M-Reference C&E Demo Guide

Multi-parametric assessment with CEUS and Elastography

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[Technical Principle]

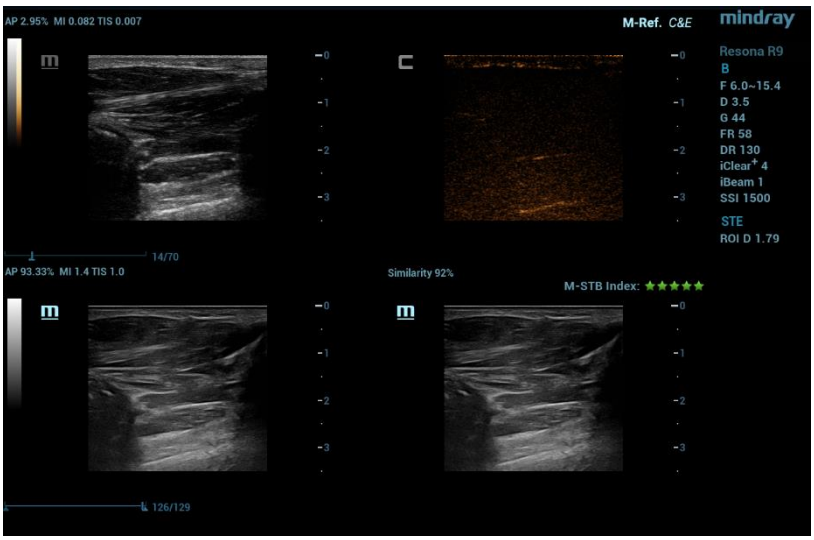
Based on a unique image feature algorithm, real-time plane matching between B mode image of STE and tissue image of CEUS is quantified by a similarity ratio and quantitative analysis of the lesion by STE and contrast image under the same plane is guaranteed.

[Advantages and Features]

1. Comparative observation and analysis of CEUS and STE image under the same plane;
2. Real-time plane matching improves the matching efficiency and success rate;

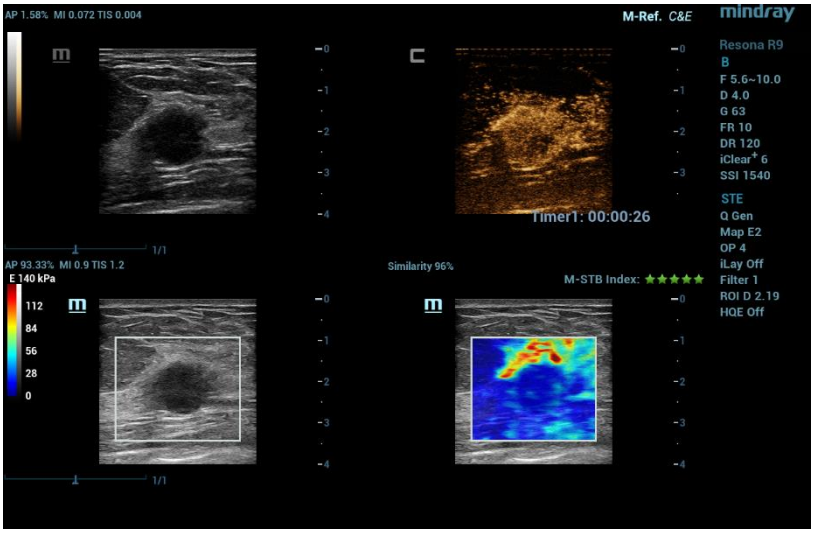
[Demonstration Points]

1. Select L15-3WU, L14-3WU or L11-3U probe, breast examination mode;
2. Perform a thorough scan of the breast to detect suspicious lesions. After the 2D and CDFI evaluation, CEUS is performed and the image is stored. Select a frame of image from the CEUS file, and it is recommended to select the image that reaches the peak because it shows the clearest boundaries and scope of the lesion. And it is also possible to select the frame that reaches the peak through TIC;
3. Select **M-Ref C&E** on the touchscreen to switch to the QUAD display, the upper window displays the frozen tissue image and the contrast image, and the lower window displays the B/STE image, and the STE is in the pre-acquisition state at this time;



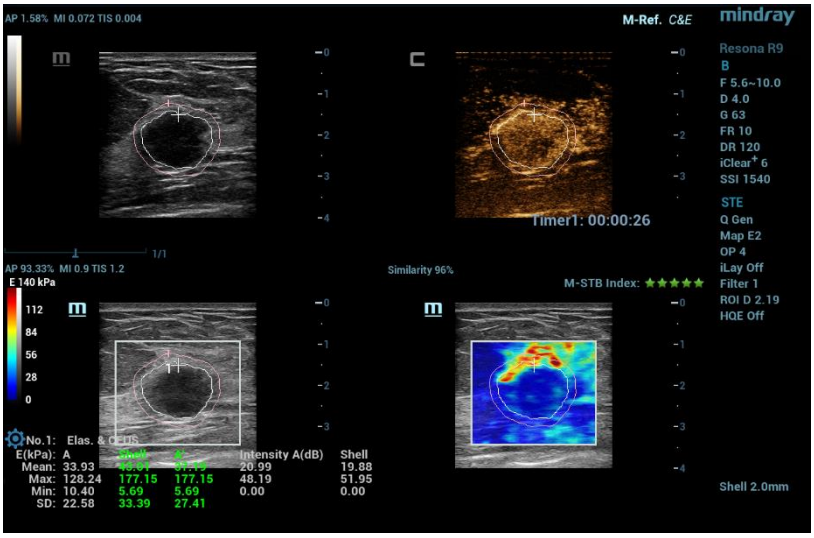
Schematic diagram: M-Ref C&E STE collection preparation state

4. Perform plane matching under the guidance of similarity. Generally, the similarity is required to reach more than 85%, and then press **UPDATE** to start STE acquisition;
5. As the same with the STE operation, do not press the probe heavily, and observe that the motion stability shall be more than 4 green stars. You can also start the RLB to observe the quality map of STE. After confirming that the STE quality index is above 90%, freeze and save the image;



M-Ref C&E STE image collection matching status

6. Press **Caliper** to enter **Elas &CEUS** quantitative assessment, and the lesion with shell can be analyzed by STE. At the same time, the information on the contrast intensity in the corresponding area and Shell can also be obtained;



Measurement interface under M-Ref C&E

[Precautions]

The integrated analysis of ultrasound CEUS and Elastography can also be applied to the abdominal examination mode; the operation steps are the same, perform CEUS first and then STE.