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Document Title : *The Evaluation of HER-2 Amplification by Florescence In Situ Hybridization (FISH) in Saudi Females with Breast Cancer*

بواسطة التهجين الموضعي الوميضي لدى النساء السعوديات المصابات HER-2 /تقيم تضاعف جين بسرطان الثدي

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Abstract : The HER-2 oncogene encodes a transmembrane tyrosine kinase receptor with extensive homology to the epidermal growth factor receptor. Although, HER-2 has been widely studied in breast cancer, some of the aspects related to biochemistry, were lacking or scanty. Therefore, in the present work, the association of HER-2 gene and protein abnormalities on Saudi female with breast cancer has been studied by immunohistochemistry and fluorescence in situ hybridization. The study also focuses on to explore the present outcome in antibody-based therapies directed against the HER-2 protein and assess the potential as a new modality for breast cancer treatment. The current research design employed unselected stage I, II, and III breast cancer patients (N = 32). All samples were put to tested for HER-2 gene amplification by FISH in paraffin-embedded, formalin-fixed archival material using in HER-2 overexpression by IHC. The efficacy of fluorescence in situ hybridization (FISH) incorporated in detecting the HER-2 amplification further helped in comparison with the HER-2 overexpression detected by immunohistochemical assay. The fact that a considerable number of subjects responded positively by either FISH (35.7%) or IHC (21.42%), a discrepancy apparently- can beexplained on the basis of expected loss of IHC sensitivity associated with tissue fixation, embedding. The studies are furthered compared viz-a-viz with cotemporary findings.

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