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### Original Article

Correlation of HER2/neu Over Expression, p53 Protein Accumulation and Steroid Receptor Status with Tumor Characteristics: An Iranian Study of Breast Cancer Patients

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#### Abstract:

Background: Molecular biomarkers are valuable in evaluation the course of malignancies. In this study, the relationship between HER2/neu, p53, steroid receptors and clinicopathological features of patients with breast cancer has been assessed.

Methods: Three hundred thirty nine women with a primary diagnosis of breast cancer from 2001 to 2006 were included. They were evaluated for tumor features. The content of the steroid hormone receptors and expression of HER2/neu and p53 was also examined by immunohistochemistry assay.

Results: From patients arrived at this study, 52%, 36%, 46.5% and 44% were positive for HER2/neu, p53, ER and PR respectively. No association was found between most of pairs. HER2/neu expression significantly related with grade ( $P=0.016$ ). P53 had considerable reverse relation with axillary lymph node involvement and primary distant metastasis ( $P=0.010$  and  $P=0.023$ , respectively). A significant association was found between PR and lymph node involvement ( $P=0.038$ ).

Conclusion: This study present the pattern of prognostic biomarkers in breast cancer for the first time in northeast of Iran and suggests to conduct larger studies regarding other effective variables include demographic ones.

#### Keywords:

Breast Cancer , HER2/neu , p53 , Steroid Receptor , Stage , Iran

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