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MALIGNANT NEOPLASMS OF VARIOUS LOCALIZATION – CURRENT TRENDS IN MORBIDITY AND MORTALITY OF THE POPULATION OF THE REPUBLIC OF BELARUS

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Annotation: The analysis of modern trends in morbidity and mortality of the population of the Republic of Belarus with malignant neoplasms of various localization and mortality, the study of the ratio of these two indicators in different localization of malignant neoplasms. As a result of the conducted research, the trend of growth of oncological pathology in the population of the Republic of Belarus in recent decades has been established. The increase in morbidity is largely determined by the unfavorable direction of demographic processes in Belarus associated with the "aging" of the population.

Keywords: malignant neoplasms, morbidity, mortality

ЗЛОКАЧЕСТВЕННЫЕ НОВООБРАЗОВАНИЯ РАЗЛИЧНОЙ ЛОКАЛИЗАЦИИ – СОВРЕМЕННЫЕ ТЕНДЕНЦИИ ЗАБОЛЕВАЕМОСТИ И СМЕРТНОСТИ НАСЕЛЕНИЯ РЕСПУБЛИКИ БЕЛАРУСЬ

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Аннотация: Проведен анализ современных тенденций заболеваемости и смертности населения Республики Беларусь злокачественными новообразованиями различной локализации и смертности, изучение соотношения этих двух показателей при различных локализациях злокачественных новообразований. В результате проведенных исследований установлена тенденция роста онкологической патологии у населения Республики Беларусь в последние десятилетия. Прирост заболеваемости в значительной мере определен неблагоприятным направлением демографических процессов в Беларуси, связанными с «постарением» населения.

Ключевые слова: злокачественные новообразования, заболеваемость, смертность

Relevance. For many years in the countries of the European region, as well as in the Republic of Belarus, oncological pathology ranks second in the structure of all causes of death after diseases of the circulatory system and significantly affects the average life expectancy of the population.

According to the World Health Organization (WHO) and the International Agency for Research on Cancer, malignant neoplasms are a modern global problem. The International Agency for Research on Cancer annually registers more than 12 million new cases of malignant neoplasms in the world and about 6.2 million deaths from this pathology. The annual growth rate of patients with malignant neoplasms is approximately 2 %, which exceeds the growth of the world population by 0.3-0.5 %. The forecast of WHO experts is disappointing: cancer incidence worldwide will increase to 24 million cases by 2050, and mortality to 16 million annually registered cases.

According to the statistics of 2018, the most common oncological diseases in the world are lung, breast and intestinal cancers.

Reducing the morbidity and mortality of the population from malignant neoplasms is one of the most urgent important problems facing medical science and healthcare at the present time.

The analysis of the incidence of malignant neoplasms is necessary for health protection, the development of preventive measures, the solution of strategic and tactical tasks of health management. To date, much has already been done to understand the problem as a whole, a huge amount of material has been accumulated, the systematization and generalization of which

ultimately makes it possible to answer many questions related to the etiology and pathogenesis of cancer.

Goal. Analysis of current trends in morbidity and mortality of the population of the Republic of Belarus with malignant neoplasms of various localization and mortality, the study of the ratio of these two indicators in different localization of malignant neoplasms.

Materials and methods of research. The work uses epidemiological, comparative-evaluation and analytical methods to study official statistical data on the health status of the population of the Republic of Belarus, as well as literature data on morbidity and mortality of residents of our country from malignant neoplasms.

Results and their discussion. In our country, for the period from 1995 to 2018, a significant increase in primary morbidity was registered in the class of "Neoplasms": 296.1 cases per 100 thousand population in 1995; 328.7 – in 2000, 367.2 – in 2005, 442.9 – in 2010, 513.4 – in 2015, 554.5 – in 2018 G., that is, over 23 years, this indicator has grown by 87.3%. In the period from 1995 to 2005, the average annual increase in morbidity was 7.11; from 2005 to 2015 – 14.62; from 2015 to 2018 – 13.7. On the territory of the Republic of Belarus, there was a significant increase in this pathology in the period from 1995 to 2018. on average by 3.8 % (11.2 cases per 100 thousand population) per year.

If the cancer incidence in our country continues to grow at the same rate, the number of cases will double in just 15 years, which will not only significantly increase the burden on the republic's healthcare system, but will also entail significant socio-economic consequences. According to official statistics [1], more than 40 thousand patients have been registered annually in our country since 2011, and since 2017 – more than 50 thousand patients with an established oncological diagnosis for the first time in their lives, which is about 0.5 % of the country's population

The analysis of the oncological epidemiological situation shows that there are also significant differences in the incidence rates in urban and rural populations. Due to the significant differences in the age structure of the urban and rural population of Belarus, the rough intensive indicator of the total oncological morbidity for the entire period was higher in the rural population. The incidence of malignant neoplasms of the urban population during the studied period increased by 95.8 %, while the incidence among the rural population by 47.7 %, which is almost 2 times less.

The dynamics of the incidence of malignant neoplasms in the regions of the Republic of Belarus and Minsk tends to increase. There are certain differences in the overall cancer incidence in the regions of the republic. From year to year, the highest cancer incidence remains in Minsk and the Gomel region. Moreover, the largest increase in cases over the period 1995-2018 was observed in the Gomel region and amounted to 188 %, while in Minsk this indicator is the lowest – 130.2 %.

The incidence of men with malignant neoplasms of all localizations is generally higher than that of women. It should be noted that the greatest increase in morbidity is observed at the age of 60 and older, and in 2018 amounted to 1719 cases per 100 thousand people of the population.

The structure of cancer incidence in men has changed over the period from 2000 to 2010. In 2000, lung cancer was in the first place, stomach cancer was in the second, and colon cancer was in the third; in 2010, respectively, lung cancer, prostate cancer and non-melanoma skin cancer. In 2018 and 2019, men most often had prostate cancer, lung cancer and colorectal cancer.

The structure of cancer incidence in women has not changed significantly over the same period. In women in 2000, the first three positions were occupied by breast, skin and stomach cancer. Thus, the leading positions in women in 2010 were occupied by skin cancer (19.8 %), breast cancer (17.6 %), uterine body (7.7 %), followed by stomach cancer (6.1 %). In 2018 and 2019 [1, 2], breast cancer was in the lead, followed by colorectal cancer and uterine cancer.

In Belarus, 6-9 % of detected cases of oncological diseases annually are primary multiple tumors, of which every fifth case is the localization of tumors in two or more organs at the same time, which indicates an increase in cases of polyneoplasia. According to data for 2010, the main part in their structure (62.1 %) are cases of non-melanoma skin cancer (17.7 % of all detected cases of skin cancer). Primary multiple tumors in 10.1 % of the detected cases were lip tumors, 4% – esophagus, 2.6 % – stomach, 7.9 % – colon, 5.7 % – kidney, 2.7 % – thyroid gland. The most rapid increase in morbidity rates [2] was observed in prostate cancer and non-melanoma skin cancer.

In Belarus, mortality from malignant neoplasms ranks second among all causes of death, which affects the average life expectancy and the size of irreparable losses of the population, especially in working age, and also causes significant economic damage.

Mortality from oncological pathology in Belarus remains high: in 1995 – 188.1 cases per 100 thousand population, in 2000 – 194.3; in 2005 – 188.5; in 2010 -191.6; in 2015 – 183.9 and in 2018 – 196.0. From 1995 to 2018, the total mortality rate increased by 4.2% and has remained relatively stable over the past decade, with a tendency to a slight decrease. Moreover, the mortality rate among the rural population suffering from cancer was significantly higher than among urban residents. The ratio of mortality of urban and rural population per 100 thousand. The number of people was: in 1995 – 167.2 and 245.5; in 2010 – 181.5 and 232.4; in 2015 – 175.9 and 223.4; in 2018 – 184.4 and 250.1.

The mortality of men from malignant neoplasms of all localizations, as well as the incidence was generally higher than women.

For the period from 1995 to 2018, lung cancer (3280 people) took the first place in mortality among all malignant neoplasms (as of 2010 [3, 4]), stomach cancer and colorectal cancer (2290 and 2259 people) took the second and third places. This was followed by breast cancer (1,220 people) and prostate cancer (855 people). In 2017, mortality from lung cancer came out on top (3,112 people), colorectal cancer was in second place (2,418 people), stomach cancer was in third place (1,860 people).

Conclusion. As a result of the conducted research, the trend of a significant increase in oncological pathology in the population of the Republic of Belarus in recent decades has been established. The increase in morbidity is largely determined by the unfavorable direction of demographic processes in Belarus associated with the "aging" of the population. It has been established that the incidence of malignant neoplasms of the urban population is significantly higher than that of the rural population. The morbidity and mortality of men with malignant neoplasms of all localizations in general was always higher than that of women.

It is shown that during this period in our country the most rapid growth of malignant neoplasms (skin, breast and prostate cancer) was observed, and the largest number of deaths were registered from lung cancer. The mortality rate of the rural population is higher from year to year than that of city residents.

Given the high efficiency of modern medical preventive work, it is necessary to focus the efforts of healthcare workers on improving the effectiveness of primary and secondary prevention of this pathology in the population of our country.

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