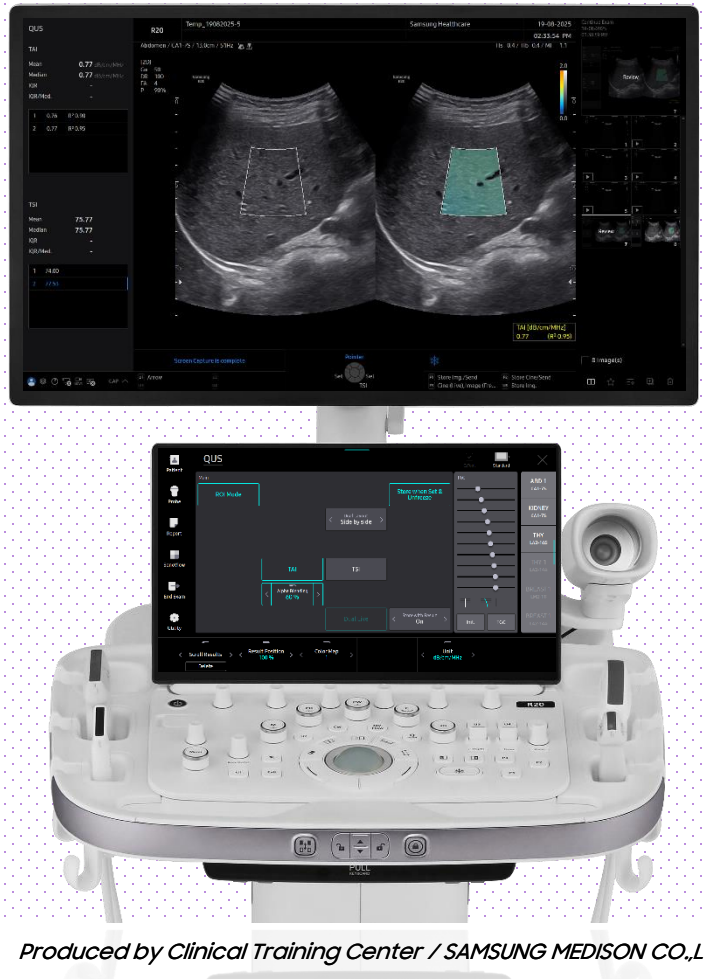
SAMSUNG

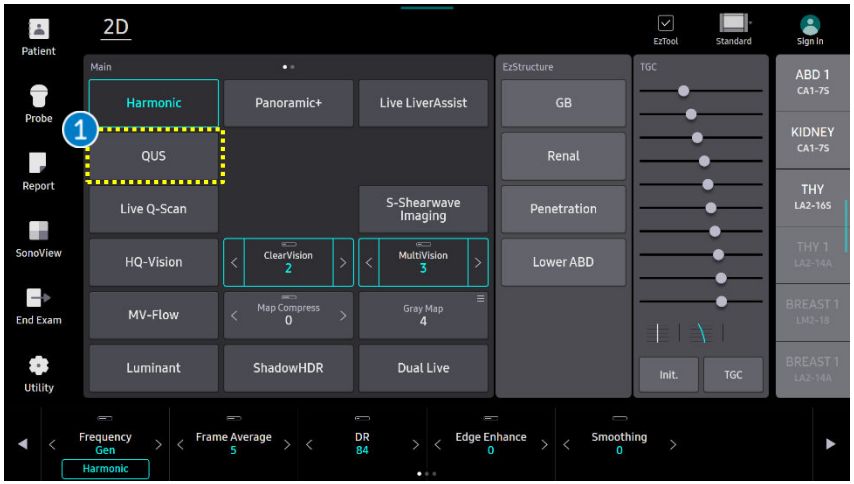
QUS (TAI & TSI)

R20 Quick Guide



Produced by Clinical Training Center / SAMSUNG MEDISON CO.,LTD

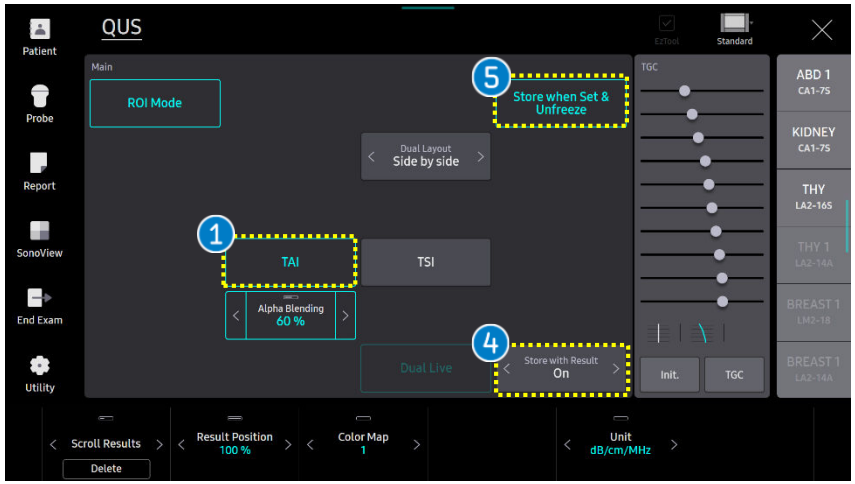
1. Start QUS

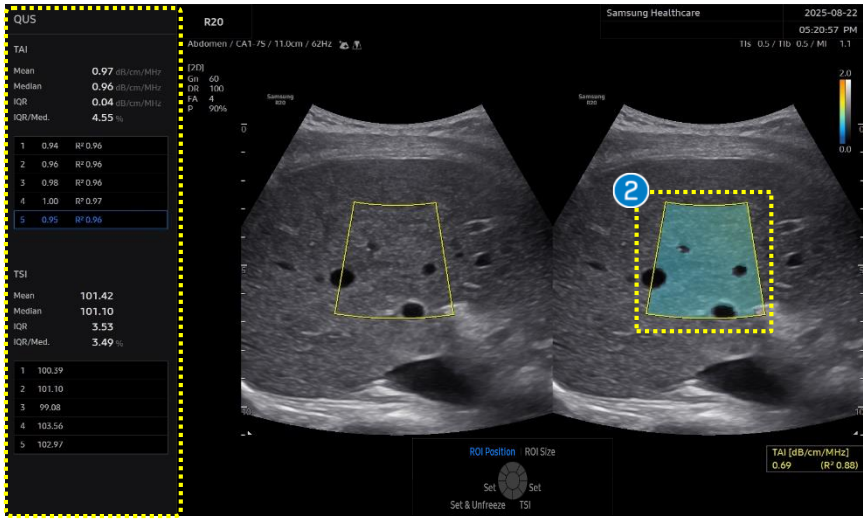


Acquire liver parenchyma without vessel and reverberation artifact.
B-mode image is placed in the right lobe of the liver at the intercostal space while the patient maintained breath-holding.

① QUS	Tab the [QUS] on the touch screen to start.
② Dual Live	You can select the [Dual Live] depending on your preference to display single/Dual. (2D on the left, QUS on the right)

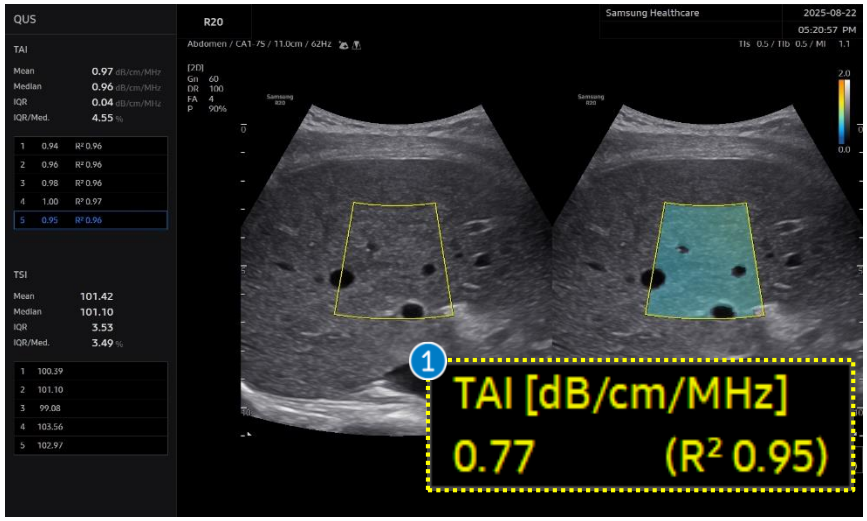
2. Activate TAI™

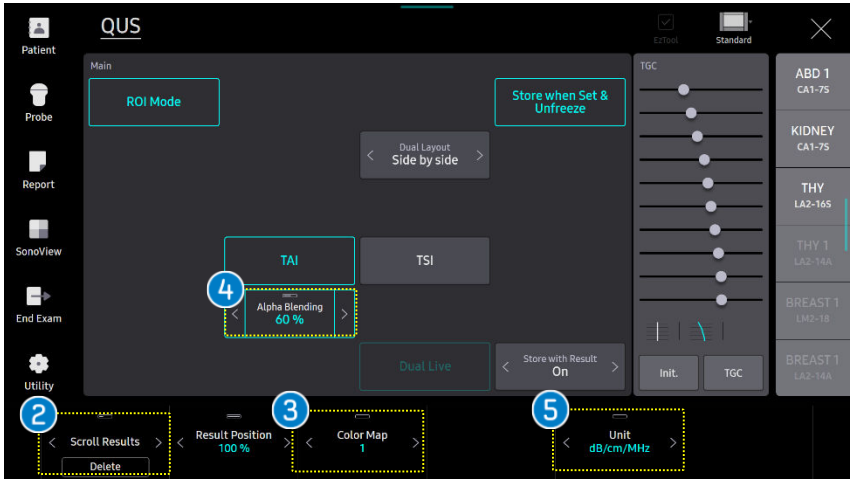


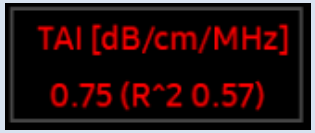
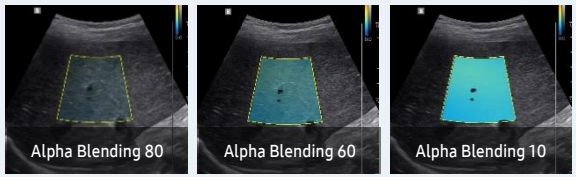


1	TAI	Activate the [TAI] function.
2	ROI Position	The ROI box is placed in a relatively homogenous region of the right lobe of the liver at least 2cm below the liver capsule, while avoiding areas with focal fat sparing or deposition and large vessels.
3	Set	Press the [Set] button on the control panel to confirm the result, the result value (dB/cm/MHz, R2) is displayed on the screen.
4	Store with Result	Store image including the TAI/TSI results on the left of the screen.
5	Store When Set & Unfreeze	Store Image when press [Set & Unfreeze] on the contextual button. * It is a function that sets the results and saves the image simultaneously with unfreezing.

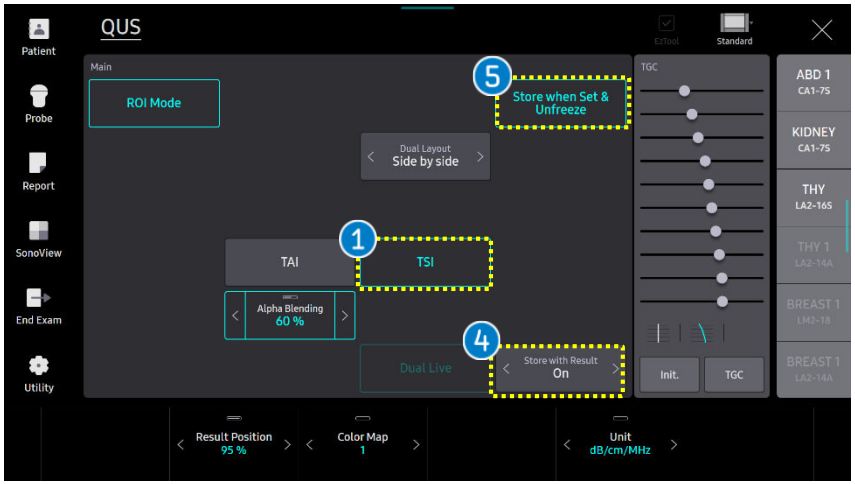
3. The result of TAI™

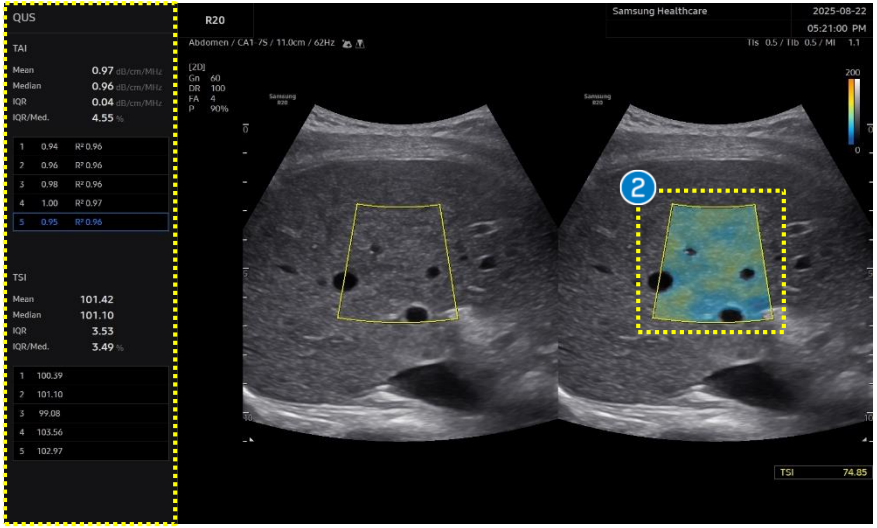




❶ Result	▪ TAI™ (Tissue attenuation imaging) provides quantitative measurement of attenuation coefficients of tissues. ▪ R^2 (Measurement quality) - Higher value(R^2 > 0.6) indicates reliable result. - R^2 < 0.6 (Unreliable result) The Results in red color is recommended to avoid. 
❷ Scroll Result	Scroll the knob and select among the result and delete with push.
❸ Color Map	Choose Color Map Type.
❹ Alpha Blending	
❺ Unit	Change Unit between dB/m and dB/cm/MHz.

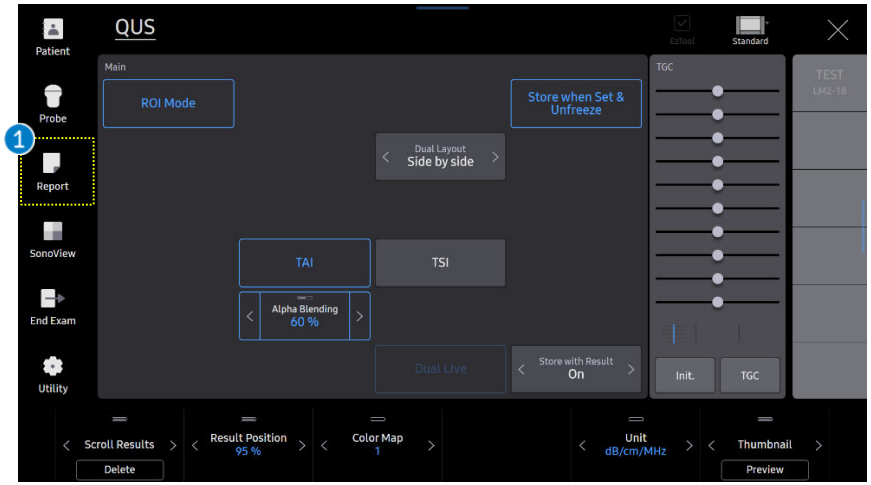
4. Activate TSI™

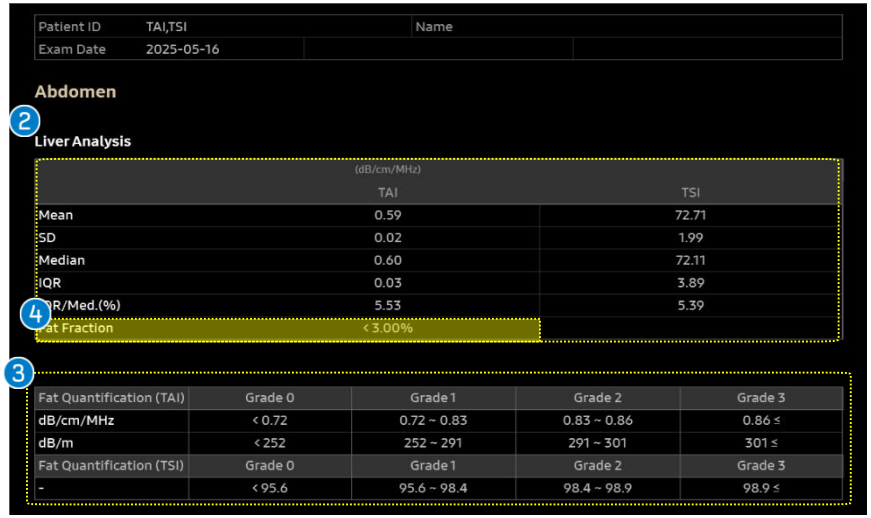




1	TSI	Activate the [TSI] function.
2	ROI Position	The ROI box is placed in a relatively homogenous region of the right lobe of the liver at least 2cm below the liver capsule, while avoiding areas with focal fat sparing or deposition and large vessels.
3	Set	Press the [Set] button on the control panel to confirm the result, the result value is displayed on the screen.
4	Store with Result	Store image including the TAI/TSI results on the left of the screen.
5	Store When Set & Unfreeze	Store Image when press [Set & Unfreeze] on the contextual button. * It is a function that sets the results and saves the image simultaneously with unfreezing.

5. Result / Report





① Report	Select the [Report] button on the touch screen and the result value is saved on the report. You can check the mean and median value of consecutive measurements.
② Result	All results of the liver analysis may be reviewed including TAI, TSI, Fat Fraction.
③ Fat Quantification	Reference guide for Fat Quantification
④ Fat Fraction	Shows TAI/TSI results in correlation with MRI-PDFF.

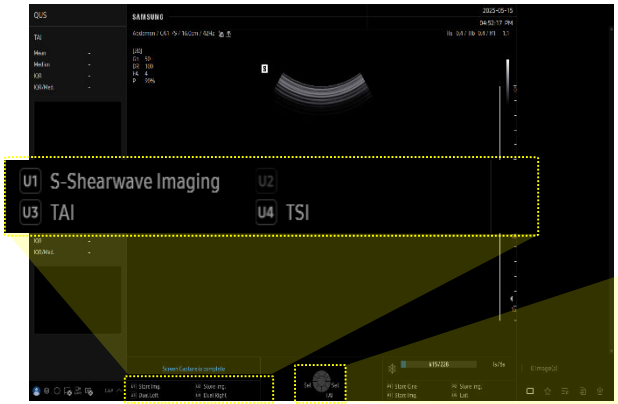
QUS

6. Assign TAI™/TSI™ to User Key

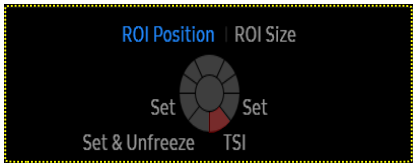
★ Assign TAI/TSI to User Key	Assign TAI/TSI to User Key to access QUS without additional keystroke. ⓐ User Key(Setup : Utility → Setup) ⓑ Customize U1-U5 from the set up. ⓒ Select item and set to assign.
① TAI ② TSI	Enter TAI or TSI mode with assigned User Key and set to get each result. Mode change can be done with contextual key in the control panel.

[User/Contextual Key in the control panel]

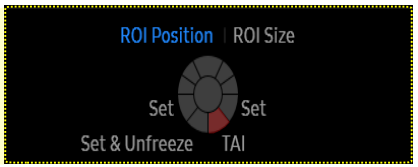
User/Contextual Key Guide



★ Assigned key is shown in the monitor

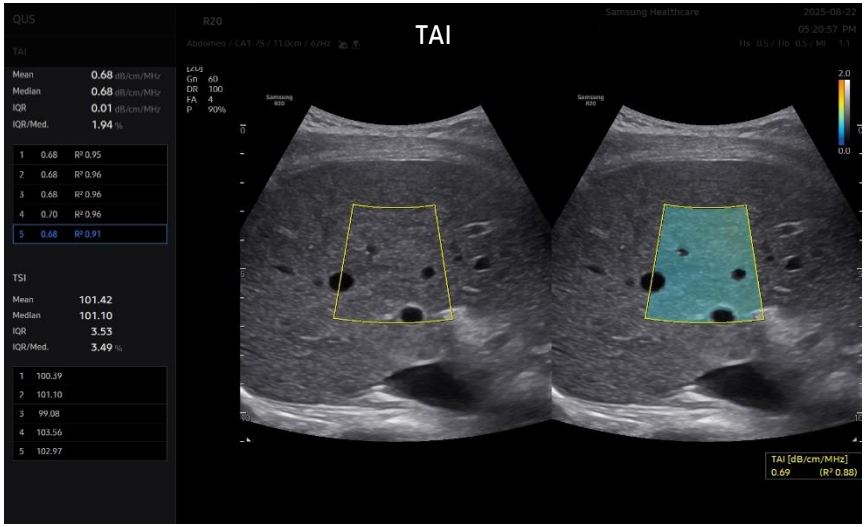


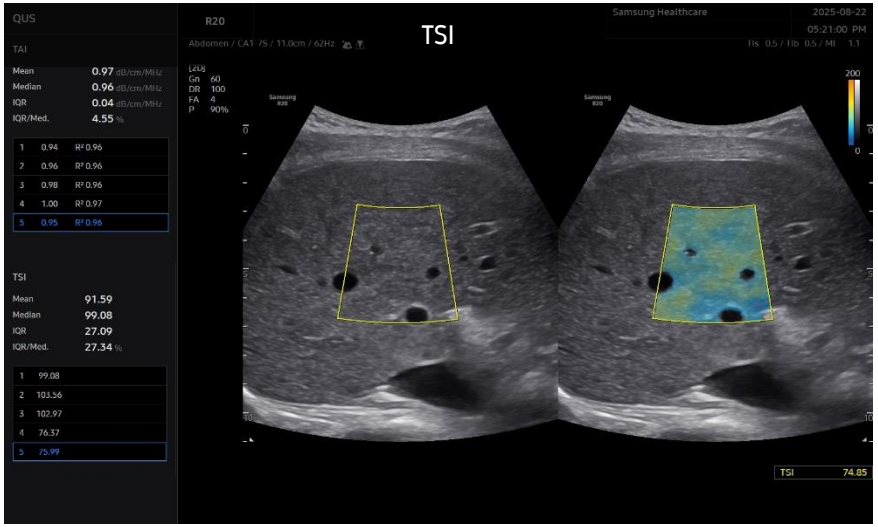
★ Contextual [TSI] button in the monitor



★ Contextual [TAI] button in the monitor

7. TAI™/ TSI™ Guide





TAI™/ TSI™ Guide

- NPO for at least 4 hours.
- Intercostal scan, acquire image with horizontal liver capsule.
  - ※ *To maximize intercostal space, put patient in the supine or left decubitus(30 degrees oblique to the left) and raise right arm.*
- *ROI in the middle.*
- Steady and slow breathing is required to get a stable result.
- Avoid Vessels, shadowing and place the ROI.
- Place ROI 3cm below Skin or 1.5cm below liver capsule to avoid Reverberation Artifact caused by Glisson's Capsule.
- ROI placement should be between 3cm-9cm of depth.
- Use default size of the ROI(2*4).

- The features, options may not be commercially available in some countries.
- Sales and shipments are effective only after the approval by the regulatory affairs. Please contact your local sales representative for further details.
- This Quick guide does not include all of the details of instruction, fore more detail, please refer to R20 User Manual.
- Do not distribute this document to customers unless relevant regulatory and legal affairs officers approve such distribution.
- This User Quick Guide is based on R20 V1.01.
- Disclaimer: Some Images in this content were obtained from other system.

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