Women With Breast Cancer Care At The Public Hospital Of Macapá - Amapá: Epidemiological And Clinical Aspects

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Abstract

Breast cancer is a disease of widespread epidemiology worldwide and is considered a serious public health problem. Although it is well established that early diagnosis and appropriate treatment interfere with mortality rates and cancer prevalence, few data are available on the descriptive epidemiology of breast cancer in Brazil and in the state of Amapá. The general objective of this dissertation work was to study the epidemiological and clinical aspects of breast cancer patients treated at the Dr. Alberto Lima Clinical Hospital (HCAL), from January 2012 to December 2017 in the city of Macapá, Amapá. Breast cancer cases were reviewed, with analysis of 194 medical records, and the following variables were studied: Annual frequency of breast tumor, age, education level, origin, location of breast lesion, histological type of cancer, age at first childbirth, Menarche and Menopause, breastfeeding time, alcohol intake, smoking, family history of breast cancer in first-degree relatives, clinical staging of the disease, immunohistochemical panel, type of surgical treatment, Chemotherapy, Radiotherapy, Hormone Therapy and Target Therapy " It was noted that the year 2017 had the highest number of diagnosed cases, the age group between 41-50 years was the most affected, women with low education (Elementary Level) and coming from the capital of Amapá. In these women, the most frequent characteristics were: Age at first birth between 13-20 years, Menarche between 10-13 years, Menopause 41-50 years with significant number of patients in Menácme (out of menopause), Breastfeeding time between 02 -22 and 23-42 months, both intervals with the same number of records; Most of them did not drink alcohol, were not smokers, and had no family history of first-degree relatives of breast cancer. In the studied cases, the most common localization of the breast lesion was the Lateral Upper Quadrant, the most diagnosed histological type was Invasive Ductal Carcinoma, with clinical stage IIA, Luminal A molecular subtype, Radiotherapy and Hormomyotherapy were performed most of the time, but Target Therapy was not prevalent.

KEYWORDS: Cancer; Breast; Epidemiological aspects; Clinical features; Malignant Breast Neoplasia.

INTRODUCTION

The etiology of breast cancer is still unknown, but it is known that, like other cancers, it is multifactorial[1]. The implementation of a breast cancer control policy in the single health system must be able to expand and qualify the screening, guaranteeing the care of cases and reducing mortality [34]. It is recommended that

screening should start at age 40, including annual mammography and clinical examination, self-examination is optional and is also importante [41].

Conservative treatment coupled with new techniques, revolutionary drugs, more accurate and accessible tests, better trained doctors and more

conscious will make breast cancer better controlled and less lethal [34]. Patients can be submitted to conservative surgery as the first option, if mastectomy is indicated, immediate reconstruction should always be offered, within the possibilities of each medical servisse [41].

The identification of risk factors and characteristics of women with breast cancer, including epidemiology, can facilitate the tracking of subclinical lesions, in addition to helping to form viable proposals to decrease the incidence of breast cancer in the population [37]. The absence of this information makes it difficult to evaluate programs aimed at breast cancer and also makes it impossible for financial and human resources to be allocated according to the needs peculiar to the North and Brazilian Amazon. Therefore, the present study will seek to describe the demographic and clinical characteristics of women who were treated for breast cancer between 2012 and 2017 in the State of Amapá, Brazil.

MATERIAL AND METHODS

The access to the information necessary to carry out the research was done through authorization / acceptance from the institution signed by the clinical director and by the Data Usage Commitment Term (TCUD), signed by the researcher. The study was assessed and approved by the Human Research Ethics Committee of the Federal University of Amapá (UNIFAP) under opinion No. 3,063,020.

This is a retrospective, cross-sectional, descriptive, quantitative study with patients with malignant tumor, from the Mastology sector / Unit of High Complexity Assistance in Oncology-UNACON of Hospital de Clínicas Dr. Alberto Lima, where there was a review of breast cancer cases, with an analysis of 194 medical records, from a total of 254 cases diagnosed from January 2012 to December 2017 and use of information contained in 171 medical records. The collected data were recorded in a form designed specifically for the research.

As eligibility criteria we had:

- Inclusion criteria: Women diagnosed with breast cancer, attended at HCAL, from January 2012 to December 2017 were included.

- Exclusion criteria: Medical records containing insufficient information and male individuals were excluded.

The following variables were studied: annual frequency of the breast tumor, age, education level, origin, location of the breast lesion, histological type of the neoplasia, age at first delivery, menarche and menopause, breastfeeding time, alcohol intake, smoking, family history of breast cancer in first-degree relatives, clinical stage of the disease, immunohistochemical panel, type of surgical treatment, chemotherapy, radiotherapy, hormone therapy and "target" therapy.

A comparative statistical analysis of the data obtained was performed using the BioEstat software, version 5.3, with the application of the Chi-Square test, comparing the number of observations between the

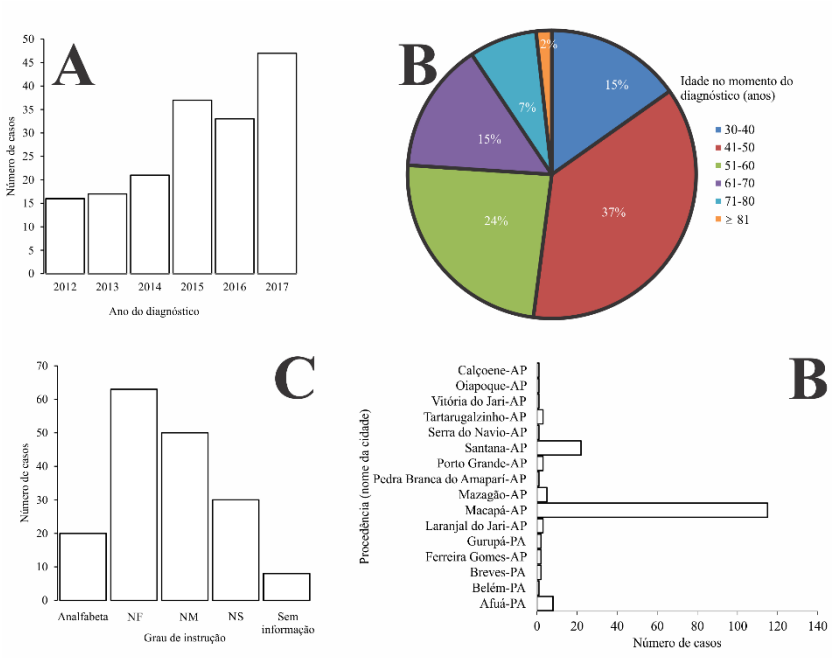
classes of each researched variable. The significance level of 5% was considered in all comparative analyzes.

RESULTS

Demographic epidemiology of breast cancer patients

Information was collected on 171 breast cancer cases from January 2012 to December 2017. Figure 1 shows the comparisons of demographic parameters of the breast cancer cases identified in the study period. It was observed that within the historical series the number of cases increased significantly from 2012 and reached its maximum value in 2017 ($p < 0.05$). The prevalent age group in the sample studied was between 41 and 51 years old, with a decrease for older and younger age groups. Women affected by breast cancer had mainly a level of education with only elementary education and gradually decreased the higher the degree of education of the patient. The vast majority of diagnosed women came from the state capital, Macapá.

Figure 1. Demographic epidemiology of breast cancer cases treated at Hospital de Clínicas Dr. Alberto Lima, from January 2012 to December 2017, in Macapá-AP, showing the occurrence of cases regarding the (A) year of diagnosis , (B) age of diagnosis, (C) education level and (D)origin.



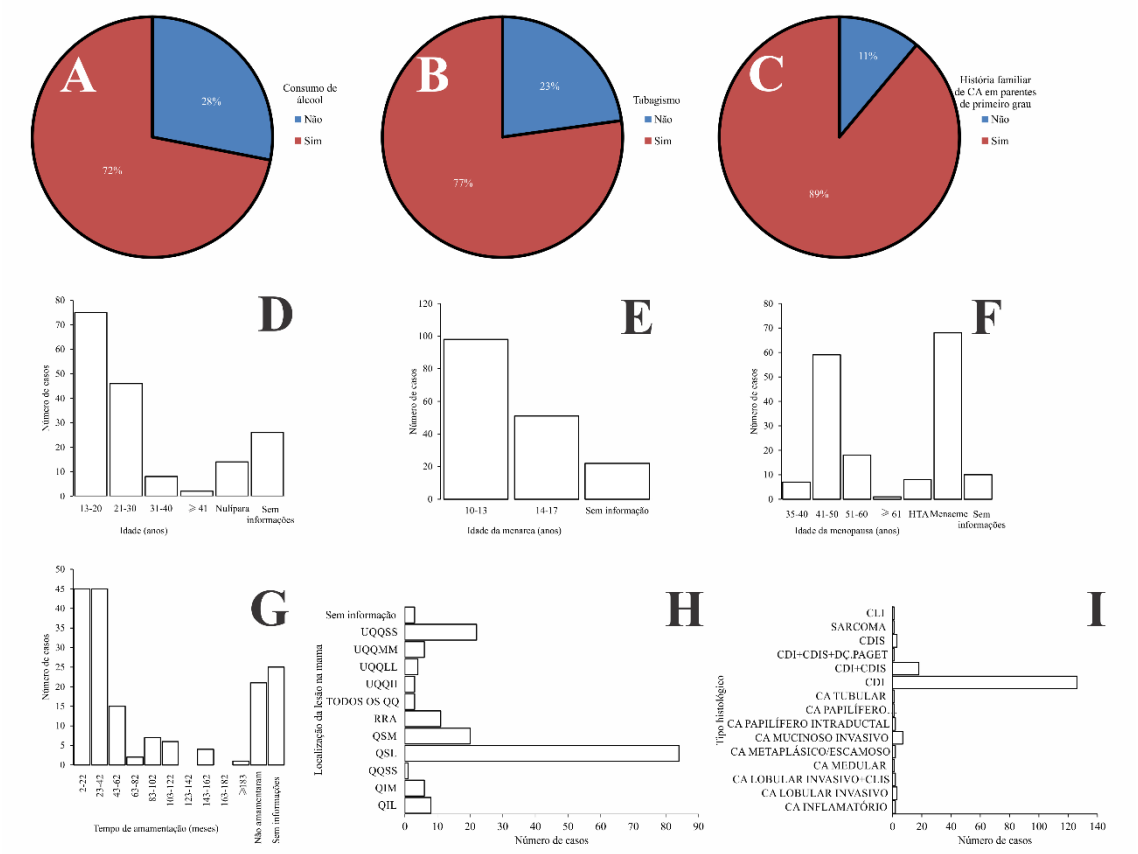
Clinical epidemiology of breast cancer patients

Figure 2 shows the distribution of cases regarding the patient's clinical history or the disease. The vast majority of patients had alcohol consumption habits, cigarettes and had first-degree relatives who had already had cancer. Most women had their first delivery between 13 and 20 years old, menarche between 10 and 13 years old. A bimodal distribution was found regarding the duration of the menstrual cycle. One fashion indicated a prevalence of cases whose women had menarche between 41 and 50 years old and another fashion indicated a number of cases

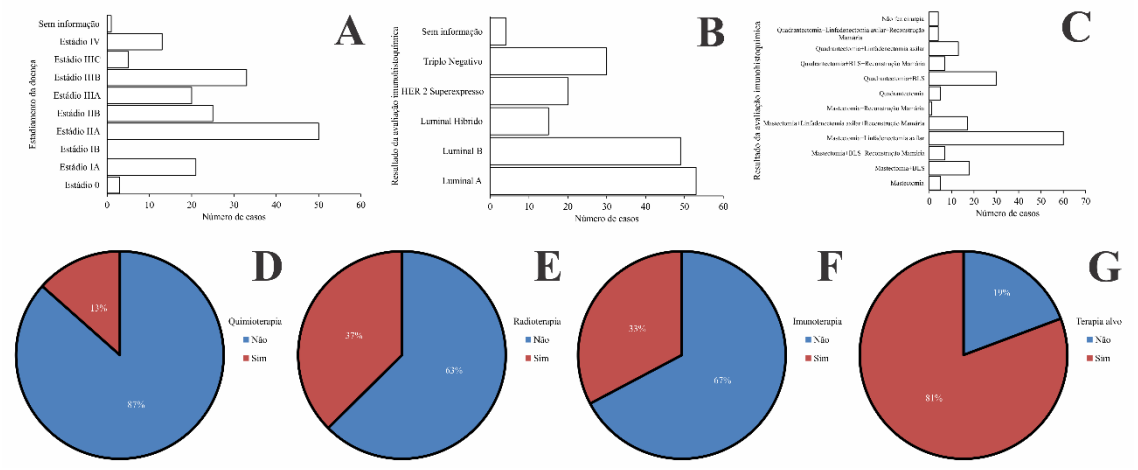
equivalent in women who were still menstruating. The short period of breastfeeding and the absence of breastfeeding were characteristics with a number of equivalent cases. The location of the lesion was greater

in the Upper Lateral Quadrant than in the others and the most prevalent histological type was Invasive Ductal Carcinoma.

Figure 2. Clinical epidemiology of breast cancer cases treated at Hospital de Clínicas Dr. Alberto Lima, from January 2012 to December 2017, in Macapá-AP.



Stages of disease II and III were prevalent in comparison to the others, as well as the luminal immunohistochemical result (A and B). The preferred treatment chosen for the studied cases was Mastectomy associated with Axillary Lymphadenectomy followed by Quadrantectomy associated with BLS (Sentinel Lymph Node Biopsy). Most patients underwent Chemotherapy, Radiotherapy, Immunotherapy, however the minority had Targeted Therapy.



DISCUSSION

Cases of malignant breast cancer have, over the years, shown alarming growth, as concluded by Souza et al. (2017), this aspect was confirmed by the present study, where there was a progression in the number of diagnoses confirmed annually. Highlight for the year of 2016, which presented a decrease and in the following year, a greater number of cases (47) was registered among women with breast cancer.

This increase is probably due to the emergence and dissemination of campaigns with the main objective of making an early diagnosis of the disease, encouraging the practice of breast self-examination and facilitating access to diagnostic methods. It is worth remembering that in 2012 the State of Amapá hired mastologists (04), through a public tender increasing the likelihood of registering new cases. This follows the INCA's annual estimates for breast CA, which are also increasing.

Farina et al. (2017), observed that the age group from 41 to 50 years old was the most affected by malignant breast tumors. Result identical to the research in question, where 63 patients were counted. However, most of the consulted medical literature shows a predominance of ages between 51 and 60 years. This finding is possibly due to the hormonal imbalance that arises in the climacteric, added to environmental, biological and individual factors.

In this research, most women had a low level of education, where the Fundamental Level (63) stood out. Information that can be ratified in the study by Ribeiro (2018) carried out in the State of Pará, with the level of education in the population studied being far from ideal. Sousa et. Al. (2016) observed similar results, in his publication also in the northern State of Tocantins, in this case it was the level of education of incomplete elementary school that predominated. Barboza et al. (2017) were also able to prove this information, in their work carried out in the State of Rio Grande do Norte (Northeast region), which presents socio-demographic characteristics similar to those of the states in the North region.

The literature describes that, the lower the level of education, the lower the chances of diagnosis in early stages of the neoplasia, a limiting factor for carrying out preventive measures. Thus, there is no doubt that the results obtained prove that the low cultural and educational degree, predispose the misinformation about prevention, early diagnosis and risk factors for breast cancer, further damaging the diagnosis.

As for the origin, it was observed that the capital of the State of Amapá (Macapá) had the largest number (115) of patients with the disease, similar to what is described by Ribeiro (2018), Barboza et al. (2017), Pereira (2016) and Pinto & Oliveira (2003). It may be that the cause is greater availability and better access to diagnostic methods, in addition to the population concentrating on Macapá-AP, favoring most case reports. It must be remembered that, for some years, there has been a migratory flow of cancer patients to the Cancer Hospital of Barretos-SP (Hospital de Amor de Barretos-HAB) and / or its unit in Porto Velho-RO, cause underreporting of new cases of breast cancer, among others. In 2019, the HAB inaugurated in Amapá a unit for the prevention of cervical and breast cancers, where the itinerant service is carried out by municipalities in the interior of the state with a mobile unit called “Carreta da Mulher”, providing the population with screening tests, this could invariably increase the number of diagnosed cases among rural women.

Pinto and Oliveira (2003) stated that the Upper Lateral Quadrant (QSL) of the breast was the most affected site. Conclusion that could be made by the present study, which contains 84 records, the correct

topographic documentation of the lesion being extremely important, because the QSL is the one that most leads to the involvement of axillary lymph nodes. Even so, it was not possible to collect this information from 03 medical records.

Invasive Ductal Carcinoma, which is one of the tumor histological types with the worst prognosis, was significantly (126) the most diagnosed, this data is in agreement with the conclusions of the researched studies, such as Barboza et al. (2017), Farina et al. (2017), Sousa et al. (2016), Pereira (2016), Moura et al. (2015), Gonçalves et al. (2012) and Leme (2005).

Regarding age at the first delivery, there was agreement with the research by Souza et al. (2017) and Moura Silva (2015), as well as the vast majority of the literature consulted, where ages under 30 years were more prevalent, considering that the Northern Region of Brazil has a high birth rate, including among adolescent mothers. However, the number of nulliparous women must be carefully observed.

The age of menarche between 10-13 years (98) predominated, coinciding with the results published by Souza et al. (2017), Farina et al. (2017) and Moura Silva (2015). Possibly such statement must happen due to the change in eating habits, with increased consumption of animal fat and foods rich in factors related to the genesis of breast cancer. In our region, these data deserve a special discussion, since amapá habitats eat foods with a high content of animal fat and salt, but vegetables, some of which have protective factors against cancer, are hardly part of the regional menu, in which fish meat is widely consumed.

The most frequent age of menopause was between 41-50 years (59), as stated by Moura Silva (2015) in his article, where menopause occurred before the age of 55 in 100% of patients. But, Among the cases studied in the current research, 68 women were not menopausal (Menácme), 8 were submitted to Total Abdominal Hysterectomy (HTN) surgery and 10 patients had no record of this information.

As for breastfeeding time, in the present study it was found that the result obtained was similar to those by Souza et al. (2017) and Farina et al. (2017), but it was also observed that 21 women did not breastfeed and in 25 medical records there was no such information. Contradicting the protective action of breastfeeding for breast cancer in the rest of the medical literature available for consultation.

With regard to alcohol intake, the present research work was in agreement with the theses of Farina et al. (2017), Barboza et al. (2017), Sousa et. Al. (2016) and Leme (2005), as 123 women said they did not use alcohol. However, alcohol consumption is considered a risk factor, since it can increase total levels and estrogenic bioavailability, progressive tissue damage by the formation of acetaldehyde that acts on breast carcinogenesis through an inflammatory response mechanism, that is, the greater the consumption , the greater the chance of developing the malignancy.

As for smoking, 132 patients denied being a smoker, according to the provisions of the studies by Ribeiro (2018), Barboza et al. (2017) and Leme (2005), however Souza et al. (2017) showed a significant result where 29% of women reported being smokers. Factor that is considered to be contradictory to the risk of breast cancer in humans.

The family history of breast cancer in first-degree relatives was not observed among the majority (152) of the medical records handled, coinciding with the results of Souza et al. (2017), Sousa et. Al. (2016), Lauter et al. (2014) and Leme (2005), but diverging from the conclusion of Barboza et al. (2017) which points out 42% (495) of patients with a family history of cancer. According to INCA (2018), this increases the risk of developing breast cancer by two to three times, as this is an important risk factor for breast

cancer, due to the mutations of the BRCA 1 and BRCA 2 genes, which are passed on from one generation to another.

Regarding clinical staging, it was noticed that the majority (50) of the women studied were in stage IIA, similar to what was observed in the research by Barboza et al. (2017), Farina et al. (2017), Pereira (2016), Moura et al. (2015), Lauter et al. (2014) and Gonçalves et al. (2012). However, there was disagreement with the conclusions of Sousa et. Al. (2016) and Leme (2005).

In Amapá, cases of breast cancer with advanced clinical staging were highlighted, causing patients to undergo more difficult, time-consuming and radical treatments. The early diagnosis of this disease is not yet part of our reality.

As for Immunohistochemistry, the molecular subtype Luminal A was the most found (53), being in accordance with most of the available literature, however the work of Pereira (2016) describes the Negative Triple as being the most recurrent.

Mastectomy with axillary lymphadenectomy was the most common surgical treatment (60), in the study in question, in accordance with the publications by Souza et al. (2017), Pereira (2016), Gonçalves et al. (2012) and Leme (2005). However, it is at odds with the article by Leite (2011), where most of the surgeries were of the conservative type. The increasing use of this surgical modality, where there is no complete excision of the breast, has reduced the negative effect on body self-image and self-esteem of women affected by the disease.

Conservative surgery is the standard treatment for breast cancer in stages I and II, but it requires some minimum conditions for it to occur, such as the transoperative evaluation of the compromised surgical margins by the tumor, a procedure performed by a pathologist and that for many years it was not offered in the public health network of Amapá. Pre-surgical marking of lesions breast cancer, which is a procedure performed by a radiologist, is another limiting factor because it is not yet offered in the Unified Health System (SUS) in Amapa. Perhaps these reasons, among others, may justify the greater number of radical surgeries that occurred during the period of the present study. Not to mention that surgery is impaired, in cases where breast reconstruction could be performed with silicone prostheses, because this material is considered “high cost” and the State Government does not usually stock it, as it would be necessary to purchase through a long bidding process and this could harm the patients, who would be waiting for a long period of time to be operated and thus have their breast reconstructed.

148 women underwent chemotherapy treatment in the present study, the majority in the cases studied and agreeing with Ribeiro (2018), Barboza et al. (2017), Pereira (2016) and Leme (2005). Chemotherapy is an advanced, high-cost pharmacotherapeutic method, capable of inhibiting tumor progression by various mechanisms. Widely used as a complementary resource to the treatment of breast cancer.

However, large variations in time to start treatment or between drug infusion cycles are related to adverse, potentially damaging effects on the organism that can lead to discontinuity or a longer interval between doses, being very harmful, causing failure and affecting substantially the general efficacy of the treatment, hindering the healing process and may even change the prognosis of these patients. In Amapá, in certain periods, there was a “lack of high-cost drugs”, which may hinder the cure of the disease for some women.

As for radiotherapy, it was indicated for 107 breast cancer patients in this study, which is in agreement with the researched literature. It is a local treatment modality in which controlled radiation is emitted on cancer cells to eliminate them or slow their growth, however not all patients have a clinical indication for radiotherapy, which also depends on the tumor stage.

The omission of radiotherapy treatment is related to the decrease in survival due to the disease. Amapá is the only state where this therapy is not offered to users of the health system, causing a migratory flow of patients, who in the case of the public network travel with the help of Treatment Outside the Home (TFD), but there is bureaucracy and delay, discouraging factors for patients.

Most (115) of the patients used hormone therapy, the same situation mentioned in the studies by Ribeiro (2018), Barboza et al. (2017), Souza et al. (2017) and Milk et al. (2011). Positivity for hormone receptors in breast tissue is generally linked to a good response to treatment and a better prognosis, since hormone therapy is a type of systemic treatment, reaching the breast and also other organs, and can be neoadjuvant (before surgical treatment) or complementary (adjuvant), contributing to reduce the risk of recurrences. In general, it acts to contain the activity of Estrogen and Progesterone as growth promoters and tumor spread in the breast, by reducing serum levels of hormones or inhibiting their activity in breast cancer cell receptors.

As for Target Therapy, Most women (138) did not use it, in line with the information in the medical literature consulted, with emphasis on the publication of Brasil (2017), where the overexpression of human epidermal growth factor type 2 receptors (HER-2) is seen in around 20% to 30% of breast cancer cases. In this overexpression, extra transmembrane proteins function as growth factor receptors, inducing dimerization and the consequent determination for accelerated cell division and multiplication.

Tumors are considered HER-2 positive when they present grade 3+ results on immunohistochemistry, confirmed by fluorescence in situ hybridization (FISH) demonstrating amplification of the HER-2 gene. Tumors may also occur that do not show overexpression of the HER-2 gene, but which do have amplification.

The status of HER2 indicates the likelihood of response to certain chemotherapeutic agents, contributes to determining the patient's prognosis and identifies women who can respond to treatment with Trastuzumab, so the procedures used to determine the status of HER-2 must be reliable and judicious.

CONCLUSION

The year 2017 had the highest number of diagnosed cases, the age group between 41-50 years was the most affected, women with a low level of education (Fundamental Level) and coming from the capital of Amapá. In these women, the most frequent characteristics were: Age at first delivery between 13-20 years, Menarche between 10-13 years, Menopause from 41-50 years with significant number of patients in Menácme (outside of Menopause), breastfeeding time between 02 -22 and 23-42 months, both intervals with the same number of records; most did not ingestion of alcoholic beverages, was not a smoker and had no family history of first-degree relatives of breast cancer.

In the studied cases, the most common location of the breast lesion was the Upper Lateral Quadrant, the most diagnosed histological type was Invasive Ductal Carcinoma, with clinical stage IIA, Luminal A molecular subtype, the most common surgical treatment was Mastectomy with axillary lymphadenectomy, Chemotherapy, Radiotherapy and hormone therapy were performed most of the time, but Target Therapy was not prevalent.

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