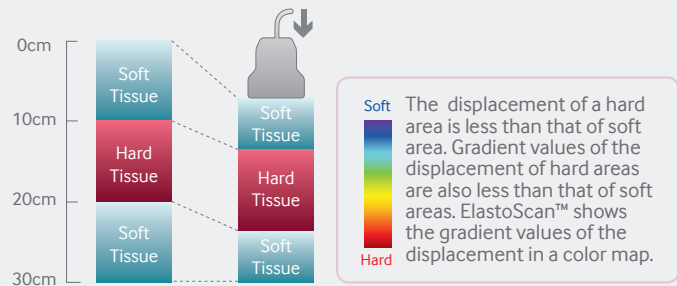
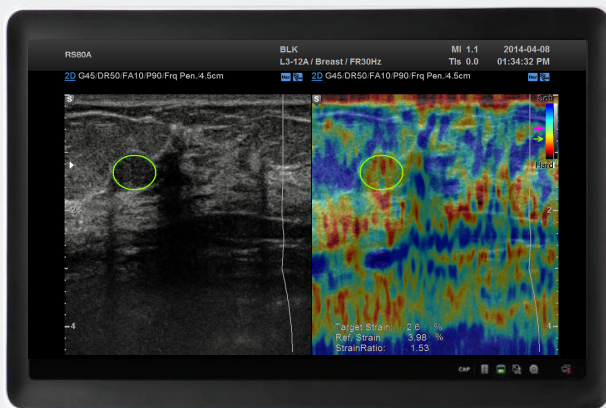


RS80A / WS80A

# Workflow efficiency to detect suspicious malignant breast lesions, E-Breast™

ElastoScan™ for Breast



## Key Advantages

- Enhanced Workflow** ➤ Reduces measurement steps by appointing 1 ROI
- Diagnostic Consistency** ➤ Reduces intra / inter-observer variability
- Decision Support** ➤ Identifies suspicious malignant lesions using strain ratio

## E-Breast™

A complementary diagnostic ultrasound technique for imaging elasticity, Elastography, noninvasively assesses the relative tissue stiffness of lesions compared to the stiffness of surrounding tissues to detect suspicious malignant lesions. Stiffer areas hardly deform than do their surroundings and provide dark contrast, whereas softer areas provide light contrast. This technique is normally used as an additional diagnostic tool to differentiate benign from malignant solid breast masses providing information on the mechanical properties, since malignant lesions are generally harder than benign lesions. Breast Elastography can substantially improve ultrasound capability in differentiating benign from malignant breast lesions with increased sensitivity and specificity of breast ultrasound, thus reducing the number of biopsies.

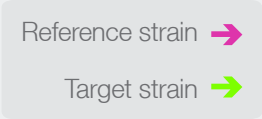
However, the limitation of the Elastography is the inter- /intra-observer variability and lack of standardized compression. To overcome these problems, Samsung Medison developed the semi-quantification **ElastoScan™** technique, **E-Breast™**(ElastoScan™ for Breast), using strain ratio which compares the strain of a region of interest and that of a reference region. **E-Breast™** improves classification and characterization of benign and malignant breast masses.


**SAMSUNG MEDISON**

“E-Breast™ enables **Simple** and **Efficient** measurement with **Less Variability** by selecting only **1 ROI**”

### Easy and Efficient Procedure

- ..... Elasto Scan™ image acquisition
- ..... Set up the ROI and obtain mean strain
- ..... Calculate ROI strain ratio to reference
- ..... Intuitive diagnosis by strain ratio



#### BENIGN

**Figure 1a.**

**Figure 1b.**

**Figure 1.** 1a), 1b) Adenofibroma

#### MALIGNANT

**Figure 2a.**

**Figure 2b.**

**Figure 2.** Invasive Ductal Cancer(IDC) G2,  
2a) transverse view, 2b) longitudinal view

- Tips**
1. Place the ROI within the suspicious lesion to calculate mean strain.
  2. Reference strain is calculated from the breast fat area at the same and/or above level of the ROI.

#### Reference

- (1) Burnside ES et. al. Radiology. 2007 Nov; 245(2):401-10.
- (2) Volker Duda. ECR2014 “The use of measurements in Breast Elastography: Frist Experiences in E-Breast™”

#### Supported System

- (1) RS80A V1.00
- (2) WS80A V1.00

\* Images by courtesy of Dr. Volker Duda at University Hospital Marburg in Germany.