

The Expression of C-erb B2, Neu Oncogene in the Breast Tissues of a Group of Saudi Female Patients

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Abstract. Breast cancer is the most common cause of death among women. The exact etiological mechanism still remains unclear. However, breast cancer varies with age and nationality. For example, in Saudi Arabia according to the annual report of tumor registry of 1991 breast cancer is 8.2-12% of the total distribution of common malignancy. In United States, according to the American cancer society, one in nine women will get breast cancer before the age of eighty-five. In the United Kingdom it has the highest mortality of any malignant disease. In the current work the expression of C-erb B2 oncogene has been investigated in breast tissues of some Saudi female patients. Clinical investigation on the patients has shown that there was a high risk of breast cancer in relation to heredity and genetic constituents as well as age of first birth, obesity, early menarche, drug medication and hormone replacement therapy. No significant difference was observed in DNA content of non-malignant and malignant tissues. The employment of southern blotting technique have demonstrated that tumour DNA exhibits two EcoR I fragments of approximately 6.6 Kb and 6.0 Kb and with Hind III fragments of 4.72 Kb (Lane 3, Fig. 1), an EcoR I fragments of 3.2 Kb and Hind III fragments of 3.3 Kb and 2.20 Kb. In non-malignant cell C-erb B2 hybridized with EcoR I fragments at 20.29 Kb and 2 Hind III at 6.0 Kb and 4.4 Kb and at 2.20 Kb. Clinical investigated parameters for Saudi women were in agreement with what has been reviewed in the literature in which the integration and the expression of C-erb B2 oncogene was the cause of malignancy in most of the cases investigated either in phenotypically, non-malignant or malignant tissues. The development of mammary tumour in all cases investigated may reflect the overproduction of the estrogen receptor in the investigated tissues.