image of your breast tissue in one millimeter layers.

Now the radiologist can see breast tissue detail in a way never before possible. Instead of viewing all the complexities of your breast tissue in a flat image, the doctor can examine the tissue a millimeter at a time. Fine details are more clearly visible, no longer hidden by the tissue above and below.

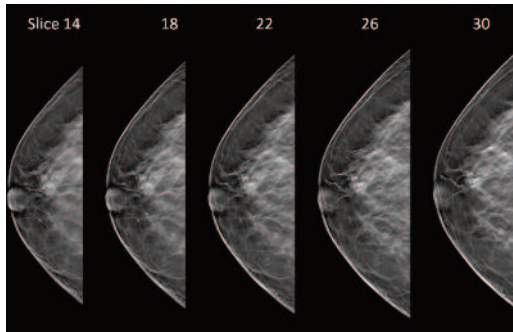
## SELENIA DIMENSIONS



The Selenia Dimensions systems is designed to maximize patient comfort during the exam.



2D "conventional" mammogram



3D breast tomosynthesis mammogram layers or "slices"

In a "conventional" 2D mammogram there appears to be an area of concern that the doctor may want to further investigate with another mammogram or a biopsy. Looking at the same breast tissue in 3D "breast tomosynthesis" image slices, the doctor can now see that the tissue is in fact normal breast tissue that was overlapping in the traditional mammogram creating the illusion of an abnormal area. In this scenario this patient likely avoided a call-back for an additional mammogram thanks to the tomosynthesis exam technology.

**“ Every woman over 40 should be  
examined for breast cancer once a year.”**

*American Cancer Society*

## ► What to expect during your exam

A tomosynthesis exam is very similar to a traditional mammogram. Just as with a digital mammogram, the technologist will position you, compress your breast under a paddle and take images from different angles. A breast tomosynthesis exam may be used as a screening tool in conjunction with a traditional digital mammogram or may be used by itself for a diagnostic mammogram.

During the tomosynthesis portion of the exam, your breast will be under compression while the x-ray arm of the mammography machine makes a quick arc over the breast, taking a series of breast images at a number of angles. This will only take a few seconds and all of the images are viewed by the technologist at their computer workstation to ensure they have captured adequate images for review by a radiologist.

The whole procedure time should be approximately the same as that of a digital mammogram. The technologist sends your breast images electronically to the radiologist, who studies them and reports results to either your physician or directly to you.

# Early Detection is the Key

Because our primary goal has always been to deliver the highest quality care to our patients, we are adding breast tomosynthesis to our breast health services.

We have chosen the Selenia® Dimensions® breast tomosynthesis system from Hologic® because we believe that it offers the best technology available. Please call our office to schedule your annual mammogram.

For additional information on breast health, call the American Cancer Society at 1.800.ACS.2345 or visit [www.cancer.org](http://www.cancer.org).

You can learn more about mammography and breast tomosynthesis, by visiting [www.hologic.com](http://www.hologic.com).