I Congresso Nacional de Oncologia
da Associação Presente - Agosto de 2017.

REVISTA
UNIMONTES CIENTÍFICA
(ISSN 2236-5257)

THE IMPORTANCE OF EARLY SCREENING FOR BREAST CANCER IN YOUNGER WOMEN

A importância do rastreamento precoce do câncer de mama em mulheres mais jovens

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Abstract: Objective: To know the incidence of breast cancer (CM) regarding the age range, in the state of Minas Gerais, as well as to evaluate the need for early screening. **Methodology:** This is a descriptive and quantitative study in which the population was constituted by female patients, with or without malignant and benign lesions. **Results:** The frequency of malignant and benign tumors were analyzed as well as BIRA-DS (Breast Imaging and Data System Report) in Minas Gerais state. The most affected women by the neoplasia are in the age group of 40 and 54 years and at 70 years there is a sudden increase in the number of malignant lesions. **Conclusion:** It is concluded that despite the screening of breast cancer in the age group between 50 and 69 years, there is an expressive increase in the number of malignant lesions in the age group of 40 and 49 years according to anatomopathological study in the categories of BI-RADS 4 and 5. It is recommended a better attention from the State to the early screening, through mammography, for younger women.

Keywords: Breast Neoplasms; Mammography; Early Diagnosis.

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Resumo: Objetivo: Conhecer a incidência de câncer de mama (CM) em relação à faixa etária, no estado de Minas Gerais, bem como avaliar a necessidade do rastreamento precoce do mesmo. **Metodologia:** Trata-se de um estudo de caráter descritivo e quantitativo em que a população foi constituída por pacientes do sexo feminino, portadoras ou não de lesões malignas e benignas. **Resultados:** Foram analisadas as freqüências de tumores malignos, benignos e resultados BI-RADS (Breast Image Reporting and Data System) em Minas Gerais. As mulheres mais acometidas pela neoplasia encontram-se na faixa etária de 40 e 54 anos e aos 70 anos há um aumento súbito do número de lesões malignas. **Conclusão:** Conclui-se que apesar do rastreamento do câncer de mama ocorrer na faixa etária entre 50 e 69 anos, há um aumento expressivo do número de lesões malignas na faixa etária de 40 e 49 anos conforme estudo anatomopatológico nas categorias de BI-RADS 4 e 5. Recomenda-se maior atenção do Estado para a necessidade de rastreamento precoce, através da mamografia, em mulheres mais jovens.

Palavras-chave: Neoplasias da Mama; Mamografia; Diagnóstico Precoce.

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INTRODUCTION

The breast cancer (BC) is the most common malignant neoplasm in women, being the first in incidence, after skin cancer, and one of the main causes of cancer deaths in women. In the year of 2012 there was 1.7 million new cases of this neoplasm, which represents 25% of all types of cancer diagnosed in women; with the number of 522,000 thousand deaths, around the world.[1] In Brazil, according to the National Cancer Institute, in 2016, it is expected that 57,960 new cases of breast cancer, with an estimated risk of 56.27 cases per 100,000 women in Brazil.[2]

Younger women do not usually consider the risk of developing breast cancer. However, risk factors such as family history (mother and sister); presence of the mutated gene called BRCA1 or BRCA2; exposure to radiation in the region of the chest before 40 years of age; Gail index greater than or equal to 1.7%; alcohol abuse, high consumption of red meat, dense breasts, obesity, sedentary lifestyle, first pregnancy after 35 years, not having breastfed and high level of stress may be associated with an increased incidence of early neoplasia.[3]

Breast cancer is a multifactorial disease, whose risk factors are well known, are related to the disease and get worse with the changes in the life habits. It is possible to list among them age, genetics, family history, the endocrine and reproductive factors, the ingestion of alcoholic beverages, diets richer in fat, obesity, sedentary lifestyle, exposure to ionizing radiation, the premalignant lesions of the breast and the high density of breast tissue. The factors associated with the reproductive life of women and prolonged exposure to endogenous estrogens, such as early menarche, late menopause, nulliparity, use of hormone replacement therapy for more than five years and late age in the first labor work, are among the most important risk factors for breast cancer.[4]

It is considered a cancer of relatively good prognosis if diagnosed and treated in a timely manner. However, the mortality rates for breast cancer remain high in Brazil, in 2013 the incidence was 14 deaths per 100,000 women.[2]

Due to the change in the pattern of quality of life in women and the increasing incidence of CM in this population, some entities recommend mammography before the age of 50 years (as recommended by the Ministry of Health and the National Cancer Institute), aiming at the early diagnosis and, consequently, a better prognosis; since, according to the National Institute of Cancer (INCA), more than 95% of the women whose breast cancer is at an early stage can be cured.[2]

Before this, the Brazilian Society of Mastology supports the implementation of mammography from the age of 40 years, annually, and is justified, since that, the mammographic screening, diagnosing initial cancer stages, collaborates in the increase of the possibility to practice interventions with aesthetic results much more enjoyable than radical procedures with loss of the breast and the need for new reparative surgeries. In addition, when the tumor is discovered late, there may be a higher probability of axillary involvement , which leads to the lymph nodes draining causing beyond the aesthetic deformity, motor damage to the upper limb affected, as well as increasing rates of lymphedema of the arm, bringing permanent disorders to the patient throughout her life.[5]

Thus, an analysis about the benefits of early screening of CM is important in terms of a better survival in young women identified early with this

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neoplasm. To know the incidence of breast cancer (CM) regarding the age range, in the state of Minas Gerais, as well as to evaluate the need for early screening.

METHODOLOGY

It is a descriptive epidemiological study and quantitative type design, whose data were obtained by means of a query to the database of the Information System of Breast Cancer (SISMAMA), provided by the Department of Information Technology of the Healthcare System(DATASUS) [6].

Data were collected on the cases of unilateral mammography and pathologic examination of breast biopsy, in the state of Minas Gerais (MG), relating to the classification BIRA-DS (Breast Imaging Reporting and Data System) and the age of the patients.

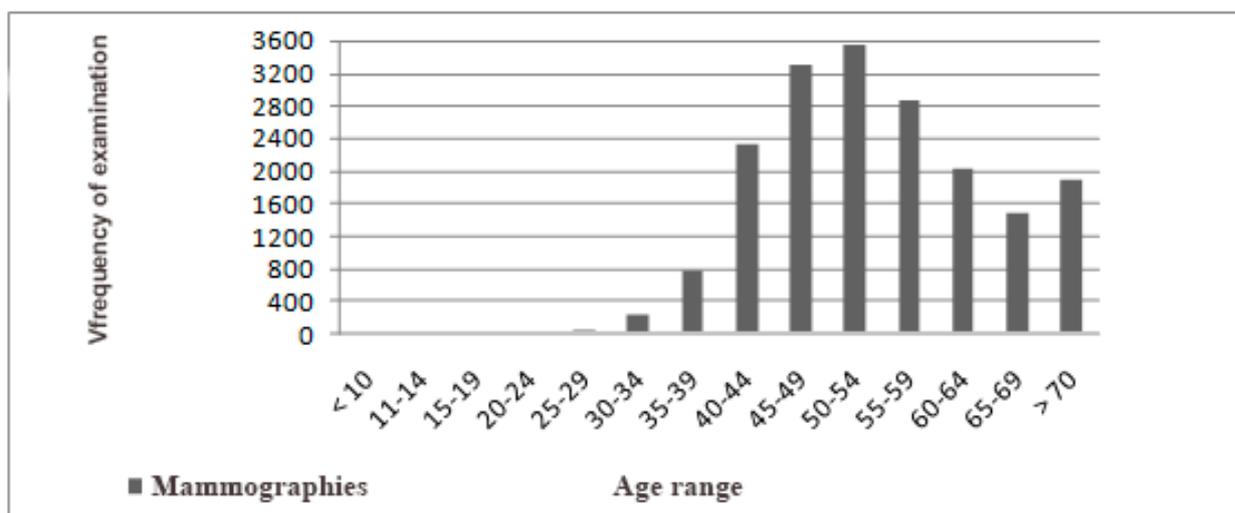There was a comparative analysis of the data contained in the DATASUS, based on the percentage and absolute value. New tables were elaborated, through the Excel® program, version 2013, with the purpose of identifying the prevalence of BI-RADS 4 and 5 in the state of MG, as well as analyze the proportion of cases of malignancy over benignancy in the breast pathological examination, in order to point out actions performed in the region.

Because it is a database of public domain, in accordance with the Resolution no. 510/16, of the National Health Council , it was not necessary to submit the project to the Committee for Ethics in Research.
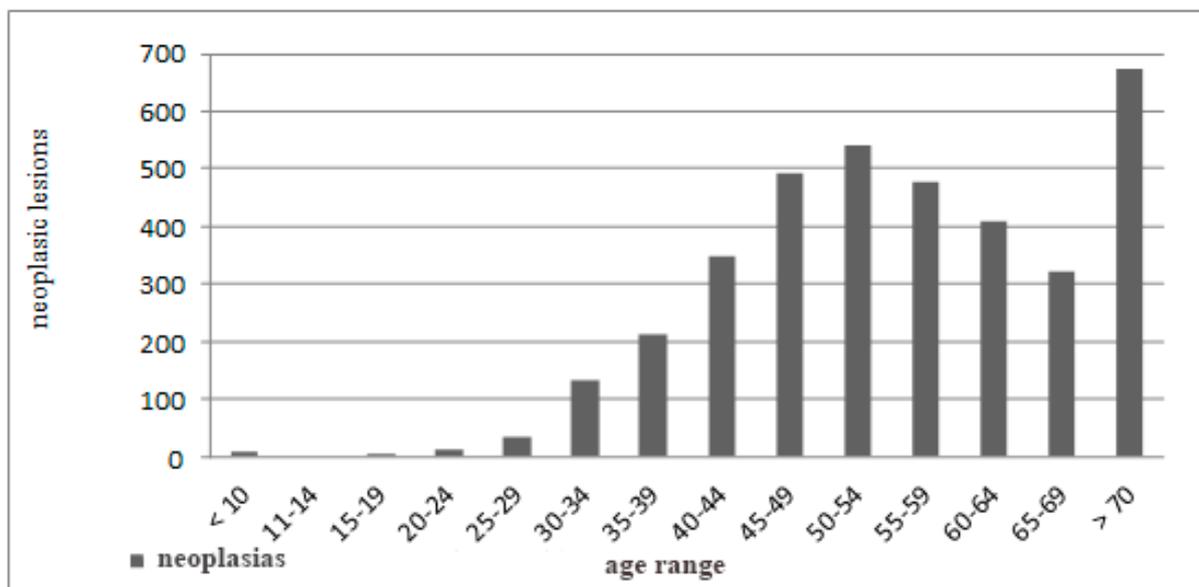
RESULTS

Graph 1 shows the result of the mammographic examinations of BI-RADS 4 and 5, classified according to age group. It is observed that there was a significant increase of 300% in the age group from 35-39 years to 40-44 years. The peak occurred in the age group of 50-54 years and then declined up to 69 years. It was observed a relevant increase at 70 years old.

Graph 1 - Frequency of examinations BI-RADS 4 and 5, Minas Gerais, 2009-2013

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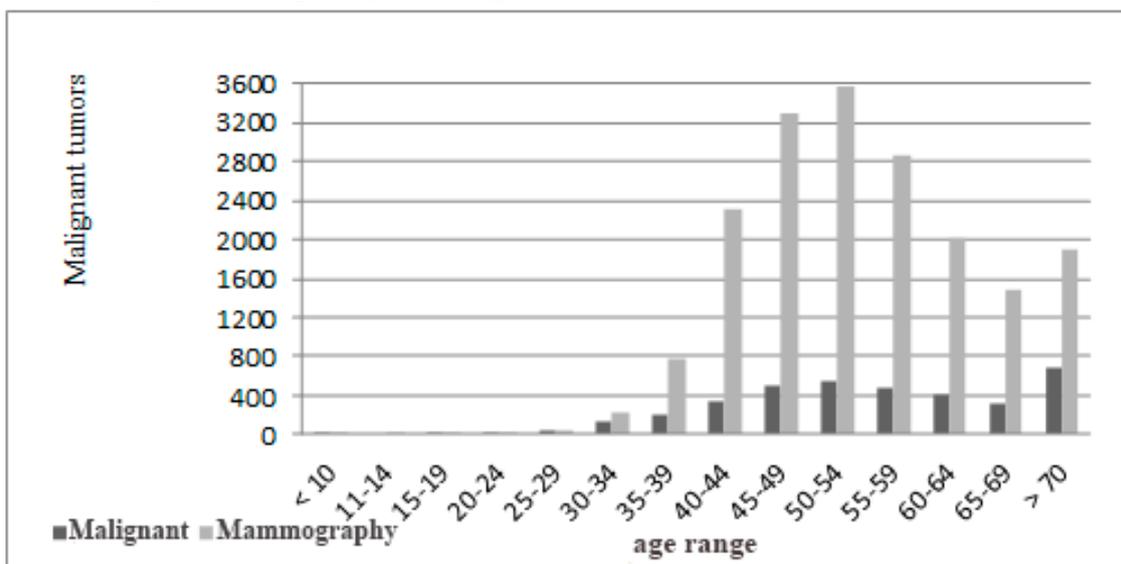da Associação Presente - Agosto de 2017.

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Graph 2 shows the number of malignant lesions confirmed by histopathological examination sorted by age. It is observed that there was an increase of 63% in the age group 35-39 to 40-44, representing the second largest increase among the groups. The number of cases continued to increase concomitantly with the increase in age. It is observed a gradual decline between 55 and 69 years old and a steep increase in the number of cases in the age group of 70 years.

**Graph 2 - Frequency of neoplastic lesions, Minas Gerais, 2009-2013**

Graph 3 shows the correlation among the tests with results BI-RADS 4 and 5 and the anatomopathological results of neoplasia. As it was observed, the peak age range with more cases of cancer was 70 years, but in the mammographic examinations this was not the age group with the highest results of BI-RADS 4 and 5. It was observed that, of these exams, from 40 to 44 years, 16% of the results BI-RADS 4 and 5 were confirmed as cases of neoplasias. This proportion was similar in age ranges of 45-49, 50-54, 55-59. In the age ranges of 60-64 and 65-69 the ratio increased (approximately 21%) and at 70 was 35%.

Graph 3 - Frequency of malignant tumors, Minas Gerais, 2009-2013

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Graph 4 lists the results BI-RADS 4 and 5 found in mammography and the benign pathological anamopathologhical results. Up to 34 years, there were more benign lesions than results of mammograms. Probably, this occurred due to other imaging methods to be more effective in view of the possible lesions in this age group. From 40 to 49 years, approximately 30% of lesions detected were benign, from 50 to 64 the proportion decreased to approximately 20% and continued to decline from 65 years, in 15%.

Graph 4 - Comparison among the results BI-RADS 4 and 5 and benign tumors according to age group, Minas Gerais, 2009-2013.
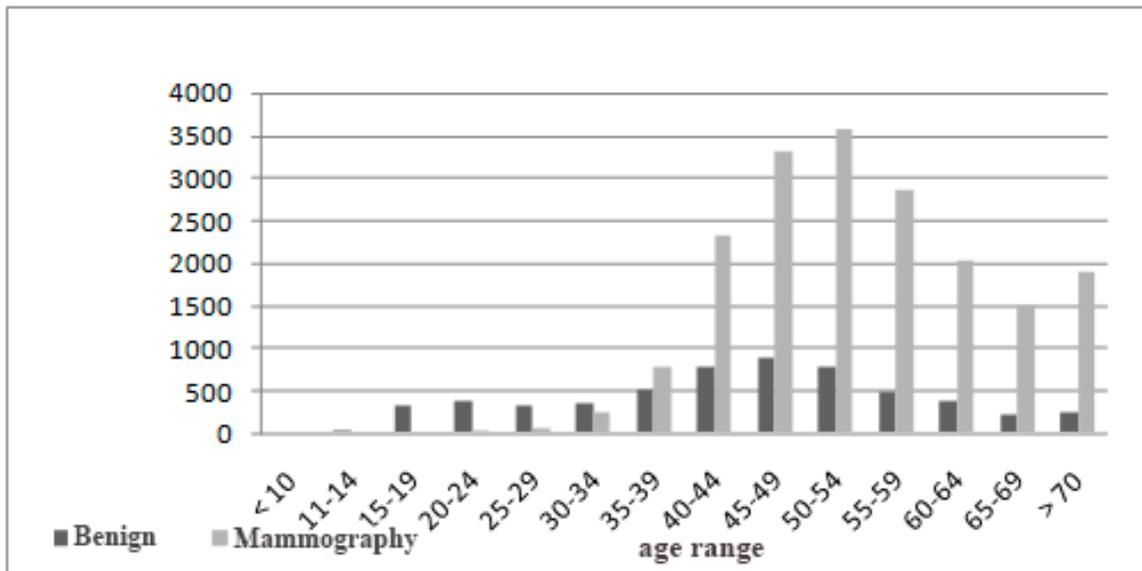
DISCUSSION

The present study corroborates the analysis of Batiston *et al*. (2011)[7] on the ascension of neoplastic lesions according to age group, which indicates a higher rate of variation in incidence of the disease until 50 years of age, and later, this increase occurs more slowly, there may be even a decrease.

The age groups most affected are related to the risk factors for breast cancer, as for example, pregnancy after 30 years and late menopause[8]. Therefore, due to the increase in the number of cases ranging in age from the age of 40 years, the Ministry of Health recommends screening for breast cancer from 50 years with biennial mammography until reaching the age of 69 and clinical examination of the breast annually from the age of 40, being that women at high risk should begin mammograms at 35 years[9].

Mammography before the age of 50 years is not justifiable, since the number of neoplasias increases when women reach the age from 50 to 69 years[10]. However, the present study found that the number of malignant tumors in the age range from 40 to 49 years with BI-RADS 4 and 5 was quite expressive, which draws attention to a new perspective of the possibility of reassessing the need to initiate the screening still early at the age of 40.

The results of this study show the recommendation of the Brazilian Society of Mastology (2013), that suggests the need for early screening. Regarding the age of screening begin at age 50, about 14 thousand cases of breast cancer

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occur annually in women who are between 40 and 50 years of age, which represents 25% of the more than 56 thousand cases referred by INCA in 2014 in Brazil.

According to the guidelines of the National Cancer Institute and the Ministry of Health, these women are outside the program of mammographic screening in Brazil and will be subjected to seek health services only when the tumors are palpable, and often incurable. Women fear breast cancer, which is directly related to the pain and mutilation, however they face the mammogram the possibility of not developing neoplasia.

Mammography is pointed out as the main diagnostic method of breast cancer at an early stage, since it is able to detect changes still not palpable and thereby promoting the early treatment, less aggressive, with better results and reduced adverse events. Several studies show a reduction in breast cancer mortality through mammography screening in mass, however it is also the subject of controversy regarding its effectiveness, especially in women under 50 years old. Despite of this, the mammographic screening has been encouraged and practiced on women from the age of 40 years, and it is still the best method of screening for breast cancer available.[11].

According to the screening that is done currently in Brazil, there is a considerable increase in the number of mammograms that are performed from the age of 40 years. Regarding the categories BI-RADS, there is in category 4 the morphological lesions typical of cancer and point to the realization of biopsy for confirmation. Whereas the category 5 the lesions are highly likely to be malignant. [12]

A previous study showed that in category 4, although most have been confirmed the malignancy through the biopsy, there was a percentage that the result was negative for malignancy[12], which endorses the graph pointing to the possibility of BI-

RADS 4 with benign lesions in lower percentage compared the malignant lesions.

The same was not observed in BI-RADS 5 in which all changes were malignant[12], however as in this graph both forms were evaluated together we cannot say the same as the author, but it is only possible toreach the conclusion that there were benign alterations in mammograms with results BI-RADS 4 and 5 and that they occurred in different age groups having been more common to be diagnosed in the period in which more screening mammograms are performed.

CONCLUSION

It is concluded that despite of the breast cancer screening occur within the age range between 50 and 69 years old, there is an expressive increase in the number of malignant lesions within the range from 40 to 49 years old according to anatomopathologic study in the categories of BI-RADS 4 and 5. It is recommended a better attention from the State to the early screening, through mammography, for younger women.

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11 ISSN 2236-5257

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