

Liver Elastography Ultrasound

I. Patient Preparation

- a. None.

II. Equipment

- a. Performed with real-time scanner using the curved transducer C5-1
 - i. Abdomen General preset.
 - ii. Elasto control at the bottom of the 2D touch screen
 - iii. For most accurate results, turn Output Power knob to 0.0 db before making measurements

III. Procedure Protocol

- a. Scan the patient using an intercostal technique (Scan patient in decubitus or supine position). Find the best intercostal window for viewing the right upper lobe of the liver (segment 7 or 8). Note: Intercostal scanning yields more accurate results than subcostal scanning.
- b. Obtain a sagittal view of the right lobe of the liver. Sagittal view provides the most accurate date. Use the trackball and place the ROI box in the superior portion of the right lobe. The ROI should be placed in the parenchyma to avoid blood vessels, heart, diaphragm, liver/kidney interface, liver capsule.
- c. Before making a stiffness measurement: Ask the patient to pause their breathing in a relaxed manner. They should not take in a deep breath and hold it. Hold the C5-1 transducer still. Wait 1-2 seconds for tissue to stop moving.
- d. Do not freeze. Instead make a liver stiffness measurement using (a) Update key in the trackball cluster OR (b) Measure button in right corner of Elasto touch screen.
- e. System automatically freezes, then measures. Stiffness measurement is displayed left of image.
- f. If the value is greater than 0.00, print it with the Acquire key (or whichever Acquire key has been configured for "Acquire Print" (Important: If the value is 0.00, DO NOT acquire it; the 0.00 value means the system did not detect liver tissue)
- g. Unfreeze after the cooling cycle has ended (3 seconds).
- h. Repeat steps b-g until you have 8-10 stiffness measurements greater than zero. The Stiffness Average is displayed in lower left. An accurate stiffness average needs at least 8-10 non-zero measurements.
- i. Look at the automatic report. Print/Save.

IV. Indications for ultrasound examination of the abdomen and/or retroperitoneum include, but are not limited to:

1. Hepatitis B/C.
2. Nonalcoholic steatohepatitis
3. Primary biliary disorders
4. Chronic hepatic disease