

The Association Between Ki-67 and P53 Expression with Histopathological Grading in Breast Cancer: A Cross-Sectional Study

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ABSTRACT

Background: Rapid developments in molecular biology in recent years have made possible the discovery of several new prognostic factors in addition to the previously known ones. Changes in proto-oncogenes and suppressor genes play an important role in the pathogenesis of cancer. The proto-oncogene Ki-67 and the suppressor gene P53 are prognostic and predictive markers for the level of proliferation. This study aims to determine the association between Ki-67 and P53 in patients with breast cancer.

Methods: This cross-sectional study examined 40 cases analyzing the expression of Ki-67 and P53 by immunohistochemistry assay. The association of Ki-67 and P53 expression with histopathological grading was tested with Spearman's rho test.

Results: Ki-67 was expressed in 32 of 40 patients with breast cancer (80%), mostly with a high histopathological grade (65%). P53 was expressed in 33 of 40 patients with breast cancer (82.5%), mostly with a high histopathological grade (65%). Associations were evaluated between the expression of Ki-67 and histopathological grade ($p \leq 0.001$), P53 and histopathological grade ($p \leq 0.001$), and P53 expression with Ki-67 expression ($p = 0.059$).

Conclusion: The associations observed demonstrate the relationship between Ki-67 and P53 expression with histopathological grading of breast cancer.

Key words: Ki-67, P53, breast cancer, immunohistochemistry, histopathological grade