



## The impact of the unified health system (SUS) in the detection and support to breast cancer patients

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### 1 INTRODUCTION

Breast cancer is the malignant neoplasm with the highest incidence in the Brazilian and world female population, if non-melanoma skin cancer cases are not considered. This disease has been showing an increase in cases, with an estimated 66,280 new cases for each year between 2020 and 2022, according to INCA. Breast cancer manifests itself in different clinical presentations and is strongly influenced by genetic, behavioral, and hereditary components. Thus, due to the plurality of this disease, it is essential that there is early screening and treatment of female breast cancer cases, since detection and therapy in the early stages of the disease reveal the best prognosis of the disease, as well as decrease the mortality rate. In this context, the Unified Health System (SUS) systematizes these actions, through the Guidelines for Early Detection of Breast Cancer in Brazil, besides providing support and appropriate treatment to women identified with breast cancer.

### 2 OBJECTIVE

To evaluate the impact of the Unified Health System public policies on screening and early detection of breast cancer cases in Brazilian women, as well as the therapeutic and post-therapeutic support offered to such patients once they have this diagnosis confirmed.

### 3 METHODOLOGY

This is a literature review, developed from consultations in scientific articles and pertinent literature: Pubmed, Scielo, Fapesp, CNPq, which address the topic, being available in these databases between 2014 and 2022. For the search the following keywords were used: breast cancer *and* Unified Health System *and* women's health. Articles were excluded from the proposed period and that did not address the objectives proposed by this work.



## 4 DEVELOPMENT

Breast cancer is a heterogeneous disease caused by abnormal multiplication of breast cells that develops as a result of genetic alterations. It is the most incident malignant neoplasm in the female population worldwide and in Brazil, when non-melanoma skin cancer cases are excluded (Brazil, 2019a; INCA, 2015).

The heterogeneity is due to the various forms of presentation of the disease, which can be more aggressive or clinically indolent, depending on the biological characteristics of the tumor, growth rates and metastatic potential. In general, when diagnosed and treated early, breast tumor has a good prognosis (INCA, 2015).

According to data from the National Cancer Institute (INCA), it is estimated that, for each year of the triennium 2020-2022, 66,280 new cases of breast cancer will occur in Brazil (INCA, 2021b). The accumulation of exposures to several risk factors throughout life and the biological changes arising from aging are explanations for the increase in this risk, especially in women over 50 years of age (Brazil, 2019a; INCA, 2021a).

Brazil has experienced, in recent decades, an intense process of urbanization and changes in lifestyle, especially for women, with progressive population aging, consequent to the increase in life expectancy at birth, marked reduction in fertility, and increase in obesity and the incidence of chronic diseases. The control of modifiable risk factors associated with non-transmissible chronic diseases is contemplated within the Plano de Ações Estratégicas para o Enfrentamento das Doença Crônicas não Transmissíveis no Brasil, 2011-2020. Among these factors, alcohol use, overweight, and physical inactivity after menopause are associated with increased risk for breast cancer. However, major risk factors such as late age at first pregnancy, low parity, and breastfeeding for short periods are less amenable to public health interventions, especially in modern societies where there is increasing professional and social participation of women. Thus, early diagnosis and treatment, for which screening is an essential component, are the most effective means of reducing breast cancer mortality (AZEVEDO e SILVA et al., 2014).

In 2009, the Breast Cancer Control Information System (Sismama) was developed to record mammograms, cytopathological and histopathological exams, as well as follow-up information (TOMAZELLI et al., 2021)

In 2013, aiming to improve and integrate the systems, the Cancer Information System (Siscan) was developed, a web version that allows the identification of the user through the SUS card number, thus facilitating the follow-up of women with altered exams in the screening, especially by the computerized health units that start using the system. These systems also provide data for generating the Outpatient Information Bulletin necessary for the payment of procedures (exams) performed at SUS. (TOMAZELLI et al., 2021)



In Primary Care, prevention and early detection actions are carried out, which include two strategies: screening and early diagnosis. Concisely, early diagnosis is the identification of the neoplasm in symptomatic individuals, while screening is the performance of periodic exams in asymptomatic women to identify lesions suggestive of cancer (INCA, 2019).

Mammography is the method recommended for screening in Brazil and should be offered to women aged between 50 and 69 years, every two years. Among the benefits of screening is the opportunity to identify the disease at an early stage, resulting in the application of less aggressive treatments, increased likelihood of successful treatment, and increased survival (INCA, 2015; INCA, 2021a). This strategy is corroborated by the best available evidence that reinforces the recommendation of performing it biannually for patients in the aforementioned age group (LISOWSKI et al., 2018).

In the health unit, the professional, when identifying an asymptomatic user within the age range recommended by the Ministry of Health, should request "screening mammography" in a standardized form and make the referral. For symptomatic women of any age group, the request should be made with clinical indication of "diagnostic mammography" (AZEVEDO E SILVA et al., 2014).

The standardized mammography report based on the Breast Imaging Reporting and Data System (BI-RADS) classification system is delivered to the woman, who should then contact the professional who requested the exam for appropriate management. In turn, the referral to close the diagnosis is based on the interpretation of the BI-RADS category (Category 0 - inconclusive; Category 1 - no findings; Category 2 - benign findings; Category 3 - probably benign; Category 4 - suspected malignancy; Category 5 - highly suggestive of malignancy and Category 6 - previous biopsy with proven malignancy) (AZEVEDO e SILVA et al., 2014).

When cancer is suspected by early detection methods, patients are referred to medium complexity for diagnostic investigation, and it is crucial to ensure access and qualify the supply of services, as well as ensure the completeness and continuity of care in the health care network, so that the purpose is achieved (INCA, 2015).

Once the diagnosis of cancer is confirmed, they are directed to begin treatment in health facilities qualified in oncology by SUS - Cacon (Center for High Complexity Assistance in Oncology) or Unacon (Unit for High Complexity Assistance in Oncology) (INCA, 2019). Treatment includes offering palliative care as needed (ALCÂNTARA et al., 2022).

Women's referrals should be made through the regulation system that organizes access to services. The regulation system should be a facilitator to ensure resoluteness of care through appropriate and timely referral of patients (INCA, 2019).

SUS managers are responsible for organizing the flow of women in each territory, from Primary Care to the provision of palliative care. SAS/MS Ordinance no 140, of 2014, and Ordinance no 1.399,



of 2019, determine that both Unacon and Cacon must have treatment for breast cancer, except for Unacon enabled as exclusive to pediatrics and hematology (INCA, 2019; Brazil, 2014; Brazil, 2019b).

The modalities of care for breast cancer depend on the stage at which the disease is found (staging) and the type of tumor, and can be grouped into local treatment, contemplating surgery and radiotherapy, and systemic, including chemotherapy, hormone therapy and biological therapy (targeted therapy). In the case of advanced or metastatic disease (when the cancer has spread to other organs), the treatment seeks to prolong survival and improve quality of life (INCA, 2019).

The main therapeutic modalities for breast cancer are oncologic surgery, radiotherapy, and clinical oncology. Oncological surgery and clinical oncology (chemotherapy and hormone therapy) are mandatory in both CACs and UNACs. Radiotherapy is mandatory in Cacon and optional in Unacon, which must formally refer when it is not available (INCA, 2019).

Palliative care is part of the treatment and can be provided in the Cacon and Unacon structure itself or in an integrated manner with other components of the Health Care Network: regional hospitals, municipal hospitals, polyclinics, family health clinics, health posts and centers (INCA, 2019).

Palliative care consists of assistance promoted by a multidisciplinary team, which aims to improve the quality of life of patients and their families, in the face of a life-threatening disease, through prevention and relief of suffering, early identification, correct assessment and treatment of pain and other physical, social, psychological and spiritual symptoms.(INCA,2019).

Breast reconstructive plastic surgery is mandatory at Cacon and optional at Unacon, which must indicate referral services for this procedure (INCA, 2019).

According to Law no 9,797, May 6, 1999, as amended by Law no 12,802, April 24, 2013, women who suffer any type of mutilation in the breast as a result of breast cancer treatment are entitled to immediate reconstructive plastic surgery.(INCA,2019).

When immediate reconstruction is not possible, the patient will be referred for follow-up and will be guaranteed surgery immediately after reaching the required clinical conditions.(INCA,2019).

As of December 2018, Brazil had 307 Unacon and Cacon. All must offer treatment for breast cancer (INCA,2019).

Considering this distribution, the SUS management should organize flows and references, obeying criteria established in protocols, which consider the legislation and regulations in force, among them, the 60-day Law, the Clinical Protocols and therapeutic guidelines published by the Ministry of Health, the PNPCC and the SAS/MS Ordinance no 140, of 2014 (INCA,2019).

Law no 12.732, of November 22, 2012, amended by Law no 13.685, of June 25, 2018 regulated by Portaria GM/MS no 876, of May 16, 2013, amended by Portaria GM/MS no 1.220, of June 3, 2014 determines that the patient with malignant neoplasia has the right to undergo the first treatment at SUS, within up to 60 days from the day on which the diagnosis is firmed in a pathological report or within



a shorter period, according to the therapeutic need of the case recorded in medical records (INCA,2019).

The definition of a national cancer control policy in 2005 (BRASIL, 2005), updated in 2013 (BRASIL, 2013a), alongside the structuring of the Plan for confronting NCDs (BRASIL, 2011b), established the priority of breast cancer control in the national health agenda and defined actions and competencies for federal, state and municipal levels (INCA,2019).

To streamline the organization of medium complexity, in 2014, Ordinance no 189 was published, which established financial incentives for costing and investment for the implementation of reference services for diagnosis of breast cancer this Ordinance defined criteria for qualification of the units, in addition to the minimum set of tests required for diagnosis. (INCA,2019).

Finally, it is important to note the continuous increase, since 2012, in the offer of screening mammograms for women in the recommended age group (50 to 69 years), in which there is a better balance between benefits and risks. in 2012, only 52.8% of screening mammograms in the country were performed in women aged 50 to 69 years (inCa, 2015a) and, in 2017, this percentage reached 64.6%. The direction of efforts to increase coverage in this group, with greater evidence of impact on the reduction of mortality from breast cancer and lower associated damage, is a positive trend in control actions (INCA,2019).

## 5 CONCLUDING REMARKS

SUS, through its own guidelines and protocols for breast cancer screening, offers Brazilian women between 50 and 69 years of age biennial mammography for screening, in addition to the necessary tests for the diagnosis of malignant breast cancer. Through Siscan, the test results and information relevant to this pathology are registered and attached to the patient's medical record. In this way, the Unified Health System reveals a systematization of the information of the population targeted for screening, allowing the diagnosis to be early and effective, in addition to facilitating access to the patient's data to choose the most appropriate treatment at any stage of the disease. In addition to the appropriate choice and initiation of therapy, it is worth emphasizing the support given post-treatment, whether palliative or a new screening. In this sense, the importance of SUS in the early diagnosis of female breast cancer is highlighted, which improves the patient's prognosis and decreases the mortality rates from this neoplasm, as well as the support offered by the appropriate treatment and post-treatment, culminating in the positive impact on the patient's disease history.



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