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## *Raja Alyusuf*

*Salmaniya Medical Complex, Ministry of Health, Bahrain*

### **The immunoexpression of glucocorticoid receptors in breast carcinomas, lactational change and normal breast epithelium and its possible role in mammary carcinogenesis**

Glucocorticoids (GC) are known to play a role in mammary development and differentiation, thus it is of interest to attempt to delineate its immunoexpression across a spectrum of mammary epithelia. This study aims to delineate the distribution pattern of GRs in malignant versus non-malignant epithelium with particular emphasis on lactational change epithelium as its cells are considered the most terminally differentiated mammary cells. Immunohistochemistry (IHC) for glucocorticoid receptors (GR) was performed on archival formalin fixed paraffin embedded tissue blocks of 97 cases comprising 53 invasive carcinomas, 21 cases with lactational change and 23 cases showing normal mammary tissue histology. The results reveal an over-expression of GR receptors in mammary malignant epithelium compared to both the normal and lactational group individually and combined together as a non-malignant group. This is the first study to compare GR expression in human lactating epithelium versus malignant and benign epithelium. GR overexpression was also established in HER-2 negative cancers as compared to HER-2 positive ones, while GR immunoexpression in tumors categorized according to grade, estrogen (ER), progesterone receptor (PR) or axillary lymph node (ALN) status showed no statistical difference. It seems that GR expression in mammary epithelium promotes the development of HER-2 negative breast cancer, thus such receptors may become targets for the development of therapeutic interventions. Further studies are required to determine the level of caution that is needed if any in the use of steroid therapy in such category of patients.

#### **Biography**

Raja Alyusuf is a Fellow of Royal College of Pathologists since 1998. She is a Consultant Histopathologist with special interest in the area of Breast Treatment. She chaired the Department of Pathology at Salmaniya Medical Complex for 10 years after which she became the Deputy Chief of Medical Staff for Diagnostic Affairs at the Salmaniya Medical Complex. In addition, she is a part-time Associate Professor of Pathology at the Royal College of Surgeons, Ireland-Bahrain branch. She has over 20 publications in reputable journals and is a member of a number of international and national professional associations.

[RYousif@health.gov.bh](mailto:RYousif@health.gov.bh)

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