Liver transplant ultrasound exams are used to detect problems with the transplanted liver. Read this handout to learn how to prepare for the exam, how the exam works, how the exam is performed, what you will feel during the exam, and how to get your results.

What is liver transplant ultrasound imaging?

Ultrasound studies of the liver transplant use sound waves to obtain pictures of the transplanted liver. The liver and the blood vessels to and from the liver, and the biliary system (bile ducts) are studied. The gallbladder is not studied because it is removed with the original liver.

How does the exam work?

Ultrasound sends sound waves into the body using a transducer, a hand-held device that sends and receives sound waves. After gel is applied to the skin, the sonographer (technologist) presses the device against the skin to obtain pictures, which then appear on a screen. As the sound waves echo from the body’s fluids and tissues, an image is created. You will be asked to hold your breath for 10 to 15 seconds.

How should I prepare for a liver transplant ultrasound?

- If the biliary system is under study, you must fast for at least 8 hours. This allows for the best results when evaluating for biliary disease. Clear liquids and daily medications are fine, as long as you consume no sugar or fat. Liver transplant studies are normally done fasting.
- If a biopsy of the liver transplant is ordered, you must have nothing by mouth for at least 12 hours. Ultrasound is done before the biopsy to check the liver and its blood vessels, and to locate the best biopsy site.
- You should wear loose-fitting, comfortable clothes for your exam.
How is the exam performed?

1. You will be placed on an exam table, and your clothing will be moved away from the study area.
2. A warm gel is applied to the abdomen to help the transducer make contact with your skin.
3. The sonographer then presses the device against your skin and sweeps it over the abdomen.
4. During the exam, you will be asked to hold your breath for 10 to 15 seconds.
5. The radiologist may obtain more pictures after the sonographer is done.

What will I feel during the exam?

- Ultrasound of the liver is fast, painless, and easy. You will feel the sonographer apply warm gel to your abdomen, and press the transducer against your skin. You may be asked to roll on either side, or change positions. There is little or no discomfort with the exam, which usually takes less than 45 minutes.

- Ultrasound of the liver transplant is done right after the transplant surgery, and usually 2 more times during the first week. Since blood vessel problems are common during the first week, the blood vessels are routinely checked. The area of the cut may be quite sore right after surgery, so you may feel some discomfort during the ultrasound.

- If a biopsy of the liver transplant is needed, ultrasound is used to mark a safe area of liver to be sampled. The biopsy area is marked on your skin, and then you are sent to the day procedure unit on 4-South. The biopsy is done by the hepatologist (liver specialist).

Who interprets the results of ultrasound and how do I get them?

The radiologist who specializes in ultrasound will review the pictures and send the report to your referring doctor. You will receive results from the doctor who ordered the test. In some cases, the radiologist may discuss early findings with you when your exam is over.