

## PRELIMINARY DATA OF NEUROPEPTIDE Y1 RECEPTOR IN BREAST CANCER EGYPTIAN PATIENTS

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**Background:** Breast cancer is the most common malignancy in females worldwide. It constitutes about 38.8% of all malignant tumors among Egyptian females. Current data suggest that expression of neuropeptide Y 1 receptor (NPY1R) is present in 85% of primary breast cancer and 100% of lymph node metastases of receptors-positive primaries. This report presents preliminary data from a study conducted in Menoufia University Department of Clinical Oncology and nuclear medicine to assess NPY1R expression in breast cancer patients and its correlation with clinicopathological features and clinical outcomes.

**Patients and Methods:** This study included 31 women who presented to Menoufia University, Department of Clinical Oncology and nuclear medicine between January 2016 and December 2017. We included patients with pathologically proven invasive breast cancer. Immunohistochemical study was done to evaluate the expression of NPY1R receptor on paraffin embedded formalin-fixed tissue. **Results:** Out of 31 patients, 21 (65.6%) showed positive expression of NPY1R. Most of cases were diagnosed as invasive duct carcinoma (28 cases) and only 3 cases with invasive lobular carcinoma. There was statistically significant association between M0 status and NPY1R expression ((76.9%, n = 26 for M0 patients versus 0%, n = 0 for M1 patients; p = 0.001). No statistically significant correlations could be found between NPY1R and other clinicopathological characteristics of the disease like : T stage, N stage, Estrogen receptor positivity, progesterone receptor positivity, Her2neu overexpression, Ki67 high expression, grade, menopausal status, patient's ECOG performance status and family history. **Conclusion:** Neuropeptide Y1 receptor (NPY1R) is commonly expressed in breast cancer patients. We recommend inclusion of more patients and longer follow up duration.