



## Literature Review

# Quality of life of cervical cancer patients

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## **Abstract**

Cervical cancer is known as the highest cause of death after breast cancer. It is gynecological cancer contributing to the top cause of death in women. Sexual and reproductive issues can reduce the quality of life of women with cervical cancer. WHO defines the quality of life as an individual's perception in the cultural context and value system in which the individual experiences and is related to their goals, expectations, standards, and affairs. It gives the concept of an individual's physical health, psychological conditions, one's beliefs, social relationships, and one's involvement with something meaningful in their environment. This article will explain the definition, symptoms, and staging of cervical cancer, the definition of the quality of life, the meaning of excellence for the cervical cancer patient, and the facts that affect the quality of life.



## INTRODUCTION

Cervical cancer, based on the data from the Global Burden Cancer or the International Agency for Research on Cancer (IARC), is known as the highest cause of death after breast cancer. This cancer is gynecological cancer contributing to the most top cause of death in women, with 84% of new cases worldwide (Memon & El-Turki, 2018). In the developed countries, programs are in place, which enables females to be vaccinated against HPV and women to get screened regularly. Screening allows pre-cancerous lesions to be identified at stages when they can quickly be treated. Early treatment prevents up to 80% of cervical cancers in these countries (World Health Organization, 2019).

Cervical cancer in Indonesia is the most common cancer with an incidence rate of 23.4 per 100,000 population, with 13.9 deaths per 100,000 people (Kemenkes RI, 2015). This condition makes cervical cancer called the number one killer disease in Indonesia. The deaths associated with the majority of cervical cancer stages (80%) are invasive, advanced, and even terminal stages at the time of diagnosis (Nindrea, 2017). The highest prevalence of people with cervical cancer in Indonesia in 2013 was 0.8% or an estimated 98,692 patients. The province of Kepulauan Riau, North Maluku, and Daerah Istimewa Yogyakarta had the highest prevalence of cervical cancer in Indonesia. In 2013, the North Sumatra Province ranked ninth with a prevalence of 0.7% or an estimated 4,694 patients (Kemenkes RI, 2013).

Cervical cancer will cause its problems for women who experience it because it is associated with changes in the female reproductive organs, which are considered a significant part of women (Wijaya, 2010). A cervical cancer diagnosis is an emotional trauma for women. The impacts of cervical

cancer are decreased self-esteem on body image, impaired relationships with partners, sexual, and reproductive issues that can reduce the quality of life of women with cervical cancer (Samadi, 2010).

WHO defines the quality of life as an individual's perception in the cultural context and value system in which the individual experiences and is related to their goals, expectations, standards, and affairs (Yulianti et al., 2015). It gives the concept of an individual's physical health, psychological conditions, one's beliefs, social relationships, and one's involvement with something meaningful in their environment.

This article aims to look at the meaning of the quality of life of people with cervical cancer.

## LITERATURE REVIEW

### CERVICAL CANCER

#### *Definition of Cervical Cancer*

Cervical cancer is cancer that grows on the cells of the cervix caused by infection with Human Papilloma Virus (HPV) and is transmitted directly through skin contact during sexual intercourse in patients who have infected with the HPV virus. Human Papilloma Virus (HPV) is a virus that attacks the skin and mucous membranes of humans and animals (Arum, 2015).

Cancer is an uncontrolled growth of body cells forming new cells that urges healthy cells and causes problems in the organs where cancer grows (American Cancer Society, 2017). The cervix is a cylindrical lower part of the uterus that connected to the vagina. At the top meet, the corpus of the uterus is called isthmus or internal os, and the lower border of the cervix related to the vagina is called external os. The cervix is anatomically divided into endocervix and ectocervix, which is coated by two different glands. The columnar epithelium paints the endocervix while the ectocervix covered by



squamous epithelium, and the two organs meet at the squamocolumnar junction (SCJ) (Bermudez et al., 2015).

### ***Risk Factors for Cervical Cancer***

Factors that cause cervical cancer include:

#### 1) *Genetic factors*

Genetic abnormalities play a role in carcinogenesis and cervical tumor aggressiveness around 32-34%. Families with a history of cervical cancer can increase their risk two to three times higher than those without a family history of cervical cancer (Kessler, 2017).

#### 2) *Sexual behavior*

Sexual behavior is related to the age of first sexual intercourse and the number of sexual partners or partners with many sex partners. They are related to the possibility of cervix exposed to higher and longer carcinogenic factors. Women who first have sexual intercourse at the age of <20 years old have more risk than women who have sexual intercourse >20 years old (Kessler, 2017).

#### 3) *Reproductive factors*

Higher parity, early age at first birth, and the number of vaginal deliveries cause chronic trauma to the cervix during childbirth to be a factor in cervical cancer (Roura et al., 2016; Kessler, 2017). A woman who experiences her first pregnancy age of 17 is almost twice as likely to develop cervical cancer than a woman who waits to get pregnant until the age of 25 (Kessler, 2017).

#### 4) *Smoking habits*

Female smokers with high duration and intensity show a twofold increase in the risk of grade 3 cervical intraepithelial neoplasia (NIS 3)/ carcinoma in situ (KIS). Women who smoke are twice as likely to get cervical cancer compared to nonsmokers. Cancer-causing chemicals and tobacco byproducts in cigarettes have been found in the cervical mucosa of female smokers, and these substances damage the DNA of cervical

cells (Kessler, 2017).

- 5) *The use of long-term oral contraceptives*  
The use of oral contraceptives for more than five years has a risk of cervical cancer, but the risk returns to normal ten years after oral contraception is stopped (Roura et al., 2016; Kessler, 2017).
- 6) *History of Sexually Transmitted Diseases (STDs)*  
Chlamydia and herpes simplex infections cause chronic inflammation and ulcerative micro-changes in the cervical epithelium that play a role in cancer initiation and progression (Roura et al., 2016).
- 7) *Chronic immunosuppression*  
Women with advanced Human Immunodeficiency Virus (HIV) infection have a high risk of cervical cancer because the development of pre-cancerous lesions becomes invasive cancer more quickly (Kessler, 2017). HIV is a virus that damages the immune system. The immune system is essential in destroying cancer cells and slowing growth and spread. For women with HIV, cervical precancers lesion develop invasive cancer faster than usual. Having HIV makes a woman's immune system less able to fight both HPV infection and diseases at an early stage (Ngabo et al., 2016).
- 8) *Dietary factors*  
Diets high in calories and sugar, sugary drinks, and processed meat are associated with weight gain, leading to obesity, which risks increasing carcinogenesis. A healthy diet with high vegetable food intake (fruits, vegetables, legumes, and whole grains), low consumption of processed red meat, moderate consumption of sweet foods, and avoidance of high salt intake are associated with lower cancer risk and improve cancer prognosis for the better in patients who have to diagnose with cancer (Norat et al., 2015).



### 9) *Factors of poverty*

The poverty factor is associated with low income and limited access to health care cannot be screened for cervical cancer precursors or treated for cervical cancer (Kessler, 2017).

### *Symptoms of Cervical Cancer*

Several signs found in patients with advanced cervical cancer, according to Arum (2015), namely:

#### 1) Abnormal leucorrhoea

Recurrent leucorrhoea occurs, which does not heal even though it has been treated. The leucorrhoea is usually smelly, itchy, and hot because it has a secondary infection, meaning that the fluid coming out of the pre-cancerous lesion or cancer is added to contamination by germs, bacteria/parasites, fungi, and even HPV virus infections.

#### 2) Bleeding from the vagina

At an advanced stage, cervical cancer symptoms not only cause vaginal discharge but also bleeding from the vagina. This bleeding occurs outside the menstrual period. It can occur after intercourse, too much force during bowel movements, or after menopause.

#### 3) Pain in the reproductive organs

People affected by cervical cancer will also often experience pain in the area around the vagina. Apart from the vaginal area, the pain will usually also felt in the lower abdomen, thighs, and hip joints during menstruation, bowel movements, and intercourse. If cervical cancer has spread to the pelvis, the patient will suffer complaints of back pain, obstacles in urination, and kidney enlargement.

### *Staging Cervical Cancer*

The diagnosis of the staging of cervical

cancer is crucial for proper treatment. The stage of cervical cancer is divided into five types. According to Cancer Research UK (2019), the types of cervical cancer given as follows:

#### 1) Normal

This is also called “Carcinoma In Situ (CIS),” which means that some cervical cells change the changes. However, abnormal cells are located and contained in the cervix’s surface layer and are still in place. Carcinoma in situ is not cancer, but in some women, the change will develop into cancer after a few years.

#### 2) Stage 1

It is characterized by cancer cells that only exist in the cervix, and the size of the disorder is less than 3 mm. This stadium means that cancer only exists in the uterus. Usually divided into two stadiums, namely:

a) Stage 1A: minimal growth can only see with a microscope. Stage 1A1 means that cancer has grown less than 3 millimeters (mm) into cervical tissue, and is less than 7 mm wide. Stage 1A2 means cancer has grown between 3 and 5 mm into the cervical tissue but is still less than 7 mm wide.

b) Stage 1B: the cancer area begins to spread, but it is still only in the cervical tissue and has not spread. It can be seen without a microscope but can not see. In stage 1B1, the cancer is no larger than 4 cm. In 1B2 glass, the tumor is more significant than 4 cm.

#### 3) Stage 2

Cancer has begun to spread in the cervix into the surrounding tissue. Nevertheless, it not yet grown into the muscles or ligaments that line the pelvis (pelvic wall) or the bottom of the vagina. This stage is divided into two sub stage, namely:

a) Stage 2A: cancer has spread to the upper part of the vagina



- b) Stage 2B: cancer spreads to the tissue around the cervix.
- 4) Stage 3  
 Cancer has spread outside the uterus but is still in the pelvic cavity and has not entered the bladder or rectum. However, lymph consumption can already contain cancer cells. Cancer at this stage is high-grade cancer, and the symptoms are getting worse. The stage 3 is divided into two, namely:
- a) Stage 3A: this stage prohibits cancer cells from spreading to the lower third of the vagina but not to the pelvic wall.
- b) Stage 3B: the cancer cells have spread to the pelvic wall and can even deny because of its enlarged size. This blockage can cause the kidneys to stop working.
- 5) Stage 4  
 Cancer has spread to the bladder, rectum, or others. Stage 4 is also divided into two, namely 4A and 4B.
- a) Stage 4A: cancer has spread to the bladder, and the rectum also covers lymph.
- b) Stage 4B: cancer has spread beyond the pelvis and includes lymph nodes besides the pelvis such as liver, stomach, lungs, digestive tract, bones.

## QUALITY OF LIFE

### *Definition Quality Of Life*

Quality of life is a subjective perception of satisfaction or happiness in life and an essential domain for individuals (Ikatan Dokter Anak Indonesia, 2017). According to WHO in Astuti et al. (2015), if the patient's quality of life decreases, the patient will feel physically, psychologically, socially, and spiritually uncomfortable. The patient also cannot utilize his life optimally for the happiness of himself and others.

There are four fields (areas) used to measure the quality of life, namely physical health, psychological health, social relations, and the environment (Salim et al., 2016). In detail, the

areas of quality of life assessment include:

- a) The domain of physical health, related matters, include daily activities, dependence on medical materials or medical help, energy and fatigue, mobility, pain and discomfort, sleep and rest, and work capacity
- b) Psychological domain, related things such as body image and appearance, negative and positive feelings, spirituality / personal beliefs, thoughts, learning, memory, and concentration
- c) The social domain, related matters such as personal relationships, social relations, and social support, and sexual activity
- d) Environmental area, about financial resources, freedom, physical security and safety, health and social care (accessibility and quality), home environment, opportunities to obtain information and learn new skills, opportunities for recreation or leisure, physical environment ( pollution, noise, traffic, climate), and transportation

### *Result Facts Affects Quality of Life*

Factors that can affect the quality of life include:

#### 1) *Physical Factor*

According to research conducted by (Khalid et al., 2016), physical factors such as functional disabilities can affect the quality of life of individuals because these individuals cannot undergo their daily activities independently. Anxiety and pain sometimes make the patient unable to work as usual and impedes daily activities or routines (Utami et al., 2014) The frequent pain that interferes with daily activities, lack of energy in activities, lack of satisfactory sleep quality, and lack of ability to work can also affect the quality of life (Rose et al., 2020).



### 1) *Psychological Factors*

Psychological factors, such as depression can reduce a person's quality of life (Lin et al., 2015). In addition to depression, dementia (Khalid et al., 2016), reduced ability to concentrate, feeling dissatisfied with yourself due to illness and frequent negative feelings such as loneliness, despair, and anxiety also become the factors that can affect the quality of life (Astuti et al., 2015).

### 2) *Clinical Factors*

Clinical factors that can affect the quality of life of individuals including the side effects in medicine (Lin et al., 2015), disease severity, and complications (Khalid et al., 2016), drug use, and patient compliance (Yaghoubi et al., 2012).

### 3) *Socio-Economic Factors*

According to Khalid et al. (2016), marital status, family status, and health services can affect the quality of life of individuals. Huang et al. (2017) states the factor related to QOL of cervical cancer survivors was household income.

### 4) *Family Support*

The family is an aspect in making decisions concerning where treatment should be given and by whom. Family support can make the family able to improve health and adaptation in life so that it will affect the quality of life where information support included in the family health care function of family members. This information support can provide in the form of giving advice, direction, and essential information needed. In dealing with these conditions, family support is necessary. Family support is to help or support the family in the form of attention, appreciation, and love in a family. The backing that is owned by someone can prevent the development of problems due to pressure faced, according to Prodono et al. (2009).

## THE MEANING OF QUALITY FOR CERVICAL CANCER PATIENTS

Made et al., (2017) stated that cervical cancer patients treated in the Gynecology Cempaka Room at Sanglah Hospital Denpasar are mostly advanced-stage cases. Physically, most cases of cervical cancer complain of feeling a lack of energy/weakness at an intermediate level even though only a small proportion complain of severe nausea. Weakened physical conditions make it difficult for sufferers to meet with the family. This condition also influences by feelings of pain, where most sufferers complain of moderate-severe pain. Declining physical health also influenced by complaints due to the side effects of the drug. Most of them experience physical activity obstruction due to claims of drug side effects. Physical conditions like this also have an impact on the time spent in bed.

Research of Sabulei & Maree (2019) showed that women treated for cervical cancer get financial difficulties that were rampant, especially during the treatment phase. Insomnia and urinary frequency were the most cumbersome problems and remained so even after treatment. Cervical cancer and its treatment had a negative influence on QoL in all domains of the lives of these women.

Research of Endarti et al. (2015) showed that the most frequently reported problems were pain/discomfort, followed by anxiety/depression. Cervical cancer significantly affects patient's health-related Quality of Life (HRQoL). Research of Thapa et al. (2018) in China stated symptoms that mostly experienced were insomnia, constipation, financial difficulties, and menopausal symptoms.

A study in Ethiopia suggests that HRQoL patients with cervical cancer in Ethiopian were low with mean global health status/ QoL score of  $48.3 \pm 23.77$  and EQ-5D index of 0.77. Physical functioning, emotional functioning, pain, and symptom experience significantly



# QANUN MEDIKA

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affects the global health status/ QoL (Araya et al., 2020).

The study of de Arruda et al. (2020) identified that after treatment for locally advanced cervical cancer, patients improved in most quality of life aspects. However, worsening observed in sexual enjoyment, peripheral neuropathy, and menopausal symptoms. Efforts should be made to prevent and treat these long-term effects of locally advanced cervical cancer treatment, which could improve patients' quality of life.

Study of dos Santos et al. (2019) indicated that health-related quality of life in women with cervical cancer using domains of HRQoL of the women treated for cervical cancer, showed a better score observed in the areas of physical and social/ family well-being. Most domains show better scores in those with a current occupation, the duration after the diagnosis and treatment, and among those who had undergone a hysterectomy.

Research on cervical cancer survivors', regarding the quality of life and sexual function, states QoL and sexual function of cervical cancer survivors' were lower than the general population. Treatment-related complications and sexual dysfunction significantly affected patients' QoL. Having health insurance was associated with better QoL. Sexual function was adversely affected by radiotherapy and radical hysterectomy. Sexuality is an essential concern of cervical cancer survivors (Zhou et al., 2016). Due to traditional culture, cervical cancer survivors in China usually avoid discussing issues of sexuality with physicians. A model gynecological advice clinic has shown positive outcomes in British cancer patients who face sexuality issues. Therefore, a similar strategy could be adopted to improve cervical cancer survivors' sexual function and QoL in China.

## CONCLUSION

Cervical cancer has an impact on the quality of life, either physical, psychological, social, or financial. Physical changes can occur, including on the reproductive organs. Sexuality, insomnia, and urinary frequency are the most complicated problems. The symptoms that remain even after treatment are pain or discomfort, followed by anxiety or depression, reduced loss of appetite, fatigue, and financial difficulties.

## REFERENCES

- American Cancer Society (2017). *California Cancer Facts & Figures 2017*. Retrieved from: <https://www.cdph.ca.gov/>
- Araya, L. T., Fenta, T. G., Sander, B., Gebremariam, G. T., & Gebretekle, G. B. (2020). Health-related quality of life and associated factors among cervical cancer patients at Tikur Anbessa specialized hospital, Addis Ababa, Ethiopia. *Health and Quality of Life Outcomes*, 18(1), 1–9.
- Arum, S. P. (2015). *Stop kanker serviks. Yogyakarta: Penerbit Notebook*.
- Astuti, N. D., Syamsiatun, N. H., & Suryani, I. (2015). Faktor-faktor yang berhubungan dengan kualitas hidup pasien gagal ginjal kronik yang menjalani hemodialisa di rumah sakit umum daerah Panembahan Senopati Bantul. *Jurnal Nutrisia*, 17(1), 10–16.
- Bermudez, A., Bhatla, N., & Leung, E. (2015). Cancer of the cervix uteri. *International Journal of Gynecology & Obstetrics*, 131, S88–S95.
- Cancer Research UK (2019). *Stages, types and grades*. Retrieved from: <https://www.cancerresearchuk.org/about-cancer/cervical-cancer/stages-types-grades>



- Clifford, G. M., de Vuyst, H., Tenet, V., Plummer, M., Tully, S., & Franceschi, S. (2016). Effect of HIV infection on human papillomavirus types causing invasive cervical cancer in Africa. *Journal of Acquired Immune Deficiency Syndromes (1999)*, 73(3), 332.
- de Arruda, F. N., da Costa, S., Bonadio, R., Dornellas, A., Pereira, D., de Bock, G., & Diz, M. D. P. E. (2020). Quality of life of locally advanced cervical cancer patients after neoadjuvant chemotherapy followed by chemoradiation versus chemoradiation alone (CIRCE trial): a randomized phase II trial. *International Journal of Gynecologic Cancer*, ijgc-2019.
- dos Santos, L. N., Castaneda, L., de Aguiar, S. S., Thuler, L. C. S., Koifman, R. J., & Bergmann, A. (2019). Health-related Quality of Life in Women with Cervical Cancer. *Revista Brasileira de Ginecologia e Obstetricia/RBGO Gynecology and Obstetrics*, 41(04), 242–248.
- Endarti, D., Riewpaiboon, A., Thavorncharoensap, M., Praditsitthikorn, N., Hutubessy, R., & Kristina, S. A. (2015). Evaluation of health-related quality of life among patients with cervical cancer in Indonesia. *Asian Pac J Cancer Prev*, 16(8), 3345–3350.
- Huang, H.-Y., Tsai, W.-C., Chou, W.-Y., Hung, Y.-C., Liu, L.-C., Huang, K.-F., Wang, W.-C., Leung, K.-W., Hsieh, R.-K., & Kung, P.-T. (2017). Quality of life of breast and cervical cancer survivors. *BMC Women's Health*, 17(1), 30.
- Ikatan Dokter Anak Indonesia. (2017). *Penilai Kualitas Hidup pada Anak Menerapkan Aspek Penting yang Sering terlewatkan*. Diakses dari <http://www.idai.or.id>. Pada tanggal.
- Kemenkes RI. (2013). *Riset Kesehatan Dasar*.
- Kemenkes RI. (2015). Profil kesehatan indonesia. *Jakarta: Kementerian Kesehatan Republik Indonesia*.
- Kessler, T. A. (2017). Cervical cancer: prevention and early detection. *Seminars in Oncology Nursing*, 33(2), 172–183.
- Khalid, W., Rozi, S., Ali, T. S., Azam, I., Mullen, M. T., Illyas, S., Soomro, N., & Kamal, A. K. (2016). Quality of life after stroke in Pakistan. *BMC Neurology*, 16(1), 250.
- Lin, X., Shang, Y., Teng, S., Liu, H., & Han, L. (2015). Relationship between perceived social support and quality of life among kidney transplant recipients. *GSTF Journal of Nursing and Health Care (JNHC)*, 1(3), 1–6.
- Made, D. I., Aryana, M. B. D., & Surya, H. W. (2017). Kualitas Hidup Pasien Kanker Serviks Yang Dirawat Di Ruang Cempaka Ginekologi Rusp Sanglah Denpasar. PIT HOGSI X Jakarta. Retrieved from: [https://simdos.unud.ac.id/uploads/file\\_penelitian\\_1\\_dir/1a237318c52e91e43a89c758a8c1b0fa.pdf](https://simdos.unud.ac.id/uploads/file_penelitian_1_dir/1a237318c52e91e43a89c758a8c1b0fa.pdf)
- Memon, A., & El-Turki, A. (2018). Epidemiology of gynaecological cancers. *Gynaecological Oncology for the MRCOG*, 1.
- Ngabo, F., Franceschi, S., Baussano, I., Umulisa, M. C., Snijders, P. J. F., Uytterlinde, A. M., Lazzarato, F., Tenet, V., Gatera, M., & Binagwaho, A. (2016). Human papillomavirus infection in Rwanda at the moment of implementation of a national HPV vaccination programme. *BMC Infectious Diseases*, 16(1), 225.
- Nindrea, R. D. (2017). Prevalensi dan faktor yang mempengaruhi lesi pra kanker