

The role of ultrasound elastography in evaluation of breast masses

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Introduction: Elastography is a non-invasive medical imaging technique that detects tumors based on their stiffness (elasticity). Strain images display the relative stiffness of lesions compared with the stiffness of surrounding tissue as cancerous tumors tend to be many times stiffer than the normal tissue, which gives under compression.

Purpose: The purpose of the study is to prospectively evaluate the sensitivity and specificity of the real-time sonoelastography as compared with B-mode US for distinguishing between benign and malignant breast lesions.

Methods: The study was conducted on 80 patients, with 144 lesions and each patient was subjected to complete history taking, thorough clinical examination. Then all patients had conventional US and elastography while 68 patients had mammography.

Results: Among the 80 patients, had sensitivity and specificity of the elastography test in breast lesions according to the elastography score were 80%, 80.95% respectively. While sensitivity and specificity of conventional B mode US were 80%, 76% respectively. Yet the combined B mode US and US elastography showed sensitivity and specificity of 86.6%, and 90.4% respectively.

Conclusion: Elastography is not used independently but in the same session of ultrasound taking about five minutes more than the conventional ultrasound examination as an additional role for conventional ultrasound examination in an attempt to increase and improve the accuracy of diagnostic efficiency assessed by the BIRADs scoring system and not as a separate examination.

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