

Quality of Life of Cervical Cancer Survivors in Bangladeshi Women

Sayada Fatema Khatun^{1*} , Dilruba Ferdous², Rogina Amin³, A K M Farhad Hossain⁴

ARTICLE INFO

Received: 18 May 2026

Accepted: 23 May 2026

Published Online: 26 May 2026

DOI: 10.5281/zenodo.20387511

Volume: 9, Number: 3, Page: 187-191

e-ISSN: 2789-5912

ISSN: 2617-0817

*Corresponding author



ABSTRACT

Background: Cervical cancer remains a major public health concern in Bangladesh, with survivorship increasingly highlighting the importance of quality of life (QoL) beyond clinical outcomes. Aim of the study: To assess the quality of life of cervical cancer survivors in Bangladeshi women and identify associated sociodemographic and clinical factors. **Methods & Materials:** This cross-sectional study was conducted over 6 months at a tertiary care hospital in Bangladesh, including 120 cervical cancer survivors selected through purposive sampling. Eligible women aged ≥ 18 years who had completed primary treatment were included. QoL was evaluated using validated Bangla versions of EORTC QLQ-C30 and QLQ-CX24 questionnaires. Statistical analysis was performed using SPSS version 26, applying independent sample t-tests, with $p \leq 0.05$ considered significant. **Result:** The mean global health status score was 62.4 ± 18.2 . Functional domains showed moderate scores, including physical functioning (68.7 ± 17.5) and emotional functioning (58.1 ± 20.4). High symptom burdens were observed for fatigue (42.6 ± 21.3), insomnia (44.1 ± 23.6), and financial difficulties (55.8 ± 24.7). Sexual activity (34.5 ± 22.6) and sexual enjoyment (38.2 ± 21.7) were notably reduced. Better QoL was significantly associated with younger age (66.8 ± 17.4 , $p = 0.021$), urban residence (65.9 ± 16.8 , $p = 0.034$), early-stage disease (69.3 ± 15.7 , $p < 0.001$), non-chemoradiotherapy treatment (70.1 ± 14.9 , $p = 0.012$), and longer post-treatment duration (66.9 ± 18.1 , $p = 0.003$). **Conclusion:** Cervical cancer survivors in Bangladesh experience moderate QoL with significant psychosocial and symptom-related challenges. Targeted survivorship interventions are essential to

enhance long-term outcomes.

Keywords: Cervical cancer, Quality of life, Survivors, EORTC QLQ-C30, Bangladesh, Psychosocial health

1. Associate Professor, Department of Gynae Oncology Bangladesh Medical University, Dhaka, Bangladesh (ORCID: 0009-0000-2655-9409)
2. Senior Consultant, Department of Gynecology & Obstetrics, Dhaka Medical College Hospital, Dhaka, Bangladesh
3. Assistant Professor (gynae oncology), Kurmitola General Hospital, Dhaka, Bangladesh
4. ADMS,24 INF Divission, CTG Cantonment, Chattogram, Bangladesh

INTRODUCTION

Cervical cancer is a type of malignant disease that arises from the cells of the cervix, the lower part of the uterus that connects to the vagina, characterized by abnormal and uncontrolled cell growth, most commonly caused by persistent infection with high-risk human papillomavirus (HPV) [1]. Quality of life (QoL) in cervical cancer survivors refers to a multidimensional concept encompassing physical health, psychological well-being, social relationships, and functional status following cancer diagnosis and treatment [2]. Cervical cancer remains a major global health burden, ranking as the fourth most common cancer among women, with approximately 604,000 new cases and 342,000 deaths reported worldwide in 2020 [3]. In Bangladesh, it is one of the leading causes of cancer-related morbidity and mortality among women, with an estimated 167,256 new cancer cases and 116,598 cancer deaths recorded in the country, reflecting a substantial public health concern [4]. The process of evaluating QoL in cervical cancer survivors typically involves standardized tools such as the EORTC QLQ-C30 and QLQ-CX24 questionnaires, which assess physical symptoms, emotional status, sexual health, and social functioning [5]. These instruments capture the long-term consequences of cancer and its treatment, including fatigue,

pain, psychological distress, and sexual dysfunction, which collectively shape survivors' overall well-being [6]. In Bangladesh, hospital-based studies have demonstrated that many survivors experience moderate to poor QoL, influenced by disease stage, treatment modalities, and socioeconomic conditions [7]. An in-depth evaluation of quality of life (QoL) in cervical cancer survivors indicates that survivorship is not solely defined by clinical recovery but also by the ability to return to normal life roles. Treatment modalities, including surgery, radiotherapy, and chemoradiotherapy, are frequently associated with persistent adverse effects such as lymphedema, menopausal symptoms, and sexual dysfunction, all of which can significantly impair daily functioning [8]. Additionally, psychological factors such as fear of recurrence and social stigma further reduce QoL, particularly in low-resource settings [9]. The impact of studying QoL in cervical cancer survivors is significant, as it provides insight into survivorship care needs and helps clinicians design patient-centered interventions. Evidence suggests that improving QoL can enhance treatment adherence, psychological resilience, and long-term outcomes [10]. Several advantages include the ability to identify modifiable factors affecting survivorship, guide policy development, and improve comprehensive cancer care.

However, it also has disadvantages, such as reliance on self-reported data, cross-sectional designs, and potential cultural biases in QoL assessment tools [11]. Existing research on QoL among cervical cancer survivors is limited by small sample sizes, heterogeneous methodologies, and a lack of longitudinal follow-up, especially in low- and middle-income countries. Furthermore, most studies are conducted in tertiary centers, which may not reflect the experiences of rural populations in Bangladesh [8]. Therefore, there is a clear need for the current study to develop culturally appropriate interventions, improve survivorship care, and inform national cancer control strategies. The objective of this study was to assess the quality of life of cervical cancer survivors in Bangladeshi women and to identify the sociodemographic and clinical factors influencing their overall well-being.

METHODS & MATERIALS

This cross-sectional study was conducted at Bangladesh Medical University, OPD of Gynae Oncology Department, Dhaka, Bangladesh over a period of 6 months from 25th June to 25th December 2025, focusing on cervical cancer survivors attending follow-up services. A total of 120 women with previously treated cervical cancer were enrolled using a purposive sampling technique, forming a well-defined study

population. Participants were selected based on eligibility criteria to ensure clinical relevance and data reliability.

Inclusion Criteria

- Women diagnosed with cervical cancer who had completed primary treatment (surgery, radiotherapy, chemotherapy, or combined modalities).
- Survivors aged ≥18 years.
- Patients willing to provide informed consent and participate in the interview.

Exclusion Criteria

- Patients with recurrent or metastatic disease under active treatment.
- Presence of other malignancies.
- Severe psychiatric illness or inability to respond to the questionnaire.
- Critically ill patients.

Data Collection

Data were collected through face-to-face interviews using a structured and pre-validated questionnaire. Socio-demographic variables included age, residence, education, marital status, and monthly family income. Clinical information such as stage at diagnosis, histological type, treatment modality, and duration since treatment completion was obtained from medical records.

Quality of life (QoL) was assessed using the validated Bangla versions of the European Organization for Research and Treatment of Cancer questionnaires: EORTC QLQ-C30 and the cervical cancer-specific module EORTC QLQ-CX24. The QLQ-C30 evaluated global health status, functional scales, and symptom scales, while the CX24 module assessed disease-specific aspects such as body image, sexual functioning, and symptom burden.

Statistical Analysis

Statistical analysis was performed using SPSS software (version 26). Continuous variables were expressed as mean ±

standard deviation (SD) and median with interquartile range (IQR), while categorical variables were presented as frequency and percentage. Independent sample t-test was used to compare mean global QoL scores between groups. A p-value ≤0.05 was considered statistically significant, ensuring robust interpretation of differences across variables.

RESULT

Table I presented the socio-demographic characteristics of cervical cancer survivors (N = 120). The highest proportion of patients belonged to the 41–50 years age group (38.33%), followed by 51–60 years (26.67%) and ≤40 years (23.33%), while only 11.67% were aged >60 years. The mean age was 48.6±9.8 years. A majority of participants were from rural areas (56.67%). Regarding education, most had primary education (35.00%), while 28.33% were illiterate. The majority were married (81.67%). In terms of monthly family income, the largest group (40.00%) earned between 10,000–20,000 BDT.

Table I
Socio-demographic Characteristics of Cervical Cancer Survivors (n = 120).

Baseline Characteristics	Frequency (n)	Percentage (%)
Age group (years)		
≤40	28	23.33
41–50	46	38.33
51–60	32	26.67
>60	14	11.67
Mean age (years)	48.6 ± 9.8	
Residence		
Urban	52	43.33
Rural	68	56.67
Educational status		
Illiterate	34	28.33
Primary	42	35.00
Secondary	30	25.00
Higher	14	11.67
Marital status		
Married	98	81.67
Widowed	18	15.00
Others	4	3.33
Monthly family income (BDT)		
<10,000	40	33.33
10,000–20,000	48	40.00
>20,000	32	26.67

Most patients were diagnosed at Stage III (41.67%), followed by Stage II (30.00%), while Stage I and IV accounted for 15.00% and 13.33%, respectively. Squamous cell

carcinoma was the predominant histological type (78.33%). The most common treatment modality was chemoradiotherapy (46.67%), followed by radiotherapy alone (31.67%).

Most patients (40.00%) had completed treatment 1–3 years prior (*Table II*).

Table II
Clinical Characteristics of Cervical Cancer Survivors (*n* = 120).

Clinical Variables	Frequency (n)	Percentage (%)
Stage at diagnosis		
Stage I	18	15.00
Stage II	36	30.00
Stage III	50	41.67
Stage IV	16	13.33
Histological type		
Squamous cell carcinoma	94	78.33
Adenocarcinoma	20	16.67
Others	6	5.00
Treatment modality		
Surgery only	14	11.67
Radiotherapy	38	31.67
Chemoradiotherapy	56	46.67
Combined (Surgery + CRT)	12	10.00
Time since treatment completion		
<1 year	34	28.33
1–3 years	48	40.00
>3 years	38	31.67

The highest mean score was observed in cognitive functioning (70.5±16.1), followed by physical functioning (68.7±17.5). Emotional functioning had the lowest score (58.1± 0.4). The mean global health status score was 62.4±18.2 (*Table III*).

Table III
Global Health Status and Functional Scales of Quality of Life (EORTC QLQ-C30).

QoL Domains	Mean ± SD	Median (IQR)
Global health status	62.4 ± 18.2	65 (50–75)
Physical functioning	68.7 ± 17.5	70 (55–80)
Role functioning	64.2 ± 19.3	65 (50–80)
Emotional functioning	58.1 ± 20.4	60 (40–75)
Cognitive functioning	70.5 ± 16.1	75 (60–85)
Social functioning	60.3 ± 18.9	60 (45–75)

Financial difficulties had the highest mean score (55.8±24.7), followed by insomnia (44.1±23.6) and fatigue (42.6±21.3). Diarrhea showed the lowest symptom burden (18.6 ± 15.4) *Table IV*.

Table IV
Symptom Scales of Quality of Life (EORTC QLQ-C30).

Symptom Scales	Mean ± SD	Median (IQR)
Fatigue	42.6 ± 21.3	45 (25–60)
Pain	38.4 ± 22.1	35 (20–55)
Nausea/Vomiting	22.5 ± 18.7	20 (5–35)
Dyspnea	30.2 ± 19.4	30 (15–45)
Insomnia	44.1 ± 23.6	45 (25–65)
Appetite loss	36.7 ± 20.5	35 (20–55)
Constipation	28.9 ± 18.2	25 (10–45)
Diarrhea	18.6 ± 15.4	15 (5–30)
Financial difficulties	55.8 ± 24.7	60 (40–75)

Body image had the highest mean score (61.3±19.8), while sexual activity (34.5±22.6) and sexual enjoyment (38.2±21.7) were notably low. Menopausal symptoms (48.6±23.4) and vaginal symptoms (41.9±21.8) indicated moderate impairment (*Table V*).

Table V
Cervical Cancer-Specific QoL (EORTC QLQ-CX24 Module).

CX24 Domains	Mean ± SD	Median (IQR)
Body image	61.3 ± 19.8	65 (45–75)
Sexual activity	34.5 ± 22.6	30 (15–55)
Sexual enjoyment	38.2 ± 21.7	35 (20–55)
Lymphedema	26.4 ± 18.9	25 (10–40)
Peripheral neuropathy	32.7 ± 20.1	30 (15–50)
Menopausal symptoms	48.6 ± 23.4	50 (30–70)
Vaginal symptoms	41.9 ± 21.8	40 (25–60)

Higher QoL scores were observed among patients aged ≤ 50 years (66.8 ± 17.4) compared to >50 years (58.2 ± 18.6) ($p=0.021$). Urban residents had significantly better QoL (65.9 ± 16.8) than rural residents (59.6 ± 19.1) ($p=0.034$). Early-stage disease

(Stage I–II) was associated with higher QoL (69.3 ± 15.7) compared to advanced stages (56.4 ± 18.9) ($p<0.001$). Patients treated with surgery $\pm$ radiotherapy reported better QoL (70.1 ± 14.9) than those receiving chemoradiotherapy (58.7 ± 19.6) ($p=0.012$).

Additionally, patients with more than 1 year since treatment completion had significantly higher QoL (66.9 ± 18.1) compared to those within 1 year (55.8 ± 17.3) ($p = 0.003$) *Table IV*.

Table IV
Comparison of Global Quality of Life by Selected Variables.

Variables	Global QoL (Mean $\pm$ SD)	P value
Age group		
≤ 50 years	66.8 ± 17.4	0.021*
>50 years	58.2 ± 18.6	
Residence		
Urban	65.9 ± 16.8	0.034*
Rural	59.6 ± 19.1	
Stage at diagnosis		
Stage I–II	69.3 ± 15.7	$<0.001^*$
Stage III–IV	56.4 ± 18.9	
Treatment modality		
Surgery $\pm$ RT	70.1 ± 14.9	0.012*
Chemoradiotherapy	58.7 ± 19.6	
Time since treatment		
≤ 1 year	55.8 ± 17.3	0.003*
>1 year	66.9 ± 18.1	

*Statistically significant ($p \leq 0.05$)

DISCUSSION

Quality of life (QoL) has emerged as a crucial outcome measure in cervical cancer survivorship, as women often experience persistent physical, psychological, and social challenges even after completion of treatment, significantly influencing their overall well-being [12]. The majority of participants were aged 41-50 years (38.33%) with a mean age of 48.6 ± 9.8 years, predominantly rural (56.67%), married (81.67%), with a monthly family income of 10,000-20,000 (40.00%), and with low educational attainment. A study by Sarkar in India reported a comparable mean age group and predominance of married women among cervical cancer patients [13]. Likewise, Le Borgne observed that most cervical cancer survivors were middle-aged women, reflecting the disease burden in this age group [14]. Additionally, socioeconomic factors such as urban residence and higher income have been shown to positively influence QoL outcomes due to better access to healthcare and support systems [15]. In contrast, a study by BMC Women’s Health reported a higher mean age (approximately 55 years) and relatively better educational status among survivors, likely reflecting differences in socioeconomic development and healthcare access [15]. Most patients were diagnosed at advanced stages (Stage III: 41.67%), with squamous cell carcinoma being the predominant histology (78.33%), and chemoradiotherapy as the most common treatment modality (46.67%). These findings align with a Ghanaian study, which reported late-stage diagnosis in a majority of patients and similar treatment patterns dominated by radiotherapy or

chemoradiotherapy [16]. Similarly, Derks demonstrated that patients receiving radiotherapy often had more advanced disease and worse QoL outcomes compared to those undergoing surgery [17]. Another study by Le Borgne also showed that combined treatment modalities were associated with greater long-term morbidity [14]. The mean global health status score in our study (62.4 ± 18.2) indicates moderate QoL. A similar multi-country analysis reported global QoL scores ranging from 59.5 to 82.1, placing our findings at the lower end of this spectrum [18]. Similarly, the Ghana study reported a higher mean QoL score of 79.6, suggesting better perceived health status [16]. In terms of functional scales, emotional functioning was the lowest (58.1 ± 20.4), and cognitive functioning was relatively preserved (70.5 ± 16.1), consistent with findings from BMC Women’s Health, where emotional functioning was also the most affected domain among cervical cancer survivors and reported higher cognitive scores compared to emotional domains [15]. Furthermore, a longitudinal study by Mantegna demonstrated persistent emotional distress even two years after treatment [19]. Fatigue (42.6 ± 21.3), insomnia (44.1 ± 23.6), and financial difficulties (55.8 ± 24.7) were the most prominent symptoms in our study. Comparable symptom patterns have been reported, with fatigue and insomnia being among the most frequently reported symptoms in cervical cancer survivors in the BMC study [15]. Additionally, multi-country data indicate fatigue scores ranging from 37.3 to 45.42 and pain from 18.2 to 46.28, closely matching our findings [18]. The high

financial burden in our study reflects a critical regional issue; a Daffodil International University study in Bangladesh reported that 61.1% of cervical cancer patients faced economic problems during treatment [20]. Our study revealed moderate body image scores (61.3 ± 19.8) but significantly low sexual activity (34.5 ± 22.6) and sexual enjoyment (38.2 ± 21.7). These findings are strongly consistent with a study on chemoradiotherapy patients, who reported very low sexual activity and enjoyment scores, highlighting the adverse impact of treatment on sexual health [21]. Similarly, another study showed wide variability in sexual functioning but consistently identified it as one of the most impaired domains [18]. The Ghana study also reported that over one-third of survivors experienced sexual dysfunction and related concerns [16]. Lymphedema (26.4 ± 18.9) and menopausal symptoms (48.6 ± 23.4) in our study were comparable to longitudinal findings where these symptoms persisted long-term after treatment [19]. Our analysis demonstrated significantly better QoL among younger patients (≤ 50 years, 66.8 ± 17.4), urban residents (65.9 ± 16.8), early-stage diagnosis (69.3 ± 15.7), surgical treatment groups (70.1 ± 14.9), and those with longer time since treatment (66.9 ± 18.1). These findings are well supported by Derks, who reported better QoL outcomes among patients treated surgically compared to radiotherapy, particularly in physical and social functioning [17]. Similarly, Le Borgne found that radiotherapy was associated with poorer QoL and increased long-term complications [14]. Time since treatment also showed a significant association, with

improved QoL over time, consistent with longitudinal studies demonstrating gradual recovery in global health status after treatment [19]. Overall, cervical cancer survivors demonstrate a relatively satisfactory quality of life; however, persistent physical, psychological, and sexual health challenges highlight the need for comprehensive, patient-centered survivorship care in Bangladeshi women [6].

LIMITATIONS

This study has several limitations. Being a cross-sectional design, it cannot establish causal relationships between variables and quality of life outcomes. The use of purposive sampling from a single tertiary care center limits the generalizability of findings to the broader population, particularly rural communities. Additionally, reliance on self-reported questionnaires may introduce recall and response bias. The absence of longitudinal follow-up restricts assessment of QoL changes over time, and potential cultural influences on responses were not fully explored.

CONCLUSION

This study demonstrates that cervical cancer survivors in Bangladesh experience a moderate overall quality of life, with notable impairments in emotional, social, and sexual domains. While functional scales such as cognitive functioning (70.5 ± 16.1) and physical functioning (68.7 ± 17.5) were relatively preserved, symptom burden—particularly fatigue (42.6 ± 21.3), insomnia (44.1 ± 23.6), and financial difficulties (55.8 ± 24.7)—remained substantial. Advanced stage at diagnosis (Stage III–IV: 56.4 ± 18.9 , $p < 0.001$), older age, rural residence, and chemoradiotherapy were significantly associated with poorer QoL outcomes. These findings highlight the need for integrated survivorship care programs focusing on psychosocial support, symptom management, and early detection strategies to improve long-term well-being among cervical cancer survivors in Bangladesh.

FUNDING

No funding sources

CONFLICT OF INTEREST

None declared

ETHICAL APPROVAL

The study was approved by the Institutional Ethics Committee.

REFERENCES

1. Franco EL, Schlecht NF, Saslow D. The epidemiology of cervical cancer. *The Cancer Journal*. 2003 Sep 1;9(5):348-59.
2. Whoqol Group. Measuring quality of life. Geneva: The World Health Organization. 1997:1-3.
3. Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, Bray F. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: a cancer journal for clinicians*. 2021 May;71(3):209-49.
4. Shahjalal M, Dahal PK, Rahman A, Mahmud ST, Kamran M, Ahmed MS, Hossain Hawlader MD, Dee EC, Iqbal J, Mahumud RA. Cancer Burden in Bangladesh: Insights From National Institute of Cancer Research & Hospital, 2014-2020. *JCO Global Oncology*. 2026 Mar;12(3):e2500584.
5. Aaronson NK, Ahmedzai S, Bergman B, Bullinger M, Cull A, Duez NJ, Filiberti A, Flechtner H, Fleishman SB, Haes JC, Kaasa S. The European Organization for Research and Treatment of Cancer QLQ-C30: a quality-of-life instrument for use in international clinical trials in oncology. *JNCI: Journal of the National Cancer Institute*. 1993 Mar 3;85(5):365-76.
6. Shylasree TS, Ranade R, Kattapur AK, Kaur S, Dusane R, Maheshwari A, Mahantshetty U, Chopra S, Engineer R, Kerkar RA. Quality of life in long term survivors of cervical cancer: A cross sectional study. *Indian journal of cancer*. 2021 Apr 1;58(2):171-8.
7. Hossain N, Akter QM, Banu F, Mahmud S. Quality of life of cervical cancer patients after completion of treatment-A study among Bangladeshi women. *Bangladesh Medical Research Council Bulletin*. 2015;41(3):131-7.
8. Stuopelytė R, Žukienė G, Breivienė R, Rudaitis V, Bartkevičienė D. Quality of life in cervical cancer survivors treated with concurrent chemoradiotherapy. *Medicina*. 2023 Apr 17;59(4):777.
9. Osann K, Hsieh S, Nelson EL, Monk BJ, Chase D, Cella D, Wenzel L. Factors associated with poor quality of life among cervical cancer survivors: implications for clinical care and clinical trials. *Gynecologic oncology*. 2014 Nov 1;135(2):266-72.
10. Alam MM, Rahman T, Afroz Z, Chakraborty PA, Wahab A, Zaman S, Hawlader MD. Quality of Life (QoL) of cancer patients and its association with nutritional and performance status: A pilot study. *Heliyon*. 2020 Oct 1;6(10).
11. Bottomley A, Flechtner H, Efficace F, Vanvoorden V, Coens C, Therasse P, Velikova G, Blazeby J, Greimel E. Health related quality of life outcomes in cancer clinical trials. *European Journal of Cancer*. 2005 Aug 1;41(12):1697-709.
12. Betea R, Dima M, Chiriac VD. Quality of life and stress-related psychological distress among patients with cervical cancer: a cross-sectional analysis. *Diseases*. 2025 Feb 25;13(3):70.
13. Sarkar M. Effect of treatment on the quality of life of cervical cancer patients: a prospective study from a tertiary care center of West Bengal. *International Journal of Community Medicine and Public Health*. 2020 Jan;7(1):300.
14. Le Borgne G, Mercier M, Woronoff AS, Guizard AV, Abeilard E, Caravati-Jouveaux A, Klein D, Velten M, Joly F. Quality of life in long-term cervical cancer survivors: a population-based study. *Gynecologic oncology*. 2013 Apr 1;129(1):222-8.
15. Huang HY, Tsai WC, Chou WY, Hung YC, Liu LC, Huang KF, Wang WC, Leung KW, Hsieh RK, Kung PT. Quality of life of breast and cervical cancer survivors. *BMC women's health*. 2017 Apr 12;17(1):30.
16. Amo-Antwi K, Agambire R, Konney TO, Nguah SB, Dassah ET, Nartey Y, Appiah-Kubi A, Tawiah A, Tannor EK, Peprah A, Ansah MB. Health-related quality of life among cervical cancer survivors at a tertiary hospital in Ghana. *PLoS One*. 2022 Jun 3;17(6):e0268831.
17. Derks M, van Lonkhuijzen LR, Bakker RM, Stiggelbout AM, de Kroon CD, Westerveld H, Roovers JP, Kenter HG, Ter Kuile MM. Long-term morbidity and quality of life in cervical cancer survivors: a multicenter comparison between surgery and radiotherapy as primary treatment. *International Journal of Gynecological Cancer*. 2017 Feb 1;27(2):350-6.
18. Anawate I, Lumley C, Silverwood S, Anchondo M, Hughes K, Kernell C, Bhatia R, Grover S. Quality of life in cervical cancer survivors treated with chemoradiotherapy: a systematic review. *International Journal of Radiation Oncology, Biology, Physics*. 2024 Oct 1;120(2):e673.
19. Mantegna G, Petrillo M, Fuoco G, Venditti L, Terzano S, Anchora LP, Scambia G, Ferrandina G. Long-term prospective longitudinal evaluation of emotional distress and quality of life in cervical cancer patients who remained disease-free 2-years from diagnosis. *BMC cancer*. 2013 Mar 18;13(1):127.
20. Eddar SR, Shimul MM, Ava IG, Jamil S, Khandker S. Quality of life assessment for patients with cancer in Bangladesh. *International Journal of Palliative Nursing*. 2025 Aug 2;31(8):404-14.
21. Stuopelytė R, Žukienė G, Breivienė R, Rudaitis V, Bartkevičienė D. Quality of life in cervical cancer survivors treated with concurrent chemoradiotherapy. *Medicina*. 2023 Apr 17;59(4):777.