IMAGING: ULTRASOUND TESTS

Abdominal Ultrasound

Using sound waves to see inside the body, an abdominal ultrasound can help diagnose medical conditions, such as cancer, gallbladder disease and gallstones and check for problems in the liver, kidneys, pancreas or spleen.

What to expect

- Before the exam:
  The patient must not eat or drink for eight hours before the appointment time.

- During the exam:
  Upon arrival, the patient lies on an examination table, and the diagnostic medical sonographer applies warm gel to the abdomen. The lubrication gel helps sound waves travel more readily through the body. A transducer (small, microphone-like device) is placed several times over the abdominal area. There is no pain and only mild pressure from the transducer. Depending on the exam, the patient may be required to lie still, change positions, hold the breath or just breathe normally. Sound waves pass harmlessly through the skin from the transducer and bounce off certain organs and tissue in the body. This creates echoes, which reflect back to the transducer. A television monitor shows images as the transducer converts the echoes to electrical signals. These moving images may be viewed immediately, recorded or photographed for review by the doctor. The procedure takes approximately 45 minutes.

Breast Ultrasound

The purpose of a breast ultrasound is to evaluate breast tissue for lumps or unusual findings discovered by the patient or the doctor. Ultrasound is most suited to identify fluid-filled spaces, such as cysts. Cysts are masses that are definitely not cancer, as distinguished from other masses that may or may not be cancer. Ultrasound is also very useful for examining both silicon and saline breast implants.

What to expect

- Before the exam:
  Patients should make available to the ultrasound doctor any previous mammogram films so that comparisons can be made with the current results. It is suggested that breast ultrasounds should be avoided one week before the menstrual cycle since breasts are usually very sensitive at this time.

- During the exam:
  The patient lies on the examination table with hands at the sides. Warm gel is applied to the breast so that the sound waves can travel more readily through the body. A transducer (small microphone-like device) is placed over the breast. There is no pain and only mild pressure from the transducer. Sound waves pass harmlessly through the skin from the transducer. A television monitor shows images of the breast as the probe changes the echoes to electrical signals. These images can be viewed immediately, recorded or photographed for physician review. Occasionally, additional images may be needed following radiologist review. The procedure takes about 30 minutes.

Thyroid Ultrasound

The most common reason for an ultrasound of the neck or thyroid is a neck mass. When a mass is found in the neck, the origin may not be obvious when the doctor examines it. Therefore an ultrasound study is necessary to determine the origin and makeup (solid or water-filled) of the mass. For this exam, ultrasound uses sound waves to see inside the thyroid and neck area.

What to expect

- During the exam:
  The patient lies on an exam table with a pillow or bolster under the shoulders and the head extended back. Warm gel is applied to the neck. The lubrication gel helps the sound waves travel more readily through the body. A transducer (a small, microphone-like device) is placed over the neck. There is no pain involved and only mild pressure from the transducer. Sound waves pass harmlessly through the skin from the transducer. A television monitor shows images of your neck as the probe converts the echoes to electrical signals. These moving images can be viewed immediately, recorded or photographed for physician review. Occasionally, additional images may be needed following radiologist review. Your procedure will take 30 to 45 minutes.

(Continued on reverse)
Venous Duplex Ultrasound - Legs

An ultrasound of the leg veins uses sound waves to see inside the body. This procedure is performed to evaluate symptoms, including leg pain or swelling, excessive varicose veins, shortness of breath or suspected blood clots in the legs and lungs.

What to expect

- During the exam:
  While the patient lies on an exam table, the vascular technologist applies warm gel to the legs. A transducer (small, microphone-like device) is placed over various locations on the legs. There is no pain and only mild pressure from the transducer. Sound waves bounce off the muscle, tissue and blood moving in the legs to create echoes. The echoes are reflected back to the transducer. A television monitor shows images as the transducer converts the echoes to electronic signals. These images may be viewed immediately or photographed for further study. Additionally, the patient may hear unusual sounds as the technologist views and records the blood flowing through the veins and arteries in the legs. The exam takes 15 to 30 minutes.

- After the exam:
  There are no post-exam instructions.

Pelvis Ultrasound

A pelvic ultrasound can help determine the cause of pain or bleeding in women’s reproductive organs.

What to expect

- Before the exam:
  One hour before the exam, the patient must drink 32 ounces of any liquid and not urinate because the bladder must be full for the procedure.

- During the exam:
  Upon arrival, the patient is positioned on an examination table, and the diagnostic medical sonographer applies warm gel to the skin of the lower abdomen. The lubrication gel helps the sound waves travel more readily through the body. A transducer (small, microphone-like device) is placed over the abdominal area several times. Mild pressure from the transducer and some discomfort from a full bladder may be felt by the patient. The sound waves bounce off certain organs and tissue in the body. This creates echoes, which are reflected back to the transducer. A television monitor shows images as the transducer converts the echoes to electrical signals. These moving images may be viewed immediately, recorded or photographed for further study. Routinely, in addition to the regular transabdominal pelvic ultrasound a transvaginal ultrasound will be performed for further evaluation of the reproductive organs. The exam takes about 30 to 60 minutes.

Transvaginal Ultrasound

Ultrasound uses sound waves to see inside the body. Frequently, a transvaginal ultrasound is performed after a transabdominal pelvic ultrasound has been done. However, this exam may also be the only pelvic ultrasound performed.

What to expect

- Before the exam:
  In this case, there are no special instructions to be followed before the exam. This exam can be performed during menstruation.

- During the exam:
  The patient is positioned on the exam table in the lithotomy position. A small, lubricated probe called a transducer is inserted into the vagina, much like a tampon. The transducer is larger than a tampon, but smaller than the speculum that the doctor uses for a pelvic exam. A light amount of pressure may be felt. The patient may be requested to lie still, change positions, hold the breath or just breath normally. Sound waves pass harmlessly through the skin from the transducer. The sound waves bounce off certain organs and tissue in the body to create echoes. The echoes are reflected back to the transducer. A television monitor shows images as the transducer converts the echoes to electrical signals. These moving images may be viewed immediately, recorded or photographed for physician review. Occasionally the radiologist may request additional images. The procedure takes approximately 45 minutes.