

## Breast cancer- statistics on patients in Negotino, Republic of Northern Macedonia in the period from 2017 to 2019

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### Abstract

Breast cancer is one of the most common malignancies in women today. Statistics show that 8 out of 9 women are struggling with this disease. This research was conducted mainly on the female population over the age of 45 in the city of Negotino. The research used data from the Periodic and Annual Reports for identified diseases from PHI Polyclinic Zana Negotino and the reports for malignant diseases submitted to PHI CPH-Veles department of statistics. The analysis of data shows that in the municipality of Negotino in the period from 2017 to 2019 a total of 254 patients were treated for malignant diseases. According to the data, it can be noticed that the percentage of breast cancer patients is high in relation to the total number of patients with all other malignant diseases. In 2017 in Negotino were treated 18 patients, in 2018 20 patients and in 2019 - 19 patients with breast cancer were treated. According to the gender of the patients with malignant disease in the period from 2017 to 2019, the total number of male patients is 112 and 142 female. According to the age data of the patients, most patients with breast cancer are in the group of 46 to 65 years old i.e. total 33 patients, in the group. Early detection and early diagnosis of breast cancer with early detection of metastases are very important in determining the stage and further therapy, as well as reducing the mortality rate.

**Key words:** oncology, breast cancer, statistics

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### I. Introduction

Modern way of life, which is characterized by accelerated technical - technological development, intensive urbanization and a more dynamic pace of life, leads to changes in the physiology of the population. Breast cancer is the most common malignant disease in women which is the second leading cause of cancer death in women. It occurs in every age of life, and its occurrence is influenced by several factors, which also make the disease multifactorial. Its early detection allows 5-year survival at 72-83% of patients, while at an advanced stage the same percentage decreases to 39-44%.

The etiology of breast cancer is complex, multifactorial, still undifferentiated, which according to the changes of the menstrual cycle, pregnancy and lactation, leads to changes in the breasts. However, as with all cancers, the etiology is generally accepted to be due to: endocrine factors (menopause, women who have never given birth, abortions, productive history), genetic factors (family history of benign breast disease, family history of malignant diseases, the woman's past history) environmental factors (physical agents - UV and ionizing radiation, chemical agents - direct and indirect agents that lead to the expression of mutated DNA and altering interactions with the environment, lifestyle - smoking, obesity, alcohol, use of contraceptives, consumption of foods rich in fat, excessive use of caffeine).

Breast cancer, in its early stages, is usually asymptomatic. In order to detect any change in the breasts, it is necessary to know what is normal for the breasts in terms of appearance and consistency. The patient usually notices a painless fortress in the chest area during the self-examination. We distinguish: local, regional and systemic symptoms. The most common local symptoms are: palpable painless nodule, painfully sensitive fortress, indentation of the skin over the tumor, nipple indentation, nipple secretion, breast fixation to the chest surface, breast deformity, breast skin like an "orange peel". Regional symptoms are due to the spread of cancer to regional lymph nodes. Systemic symptoms are manifested due to distant metastases in the body and include: general weakness, malaise, nausea, vomiting, neurological outbursts, bone pain, shortness of breath, jaundice, edema and etc.

Mammography is the most effective, non-invasive, X-ray method for breast examination that uses a special implanted X-ray machine - mammogram. The diagnostic accuracy of this method is estimated at 85-90%. Breast ultrasound is a non-invasive, painless diagnostic procedure. Computed tomography is a non-invasive method that uses special equipment with X-rays to obtain an image of the body from different angles. Magnetic

resonance imaging uses strong magnetic fields to produce incredibly clear and detailed images of the inside of organs and tissues.

The treatment of breast cancer is complex and depends on the type and stage of the disease. Because it is a systemic disease, it uses four oncological modalities: surgery, radiotherapy, chemotherapy, hormone therapy. [1-6]

## II. Material And Methods

The research was conducted mainly on the female population over the age of 45 in the city of Negotino, Republic of North Macedonia.

For the research were used data from the Periodic and Annual Reports for identified diseases from PHI Polyclinic Zana Negotino and the Reports for Malignant diseases submitted to the PHI CPH-Veles department of statistics.

The total number of patients with malignant diseases per year was followed, the number of total patients with breast cancer in the female population, as well as the number of patients by age in the period of three years from 2017 to 2019 for the municipality of Negotino. The data were analyzed using an analytical method and presented in tabular and graphical form.

## III. Results And Discussion

The analysis of data shows that in the municipality of Negotino in the period from 2017 to 2019 a total of 254 patients were treated for malignant diseases.

*Table 1. Total number of treated patients of malignant diseases in a period 2017-2019*

Year	2017	2018	2019	Total
Malignant diseases	87	85	82	254

*Table 2. Total number of treated breast cancer patients for the period 2017-2019*

Year	2017	2018	2019	Total
Breast cancer	18	20	19	57

*Table 3. Total number of treated malignant patients by gender*

Gender	2017	2018	2019	Total
Men	37	38	37	112
Women	50	47	45	142

According to the data from the tables, it can be noticed that the percentage of breast cancer patients is high in relation to the total number of patients with all other malignant diseases. The number of patients in the female population is higher than in the male population. Breast cancer occurs predominantly or only in the female population.

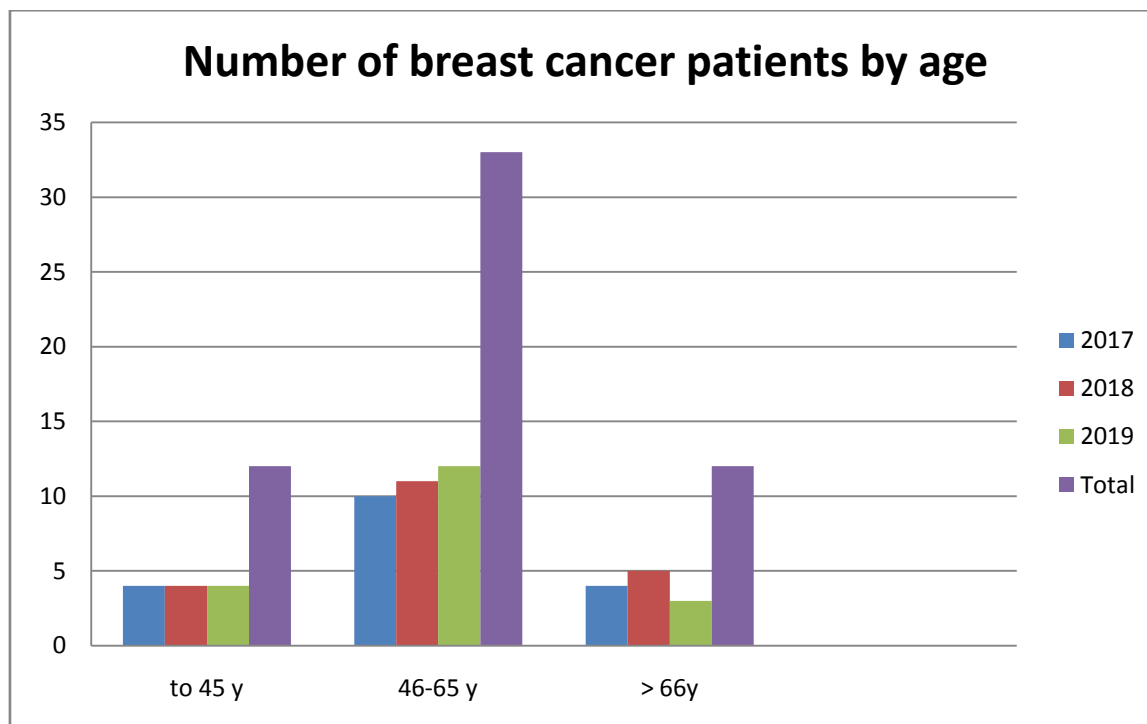
Out of total 57 patients with breast cancer, in 2017 in Negotino were treated 18 patients, in 2018 - 20 patients and in 2019 - 19 patients.

According to the gender of the patients with malignant disease in the period from 2017 to 2019, the total number of male patients is 112 and 142 female.

According to the age data of the patients, most patients with breast cancer are in the group of 46 to 65 years old ie total 33 patients. 12 patients were on age to 45 and over 66, in each group.

*Table 4. Number of breast cancer patients by age*

Age	2017	2018	2019	Total
to 45 years	4	4	4	12
from 46-65 years	10	11	12	33
over 66 years	4	5	3	12



Graph 1. Graphic display of table data 4

#### IV. Conclusion

Breast cancer is a systemic disease, with a variety of symptoms that need to be recognized in time, in order to be able to diagnose the disease and thus apply appropriate therapy. The disease requires long-term and complex treatment with the implementation of appropriate plans and programs. The measures to be taken in that regard are: health education and regular breast examinations. Timely detection of certain abnormalities, infections, or any other cause that may lead to impaired patient health with the appearance of premalignant and malignant lesions is required.

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