

**Nodular thyroid cancer. Diagnostic value of real time elastography**

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*Background:* the most important aspect in the diagnostic approach of thyroid nodule is identifying the malignancy. Elastography is a newly technique that measures the elasticity of tissue, after applying a external force, standardized control. US elastography is currently used in differentiation of malignant from benign lesions.

*Patients:* this prospective study included 69 patients, mean age 50.08±12.43 years, 67 females and 2 men, with thyroid nodules on conventional US, with a volume higher than 0.20 ml. All patients underwent surgery after complete evaluation. Extern-poraneous and postsurgical histopathological exam was performed in all cases. Tissue stiffness was scored from one (greatest elasticity) to 5 (no strain), according to the UENO scale.

*Results:* in the 69 cases we diagnosed 107 nodules, which we analyzed. 27 nodules had score 1 on US elastography and 37 nodules had score 2. All nodules were benign on histopathological exam. Score 3 was found in 33 cases, 32 benign and one papillary carcinoma. Score 4 as found in 10 cases, all carcinomas. ES score of 4 is highly predictive for malignancy (sensitivity of 90.9%, specificity of 98.96%, positive predictive value of 100%, negative predictive value if 98,60%). The diagnostic quality of elastography was independent of the nodule volume.

*Conclusion:* US elastography has a good potential in diagnosing thyroid malignancy, independent of nodule volume, allowing the study of small nodules, less than 0.5 ml.

**Key words:** thyroid nodule, thyroid cancer, real time sono-elastography

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