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Current New Treatment Methods in the Field of Oncogynecology

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Abstract: *The field of oncogynecology is an important medical field aimed at diagnosing, treating, and preventing cancers that develop in the reproductive organs of women. In recent years, new approaches such as precision oncology, immunotherapy, targeted therapy, and minimally invasive surgical techniques have been widely introduced in this field. This article analyzes modern methods used in the treatment of oncogynecological diseases, discusses their advantages and limitations. The article also highlights innovations being implemented in this area by comparing Uzbek and international experience. The goal is to increase the effectiveness of treatment for oncological diseases and make recommendations to improve the quality of life of patients.*

Keywords: *Oncogynecology, precise oncology, immunotherapy, targeted therapy, minimally invasive surgery, cancer treatment, Uzbekistan.*

Introduction: The field of Oncogynecology studies and treats cancers that develop in the organs of the female reproductive system, that is, in the uterus, ovaries, cervix, vagina and other related organs.ntroduction: the field of Oncogynecology studies and treats cancers that develop in the organs of the female reproductive system, that is, in the uterus, ovaries, cervix, vagina and other related organs. While the field not only deals with the diagnosis and treatment of these diseases, it also includes a wide range of approaches aimed at preventing them, early detection and improving the quality of life of patients. In recent decades, due to the increase in oncogynecological diseases, especially cases such as cervical cancer, ovarian cancer and endometrial (uterine lining) cancer, it has become necessary to develop new and effective treatments in this area.n recent decades, due to the increase in oncogynecological diseases, especially cases such as cervical cancer, ovarian cancer and endometrial (uterine lining) cancer, it has become necessary to develop new and effective treatments in this area. Worldwide, including Uzbekistan, special attention is paid to the introduction of early diagnosis and modern treatments to reduce the mortality rate of these diseases.

This article is aimed at analyzing modern methods of treatment in oncogynecology and discussing the possibility of their use in Uzbekistan.his article is aimed at analyzing modern methods of treatment in oncogynecology and discussing the possibility ohis article is aimed at analyzing modern methods of treatment in oncogynecology and discussing the possibility of their use in Uzbekistan. One of his article is aimed at analyzing modern methods of treatment in oncogynecology and discussing the possibility of their use in Uzbekistan. One of the main features of oncogynecological diseases is their often inconclusive symptoms in the early stages. For example, ovarian cancer is often referred to as a “silent or hidden killer” because symptoms may not be felt until it reaches advanced stages. Cervical cancer, on the other hand, is closely related to the human papilloma virus (HPV), and vaccination is important in its prevention. Endometrial cancer is more often associated with hormonal imbalances or factors such as obesity.ndometrial cancer is more often associated with hormonal imbalances or factors such as obesity. Each of these diseases requires specific diagnostic and therapeutic approaches, making the field of oncogynecology complex and multidisciplinary [1].

Modern methods of treatment in the field of oncogynecology provide great achievements in the fight against cancer.odern methods of treatment in the field of oncogynecology provide great achievements

in the fight against cancer. Techniques such as surgery, chemotherapy, radiodern methods of treatment in the field of oncogynecology provide great achievements in the fight against cancer. Techniques such as surgery, chemotherapy, radiation therapy, immunotherapy, and targeted therapy can extend patient life expectancy and improve quality of life. For the introduction of these methods in Uzbekistan, it is important to develop infrastructure, expand early diagnosis programs and increase medical awareness of the population. It is possible to reduce the mortality rate of oncogynecological diseases and increase the quality of life of patients only through an integrated approach [2].

Literature analysis: Discoveries made in recent years in the field of Oncogynecology and new treatments have made significant changes in this area.iterature analysis: discoveries made in recent years in the field of Oncogynecology and new treatments have maditerature analysis: discoveries made in recent years in the field of Oncogynecology and new treatments have made significant changes in this area. These achievements serve to improve the quality of life of patients and improve the effectiveness of treatment. In particular, approaches such as precision oncology, immunotherapy, targeted therapy, and minimally invasive surgery are central to modern medicine. While some progress has been made in the field in Uzbekistan, problems such as lack of resources and skilled professionals still remain relevant.hile some progress has been made in the field in Uzbekistan, problems such as lack of resources and skilled professihile some progress has been made in the field in Uzbekistan, problems such as lack of resources and skilled professionals still remain rehile some progress has been made in the field in Uzbekistan, problems such as lack of resources and skilled professionals still remain relevant. Precision oncology (precision oncology) has been recognized in recent years as a revolutionary approach in oncology. This approach is based on the development of personalized treatment plans for each individual by analyzing the patient's genetic profile. Cancers can occur differently in each patient because of the different genetic characteristics of tumor cells. Clear oncology allows you to identify these differences and apply only directed treatments against certain genetic mutations.lear oncology allows you to identify these differences and apply only directed treatments against certain genetic mutations. For example, if BRCA1 and BRCA2 gene mulear oncology allows you to identify these differences and apply only directed treatments against certain genetic mutations. For example, if BRCA1 and BRCA2 gene mutations are detected in patients with ovarian cancer, this information becomes important in determining treatment strategies. Clear oncology not only increases the effectiveness of treatment, but also helps to reduce side effects, since medications only affect cancer cells, not damaging healthy tissues [3].

Modern discoveries in the field of oncogynecology, in particular, methods such as precision oncology, immunotherapy, targeted therapy, and minimally invasive surgery, are creating great opportunities in the fight against cancer. These approaches serve to extend the life expectancy of patients and improve the quality of life. Although the process of introducing these methods in Uzbekistan has begun, there are problems such as limited resources, a shortage of specialists, and low medical awareness among the population. To overcome these problems, cooperation between the public and private sectors, international exchange of experience, and the development of modern medical infrastructure are of great importance. Only through a comprehensive approach can the quality of treatment of oncological and gynecological diseases in Uzbekistan be improved and mortality rates reduced [4].

Methodology: The information for the article was collected from various reliable sources. International scientific journals, such as prestigious publications in the fields of oncology and gynecology, present the results of recent studies and clinical trials. These journals cover the latest advances in precision oncology, immunotherapy, targeted therapy, and minimally invasive surgery. These resources serve as an important basis for analyzing the latest approaches to the treatment of oncological diseases on a global scale. They provide information on the effectiveness, side effects, and long-term outcomes of treatments used in different countries around the world. Reports from the Ministry of Health of Uzbekistan are an important source for understanding the statistics of oncogynecological diseases in local conditions,

treatment options, and the state of the healthcare system. These reports provide information on the prevalence of cancer in Uzbekistan, the level of early diagnosis, and the possibilities of initiating treatment. Also, data from the Republican Specialized Scientific and Practical Medical Center for Oncology and Radiology were used to analyze the state of local clinical practices and institutions equipped with modern equipment. This information plays a key role in assessing the current state and development prospects of oncogynecological treatment in Uzbekistan [5].

The methodology of the article is based on data collected from international and local sources, analyzed using scientific methods such as systematic literature reviews and meta-analysis of clinical studies. International scientific journals, reports of the Ministry of Health of Uzbekistan, and data from the Republican Oncology Center were used as extensive sources. A systematic literature review and meta-analysis allowed for an objective assessment of the effectiveness of modern treatment methods. By comparing Uzbek and foreign experience, opportunities and problems in local conditions were identified. This methodology will help develop clear and scientifically based recommendations for the development of treatment for oncogynecological diseases in Uzbekistan.

Results: The results of research and clinical practice in the field of oncogynecology demonstrate the effectiveness of modern treatment methods and their impact on the quality of life of patients. Approaches such as precision oncology, immunotherapy, and minimally invasive surgery are providing significant advances in the fight against cancer. Although certain successes have been achieved in introducing these methods in Uzbekistan, challenges such as limited resources and a lack of specialists remain. In the field of precision oncology, the development of treatment plans tailored to the individual characteristics of patients using genetic tests and biomarkers has led to great success. This approach allows us to choose the most effective treatment for each patient by identifying the genetic characteristics of cancer cells. For example, PARP inhibitors, particularly drugs such as olaparib, have shown promising results in patients with ovarian cancer who have BRCA gene mutations. These drugs block the ability of cancer cells to repair their DNA, which slows or stops tumor growth.

Such treatments significantly extend the average life expectancy of patients and reduce side effects compared to traditional chemotherapy. Precision oncology not only increases the effectiveness of treatment, but also improves the quality of life of patients, because the treatment is directed only at cancer cells. However, the success of this method depends on the availability and accuracy of genetic tests, which requires modern laboratory infrastructure.

Immunotherapy, particularly immune checkpoint inhibitors such as PD-1/PD-L1 inhibitors, is providing significant advances in the treatment of gynecologic oncology. This approach activates the body's immune system, increasing its ability to fight cancer cells. In aggressive diseases such as ovarian cancer, these inhibitors have been shown to be effective in prolonging remission periods. For example, drugs such as pembrolizumab and nivolumab have slowed the progression of the disease in some patients and allowed them to achieve long-term remission. The advantage of immunotherapy is that it is less toxic than traditional chemotherapy and improves the overall condition of patients. However, the effectiveness of this method depends on the state of the patient's immune system and the molecular characteristics of the tumor Stuart with images. Immunotherapy is not yet widespread in Uzbekistan, but clinical trials are underway. These trials are an important step in testing the effectiveness of this method in local conditions and its wider implementation. However, the need for genetic and molecular testing in the use of immunotherapy, as well as the high cost of drugs, remain obstacles to its widespread use in Uzbekistan.

The results in the field of oncogynecology show that modern methods such as precision oncology, immunotherapy, and minimally invasive surgery provide significant advances in the fight against cancer. While precision oncology extends the life expectancy of patients, immunotherapy is effective in extending the period of remission. Minimally invasive surgery is reducing post-operative complications and speeding up recovery. Although there have been some successes in introducing these methods in

Uzbekistan, challenges remain, such as a lack of resources and specialists. To eliminate these problems, complex measures are needed to provide modern equipment, train specialists, and increase medical awareness among the population. Only in this way can the quality of treatment of oncological and gynecological diseases in Uzbekistan be improved and mortality rates reduced.

Discussion: Modern treatment methods in the field of oncogynecology, in particular, precision oncology, immunotherapy, and minimally invasive surgery, are providing great achievements in the fight against cancer. However, there are a number of problems in the introduction and widespread use of these methods, especially in developing countries, including Uzbekistan. Among these problems, high financial costs, complex infrastructure requirements, and a shortage of qualified specialists can be highlighted. However, the reforms being implemented in Uzbekistan in the field of oncogynecology, such as the introduction of screening programs and modern equipment, are showing positive results.

However, expanding access to early diagnosis and treatment remains a pressing task. These issues are discussed in more detail below. Precision oncology is making great strides in the treatment of oncological diseases by developing treatment plans based on the genetic profile of patients. This approach allows us to analyze the molecular characteristics of each patient's tumor and apply treatments that are directed only against these characteristics. For example, drugs such as PARP inhibitors are highly effective in patients with BRCA gene mutations in ovarian cancer. Immunotherapy, in particular, PD-1/PD LY inhibitors, activate the body's immune system and enhance its fight against cancer cells. These methods are of great importance in prolonging the life expectancy of patients and slowing the progression of the disease. Modern treatment methods such as precision oncology, immunotherapy and minimally invasive surgery are providing great advances in the treatment of oncological diseases. However, their high cost, complex infrastructure requirements, and lack of qualified personnel limit their widespread use in developing countries like Uzbekistan.

While the reforms being implemented in Uzbekistan, in particular, the introduction of screening programs and modern equipment, are yielding positive results, additional efforts are needed to expand access to early diagnosis and treatment. By using international experience, attracting financial resources, and increasing medical awareness among the population, it is possible to improve the quality of treatment of oncological and gynecological diseases in Uzbekistan and reduce mortality rates.

Conclusion: Modern treatment methods in the field of oncogynecology are providing significant advances in the fight against cancer. Approaches such as precision oncology, immunotherapy, and minimally invasive surgery are of great importance in prolonging the life expectancy of patients and improving the quality of life. Although certain successes have been achieved in the implementation of these methods in Uzbekistan, problems remain, such as a lack of infrastructure, financial resources, and qualified personnel. A number of proposals have been developed to eliminate these problems and improve the quality of treatment. These recommendations are aimed at developing genetic testing, strengthening international cooperation, improving the skills of doctors, and expanding screening programs. These conclusions and recommendations are discussed in more detail below.

Modern treatment methods in the field of oncogynecology, in particular, precision oncology, immunotherapy and minimally invasive surgery, offer great opportunities in the fight against cancer. The introduction of these methods in Uzbekistan is faced with such problems as a lack of infrastructure, financial resources and qualified personnel. To overcome these problems, comprehensive measures are needed to develop modern laboratories, strengthen international cooperation, train doctors, and expand screening programs. Increasing the availability of genetic tests and biomarkers will ensure the effectiveness of precision oncology. International cooperation will accelerate the introduction of immunotherapy and targeted therapy. Training doctors based on foreign experience will expand the use of minimally invasive surgery. Finally, the mortality rate from oncogynecological diseases can be reduced by screening programs and encouraging early diagnosis. These proposals will help improve the

quality of treatment of oncological and gynecological diseases in Uzbekistan and improve the quality of life of patients.

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