B-0065 Very high-resolution ultrasound and elastography in melanoma lesion: US-pathological correlations

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Purpose: The aim of this study was to evaluate the very high-resolution ultrasound (US) in assessment of preoperative melanoma, especially by correlation between US thickness of melanoma and the histopathological thickness (Breslow index), being known that Breslow index positively correlates with the probability of lymph node involvement and the risk of distant metastasis.

Methods and Materials: The study included 28 melanoma lesions identified on 25 patients. A Ultrasonix equipment with 20-40 MHz linear transducer was used for US evaluation. The relation between values obtained by 2D US evaluation of the lesions (thickness and elastographic appearance) and value obtained by histopathological examination (Breslow index) was investigated.

Results: The mean age of the investigated subject was of 57±15 years old. Most investigated lesions were localized at lumbar region (17.86%, 95%CI [7.27-35.59], where CI = confidence interval) and had a hypoecogen homogenous 2D US aspect in 71 % of cases (95%CI [50.13-85.59]). The elastographic aspects of lesions were low or medium intensity in 43 % and 39 % respectively. The US thickness (2.38±1.41mm) proved significantly correlated with Breslow index (2.61±1.19mm) (r=0.9335, p=8.1410-11). Furthermore, the elastographic appearance of the lesion significantly correlated to both US thickness (ρ=-0.490, p = 0.008) and Breslow index (ρ=-0.440, p=0.036).

Conclusion: The strong linearity between US thickness and Breslow index obtained in our study and significant relation between elastographic appearance of the lesion and Breslow index sustain the usefulness of US and elastography in the assessment of skin melanoma lesions.