

## 2<sup>nd</sup> World Congress on **Breast Cancer**

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### Value of sonoelastography scoring and strain ratio in assessment of malignant breast solid masses

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**Aim & Purpose:** To detected sonoelastography appearance variation in different pathological types of the malignant solid breast masses.

**Patient & Methods:** From April 2014 to March 2015, 85 consecutive women presented by solid breast lesions that were confirmed at core needle biopsy to be invasive cancers. A total of 79 histopathologically confirmed malignant lesions as we excluded 6 cases. B-mode sonographic and sonoelastographic images were obtained for each lesion, then elasticity scores had been determined with a 5-point scoring method. Also strain indices of the lesions were calculated. The findings were compared with histopathologic findings. The diagnostic performances of the elasticity scoring and strain index methods were determined.

**Results:** Hard malignant lesions (score 4.5) were 73 (92.4%) and soft malignant (score 2.3) were 6 cases (7.5%). No statistically significant size difference between tumors classified as true-positive (hard appearing malignant on sonoelastography) and those classified as false-negative (soft appearing malignant on sonoelastography). The mean strain ratio for the hard malignant group was  $17.867 \pm 0.96$ , while the mean strain ratio of malignant soft lesions was  $4.458 \pm 0.721$ , significant difference was found between the two groups ( $P < 0.05$ ) and statistically significant association between histopathologic results and sonoelastographic scores ( $P\text{-value} < 0.001$ ).

**Conclusion:** Malignant solid masses sonoelastography results not affected by tumor size but great variation according to its pathological type.