

Research No.(7):

Correlation between hormonal receptor status and Her 2 neu expression with the age of breast cancer patients and its outcome: a single institutional study in Egypt

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Abstract:

Background: Hormone receptors and Her2/ neu statuses are known to be very powerful and useful predictors of outcome. Assessment of the receptor status profile in correlation with the age of the patients allows for prediction of breast cancer outcome and hence better treatment optimization for different age groups.

Objectives: To assess the correlation between hormone receptor and Her2/neu status and age, and its significance as a predictor of outcome in patients with breast cancer.

Patients & methods This is a retrospective study conducted on 382 patients diagnosed with breast cancer at the national cancer institute, Cairo University. Clinicopathological data (age, tumor histology, lymph node status, stage, and hormone receptor status and her2/ neu expression, were retrieved from the files. A correlation between the age of the patients and the hormone receptor status and outcome was done statistically.

Results: The patients age ranged from 26 to 78 (mean 49.7). Significant relation between ER, PR statuses and HER 2 neu expression with the age of the patients was observed. ER positivity increased and HER2/neu expression decreased with rising age. ER and PR expression were significantly lower in HER-2/neu positive as compared with HER-2/neu negative tumors. In patients less than 40 years 72.2% were ER positive while in patients more than 40 years, 83.9% of cases are ER positive and the P value insignificant (0.017). While PR was positive in 74.7% of cases less than 40 years and in 84.9% of cases more than 40 years with significant p value (0.032). Her2/neu expression was positive in 34.2% of cases less than 40 years while it is positive in only 19.2% of cases more than 40 years. No relation of ER, PR, Her2neu expression with other variables (grade, tumor size, pathological type or surgery type) were found. **Conclusion:** ER and PR and Her2 neu receptors statuses in the current study are significantly correlated with the patients age. Young breast cancer patients have more aggressive tumors with more negative hormone receptor status and more her2 /neu expression. Her-2/neu expression was increased in hormone receptor negative tumors.