



## Research Article

# Level of Knowledge of Early Detection of Breast Cancer in USU Faculty of Medicine Students, 2018–2019

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### Abstract

**Background:** Breast cancer is a malignant tumor that grows in breast tissue can come from components such as fat tissue, blood vessels. Early detection is one of the breast cancer prevention efforts that can help reduce the incidence of breast cancer. There are three ways to prevent breast cancer including primary prevention, secondary prevention and tertiary prevention. **Objective:** To determine the level of knowledge regarding breast cancer prevention among students of the Faculty of Medicine, Universitas Sumatera Utara for the 2018–2019 academic year. **Methods:** This study uses a descriptive type of research with a cross-sectional approach. The population in this study amounted to 495 students and the sample to be carried out in this study was 83 students of the Faculty of Medicine, Universitas Sumatera Utara 2018–2019 who met the inclusion criteria. Data analysis used univariate analysis with frequency distribution table. **Results:** The level of knowledge of USU Faculty of Medicine 2018–2019 students was 61.5% good, 38.5% sufficient, and there were no students who had a low level of knowledge. **Conclusion:** Most medical students at the Universitas Sumatera Utara have a good level of knowledge about breast cancer prevention. This indicates a generally adequate awareness, which is essential for early detection and effective prevention efforts.

**Keywords:** breast cancer, early detection, level of knowledge

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## 1. Introduction

Breast cancer is one of the most common types of cancer in women. Breast cancer is a malignant tumor that grows in breast tissue. Every year more than 185,000 women are diagnosed with breast cancer. The incidence of this disease is increasing in developed countries. Approximately 43,500 breast cancer deaths each year, making this disease the second leading cause of death after lung cancer in women in the United States [1].

*Global Burden of Cancer (GLOBOCAN)* released data in 2020 that female breast cancer has surpassed lung cancer as the most frequently diagnosed cancer with an estimated 2.3 million new cases (11.7%) while lung cancer (11.4%) [2]. Breast cancer in Indonesia is ranked first with a frequency of 18.6% with an incidence rate in Indonesia of 12/100,000 women while the percentage of breast cancer in men is 1% [3].

From these data, it can be seen that breast cancer cases are very high, therefore it is very important to know the risk factors and early detection methods for breast cancer because it can reduce breast cancer morbidity and mortality. Many breast cancer sufferers have been found at a young age, not even a few teenage girls aged fourteen years suffer from tumors in their breasts, where tumors can potentially become cancer if not detected early [4]. Breast cancer screening can be done early on. Detection of cancer can be done with breast self-examination or known as BSE. This action is important because almost 85% of breast abnormalities are actually discovered by the patient for the first time through proper breast self-examination [5].

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## 2. Methods

This study uses a descriptive type of research with a cross-sectional approach, this research is also called a transversal research with a point time approach model approach or research conducted by approach, observation, or data collection all at once. Data collection is done by using a questionnaire. The research was conducted from September 2021 to November 2021. Research data collection will be carried out in August 2021 at the Faculty of Medicine, Universitas Sumatera Utara, North Sumatra, Indonesia.

## 3. Results

The total number of samples taken from September 2021 to November 2021 which has met the criteria is 221 respondents.

**Table 1.** Distribution of Student Characteristics of USU Faculty of Medicine 2018-2019

Characteristics	Frequency (f)	Percentage (%)
Age (years)		
18	6	2.7
19	26	11.8
20	91	41.2
21	77	34.8
22	20	9.0
23	1	0.5
Total	221	100.0
Gender		
Man	78	35.3
Woman	143	64.7
Total	221	100.0
Illness History	41	18.6
There is	180	81.4
Total	221	100.0
Stamp		
2018	121	54.8
2019	100	45.2
Total	221	100.0

Based on table 1, it is found that in this study the majority of respondents aged 20 years (41.2%), followed by age 21 years (34.8%), age 19 years (11.8%), age 22 years (9.0%), age 18 years (2.7%), and minorities at age 23 years (0.5%). Based on gender, the majority of respondents were female as many as 144 female students (64%), and male students 78 students (35.3%). There were 41 people (18.6%) who had a family history of cancer and 180 people (81.4%) had no family history of cancer. There were 121 students (54.8%) with 2018 stamps and 100 students with 2019 stamps (45.2%).

**Table 2.** Distribution of Knowledge Level of USU Faculty of Medicine Students 2018-2019

Knowledge	Frequency (f)	Percentage (%)
Good	136	61.5
Enough	85	38.5
Not enough	0	0
Amount	221	100.0

In table 2 above, it can be seen that the level of knowledge about early detection of breast cancer shows that most of the respondents have a good level of knowledge as many as 136 students (61.5%), and a sufficient level of knowledge as many as 85 students (38.5%), and not there are 2018-2019 USU Faculty of Medicine students who have a low level of knowledge about early detection of breast cancer.

#### 4. Discussion

This study uses a descriptive type of research with a cross-sectional approach, this research is also called a transversal research with a point time approach model approach or research conducted by approach, observation, or data collection all at once. Data collection is done by using a questionnaire. The research was conducted from September 2021 to November 2021. Research data collection will be carried out in August 2021 at the Faculty of Medicine, North Sumatra.

The results of this study indicate that the level of knowledge of early detection of breast cancer from USU Medical Faculty students 2018-2019 is that the majority of students have good knowledge and some with sufficient knowledge and none of them have less knowledge, this can be caused because the educational background of the respondents is medical students who have get material from lectures and information that is very easy to access via the internet, because a person's level of education greatly influences thinking skills, the higher a person's education, the easier it is for someone to capture information [6].

According to A Joint Committee on Terminology in Health Education of the United States, health education is a learning experience to influence knowledge, attitudes and behavior in individuals or communities related to health [7]. In research, with the title the effect of health education with booklets on knowledge and attitudes about early detection of breast cancer in women of childbearing age (WUS) in Surakarta, Central Java, statistically significant results were found between the control group (without treatment) and those who received the booklet [8]. The results obtained from this study were that the Wus who gained knowledge through booklets had a higher mean value than the control group (without treatment).

This research can be related to the knowledge of 2018-2019 USU Medical Faculty students who can either provide education or knowledge about early detection of breast cancer to the community, because it can be seen in the study that there is an influence on people's attitudes if education or knowledge exists [9-11]. that thereis a significant relationship between knowledge about early detection of breast cancer and behavior of early detection of breast cancer. With good knowledge can make someone to do early detection of breast cancer.

#### 5. Conclusion

Based on the research conducted on the level of knowledge regarding early detection of breast cancer among students of the Faculty of Medicine, Universitas Sumatera Utara from the 2018 and 2019 cohorts, it can be concluded that the majority of respondents were in their early twenties, with a higher number from the 2018 cohort. Most participants were female, and a portion reported a family history of cancer. Overall, the findings indicate that the students generally possessed a good level of knowledge about early breast cancer detection, with the remainder having an adequate understanding. Notably, none of the respondents demonstrated a low level of knowledge, reflecting a positive awareness among medical students about this important health issue.

#### 6. Data Availability Statement

The datasets generated and analyzed during the current study are not publicly available due to privacy and ethical considerations but are available from the corresponding author upon reasonable request.

#### 7. Ethical Statement

This study was approved by the Research Ethics Committee of Universitas Sumatera Utara.

#### 8. Author Contributions

All authors contributed to the design and implementation of the research, data analysis, and finalizing the manuscript.

#### 9. Funding

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#### 10. Conflict of Interest

Authors declares no conflict of interest.

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