Description of Characteristics of CervicalCancer Patients at Awal Bros Batam Hospital in 2020-2022

ABSTRACT

Aims: This research aims to determine the characteristics of cervical cancer patients at Awal Bros Hospital, Batam, in 2020-2022. This research used medical records from a sample of 97 people
Methodology: This research is non-experimental with a retrospective analytical descriptive design using secondary data from medical records of cervical cancer patients at Awal Bros Hospital, Batam, in 2020-2022 in August 2023. The sample in this study was selected from a population that met the inclusion and exclusion criteria, namely 97 people. The research instrument used in this study was medical records of cervical cancer patients at Awal Bros Hospital, Batam, in 2020-2022. Data was processed using the Statistical Product and Service Solution (SPSS) program with univariate tests. The results of the analysis will be presented as a frequency table and percentage diagram.
Results: From the research results, most cervical cancer patients were 36-50 years old, 54 people (55.7%), marital status was 96 people (99%), 51 people had a history of multiparity 3-4 times (52.6%), 49 people (50.5%) had a high school education, 72 people (74.2%) worked as housewives, 52 people had complaints of bleeding (53.6%), and 70 people had a histopathological picture of squamous cell carcinoma. (72.2%), the degree of differentiation was reasonable. As many as 43 people (44.3%)
Conclusion: This study concludes that cervical cancer patients at Awal Bros Batam Hospital in 2020-2022 were mainly aged 36-50 years, with marital status, married, a history of 3-4 times multiparity, had a high school education, and worked as a housewife. They had complaints of bleeding with histopathological features of squamous cell carcinoma and a good differentiation degree.

Keywords: Human Papilloma Virus, squamous cell carcinoma, parity, degree of differentiation.

1. INTRODUCTION

Cervical cancer is a malignancy in the cervix caused by Human Papillomavirus (HPV) types 16 and 18. The International Agency for Research on Cancer (IARC) reported that in 2018, there were 570,000 incidents of cervical cancer, which caused 311,000 deaths. Cervical cancer itself is the fourth most common cancer that occurs in women in 145 countries globally [1.2]. Basic Health Research (Riskesdas) explained in 2016 that the cancer prevalence rate in Indonesia was 1.4% per 1,000 people, equivalent to around 330,000 people. Global Cancer Statistics (Globocan) also reported that in 2020, Indonesia was the country with the highest number of cervical cancer cases in Southeast Asia. Every day there are 100 newly diagnosed cases of cervical cancer which cause 57 Indonesian women to die. If we look at the cervical cancer screening program in Indonesia, only 5% of women have received cervical cancer screening. Thus, cases of cervical cancer in Indonesia are still high [2,3]. The incidence of cervical cancer in Indonesia often causes death because most cancer patients are only detected at an advanced stage. In the early stages of cervical cancer, it does not show any striking symptoms or even no symptoms. However, in the advanced stages of cervical cancer, it causes various symptoms such as: bleeding during sex, bleeding after menopause, abnormal vaginal discharge, and pain in the lower back [1].

Early detection or screening methods can reduce the death rate from cervical cancer. Some methods can be used are: Pap smear examination and Visual Inspection with Acetic Acid (IVA). The IVA test is a procedure of direct observation of the cervix after applying a 3-5% acetic acid solution to the cervix. This test is an alternative screening examination because it is easy for medical personnel to do. Meanwhile, a Pap smear is a cytology procedure used to observe cells swept from the surface of the cervical epithelium and then smeared on a glass slide. So, it can be observed under a

microscope. The function of the Pap smear test is to identify precancerous lesions to provide therapy that can prevent the development of cervical cancer [5-6]

Although HPV types 16 and 18 are the leading causes, other factors also contribute to the incidence of cervical cancer. These factors include socio-demographic variables such as age, occupation, highest level of education, and socio-economic status. As well as factors related to sexual activity, such as age at first sexual intercourse, sexual partners with a history of venereal disease, and a history of multiple sexual partners. Apart from that, parity, poor genital hygiene, long-term use of hormonal contraceptives, smoking, and immunosuppressive disorders can also be other factors that trigger cervical cancer [7-9]. Based on the background above, researchers are interested in determining the characteristics of cervical cancer sufferers at Awal Bros Hospital, Batam, in 2020-2022.

Research Problem
Based on the explanation given in the background, the problem research in this research is "What are the characteristics of cervical cancer patients at Awal Bros Hospital, Batam, in 2020-2022?"

Research Focus
This study included cervical cancer patients at Awal Bros Hospital Batam, Indonesia, in 2021-2022 who met the inclusion and exclusion criteria.

Research Aim and Research Questions
This research aims to obtain information regarding the characteristics of cervical cancer patients at Awal Brols Hospital, Batam, in 2020-2022.

2. MATERIAL AND METHODS

General Background
Cervical cancer is a stage of malignancy that occurs in the cervix, which is caused by Human Papillomavirus types 16 and 18 through sexual contact. Indonesia is the country with the most cases of cervical cancer in Southeast Asia. As many as 100 new cases of cervical cancer occur every day, causing 57 patients to die. Several factors can increase the risk of cervical cancer, including age at first sexual intercourse, multiple sexual partners, number of parties, use of contraception, education, employment, and smoking.

Sample / Participants / Group
This study's population was all cervical cancer patients at Awal Bros Hospital, Batam, in 2020-2022. The sample was selected from 97 people who met the inclusion and exclusion criteria.

Instrument and Procedures
The research instrument used in this study was medical records of cervical cancer patients at Awl Bros Hospital, Batam, in 2021-2022. The research procedures are as follows: Collecting samples based on inclusion and exclusion criteria; Grouping samples based on criteria; Recording research results; Writing research results; and Recapitulation and data analysis.

Data Analysis
Data was processed using the Statistical Product and Service Solution (SPSS) program with univariate tests. The results of the analysis will be presented as a frequency table and percentage diagram: values and maximum values of the research variables. Bivariate analysis analyzes the relationship between dependent and independent variables and determines whether significant differences exist between two or more group variables.

3. RESULTS AND DISCUSSION

The characteristics of cervical cancer patients are based on several things, including age, marital status, number of parties, education, occupation, primary complaint, histopathological picture, and degree of differentiation of cervical cancer patients.

1. Age
   The age range of patients who met the inclusion and exclusion criteria in the 97 samples in this study was 25-65 years. Data on cervical cancer patients based on age range is obtained in Table 1 below:

Table 1. Percentage of Cervical Cancer Patients Based on Age Range

Category	Number (n)	Percentage (%)
25-35 years	5	5.15
36-50 years	54	55.67
51-65 years	38	39.18

Total	**97**	**100**

From the data above, it shows that there were five patients aged 25-35 years (5.15%), 54 people aged 36-50 years (55.67%), and 38 people aged 50-65 years (39.18%). %). The largest age group of cervical cancer patients is 36-50 years, namely 54 people (55.67%). In graphic form, it is presented in Figure 1 below:

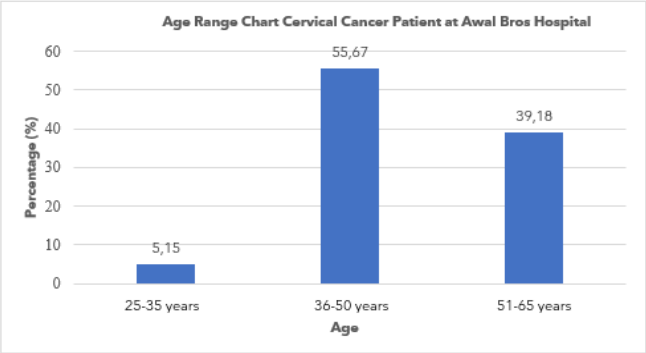

Figure 1. Graph of the Percentage of Cervical Cancer Patients Based on Age

2. Marital status

The data obtained based on the calculation results of the percentage of cervical cancer patients based on marital status is presented as data in Table 2 below:

Table 2. Percentage of Cervical Cancer Patients Based on Marital Status

Category	Number	Percentage (%)
Not Yet Married	1	1.03
Already Married	96	98.97
Total	**97**	**100**

From the data above, it shows that 96 people (99%) of cervical cancer patients are married, and one person (1%) is not yet married. So, the most common marital status category for cervical cancer patients is married, namely, 96 people with 99% cervical cancer patients, which in graphical form is presented in Figure 2 below:

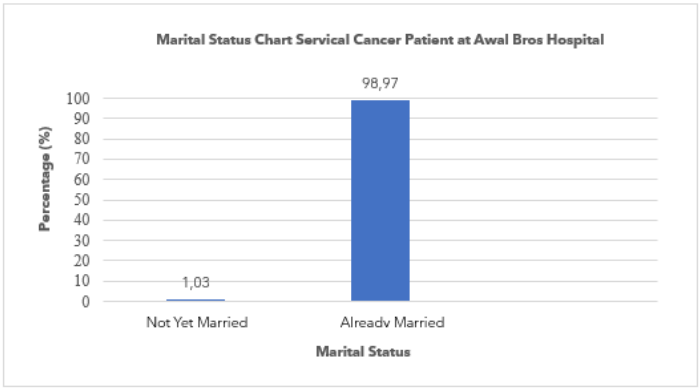

Figure 2. Graph of the Percentage of Cervical Cancer Patients Based on Marital Status

3. Parity Amount

The data obtained based on the calculation results of the percentage of cervical cancer patients based on Parity Amount is presented in Table 3 below.

Table 3. Percentage of Cervical Cancer Patients Based on Parity Amount

Category	Number (n)	Percentage (%)
Haven't given birth yet	5	5.15

1-2x	27	27.84
3-4x	51	52,58
≥5x	14	14.43
Total	**97**	**100**

From the data above, it shows that 5 patients (5.2%) have not yet given birth, 1-2x parity as many as 27 people (27.8%), 3-4x parity as many as 51 people (52.6%) and more than 5x parity there were 14 people (14.4%). So, the highest number of parity categories in cervical cancer patients is 3-4x, with a total of 51 people, namely with 52.6% of cervical cancer patients, which in graphical form is presented in Figure 3 below.

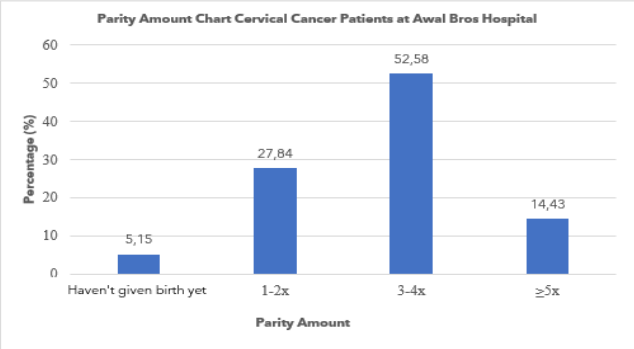

Figure 3. Graph of the Percentage of Cervical Cancer Patients Based on Parity Amount

4. Education

The data obtained based on the calculation results of the percentage of cervical cancer patients based on Education is presented in Table 4 below.

Table 4. Percentage of Cervical Cancer Patients Based on Education

Category	Number (n)	Percentage (%)
elementary school	10	10.30
Junior High School	20	20.62
Senior High School	49	50.52
Diploma/Bachelor	18	18.56
Total	**97**	**100**

The data above shows that ten people (10.3%) graduated from elementary school, 20 people (20.6%) graduated from junior high school, 49 people (50.5%) graduated from high school, and 18 people graduated from S1. (18.6%). So, the most recent category of education among cervical cancer patients is high school graduates, a total of 49 people, that is, with a total of 50.5%, which in graphical form is presented in Figure 4 below.

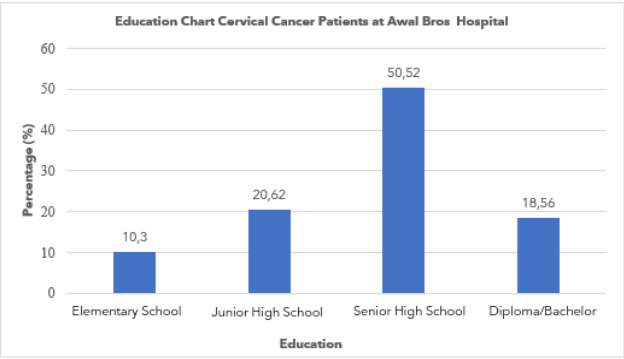

Figure 4. Graph of the Percentage of Cervical Cancer Patients Based on Education

5. Job Type

The data obtained based on the calculation results of the percentage of cervical cancer patients based on job type is presented in Table 5 below.

Table 5. Percentage of Cervical Cancer Patients Based on Job Type

Category	Number (n)	Percentage (%)
Housewife	72	74.23
Private Sector	17	17.53
Civil Servant	8	8.24
Total	**97**	**100**

From the data above, 72 (74.2%) patients were housewives, 8 (8.2%) patients were civil servants and 17 (17.5%) patients were private employees. So, the category with the highest number of jobs for cervical cancer patients is housewives, as many as 72 people, with a percentage of 74.2%, which is then presented in graphical form in Figure 5 below.

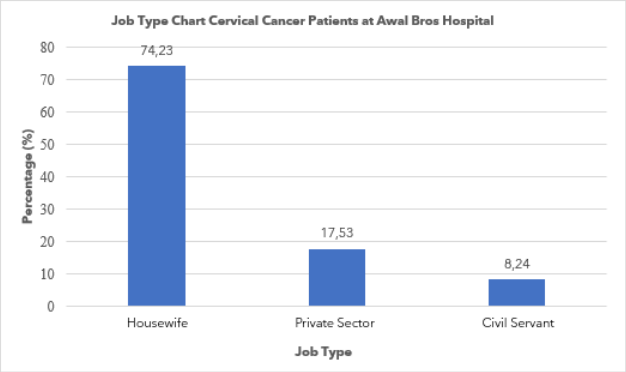

Figure 5. Graph of the Percentage of Cervical Cancer Patients Based on Job Type

6. Primary complaints

The data obtained based on the calculation results of the percentage of cervical cancer patients based on primary complaints is presented in Table 6 below.

Table 6. Percentage of Cervical Cancer Patients Based on Primary Complaints

Category	Number (n)	Percentage (%)
Vaginal discharge	25	25.77
Lower abdominal pain	8	8.24
Bleeding	52	53.6
Post-coital bleeding	12	12.4
Total	97	100

From the data above, it shows that 25 patients (25.8%) had the main complaint of vaginal discharge, 8 people (8.2%) had lower abdominal pain, 52 people (53.6%) had bleeding, and 52 people (53.6%) had the main complaint of post-coital bleeding. as many as 12 people (12.4%). So, the most common category of main complaint in cervical cancer patients is bleeding, namely 52 people with a percentage of 53.6%, which in graphic form is presented in Figure 6 below.

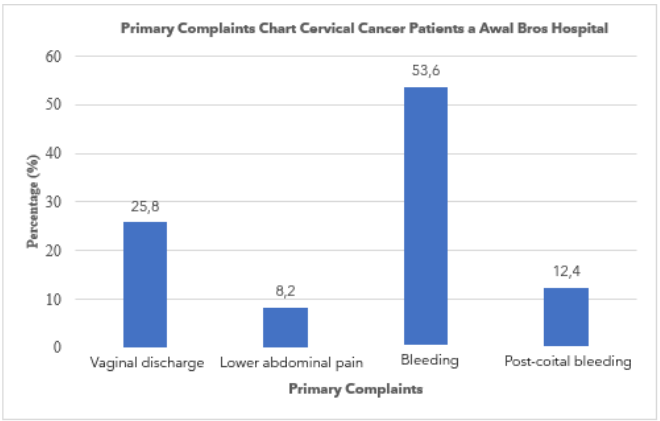

Figure 6. Graph of the Percentage of Cervical Cancer Patients Based on Primary Complaints

7. Histopathological Features

The data obtained is based on the calculation results of the percentage of cervical cancer patients based on Histopathological Features presented in Table 7 below.

Table 7. Percentage of Cervical Cancer Patients Based on Histopathological Features

Category	Number (n)	Percentage (%)
Adenocarcinoma	21	21.65
Adenosquamous	6	6.19
Squamous cell carcinoma	70	72.16
Total	97	100

The data above shows the histopathological picture of adenocarcinoma in 21 people (21.6%), adenosquamous in 6 people (6.2%), and squamous cell carcinoma in 70 people (72.2%). Thus, the category with the highest number of histopathological images in cervical cancer patients is squamous cell carcinoma, as many as 70 people, with a percentage of 72.2%, which in graphic form is presented in Figure 7 below.

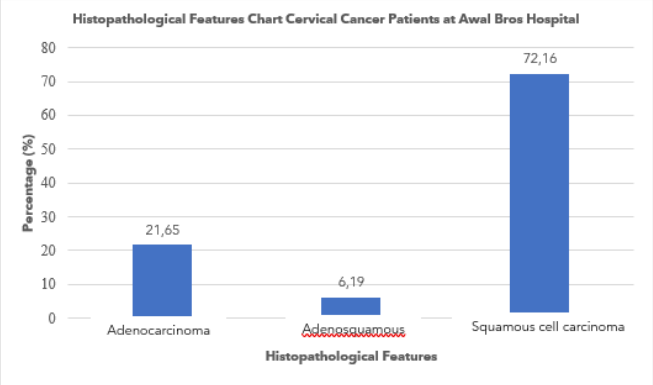

Figure 7. Graph of the Percentage of Cervical Cancer Patients Based on Histopathological Features

8. Degree of Differentiation

The data obtained is based on the calculation results of the percentage of cervical cancer patients based on the Degree of Differentiation in Cervical Cancer Patients presented in Table 8 below.

Table 8. Percentage of Cervical Cancer Patients Based on the Degree of Differentiation

Category	Number (n)	Percentage (%)
Good differentiation	43	44.33
Moderate differentiation	38	39.18
Poor differentiation	16	16.49
Total	97	100

The data above shows the degree of good differentiation of 43 people (44.3%), moderate differentiation of 38 people (39.2%), and poor differentiation of 16 people (16.5%). Thus, the category with the highest degree of differentiation in cervical cancer patients is the degree of good differentiation, as many as 43 people, namely with a percentage of 44.3%, presented in graphic form in Figure 8 below.

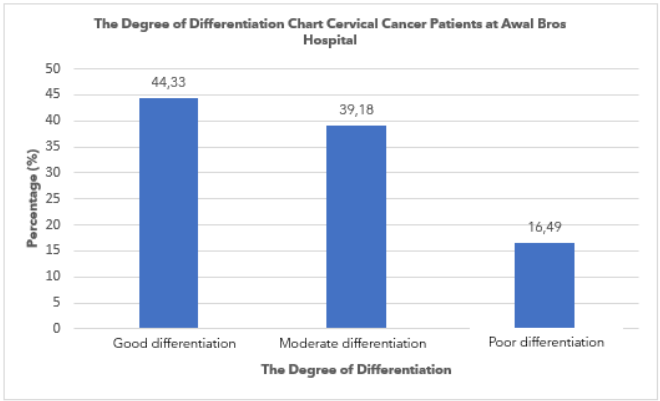

Figure 8. Graph of the Percentage of Cervical Cancer Patients Based on Degree of Differentiation

Discussion

Age

In this research, of the 97 cervical cancer patients who were registered at the Awal Bros Hospital, Batam, in 2020-2022, it was found that the majority of cervical cancer patients were patients aged 36-50 years, 54 of whom were 55.6% with cervical cancer. This research is in line with research by Naufaldi et al. [28] in 2022 at Jambi District Hospital, which revealed that 42.9% of Russian cervical cancer patients were 46–55 years old. This research is also in line with research by Herlana et al. [29] in Bandung, which found that most of the Russian cervical cancer patients were over 35 years old. In 2014, research conducted at RSU Sumedang by Kurnaelsih, elt al [26] also found that 90% of Russian cervical cancer patients were over 35 years old. This can happen because cancer takes a long time to develop and causes symptoms. Because it takes at least 26 months from the start of the HPV infection until the cells finally develop dysplasia and then develop into carcinoma in situ. It takes approximately 10-20 years for carcinoma in situ to transform into an invasive cancer [28]. In addition, at older ages, the location of the epithelial squamocolumnar junction experiences gelling of the outer cervical canal, which makes it easier for HPV infection to enter. Cells at the junctional cells often experience proliferation and dysplasia, which can trigger the occurrence of cervical cell cancer [12]. No less important, older people also experience a decrease in body immunity. So, it is difficult to kill cancer cells or slow their proliferation and spread [6].

Marital status

The highest prevalence of marital status in research is by married status, namely 96 out of 97 people (99%). This research is in line with research by Naufaldi et al. [28] at Jambi District Hospital in 2022, which stated that 96.4% of cervical cancer patients were married. Rolzi et al. [30] in 2019 also explained their research, namely that it was found that out of 521 patients, 508 patients (97.5%) were not married. Research conducted by Bobdey et al [31] in India also found that 99.87% of patients were married. This is in line with the sexual relations activities carried out. Especially if you have sexual relations before the age of 18, this increases the risk of cervical cancer by three times compared to women who have sexual relations after the age of 20 years. Teenagers have a lot of squamous cell development in the cervical mucosa. So, suppose a lot of sperm stimulation enters when the cervical mucosa is still vulnerable, and there is minimal trauma during sexual activity. In that case, this can certainly increase the risk of squamous epithelium becoming NIS due to the susceptibility of HPV infection [4,5].

Parity Amount

The highest parity category in this research on cervical cancer patients was 51 people (52.6%) with parity 3-4 times. This research is in line with research conducted by Hidayat et al. [32] in 2019 at the Padang District Hospital, which also found that multiple children (2-5 children) caused cervical cancer in 65 people (77.4%). Watulingas et al. [33] also conducted research in 2016 at RSUD DR.H. Abdul Moeloek reported that 52 patients (59%) had a parity of more than 3, the largest population. IARC states that women who have more than three children have a higher risk of developing cervical cancer. This is because the concentration of estrogen and progesterone in the blood during pregnancy continues to increase in the last trimester. These hormonal changes result in changes to the cervical transformation zone during pregnancy. Trauma to the cervix during vaginal delivery also increases the risk of introducing HPV [35].

Education

Most of the cervical cancer patients in this research were high school graduates, 49 people, with a percentage of 50.5%. This research aligns with the findings of Dewi et al. 37 in Bantul, which stated that most cervical cancer patients only received secondary education. This research is also by Watulingas et al. [33] in 2016 at RSUD DR.H. Abdul Moeloek, who reported that 50 (56.83%) patients had high school education. In contrast, research by Naufaldi et al. [28] in 2022 at Raden Mattaher Jambi Regional Hospital found that 23 cervical cancer patients (41.1%) had elementary school education. This is related to the age at which women marry, 19 or high school graduates. So, women cannot continue their education after marriage. The level of education influences how a person obtains information. Women who have low education find it difficult to have broad insight into their health, especially about personal hygiene and genitals. Apart from that, at school it is rarely discussed cervical cancer, its risk factors, how it spreads, and how to prevent it. 2 Chimo et al. 38 and Natphosuk et al. [39] explain that poor genital hygiene can result in easy growth of viruses, bacteria, and fungi in the organs. Genital, which increases the risk of cervical cancer.

Dahiya et al. [40] also emphasized in their research that higher education can increase understanding and knowledge. Increased knowledge will change people's attitudes towards obtaining health services so they can carry out cancer screening and pay for HPV vaccination. Genital hygiene practices also increase in line with higher levels of education. Women with higher education will postpone sexual relations because they are more busy with their work and delay getting married at a young age.

Job Type

The largest number of occupational groups of cervical cancer patients in this study were housewives, namely 72 people with 74.2% of the total population. This research is in line with research by Fatimah et al [41] in 2023 at Soedarso Hospital, which found that 78.8% of cervical cancer patients were housewives. Another research that is in line with this research is research by Watulingas et al [33] in 2016 at RSUP Prof. Dr. R.D. Kandou Manado, whose research results showed that the most extensive distribution of jobs for cervical cancer patients was as housewives with 61 people (69.35%). Armajin et al. [35] 2020 also conducted research at RSUD by Dr. H. Chasan Beoairie Ternate, who found that 21 people (95.46%) worked as housewives (95.46%). The work will be related to the patient's economic and nutritional status. Kessler et al. [42] explained in their research that women with low incomes have minimal access to health care, so they never undergo cervical cancer screening.

Primary Complaints

The most dominant main complaint in this study was bleeding, namely, 52 people, with a percentage of 53.6%. In 2022, Naufaldi et al. 28 conducted research at Raden Mattaher Hospital Jambi and found that bleeding was the most common complaint in cervical cancer patients, namely 33 (58.9%) of 56 patients. Research at H. Abdul Moeloek Regional Hospital by Marina et al [43] in 2022 is similar. They said 93 (45.6%) of 204 patients experienced bleeding symptoms. Research conducted by Zhang et al. [46] in 2020 in China also found that the most common main complaint that occurred in cervical cancer patients was bleeding (85%).

Bleeding complaints that arise in cervical cancer patients are vaginal bleeding between menstrual cycles, bleeding during prolonged menstruation, and post-menopausal bleeding. Bleeding occurs because degradation of p53 by HPV causes activation of angiogenesis through the production of vascular endothelial growth factor. There are also changes in the cervical dysplasia epithelium, which becomes vulnerable, making spontaneous regression easy [44].

Histopathological Features

Squamous cell carcinoma had the most histological features in cervical cancer patients in this study, namely 70 people (72.2%). This research is in line with a study conducted by Mahrus et al. 45 in Surabaya in 2023, which showed that the histopathological picture of squamous cell carcinoma was found in 92 cervical cancer patients (70.77%). Research by Helena et al. [29] in 2017 at Al-Ihsan Regional Hospital in Bandung also found that 58 people (70.7%) out of 82 patients had cervical cancer of the breast cell carcinoma type. Adityono et al. [46] 2023 also conducted research at Prof. Dr. Margono Soekarjo Hospital, Purwokerto, and found that squamous cell carcinoma was the most common histopathological finding, namely 33 cases (60.3%). Many squamous cell carcinoma types of cervical cancer occur due to infection by HPV types 16 and 18, which have a propensity originating in the squamocolumnar junction area. This HPV will later attack the cell base of the squamocolumnar junction of the cervix in the cervical transformation zone. This is because the ectocervix is occupied by squamous cells, and the endocervix is occupied by columnar cells. The area where the ectocervix and endocervix meet is called the transformation area and is the first place where precancerous lesions occur [12].

In this study, the category with the highest degree of differentiation in cervical cancer sufferers was good differentiation, with as many as 43 people, with a percentage of 44.3%. This research aligns with Marina et al. [43], and in 2021 at RSUD, Dr. H. Abdul Moeloekfound that 72 (35.3%) of 204 patients showed good differentiation. This is due to the microscopic reading by the pathologist in the cell division, which is still in a reasonable degree of differentiation, with ¾ of the cells still being the same as the standard cervical preparation form [32]

4. CONCLUSION

This study concludes that cervical cancer patients at Awal Bros Batam Hospital in 2020-2022 were mainly aged 36-50 years, with marital status, married, a history of 3-4 times multiparity, had a high school education, and worked as a housewife. had complaints of bleeding with histopathological features of squamous cell carcinoma and a good differentiation degree.

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