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# Ultrasound [1]

**This section has been reviewed and approved by the Cancer.Net Editorial Board [2], 01/2014**

*Listen to theCancer.Net Podcast: Ultrasound?€"What to Expect[3], adapted from this content*

**Key Messages:**

- An ultrasound is an imaging test that uses high-frequency sound waves to locate a tumor inside the body.
- During an ultrasound, a special hand-held device is placed on or inside the body and moved around; images of internal organs appear on a computer screen.
- Depending on which part of the body is being examined, you may or may not need to do anything special to prepare for the test. You can go back to your usual activities as soon as the ultrasound has finished.

An ultrasound, also called sonography or ultrasonography, is an imaging test that uses high-frequency sound waves to create a picture of internal organs. The sound waves hit the organs and then bounce back to a device called a transducer that turns them into images and displays them on a computer monitor for the doctor to examine. Abnormal growths of tissue create different echoes of the sound waves than healthy tissue, so a doctor is able to detect a potential tumor. Ultrasound is also used to help a doctor perform a biopsy [4] (the removal of a small amount of tissue for examination under a microscope) by showing a tumor?s exact location in the body.

### The medical team

An ultrasound may be done in a doctor's office or at a hospital. The test is usually performed by an ultrasound technologist, called a sonographer, who is specially trained to use the ultrasound machine. The results of an ultrasound are interpreted by a radiologist, a medical doctor who specializes in using imaging tests to diagnose disease.

### Preparing for the test

When you schedule your ultrasound, you will get detailed instructions on how to prepare. Specific preparation for an ultrasound depends on the part of the body being examined. For example, if the ultrasound is for certain parts of the abdomen, you may need to eat a fat-free meal the night

before, avoid eating or drinking anything for up to 12 hours before, or drink a quart of water an hour before and keep a full bladder during the test. Sometimes no special preparations are needed, other than to wear comfortable, loose-fitting clothing to the appointment.

Before your appointment, you may want to check with your insurance provider to find out whether the cost of the test will be covered and if there are any additional costs you may need to pay yourself. Once you arrive at the doctor's office or hospital, you will be asked to sign a consent form that states you understand the benefits and risks of the ultrasound and agree to have the test done. Talk with your doctor about any concerns you have about the ultrasound.

**During the test**

When you arrive for your ultrasound, you will remove some or all of your clothing, depending on which part of your body will be examined. In some cases, you will wear a hospital gown. You may also need to take off any jewelry that may interfere with the test.

You will lie on an examination table, either on your back or on your side, next to the ultrasound scanner. The scanner includes a computer, a screen, and a transducer (a hand-held device that is attached to the scanner by a long cord).

The technologist will spread a gel on your skin over the area that is to be examined. The gel, which may feel cold when applied, helps get rid of air pockets between the transducer and your skin. This allows the ultrasound to produce better images.

Next, the technologist will press the transducer firmly against the gel and move it back and forth. An image of your organs and blood vessels will appear on the screen. The technologist will use the computer to save images during the test, and a radiologist may come into the exam room to review the images on the screen.

Ultrasounds are usually painless, but you may feel some discomfort as the transducer is pressed on your body, especially if you are required to have a full bladder for the exam.

You will need to lie still during the ultrasound. The technologist may ask you to hold your breath for several seconds at a time or to change your position on the table. If you are having an ultrasound of your kidney, you may need to lie on your stomach for part of the test.

When the procedure is over, the technologist will wipe the gel off your body, and you can get dressed. Depending on the area of the body being examined, the test can take 20 to 60 minutes to complete.

In some cases, the transducer is attached to a lubricated probe that is gently inserted into the body. For example, the probe may be inserted into a man?s rectum to see the prostate or into a woman?s vagina to see the uterus or ovaries.

**After the test**

You can go back to your usual activities, including driving, immediately after your ultrasound. If your doctor finds any areas of concern during the ultrasound, additional tests may be needed to examine them more closely.

### Questions to ask your doctor

Before having an ultrasound, consider asking the following questions:

- What will happen during the ultrasound?
- Who will perform the ultrasound?
- How long will the procedure take?
- How accurate is an ultrasound at finding cancer?
- When will I learn the results? How will they be communicated to me?
- Who will explain the results to me?
- What other tests will I need if the ultrasound finds evidence of cancer?

### More Information

What is Cancer? [5]

### Additional Resources

MedlinePlus: Ultrasound [6]

*RadiologyInfo: General Ultrasound Imaging[7].*

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**Links:**
[1] http://www.cancer.net/navigating-cancer-care/diagnosing-cancer/tests-and-procedures/ultrasound
[2] http://www.cancer.net/about-us
[3] http://www.cancer.net/sites/cancer.net/files/Ultrasound_What_to_Expect.mp3
[4] http://www.cancer.net/node/24406
[5] http://www.cancer.net/node/24962
[6] http://www.nlm.nih.gov/medlineplus/ultrasound.html
[7] http://www.radiologyinfo.org/en/info.cfm?pg=genus