

## *Ultrasound*

Although a mammogram remains the most common and effective screening device for detecting early stage breast cancer, there are occasions where it may not reveal a breast lump or other abnormality. There are also times when a mammogram may not provide enough detailed information about a breast abnormality. In these cases, your doctor may recommend a breast ultrasound.

An ultrasound of the breast uses high-frequency sound waves to create a detailed computer image of the breast tissue. From this, your doctor can distinguish between cysts and solid masses to determine the size, shape, texture and density of a breast lump.

### *How ultrasound breast imaging works*

An ultrasound creates images of the breast in the same way it shows pictures of developing babies in pregnant women. High-frequency sound waves are transmitted from a transducer (a device that resembles a microphone) through the breast. The sound waves make echoes as they bounce off various types of tissue. A computer converts the echoes into an image that is displayed on a video monitor.



Receiving an ultrasound is painless. While lying on a table, the ultrasound technician will cover the part of the breast to be examined with a gel. This lubricates the skin and helps to transmit the sound waves. The technician will then guide the transducer back and forth across the breast until clear images have been generated and captured for analysis. The breast exam usually lasts between 20 and 30 minutes.

### *Limitations of ultrasound breast imaging*

While ultrasound provides an effective and painless way to identify many breast abnormalities, it does have its drawbacks. Unlike a mammogram, an ultrasound does not have good spatial resolution and, therefore, does not provide as much detail for

deeply located breast abnormalities. It is also unreliable in detecting microcalcifications, which are tiny calcium deposits that can often be the first indication of breast cancer.

Source: [www.mammotome.com](http://www.mammotome.com)