

The relationship between age of disease onset and prognosis of breast cancer in women

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Abstract

Introduction: Breast cancer is the most common type of cancer and the second leading cause of cancer death in women. The severity and importance of risk factors and predisposing behaviors are different in each region. Analysis of the relationship between prognostic factors in women with breast cancer can affect the treatment process of patients. The present study was performed with aim to investigate the relationship between age of disease onset and the prognosis of breast cancer in women. **Methods:** This cross-sectional descriptive study was performed on 160 patients referred to Khatam Al-Anbia Cancer Clinic in Jahrom in 2021 and their cancer was confirmed based on pathology report. The information in the questionnaire was analyzed using patients' files. Data were analyzed by SPSS software (version 21) and Spearman's correlation coefficient test and survival analysis and Kaplan-Meier curve (survival). $P < 0.05$ was considered statistically significant. **Results:** There was no statistically significant relationship between age of disease onset and stage of breast cancer ($r = 0.018$, $P = 0.891$) and the size of lesions at the time of breast cancer diagnosis ($r = 0.031$, $P = 0.721$). Spearman correlation coefficient showed that there was a statistically significant relationship between the age of disease onset and lymph node involvement ($r = -0.190$, $P = 0.016$) and the prognostic factor Her2 at the time of breast cancer diagnosis ($r = -0.167$, $P = 0.045$); as the age of onset increases, Her2 decreases at the time of breast cancer diagnosis. **Conclusion:** The highest frequency of age of women participating in the study was in the range of 41 to 50 years, but according to survival analysis based on age group, survival was higher in people over 70 years than other age groups (4.71 ± 0.54 years). However, the Kaplan Mir chart did not show a difference between the different age groups, but as age increases, Her2 and lymph node involvement decreases at the time of breast cancer diagnosis.

Keywords: Age of Onset, Breast Cancer, Lymph nodes, Prognosis