

CUIDADO É FUNDAMENTAL

UNIVERSIDADE FEDERAL DO ESTADO DO RIO DE JANEIRO • ESCOLA DE ENFERMAGEM ALFREDO PINTO

RESEARCH

DOI: 10.9789/2175-5361.rpcfo.v13.9503

HOSPITALIZATIONS FOR MALIGNANT BREAST NEOPLASIA IN BRAZILIAN REGIONS FROM 2014 TO 2018

Internações por neoplasia maligna da mama nas regiões brasileiras no período de 2014 a 2018

Hospitalizaciones para neoplasia maligna de mama en regiones brasileñas de 2014 a 2018

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How to cite this article

Ferrari YAC, Fontes PJO, Andrade TRSF, Santos IHA, Cavalcante AB. Hospitalizations for malignant breast neoplasia in Brazilian regions from 2014 to 2018. 2021 jan/dez; 13:711-716. DOI: <http://dx.doi.org/10.9789/2175-5361.rpcfo.v13.9503>.

ABSTRACT

Objective: To analyze the cases of hospitalization for malignant breast neoplasia in Brazilian regions from 2014 to 2018. **Method:** Descriptive and quantitative study, carried out through the data referring to hospitalizations for malignant breast neoplasia in the five Brazilian regions available in the Department of Informatics of the Unified Health System between 2014 and 2018. **Results:** There were 305,086 admissions for breast cancer in the period from 2014 to 2018. In 2017, the largest number of hospitalizations occurred with 65,029 (21.3%) cases, the Southeast region occupied the first place with 51.1% of hospitalizations, there was a predominance of females (98.9%), white (45.8%) and in the age group 40-59 (51.3%). **Conclusion:** The data show that the awareness of professionals and the population about the importance of the prevention and early detection of breast cancer is an essential factor for the change of the panorama in the country.

DESCRIPTORS: Breast neoplasias; Hospitalization; Medical oncology; Information systems; Health services accessibility.

RESUMO

Objetivo: Analisar os casos de internação por neoplasia maligna da mama nas regiões brasileiras de 2014 a 2018. **Método:** Estudo descritivo e quantitativo, realizado através dos dados referentes aos internamentos por neoplasia maligna da mama nas cinco regiões brasileiras disponíveis no Departamento de Informática do Sistema Único de Saúde entre os anos de 2014 a 2018. **Resultados:** Foram

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DOI: 10.9789/2175-5361.rpcfo.v13.9503 | Ferrari YAC, Fontes PJO, Andrade TRSF et al. | Hospitalizations for malignant breast neoplasia...

notificados 305.086 internamentos por câncer de mama no período de 2014 a 2018. Em 2017 ocorreram o maior número de internações com 65.029 (21,3%) casos, a região Sudeste ocupou o primeiro lugar com 51,1% dos internamentos, houve predominância do sexo feminino (98,9%), cor branca (45,8%) e na faixa etária de 40 a 59 anos (51,3%).

Conclusão: Os dados encontrados mostram que a conscientização dos profissionais e da população sobre a importância da prevenção e detecção precoce do câncer de mama é um fator essencial para a mudança do panorama no país.

DESCRITORES: Neoplasias da mama; Hospitalização; Oncologia; Sistemas de informação; Acesso aos serviços de saúde.

RESUMEN

Objetivo: Analizar los casos de hospitalización por cáncer de seno maligno en las regiones brasileñas de 2014 a 2018. **Método:** Estudio descriptivo y cuantitativo, realizado a través de datos que se refieren a hospitalizaciones por cáncer de seno maligno en las cinco regiones. Disponible en el Departamento de Informática del Sistema Único de Salud entre 2014 y 2018. **Resultados:** Se informaron 305,086 hospitalizaciones por cáncer de seno entre 2014 y 2018. En 2017 hubo el mayor número de hospitalizaciones con 65,029 (21.3%) casos, la región sudeste ocupó el primer lugar con 51.1% de hospitalizaciones, Predominó el sexo femenino (98,9%), blanco (45,8%) y en el grupo de edad de 40 a 59 años (51,3%).

Conclusión: La conciencia de los profesionales y la población sobre la importancia de la prevención y la detección temprana del cáncer de mama es un factor esencial para el panorama cambiante en el país.

DESCRIPTORES: Neoplasias de la mama; Hospitalización; Oncología; Sistemas de información; Accesibilidad a los servicios de salud.

INTRODUCTION

Chronic Non-Communicable Diseases (NCDs) are considered a public health problem today due to the high number of disabilities and deaths caused, especially in the without access to information and disadvantaged social classes. Respiratory diseases, diabetes mellitus, cardiovascular diseases and cancer are considered NCDs.¹

Cancer, a disease characterized by disordered multiplication of body cells, is a health problem that has been presenting an alarming increase in its incidence and mortality rates, reaching more and more individuals in all age groups, social classes and races.² According to estimates, in 2012, there were 14.1 million cases of cancer worldwide, with a higher incidence of malignant neoplasia of the lung, breast, intestine and prostate. In Brazil, an estimated 1.2 million cases occurred in 2018 and 2019.³

In Brazil, among the types of cancer that most affect women, malignant breast neoplasia is the second most incident type, lagging behind non-melanoma type skin cancer.⁴ In 2012, 52,680 new cases of this type of cancer were reported, with approximately 12,000 deaths from the disease.⁵ Estimates for breast cancer in the years 2018 and 2019 are 60 thousand cases for each year.³

Given the magnitude of breast cancer, acting in the prevention and early diagnosis of the disease is fundamental, because the sooner the cancer is discovered, the greater the chances of cure. Known risk factors include age, nulliparity, first pregnancy after 30 years, early menarche, late menopause, use of hormone therapy, family history, inadequate eating

habits, lack of physical activity, and exposure to radioactive agents.²

When the diagnosis is made late, the chances of cure of breast cancer are reduced and the individual may suffer the various consequences brought by the disease, including reduced quality of life due to the side effects of the treatments instituted, recurrent hospitalizations that cause physical and emotional wear, systemic complications and psychological changes that influence social life.⁶

In this perspective, the understanding of breast cancer as a global health problem shows the urgent need for effective implementation of specific public policies for the disease, so that professionals understand the importance of a culture of promotion, prevention and early diagnosis of malignant breast neoplasia and the population know their rights and duties related to this condition.⁷

Therefore, the choice of the theme for carrying out this paper is justified by the epidemiological importance that breast cancer has at national and international level, seeing that its incidence and mortality are still considered a problem for managers and health services, in addition to generating high expenditures for public service due to treatments and hospitalizations resulting from the disease.

Thus, the objective of this article was to analyze the cases of hospitalization due to malignant breast neoplasia in Brazilian regions from 2014 to 2018.

METHODS

This is a descriptive and quantitative study, carried out through data on hospitalizations for malignant breast neoplasia (CID 10-C50) of the Hospital Information System (SIH - Sistema de Informação Hospitalar) available in the Informatics Department of the Unified Health System (Departamento de Informática do Sistema Único de Saúde).⁸

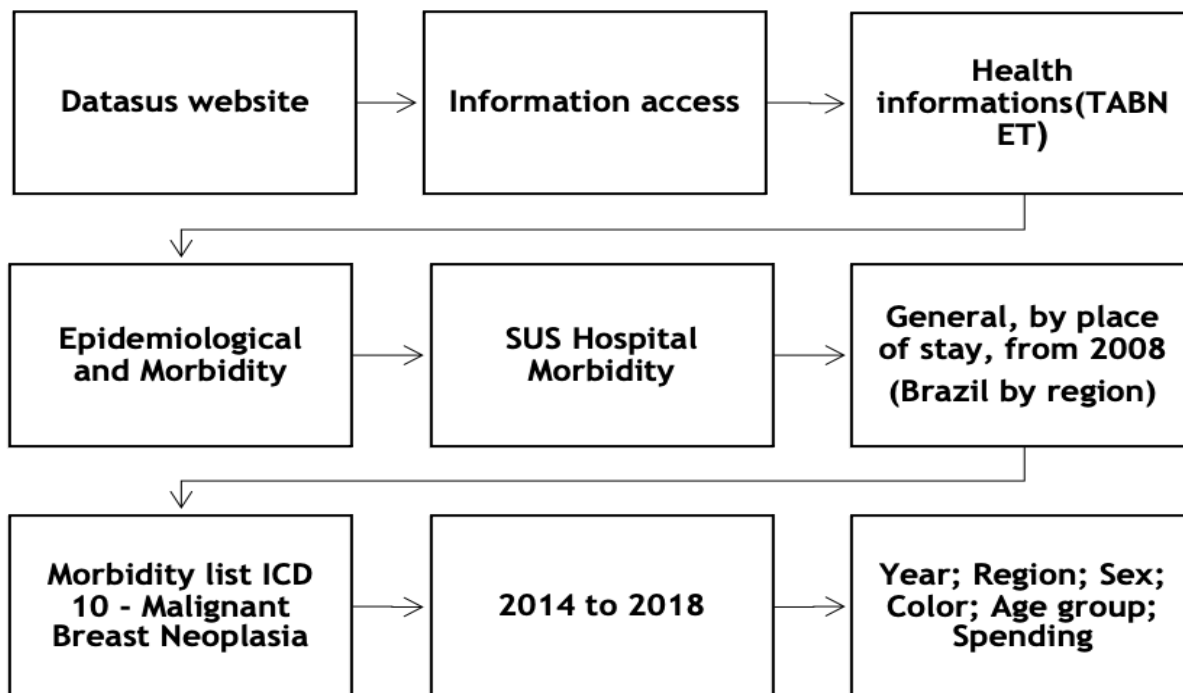
We analyzed all hospitalizations due to malignant breast neoplasia occurred in the five regions of Brazil (North, Northeast, Midwest, South and Southeast) between the years 2014 to 2018. The research was conducted in order to answer the following guiding question: "What is the panorama of Brazilian regions in relation to hospitalizations due to malignant breast neoplasia?"

Female and male subjects were included in the study, in all age groups, hospitalized in the five regions of Brazil. After searching the DATASUS, the following data were evaluated: number of hospitalizations per year and region; gender, color and age group of individuals hospitalized and, values spent by region for hospitalization. The flowchart in Figure 1 shows the steps of the data search.

The information was organized and analyzed in a spreadsheet in Microsoft Office Excel in order to provide better visualization of the data. The results were grouped into illustrative representations and were discussed according to the information available in the scientific literature.

It was not necessary to submit the work to the Research Ethics Committee because it is a research conducted from public domain data. However, all copyright rules have been respected.

Figure 1 - Flowchart of the data search steps.

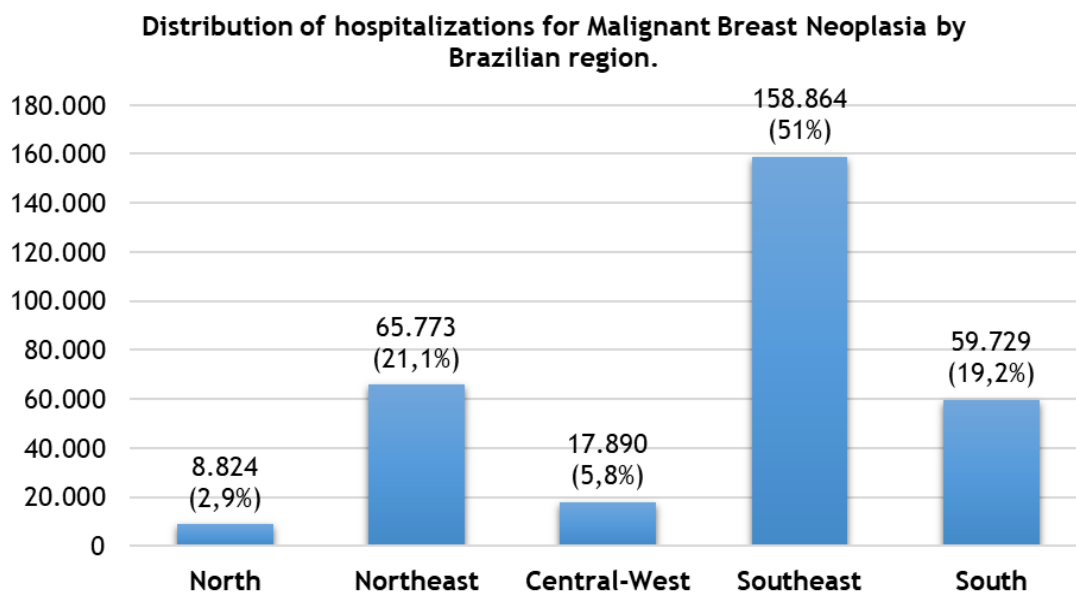


Source: prepared by the authors.

RESULTS AND DISCUSSION

According to the data available in DATASUS (2014 to 2018), 311,080 (100%) hospitalizations for breast cancer were reported in the period between 2014 to 2018. In relation to the year of occurrence of hospitalizations due to malignant breast neoplasia, a higher number was observed in 2018 with 68,206 (21.9%) cases reported and lower in 2014, with 55,916 (18%) cases, as shown in Graph 1:

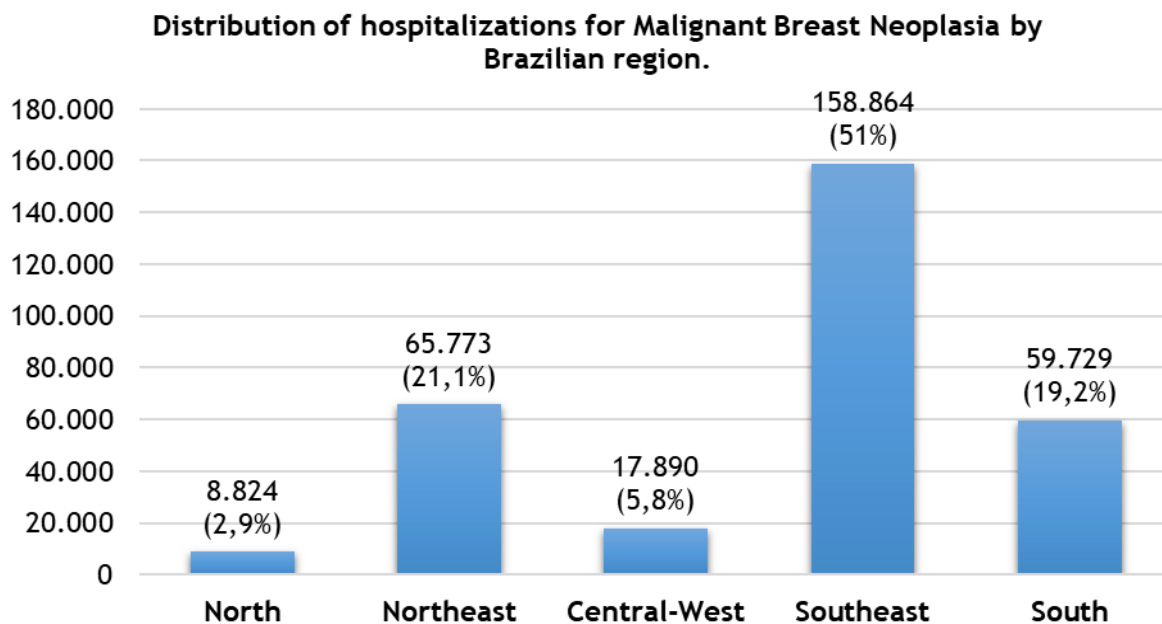
Graph 1 - Distribution of hospitalizations due to Malignant Breast Neoplasia per year of occurrence.



Source: DATASUS, 2014 to 2018.

The Southeast region presented the highest number of hospitalizations, with 51% of the cases, and the North the lowest, representing two integers and nine hundredths (2.9%) of the total, as graph in Figure 2:

Graph 2 - Distribution of hospitalizations for Malignant Breast Neoplasia by Brazilian region.



Source: DATASUS, 2014 to 2018.

As for the characterization of individuals hospitalized due to the disease, there was a predominance of female (99%), white (45.7%) and in the age group from 40 to 59 years old (51.2%) (Table 1).

Table 1 - Distribution of hospitalizations due to Malignant Breast Neoplasia by sex, color and age group.

Sex	Male		Female			
		3.278		307.802		
	1%		99%			
Color	White	Black	Brown	Yellow	Indigenous	No information
	142.150	17.931	110.876	3.160	58	36.905
	45.7%	5.8%	35.6%	1%	0.1%	11.8%
Age Group	Under 01 to 19 years old	20 to 39 years old	40 to 59 years old	60 to 79 years old	80 years old or older	
	1.670	36.349	159.436	101.425	12.200	
	0.5%	11.7%	51.2%	32.6%	4%	

Source: DATASUS, 2014 to 2018.

Regarding skin color, there was a predominance of white women with breast cancer, as in the present study.¹⁶ About 70% of the cases of hospitalization due to breast cancer were concentrated in the South and Southeast Regions, a fact that can justify the result found due to the characteristics of the skin color of the population of these places.¹⁷

Age is considered a risk factor for the development of breast cancer.² In this study, women aged 40 to 59 years old represented more than half of the cases of hospitalization due to malignant breast neoplasia (51.2%), followed by women aged 60 to 79 years old (32.6%).

The medical expenses arising from hospital admissions for breast cancer were R\$656.386.343,21, being the highest expenses in the Southeast region with a value of R\$306.593.314,98 million reais, followed by the Northeastern region with

R\$175.049.954,70, the South with R\$123.542.948,82, the Midwest with R\$35.193.826,72, and the lower spending in the Northern region with R\$16.006.297,99 million reais, depending on the number of new cases of the disease in each region and the population's access to health services.

The National Cancer Institute (INCA) launches a biennial document with cancer estimates for Brazil, which describes the expected cases by type of cancer, sex, municipality and regions of the country. From 2014 to 2018, three editions were released, showing a steady increase in these numbers year after year.³

Regarding the estimates of breast cancer in the Brazilian female population, for the biennium 2014-2015 there were estimated 57,120 thousand cases per 100 thousand inhabitants each year.⁹ In the biennium 2016-2017 the estimates were

57,960 thousand cases per year.¹⁰ For the years 2018-2019, 59,700 thousand cases per 100 thousand inhabitants were estimated annually.³

Although it is a curable cancer when diagnosed and treated early, there is an increasing number of cases each year according to the results of the research. The implementation of public policies of screening and early diagnosis is a strong ally for the reduction of complications caused by this disease, because through these measures the cancer can be detected in its initial phase or even before the signs and symptoms appear.¹¹

Therefore, in order to be able to carry out screening and early diagnosis of breast cancer, it is necessary to think about specific public policies for the needs of each region, taking into account the cultural, socioeconomic and epidemiological profile of the disease. In addition, the preparation of professionals through training and permanent education and the awareness of the population about the existence and importance of screening methods are fundamental for the adherence of health care actions.¹²

Regarding the distribution of hospitalizations for breast cancer in the Brazilian regions, the difference in the number of cases was observed, since the Southeast region presented more than half of the hospitalizations (51%) throughout the country. Several factors may interfere with these data, namely: heterogeneous profile of the population, exposure to specific risk factors, cultural and life habits, data quality of information systems, conditions of access and performance of health services.¹³ The knowledge about the situation of breast cancer by region favors the formulation of public policies directed to the health needs of each population.¹⁴

Breast cancer is more prevalent in females, occurring 99% of the time in this population, even though it can also occur in males. Physiological and hormonal factors characteristic of women make them the most affected by this type of cancer.¹⁵ In this perspective, it is important to highlight that awareness and mobilization regarding risk factors and prevention measures for breast cancer should be made for all audiences, with the aim of reducing the number of cases of the disease and its complications through prevention, screening and early diagnosis.¹¹

Age is considered a risk factor for the development of breast cancer.² In this study, women aged 40 to 59 years old represented more than half of the cases of hospitalization due to malignant breast neoplasia (51.2%), followed by women aged 60 to 79 years old (32.6%).

Knowledge of the epidemiological picture of the disease is decisive for the elaboration of public policies.⁷ Based on the age group most affected by breast cancer, the Ministry of Health recommends that women aged 40 to 49 years old perform the Clinical Examination of the Breasts (ECM) annually and in case of changes, perform mammography. For women aged 50 to 69, the indication is annual ECM and mammography every two years. For women aged 35 or older, who have high risk factors for the development of the disease, ECM and mammography are indicated annually.²

Public spending for the treatment of breast cancer is high, especially when it comes to the panorama found in much of

the country, where cases are diagnosed in advanced stages and require expensive treatments to try to re-establish the health of the individual affected by the disease. Therefore, although this is a major public health challenge, it is important that a greater investment in prevention and early detection campaigns of breast cancer are made, aiming that the expenditures on preventive actions are higher than those with curative actions, reducing the suffering and mortality of the population by this type of cancer.^{2,18}

FINAL CONSIDERATIONS

Hospitalizations for malignant breast neoplasia per year presented an approximate value, without great variations during the period studied. The distribution of cases by region showed an important difference, being more than half concentrated in the Southeast region. There was a predominance of females, in white and brown colors and in the age groups between 40 to 59 and 60 to 79 years old. The distribution of expenditures occurred according to the cases of breast cancer in each region.

As for the public expenditures arising from breast cancer, it is important to highlight that the value used with hospitalizations and more complex treatments due to the severity of the disease when diagnosed represent a large part of the public investment aimed at this type of cancer. Thus, it is observed that the population should be better guided as to the possibility of early diagnosis and prevention through healthy lifestyle habits, and health professionals should be more active in guiding these patients and in clinical evaluation during consultations.

The data found show that the awareness of professionals and the population on the importance of prevention and early detection of breast cancer is an essential factor for changing the panorama in the country. There is need for public investments aimed at subsidizing wide-ranging campaigns and human and material resources to carry out quality and effective work, making the fight against breast cancer more just and equal throughout the country.

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Received in: 02/11/2019
Required revisions: 29/11/2019
Approved in: 12/02/2020
Published in: 20/04/2021

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Disclaimer: The authors claim to have no conflict of interest.