



**FACTORS INFLUENCING ANXIETY IN BREAST CANCER PATIENTS  
UNDERGOING CHEMOTHERAPY**

**Roslina Dewi\*, Ika Tarwiyah, Abdul Rahman La Ede, Johan Budhiana, Fera Melinda, Rakanda Putra  
Waliyu**

Sekolah Tinggi Ilmu Kesehatan Sukabumi, Jalan Karamat Nomor 36, Kelurahan Karamat, Sukabumi,  
Gunungpuyuh, Jawa Barat 43122, Indonesia

\*[roslianadewi@dosen.stikesmi.ac.id](mailto:roslianadewi@dosen.stikesmi.ac.id)

**ABSTRACT**

Breast cancer is the most common type of cancer in women and the leading cause of cancer death. In Indonesia, there were 65,858 new cases with 22,430 deaths, and a prevalence of 148.11 per 100,000. Chemotherapy is one of the popular therapy options among the public. Chemotherapy can lead to psychological impacts, such as stress, anxiety, and depression in breast cancer patients. Objective: This study aims to analyze the factors that influence anxiety in breast cancer patients undergoing chemotherapy at the Chemotherapy Poly of Bogor City Hospital. Methods: This cross-sectional study involved 87 breast cancer patients undergoing chemotherapy at the Chemotherapy Clinic of Bogor City Hospital who were selected using accidental sampling. Data were collected through a validated structured questionnaire, including anxiety felt by breast cancer patients which refers to the standardized questionnaire, namely the Zung Selfrating Anxiety Scale (ZSAS). Data were analyzed using chi-square test and logistic regression to identify the relationship between variables. Results: The results of the analysis showed a significant relationship between age ( $p = 0.000$ , OR = 14.625), education ( $p = 0.022$ , OR = 3.506), length of suffering ( $p = 0.000$ , OR = 0.208), and frequency of chemotherapy ( $p = 0.021$ , OR = 0.357) with anxiety of breast cancer patients. The most dominant variable associated with anxiety of breast cancer patients is age (OR = 35.934). Conclusion: Age, education, duration of breast cancer, and frequency of chemotherapy play an important role in influencing the anxiety of breast cancer patients.

Keywords: anxiety; breast cancer; chemotherapy

**How to cite (in APA style)**

Dewi, R., Tarwiyah, I., La Ede, A. R., Budhiana, J., Melinda, F., & Waliyu, R. P. (2025). Factors Influencing Anxiety in Breast Cancer Patients Undergoing Chemotherapy. *Indonesian Journal of Global Health Research*, 7(4), 531-538. <https://doi.org/10.37287/ijghr.v7i4.6225>.

**INTRODUCTION**

Modern lifestyles influence changes in a person's lifestyle that often lead to unhealthy habits, such as consumption of low-fiber and high-fat foods, foods containing preservatives, and lack of regular physical activity. These habits can lead to various diseases, one of which is cancer. Cancer is a complex collection of diseases, characterized by abnormal cell growth in the body that can spread rapidly. According to Rasidji (2012), breast cancer is the most common type of cancer in women and is the leading cause of cancer deaths (Rusdiana et al., 2024; Setyani et al., 2020). According to data from the International Agency for Research on Cancer, in 2020 there were 2,261,419 new cases of breast cancer worldwide, with 684,996 deaths from breast cancer. In the East Asia region, particularly in India, there were 178,361 new cases of breast cancer with 90,408 deaths, and a breast cancer prevalence of 69.28 per 100,000. In Indonesia, there were 396,914 new cases of cancer and 234,511 cancer deaths overall. Specifically for breast cancer, there were 65,858 new cases with 22,430 deaths, and a prevalence of 148.11 per 100,000. The incidence of breast cancer in Indonesia continues to show an increase every year (IARC, 2020 dalam Simanullang & Simanullang, 2024).

The most common treatment for breast cancer is chemotherapy, and it is one of the most popular treatment options among the public. However, chemotherapy has side effects, such as fatigue, nausea, weight loss, and decreased immune system. In addition, chemotherapy can also damage healthy cells that are developing, potentially damaging vital organs such as bone marrow, gastrointestinal tract, and hair follicles. In addition to the physical effects, chemotherapy can also bring about psychological effects, such as stress, anxiety, and depression in patients (Muhrisa dalam Katimenta et al., 2024). Anxiety in breast cancer patients undergoing chemotherapy is influenced by various factors, such as age, experience, education level, previous chemotherapy history, and cancer stage. Some patients undergoing chemotherapy for breast cancer experience high levels of anxiety that can lead to negative reactions during the treatment process, thus affecting their recovery (Ruslany et al., 2019).

One of the factors associated with breast cancer patient anxiety is age. Individuals aged 40-65 years tend to feel anxious about chemotherapy more often, as they perceive that the procedure can make them feel useless, resulting in resistance to the treatment. This attitude is very natural, given the side effects of chemotherapy that can arise which makes individuals in this age range fear that they will lose the love of their partner (Rosalini & Budiman, 2023). Another factor associated with anxiety of breast cancer patients is the level of education. A person's level of education is positively correlated with their level of knowledge because higher education can increase knowledge about diseases and treatment procedures, so that extensive knowledge can reduce the anxiety of patients with breast cancer. In addition, a person's level of education will affect a person's ability to think and make decisions, so the higher the level of education, the easier it will be to think rationally and capture new information including in deciphering new problems and avoiding anxiety (Intan et al., 2024; Sari, 2021).

Duration of cancer is also a factor that plays a role in the anxiety of breast cancer patients. Patients who have had cancer for a long time tend to have more time to explore information about their disease both independently and get health education from health workers. In addition, the longer the patient suffers from illness, the patient will be more familiar with the treatment and its side effects so that the patient is able to adapt to his condition and avoid anxiety (Hafiza et al., 2023; Santosa et al., 2023). The next factor associated with anxiety is the frequency of chemotherapy. Patients who have just undergone chemotherapy have a high level of anxiety because they are afraid of the effects of chemotherapy. Chemotherapy side effects such as hair loss, vomiting, and fatigue cause significant anxiety for patients undergoing chemotherapy for the first to third time (Haris et al., 2024). The purpose of this study was to determine the factors that influence anxiety in breast cancer patients undergoing chemotherapy.

## **METHOD**

The type of research in this study is correlational research with a cross sectional approach. This research was conducted not August 2024 until January 2025. The population in this study were all breast cancer patients who underwent chemotherapy at the Chemotherapy Poly of Bogor City Hospital with a total sample size of 87. The sampling technique used Accidental Sampling. Data collection was carried out using a questionnaire, the anxiety variable refers to a standardized questionnaire, namely the Zung Selfrating Anxiety Scale (ZSAS). The results of the ZSAS validity test for each questionnaire question with the lowest value of 0.663 and the highest of 0.918 with an alpha value of 0.829 (Nasution, et.al., 2014). Univariate analysis was conducted using frequency distribution and percentage. Bivariate analysis used Chi-Square. Multivariate

analysis used binary logistic regression. Ethical clearance was obtained prior to data collection (No:002672/KEP STIKES SUKABUMI/2024).

## RESULT

Table 1.  
Univariate Analysis

Variable	f	%
Age (Years)		
< 41	47	54,0
≥ 41	40	46,0
Education		
Elementary/Junior/Senior High School	65	74,7
College	22	25,3
Duration of Breast Cancer (Years)		
≤ 1	31	35,6
> 1	56	64,4
Chemotherapy Frequency		
1	36	41,4
> 1	51	58,6
Anxiety		
Anxious	38	43,7
Not Anxious	49	56,3

Table 1 shows that most respondents were < 41 years old as many as 47 people (54.0%), had elementary / junior / senior high school education as many as 65 people (74.7%), had breast cancer for > 1 year as many as 56 people (64.4%), were undergoing chemotherapy > 1 as many as 51 people (58.6%), and felt no anxiety as many as 49 people (56.3%).

Table 2.  
Relationship between Age and Anxiety

Age (Years)	Anxiety				Total	%	P-Value	OR
	Anxious	%	Not Anxious	%				
≥ 41	30	75,0	10	25,0	40	100,0	0,000	14,625
< 41	8	17,0	39	83,0	47	100,0		

Table 2 shows that most respondents aged ≥ 41 years felt anxious as many as 30 people (75.0%). Meanwhile, most respondents aged <41 years felt not anxious as many as 39 people (83.0%). The Chi Square results show a p-value of 0.000 which means there is a relationship between age and anxiety. The Odds Ratio result is 14.625 which means that breast cancer patients aged <41 years have a chance/tendency to feel not anxious 14.625 times higher than patients aged ≥ 41 years.

Table 3.  
Relationship between Education and Anxiety

Education	Anxiety				Total	%	P-Value	OR
	Anxious	%	Not Anxious	%				
Elementary/Junior/ Senior High School	33	50,8	32	49,2	65	100,0	0,022	3,506
College	5	22,7	17	77,3	22	100,0		

Table 3 shows that most respondents with elementary/junior high/high school education felt anxious as many as 33 people (50.8%). Meanwhile, most respondents with college education felt not anxious as many as 17 people (77.3%). The Chi Square result, p value of 0.022, which means there is a relationship between education and anxiety. The Odds Ratio result of 3.506 means that breast cancer patients with college education have a chance/tendency to feel less anxious 3.506 times higher than breast cancer patients with elementary/junior high/high school education.

Table 4.  
Relationship between Breast Cancer Duration and Anxiety

Duration of Breast Cancer (Years)	Anxiety				Total	%	P-Value	OR
	Anxious	%	Not Anxious	%				
> 1	17	30,4	39	69,6	56	100,0	0,001	0,208
≤ 1	21	67,7	10	32,3	31	100,0		

Table 4 shows that most respondents suffered from breast cancer > 1 year and felt no anxiety as many as 39 people (69.6%). Meanwhile, most respondents suffered from breast cancer ≤ 1 year and felt anxious as many as 21 people (67.7%). The results of Chi Square, p value of 0.001, which means there is a relationship between the duration of breast cancer and anxiety. The results of the analysis obtained an Odds Ratio value of 0.208, which means that patients who suffered from breast cancer > 1 year have a chance/tendency to feel no anxiety 0.208 times higher than patients who suffered from breast cancer ≤ 1 year.

Table 5.  
Relationship between Chemotherapy Frequency and Anxiety

Chemotherapy Frequency	Anxiety				Total	%	P-Value	OR
	Anxious	%	Not Anxious	%				
> 1	17	33,3	34	66,7	51	100,0	0,021	0,357
1	21	58,3	15	41,7	36	100,0		
Total	38	43,7	49	56,3	87	100,0		

Table 5 shows that most respondents have undergone chemotherapy > 1 time and feel no anxiety as many as 34 people (66.7%). Meanwhile, most respondents have undergone chemotherapy 1 time and feel no anxiety as many as 21 people (58.3%). The results of the Chi Square statistical test show a p-value of 0.021 which means there is a relationship between the frequency of chemotherapy and anxiety. The Odds Ratio result is 0.357 which means that breast cancer patients who have undergone chemotherapy > 1 time have a chance/tendency to feel no anxiety 0.357 times higher than breast cancer patients who only do it once.

Table 6.  
Simultaneous Relationship of Age, Education, Length of Breast Cancer Survivorship, and Frequency of Chemotherapy with Anxiety

Variable	B	P-Value	OR
Age	3,582	0,000	35,934
Education	1,833	0,034	6,253
Length of Breast Cancer Survivorship	- 1,425	0,032	0,241
Frequency of Chemotherapy	- 2,045	0,006	0,129
Constant	- 0,528	0,374	0,590

R Square = 0,619

Table 6 obtained R Square of 0.619 (Nagelkerke R Square) means that age, education, length of time suffering from breast cancer, and frequency of chemotherapy contribute in influencing the anxiety of breast cancer patients by 61.9% and the remaining 38.1% is influenced by other factors not studied. The results of multivariate logistic regression analysis showed that all variables were significantly associated simultaneously with anxiety of breast cancer patients, namely age, education, duration of breast cancer, and frequency of chemotherapy. The most dominant variable associated with anxiety of breast cancer patients is age. The age variable has an Odds Ratio of 35.934, meaning that breast cancer patients aged < 41 years have a chance/tendency to feel less anxious by 35.934 times higher than breast cancer patients aged ≥ 41 years.

## **DISCUSSION**

### **Relationship between Age and Anxiety**

Age is one of the factors that affect anxiety in breast cancer patients undergoing chemotherapy. Age describes the individual time span in the development of a person's physical, psychological, and social abilities. In this study, it shows that most respondents are < 41 years old, in that age range individuals face changes and begin to adjust to existing circumstances, find ways to place themselves, and understand circumstances related to anxiety (Rosalini & Budiman, 2023). Breast cancer patients who undergo chemotherapy tend to experience little change in their psychological side because there are many external variables that participate in individual development. Breast cancer patients aged  $\geq 41$  are more often found individuals who are very anxious about chemotherapy measures, because they consider this action can make themselves useless, so there is a rejection of chemotherapy measures, because at that age there is a decrease in psychological responses, resulting in someone easily anxious and depressed (Yudono, 2019; Fikri & Fitriani, 2021).

### **Relationship between Education and Anxiety**

Education affects anxiety in breast cancer patients undergoing chemotherapy. Generally, education is useful in changing mindsets, behavior patterns, and decision-making patterns, so education for each person has its own meaning (Seputri et al., 2024). A sufficient level of education will make it easier to identify stressors within oneself and from outside oneself. Therefore, the level of education affects the awareness and understanding of the stimulus that occurs to a person. The problems that arise in him are able to be managed with more rational thinking, so that with sufficient education can manage anxiety well (Jelang et al., 2024). Higher education patients do not experience anxiety, because higher education can develop patient perception patterns in order to change problem situations, manage emotional stress, understand why cancer has occurred, what impact cancer has on his life and how chemotherapy treatment for patients with breast patients (Simanullang & Simanullang, 2024).

### **Relationship between Breast Cancer Duration and Anxiety**

Length of suffering also affects the anxiety of patients with cancer. Reporting from the results of the study, the majority of respondents who have had cancer for less than one year, will feel anxious. The length of time with cancer is measured from the first day a person is diagnosed with cancer. When a person is first told that they have cancer, there is an influence on physical and psychological responses such as tending to be silent, moody, difficulty eating, sleep disturbances, and feelings of anxiety. This is supported by the statement that patients who first hear that they have been diagnosed with cancer will feel shocked, inferior, and helpless. This triggers stress from the various things that patients think about regarding their future. This also supports Laurin's statement that someone who has cancer for a long time will get used to the intervention and the perceived impact of the intervention (Hafiza et al., 2023; Tarigan & Pasaribu, 2023).

### **Relationship between Chemotherapy Frequency and Anxiety**

The frequency of chemotherapy is also a cause of anxiety. Reporting from the results of the study, someone who is taking chemotherapy for the first time will feel anxiety. This is inversely proportional to individuals who have undergone chemotherapy more than once, the patient will not feel anxious. This is evidenced by patients who have undergone chemotherapy more than once will have confidence in their recovery despite feeling the side effects of the chemotherapy. This statement is supported by Oetami et al. who said that anxiety can arise at the beginning of management because of anxiety about the side effects of treatment. Anxiety is caused by a decrease in GABA, serotonin, and norepinephrine imbalance. A decrease in GABA increases anxiety-related stimuli. Decreased serotonin creates over-sensitivity to 5-HT

receptors. In addition, norepinephrine imbalance exacerbates anxiety. These things make a person who is doing a chemotherapy session for the first time will feel excessive anxiety (Laoli & Ismoyowati, 2022; Azkiya et al., 2024).

### **Simultaneous Relationship of Age, Education, Length of Breast Cancer Survivorship, and Frequency of Chemotherapy with Anxiety**

Based on the results of the study, there is a simultaneous influence of age, education, length of suffering and frequency of chemotherapy on the anxiety of breast cancer patients ( $p = 0.05$ ). The most dominant variable affecting anxiety is age ( $OR = 35.934$ ). Increasing age will increase risk factors in individuals, so that older patients tend to be more anxious due to concerns about psychological problems and lack of self-control on the stressors received (Setyani et al., 2020). A person with calmness is peaceful, has consistent emotions, is not easily disturbed by events and is resistant to aspects that can cause anxiety and even fear (Rosmalina, 2022). In line with that, the level of education is in line with the increase in one's knowledge and understanding (Nurhayati & Sari, 2020). Where when someone understands more about their illness, self-control abilities, especially in terms of psychosocial matters, will increase, thereby reducing anxiety. Moreover, length of illness and increased frequency of chemotherapy often influence anxiety reduction. Treatment procedures, especially chemotherapy, are often accompanied by significant side effects and uncertainty about the outcome (Rahmadi et al., 2024). Therefore, individuals who experience frequent treatment to the point of being able to accept their condition will feel accustomed to it, reducing the uncertainty and fear that was previously present (Suciana et al., 2020).

### **CONCLUSION**

The results showed that most respondents were less than 41 years old, had elementary/junior/senior high school education, suffered from breast cancer for more than 1 year, underwent chemotherapy more than once and did not experience anxiety. There is a significant relationship between age ( $p = 0.000$ ,  $OR = 14.625$ ), education ( $p = 0.022$ ,  $OR = 3.506$ ), length of suffering ( $p = 0.000$ ,  $OR = 0.208$ ), and frequency of chemotherapy ( $p = 0.021$ ,  $OR = 0.357$ ) with anxiety of breast cancer patients. There is a simultaneous relationship between age, education, length of breast cancer, and frequency of chemotherapy with breast cancer anxiety ( $p < 0.005$ ). The most dominant variable associated with anxiety of breast cancer patients is age ( $OR = 35.934$ ).

### **REFERENCES**

- Azkiya, M. W., Ardiana, A., Afandi, A. T., & Herawati, H. (2024). Pengaruh Edukasi terhadap Kecemasan Pasien Kanker Kolorektal pada Kemoterapi Pertama Kali: Studi Kasus. *KEPO: Jurnal Keperawatan Profesional*, 5(1), 122–129. <https://doi.org/10.36590/kepo.v5i1.934>
- Fikri, M., & Fitriani, D. R. (2021). Pengaruh Terapi Musik terhadap Tingkat Kecemasan Pasien Kanker di Rumah Singgah Kanker Samarinda. *Borneo Studies and Research*, 3(1), 66–75.
- Hafiza, N., Nauili, F. A., & Dilaruri, A. (2023). Gambaran Depresi dan Kecemasan pada Pasien Kanker Serviks. *Jurnal Ilmiah Wahana Pendidikan*, 9(6), 422–437. <https://doi.org/https://doi.org/10.5281/zenodo.7785100>.
- Haris, T., Sutrisno, Cahyono, H. D., & Fatarona, A. (2024). Hubungan Spiritualitas dengan Tingkat Kecemasan Efek Kemoterapi pada Pasien Kanker. *Jurnal Ilmiah Kesehatan Rustida*, 11(2), 184–193. <https://doi.org/https://doi.org/10.55500/jikr.v11i2.231>.

- Intan, I. L. H., Nana, A. S. S., & Ita, I. A. (2024). Gambaran Tingkat Kecemasan pada Pasien Perioperatif Kanker Payudara. *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, 14(1), 433–440. <https://doi.org/https://doi.org/10.32583/pskm.v14i1.1636>.
- Jelang, D. W., Kariasa, I. M., & Yona, S. (2024). Efektivitas Breathing Exercise dalam Menurunkan Kecemasan pada Pasien dengan Kanker Paru. *Journal of Telenursing (JOTING)*, 6(1), 1554–1562. <https://doi.org/10.31539/joting.v6i1.9789>
- Katimenta, K. Y., Nugrahini, A., Hermanto, & Mahmudah, R. (2024). Hubungan Dukungan Keluarga dengan Tingkat Stress Pasien Kemoterapi di Ruang Anggrek Tewu RSUD dr. Murjani Sampit. *Jurnal Ventilator: Jurnal Riset Ilmu Kesehatan Dan Keperawatan*, 2(1), 28–42. <https://doi.org/10.59680/ventilator.v2i1.960>.
- Laoli, F. H., & Ismoyowati, T. W. (2022). Kondisi Fisik Post Kemoterapi dan Self Efficacy Pasien Kanker di Rumah Sakit Bethesda Yogyakarta. *Jurnal Penelitian Kesehatan "SUARA FORIKES"(Journal of Health Research" Forikes Voice")*, 13(2), 388–392. <https://doi.org/10.33846/sf13222>.
- Nurhayati, C., & Sari, N. A. (2020). Hubungan Tingkat Pengetahuan Hipoglikemia dengan Kemampuan Deteksi Hipoglikemia Pasien DM Tipe 2. *Indonesian Jurnal of Health Development Vol.2 No.1*, 2(1), 1–8. <https://doi.org/10.52021/ijhd.v2i1.30>.
- Rahmadi, M. A., Nasution, H., Mawar, L., & Sari, M. (2024). Pengaruh Kecemasan terhadap Kepatuhan Pengobatan Kanker Payudara. *Jurnal Medika Nusantara*, 2(3), 325–350. <https://doi.org/10.59680/medika.v2i3.1354>.
- Rosalini, W., & Budiman, M. E. A. (2023). Faktor Usia Berhubungan dengan Kecemasan pada Pasien Kanker Payudara yang Menjalani Kemoterapi. *ASSYIFA: Jurnal Ilmu Kesehatan*, 1(1), 72–75. <https://doi.org/https://doi.org/10.62085/ajk.v1i1.13>.
- Rosmalina, A. (2022). Pengaruh Kesehatan Mental terhadap Kesejahteraan Keluarga. *Prophetic : Professional, Empathy, Islamic Counseling Journal*, 5(2), 171–182. <https://doi.org/10.24235/prophetic.v5i2.12781>.
- Rusdiana, M. D., Ma'rifah, A. R., & Hanum, F. (2024). Hubungan antara Spiritualitas dan Penerimaan Diri pada Pasien Kanker Payudara yang Menjalani Kemoterapi di Rumah Sakit Dadi Keluarga. *Jurnal Ilmiah Wahana Pendidikan*, 10(10), 488–497. <https://doi.org/https://doi.org/10.5281/zenodo.11440875>.
- Ruslany, C., Fauzi, T. M., & Damanik, I. (2019). Analisis Faktor-faktor yang Mempengaruhi Kecemasan pada Pasien Ca Mammæ yang Sedang Melakukan Tindakan Kemoterapi. *Jurnal Kedokteran Methodist*, 12(1), 1–8.
- Santosa, I. M. E., Nazamudin, Bebasari, E., Cahyono, W., & Sumartyawati, N. M. (2023). Gambaran Tingkat Stres, Kecemasan, dan Depresi pada Penderita Kanker Payudara Menjalani Kemoterapi di Ruang Gili Asahan RSUD Provinsi NTB. *PRIMA : Jurnal Ilmiah Ilmu Kesehatan*, 9(2), 134–142. <https://doi.org/https://doi.org/10.47506/pd4egx07>.
- Sari, S. M. (2021). Analisis Faktor-faktor yang Berhubungan dengan Kecemasan pada Pasien Pre Operasi. *Babul IlmibJurnal Ilmiah Multi Science Kesehatan*, 13(1), 95–106. <https://doi.org/https://doi.org/10.36729/bi.v13i1.914>.

- Seputri, T. M., Sriyati, S., & Estriana, E. (2024). Tingkat Kecemasan Pasien Kanker yang Menjalani Kemoterapi. In *Prosiding Seminar Nasional Penelitian Dan Pengabdian Kepada Masyarakat LPPM Universitas' Aisyiyah Yogyakarta*, 2, 744–749.
- Setyani, F. A. R., Bernadetta, D. B. P., & Milliani, C. D. (2020). Tingkat Kecemasan Pasien Kanker Payudara yang Mendapatkan Kemoterapi. *Carolus Journal of Nursing*, 2(2), 170–176. <https://doi.org/https://doi.org/10.37480/cjon.v2i2.44>.
- Simanullang, D. L. M., & Simanullang, R. H. (2024). Hubungan Dukungan Keluarga dengan Tingkat Kecemasan pada Pasien Kanker dalam Menjalani Kemoterapi. *Indonesian Trust Health Journal*, 7(2), 111–116. <https://doi.org/https://doi.org/10.37104/ithj.v7i2.296>.
- Suciana, F., Agustina, N. W., & Zakiatul, M. (2020). Korelasi Lama Menderita Hipertensi dengan Tingkat Kecemasan Penderita Hipertensi. *Jurnal Keperawatan Dan Kesehatan Masyarakat Cendekia Utama*, 9(2), 146–155. <https://doi.org/10.31596/jcu.v9i2.595>.
- Tarigan, M., & Pasaribu, M. S. (2023). Life experiences of breast cancer patients in Medan: A phenomenological study. *TROPHICO: Tropical Public Health Journal*, 3(1), 12–18. <https://doi.org/10.32734/trophico.v3i1.11558>.
- Yudono, D. T. (2019). Analisis Faktor-faktor yang Mempengaruhi Kecemasan Pasien Ca Mammoe dengan Tindakan Kemoterapi. *Viva Medika: Jurnal Kesehatan, Kebidanan Dan Keperawatan*, 12(2), 53–63. <https://doi.org/https://doi.org/10.35960/vm.v11i02.461>.