COMPARISSON BETWEEN MORPHOLOGICAL ASPECTS ON THE MAMMARY ULTRASSONOGRAPHY OF BREAST MALIGNANT NEOPLASIES AND THE IMMUNOHISTOCHEMISTRY PROFILE OF THESE TUMORS

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Objective: Compare the morphological aspects on the mammary echography of malignant tumors with the immunohistochemistry profile of these tumors and identify morphological parameters that are related in a significant manner with immunohistochemistry variants. **Methods**: We compared the ultrasonography morphological features defined according to the ACR BI-RADS – US® on its first edition (shape, posterior acoustic features, margins, lesion boundaries, echo pattern and orientation) with the immunohistochemistry profile, defined by hormone receptors (i.e. estrogen receptors (ER) and progesterone receptors (PR)), human epidermal growth factor 2–neu receptor (HER2) and Ki67 antigen of 518 malignant breast tumors. Statistically significant associations were defined as p≤0.05 on the Pearson's chi-square tests and Monte Carlo procedure. **Results**: We found a negative relation between hormone receptors (ER and PR) and the characteristics enhancement and absence of posterior acoustic features, abrupt interface and microlobulated margin. Also, we found a negative relation between ER and oval shape and parallel orientation, as well as negative relation between PR and round shape and complex echo pattern. Our results also comprehend positive association for ER and PR with the characteristics shadowing, irregular shape, echogenic halo and spiculated margins. There was also positive association between non-parallel orientation and ER. We found positive association between expression of Ki67 antigen and microlobulated margins. It was possible to demonstrate a relation among basal like tumors and posterior acoustic features (enhancement or no posterior acoustic feature), oval or round shape, abrupt interface, microlobulated margin and parallel orientation. Tumors that present shadowing or lesion boundary with echogenic halo at the ultrasonography were less likely to be identified as basal like. **Conclusion**: we found certain statistically significant associations between the immunohistochemistry profile of the tumors and the ultrasonography features.