

CANCER INCIDENCE AND MORTALITY.**STATE OF ONCOLOGICAL ASSISTANCE TO THE POPULATION**

The main features of oncoepidemiological process in Ukraine in 2008 and its change comparatively with the previous year.

As according to the adjusted data of National Cancer Registry in 2008 number of new cases numbered 161 414, incidence rate was 349,4 per 100 000 of population, that is it increased by 0,5%. At the same time, the decreasing tendency in cancer incidence was observed in 10 oblasts – Vinnitska, Donetska, Zakarpatska, Ivano-Frankivska, Kirovogradska, Odesska, Sumska, Ternopil'ska, Hmel'nitska and Chernigiv'ska. Number of cancer patients in 2009 was 961 183: 338 635 of men and 622 548 of women.

The highest incidence rates were in Zaporizka, Mykolayvska and Kirovogradska oblasts (401,4 - 412,7 per 100 000 of population) and in Sevastopol city - 483,7 per 100 000 of population. The lowest ones - in Volyn'ska, Zakarpatska, Ivano-Frankivska and Rivnenska oblasts (238,8-277,0 per 100 000 of population), the highest rate exceeds the lowest one 1,7 times.

In male population of Ukraine the reliably increased incidence rates for cancer of colon, pharynx, pancreas gland, prostate gland, kidney, bladder, brain and melanoma of skin were observed. In female population incidence rates for melanoma of skin and cancer of breast, thyroid gland, cervix uteri, corpus uteri, bladder, brain and malignant diseases of lymphatic, hematopoietic and reticuloendotelial systems have been reliably increased.

The most rapidly growing incidence rates that exceeded 3% per one year were registered for cancer of pharynx (6,4%), colon (5,2%), melanoma of skin (6,1%), cancer of thyroid (3,1%) and pancreas glands (5,9%) - in male population. For women the greatest increment was revealed in cancer of thyroid gland (8,2%), brain (6,5%), cervix uteri (3,4%), bladder (11,4%), multiple myeloma (13,3%) and malignant lymphoma (4,3-8,1%).

The most frequent cancer incidence showed: in male population – cancer of lung, skin, stomach, prostate gland and rectum (altogether 52,2% of total), in female population – cancer of breast, skin, corpus uteri, colon and cervix uteri (53,5% of total).

Cancer mortality rate in 2008 was equal to 184,5 per 100 000 of population (85 200 patients), that is it has been decreased by 0,5%; at the same time this rate increased in 10 oblasts.

The most frequent deaths from cancer were registered for cancer of lung, stomach, prostate gland, colon and rectum (altogether 56,3% of total) – in male population, and for cancer of breast, stomach, colon, rectum and ovary (altogether 52,0% of total) – in female population.

Leukemia and cancer of brain made up the greatest share of cancer incidence of children population (age group 1-17) - 49,1% for boys and 43,1% for girls. In young age group 18-29, the greatest share of cancer incidence was made with Hodgkin lymphoma and cancer of testis (29,7%) for men, Hodgkin lymphoma and cancer of cervix uteri (29,6%) - for women. The intensive growth of brain cancer incidence put it on the fourth place in the structure of cancer incidence in this age group.

The greatest share in structure of children cancer mortality was made with leukemia and brain cancer: 58,3% in boys and 48,1% in girls. The same is observed in age group 18-29: 28,5% in men and 25,9% in women. In older age groups, the most frequent cause of death is: cancer of lung and stomach (34,9-39,2%) – in male population, cancer of breast, cervix uteri and stomach (31,7-39,7%) – in female population.

State of oncological assistance to the population is defined with the indices of diagnostics and treatment.

The level of morphologically verified diagnoses in 2009 was 81,4%, with its fluctuation within 74,0% in Crimea AR and 90,7% in Zhytomyrska oblast. The highest level of morphological verification is shown in visually available sites: lip - 95,6%, skin - 97,6%, cervix uteri - 98,4%, thyroid gland - 97,6% and malignant diseases of lymphatic, hematopoietic and reticuloendotelial systems - up to 99,9%, the lowest one – in lung cancer (56,7%). At the same time, in some oblasts this index for visually available sites does not exceed 45% (in Crimea AR, Kirovogradska, Rivnenska, Ternopil'ska, Kharkiv'ska, Hmelnytska and Chernigiv'ska oblasts).

The survival rate and estimation of share of cancer patients which have not live longer then 1 year since the moment of cancer diagnosis can be used as integral indices for appraising the state of anti-cancer activity.

The share of patients *that have not live longer then 1 year since the moment of cancer diagnosis here* includes also the post mortem diagnosed persons. In 2009, this average rate for Ukraine was 34,5%. It fluctuated from 28,6% in Odessa oblast to 39,8% in Luganska oblast. Even for visually available sites of cancer, this index was high: for breast (11,6%), cervix uteri (16,2%), prostate (20,9%) and rectum (32,9%).

The share of stomach cancer patients which have not live longer then 1 year since the moment of cancer diagnosis was 62,2% in Ukraine in total, from 54,2% in Sumska oblast to 70,7% in Luganska oblast; this share for lung cancer patients was 63,9% - in Ukraine in total, from 55,9% - in Crimea AR to 75,1% - in Luganska oblast, that testifies against the timely detection of this disease and to the low efficiency of endoscopic and fluorographic services.

Treatment of cancer patients can be assessed by indices of receiving of special treatment.

In 2009, the special treatment received 66,9% of newly diagnosed patients on average, from 60,1% - in Dnipropetrovska oblast to 75,5% - in Odessa oblast.

44,2% of patients with stomach cancer received special treatment: from 31,5% in Zhytomyrska oblast to 70,7% - in Luganska oblast. With regard to the share of late detected cases of stomach cancer (31,1%) the expected number of patients underwent the special treatment should be substantially greater. Share of patients with cancer of colon, rectum and anus, which received special treatment, was 67,7%-69,2%, with its fluctuation in bounds 60,4% -78,4%. Only 0,4% lung cancer patient received special treatment, from 30,5% of those - in Dnipropetrovska oblast to 57,3% - in Odessa oblast.

In 2009, 81,0% of newly diagnosed patients with breast cancer received special treatment, with fluctuation from 66,3% in Crimea AR to 89,5% – in Volyn'ska oblast. Sufficiently great number of patients with cancer of genitals received special treatment (81,0-82,4%). Special treatment received also 66,4% of patients with cancer of kidney and 75,5% - with cancer of bladder. The lowest index for kidney cancer was in Poltav'ska (55,8%) and Zhytomyrska (59,3%) oblasts, for bladder cancer - in Crimea AR (65,7%), Kirovogradska (66,4%), Luganska (67,9%) and Sumska (67,4%) oblasts. For prostate cancer, the special treatment was received with 70,6% patients: from 36,4% - in Zhytomyrska oblast to 88,6% - in Chernigiv'ska oblast.

Special treatment was received with 66,9% of leukemia patients: from 40,7% - in Kirovogradska oblast to 91,5% - in Vinnitska oblast.

The numbers observed witness that more then 30,0% of cancer patients do not receive the proper treatment in most of oblasts.

Thus, this analysis is an evidence of anti-cancer activity remaining be urgent problem for health protection in Ukraine. It's solving depends both from modernizing and reequipment of medical institutions and improvement of professional qualification level in oncology of physicians and other medical stuff. To a great extent it depends from realization of the National Program of Combating the Oncological Diseases until 2016 that has been approved due to the Low of Ukraine № 1794-VI of 23.12.2009.

SURVIVAL ANALYSIS OF CANCER PATIENTS IN UKRAINE

Survival analysis was not practically carried out in oncoepidemiological research in Ukraine; as a rule, survival rate was used for comparative assessment of the effect of different treatment methods in clinical trials and research. Creation of National Cancer Registry with its personified database, which store information about all cancer cases in the whole territory of Ukraine, and annually replenishing with new data enabled carrying out survival analysis on the population level.

The analysis has been done for the most common cancer forms based on database of National Cancer Registry. Information about 668 325 cancer patients that were newly diagnosed in 2000-2005 has been used, the patients with multiple primaries and postmortem diagnoses has been excluded.

Survival rate as an integral index enables evaluating of achievements in anti-cancer activity of the country, that is why it is useful for comparing prophylaxis, diagnostics and treatment of cancer with the view of development the arrangements for improving the oncological care.