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National policy for cancer prevention and control: A discussion on the prevention and control of breast cancer

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ABSTRACT
Introduction: Characterized by the disordered growth of cells, cancer is a group of more than 100 diseases, of which breast cancer stands out. It consists of a malignant neoplasm with disordered and uncontrollable multiplication of abnormal cells, which is considered to be heterogeneous with histopathological variations and generally originates from epithelial tissue. Many breast carcinomas have been described in the literature, with ductal carcinoma in situ and invasive ductal carcinoma being the most common. In addition, the International Agency for Research on Cancer (IARC) has pointed out that this is the second most incident type of cancer and the fifth leading cause of death compared to all cancers diagnosed in the world, thus making it a priority in the National Health Policy. Aim: To investigate and detail the National Policy for the Prevention and Control of Breast Cancer. Considerations: In Brazil, there are many policies for the prevention and control of breast cancer, but there is a need to intensify the implementation of actions and strategies for its early detection, with the aim of reducing the mortality rate and disability of patients diagnosed with breast cancer. It is therefore essential to execute and implement prevention and control policies so that they are effective in preventing new cases and reducing mortality from this disease.

Keywords: Public Policy, Breast cancer, Health System.

1 INTRODUCTION

Coming from the Greek *karkínos*, the word cancer was first used by Hippocrates (460 and 377 BC), so that, today, it refers to a disease that affects the population for more than 3,000 years before Christ. Under this bias, this is characterized by a set of more than 100 derived pathologies and represents a disordered growth of cells, which are able to enter neighboring tissues and organs (INCA 2020). In addition, due to its power to compromise life expectancy and be one of the leading causes of early death before the age of 70, cancer is considered a worldwide public health problem (INCA, 2023).

In this context, data from INCA (2022) with an estimate for the triennium from 2023 to 2025 in Brazil indicate that there will be 704,000 new cases of cancer, 483,000 if cases of non-melanoma

skin cancer are excluded. This is estimated as the most incident, with 220,000 new cases (31.3%), followed by breast cancers, with 74,000 (10.5%); prostate, with 72 thousand (10.2%); colon and rectum, with 46 thousand (6.5%); cervix, with 17 thousand (4.7%); lung, with 32 thousand (4.6%); thyroid, with 14 thousand (3.9%); oral cavity, with 11 thousand (3.2%) and stomach, with 21 thousand (3.1%) new cases.

It is also noteworthy that the incidence and mortality of cancer has increased worldwide. According to data from the Pan American Health Organization, cancer was responsible for 9.6 million deaths worldwide (PAHO, 2020). The reasons for this are diverse, such as population aging, population increase and changes in exposure to risk factors, which are often related to the socioeconomic development of a particular region or country (BRAY *et al.*, 2018). In addition, there is a prospect that cancer will become the world leader in death from diseases, mainly by decreasing deaths from heart disease and stroke (BRAY *et al*., 2018).

Similarly, according to Sung *et al.* (2021), the latest global estimates of incidence and mortality related to cancer point to the need to adopt sustainable measures for cancer prevention and control, so that Ferlay *et al.* (2021) state that these strategies should be aimed at strengthening public policies that support the planning and prioritization of measures to control this disease.

Given this, to understand the advancement of the health system in relation to cancer, it is worth a brief historical consideration about the disease. In the 1920s the first oncological treatment services appeared, and in 1922, in Belo Horizonte, the Radium Institute was inaugurated, which worked in association with the Faculty of Medicine of the State of Minas Gerais, as well as in 1929, within the scope of the Santa Casa de Misericórdia de São Paulo, the Dr. Arnaldo Institute came into operation, philanthropic institution directed to the treatment of cancer. After that, in 1937 there was the creation of the Oncology Center of the Federal District, by the doctor Mario Kroeff, who was one of the pioneers in the oncology area in Brazil (TEIXEIRA; HARBOR; HABIB, 2012).

Thus, it is pointed out that, although there was already concern of the medical classes on this subject, with the organization of the first Brazilian congresses on cancer, in a country where the reality of the majority of the productive population was struggling with health problems, the discussion of problems related to the aging of the body had not yet gained strength (ARAÚJO NETO; TEIXEIRA, 2017).

It was only from the 1940s, during the government of President Getúlio Vargas, that the structuring of public health services was initiated, so that in 1941 the National Cancer Service (SNC) was created, currently known as the José de Alencar Gomes da Silva National Cancer Institute – INCA (TEIXEIRA, 2010). According to Teixeira *et al.* (2010), the SNC emerged from the intense work of the gaucho physician Mario Kroeff who, due to his proximity to power during the getulista government,

managed to work on the awareness of the political and economic elites about the epidemiological importance of the disease and the need for its control.

Thus, the National Cancer Service was responsible for guiding and controlling, throughout the country, a permanent campaign against the disease, the National Campaign Against Cancer. Its work would have as axes the research on etiology, epidemiology, prophylaxis, diagnosis and therapeutics; preventive actions; the propaganda of periodic health examinations and the importance of early diagnosis; the treatment and supervision of the recovered; and the hospitalization of patients when needed (TEIXEIRA, 2010).

The SNC was small in the early years, but progressively it was incorporated into several philanthropic hospitals, units maintained by state governments and civil entities to support the creation of new institutions. This set would later compose a network called the National Campaign to Combat Cancer (TEIXEIRA; HARBOR; HABIB, 2012).

In 1944, the structure and functioning of the SNC became more defined and began to be composed of three sections, an exclusive administrative section, one focused on the Cancer Institute and the Organization and Control Section. The first was the Center created by Kroeff, which in the future would become the National Cancer Institute (INCA) and which, although it continued to carry out diagnostic and treatment activities, had its action limited by the extreme deficiency of physical facilities. In turn, the Organization and Control Section would be responsible for the National Campaign Against Cancer (CNCC), acting at the national level in standardizing the activities of public and private institutions. It would also provide advice to the Ministry of Health (MS) in relation to the federal subsidy to private institutions (TEIXEIRA, 2010).

The inauguration of the new headquarters of INCA, in 1957, with many trained professionals and with increased funding, was a milestone for the cancer area in Brazil (TEIXEIRA, 2010). However, only after the promulgation of the constitution in 1988 were there changes in the Brazilian sanitary structure. In the new constitution, the principles of universality, equity and integrality in health actions were assured (BRASIL, 1988).

In short, in Brazil, public policies, regulations and norms, actions and programs to control and combat cancer are just over 25 years old. In this period, a cancer care policy was structured that contains a large volume of norms that hinder the knowledge of managers and health professionals. On the other hand, this succession of norms indicates a prominent place in the political agenda, in line with the epidemiological importance of cancer (SILVA *et al*., 2017).

Among them, there is the National Policy for the Prevention of Cancer Control (PNPCC), Ordinance No. 874/13, as a Legal Framework. In addition to the central issues related to the line of care, contemplated in previous legislation, the PNPCC gives greater emphasis to the integrality of health care and information. Its guidelines highlight the need for planning, monitoring and evaluation

of actions and services for the prevention and control of cancer through the integrated use of data and epidemiological and care information available (BRASIL, 2013).

In the current conjuncture, specifically on October 16, 2019, the Federal Senate approved House Bill No. 143 of 2018, known as the 30-day PLC, which establishes that, in cases where the main diagnostic hypothesis is that of malignant neoplasm, the examinations necessary for the elucidation of the case must be carried out within a maximum period of 30 days, upon reasoned request of the physician in charge. PLC No. 143 was sanctioned by the President of the Republic and published in the official gazette as Law No. 13,896 of October 30, 2019 (BRAZIL, 2019b).

Still from this perspective, it is exposed that from the creation of the Unified Health System (SUS) it was possible to implement a new set of policies in order to structure the care to the cancer patient in several fronts of organization (SILVA *et al*., 2017). The first of these, Ordinance No. 170/93, classified the oncological treatment units in Reference Center (CR) I and II according to complexity (BRASIL, 1993). Subsequently, Ordinance No. 3,535/98, which repealed Ordinance No. 170/93, established new criteria for the registration of High Complexity Reference Centers in Oncology (CACON), which could be classified into three categories: CACON I, CACON II and CACON III (BRASIL, 1998).

Similarly, Ordinance No. 741/05, referring to the organization of the Oncological Care Networks (RAO), established the mandatory implementation of the Hospital Cancer Registry (RHC) in all Cancer Treatment Centers of the SUS, creating an epidemiological database essential for future planning of strategies to combat cancer. The RHC has the responsibility of registering all new cases in a database, which is annually sent to INCA for compilation and publication of data (BRASIL, 2005b).

In 2012, with the concern of the difficulty of access to treatments, Law No. 12,732 was published, one of the most important regarding public policies in oncology. This law became popularly known as the "Law of 60 days" (BRAZIL, 2012a). This law establishes that the first oncological treatment by SUS must start within a maximum period of 60 days from the signature of the anatomopathological report or in a shorter period (BRASIL, 2012a).

Given this scenario, actions developed by the State, through health programs and public policies, are essential for the combat, early diagnosis and control of this disease. In December 2005, with Ordinance No. 2,439 of the Ministry of Health (MS), neoplasms were classified as a public health problem and the bases of a broad National Policy of Oncological Care were established, whose main objectives would be: to promote the quality of life and health of society; organize lines of care that involved all levels of care (basic and specialized, of medium and high complexity) and care (promotion, prevention, diagnosis, treatment, rehabilitation and palliative care); and to establish hierarchical and organized networks, guaranteeing access and comprehensive care (BRASIL, 2005a).

Also noteworthy is Law No. 14,238, of November 19, 2021, which established the statute of the person with cancer, aimed at ensuring and promoting, under conditions of equality, access to appropriate treatment and the exercise of the rights and fundamental freedoms of the person with cancer. "Single paragraph. This Law establishes principles and objectives essential to the protection of the rights of the person with cancer and the implementation of policies to prevent and combat cancer." (Brasil, 2021).

In summary, in view of the contextualization made, the present study focuses on breast cancer, which is defined as a malignant neoplasm, characterized by the multiplication of abnormal cells, in a disordered and uncontrollable way, being a heterogeneous disease with histopathological variations, and usually coming from the epithelial tissue. Many breast carcinomas are described in the literature, the most common being: ductal carcinoma in situ, invasive ductal carcinoma (triple negative and inflammatory), the least incident breast cancers are these: Paget's disease, angiosarcoma and phylloid tumor. (AMERICAN CANCER SOCIETY, 2015; RIVENBARK; O'CONNOR; COLEMAN, 2013).

The International Agency for Research on Cancer (IARC) pointed out that this is the second most common type of cancer and the fifth cause of death compared to all cancers diagnosed in the world. In addition, there is a growing increase in the number of new cases, both in developed and developing countries (FERLAY *et al*., 2015).

Thus, this disease becomes a priority in the National Health Policy. The Guidelines for the Early Detection of Breast Cancer in Brazil launched in 2015 emphasize that breast cancer control remains one of the priorities in the agenda of health care for Brazilian women. For the control of this cancer, the Ministry of Health has recommended the performance of mammography in order to focus on its early detection, through early diagnosis and screening, due to the great magnitude of this disease (INCA, 2015a).

Regarding the development of this disease, there are several risk factors correlated with it. Some of these factors can be partially changed and there are those that cannot be changed. They are: a) non-alterable (hereditary factors that characterize family history, histological characteristics of cancer, staging, ethnicity and age); b) those partially alterable (related to the sexual and reproductive life of the woman, such as early menarche, late menopause, absence of pregnancy or late pregnancy, absence of breastfeeding, the use of contraceptives and hormone replacement); and c) the alterable ones (excessive intake of alcoholic beverages, tobacco use, sedentary lifestyle, type of diet causing an increase in total and abdominal body fat) (RIVENBARK; O'CONNOR; COLEMAN, 2013.

Socioeconomic and demographic conditions, the difficulty of access to the screening test, late diagnosis, late or inadequate treatment, the process of urbanization, industrialization and the new lifestyle of the population are also considered as contributors to the development of breast cancer (DESANTIS *et al*., 2015; MORALES *et al*., 2013; TEIXEIRA; HARBOR; HABIB, 2012).

Usually, breast cancer is detected early by a screening test or detected late by the presence of a lump in the breast. Most cell masses or nodules seen on a mammogram are benign. When malignancy is suspected, microscopic analysis of breast tissue by means of a needle or surgical biopsy is required (INCA, 2015a).

Regarding the mortality rates of this disease, they are higher in developing countries, which may be related to a late detection of the disease and, consequently, to the delay in the start of treatment (CORBEX; BOUZBID; BOFFETTA, 2014).

In the social aspect, women diagnosed with breast cancer undergo changes in their family and work routine. They may have to abandon or reduce their work activities as a result of treatment and/or mastectomy. These routine changes end up providing financial limitations in the family, and when this woman is the provider of family income, the situation becomes even more difficult, since it compromises her livelihood and that of her dependents. Sometimes these women experience physical pain and weakness, which can make household chores difficult. When it is necessary to remove the breast, the suffering intensifies both from the biological and psychological point of view, and may have a reflection on aspects of femininity, sexual libido and contribute to low self-esteem and depression (LAGO *et al*., 2015; GUIMARÃES; ANJOS, 2012).

Although breast cancer affects both men and women, this is a more significant incidence and mortality aggravation among women. Therefore, the projection of new cases of this cancer has a potential impact on their lives. There may be personal, family and social consequences that directly influence women's quality of life. Economic repercussions and in the management of health services can also lead to a decrease in the quality of health care for these patients. (ALMEIDA *et al*., 2016).

In addition, over the years, estimates suggest an increase in cancer cases overall, which may be associated with population growth and aging. For breast cancer, the situation is similar, because each year the number of women with this condition has also been increasing, suggesting that longevity among women may be a factor that contributes to the increase in the number of cases (ROSA; RADÜNZ, 2012).

In Brazil, the increase in the number of cases of breast cancer has been confirmed based on evidence from the official records of the Ministry of Health (MS) and scientific research (INCA, 2015a, 2013e; RIBEIRO, 2013). The high mortality rates, presented since the 80's, have been shown to be indicative of the importance of breast cancer as a public health problem and the necessary inclusion of this chronic non-communicable disease as a priority in the researchers' agenda. (INCA, 2015a; ZAPPONI; MELO, 2010).

Studies show that having breast cancer can result in suffering for women, for example, resulting in fear of dying, fear about the evolution and recurrence of the disease, possible repercussions on the

care of children, financial concerns, the need for access to health services, in addition to the adverse effects of treatments (ALMEIDA *et al*., 2016).

In addition, patients undergoing treatment for Breast Cancer present physical-functional complications, requiring that physical therapy care be performed early. This rehabilitation with the physiotherapist becomes paramount because it presents a set of therapeutic possibilities that can be used in all phases of cancer treatment (diagnosis, chemotherapy, radiotherapy, hormone therapy, post-surgical, recurrence of the disease and palliative care), contributing to the reduction of fatigue associated with cancer, improvement of the general condition and reduction of the risk of complications associated with surgery, as well as injuries (OLIVEIRA, 2015).

Although the treatment for this pathology has advanced and achieved a significant reduction in mortality rates, sequelae have affected approximately 90% of this population, with its complications and severity increased, which consequently causes impairments in functionality in the short and long term (INCA, 2010).

Moreover, in addition to the specific issue of the social cost of breast cancer related to the family and work sphere, the financial impact of the disease on the Unified Health System (SUS) can also be highlighted, considering the costs of diagnosis, treatment and follow-up of affected women. Studies show that hospitalizations, chemotherapy treatments and social security benefits of women with breast cancer significantly burden the State (SIQUEIRA *et al*., 2016)

Given this, breast cancer is considered a public health problem of extreme relevance, due to the high incidence and prevalence evidenced in statistics. In Brazil, there are many policies for the prevention and control of breast cancer, but there is a need to intensify the implementation of actions and strategies for early detection of breast cancer, with the objective of reducing the mortality rate and disability of patients diagnosed with breast cancer.

It is worth mentioning that most cases are not diagnosed in the early phase of the disease, which results in aggressive treatments, such as radical mastectomy, in which the patient may develop serious functional, psychological and social limitations, which culminates in withdrawal from the labor market or palliative care, in order to minimize her suffering. Therefore, it is essential to implement and implement breast cancer prevention and control policies, so that they are effective in preventing new cases and reducing mortality caused by breast cancer.

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