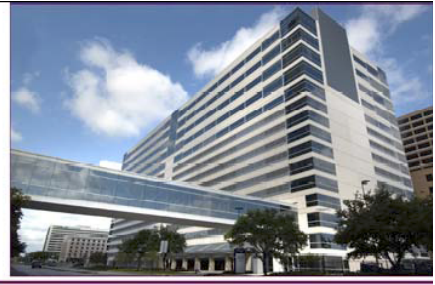


# Baylor Clinic Healthletter



## Focus On Breast MRI

October 2007

By Emily Sedgwick, MD, Director of Breast Imaging, Lester and Sue Smith Breast Center at Baylor College of Medicine

One of the most talked about topics in women's health today is the breast MRI. Who should have one? Is it right for you? How does it differ from a mammogram?

The Lester and Sue Smith Breast Center at Baylor College of Medicine offers the following information to help you better understand breast MRI, its role in breast healthcare and how your doctor can determine if you're a good candidate.

### Q. What is a breast MRI?

A. Breast MRI or magnetic resonance imaging is a non-invasive diagnostic tool that uses magnetic fields to produce high-quality, 3-D images of the breast. Unlike a mammogram, the images do not use x-rays and do not require flattening the breast.

### Q. How does it work?

A. With an MRI, a magnetic pulse is applied to the patient to identify the different tissues of the breast. A contrast agent or dye is injected into a vein in the patient's arm during the exam to help show breast tissue details and highlight abnormalities. If the patient has cancer, the contrast concentrates in that area, because cancer has increased blood supply. The cancer "lights up" with the contrast on the breast MRI.

### Q. Who should get a breast MRI?

A. Breast MRI is not recommended for everyone. While breast MRI picks up most breast cancers, unfortunately this highly sensitive tool often identifies other areas in the breast that do not turn out to be breast cancer. These false-positives can result in unnecessary follow-up MRIs and biopsies that can be frustrating for the patient.

Breast MRI has been most successful in patients who have a high risk of breast cancer. For example, if you have a known genetic predisposition or a strong family history of breast cancer, your doctor may determine you are a good candidate for breast MRI. MRI is also the method of choice for detecting ruptures in silicone implants. If you have silicone implants and suspect you have a rupture, contact your doctor.

In general, a yearly mammogram is recommended for women 40 and older. In the majority of patients, breast cancer is diagnosed through mammograms and ultrasound. In some cases, additional information can be obtained from breast MRI. At the Smith Breast Center, most patients with abnormal mammograms will be offered a same-day biopsy, eliminating the need for multiple diagnostic visits and avoiding delays in diagnosis and treatment. If you think you need a breast MRI, talk with your doctor. Your doctor and radiologist will review your history. The radiologist will also review your mammogram to plan how best to perform your MRI.

### Q. What is the breast MRI experience like for the patient?

A. There are no special preparations required for this procedure. At the Smith Breast Center, when you arrive for a breast MRI you'll be asked to remove your shirt and bra and put on a gown. An IV is placed in your arm to inject the contrasting agent. (If you are over age 60, or have a history of kidney problems, a blood test may be done prior to the exam.)

During the exam, you lie on your stomach with your breasts placed into openings in the examining table. Your arms will rest on the table above your head. Your breasts are gently immobilized, but not compressed as they are during a mammogram. The IV in your arm is then connected to the contrasting agent. Next, you are placed inside the “gantry” or imaging machine, which is shaped like a donut, with your head near the opening.

Imaging then begins. Having an MRI is noisy! You’ll be offered a set of earphones so you can listen to music, if desired. The technologist can see and hear you the entire time and is in constant communication with you during the MRI, which takes about 30 minutes.

**Q. How do I get my results?**

A. The images from the MRI are processed by a special software program and sent to the radiologist, a doctor who has expertise in reading breast MRI. Your referring physician will receive your results -- most patients have results back within 24 hours.

**Q. What if the radiologist finds something abnormal on my breast MRI?**

A. If you have an abnormality on the MRI, the radiologist may try to find it through an ultrasound (ultrasound uses sound waves to create a picture of the breast). About half of all MRI abnormalities can be identified with ultrasound. At the Smith Breast Center, most patients are seen for an ultrasound the day after their breast MRI, when required. If we can find an abnormality on ultrasound that correlates to the abnormality on your MRI, you will likely be scheduled for a biopsy that same day. Biopsy results are typically finalized within two business days, minimizing the wait for a definitive diagnosis.

If the MRI abnormality cannot be found by ultrasound, you will be scheduled for an MRI guided biopsy. The breast MRI is repeated, and MRI is used to guide the biopsy needle. For most patients, biopsy results are available in two business days.

The key for all women is to stay on top of routine breast care screenings. Early detection and treatment is crucial to surviving breast cancer, a disease that claims the life of another woman in this country every 12 minutes. For more information or to schedule an appointment, call the Lester and Sue Smith Breast Center at Baylor College of Medicine.

*Emily Sedgwick, MD, is assistant professor of Radiology at Baylor College of Medicine and director of breast imaging at the Smith Breast Center. Dr. Sedgwick focuses on the continual advancement of the breast imaging program, as well as research studies that include working with oncologists to determine the appropriate use of breast MRI.*

*The Lester and Sue Smith Breast Center at Baylor College of Medicine brings together a multidisciplinary team of breast care specialists in one location, integrated with an internationally recognized research program, all collaborating to provide life-saving patient care today and a cure for tomorrow. A major component of the Dan L. Duncan Cancer Center, an NCI-designated cancer center, the Smith Breast Center is recognized as one of the top breast centers in the world.*

Lester and Sue Smith Breast Center at Baylor College of Medicine  
Baylor Clinic  
6620 Main Street  
13<sup>th</sup> Floor, Suite 1350  
Houston, Texas 77030

Monday – Friday 7 a.m. to 4 p.m.  
713.798.2180  
*mammography/imaging*

Monday – Friday 8 a.m. to 5 p.m.  
713.798.1999  
*main*