

Research Article

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The Relationship of Molecular Subtypes to Breast Cancer Survival in Arifin Achmad Pekanbaru Hospital, 2014-2023

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Abstract

Breast cancer is a malignancy of breast tissue originating from the ductal epithelium or its lobules. Its study aims to know characteristics among breast cancer patients in Arifin Achmad hospital from 2017 to 2021.

Material and methods: This is a descriptive study. The data was collected from medical record and processed with descriptive methods.

Result: The most cases of breast cancer are in the age range of 41-50 years, as much as 39.56%. While the age >60 years as much as 10.37% and <30 years as much as 2.29%. 62.04% of patients have not experienced menopause when diagnosed with breast cancer. Most of the patients came to the hospital with local advance stage conditions (stages 2-3) as many as 49.85%, early stage (stage 1) 35.59% and advanced stage (stage 4) as much as 14.56%. Immunohistochemical examination obtained as many as 572 samples (43.60%) luminal B, 5.11% luminal A, 21.88% type Her2, 8.23% Type Triple negative. Based on histopathological examination, 59.91% of the samples were invasive ductal carcinoma and the highest grade was grade III, which was 48.70%.

Keywords: Breast cancer; Arifin Achmad Hospital; Patient characteristic.

Introduction

Breast cancer is a malignancy in the breast tissue originating from the duct epithelium and lobules. Breast cancer occupies the first position of cancer in women in the world in 2020 based on data from Global Burden Cancer (GLOBOCAN). There are 2.26 million (24.5%) new cases of breast cancer throughout the world. This number beats lung cancer cases which previously ranked first in the world. In Indonesia, there will be more than 200 thousand new cases in 2022, and it also ranks first in cancer in women [1,2].

The incidence of breast cancer is increasing across all ethnicities in the United States, and Estrogen-positive Breast Cancer is increasing across nearly all ethnicities. Up to 80% of invasive breast cancers are infiltrative ductal carcinoma. Invasive lobular carcinoma occupies the second position, the rest are noninvasive carcinoma in situ [3].

Materials and methods

In this study, the sample was all breast cancer patients who received treatment at the Surgical Oncology Polyclinic from 2014 to 2023. Data was taken from medical records and processed

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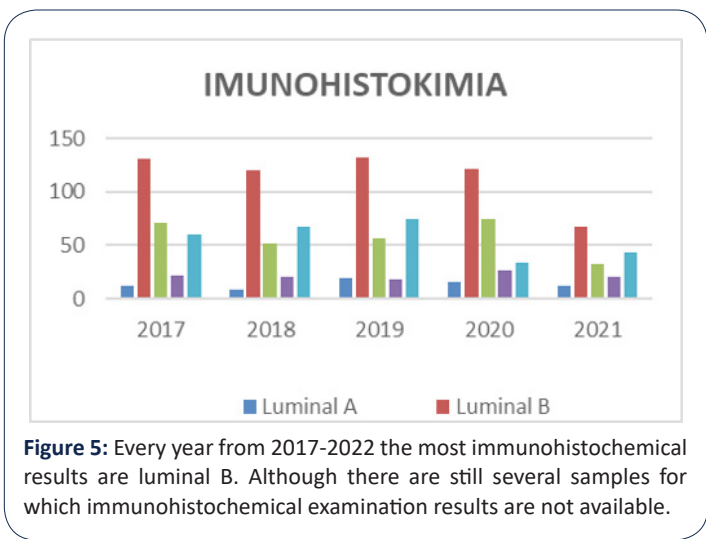
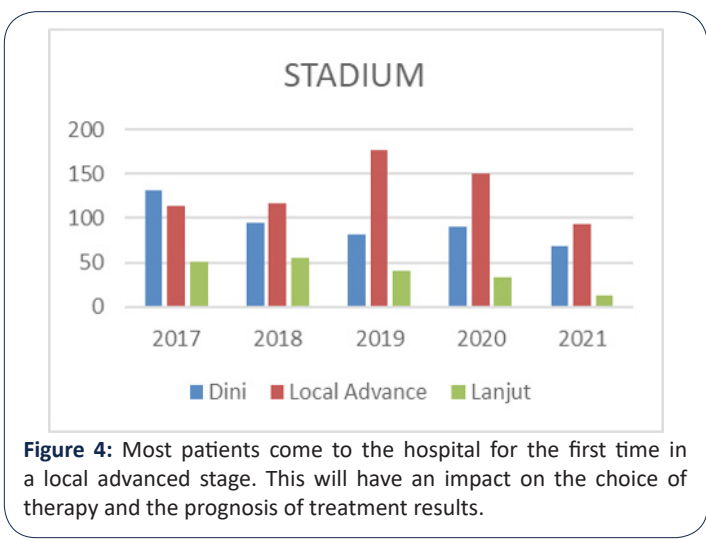
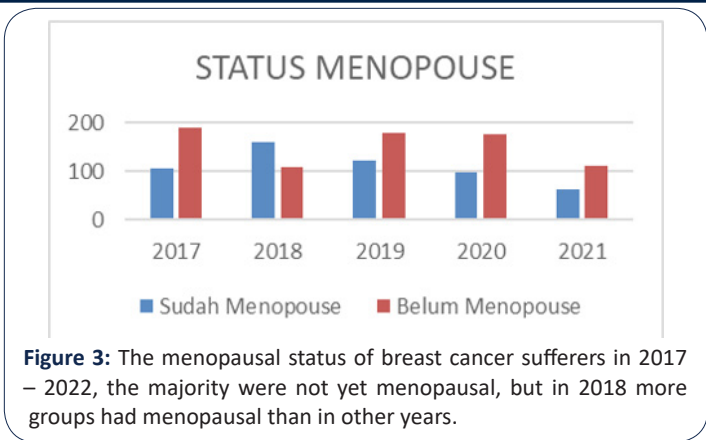
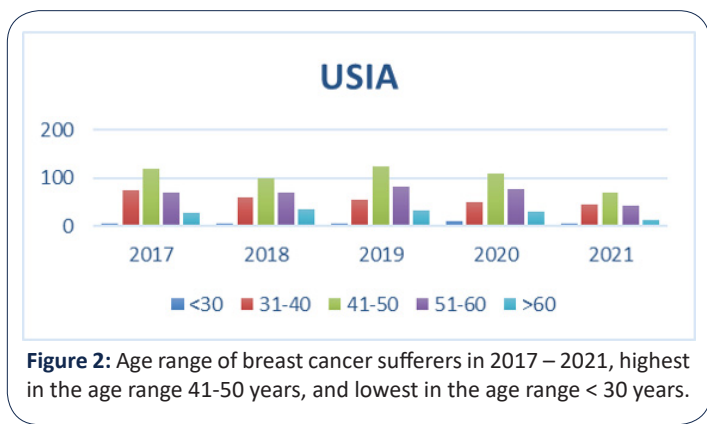
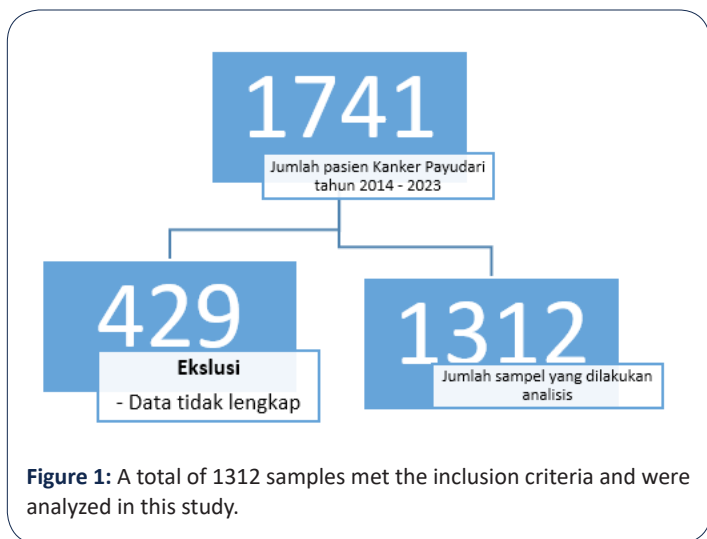
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using descriptive methods. The exclusion criteria in this study were patients whose medical record data was incomplete.

Research results

The total number of samples from 2014 to 2023 is 1741 samples. 429 samples were excluded, so 1312 samples underwent data analysis (Figure 1). The exclusion criteria for this study include incomplete medical record data.

Of a total of 1312 patients, the most cases of breast cancer were in the age range 41-50 years, as much as 39.56%. Meanwhile, age >60 years was 10.37% and <30 years was 2.29%. 62.04% of patients had not experienced menopause when diagnosed with breast cancer. Most of the patients came to the hospital with conditions in the local advanced stage (stage 2-3), namely 49.85%, early stage (stage 1) 35.59% and advanced stage (stage 4) 14.56%. Immunohistochemical examination revealed 572 samples (43.60%) luminal B, 5.11% luminal A, 21.88% Her type 2, 8.23% Triple negative type. Based on histopathological examination, 59.91% of samples were invasive ductal carcinoma and the highest grading was grade III, namely 48.70%.



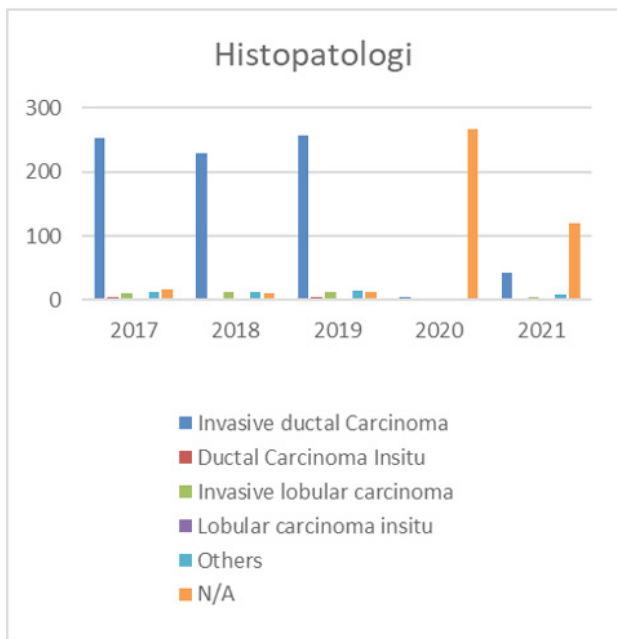


Figure 6: The appearance of invasive ductal carcinoma was the most common histopathology finding in 2017 to 2019. In 2020 and 2021, most of the histopathology results stored in medical record data were not recorded so the data could not be analyzed.

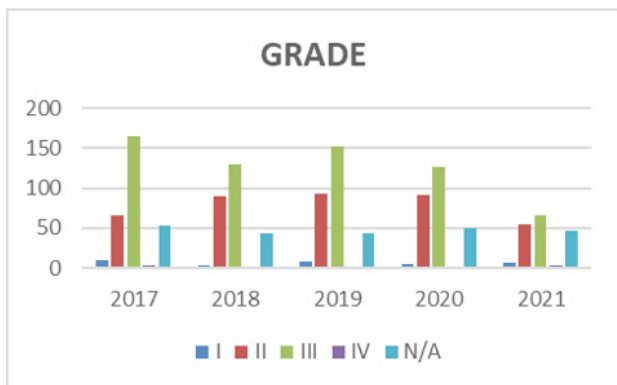


Figure 7: From the results of histopathological examination, patients presented with Grade III and very few histopathological results showed initial grade (grade I).

Discussion

Breast cancer can be diagnosed through screening or clinical symptoms that appear such as pain, palpable lumps which are confirmed by clinical examination. Breast cancer screening in healthy women is associated with the detection of tumors that are smaller in size, have a low probability of metastases, and allow for breast conserving and limited axillary lymph node surgery, and rarely require chemotherapy [4].

The risk of breast cancer increases in women aged 50-69 years in Poland, and only 2-7% of all cases are diagnosed at age less than 40 years. Although breast cancer has a low risk after the third decade, namely around 0.04% per year, it remains the most common malignancy in women aged less than 35 years [5]. The Grell Cooperative study states that the overall incidence of breast cancer is higher at ages 15-34 years compared to 35-39 year olds.

The incidence also differs based on the histopathological picture, where ductal carcinoma is more common than lobular and mixed carcinoma [6]. This picture is also the same as the results of this research from 2017 to 2019. For 2020 and 2021, most of the histopathological examination results were not recorded due to the pandemic conditions covid 19.

The number of breast cancer cases increased from 2017 to 2019. However, there was a decrease in the number of breast cancer cases at Arifin Ahmad Pekanbaru Regional Hospital which also decreased in 2020 and 2021, this was due to the Covid 19 pandemic conditions, where patients coming to the polyclinic experienced a decrease.

Conclusion

Breast cancer cases are the most cancer cases in the world. At Arifin Ahmad Hospital Pekanbaru, the number of breast cancer cases is quite large. This research provides an overview of the number and age distribution of breast cancer sufferers at Arifin Ahmad Hospital. Most sufferers come to the hospital in a local advanced condition. So, efforts by health workers and the government are needed to re-encourage early breast cancer screening.

The limitation of this research is that data collection is still not good, so a lot of data cannot be analyzed. Especially during the Covid 19 situation, recording and collecting data on breast cancer patients was very poor, this resulted in a lot of data that could not be analyzed, especially in recording and collecting the results of histopathological examinations.

It is hoped that through this research, in the future the system for recording and collecting data on breast cancer patients will be even better, so that it can become a representative data registry for future research.

Declarations

Funding: This research did not receive external funding.

Conflict of interest: There is no conflict of interest in this research.

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