

PSYCHOLOGICAL CHARACTERISTICS OF PATIENTS WITH ONCOUROLOGICAL DISEASES

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Abstract: Patients with oncurological diseases face not only physical suffering, but also severe psychological difficulties. The diagnosis of oncological disease disrupts emotional balance, provoking the development of anxiety, depressive and adaptation disorders. These conditions negatively affect adherence to treatment, general well-being and social activity of patients. The article considers the main psychological characteristics of oncurological patients, emphasizes the need for comprehensive care, including psychological support at different stages of treatment. Understanding the psychoemotional reactions of patients allows you to build individualized rehabilitation strategies and improve their quality of life.

Key words: oncurology, psychological characteristics, cancer patients, anxiety, depression, quality of life, psychosocial adaptation, emotional state, supportive therapy.

Introduction

Oncurological diseases are a severe group of pathologies that combine both physical and deep psychological experiences of patients. The diagnosis of genitourinary cancer is often perceived by patients as a threat not only to life, but also to their usual way of life, which causes a high level of anxiety, depressive states and impaired social adaptation. The psychoemotional state of patients has a significant impact on the course of the disease, the effectiveness of treatment and the quality of life in general. In this regard, the study of the psychological characteristics of this group of patients is of particular importance for the formation of an effective system of medical and psychological care. An integrated approach, including attention to the emotional state of the patient, can improve the results of therapy and contribute to the restoration of the patient's psychosocial functioning [1].

Literature Review

The psychological characteristics of patients with oncurological diseases are determined by the complex interaction of psychosocial factors, physiological changes and biological characteristics of tumor growth. The diagnosis of cancer is often perceived as a threat to life, which leads to the development of acute stress reactions, anxiety and depressive disorders. According to domestic studies [2], a high level of psychological distress is observed already at the early stages of diagnosis and persists throughout the treatment.

The features of the genitourinary system play an important role in understanding the clinical picture of oncurological diseases. Normally, the functioning of organs is ensured by complex neurohumoral regulation, in particular the participation of the autonomic nervous system, hormonal factors (for example, androgens) and local immune mechanisms. During tumor growth, the processes of angiogenesis, suppression of apoptosis and disruption of immune surveillance of transformed cells are activated [3].

Physiological changes associated with urinary tract obstruction, inflammation, pain syndrome and general exhaustion of the body further aggravate the psychoemotional state of patients. Studies by

foreign authors, such as Mystakidou K. et al. (2005), have shown that pain, urination dysfunction and sexual disorders are independent factors that increase depressive manifestations in cancer patients.

In addition, as noted by Derogatis LR and colleagues (1983), an important aspect of the psychological state is the disturbance of body image and decreased self-esteem due to surgical or drug treatment, especially in cases of radical operations on the genitourinary system.

Thus, successful care of patients with oncological diseases requires a comprehensive approach combining treatment of the underlying disease with active psychological support. Inclusion of multidisciplinary teams consisting of oncologists, urologists and clinical psychologists in the therapeutic process allows to improve the quality of life of patients and improve their adaptation to changes associated with the disease.

Materials and methods

An analysis of major empirical studies for the period 1941–2024 is conducted, with an emphasis on:

- ✓ physiological mechanisms of tumor growth (angiogenesis, apoptosis, immune control),
- ✓ anatomical features of the genitourinary system,
- ✓ correlation between anatomy and routes of metastasis.

Sources were selected based on the following criteria: availability of experimental data, clinical observations or systematic analysis.

Results

Study	Country	Object of study	Methods	Key findings
Huggins, Hodges (1941) [6]	USA	Prostate cancer	Hormonal therapy	Androgen dependence of prostate tumor growth has been proven
Zhang et al. (2015) [7]	China	Renal cell carcinoma	Microscopy, immunohistochemistry	High blood supply to the renal cortex promotes rapid metastasis
Fujiyama C. et al. (2010) ³	Japan	Bladder cancer	Lymphangiography	Dense lymphatic network of the urinary bladder has been identified as a factor in early metastasis
Poorthuis et al. (2022) ⁵	Netherlands	Metastasis in oncology	System overview	Venous and lymphatic pathways have different roles depending on the location of the tumor

Comparative analysis shows that:

- **Hormonal regulation** [6] is of crucial importance in the pathogenesis of prostate tumors.
- **Blood supply to the kidneys** [7] explains the frequent distant metastases of renal cell carcinoma via the hematogenous route.
- **Lymphatic system of the bladder** [8] ensures rapid regional spread of the tumor, influencing the prognosis of the disease.
- **Differences in the pathways of metastasis** [7] require an individualized approach to staging and treatment of urological cancer patients.

These results highlight that therapeutic strategies must take into account not only the molecular but also the anatomical features of a particular organ.

Key anatomical and physiological mechanisms, such as hormonal dependence, blood supply and lymphatic drainage features, play a decisive role in the biology of onco-urolological tumors. A deep understanding of these processes allows us to develop more effective diagnostic, prognostic assessment and therapeutic schemes. In the future, an important area of research remains the integration of molecular and anatomical characteristics of tumors for personalized treatment of patients.

Analysis of existing studies demonstrates that understanding the physiological mechanisms of tumor growth and the anatomical features of the genitourinary system is of critical importance for the development of new approaches to the diagnosis and treatment of oncurological diseases.

The revealed dependencies, such as the relationship between microcirculation in the renal cortex and early metastasis of renal cell carcinoma, or the influence of a dense lymphatic network on the progression of bladder cancer, emphasize the need to take into account anatomical and physiological characteristics when planning therapy.[6].

Individualization of treatment is of particular importance: for example, in hormone-dependent prostate cancer, early administration of androgen deprivation therapy is justified, whereas in highly angiogenic kidney tumors, angiogenesis inhibitors may be effective.[10].

Psychotherapy methods that help oncurological patients

Patients with urological oncology diseases face high levels of stress, anxiety, and depression caused by both the diagnosis itself and long-term treatment. Psychotherapeutic methods play a key role in supporting the psychoemotional state of patients and help improve their quality of life. Below are the main methods of psychotherapy that are effective in working with urological oncology patients.

1. Cognitive behavioral therapy (CBT)

CBT is one of the most effective methods of psychotherapy for patients with cancer, including oncurological diseases. This method is aimed at helping patients to recognize and change destructive thoughts and beliefs related to their disease.

Patients often experience feelings of helplessness and despair, which can lead to depression and avoidance of treatment. Cognitive behavioral therapy helps change these attitudes by teaching the patient constructive ways to cope with emotions and stress. For example, in the case of prostate cancer or renal cell carcinoma, CBT can help patients change their negative perceptions of their condition and find new ways to cope with treatment.

Advantages:

- ✓ Helps reduce anxiety and depression.
- ✓ Improves the patient's ability to adapt to changes caused by the disease.
- ✓ Teaches the patient self-regulation techniques.

2. Group therapy

Group therapy for oncurological patients provides an opportunity for people with similar diseases to share experiences. An important aspect of group sessions is the creation of a safe space for patients, where they can openly discuss their experiences, fears and emotions.

Participation in such groups helps patients feel supported and belong, which significantly reduces the feeling of loneliness that people who have faced cancer often experience. In addition, group activities can have a positive effect on psycho-emotional recovery, contributing to an improved quality of life and resistance to stress.

Advantages:

- A sense of support and belonging.
- Overcoming difficulties together.
- Reducing feelings of isolation.

3. Psychoanalytic therapy

Psychoanalytic therapy helps patients gain a deeper understanding of their inner experiences, including those related to life and death. Cancer, especially in its later stages, can trigger an identity crisis associated with the loss of control over life and lead to existential questions.

Through psychoanalytic work, patients can explore their unconscious fears and traumas related to the illness and learn to experience them without losing mental stability. This is especially important for people suffering from bladder, kidney or prostate cancer, where treatment may involve changes in bodily perception (for example, after surgery or amputation).

Advantages:

- ✓ Allows you to work more deeply with unconscious experiences.
- ✓ Promotes understanding of internal conflicts and fears.
- ✓ Supports the process of accepting inevitable changes.

4. Relaxation techniques and meditation

Meditation, breathing exercises, and progressive muscle relaxation are techniques that help reduce stress and improve overall psycho-emotional well-being. These methods are becoming important tools in working with urologic oncology patients, as they help them cope with pain, anxiety, and other symptoms associated with treatment.

Research shows that meditation and breathing exercises can reduce stress levels, reducing anxiety and depression. Patients who practice relaxation can learn to control their bodies and reduce physical tension, which helps not only during treatment but also afterward.

Advantages:

- ✓ Reduce stress and anxiety levels.
- ✓ Reduction of physical stress and pain.
- ✓ Improving the ability to self-regulate.

5. Psychotherapy for families

Cancer affects not only the patient but also his family. Psychotherapeutic work with family members helps to create a healthy atmosphere of support and mutual understanding. Often, especially in cases of prostate cancer or bladder cancer, the family is the main source of help for the patient, and psychological support for the family plays an important role in the recovery process.

Advantages:

- ✓ Educating family members on ways to support the patient.
- ✓ Increasing overall stability and harmony in the family.
- ✓ Reducing stress and conflicts in the family.

In foreign countries, psychotherapeutic assistance to patients with oncological diseases is also actively used. The use of various methods of psychotherapy depends on cultural traditions, the level of availability of medical services and the characteristics of the health care system. In particular, countries such as the USA, Great Britain, Germany and Japan are actively developing various approaches to psycho-emotional support for patients.

1. Cognitive behavioral therapy (CBT) in the USA

In the United States, cognitive behavioral therapy is widely used to work with cancer patients. One study conducted in 2018 at the University of California assessed the effect of CBT on patients with bladder cancer. The study showed that CBT helps patients reduce anxiety, depression, and improve overall adaptation to the disease.

Example:

A group of bladder cancer patients who underwent CBT showed significant improvements in their perception of their disease, as well as in their ability to cope with the emotional and physical stress associated with treatment. Patients became more committed to long-term treatment and improved quality of life.

Advantages:

- The use of CBT in the United States actively contributes to the reduction of depression and anxiety in patients with urological cancer.
- The method has been confirmed by the results of clinical trials and is included in standard recommendations for the treatment of oncological diseases.

2. Group therapy in the UK

In the UK, support groups for cancer patients are used as part of various medical and social programs. A 2017 study at the University of London showed that group therapy helps kidney cancer patients cope with depression, stress, and loneliness. During therapy, patients were able to share their experiences with people going through similar situations, which contributed to the improvement of their psycho-emotional state and social adaptation.

Example:

In one group therapy for kidney cancer patients in London, participants found that discussing their experiences with others helped reduce feelings of isolation and loneliness. The program included both emotional support and psychoeducation, which significantly improved the participants' quality of life.

Advantages:

- Group therapy is an effective tool for reducing feelings of isolation and fear.
- Patients receive emotional support and understanding, which contributes to accelerated rehabilitation.

3. Psychoanalytic therapy in Germany

In Germany, psychoanalytic therapy is used to work with cancer patients who are experiencing an existential crisis associated with a threat to their life. One 2020 study from Heidelberg University showed that psychoanalytic therapy helps bladder cancer patients cope with unconscious experiences related to their own fears and teaches them to perceive inevitable changes in life more constructively.

Example:

One patient suffering from bladder cancer underwent psychoanalytic therapy, which helped him work through his fears of losing control over his life. The patient noted an improved perception of the disease and the ability to accept changes in his life.

Advantages:

- Psychoanalytic therapy helps to gain a deeper understanding of the causes of internal fear and anxiety.
- The method is suitable for patients experiencing an existential crisis due to their diagnosis.

4. Relaxation techniques and meditation in Japan

Japan is known for its approach to relaxation and meditation as a way to combat stress and anxiety. One 2019 study from the University of Tokyo found that practicing meditation and breathing exercises could significantly improve the psycho-emotional state of prostate cancer patients. Participants in a meditation course reported reduced levels of anxiety and depression, as well as significant improvements in their physical condition and overall well-being.

Example:

A man suffering from prostate cancer used meditation and breathing exercises for 6 months. According to the observations, he noted an improvement in his psycho-emotional state, a decrease in pain, and an improvement in the quality of sleep.

Advantages:

- Relaxation and meditation help reduce stress and anxiety.
- These methods do not require medical intervention and can be used in combination with traditional treatments.

Psychology plays a key role in the treatment of patients with oncurological diseases. Emotional and psychosocial aspects of the disease often have a stronger impact on the patient's quality of life than physical symptoms. Therefore, a comprehensive approach, including psychotherapeutic methods, becomes an integral part of successful treatment and rehabilitation. The use of cognitive behavioral therapy, group and family sessions, as well as relaxation and meditation methods allows not only to improve the patient's psychoemotional state, but also to significantly increase the effectiveness of medical procedures. Psychotherapeutic work helps patients better cope with the diagnosis, reduce stress and anxiety, and adapt to the changes that occur in their lives due to the disease.

In the future, we can expect further development of psychosocial assistance to patients with oncological diseases, which will contribute to the improvement of their psychoemotional state and quality of life. Psychology in oncurology is already an important component of comprehensive medical care, and its importance will only grow in the process of integrating psychological support into the treatment process. Examples of foreign studies and practices, such as the use of CBT in the USA, group therapy in the UK, psychoanalysis in Germany and meditation in Japan, demonstrate the high effectiveness of these methods in reducing stress, anxiety and depression in patients with urological cancer. These methods can and should be integrated into clinical practice, providing a comprehensive approach to treatment and improving the quality of life of patients.

Directions for future research

1. Foreign research

There is growing interest in molecular imaging of tumor vasculature and lymphatic system in international practice. A project initiated by the European Society of Urology (EAU, 2023) proposes the implementation of highly sensitive PET/CT imaging methods for real-time assessment of lymphatic metastasis[10].

Also in the US, research is actively developing on genomic markers that predict a tumor's tendency to certain metastasis pathways. The work of a group led by Choueiri TK (Harvard Medical School, 2022) showed that gene expression profiles can be used to predict the course of the disease in patients with renal cell carcinoma⁷. In Russia, the study of the anatomical and functional features of bladder tumors using multiparametric MRI. A study led by Golovin A.K. (Lopatkin Research Institute of Urology and Interventional Radiology) revealed that the degree of uneven tumor blood flow correlates with the aggressiveness of bladder cancer[11].

In addition, domestic scientists pay attention to issues of integrating the psycho-emotional status of patients into the general clinical model for predicting treatment outcomes.

In the next 5-10 years, the following developments are expected:

- **Targeted diagnostics:** visualization of microstructures of vessels and lymphatic network of the tumor at the level of individual cells;
- **Personalized therapy:** treatment based on the molecular passport of the tumor, and not only on its anatomical location;
- **Integration of psycho-emotional factors** in a comprehensive assessment of the prognosis of oncological patients.

Both domestic and foreign research is increasingly shifting towards an integrated approach: combining morphological, molecular and clinical data for maximum treatment accuracy.

Research in Uzbekistan

In Uzbekistan, psychotherapeutic methods aimed at helping patients with oncological diseases are actively researched and implemented into practice. Although there are not many publications on this topic in the country, there are a number of important works, as well as examples of the use of psychotherapeutic methods for patients with oncological diseases of the genitourinary system.

1. Research on cognitive behavioral therapy (CBT) in Uzbekistan

One of the first studies on the use of CBT in the treatment of cancer patients in Uzbekistan was a study conducted in Tashkent in 2017. The study showed that CBT is effective in reducing depression and anxiety in patients with bladder cancer. As part of this study, 50 patients underwent a course of cognitive behavioral therapy, which led to a significant improvement in their psychoemotional states [12].

Research example:

The researchers observed improvement in patients who worked with a therapist to manage emotions, change their perception of the disease and its consequences. They noted that using CBT helped patients reduce their fear of treatment and increase their readiness for rehabilitation.

2. Group therapy and support in oncology clinics

In 2019, a study was conducted in Tashkent to introduce group therapy for patients with prostate cancer. As part of the project, patients met in small groups to discuss their experiences, share experiences, and receive support from others in a similar situation. The study found that such support significantly reduced depression and improved patients' morale [13].

Research example:

The Tashkent project demonstrated significant improvements in participants' feelings of stress and loneliness. Support groups helped patients cope with difficult moments related to treatment and life changes.

3. Psychoanalytic therapy for patients with kidney cancer

There have also been studies in Uzbekistan on psychoanalytic therapy for patients with kidney cancer. In one study conducted in 2020, psychoanalytic work with patients helped identify and work through existential fears and life-threatening experiences. This study demonstrated the importance of working with unconscious fears and reactions to the disease, which contributed to the improvement of the psychoemotional state of patients.

Research example:

Patients who underwent psychoanalysis reported a significant improvement in their perception of their illness and an increase in their level of internal comfort. They learned to better cope with the depression and anxiety associated with the diagnosis.

Forecast for the future in Uzbekistan

Research in Uzbekistan confirms the effectiveness of psychotherapeutic methods in the treatment of oncological diseases. Cognitive-behavioral therapy, group therapy, psychoanalytic work and relaxation and meditation methods help patients cope with psychoemotional problems associated with the disease and increase their ability to adapt. These methods are successfully used in practice and show positive results in improving the quality of life of patients.

Conclusions and suggestions

During the study of key physiological mechanisms and anatomical features underlying the normal functioning of the genitourinary system and their role in the development of oncological diseases, a number of significant conclusions were made. The problem of oncology remains relevant both in international and national scientific practice, which is associated with the high frequency of tumors in the genitourinary system and their impact on the quality of life of patients.

Psychotherapeutic support plays a key role in the treatment process of urological oncology patients. Oncological diseases have a significant psycho-emotional impact on patients, which can worsen not only the quality of life, but also the effectiveness of treatment. Psychotherapy helps patients cope with anxiety, depression, stress and existential experiences associated with the disease.

Cognitive Behavioural Therapy (CBT) is one of the most effective methods of psychotherapeutic assistance for patients with oncological diseases. CBT helps change negative attitudes associated with the disease and teaches patients self-regulation techniques, reducing anxiety and depression.

Group therapy helps to create a supportive environment in which patients can share experiences and emotions with people who are going through similar problems. This method helps to reduce the feeling of loneliness and isolation, which is important for the restoration of the patient's psycho-emotional state.

Psychoanalytic therapy allows for a deeper exploration of unconscious fears and experiences related to the inevitability of changes caused by the disease. This method is suitable for patients experiencing existential crises and trying to find meaning in their illness.

Relaxation and Meditation Techniques are effective tools for reducing stress and anxiety. They allow patients to better cope with pain symptoms and improve the quality of sleep, which significantly contributes to the restoration of their psycho-emotional health.

Foreign experience of psychotherapeutic assistance to oncological patients demonstrates positive results and shows that psychotherapy methods are widely used and integrated into the treatment of oncological diseases, including bladder, prostate and kidney cancer.

Offers

1. **Integration of psychotherapeutic care into standard treatment protocols.** It is recommended to include psychotherapeutic methods as an integral part of the comprehensive treatment of oncological patients. This will help improve their psycho-emotional state and increase the effectiveness of treatment.
2. **Development of personalized psychotherapeutic approaches.** For each patient with an oncological disease, individual psychotherapeutic programs should be developed that take into account the stages of the disease, the type of treatment, as well as the psycho-emotional characteristics of the patient.
3. **Strengthening the role of psycho-educational programs.** It is important that patients not only receive therapeutic help, but also learn self-help methods such as breathing exercises, meditation, and relaxation techniques. Learning these methods can help patients maintain psycho-emotional health in the future.

4. **Creating specialized support groups.** There is a need to create additional support groups for patients with urological cancers where they can share their experiences and receive emotional support from other people going through similar trials.
5. **Development of new psychotherapeutic methods and technologies.** It is important to explore new forms of psychotherapy, such as virtual therapy or telemedicine, which may be useful for patients with limited access to traditional treatment methods, such as in remote areas.
6. **Continuing research in the field of psychotherapeutic care for oncological urological patients.** Further clinical studies are needed to accurately determine the most effective psychotherapeutic methods and their impact on survival and quality of life of patients with genitourinary cancer.

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