

## **Molecular Subtypes of Breast Cancer**

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**Background:** Breast cancer is the most common invasive malignancy among women in Bahrain. Hormone receptor status and human epidermal growth factor receptor 2 (HER2) protein overexpression are important parameters in determining the therapeutic options and patient prognosis.

**Objective:** To evaluate the prevalence of estrogen (ER), progesterone (PR) and HER2 receptor status and as well as the molecular subtypes of breast cancer in Bahrain compared with those reported in other countries.

**Design:** A Retrospective Study.

**Setting:** Salmaniya Medical Complex, Bahrain.

**Method:** Two hundred eighty-six female breast cancer patients were included in the study. Data collected included patient age, tumor type, ER, PR and HER2 receptor status, and molecular subtypes. The data were analyzed using SPSS version 25.

**Result:** One hundred eighty-eight (65.7%) were ER-positive tumors. One hundred sixty-five (57.8%) PR receptors were positive. Eighty-nine (31.1%) patients had HER2 amplification. One hundred forty-seven (51.4%) cancers were Luminal A and 48 (16.8%) were Luminal B subtype. Forty-one (14.3%) tumors were HER2-type and 50 (17.5%) had triple negative breast cancers among females. Correlation between age and immunohistochemistry (IHC) receptor status was not statistically significant.

**Conclusion:** The prevalence of molecular subtypes of breast cancer showed some variation among the regional population. Among females in Bahrain, the proportion of HER2-type and triple negative breast cancers is higher than other regional countries.