

## **PROBLEMS OF ONCOLOGY IN UKRAINE AND WAYS TO SOLVE THEM. DISEASE STATISTICS**

**Introduction.** Oncology, in general, is identified as the study about tumors, their growth, possible ways of prevention of their appearance and effective ways of treatment. Yet, there is still no universal precise definition of “tumor” existing in the scientific literature, which results in discrepancy and continuous debates between supporters of different theories of its origin.

The most precise and successful definition of the “tumor” was given by M.M. Blokhin: «Tumor disease is a special type of pathology, widespread in nature, characterized by unbridled and relatively autonomous growth and reproduction of cells within the affected area. At the same time, the growth of the tumor occurs from the primary rudiment without involving surrounding unchanged cells in the process. However, the malignant cell transmits its properties and the ability to grow to all subsequent generations of cells» [3]. Malignant tumor is a specific pathological form of cell proliferation, caused by induced or spontaneous changes in the genome of a cell, characterized by a tendency to uncontrolled growth, incomplete differentiation, as well as invasion and destruction of adjacent tissues and the formation of distant metastases [5].

**Topicality of our research** is determined by a number of factors, including rapid spread of oncological diseases, the high cost of their treatment, the severe course of illness, lack of funding for cancer hospitals etc. The ecological crisis that swept the world in recent decades has posed to humanity almost the most difficult medical, social and economic problem, such as the irregular growth of cancer morbidity and mortality. Representatives of the European Commission have recently published stunning data, indicating the following fact: every fourth EU citizen dies of cancer. Every year in the world more than 10 million new cases of cancer are registered, as well as about 6 million deaths from them. Experts predict, that in 2020 these figures will be 20 and 10 million respectively [1].

More than 160 thousand new cases of malignant tumors are registered annually in Ukraine, thus, giving us the second place among European countries in terms of the rate of cancer spread. Every year about 100 thousand Ukrainians die from oncological diseases, 30% of them are people of working age. Today, more than a million of our compatriots are on the cancer record. Every third Ukrainian, diagnosed with cancer, dies within a year after the diagnostic procedure. According to the National Cancer Registry, from 37% to 60% of all cancer patients in Ukraine receive no special treatment, leading to such a high mortality rate. Only 47% of children with different types of cancer survive, while in Israel this figure reaches 84%. Up to 12% of Ukrainian women with breast cancer die without living a year, while in the US this figure does not exceed 2%. The five-year survival rate for breast cancer in Ukraine is 58%, in France - 83% and in the USA - almost 90%. The financing of medical aid for children with cancer is not included in a separate line in the State Budget for 2012-

2013(y) as the State Program "Children's Oncology" has expired in 2010, and the new program of the Ministry of Health of Ukraine has not been prepared and has not been approved by the Cabinet of Ministers [2].

Currently, the level and quality of aid to cancer patients in our country is unacceptable. The main issue is the lack of funds within the healthcare sector, including healthcare facilities and institutions. Kyiv City Cancer Hospital (KCCH) exemplifies the situation. The financial needs of KCCH are about 40 million 400 thousand UAH per year (which includes medical drugs, equipment, salaries, international cooperation etc), but in 2006 only 1 million 148 thousand UAH was received in accordance with "Health of Kyiv Citizens" program, as well as additional 3.5 million from the state budgets. The first transaction of about 428 thousand UAH came only in August. Hospitals lack modern equipment for ultrasound diagnostics of expert class, endoscopic devices, mammographs, immunoassay and hematologic analyzers. It is known that up-to-date endoscopic equipment increases the identification of stomach cancer by 10% [1].

**Object of research** are individuals (Ukrainians) with registered cases of cancer of working age.

**Subject of the research** is the condition of malignant tumors of the prostate on the outpatient-policlinic level.

**Aim of our research** is determine the scale of oncological diseases in the Zhytomyr region.

**Methods of research:**

We have used the following research methods: the sociological method (surveys), the statistical method (data generalization), the method of analysis (comparison of the results) and the interpretation of the analysis (explanation of the results), the method of the organizational experiment (mathematical processing of data), the epidemiological method (detection problems of prophylaxis, causes, conditions and mechanisms of the formation of morbidity).

**Research Results:**

In the process of our research, we have identified, that in the Zhytomyr region there was a significant increase in the prevalence of malignant neoplasms among residents of urban (+5.9%) and rural (+3.7%) areas (2013-2014 years); high (25.1%) is the proportion of patients with newly diagnosed prostate cancer in III-IV stages. As a general population, patients who applied for medical assistance at the outpatient clinic level to the urologist (873 persons) were eligible to take part in the research as respondents.

In fact, 890 surveys were analyzed (17 surveys were rejected, which was 1.94% of 873). Among the remaining survey material, 471 patients were enrolled in the main group (patients diagnosed with malignant neoplasm (cancer) of the prostate), 402 patients were moved to the control group (patients without signs of neoplasms in the prostate who applied to the urologist for a counseling and / or prophylactic purpose).

For the male population of Zhytomyr region during the period of research from 2014, the gradual was characterized by the decrease in the prevalence of prostate gland diseases (from 1226.5 in 2010 to 1075.9 per 100 thousand men (18 years old and older) in 2014, at 12,3%), which occurred in most (in 17 of 23) of city districts. At the

same time, its growth was observed in 4 districts: Volodar-Volynskiy (from 575.0 to 982.0, by 70.8%), Cherniakhivky (from 1521.3 to 3418.2, by +24.7%), Radomyshl'sky (from 421.7 to 551.1, +22.0%), and the Chervonoarmiysky (from 259.2 to 288.3, +11.2%), including the city of Berdichev (from 926.2 to 1518.0, at +63.9%).

As a result, the highest levels of prevalence of prostate gland diseases in 2014 were registered in Cherniakhivsky (3418.2) and Lyubarsky (2767.1) districts. The lowest indicators were picked in Malinsky (260.8), Brusilovsky (270.8), Chervonoarmiysky (288.3) districts of the region.

The difference between the values (top and bottom) of the indicator in 13.1 times testifies to the presence of essential features of its formation at a regional level. Similar changes were observed among men of all ages. Thus, among the men of working age, the rate of decrease was about 2.74%, with specific changes in the indicator from 416.8 in 2010 to 405.4 in 2014 (2.74%). For men of retirement age, the process was slower: from 4312.0 to 3597.7 respectively (16.57%) [4].

**Conclusion.** On the basis of the statistical data analysis we can conclude that, similar to the all-Ukrainian tendencies of reducing the incidence of the tumors-class diseases, in Zhytomyr region the indicators have decreased from 2013 to 2014 among urban (by 18.5%) and rural population (by 2.46%); the same tendencies characterized the spread of tumors, but only among urban residents (12.3%) with a slight increase among the rural population (by 1.16%). The decrease in the incidence of neoplasms (tumors) occurred within the age groups of adult (urban population ~18.9%), adult groups of rural population (-3.0%) and among the working-age population (-8.5%) [4].

**The prospects of our further research** is to establish and confirm a connection between the onset and development of cancer in patients due to high electromagnetic radiation, a Chernobyl accident, virus infections etc, as well as to determine the sequence of symptoms and the stages of cancer development within different categories of patients.

## REFERENCES

1. Сьогоднішня української онкології <http://health-ua.com/article/17956-sogodennya-ukranksko-onkolog-problemi-dosyagnennya-perspektivi>
2. Діагноз: онкологія. Історії однієї країни [http://patients.org.ua/wp-content/uploads/2016/02/UCAB\\_v2\\_PQ.pdf](http://patients.org.ua/wp-content/uploads/2016/02/UCAB_v2_PQ.pdf)
3. Клінічна онкологія, т. 1. М., Медицина, 1971, с. 6
4. [http://old.nmapo.edu.ua/zagruzka2/DrAr/Dr-15\\_05\\_17-5.pdf](http://old.nmapo.edu.ua/zagruzka2/DrAr/Dr-15_05_17-5.pdf)
1. Онкологія: Підручник - Білінській Б.Т. <http://booksshare.net/index.php?id1=4&category=med&author=bilinskiy-bt&book=2004&page=3>
2. <https://www.clinicaloncology.com.ua/article/11204/analiz-diyalnosti-nacionalnogo-institutu-raku>
3. [http://dspace.nbu.gov.ua/bitstream/handle/123456789/24720/14\\_219.pdf?sequence=1](http://dspace.nbu.gov.ua/bitstream/handle/123456789/24720/14_219.pdf?sequence=1)