

Role of osteopontin in breast cancer patients

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ABSTRACT

Aim and background. In breast cancer, as in almost all neoplastic diseases, the prognosis is strictly related to the invasive capacity, local and distant, that characterizes the growth of all tumors. Since the mechanisms that regulate replication of the neoplastic cells, with consequent capacity to metastasize, are not completely known, identification of new markers represents the gold standard of research in the stratification of patients with such a pathology. Osteopontin, a specific phosphoglycoprotein isolated from extracellular bone matrix and actively involved in mechanisms of bone reabsorption, appears to play a key role in osteoclastogenesis at the level of the skeleton in some pathologic situations. It has been found that patients with metastatic bone lesions from breast or prostate cancer present, with respect to subjects without repetitive bone lesions, elevated serum levels of the protein, indicating that osteopontin could play an important role in the development and progression of the neoplastic disease at the bone level.

Methods and study design. The authors studied 26 patients with breast cancer, evaluating as a marker also serum osteopontin levels.

Results and conclusions. The results, although obtained on a small number of patients, showed that osteopontin evaluation in breast cancer patients can be a particularly interesting method of research in staging of the disease as well as in the prognosis, thereby attributing a role of a biotumoral marker also in the follow-up of the therapy.

Key words: bone metastases, breast cancer, osteopontin.

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