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Metastatic breast cancer shows different immunohistochemical phenotype according to metastatic site

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ABSTRACT

Aims and background. The study was performed to assess the status of immunohistochemical markers in primary and metastatic breast cancer and to determine the organ-specific characteristics of metastatic breast cancer.

Methods. Samples from 13 cases of paired primary and metastatic breast cancer and 34 cases of metastatic breast cancer were included.

Results. In the analysis of 13 cases of paired primary and metastatic breast cancer, estrogen receptor and progesterone receptor loss were noted in 1 (7.7%) case each. Androgen receptor loss and gain was noted in 2 (15.4%) cases, respectively. HER-2 showed 100% concordance with primary and metastatic tumors. C-kit was demonstrated in only 2 (15.4%) cases of metastatic breast cancer. In the analysis of 34 cases of metastatic breast cancer, when classified into triple-negative type (ER-, PR-, and HER-2-), HER-2+ type, and ER+ or PR+/HER-2- type according to immunohistochemical stain results, HER-2 type (66.7%) in brain metastasis and ER+ or PR+/HER-2- type (75.0%) in liver metastasis were predominant. Bone metastasis was composed of triple negative type (44.4%) and ER+ or PR+/HER-2- type (55.6%), and lung metastasis showed all of three subtypes in similar proportions.

Conclusions. Metastatic breast cancer shows different immunohistochemical phenotypes according to metastatic site ($P = 0.048$). Free full text available at www.tumorionline.it

Key words: breast neoplasm, cancer metastasis, immunohistochemistry.

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