

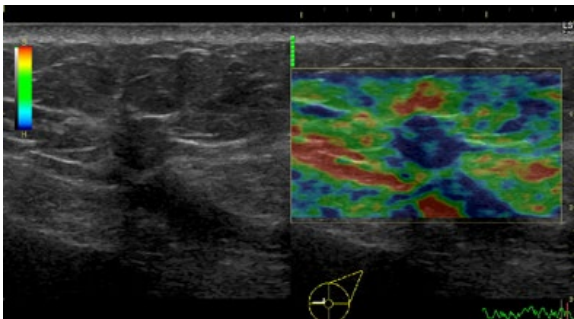
LOGIQ™ S7

Qualitative and Semi-Quantitative Elastography

Sensational performance, Smart design, Specialized capabilities

Ultrasound elastography is a non-invasive diagnostic technique performed in combination with conventional B-Mode ultrasound to help assess tissue stiffness. Strain elastography can help clinicians characterize abnormal tissue by assessing the stiffness in relationship to surrounding tissue. The field of medicine widely accepts the principle that most malignant lesions have a harder or stiffer consistency than surrounding benign tissue. This change in stiffness can also be present in chronic or inflammatory diseases.

The LOGIQ™ S7 platform adopts a simple compression/decompression technique (manually performed by the user or produced by patient respiration), displacing the underlying anatomical structures. The LOGIQ S7 proprietary software estimates the strain of tissue in a region of interest and creates an elastogram. It is then displayed as a real-time color map of the relative elasticity, superimposed on the B-Mode image. A quality indicator (or a quality graph) provides visual feedback to the user to help monitor the compression technique and make elastography reproducible and easy to learn. An elastography semi-quantitative package completes the LOGIQ S7 offering, adding a relative measure of elasticity in a selected ROI, over a single or multiple frames.



Elastogram of a breast mass with ML6-15 demonstrating hard tissue stiffness.



Qualitative elastography package –

Highlights

- High resolution, persistence and artifact control
- User selectable color and gray strain maps
- Quality bar and graph to help increase user confidence
- Dual measurements (A/B ratio)

Semi-Quantitative elastography package¹ –

Highlights

- E-Index (Elasticity Index), single ROI elasticity
- E-Ratio, ratio between two E-Indexes
- E-Index and E-Ratio Q-Analysis, over a multi-frame acquisition
- Up to 8 user selectable ROIs
- Automatic deletion of low quality frames
- Export traces in ASCII format
- ROI anchor function to follow target movements
- GE Raw Data processing, no user setting dependency
- Good linear correlation with Elasticity QA Phantom (kPA)

Transducers

- L3-12-D, high frequency linear transducer
- ML6-15, high frequency linear matrix transducer
- 11L-D, high frequency linear transducer
- 9L-D, mid frequency linear transducer
- C1-5-D, low frequency convex transducer
- IC5-9-D, endocavitary transducer
- BE9CS, bi-plane, micro-convex transducer

Potential value in clinical applications

Oncology – strain elastography may help

- Image and evaluate breast, testicular and prostate lesions
- Soft tissue lesion classification
- Depict the size and extension of lesions before surgical planning
- Improve biopsy targeting
- Monitor response to local treatment therapy
- Perform a quick monitoring and follow up of interventional procedures

Other – strain elastography may help

- Assess and grade the relative elasticity of soft tissue
- Provide additional information to increase diagnostic confidence for musculoskeletal diseases such as tendinopathies, tendinosis, synovial hypertrophy or tears
- Assist in athletes injury management from early diagnosis (e.g. acute muscle injury) to treatment response
- Set up a tailored training program for athletes

¹Elastography with semi-Quantification described in this material has not been cleared by the U.S. FDA and is not available for promotion or sale in the United States.

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June 2014
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