

CLINICAL STAGING AND GEOGRAPHIC DISTRIBUTION OF BREAST CANCER IN THE STATE OF PARÁ: CASE ANALYSIS AT A UNIVERSITY HOSPITAL IN NORTHERN BRAZIL

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Introduction: Pará is the second-largest state in Brazil, with 144 municipalities. Health services in Pará that specialize in highly complex oncology are concentrated in large urban centers, such as Belém and Santarém, which affects access to early breast cancer diagnosis. **Objectives:** To describe the clinical staging at breast carcinoma diagnosis and examine its association with the patients' municipality of residence treated at a referral university hospital in the state of Pará. **Methods:** This is an epidemiological, descriptive, and retrospective study with a quantitative approach. Inclusion criteria: female, over 18 years old, living in the state of Pará, confirmed diagnosis of breast cancer from 2018 to 2024. The data were extracted from the hospital's medical records and stored on the secure platform REDCap, organized in a spreadsheet in the Microsoft Excel 2019 software, and analyzed in the Jamovi cloud version 2.6.44. The association between the place of residence (capital vs other municipalities) and the disease stage (initial vs advanced) was evaluated by contingency table and chi-square test. Variables used: age at diagnosis, municipality of residence, clinical staging, and immunohistochemical classification of breast carcinoma in biopsy product. Stage III was adopted as the cut-off point for defining the advanced stage of breast cancer. The study was approved by the Research Ethics Committee with CAAE 55998522.1.0000.5634. **Results:** Of 584 patients, 99 (16.45%) had the necessary data for analysis. Of these, 50 (50.5%) resided in the capital city of Pará (Belém), and 49 (49.5%) in 33 other municipalities of Pará. Patients ranged in age from 31 to 91 years, with a mean age of 50.7 years. The following frequencies of clinical staging were observed: 6 (0.6%) IA, 24 (24.24%) IIA, 23 (23.23%) IIB, 29 (29.29%) IIIA, 10 (10.10%) IIIB, 2 (2.02%) IIIC, and 5 (5.05%) IV. In this population, 53 (53.5%) and 46 (46.46%) presented, respectively, early and advanced stages of cancer, 25 (47.16%) were from Belém, and 28 (52.8%) were from other municipalities. The distribution of molecular classification at diagnosis was: 7 (7.07%) patients with HER-2 tumor, 32 (32.32%) luminal A or B, 55 (55.55%) triple negative, and 5 (5.05%) had metastasis at diagnosis. The *p*-value of the contingency table was equal to 0.45. **Conclusion:** The majority of patients resided in Belém, where the most common

clinical stage observed was IIIA. Half of these patients had locally advanced breast cancer. In contrast, among women from outside the capital, stage IIA was the most frequent, and most of the cases were diagnosed at early stages. Furthermore, the findings highlight that this neoplasm affects a wide age range, from young adult women to middle-aged and elderly individuals. The lack of statistical significance (p -value) may be attributed to the disproportionate distribution of histological subtypes—particularly the predominance of triple-negative cases—as well as the limited sample size. This study was relevant in demonstrating the impact of the care provided by this university hospital within the state of Pará.

Keywords: Breast Neoplasms; Neoplasm Staging; Descriptive Epidemiology.