



## Quality of life of women undergoing treatment for cervical cancer\*

Qualidade de vida de mulheres tratadas por câncer do colo de útero

Calidad de vida de mujeres tratadas por cáncer de cuello uterino

Francieli Ana Dallabrida<sup>1</sup>, Marli Maria Loro<sup>2</sup>, Cleci Lourdes Schmidt Piovesan Rosanelli<sup>2</sup>, Marina Mazzuco de Souza<sup>2</sup>, Joseila Sonogo Gomes<sup>2</sup>, Adriane Cristina Bernat Kolankiewicz<sup>2</sup>

This study aimed to evaluate the quality of life of women with cervical cancer. This is a cross-sectional, descriptive study developed with 43 women undergoing oncological treatment assisted at an Oncology High Complexity Center, in the Southern region of Brazil. The instrument used was the European Organization for Research and Treatment of Cancer – Quality of Life Questionnaire Core-30, and the data were analyzed through descriptive statistics. The average age was 54.6 years old. Married women prevailed (53.4%), with incomplete elementary education (72.1%) and income from one to two minimum wages (62.8%). Quality of Life was considered very satisfactory. According to the development scales and emotional functioning, the result was from regular to satisfactory. The most frequent symptoms were fatigue, lack of appetite and pain. There is a need of structure of public health policies, for preventing cervical cancer in the most vulnerable population.

**Descriptors:** Uterine Cervical Neoplasms; Quality of Life; Women's Health.

O estudo objetivou avaliar a Qualidade de Vida de mulheres com câncer do colo uterino. Pesquisa transversal, descritiva, realizada com 43 mulheres em tratamento oncológico atendidas em um Centro de Alta Complexidade de Oncologia, na Região Sul do Brasil. O instrumento utilizado foi o *European Organization for Research and Treatment of Cancer – Quality of Life Questionnaire Core-30*, e os dados foram analisados a partir da estatística descritiva. A média de idade foi de 54,6 anos. Prevaleram as casadas (53,4%), com Ensino Fundamental incompleto (72,1%) e renda de um a dois salários mínimo (62,8%). A Qualidade de Vida foi considerada muito satisfatória. De acordo com escalas de desempenho de papel e funcionamento emocional, o resultado foi regular a satisfatório. Os sintomas mais frequentes foram fadiga, falta de apetite e dor. Aponta-se a necessidade de estruturação das políticas públicas de saúde, para prevenção do câncer do colo uterino na população mais vulnerável.

**Descritores:** Neoplasias do Colo do Útero; Qualidade de Vida; Saúde da Mulher.

El objetivo fue evaluar la Calidad de Vida de mujeres con cáncer de cuello uterino. Investigación transversal, descriptiva, con 43 mujeres en tratamiento del cáncer en un Centro de Alta Complejidad de Oncología, en el Sur del Brasil. El instrumento utilizado fue el *European Organization for Research and Treatment of Cancer – Quality of Life Questionnaire Core-30*, y los datos se analizaron mediante estadística descriptiva. La edad media fue de 54,6 años; prevalecieron casadas (53,4%), con educación primaria incompleta (72,1%) y renta de uno a dos sueldos mínimos (62,8%). La Calidad de Vida fue considerada muy satisfactoria. En las escalas de desempeño del rol y del funcionamiento emocional, el resultado fue regular a satisfactorio. Los síntomas más comunes fueron fatiga, falta de apetito y dolor. Hay necesidad de estructuración de las políticas de salud pública para prevención del cáncer de cuello uterino a la población más vulnerable.

**Descritores:** Neoplasias del Cuello Uterino, Calidad de Vida, Salud de la Mujer.

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<sup>1</sup>Hospital Tacchini de Bento Gonçalves, Bento Gonçalves, RS, Brazil.

<sup>2</sup>Universidade Regional do Noroeste do Estado do Rio Grande do Sul de UNIJUÍ, Ijuí, RS, Brazil.

Corresponding author: Adriane Cristina Bernat Kolankiewicz  
Rua Tiradentes, 231, apto. 804, Centro, CEP: 98700-000. Ijuí, RS, Brazil. E-mail: adriane.bernat@unijui.edu.br

## Introduction

Cancer is a chronic degenerative disease, considered a public health problem, given its high incidence, prevalence, morbidity, mortality and demands of care from family members and healthcare professionals<sup>(1)</sup>. Its characteristic is a disorderly and accelerated growth of cells that invade surrounding tissues and organs<sup>(1)</sup>.

An estimate from the National Cancer Institute (INCA) for 2012-2013 foresees an occurrence of 518,510 new cases of cancer in Brazil, 257,870 for males and 260,640 for females, and, in females cases, 18,000 new cases of cervical cancer (CC) are expected<sup>(2)</sup>.

The disease is the third most frequent type of cancer among women, with approximately 530 thousand new cases per year worldwide, leading to death about 274 thousand women per year<sup>(3)</sup>. It is responsible for most causes of death among women aged from 35 to 45 years old in developing countries. The risk of a woman developing cervical cancer in developed countries is 1%, but in developing countries is 5%<sup>(4)</sup>.

In Brazil it is the second most frequent type in the female population, excluding non-melanoma skin cancer<sup>(5)</sup>. It has its higher incidence in the Midwest Region (28/100,000), followed by North (24/100,000), Northeast (18/100,000), Southeast (15/100,000) and South region (14/100,000). In Rio Grande do Sul 1,190 new cases of this neoplasm were expected for every 100,000 women in 2013<sup>(2)</sup>.

Neoplasms of cervical cancer originate in the epithelium lining of the ectocervix or the epithelial cells lining the glands of the endocervix. With slow growth, these cells are characterized by uncontrolled replication of the body's epithelial lining, affecting the underlying tissue, and by the potential to invade continuous or distant structures and organs<sup>(3)</sup>.

The diagnosis of cervical cancer and the need for treatment have physical and psychological repercussions in women's lives, making them anxious

about the prognosis, as well as the changes caused by the disease and its treatment – which can alter their quality of life. They experience a variety of side effects, which may persist for a long period, which interfere with their way of living. The quality of life is the perception that the individual has of himself, of his position in life, customs, values and social perspectives, relating to the patient's physical and mental health and independence<sup>(4)</sup>. Their assessment provides important information about the impact of the disease on patients' lives.

Thus, this study sought to answer the following research question: What is the quality of life of women undergoing treatment for cervical cancer like?

## Method

This study is part of the institutional research *Life Quality of Oncological Patients assisted in a high complexity Center for Cancer Treatment*, from the Universidade Regional do Noroeste do Estado do Rio Grande do Sul (UNIJUÍ). This is a cross-sectional study with quantitative nature.

The study included 43 women undergoing outpatient cancer treatment. For the sample composition, were considered as inclusion criteria: being over 18 years old, with diagnosis of cervical cancer, undergoing chemotherapy and/or radiotherapy. For patients receiving chemotherapy, were considered those from the third cycle, and in radiotherapy from the first section. All of them were undergoing cancer treatment in a high complexity oncology center in the south of Brazil.

Data collection was conducted from April to December 2011. The data were collected by a calculation instrument of sociodemographic conditions and an instrument used in Brazil in previous studies<sup>(6)</sup>, the European Organization for Research and Treatment of Cancer – Quality of Life Questionnaire – Core 30 (EORTC QLQ-C30). The QLQ-C30 assesses the quality of life of patients with cancer through 30 questions divided into five functional scales (physical,

cognitive, emotional, social and role performance); three symptom scales (fatigue, pain, and nausea and vomiting); a scale of general health status/QOL; and five other items that assess symptoms commonly reported by cancer patients (dyspnea, loss of appetite, insomnia, constipation, diarrhea and evaluation of financial impact of the treatment and the disease)<sup>(6)</sup>.

In the analysis of the results of the QLQ-C30, values obtained in the scales nearest to 100 mean better functioning (general health status/QOL, physical, emotional, cognitive and social function and role performance), whereas in the symptom scales and financial difficulties, values obtained near 100 represent major symptoms and difficulties<sup>(7)</sup>.

Data analysis was performed from the descriptive statistics with the aid of the Statistical Package for Social Sciences for Windows, version 18.0. The average and standard deviation were calculated.

The research was approved by the Ethics in Research Committee from the UNIJUÍ, under substantiated opinion 275/2010. The study participants signed an informed consent form in two copies, and all the ethical aspects of research with human beings were respected.

## Results

Among the 43 women undergoing outpatient cancer treatment, the average age was 54.6±12.02 years, with a minimum age of 32 and maximum of 80 years old. Most were married (53.4%) had incomplete elementary education (72.1%) and 62.8% had an income from one to two minimum wages (Table 1).

The quality of life assessed by the global health was considered very satisfactory with score of 79.08%. When the average scores of quality of life achieved in many areas were evaluated, it was found that in the scales of physical, cognitive and social functioning, the average ranged from 75.19 to 81.40, indicating a very satisfactory level of quality of life. As for the scales of role performance and emotional functioning, the average was <63.14, which indicates a moderate

to satisfactory level of QOL. On the symptoms scale, fatigue was the most present, followed by lack of appetite and pain. Data shown in table 2.

**Table 1** - Sociodemographic conditions of women undergoing treatment for CCU at a High Complexity Oncology Center from the South Region of Brazil

Variable	n (%)
Marital status	
Married	23 (53.4)
Single	7 (16.3)
Widow	6 (14.0)
Separated or divorced	7 (16.3)
Education	
Illiterate	1 (2.3)
Incomplete elementary school	31 (72.1)
Complete elementary school	1 (2.3)
Incomplete High School	2 (4.7)
Complete high school	5 (11.6)
Higher education	3 (7.0)
Income in minimum wages* (n=42)	
<1	7 (16.3)
1-2	27 (62.8)
3-5	8 (18.6)

\* Value of the minimum wage at the time of the study: R\$ 545.00, equivalent to US\$ 272.00

**Table 2** – Quality of life of women with cervical cancer by the instrument *Quality of Life Questionnaire-30 Core*, in a High Complexity Oncology Center from the south region of Brazil

Scales	Average ± SD	CI 95%	Min.	Max.
Functional scales				
Global Health	79.08 ± 20.00	73.68 to 86.00	17	100
Physical functioning	78.33 ± 19.9	72.18 to 84.47	20	100
Role performance	63.14 ± 33.61	52.89 to 73.48	0	100
Emotional functioning	67.58 ± 29.78	58.42 to 76.75	8	100
Cognitive functioning	81.40 ± 28.85	74.05 to 88.74	17	100
Social functioning	75.19 ± 30.07	65.93 to 84.44	0	100
Symptom scale				
Fatigue	30.09 ± 22.96	23.03 to 37.16	0	100
Nausea	27.51 ± 29.93	18.30 to 36.73	0	100
Pain	27.91 ± 31.62	18.18 to 37.64	0	100
Dyspnea	9.23 ± 19.60	3.20 to 15.26	0	100
Insomnia	26.33 ± 32.22	16.41 to 36.29	0	100

(continuation)

Lack of appetite	28.65 ± 33.84	18.24 to 39.07	0	100
Constipation	20.91 ± 30.05	11.66 to 30.16	0	100
Diarrhea	20.09 ± 28.31	11.38 to 28.81	0	100
Financial difficulty	34.88 ± 41.15	22.22 to 47.55	0	100

SD: standard deviation; CI 95%: confidence interval of 95%

Regarding the type of treatment undergone by these women, radiotherapy predominated (37.2%), followed by conjugate treatment (32.6%), chemotherapy (23.3%) and brachytherapy (7.0%).

## Discussion

Study participants were 43 women, mostly married, with uncompleted elementary education and income from 1 to 2 minimum wages.

The average age of participants was 54.6 years old. This result is similar to the study conducted with 149 patients in an Oncological Medical Clinic, where the average age was 53.13 years old<sup>(8)</sup>. Still, research conducted with Cancer Hospital Records of a hospital in Vitória (ES), with a sample of 964 women showed that the average age was 53.8 years old<sup>(9)</sup>.

A study conducted in Santo Ângelo (RS), with a sample of 60 women, highlights that 45% of them were married<sup>(9)</sup>. Another study conducted with Hospital Records of Cancer throughout Brazil with a population of 77,317 women showed that 51.5% were married<sup>(10)</sup>.

The demographic data from this study corroborate data from another study in which 90% of participants had complete or incomplete elementary education, and 6.6% had higher education<sup>(6)</sup>. About the sociodemographic and clinical profile of women with cervical cancer, it was found that the incidence of this cancer is common in women with lower education levels and lower social classes<sup>(8)</sup>, and these results meet this study.

From this perspective, the lower the educational level, the bigger the risk of developing cervical cancer is and having a late diagnosis of the disease. These women, in most cases, have no knowledge necessary

to perform early screening and treatment, do not recognize the importance of cervical cancer screening, and have poor access to health services linked to the Unified Health System(SUS)<sup>(11)</sup>.

In another study, 89.5% of the subjects came from middle or low socioeconomic status<sup>(12)</sup>, corroborating the study. The prevalence of chronic diseases in the Brazilian population suggests inequality of living conditions of the adult population<sup>(1)</sup>.

Still, when questioned about the income, a higher percentage reported receiving from one to two minimum wages. This result is consistent with the study with information from the Information System of Cervical Cancer (SISCOLO) with 20 women who reported the same monthly income<sup>(13)</sup>.

Low education and income are prevalent in women with cervical cancer, which indicates the need to implement preventive actions for this population. The data highlight the need of public policies for the vulnerable group through Primary Health Care, where there is the need to conduct active surveillance of these women, health promotion, information on reducing exposure to risks and forms of protection, enhancement and access to screening tests, reference for diagnosis and treatment<sup>(11)</sup>.

It is important that healthcare professionals and managers perform actions with a preventive nature and that they aim to reach these women, with the aim to detect early premalignant lesions. This study points out the importance of nurses and the need that they develop actions planned for women with less education, aiming to allow their access to Primary Health Care Services. This may be accomplished through the mobilization and involvement of community leaders, health professionals, women's movements and the media<sup>(14)</sup>.

Nurses can approach women when they seek the Basic Health Unit, being possible, for example, to focus on that theme while they wait in the waiting room, provide alternative schedules, perform service without prior scheduling, make home visits, joint efforts for consultations and examinations of

gynecological cancer in off hours, in order to benefit the group that has difficulty accessing the unit during business hours<sup>(14)</sup>.

When assessing the life conditions of these patients, it can be demonstrated that their overall health was considered very satisfactory with a score of 79.08%. But their physical, cognitive and social functioning ranged from 75.19 to 81.40, indicating a very satisfactory level of quality of life. In the scales of role performance and emotional functioning, the average was <63.14, which indicates a level from moderate to satisfactory of QOL.

In a study conducted with 225 patients with gynecological cancer undergoing radiotherapy treatment to assess their health conditions through the instrument EORTC QLQ-C30, before and after treatment up to 3 years, the overall quality of life and functional scales represented better quality of life, evidenced by the increase in the score over time<sup>(15)</sup>. The score for overall and physical QOL, role performance, cognitive, social and emotional functioning decreased significantly compared to pre-treatment levels<sup>(15)</sup>.

A study conducted between the years 2006 and 2008 with 149 women in order to assess the health-related QOL using the questionnaire *Functional Assessment of Cancer Therapy - Cervix Cancer*<sup>(7)</sup> found the following averages related to the field: 21.42 for emotional, 25.17 for social/family, 25.62 for physical and 25.77 for functional. The averages obtained in the areas of the questionnaire show satisfactory QOL<sup>(7)</sup>.

Regarding the symptom scale in this study, fatigue had the highest average, 30.09, followed by loss of appetite (28.65) and pain (27.91). The cancer-related fatigue is usually the most common and treatable symptom among patients. Patients refer to this symptom as the most important and stressful related to their disease and treatment. It is an unpleasant sensation with physical, mental and emotional symptoms, usually reported as a tiredness that does not diminish with the usual strategies for restoring power; it varies in duration and intensity and reduces, in varying degrees, the ability to perform

usual activities<sup>(16)</sup>.

The lack of appetite has a big impact on cancer patients and it is important for the evaluation and monitoring of nutritional status in cancer patients. A study points out that the nutritional deficit is associated with high morbidity, mortality, infection, prolonged hospitalization, lower response to chemotherapy and radiotherapy, and high hospital costs<sup>(17)</sup>.

The long duration of hospitalization reduces food intake of patients with cancer due to food monotony and the effects of drugs during treatment, with consequent increase of symptoms such as poor appetite, nausea, vomiting, diarrhea, early satiety, constipation, dry mouth and dysphagia which contribute significantly to a compromised nutritional status<sup>(17)</sup>.

Pain is one of the biggest causes of disability and distress in cancer patients – about 80% of them experience pain during the disease, which can be acute or chronic. Chronic pain occurs in approximately 50% of cancer patients in all stages of the disease, and about 70 to 90% of patients in the advanced stages relate this symptom, which may have from moderate to unbearable intensity<sup>(18)</sup>. A study shows that pain was reported by 58.6% of patients at the moment of the interview or on that week. The average pain intensity assessed through the numerical scale was 6.7, which characterizes pain of moderate intensity<sup>(19)</sup>.

Pain can be a result of chemotherapy, radiotherapy and surgical treatment, but it may also be caused by the tumor, presence of metastases, or for reasons unrelated to cancer, such as functional loss, metabolic, infectious, necessity and degenerative changes<sup>(18)</sup>.

In this study, radiotherapy was the most common treatment, followed by conjugate, chemotherapy and brachytherapy. The adverse effects of radiotherapy include: stenosis, vaginal atrophy, dyspareunia, decreased vaginal lubrication, loss of vaginal and clitoris sensations during sexual intercourse, loss of sensation, vaginal fibrosis, decreased vaginal elasticity and depth, dryness and flaking of the vaginal mucosa,



vulvar ulcerations, necrosis and vaginal bleeding after sexual intercourse<sup>(20)</sup>.

Those effects may reduce QOL and persist for a long period, even after the end of treatment<sup>(4)</sup>. It's important to highlight that the social vulnerability of these women increases the risk of cervical cancer, which is directly related to low financial conditions, as evidenced in this study. It's necessary that managers and health professionals become involved in the promotion of health actions in order to empower women in the control and reduction of risk factors, and implement actions aimed at tracking, in order to make early detection. Nursing must assist women as a whole, through nursing consultations, being an opportunity to favor the creation of a bond between the woman and the professional, and make them aware of the importance of preventive behavior, which will bring social and economic benefits.

It is believed that educational initiatives developed with the community's participation may increase their knowledge about risk factors, the development of the disease and the importance of performing preventive tests periodically, which may lead to satisfactory results concerning the reduction of morbidity and mortality rates. Thus, cancer and, in particular, the cervical cancer, is worthy of attention from healthcare professionals, especially Nursing ones.

## Conclusion

The study showed that women with cervical cancer had very satisfactory overall Quality of Life. Regarding symptoms, fatigue, lack of appetite and pain prevailed. However, they did not affect patients' perceived quality of life.

The findings of this study contribute to alert about the need of the contribution of different professionals to intervene and assist in order to reduce cases of cervical cancer. Nursing may qualify assistance, allied with the structuring of programs that promote education and prevention, identifying women at high

risk, through screening, early diagnosis, treatment, multidisciplinary actions, continuing education, besides planning qualified care, aiming at the prevention of risks and the decrease of symptoms and, consequently, at improving women's quality of life.

The results also contribute to the management of public health and Nursing education, to enhance the perception of quality of life of people with cancer, as well as develop strategies for empowering women about the treatment's side effects and ways to mitigate their consequences during the different types of treatments.

## Collaborations

Dallabrida FA and Kolankiewicz ACB participated in the creation, planning, analysis, interpretation of data. Rosanelli CLSP, Loro MM, Souza MM and Gomes JS participated in the critical review of the manuscript and in the final version to be published. All the authors declared that they contributed in the writing, critical revision of the article and final approval of the version to be published.

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