



DOI:10.29013/EJTNS-25-1-18-21



ENHANCING LIFE SATISFACTION: THE IMPORTANCE OF FERTILITY PRESERVATION IN YOUNG WOMEN WITH CANCER

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Cite: Khodjaeva N.Kh. (2025). *Enhancing Life Satisfaction: The Importance of Fertility Preservation in Young Women With Cancer*. *European Journal of Technical and Natural Sciences 2025, No 1*. <https://doi.org/10.29013/EJTNS-25-1-18-21>

Abstract

Recent advances in oncology have significantly increased the survival rates of patients with cancer; however, issues regarding their quality of life remain a pressing concern. Particularly important are the aspects of reproductive health in women of childbearing age, as aggressive treatments such as chemotherapy and radiation therapy can lead to fertility loss. This study aimed to evaluate the quality of life of oncology patients participating in fertility preservation programs using the FACT-G questionnaire.

The study included 140 patients divided into two groups: the main group (n=75), who underwent fertility preservation programs, and the control group (n=65), who did not participate in such programs. Statistical methods were employed to analyze differences in quality of life between the groups.

The results revealed that all measured parameters, including physical well-being, social and family relationships, emotional well-being, and overall quality of life scores, were significantly higher in the main group compared to the control group. This confirms the positive impact of fertility preservation programs on improving the quality of life for oncology patients.

This research underscores the need to integrate fertility preservation programs into standard treatment protocols for oncology patients, ultimately improving not only their physical health but also their psychoemotional state, thereby providing a more comprehensive approach to their care.

Keywords:

Relevance of the study:

Modern advances in the field of oncology, such as new diagnostic and treatment methods, have significantly increased the survival rate of patients with cancer, which, in turn, makes the issue of the quality of life of these women especially important. Since many of them are in their reproductive years, the loss of fertility due to aggressive treatments such

as chemotherapy and radiation therapy is becoming a serious problem affecting not only physical health, but also emotional and social well-being.

Fertility-related issues are indirectly related to women's sense of identity and self-realization, which highlights the need to integrate fertility preservation programs into patient care standards. These programs offer

women the opportunity to preserve their reproductive functions and plan a family in the future, which directly improves their quality of life and emotional state.

However, despite the growing number of women who are offered such programs, there remains insufficient data to fully highlight the impact of these interventions on various aspects of quality of life. There is a lack of systematic research in the scientific literature analyzing how fertility preservation programs affect the physical, emotional, and social aspects of patients' lives.

There is also a need to understand individual factors such as age, type of cancer, and mental and emotional state that can influence perceptions of quality of life and outcomes of participation in fertility preservation programs. This is especially important for women's health, because not all patients respond to the same treatment in the same way. Our research aims not only to identify the positive and negative results of fertility preservation programs, but also to analyze their impact on the overall quality of life, which will allow us to develop individualized approaches to patient support.

At a time when issues of reproductive health and fertility are becoming increasingly important, this study plays a key role in shaping the scientific basis for optimizing care for cancer patients, which ultimately can lead to an improvement in their quality of life at all levels. The results of the study can directly influence clinical practice, contributing to a more comprehensive and humane approach to the treatment of cancer in women, which also corresponds to current trends in the field of patient-centered care (patient-centered medical approach).

Materials and methods:

The study was comparative and descriptive in nature. It was aimed at assessing the quality of life of cancer patients participating in fertility preservation programs, in comparison with patients who do not participate in these programs.

The study included 140 patients from two groups: the main group (n=75), which included women who had gone through fertility preservation programs, and the control group (n=65), consisting of patients who did

not participate in such programs. All participants provided informed consent to participate in the study.

Inclusion and exclusion criteria:

The group included women aged 18 to 40 years, diagnosed with a malignant tumor, who had no contraindications to fertility preservation. Patients with severe concomitant diseases that could affect the overall quality of life and fertility preservation were excluded.

The FACT-G (Functional Assessment of Cancer Therapy – General) questionnaire, which is adapted for cancer patients, was used to assess the quality of life. It covers four main domains: physical well-being, social/family relationships, emotional well-being, and well-being in daily life.

Statistical analysis of the data was carried out using the Statistica v program. 4.7.1. First, the data were checked for compliance with the normal distribution using the Shapiro-Wilk criterion (if the group size was less than 50) or the Kolmogorov-Smirnov criterion (if the group size exceeded 50). In the case of an abnormal distribution, the data were described by the median (Me) and the interquartile range (Q1 – Q3).

The Mann-Whitney U-test was used to compare the two groups with an abnormal data distribution. In the case of multigroup analysis, the Kruskal-Wallis criterion was applied, and post-hoc analysis was performed using the Dunn criterion with the Holm correction. The level of statistical significance was set at $p < 0.05$.

The study was conducted in accordance with ethical standards approved by the local Ethics committee and in full compliance with the Helsinki Declaration. Informed consent was obtained from all participating patients.

Results

Table 1 provides descriptive statistics of quantitative variables illustrating differences in the quality of life of cancer patients depending on their participation in fertility preservation programs. Data were collected from 140 patients divided into two groups: the main group, consisting of 75 women participating in the program, and a control group, including 65 patients who had not gone through such activities.

Table 1. *Descriptive statistics of quantitative variables depending on the group*

Indicators	Groups		p
	Main group	Control group	
physical condition, Me [IQR]	18.00 [14.00; 22.00]	12.00 [11.00; 13.00]	< 0.001*
Social/family relationships, Me [IQR]	19.00 [14.50; 21.50]	10.00 [10.00; 12.00]	< 0.001*
Emotional well-being, Me [IQR]	18.00 [14.50; 20.00]	10.00 [9.00; 11.00]	< 0.001*
Well-being in everyday life, Me [IQR]	21.00 [18.00; 24.00]	16.00 [15.00; 18.00]	< 0.001*
Total score, Me [IQR]	73.00 [65.50; 83.50]	49.00 [46.00; 51.00]	< 0.001*

For the main group, the median was 18.00 with an interquartile range (IQR) [14.00; 22.00], which indicates a relatively high physical condition of the patients who actively participated in fertility preservation programs. In the control group, the median was significantly lower, amounting to 12.00 (IQR [11.00; 13.00]). This difference is significant ($p < 0.001$), which indicates that the programs have an obvious positive effect on the physical condition of women undergoing cancer treatment.

The assessment of this aspect also showed convincing differences: in the main group, the median was 19.00 (IQR [14.50; 21.50]), while in the control group, this figure dropped to 10.00 (IQR [10.00; 12.00]). This result ($p < 0.001$) highlights not only the emotional support women receive through participation in programs, but also the importance of social interactions that contribute to improving their quality of life.

The main group showed a median of 18.00 (IQR [14.50; 20.00]) in assessing emotional state, while the control group showed a significantly lower value of 10.00 (IQR [9.00; 11.00]). This difference ($p < 0.001$) indicates the need to take into account the emotional support provided by fertility preservation programs, which is important for the psychoemotional state of patients.

The median for the main group was 21.00 (IQR [18.00; 24.00]), while for the control

group it was significantly lower, 16.00 (IQR [15.00; 18.00]). This difference ($p < 0.001$) highlights that participation in fertility preservation programs not only helps preserve reproductive health, but also positively affects the general aspects of daily life and functional well-being of women.

Finally, the overall quality of life score for the main group was 73.00 (IQR [65.50; 83.50]), which significantly exceeds the similar value in the control group of 49.00 (IQR [46.00; 51.00]). This sharp contrast ($p < 0.001$) clearly shows that participation in fertility preservation programs significantly improves the overall quality of life of cancer patients.

Conclusion:

The results summarize the significant differences in quality of life between cancer patients who went through fertility preservation programs and those who did not use these opportunities. All measured parameters, such as physical condition, social and family relationships, emotional well-being, and an overall assessment of quality of life, confirm the positive impact of these programs. This highlights the importance of integrating fertility preservation programs into the overall treatment of cancer patients to improve their quality of life on both physical and psychoemotional levels.

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submitted 18.01.2025;
accepted for publication 01.02.2025;
published 26.12.2024
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