

Abdominal Ultrasound

The Radiology Department

The Radiology Department, sometimes called the x-ray, is the facility in the hospital that carries out the radiological examinations of patients, using a range of equipment, including x ray, CT scanning, ultrasound and magnetic resonance imaging (MRI).

The radiologists are doctors specially trained to interpret the results and carry out some of the more complex examinations. They are supported by radiographers who are highly trained to carry out many of the x-ray and other imaging procedures.

What is Abdominal Ultrasound?

Ultrasound uses high-frequency sound waves to produce pictures of the inside of your body. Ultrasound does not use radiation (x-rays). Ultrasound images are captured in real-time and can therefore show the structure and movement of the body's internal organs, as well as blood flowing through blood vessels.

Ultrasound imaging is a painless investigation that helps Dr Ian McCafferty to diagnose and treat medical conditions. An *abdominal ultrasound* produces a picture of the organs and other structures in the abdomen. A *doppler ultrasound* is a special ultrasound technique that evaluates blood as it flows through a blood vessel, including the body's major arteries and veins in the abdomen.

What are common uses of abdominal ultrasound?

Abdominal ultrasound imaging is performed to evaluate the kidneys, liver, gallbladder, pancreas, spleen, abdominal aorta and other blood vessels of the abdomen.

How should I prepare for the procedure?

You should wear comfortable, loose-fitting clothing for your ultrasound exam. You may need to remove all clothing and jewellery in the area to be examined. You will be asked to wear a gown during the procedure.

Other preparations depend on the type of ultrasound you are having:

- For a study of the liver, gallbladder, spleen, and pancreas, you may be asked to starve for 4 – 6 hours before the test.
- For ultrasound of the kidneys, you may be asked to drink four to six glasses of liquid about an hour before the test to fill your bladder. You may be asked to avoid eating for eight to 12 hours before the test to avoid gas build-up in the intestines.
- For ultrasound of the aorta, you may need to avoid eating for eight to 12 hours before the test.

What does the equipment look like?

Ultrasound scanners consist of a console containing a television monitor and a *transducer* that is used to scan the body. The transducer is a small hand-held device that resembles a microphone, attached to the machine by a cord. The transducer sends out high frequency sound waves and then listens for a returning sound wave or "reflection". The ultrasound image is immediately visible on the television monitor.

How is the procedure performed?

Ultrasound exams are performed with you lying on a couch. A clear gel is applied to the ultrasound transducer before examining the area of your body. The radiologist can then press the transducer against your skin lightly and sweeps it back and forth over the area of interest.

This ultrasound examination is usually completed within 30 minutes.

What will I experience during and after the procedure?

Ultrasound examinations are painless, quick and easy. After you are positioned on the examination table, Dr Ian McCafferty will place some gel on your skin and then move the *transducer* firmly against your body, moving it back and forth over the area of interest until the desired images are captured. There may be varying degrees of discomfort from pressure as the transducer is pressed against the area being examined. If a doppler ultrasound study is performed, you may hear sounds that change in pitch as the blood flow is monitored and measured.

After an ultrasound exam, you should be able to resume your normal activities.

Who interprets the results and how do I get them?

Dr Ian McCafferty, a radiologist, specifically trained to supervise and interpret radiology examinations, will analyze the images and send a signed report to your doctor. Dr Ian McCafferty may discuss preliminary results with you at the conclusion of your examination.

What are the benefits vs. risks?

Benefits:

- Ultrasound is non invasive and is painless
- Ultrasound is widely available
- Ultrasound uses no ionizing radiation
- Ultrasound gives a clear picture of soft tissues that do not show up well on x-ray images
- Ultrasound causes no health problems and may be repeated as often as is necessary

Risks:

- For *diagnostic ultrasound* there are no known harmful effects on humans

What are the limitations of Abdominal Ultrasound?

Ultrasound waves are reflected by air or gas; therefore ultrasound is not an ideal imaging technique for the bowel. Barium exams and *CT scanning* are the methods of choice for bowel-related problems.

If you have a query?

If you have a query about having an Abdominal Ultrasound, please ring the Radiology Department (Ultrasound department) between 9am and 5pm, Monday to Friday &, 9am and 12pm Saturday.

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