Breast Cancer Patients at Dr. Zainoel Abidin Hospital Banda Aceh

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ABSTRACT

Keywords:
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Breast cancer was the most common cancer-related death in women. Epidemiology reports the incidence to increase related to stage, histopathologic and subtype. Epidemiology reports in Aceh of breast cancer patients treated at Zainoel Abidin Banda Aceh Hospital are still limited. We want to report breast cancer patient profiles in Aceh. This study uses a quantitative descriptive approach by analyzing medical data of breast cancer patients recorded during 2021. The variables analyzed include age, age, location of cancer, histopathology type, grading and subtype of breast cancer performed. In this study, it was found that patients diagnosed with breast cancer were aged 36-50 years with images of 53 patients (37.86%) patients aged over 50 years and 14 (10%) patients aged under 36 years. The most common histopathology types were invasive ductal carcinoma 64%, and invasive lobular carcinoma 36%. Histopathology grading of breast cancer obtained the highest grade with grade III as many as 79 patients (56%). The most common subtype of breast cancer was triple negative. Breast cancer patients were most common at the age of 50 years old, histopathology was invasive ductal carcinoma, and the most common subtype of breast cancer was Triple Negative.

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Introduction

Breast cancer Global epidemiology shows that 2.3 million new cases of breast cancer occurred in 2020 (Arnold et al., 2022; Lei et al., 2021; Smolarz et al., 2022). The incidence of breast cancer averaged 24.5%, with the mortality rate for breast cancer reaching 15.5%, the highest incidence of death in the world in 2020 (Lei et al., 2021). 30.8% of women in Indonesia have a risk for breast cancer. Data from 4 years in Banung reached 913 people with cases of breast cancer. The average age is 49.5 years. The average age at initial diagnosis of breast cancer is 42.4 years. Approximately 64.5% were diagnosed with stage III-IV, and 75.1% underwent mastectomy surgery, 47.3% underwent palliative therapy (Azhar et al., 2020; Chhatre et al.,

2021; Disis et al., 2023; Phillips et al., 2023). For the Aceh region, especially Banda Aceh, there are no definite figures regarding breast cancer patients undergoing treatment at RSUZA. Therefore, this study is an initial study that aims to identify the profile of breast cancer patients treated at RSUD Zainoel Abidin Banda Aceh in the Aceh Region.

In the Aceh region, particularly Banda Aceh, there is a lack of definitive data regarding breast cancer prevalence and treatment. Therefore, this study is crucial as it aims to fill this gap by identifying the profile of breast cancer patients treated at RSUD Zainoel Abidin, Banda Aceh. The urgency of this research stems from the limited information available on breast cancer in Aceh, which hinders the development of effective healthcare strategies and interventions.

This research introduces novel insights into breast cancer epidemiology in Aceh, contributing to scientific development by providing detailed data on the demographic, histopathological, and molecular characteristics of breast cancer patients in this region. Understanding the unique profile of these patients is essential for tailoring local healthcare responses, improving early detection, and developing targeted treatment strategies.

The objectives of this research are to: (1) identify the demographic characteristics of breast cancer patients in Banda Aceh, (2) examine the histopathological and molecular subtypes of breast cancer in this population, and (3) provide a baseline for future studies on the prevalence and treatment outcomes in this region.

A review of previous studies shows that breast cancer is a significant health issue in Indonesia, with high morbidity rates observed in areas like Bandung (Azhar et al., 2020). However, few studies have focused specifically on Aceh, making this research a crucial contribution to understanding the regional patterns of the disease.

This study was conducted at Dr. Zainoel Abidin General Hospital, Banda Aceh, chosen due to its prominent role in healthcare delivery in the region. The hospital provides a comprehensive range of services to the local population, including breast cancer diagnosis and treatment, making it an ideal setting for this research. Data collection for this study was done from January to December 2021, and it aims to provide a comprehensive analysis of breast cancer prevalence and patient profiles in this area.

Research Method

This research employs a quantitative descriptive approach, aiming to analyze the characteristics of breast cancer patients treated at Dr. Zainoel Abidin General Hospital (RSUDZA) in Banda Aceh. The study is based on secondary data obtained from medical records of breast cancer patients diagnosed and treated during the year 2021. This retrospective study provides valuable insights into the demographic, histopathological, and molecular features of breast cancer patients in the region.

The research was conducted over a period of one year, from January 2021 to December 2021. The population for this study includes all breast cancer patients treated at RSUDZA during this time frame. A total of 120 patients' medical records were selected for analysis, based on the inclusion criteria of being diagnosed with breast cancer and receiving treatment at RSUDZA during the research period.

The inclusion criteria for the sample were:

- Female patients diagnosed with breast cancer at RSUDZA between January and December 2021.
- Patients who have complete medical records, including demographic details, histopathological data, and subtype classification.
- Patients with confirmed diagnosis and treatment data available for analysis.

Exclusion criteria included:
- Patients with incomplete medical records.
- Patients diagnosed with other forms of cancer or co-morbidities that interfered with the breast cancer diagnosis.

Data collection was carried out by accessing the medical records stored in the hospital's database. The information extracted included demographic data (age, location), histopathological diagnosis, cancer grading, and molecular subtypes. No questionnaires or interviews were used in this study, as it relied solely on secondary data from the medical records.

For data analysis, descriptive statistics were used to summarize the data. The analysis included frequency distributions and percentage calculations for demographic characteristics, histopathological types, cancer grades, and molecular subtypes. This approach provides a comprehensive overview of the breast cancer patient profile at RSUDZA and allows for comparison with findings from other studies.

Result and Discussion

Breast cancer characteristics at Zainoel Abidin General Hospital in Table 1 and Table 2

Table 1. by age

Variable	Frequency (N)	Percentage (%)
<36 years	14	10%
36-50 years	73	52,14%
> 50 years	53	37,86%
	140	100%

73 patients (52.14%) diagnosed with breast cancer were aged between 36 and 50 years, 53 patients (37.86%) were over 50 years old, and 14 patients (10%) were under 36 years old (Table 1).

A description of the types of histopathology in breast cancer patients at Dr. Zainal Abidin Hospital Banda Aceh during the 2021 period can be seen in Table 2

Table 2. Types of histopathology in breast cancer patients

Variable		Frequency (N)	Percentage (%)
Histopathology types			
	Invasive ductal carcinoma	89	64%
	Invasive lobular carcinoma	51	36%
		140	100%

Based on Table 2, the most common histopathological type of breast cancer was invasive ductal carcinoma, which was found in 89 patients (64%). Invasive lobular carcinoma was the second most common type, with 51 patients (36%). These findings highlight the prevalence of these two subtypes of breast cancer among the patients at Dr. Zainoel Abidin General Hospital, Banda Aceh, during the study period.

Table 3 shows the grading of breast cancer patients at Zainoel Abidin General Hospital, Banda Aceh, in 2021.

Table 3. Grading of breast cancer

Variable		Frequency (N)	Percentage (%)
Grading			
	Grade I	37	26%
	Grade II	24	17%
	Grade III	79	56%
		140	100%

Table 3 shows that 79 patients (56%) diagnosed with breast cancer were in Grade III. Thirty-seven patients (26%) were in Grade I, and 24 patients (17%) were in Grade II.

Table 4. Subtypes of breast cancer

Variable		Frequency (N)	Percentage (%)
Sub type			
	Luminal A	37	26%
	Luminal B	24	17%
	Triple negative	49	35%
	Tipe HER 2	30	21%
		140	100%

49 patients (35%) had the triple-negative breast cancer subtype. Thirty patients (21%) were diagnosed with HER2 type, 37 patients (26%) had the luminal A subtype, and 24 patients (17%) had the luminal B subtype.

Discussion

The most common age at dr. Zainoel Abidin Hospital Banda Aceh, breast cancer patients were patients aged 36-50 years, which is 73 patients (52.14%). This is in accordance with another study report from Azhar et al. (2020), which found that 913 women were diagnosed with breast cancer with an average age was 49.5 years (Azhar et al., 2020). One in eight invasive breast cancers is found in women under the age of 45. 2-3 patient IBCs were found in women aged 55 years (Brunicardi et al., 2019).

Table 2 most histopathological was invasive ductal carcinoma at 68%, followed by invasive lobular carcinoma at 32%. For the type of histopathology, the most common was Invasive Carcinoma Without Specific Type at 60 (81.04%) compared to the others. This is in accordance with the literature that IBC was the most common type of breast cancer compared to other types (75 - 80%) (Rakha & Tozbikian, 2022; Surabhi et al., 2023). In this study, we know that patients diagnosed with breast cancer as many as 79 patients (56%) were in Grade III, 37 patients (26%) were in Grade I, and 24 patients (17%) were in Grade II. Another study

conducted by Furqan and Pohan (2020) explained that the highest histopathology grading is in grade 2, which is 53 people (40.5%). However, another study conducted by Alif et al. showed the highest grading was grade 1 tumour (58.71%) (Subiyanto et al., 2021).

In this study, it was found that 49 patients (35%) had triple negative breast cancer subtypes; for HER 2 type as many as 30 patients (21%); for luminal A subtype as many as 37 patients (26%) and luminal B as many as 24 patients (17%). This is different from the study conducted by Furqan and Pohan (2020) the study showed that the highest breast cancer subtype was luminal A. Another study also found the second highest subtype was triple negative and luminal b (Sadaps et al., 2020; Subiyanto et al., 2021; Zhao et al., 2020).

Conclusion

The findings indicate that the majority of breast cancer patients in this study were aged between 36 and 50 years. The most common histopathological type was invasive ductal carcinoma, followed by invasive lobular carcinoma. Additionally, the majority of patients had Grade III tumors, with triple-negative breast cancer being the most prevalent subtype. The results of this study contribute valuable information on the profile of breast cancer patients in Banda Aceh, filling a gap in regional data and providing a foundation for future research. This data will be crucial in enhancing early detection programs, guiding treatment strategies, and informing healthcare policies in the region.

Recommendations: Based on the findings of this study, several recommendations are proposed to improve breast cancer management and research in Banda Aceh. First, local healthcare authorities should prioritize the implementation of early breast cancer detection programs, particularly targeting women in the 36-50 age group, as this demographic shows the highest incidence of breast cancer. Additionally, further research should be conducted to explore the relationship between histopathological types and molecular subtypes to better understand treatment outcomes, especially for patients diagnosed with triple-negative breast cancer, which was found to be the most common subtype in this study. Finally, more comprehensive studies are needed to investigate the risk factors, prevention strategies, and treatment options specific to the Aceh region. This would help inform healthcare policies and enable the development of targeted therapeutic strategies to improve patient outcomes.

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