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## Perfil clínico, sociodemográfico e epidemiológico da mulher com câncer de mama

Clinical, sociodemographic and epidemiological profile of woman with breast cancer

Perfil clínico, socio-demográfica y epidemiológica de las mujeres con cáncer de mama

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### ABSTRACT

**Objective:** To describe the main clinical, therapeutic and epidemiological characteristics of women diagnosed with breast cancer in the Pérola Byington Hospital, between the years 2000 and 2006. **Methods:** This was a cross sectional study and quantitative nature. Data collection was performed using a structured form. **Results:** Most of the women were married, white, with low education, catholic and housewives. About 75% had at least one pregnancy, and 33.1% breastfed. Just over 30% had hormone replacement. Smokers were 14.7% and 2.7% were ex-smokers. The initial clinical staging of highest incidence are the II and III, representing together 66.5% of cases. Before the first consultation, 91.3% of women had no diagnosis of breast cancer and no prior treatment. **Conclusion:** Knowing the profile of women affected by breast cancer is essential for targeting of resources and decision-making.

**Descriptors:** Breast neoplasms; Epidemiology; Women's health.

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## RESUMO

**Objetivo:** Descrever as principais características clínico-terapêuticas e epidemiológicas de mulheres diagnosticadas com câncer de mama no Hospital Pérola Byington, entre os anos de 2000 e 2006. **Métodos:** Trata-se de um estudo de corte transversal e natureza quantitativa. A coleta de dados foi realizada por meio de um formulário estruturado. **Resultados:** A maior parte das mulheres era casada, branca, com baixa escolaridade, católica e do lar. Cerca de 75% tiveram pelo menos uma gravidez, e 33,1% amamentaram. Pouco mais de 30% fizeram reposição hormonal. Eram fumantes 14,7%, e 2,7% ex-fumantes. Os estadiamentos clínicos iniciais de maior incidência são os II e III, juntos representam 66,5% dos casos. Cerca de 91,3% das mulheres não apresentavam diagnóstico do tumor de mama e nem tratamento anterior à primeira consulta. **Conclusão:** Conhecer o perfil das mulheres acometidas pelo câncer de mama é imprescindível para o direcionamento de recursos e tomadas de decisão.

**Descritores:** Neoplasias da mama; Epidemiologia; Saúde da mulher.

## RESUMEN

**Objetivo:** Describir las principales características clínicas, terapéuticas y epidemiológicas de las mujeres diagnosticadas con cáncer de mama en el Hospital Pérola Byington, entre los años 2000 y 2006. **Métodos:** Se realizó un estudio de corte transversal y de naturaleza cuantitativa. La recolección de datos se realizó mediante un formulario estructurado. **Resultados:** La mayoría de las mujeres estaban casadas, blancas, con bajo nivel de educación, católica y dueña de casa. Aproximadamente el 75% tenía al menos un embarazo, y el 33,1% con leche materna. Algo más del 30% tenían de reemplazo hormonal. Las fumadoras eran el 14,7% y el 2,7% ex fumadoras. La estadificación clínica inicial de mayor incidencia son la II y III, en conjunto representan 66,5% de los casos. Sobre el 91,3% de las mujeres no tenían un diagnóstico de tumor de mama y no se sometieron a tratamiento previo a la primera consulta. **Conclusión:** Conocer el perfil de las mujeres afectadas por cáncer de mama es esencial para la orientación de los recursos y la toma de decisiones.

**Descriptor:** Neoplasias de la mama; Epidemiología; Salud de la mujer.

## INTRODUCTION

The breast cancer is the most common cause of death among women and, except for nonmelanoma skin cancer, is the most prevalent in 140 countries. For the years 2014-2015 it is estimated that in Brazil there will be 57,000 new cases.<sup>1</sup>

The Southeast and South regions are characterized by the predominance of breast cancer, with São Paulo being the Brazilian state with the highest number of cases foreseen for the period from 2014 to 2015: 16,160 new cases.<sup>3</sup>

Against the impact of the disease, it has been created a set of systematic information about the behavior, characteristics and trends of the disease that aim to collect, analyze and classify information of all new cases of cancer, in order to build reliable statistical data of the event of cancer in the population in question.

Such tools, called Population-Based Cancer Registry (PBCR) and Cancer Hospital Registry (CHR), assist in the monitoring and evaluation of control activities and cancer research, and help in taking forward the decision to the effects of the treatments.<sup>4,5</sup>

Registering this data is not always an easy task, considering the lack of material and human resources. The risk of distortion is real,<sup>4</sup> and completeness is, often, bad.<sup>5</sup> However, there is availability of training and updating of professionals aiming at improved quality.

The information contained in RHCS give grants to several studies, including the survival<sup>6</sup> and analysis of temporal trends of the phenomena associated with the disease,<sup>5</sup> also being possible all characterization of the population according to clinical and epidemiological variables.

Given the above and disease-related social impact, this study is envisioned that can assist in knowledge about the profile of women affected by breast cancer and also offer grants to develop strategies for prevention, early detection and treatment of this cancer.

## OBJECTIVE

To describe the clinical-therapeutic, socio-demographic and epidemiological profile of women diagnosed with breast cancer treated at Pérola Byington Hospital.

## METHOD

This is a cross-sectional study, of a quantitative nature, held at the Pérola Byington Hospital, Health Reference Center for Women, in São Paulo. Data were extracted from the RHC and the medical records of women treated in this hospital.

The study sample was random among women who received the first diagnosis of breast cancer between the years 2000 and 2006, totaling 299 records.

The variables were defined from the Cancer Hospital Records Manual, routines and procedures of INCA,<sup>4</sup> which is the database feeding the Hospital Cancer Registry Information System (SisRHC).

Out of the total of the variables, were chosen 16 sociodemographics, 9 referring to the tumor and 2 referring to the treatment, since they were considered to be the most interesting for the profile design.

In women who have more than one primary tumor, it was considered only the first diagnosis.

As inclusion criteria, the woman should have done the first diagnosis of breast cancer, confirmed by biopsy, in service study from 2000 to 2006.

Data collection was performed using a form with the sociodemographic and clinical variables. The data collection period was from August 2013 to April 2014.

Data were stored in a spreadsheet using Excel program and performed the simple frequency of tests for the variables using the Statistical Package for the Social Sciences version 19.

The study was approved by the Unifesp Ethics Committee's second opinion No. 572,865.

## RESULTS

Table 1 shows the sociodemographic profile. The predominant age group is between 50 and 69 years (44.15%). The average age was 53.95 with a median of 52 and standard deviation of 13.5 years. With regard to skin color, 31.5% were white and more than 50% of the sample had incompleteness of this variable. Married women predominate with 26.4%. As for education, 4.7% of the study population reported having incomplete primary education, 2% are illiterate and only 0.3% have higher level. Among occupations, the predominance of women was housewives with 10%. In variable religion, 30.4% were Catholic.

The incompleteness of the data was an important limiting factor in the study, ranging from 52.5% in the variable race/color and 88.3% in variable education.

**Table 1 -** Sociodemographic profile of women diagnosed with breast cancer and treated at Pérola Byington Hospital from January 1, 2000 through December 31, 2006

Variables	N	%
<b>Age</b>		
Equal to or less than 39 years	37	12.37
40 to 49 years	88	29.43
50 and 69 years	132	44.15
70 or more	42	14.05
<b>Race/Color</b>		
White	95	31.8
Black	15	5.0
Yellow	4	0.3
Brown	31	10.4
No information	157	52.5
<b>Education</b>		
Incomplete Elementary school	15	5
Complete Elementary school	4	1.3
Complete High School	9	3.0
Incomplete Higher Education	1	0.3
Illiterate	6	2.0
No information	264	88.3

**Table 1 continued -** Socio-demographic profile of women diagnosed with breast cancer and treated at Pérola Byington Hospital from January 1, 2000 through December 31, 2006

Variables	N	%
<b>Marital Status</b>		
Single	21	7.0
Married	79	26.4
Divorced	12	4.0
Widowed	18	6.0
Stable Union	2	0.7
No information	167	55.9

(To be continued)

(Continuation)

Variables	N	%
<b>Occupation</b>		
Housewife	30	10
Retired	9	3.0
Housekeeper	10	3.3
Others	14	4.7
No information	236	79
<b>Religion</b>		
Catholic	91	30.4
Evangelical/Christian	33	11
Spiritist	3	1.0
Do not have any	2	0.6
Jehovah's Witness	2	0.7
No information	168	56.2
<b>Total</b>	<b>299</b>	<b>100</b>

AGE - Average: 53.95; Median: 52.0; Trend: 44; Standard deviation: 13.5; Minimum: 19; Maximum: 99.

As described in Table 2, the majority (75.3%) of women had at least one pregnancy. Regarding age at first birth, 39.8% were under 30 years, while aged over 30 accounted for 8% of the sample. Of the total, 33.1% of women breastfed and 9.7% did not.

As for menarche, 21.40% of the cases occurred between 11 and 15 years. The trend for age was 14 years, with a minimum of 9 and a maximum of 19.

The variable menopause had 21.40% of women aged between 44 and 50 years. The trend was 50 years and a minimum age of 34 and maximum of 57.

About 35% of women were postmenopausal, followed by 20.4% in premenopausal.

Those who used contraceptives made up 4.3%, and 25.8% did not. Of the 299 records, 30.8% underwent hormone replacement therapy and 14.4% did not.

As for family history related to breast cancer, 46.5% of women reported no history, followed by 14.4% who had cases in the family.

With regard to lifestyle and modifiable risk factors, 54.2% of women were non-smokers, 14.7% were smokers and 2.7% ex-smokers. Alcoholism was denied in 56.9% of cases and only 0.3% was confirmed.

By analyzing Table 2, it is observed that the item no information had frequency of 16.42% to 72.91% between variables.

**Table 2** - Characteristics of personal and family history of women diagnosed with breast cancer and treated at Pérola Byington Hospital from January 1, 2000 through December 31, 2006

Variables	N	%
<b>Nulliparity</b>		
Yes	25	8.4
No	225	75.3
No information	49	16.4
<b>Age at First Birth</b>		
≤ 30 years	119	39.8
> 30 years	9	3.0
Not applicable	24	8.0
No information	147	49.2
<b>Age of Menarche</b>		
≤ 10 years	9	3.01
11 to 15 years	64	21.40
≥ 16 years	8	2.68
No information	218	72.91

**Table 2 continuation** - Characterization of personal and family history of women diagnosed with breast cancer and treated at Pérola Byington Hospital from January 1, 2000 through December 31, 2006

Variables	N	%
<b>Age of Menopause</b>		
< 40 years	11	3.68
40 - 55 years	64	21.40
> 55 years	3	1.00
Not applicable	55	18.40
No information	166	55.52
<b>Hormonal Status at Diagnosis</b>		
Pre Menopause	61	20.4
Post Menopause	105	35.1
No information	133	44.4
<b>Use of Contraceptive</b>		
Yes	13	4.3
No	77	25.8
No information	209	69.9
<b>Hormone Replacement</b>		
Yes	9	3.0
No	92	30.8
No information	198	66.2
<b>Family History of Breast Cancer</b>		
Yes	43	14.4
No	139	46.5
No information	117	39.1
<b>Breast-Feeding</b>		
Yes	99	33.1
No	29	9.7
No information	171	57.2

**Table 2 continuation** - Characterization of personal and family history of women diagnosed with breast cancer and treated at Pérola Byington Hospital from January 1, 2000 through December 31, 2006

Variables	N	%
<b>Alcoholism</b>		
Yes	1	0.3
No	170	56.9
No information	128	42.8
<b>Smoking</b>		
Yes	42	14.0
No	162	54.2
Ex-Smoker	8	2.7
No information	87	29.1
<b>Total</b>	<b>299</b>	<b>100</b>

AGE AT MENARCHE - Trend: 14; Minimum: 9; Maximum: 18. AGE AT MENOPAUSE - Trend: 50; Minimum: 34; Maximum: 57.

In 95.4% of the sample, the tumor location was not topographically described, being used the initials NOS, which corresponds to the unspecified mammary gland. The upper outer quadrant was described at 2.3%, followed by Superior Internal Quadrant at 1.7%; the Lower Quadrant Internal and External Lower Quadrant were each 0.3%. The initial clinical staging of highest incidence was isolated staging II in 45.82% of cases, followed by stage III with 20.73%, 15.72% stage I and stage IV at 3.68%, the percentage of non-completion was 14.05.

There was distant metastasis in 13.63% of the sample. Of this total, 5.52% of women had metastasis in the bones, joints and articular cartilage of the limbs, 3.9% in the bronchi and lungs, 1.95% in the liver and biliary tract, 0.97% in the lymph nodes, 0.97% in the brain and 0.32% in ill-defined locations. Of the patients, 13 relapsed, totaling 4.4% of the sample, of the total 2.7% were local recurrence and 1.7% regional recurrence. The rest is divided into 86.3% who did not have any and 9.4% without information.

The predominant laterality was left in 55.9% of the cases.

In relation to hormone receptors, 51.5% was positive for Estrogen Receptor, 25.8% negative and 8.7% inconclusive. To Progesterone Receptor, 43.5% of cases were positive, negative 39.1%, and 2.7% inconclusive. As to the tumor markers, the c-erbB-2 was positive in 30.1% of cases, negative in 34.4%, inconclusive in 4%. The tumor marker P53 was positive in 22.4% of cases, negative in 33.1% and 2.7% inconclusive.

**Table 3** - Clinical characterization of women diagnosed with breast cancer and treated at Pérola Byington Hospital from January 1, 2000 through December 31, 2006

Variables	N	%
<b>Location of the Primary Tumor</b>		
Breast, Internal Superior Quadrant	5	1.7
Breast, Internal Lower Quadrant	1	0.3
Breast, External Superior Quadrant	7	2.3
Breast, External Lower Quadrant	1	0.3
Breast, SOE	285	95.4
<b>Laterality</b>		
Left	167	55.9
Right	127	42.5
Bilateral	4	1.3
No information	1	0.3
<b>Estrogen Receptor</b>		
Positive	154	51.5
Negative	77	25.8
Inconclusive	26	8.7
No information	42	14.0
<b>Progesterone Receptor</b>		
Positive	130	43.5
Negative	117	39.1
Inconclusive	8	2.7
No information	44	14.7
<b>Tumor Marker c-erbB-2</b>		
Positive	90	30.1
Negative	103	34.4
Inconclusive	12	4.0
No information	94	31.4

**Table 3 continued** - Clinical characterization of women diagnosed with breast cancer and treated at Pérola Byington Hospital from January 1, 2000 through December 31, 2006

Variables	N	%
<b>Tumor marker P53</b>		
Positive	67	22.4
Negative	99	33.1
Inconclusive	8	2.7
No information	125	41.8
<b>Metastasis</b>		
No	247	80.2
Liver and Intra-Hepatic vias	6	1.95
Bronchi and Lungs	12	3.9
Bones, Joints and Cartilage Articular Member	17	5.52
Encephalon	3	0.97
Other Locations and Locations ill-defined	1	0.32

(To be continued)

(Continuation)

Variables	N	%
<b>Metastasis</b>		
Lymph nodes	3	0.97
No information	19	6.17
<b>Recurrence</b>		
Local	8	2.7
Regional	5	1.7
No	258	86.3
No information	28	9.4
<b>Staging</b>		
I	47	15.72
II	137	45.82
III	62	20.73
IV	11	3.68
No information	42	14.05
<b>Total</b>	<b>299</b>	<b>100</b>

From the 299 records analyzed, 91.3% were women who had a no previous diagnosis of breast tumor and no previous treatment to the first consultation at the Pérola Byington Hospital. Previous diagnoses corresponded to 7.7% and 1% had a diagnosis and had previous treatment in another service.

Of the total sample, 32.44% underwent the following treatments Surgery, Chemotherapy, Radiotherapy and Hormone Therapy. 25.08% had only Surgery, Chemotherapy and Radiotherapy.

**Table 4** - Characterization of the treatment of women with diagnosed breast cancer and treated at Pérola Byington Hospital from January 1, 2000 through December 31, 2006

Variables	N	%
<b>Treatments and Combinations</b>		
Just Surgery	20	6.69
Just Chemotherapy	4	1.34
Surgery + Chemotherapy	16	5.4
Surgery + Radiotherapy	14	4.7
Surgery + Hormone Therapy	18	6.02
Chemotherapy + Hormone Therapy	1	0.33
Surgery + Chemotherapy + Radiotherapy	75	25.08
Surgery + Chemotherapy + Hormone Therapy	24	8.03
Radiotherapy + Surgery + Hormone Therapy	24	8.03
Chemotherapy + Radiotherapy + Hormone Therapy	1	0.33
Surgery + Chemotherapy + Radiotherapy + Hormone Therapy	97	32.44
No treatment	5	1.7

(To be continued)

(Continuation)

Variables	N	%
<b>Diagnosis and Previous Treatment</b>		
No Diagnosis and No Treatment	273	91.3
With Diagnosis and With Treatment	3	1.0
With Diagnosis and Without Treatment	23	7.7
<b>Total</b>	<b>299</b>	<b>100</b>

## DISCUSSION

The age range for women corroborates previous studies<sup>7</sup> that claim that as the age increases the risk for breast cancer increase,<sup>8</sup> being relatively rare before 35 years.<sup>9</sup>

The predominance of color converge with previous findings.<sup>7,10</sup> However, one cannot conclude much about this variable, considering the small number of non-white women, as well as high rate of incompleteness.<sup>7</sup>

Married women are also the majority in similar studies,<sup>11,12</sup> which say it is important the presence of a companion to cope with the disease due to the large generated psychosocial impact, but their absence does not constitute a risk factor.<sup>7,11,12</sup>

A low educational level of these women is observed, similar to results found in the same character studies.<sup>7,12</sup> "Household" women are also most in the Pinho and Coutinho study.<sup>13</sup>

Another study also points to the primacy of the Catholic religion.<sup>12</sup> According to Caldeira, Carvalho and Vieira (2014),<sup>14</sup> spiritual distress is present during the treatment of cancer, being the importance of religion high, and requiring preparation of nurses to assist in the process.

In relation to pregnancy and age at first birth, gender studies also found similar results,<sup>10,15</sup> reporting most as young mothers.

Most women breastfed. Although not proven by science, breastfeeding has already been characterized as a protective factor against breast cancer in other studies.<sup>16,17</sup>

As for the age of menarche, the result is similar to the Paiva *et al.* study (2002),<sup>10</sup> which showed maximum and minimum of 9 and 20 respectively. Regarding the age of menopause, the data found can also be glimpsed in other studies,<sup>10,15</sup> and the predominance of women in the postmenopausal period.<sup>18</sup>

On the correlation between contraceptive use and breast cancer, some authors claim not to have observed a positive correlation,<sup>19</sup> diverging from another group that defends this association.<sup>11</sup> In relation to hormone replacement therapy, a study shows that this factor now is at risk after the fifth year of use.<sup>19</sup>

It is already clear in the literature that breast cancer in first-degree relatives, particularly mother and sister, increase the risk by up to twice of having breast cancer.<sup>20</sup>

With regard to lifestyle and modifiable risk factors, the National Cancer Institute<sup>21</sup> says that smokers, former

smokers and passive smokers women have higher risk of developing cancer, especially after menopause. The intake of alcohol is also a risk factor for all types of cancer, including breast cancer.<sup>22</sup>

The location of the tumor corresponding to the mammary gland, without specification, also prevailed in a study carried out in the state of Espírito Santo,<sup>23</sup> showing failure in the trusted registration of information.

The staging is one of the most important variables when it comes to survival, and its prevalence in I and II (initial) is associated with better prognosis for women and may have a survival rate of 97% in 5 years; if diagnosed at the advanced stage, these chances fall sharply.<sup>7</sup>

The presence of both recurrence and metastasis has been associated with worse prognosis.<sup>23</sup> Most cases do not progressed to metastases, converging with results from a previous study.<sup>24</sup>

The left laterality is predominant in the literature and, in addition to this, was also found in a study carried out in Espírito Santo.<sup>23</sup>

Cintra *et al.* (2012),<sup>18</sup> in their study on hormone receptors in breast cancer, also found higher prevalence of negative cases of tumor marker c-erbB-2. Authors show large differences in prognosis according to treatment received.<sup>25</sup>

## CONCLUSION

Breast cancer is a multifactorial condition, which allows the study of many risk factors. Among the women surveyed, the majority presented a profile similar to that described in the literature, such as age and stage. It is important to highlight the poor quality of RHC hospital studied, as well as from the medical records, especially the socio-demographic data, which prevailed without information and could have been used to better define the profile of these women.

More studies are needed to trace the profile of women with breast cancer, places committed to the teaching-research binomial, with professionals who dedicate themselves to faithfully filling out forms and the patient's records, to make possible the advance of science with the use of secondary data, helping in the planning of specific health agendas, resource allocation, continuing education, as well as in actions to promote health, early detection of diseases and conduct for treatment.

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