Elasticity is an ultrasound mode that provides mechanical stiffness information. Elasticity has been shown to provide an additional dimension of diagnostic information to anatomical (B-mode) as well as vascular (Doppler) information.

This presentation will start with a discussion of Elastography, defined as a manual palpation method, in which stiffness or strain images of soft tissue, particularly the breast, can be used to help detect or classify lesions.

The presentation will continue with newer quantitative elasticity method called acoustic radiation force impulse imaging (ARFI). This method utilizes shear waves to provide quantitative and reproducible mechanical stiffness tissue properties.

Lastly, a review of published clinical literature will show the developing consensus on the utilization of quantitative elasticity.