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Abstract

Background: Breast cancer is the most common and costly disease in Lebanon, but data on cancer stage and mortality are scarce.

Aims: This study aimed to assess the effect of mammography screening campaigns in reducing the breast cancer stage at diagnosis.

Methods: A secondary analysis was conducted of data from the Ministry of Public Health's Cancer Drug Scientific Committee database. The medical files of 3320 newly diagnosed breast cancer patients between 2012 and 2017 were reviewed. Demographic and pathology characteristics, cancer stage at diagnosis and presence of receptors were extracted and analysed.

Results: The median age of the patients was 53 (interquartile range 36–72) years. Most patients had positive estrogen and progesterone receptors. Patients 30% or in the presence of the human epidermal growth factor receptor gene amplification using fluorescent in situ hybridization. The triple negative breast cancer subtype is characterized by the absence of expression of receptors for estrogen, progesterone and human epidermal growth factor.

Patients were staged according to the TNM (tumour, nodes and metastases) staging system,

the most accepted classification (11). Stage at presentation was used for analysis. Clinical staging was used for all patients who had received neoadjuvant pre-operative therapy and pathological staging for all patients post-surgery.

Statistical analysis

Data analysed using SPSS, version 24 (IBM Corp., Armonk, New York). All data were entered anonymously to ensure patient confidentiality. The chi-squared test was used to test the statistical significance of differences between categorical variables. Eight variables were included in a univariate analysis: age and cancer stage at diagnosis, governorate of residence, estrogen receptor status, progesterone receptor status, human epidermal growth factor receptor status, triple negativity status and trends in stages over the years of the study. Correlation between these variables was also explored. A P-value less than 0.05 was considered statistically significant.

Ethical concerns

This study was a secondary analysis of de-identified data.

Results

We categorized 3320 breast cancer medical files according to age and stage of the disease at diagnosis over 6 years.

The demographic and pathology characteristics of the cases were classified into three age groups (Table 1). Median age at diagnosis for all patients was 53 years (interquartile range (IQR) 36–72 years). Age group 1 included 134 (4.0%) patients