



## ORIGINAL ARTICLE

## EARLY DETECTION OF BREAST CANCER: INFLUENCING FACTORS IN TREATMENT

DETECÇÃO PRECOCE DO CÂNCER DE MAMA: FATOR INFLUENCIADOR DA TERAPÊUTICA  
DETECCIÓN PRECÓZ DE CÁNCER DE MAMA: FACTOR INFLUIDO EN LA TERAPIA

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## ABSTRACT

**Objective:** to identify which early detection measures that the women had access to, in which way the neoplasm was detected and clinic stage it was found. **Method:** forty women undergoing chemotherapy treatment in the city of Aracaju, Sergipe state, Brazil were interviewed from March through October 2009 by an applied questionnaire after free and informed patients' consent. Method: descriptive-exploratory study with a quantitative approach and the data analysis was done by EPI6 software version 6. The Research Ethics Committee of Sergipe Federal University approved this research via the protocol CAAE-1533.0.000.107-08. The sample consisted of 44 women who underwent chemotherapy for breast cancer enrolled in outpatient oncology. **Results:** number of women with breast cancer has grown quickly. The results showed deficiency in early detection that had reflected in more frequency of aggressive surgical intervention and pre-surgical treatment because of advanced stages and the presence of metastases. **Conclusion:** the necessity to execute early detection should be recognized by administrators and health professionals to offer less aggressive treatments that result in a greater quality of life and better prognosis. **Descriptors:** breast neoplasm's; diagnosis; combined modality therapy; prognosis.

## RESUMO

**Objetivo:** identificar as medidas de detecção precoce a que as mulheres com diagnóstico de câncer de mama tiveram acesso, de que forma a neoplasia foi descoberta e em que estadió clínico se apresentava. **Método:** estudo de caráter descritivo-exploratório com abordagem quantitativa, realizado na clínica Onco Hematos Cirurgia, em Aracaju, Sergipe-SE. O período para a coleta dos dados com um instrumento de pesquisa abrangeu os meses de março a outubro de 2009, após aprovação do projeto pelo Comitê de Ética em Pesquisa da Universidade Federal de Sergipe com CAAE-1533.0.000.107-08. A amostra foi constituída por 44 mulheres que realizavam quimioterapia para câncer de mama, cadastradas no ambulatório de oncologia. Os resultados foram apresentados por meio de números absolutos e percentuais obtidos a partir de tabulação do software EPI6, versão 6 e foram comparados com estudos sobre o tema em literatura nacional e internacional. **Resultados:** o índice de mulheres com câncer de mama tem crescido vertiginosamente. Os resultados revelaram deficiência na detecção precoce que se refletiu na maior frequência de intervenção cirúrgica agressiva e tratamento pré-cirúrgico devido ao estadiamento avançado e presença de metástases. **Conclusão:** a necessidade da realização das ações de detecção precoce deve ser reconhecida por gestores e profissionais de saúde para que se ofereçam tratamentos menos agressivos que resultem em maior qualidade de vida e melhor prognóstico. **Descritores:** neoplasias da mama; diagnóstico; terapia combinada; prognóstico.

## RESUMEN

**Objetivo:** identificar las medidas de detección precoz que las mujeres tenían acceso, como se detectó la neoplasia y que estratificación clínica se ha encontrado. **Método:** cuarenta cuatro mujeres que realizan tratamiento de quimioterapia en la ciudad Aracaju, el estado del Sergipe, Brasil fueran entrevistadas entre marzo y octubre de 2009 por búsqueda aplicada después de autorización de los pacientes libre e esclarecida. Enfoque de carácter descriptivo-exploratorio, se pronunció sobre datos cuantitativos y el análisis fue hecho por el software EPI6 la versión 6. El Comité de Ética del Pesquisa de la Universidad Federal de Sergipe aprobó el estudio por el parecer nº CAAE-1533.0.000.107-08. **Resultados:** número de mujeres con cáncer de mama crece rápidamente. Los resultados mostraron que la deficiencia en la detección temprana había reflejado en la frecuencia de intervención quirúrgica más agresiva y el tratamiento pre-quirúrgico debido a estratificación avanzada y la presencia de metástasis. **Conclusión:** la realización de acciones de detección temprana debe ser reconocida por los administradores y profesionales de la salud para ofrecer tratamientos menos agresivos que resulta en una mayor calidad de vida y un mejor pronóstico. **Descriptores:** neoplasias de la mama; diagnóstico; terapia combinada; pronóstico.

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## INTRODUCTION

This study was designed from experiences in the Research and Extension Project “Breast cancer: a nursing concern about the epidemiology, early detection, care and therapy”, developed in a chemotherapy clinic, during which the interest arose to characterize aspects involved in the detection and treatment of women with breast cancer.

The contact with women with this diagnosis was performed by a nursing consultation when they noted the importance of early detection measures for this neoplasm, as well as quick access to diagnostic and treatment measures for survival and quality of life. From this experience the following questions emerged: The early detection measures which women had access to and frequency of this before the diagnosis of breast cancer? How did they discover the cancer? What clinical stage of breast cancer are these women in showing in the diagnosis? What forms of treatment do they undergo?

From these questions, this study aimed to identify the early detection measures undertaken by women and how they often have access to them before the diagnosis, how the woman detected breast cancer and at what clinical stage was the disease confirmed.

The results obtained, aimed to reveal which early detection measures are performed and how often they are performed by health professionals and whether they conform to what is recommended by the Ministry of Health. Also, to help health managers and professionals, highlighting the Nursing area, to recognize and grasp some of the current reality of the early detection actions of care for women with breast cancer and their consequences in the state of Sergipe, Brazil.

## LITERATURE REVIEW

Breast cancer is a disease that has experienced a continued worldwide growth in the last decade. The World Health Organization estimates that more than 1,050,000 new cases of breast cancer occur worldwide per year. It is the most common cause of death in women and accounts for 16% of cancer deaths in adults.<sup>1-2</sup>

The National Cancer Institute estimates that in 2010, the number of new cases in Brazil will reach 19.4% of all the neoplasms in women. In the state of Sergipe, the estimated rate is 31.22 cases per 100,000 women, since it puts the state in a favorable position in relation to the national average (49.27/100,000).<sup>3</sup>

Although the prognosis is considered good when detected and treated early on, the breast cancer mortality rate is still high, which may indicate a deficiency in the performance of early detection strategies.<sup>4</sup>

The early diagnosis does not only allow for the application of treatment in the early stages of the lesions, but also treats pre-neoplastic lesions, and thus avoiding the actual tumors. To achieve this, there are important preventive actions that have the power to modify the natural evolution of the tumors.<sup>4-5</sup>

The early detection strategies recommended by the Ministry of Health is an annual clinical examination after 40 years of age and biennial mammography in women from 50 to 69 years of age. For women who have associated risk factors these exams should begin at age 35, but the law 11.664 of 2008 provides for the performance of the mammography as a screening method for breast cancer in all women after 40 years of age.<sup>6-7</sup>

The clinical breast exam (ECM) is a practice that must be performed by a qualified health care professional and is designed to detect neoplasms or any disease incident. It should be performed as part of the physical and gynecological examination, and forms the basis for requesting additional examinations.<sup>5-6</sup>

Among the ECM's advantages are included, the absence of side effects and cost. Still, a study conducted in 2008 on ECM implementation, reveals a significant incidence of women who do not perform these exams, especially elderly women. The lower socioeconomic status and absence of a partner acted as influencing behavioral factors.<sup>8</sup>

The mammography is one strategy recommended by the Ministry of Health for breast cancer screening. This is the method of choice for imaging evaluation of early lesions in women at 35 years of age and over. In some cases there is a need to complete the imaging evaluation by ultrasound (USG) as when there is no nodular expression, regular or slightly lobed, or diffused asymmetric densities.<sup>6</sup>

The most common complaints and often reported by women during the mammography are pain and discomfort. Although the process is cumbersome, the cost-benefit assessment indicates that the mortality reduction due to breast cancer observed in developed countries is associated with early disease detection through mammography usage and the provision of the appropriate treatment.<sup>6,9</sup>

Cancer treatment often associated with radiotherapy and surgery with chemotherapy

since only the latter has the power to destroy disseminated tumor cells. The therapeutic method choice is made from the staging exams results that define the location, size and spread of the tumor.<sup>10</sup>

The mastectomy, is not a conservative surgery, it is recommended by the extent and multicentricity of the tumor. The total mastectomy, which removes the breast, skin, and papillary-areola complex, is curative in 98% of cases, but it is a mutilating procedure for most women. The quadrantectomy breast-conserving surgery is the resection of which is only a breast segment.<sup>6</sup>

The sensations reported by women with full a mastectomy and/or quadrantectomy are of discomfort, anger, shame, despair, courage, conformity, denial and depression. These surgical procedures cause changes in their self-image, relationship with their bodies, sexuality and social relationships.<sup>11-3</sup>

Chemotherapy uses anti-neoplastic chemicals for the purpose of treating malignant neoplasms. It is suitable for solid tumors that are not either regional or distant metastases. Most chemotherapy drugs used to treat breast cancer acts in a nonspecific way, damaging benign and malignant cells, resulting in various side effects that cause discomfort and compromise the women's quality of life.<sup>5</sup>

For the period in which chemotherapy is performed this can be neoadjuvant or adjuvant, when performed before or after the main treatment, respectively.<sup>5</sup> This treatment requires guidance regarding the regular care because of the side effects it causes. Nevertheless, this study of women in treatment, revealed that they had little information about self-care practices and the its importance.<sup>14</sup>

Radiation therapy is a non-surgical treatment used in order to destroy the remaining cells after surgery or to reduce tumor size before surgery. Since hormone therapy alone is an effective treatment with positive side effects that should be used only on hormonal receptor positive (estrogen and/or progesterone) tumors.<sup>6</sup>

As important as the opportunity for women to have access to appropriate treatment is the early onset of it, because it is a positive factor that ensures there is a reduction in disease progression into more advanced stages. In such cases, therapy is more expensive and the chances of cure are below 30%.<sup>15-6</sup>

The tumor stages are categorized according to the TNM staging system. This classification

is based on assessing the size of the primary tumor (T), the extent its spread to regional lymph nodes (N) and the presence or absence of distant metastases (M). The primary tumor variations range from T1 to T4, for the lymphatic impairment from N0 to N3 for the distant metastases M0 to M1. The combination of the different variants of T, N and M, determines the clinical stages ranging from I to IV.<sup>5</sup>

From the data obtained in this study, we wish to highlight the importance of public health policies aimed at women with breast cancer will be resolved, effectively and universally. For this to actually happen, it is essential that health professionals are adequately able to treat these women.

The nurse being a professional who has a fundamental role in health care, from primary care to high complexity, they should be aware of new contexts that present themselves and change therefore reflecting in their performance, against the data presented here.

## METHODOLOGY

A descriptive and exploratory study of founded on the quantitative approach in the Onco Hematos Cirurgia clinic (Oncology Hematology Surgery clinic) in the city of Aracaju, Sergipe state, Brazil.

The period for data collection covered the months from March to October 2009, after the project approval by the Research Ethics Committee of the Federal University of Sergipe (June 6, 2008), Protocol No. 08-CAAE-1533.0.000.107-08. All of the recommendations of the Resolution 196/96 of the National Research Ethics have been met.

For having a specific preparation time for the study, a prior knowledge about the population and sample size was based on a survey by a Simple Random Sampling System for proportions and was adopted as the estimated proportion of the interest characteristic a value of 0.5 or 50%.

Thus, the sample consisted of 44 women who performed chemotherapy for breast cancer they were enrolled in outpatient oncology in 2009.

The women were asked by the researchers during the chemotherapy session and asked about the possibility of their participation in the study. After reading, agreeing to and signing the consent form, the interviews began.

The survey instrument was individually applied and contained data about identification, socio-economic and cultural

activities for early detection and information about the disease and treatments performed.

The results were presented by means of absolute numbers and percentages obtained from EPI6 tabulation *software*, version 6 and were compared with studies on the subject in national and international literature.

RESULTS

Table 1. Ways of detecting breast cancer in women undergoing chemotherapy. Aracaju, Sergipe, Brazil. March/October. 2009

Type of detection	n	%
Self-examination	17	38.6
Accidental palpation	17	38.6
Pain	04	9
Mammography	03	6.8
Ignored	01	2.5
Clinical breast exam	01	2.27
Accidental palpation and pain	01	2.27
TOTAL	44	100%

Before diagnosis, 34 (77.3%) women reported having early detection breast cancer exams. Of these, the mammography implementation was referred to as annually by 10 (29.4%) and biannually by 03 (8.8%). The ECM’s implementation period was referred to as annually by 09 (26.4%). The annual USG performance frequency was 05 (14.7%) and bi-annual, 03 (8.82%).

Regarding the form of breast cancer detection, predominating among the women in the study was accidental palpation (17, 38.6%) and self-breast examination (17, 38.6%), followed by 04 (9%) by pain, 03 (6.8%) by mammography, 01 (2.27%) by clinical breast examination, 01 (2.27%) by accidental

This study included women between the ages of 33 and 73. In the sample profile was predominated by women (24, 54.5%) from 40 to 59, who were a homemaker (21, 47.7%), incomplete elementary education level (19, 43.1%), family income less than or equal to 1 minimum wage (28, 63.6%) and from the Aracaju origin (13, 29.5%).

palpation and pain 01 (2.27%) was ignored, as shown in Table 1.

With regard to the type of breast cancer presented by women, 35 (79.5%) had invasive ductal cancer, 02 (4.5%) invasive lobular cancer, 01 (2.27%), lobular neoplasm in situ 05 (11.3%) had another unspecified type. The TNM classification showed 2 (4.54%) women with distant metastases and 29 (65.9%) with metastasis in regional lymph nodes. Regarding the staging of the cancer, 08 (18.1%) had low-type (I, IA, IIA) and 36 (81.9%) high-stage (IIB, III, IIIA, IIIB or IV), as shown in table 2.

Table 2. Distribution of women undergoing chemotherapy according to the type of cancer, metastasis and stage at diagnosis. Aracaju, Sergipe, Brazil. March/October. 2009

Characteristics	Classification	n	%
Cancer Type	Invasive ductal cancer	35	79.5
	Invasive lobular cancer	02	4.5
	Lobular neoplasm in situ	01	2.27
	Another unspecified type	05	11.3
Metastasis	Distant	02	4.54
	In regional lymph nodes	29	65.9
Staging	Low	08	18.1
	High	36	81.9

With regard to the treatment applied, surgery, chemotherapy and radiotherapy were used. The total number of women who underwent surgery was 39 (88.6%). Of these,

09 (23%) underwent only a quadrantectomy, 27 (69.2%) mastectomy and 03 (7.7%) underwent surgery for both types, as shown in Table 3.

Table 3. Distribution of women undergoing chemotherapy according to the adopted treatment. Aracaju, Sergipe, Brazil. March/October. 2009.

Treatment	Type	n	%
Neoadjuvant	Chemotherapy	20	95.2
	Radiotherapy	01	2.5
Adjuvant	Chemotherapy	25	56.8
	Quadrantectomy	09	23
Surgery	Mastectomy	27	69.2
	Quadrantectomy and mastectomy	03	7.7



In relation to neoadjuvant treatment, 21 (47.7%) underwent this therapeutic treatment. From this total, chemotherapy accounted for 20 (95.2%) and the treatment associated with radiotherapy was found in 1 (4.76%). The applied adjuvant therapy was exclusively, chemotherapy, being that 25 (56.8%) women underwent it. (Table 3)

## DISCUSSION

The profile of women in this study revealed that the occurrence of breast cancer prevailed in women who were over 35 years of age. It was also observed that increasing age was inversely proportional to the number of women with the disease. According to the literature, it is a relatively rare disease in women under 35 years of age and, thereafter, the occurrence grows rapidly. Thus, the result of the profile showed partial agreement with the findings of some authors.<sup>5</sup>

The significant number of patients who discovered breast neoplasms by accidental palpation and self-breast examination revealed that, often, the discovery was subject to chance and/or late. This data proved to be of concern since the late detection of mammary changes favors node growth and, consequently, the prognosis becomes grim due to the advanced stage.<sup>15</sup>

In addition, the AEM, today is no longer considered as a means of early detection, but rather as a practice that allows women the knowledge of their body and identify any eventual changes, but the palpable tumors are already larger than 2.0 cm and lessens their chances for cure.<sup>5</sup>

The low number of women who detect breast changes through the ECM or mammography allows questioning in relation to access and/or adherence of the women's actions that early detection must be performed and offered by health professionals during health consultations for women. Thus, the result resembled that of another study that also pointed out flaws in the early detection.<sup>4</sup>

Another factor that may have contributed to this finding is the predominance of women with a family income lower than the minimum wage in the sample. This inference is based on a study that is associated with low mammography and ECM applied to the low socio-economic population.<sup>8</sup>

The proportion of types of cancers manifested by women corroborated with the literature that states that approximately 80% of breast cancers are the invasive ductal type,

10% lobular and the remaining of other types.<sup>10</sup>

The total number of metastases and advanced stage of the sample pointed to the prevalence of late disease diagnosis. The presence of metastasis makes the prognosis worse since it follows the spread of cancer in the body.<sup>15</sup>

The treatment in cases of advanced stages is more aggressive than those in early stages and may result in the need for mutilating surgery that in most cases, alters the women's self-concept and sexuality.<sup>11</sup> This result is similar to the high rate of advanced stage compared with those of developed countries.<sup>17</sup>

The need for neoadjuvant therapy, which aims to reduce the size of the tumor to facilitate the surgical procedure, has prevailed in almost half of women, which once again confirms the advanced stage of neoplasms in most cases.

Women who have undergone surgical procedures amounted to 60% of the total, making them more likely to have a lower a quality of life than those underwent conservative breast treatment.<sup>18</sup>

From this, the importance of early detection of cancer is highlighted and to seek the best survival outcome with minimal aesthetic loss, based on definitively established conduct.<sup>19-20</sup>

## CONCLUSION

The results primarily showed that most women with breast cancer were in the age group corresponding to the highest risk of developing the disease which were from underprivileged economic classes, had little schooling, and primary occupation was homemaker.

The access or adherence to the early detection actions have shown to be impaired by the reduced offering of services or by the insufficient frequency in which they were performed, far below what is nationally recommended.

Thus, most women found mammary changes by accidental palpation or self-examination, resulting in the diagnosis of advanced neoplasms.

As a result, they underwent neoadjuvant chemotherapy, adjuvant and mastectomy, confirming the advanced stage in which the changes were found, requiring the use of more aggressive and costly treatment.

It is noteworthy, therefore, the importance of health professionals commitment as to

enable access and adherence to early detection actions in order to identify mammary lesions in early stages and prevent the worst prognosis. It is therefore necessary to have professional training and awareness to develop activities according to what is nationally recommended.

It is also worth noting the importance of making the patient's rights known in relation to the action measures for early detection of this so that they may request their right to healthcare. The benefits of early detection affect everybody, because it reduces government spending and increases the survival rate and quality of life of the patients.

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