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# The quality of life of women treated for cervical cancer

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Quality of life
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A B S T R A C T

*Objective:* The objective of this work was to assess the quality of life of women treated surgically for early stage cervical cancer (FIGO IA2-IIA).
*Methods:* Quality of life was evaluated at the preoperative period (T1), three months (T2) and six months after surgery (T3). The study employed two types of survey questionnaires: EORTC QLQ-C 30 and QLQ-CX 24. The study protocol was approved by the Bioethical Comitee at Rzeszów University. 100 women who signed an informed consent and completed questionnaires were included in the study.
*Results:* Based on EORTC QLQ-30 it was found that global health status improved at T2. This improvement was stable until T3. The same was true in respect of emotional and cognitive functioning. Role and social functioning improved at T3. Stable improvement of insomnia, appetite and financial difficulties was noted at T2 and T3. Reduction of fatigue, nausea and vomiting, and diarrhea was observed until T3. Based on the modules of the QLQ-CX 24 questionnaire, a reduction in symptom experience was observed at T2 and T3. The opposite tendency was noted in the case of body image.
*Conclusions:* The present study was carried out in a period of vulnerability for cervical patients up to six months from the start of treatment. The cancer itself, surgery and adjuvant therapy and their side effects together had an effect on quality of life.



## Introduction

There are two main goals of cancer treatment: the first is to cure the malignancy or lengthen survival time, and the second is to improve quality of life (Penson et al., 2006). Measurement of quality of life in cervical cancer patients is important for many reasons. Firstly, cervical cancer is the third most common neoplasm in women and thus affects a high proportion of the female population, especially those with low socio-economic status (Ashing-Giwa et al., 2004; Ashing-Giwa et al., 2010; Ashing- Giwa et al., 2008). Secondly, cervical cancer treatment is multimodal, and quality of life may be an additional factor which makes it possible to choose a better mode of treatment. A good example of this is the introduction into cervical cancer treatment of the nerve sparing radical hysterectomy technique which improves post-operative micturation (Skręt-Magierło et al., 2010). In another study (Frumovitz et al., 2005) it was found that cervical cancer survivors treated primarily with radical hysterectomy and lymph node resection have less sexual dysfunction than patients treated with radiotherapy. According to the authors of this report, their findings make it possible to incorporate knowledge about quality of life outcomes into the clinical decision-making process and to assist both the patient and her physician in selecting the most appropriate treatment. Another fact which supports quality of life studies in cervical cancer patients is the growing number of long-term survivors. This is a result of the high curability of this neoplasm (Greenwald et al., 2008; Wenzel et al., 2005). Quality of life of long-term survivors, with sexual functioning and pelvic floor dysfunctions as components, brings new challenges for oncologists and oncology nurses (Seibaek and Petersen, 2007). Additionally it was found that conversation with a physician may be a simple prophylactic measure in long-term survivors (Lindau et al., 2007; Bukovic et al., 2003). Quality of life studies in cervical cancer patients are also important because it is apparent that health-related quality of life influences the survival of cervical cancer patients (Ashing- Giwa et al., 2010), and thus quality of life may be to some extent a prognostic factor (Seibaek and Petersen, 2007).

Previous studies of quality of life in cervical cancer patients suffered from some shortcomings which preclude definitive conclusions (Vistad et al., 2006), for example, samples were not homogenous, most of the past studies were cross-sectional (Vaz et al., 2007; Seibaek and Petersen, 2007) with different time elapsed from the start of treatment, and different time frames (Vistad et al., 2006). Studies were carried out in different clinical

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stages of cervical cancer (Ahlberg et al., 2005) and different treatment modalities (Taechaboonsermsak et al., 2005; Burns et al., 2007). In some studies the subject group included not only cervical cancer patients, but also those with endometrial cancer (Vaz et al., 2007; Juraskova et al., 2003). The size of study groups varied from 11 to 256 patients (Vistad et al., 2006). Researchers have used different questionnaires with different domains covered (Ahlberg et al., 2005). Some of them were self-developed and not validated (Vistad et al., 2006). Because of the great variety in study design and measures used, general conclusions concerning quality of life in cervical cancer patients cannot be drawn (Vistad et al., 2006). In a recent study (Singer et al., 2010) the core questionnaire (EORTC QLQ-C-30) was used in conjunction with a cervical cancer module (EORTC QLC-CX24). Both questionnaires are validated multinationally, including in Poland. Singer et al. (2010) suggest multiple applications of these questionnaires during the course of the disease, i.e. before surgical treatment and at several follow-up assessment points. Interestingly, the latter longitudinal QOL study was carried out in breast cancer patients (Dodd et al., 2010; Moreira and Canavarro, 2010). This study makes it possible to identify subgroups of patients with different symptomatic experiences. According to the authors of this report it may be helpful in deciding on appropriate intervention and result in improvement of functional status and QOL. In uterine cancer patients (Ahlberg et al., 2005) examined the quality of life during radiotherapy and, based on the results of this study, suggested further prospective longitudinal studies after 6, 9 and 12 months. Longitudinal prospective studies over varying periods of the survivorship are postulated in many reports (Ashing- Giwa et al., 2008; Lindau et al., 2007; Taechaboonsermsak et al., 2005). In one study the authors suggest prospective, longitudinal quality of life examination starting at a time before the start of the cervical cancer treatment (Vaz et al., 2007). According to the authors of this report, prospective evaluation will provide knowledge as to whether the pre-treatment factors that influence QOL will remain related to QOL in the long-term.

## Aim

The objective of this work was to evaluate longitudinally the quality of life in women treated for cervical cancer 3 and 6 months postoperatively.

## Methods

### *Design*

Quality of life was evaluated according to the following schedule; preoperative period (T1), three months (T2) and six months after surgery (T3). The study employed two types of survey questionnaires: the EORTC QLQ-C 30 and QLQ-CX 24. EORTC (European Organization for Research and Treatment of Cancer) is a non-profit organization focusing on the development and coordination of cancer clinical research in Europe. EORTC provides questionnaire versions translated and validated into more than 80 languages, including Polish. In order to employ these tools, the required consent from EORTC was obtained.

QLQ C-30 is a questionnaire assessing global quality of life of cancer patients. It consists of 30 questions covering three modules;

- functioning scales (physical functioning, role functioning, emotional functioning, cognitive functioning, and social functioning);
- symptom scales (fatigue, nausea and vomiting, pain, dyspnea, insomnia, appetite loss, constipation, diarrhea, financial difficulties);
- global health status scales (global health status and quality of life).

QLQ CX-24 is a module validated for cervical cancer. It comprises a universal tool adapted to examine patients in all disease stages. It consists of 23 items with two broad scales;

- Functioning scales:
  - Body image
  - Sexual functioning
  - Sexual activity
  - Sexual enjoyment
- Symptom scales:
  - Disease symptoms
  - Lymphedema
  - Peripheral neuropathy
  - Menopausal symptoms (Greimel et al., 2006)

### *Sample and setting*

The study group comprised 100 women suffering from early clinical stages of cervical cancer (FIGO IA2-IIA). The study protocol was approved by the Bioethical Committee at Rzeszow University (2 October 2006). The study took place between October 2006 and June 2008.

Patients satisfying the following criteria were enrolled:

- Hospitalized, diagnosed with cervical cancer and qualified for surgical treatment,
- without any cognitive disorders,
- aware of their cancer diagnosis,
- having signed a consent form.

The exclusion criteria were as follows:

- patients with diagnosed malignant disease of the reproductive organs other than cervical cancer, and previously treated for such disease (surgery, chemotherapy, radiotherapy, hormonal therapy, immune therapy),
- other malignant disease concurrent or diagnosed within the previous 5 years.

### *Procedures*

Patients were asked to complete the questionnaires three times, i.e. during hospitalization – T1 (unaided self-evaluation), three months later – T2, and six months later – T3 (unaided self-evaluation after receiving questionnaires by post or telephone interview). Issues related to the method of completing the questionnaire forms were discussed individually with every respondent during the baseline enrollment interview.

### *Data analysis*

The statistical analysis employed Statistica software, version 7.0. It had the aim of identifying correlations between changes in quality of life in selected periods of time using the Wilcoxon test. The results are presented as mean values and standard deviation and median.

## Results

The age of respondents ranged from 25 to 85 years. Mean age of the sample was 52.89 and SD 12.8. The largest age subgroup, from