ShearWave PQ Tips

Scan ▶ Measure ▶ Print } x10

An accurate stiffness average needs at least 10 measurements over "0.00"

For Best Results

- **Use an intercostal scanning technique** to image the liver
- **Take samples in segment 7 or 8 of the right lobe** of the liver using a **sagittal view**
- **Avoid** placing the ROI box in or near:
  - blood vessels
  - the heart
  - the diaphragm
  - liver/kidney interface
  - liver capsule
- **Before each measurement, ask the patient to suspend their breathing in a neutral, relaxed state**
- **Hold the C5-1 transducer very still** during measurements. Maintain steady pressure.
- **If better penetration is needed, change the Res / Pen setting from RP to HP**

What to do if you get a "0.00" value

- Do not print/save. Do not press the Acquire key.
- Confirm the ROI box is not on: blood vessels, heart, diaphragm, liver/kidney interface, or liver capsule
- During measurements, ask patient to pause breathing
- Hold the transducer still during measurements

A "0.00" value means the system did not detect liver tissue.

Philips ElastPQ Shear Wave Elastography

What is ElastPQ Shear Wave Elastography?

Shear wave elastography utilizes unique pulsing schemes to generate and measure the propagation speed of shear waves through tissue. This technique produces an absolute measure of tissue stiffness that has proven helpful in assessing diseases such as liver fibrosis.

Clinical Uses of ElastPQ Shear Wave Elastography

Shear wave elastography has the potential to assess tissue stiffness within these abdominal applications using the C5-1 transducer:

- Liver stiffness
- Spleen stiffness for monitoring portal hypertension
- Renal stiffness for screening, diagnosis, and monitoring
- Pediatric obesity and hypertension
- Differential diagnosis of liver tumors

About the Bias Reference Table

Bias (in %):			
Vel(m/s)=>	1.11	2.3	2.91
30 mm	-9	2.2	13.8
45 mm	-15.3	-11.7	0
60 mm	-19.8	-16.5	-10.3

Note: The reference table does not vary by patient.

The Bias Reference Table is shown for reference purposes as requested by the FDA. It describes the potential variation in meters/seconds obtained at different sample depths.

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ElastPQ
Shear Wave Elastography

Reference Card for Liver Stiffness

Measurements Liver fibrosis

Staging Metavir score in kPa

Normal F0 : 2.0 – 4.5

Normal – Mild F0 – F1: 4.5 – 5.7

Mild – Moderate F2 – F3:

5.7 – 12.0

Moderate – Severe F3 – F4:

12.0 – 21.0

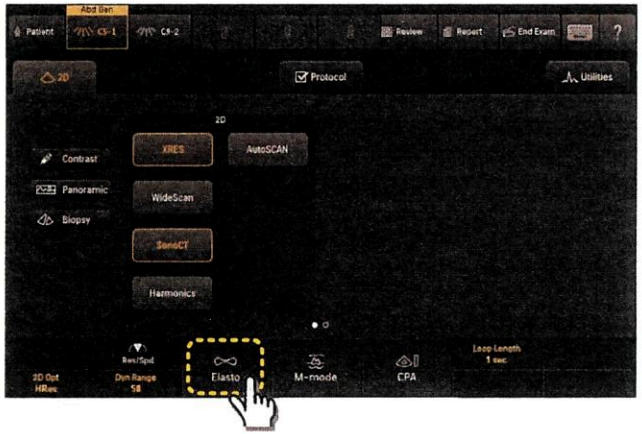
PHILIPS

Starting ShearWave PQ

A Select the **C5-1 transducer** on the touch screen.

B On the **C5-1** touch screen, select the **Abdomen General** preset.

C **Press the Elasto control** at the bottom of the 2D touch screen.



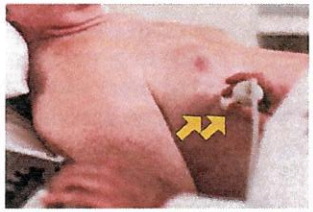
D **If better image penetration is needed, change the Res/ Pen setting from RP → HP**

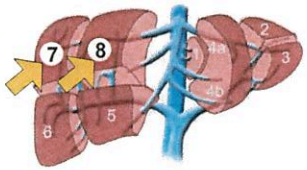
- Press the **Res/Pen button** on the right side of the Elasto touch screen.
- This may also be helpful if the patient has a prior history of liver lesions or cirrhosis.

Making Liver Stiffness Measurements

1 **Scan the patient using an intercostal technique.**

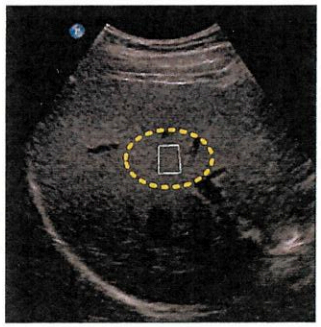
- Intercostal scanning is needed for accurate stiffness measurements.
- Find the best **intercostal** window for viewing the **right upper lobe of the liver** (segment 7 or 8).
- Note: Intercostal scanning yields more accurate results than subcostal scanning.





2 **Obtain a sagittal view of the right lobe of the liver.**

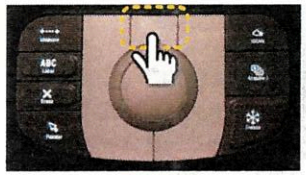
- **Sagittal view** provides the most accurate data
- Use the trackball & place the ROI box in the **superior portion** of the **right lobe**.
- The ROI should be placed in the parenchyma to avoid vessels



3 **Before making a stiffness measurement:**

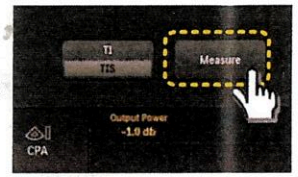
- Ask the patient to suspend their breathing in a relaxed manner. They should **not** take in a deep breath and hold it.
- Hold the C5-1 transducer still.

4 **Make a liver stiffness measurement using:**



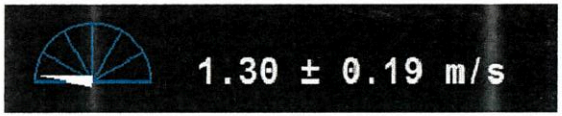
Update key in the trackball cluster

OR



Measure button in right corner of Elasto touch screen

5 **Stiffness measurement is displayed left of image.**



6 **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 print it.

7 **Unfreeze** when the cooling cycle has ended (3 seconds)

8 **Repeat steps 2 - 7 until you have 10 stiffness measurements**, all over zero.

- **Stiffness average** is displayed in lower left

- An accurate stiffness average needs **at least 10 non-zero measurements**.

9 **Look at the automatic report.** Print if desired.