

Multiparametric Liver Assessment

QElaXto 2D and QAI Guidelines

- Fasting for 4-6 hours is recommended.
- Acquisition must be performed from the right intercostal approach, to access the right lobe of the liver (VI and VII segments), with the patient in dorsal decubitus position and his/her right arm behind the head in order to maximize the intercostal space.
- The probe-liver coupling must be complete (the entire ultrasound image must be fully visible) and a correct amount of gel needs to be used. Dark areas of the ultrasound image, reverberation artefacts, and rib shadows must be avoided.
- The higher the skin-to-liver distance, the lower the reliability of the measurements.
- Proportionate pressure must be applied, for an optimal liver B-Mode image.
- During the acquisition, the patient should be asked to stop breathing for a few seconds in the neutral respiratory phase, without a deep inspiration.
- The sample ROI (Region of Interest) must be positioned in an area free from bile ducts, artefacts or vessels.

- According to the guidelines, three to five valid measurements must be acquired in an area free from vessels, bile ducts or artefacts.
- A session is considered reliable when $IQR/MED < 30\%$.
- Standard deviation (SD) of every measurement should be less than 30% to guarantee high reliability.

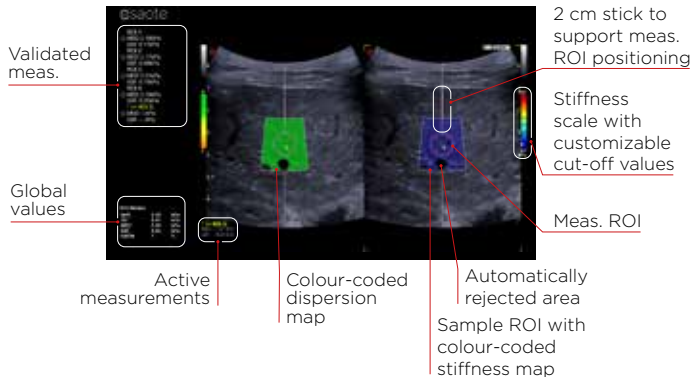
Specific guidelines for QElaXto 2D:

- The sample ROI must be positioned orthogonally with respect to the Glisson capsule.
- A complete and homogenous filling of the colour-coded maps is required.
- A measurement stick can be set at 2 cm to support the measurement ROI positioning. The optimal depth is not deeper than 4-5 cm.
- A reliability map helps the operator guide the positioning of the measurement ROI.

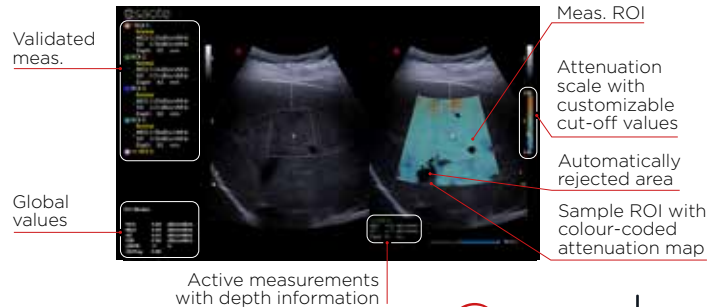
Specific guidelines for QAI:

- Esaote cut-off values are obtained with measurements done at 6.9 cm from the skin.

QElaXto 2D imaging and acquisition



QAI imaging and acquisition

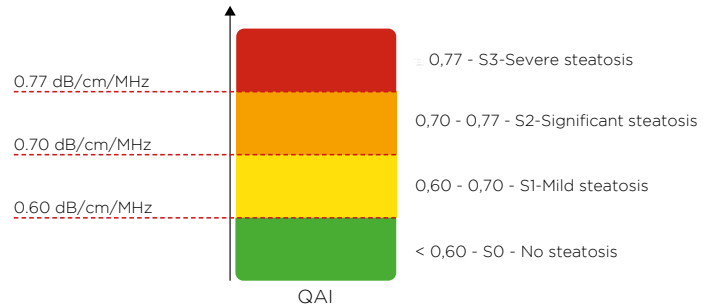
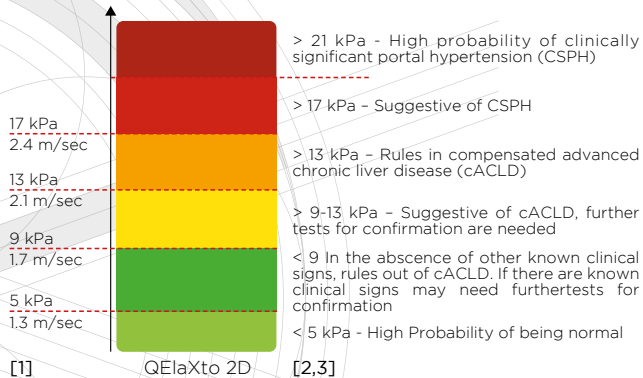


Multiparametric Liver Assessment

Suggested cut-off values for liver stiffness and steatosis staging with QEIaXto 2D and QAI technologies

Liver stiffness staging with QEIaXto 2D (2D SWE technique)
Rule of 4 recommended by the guidelines on Liver Ultrasound Elastography

Steatosis staging with QAI (Attenuation coefficient assessment technique*)



[1] Barr R.G. & al. Update to the Society of Radiologists in Ultrasound Liver Elastography. Consensus Statement Radiology 2020; 296:263-274

[2] Barr R.G. al. WFUMB Guidelines/Guidance on Liver Multiparametric Ultrasound. Part 1. Update to 2018 Guidelines on Liver Ultrasound Elastography. Ultrasound Med. Biol. 2024; 50: 1071-87

[3] Garcovich M. & al. Are society of Radiologists in Ultrasound (SRU) vendor-neutral liver stiffness cut-offs accurate for assessing compensated advanced chronic liver disease (cACLD) with a specific ultrasound device? - ECR 2024, epos #19290

Paratore M. & al. Feasibility and diagnostic accuracy of attenuation imaging using a novel ultrasound technique (QAI) in patients with hepatic steatosis undergoing liver biopsy - EFSUMB, Euroson 2024, ePos p.301

* No official guidelines providing vendor-neutral attenuation coefficient cut-off values have been released by scientific societies to date. The values displayed here are based on user experience with our devices in clinical centers.



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