

Worldwide, the incidence of tuberculosis is declining, but not fast enough to reach the limit of 2020 - a decrease of 20% between 2015 and 2020. The overall incidence reduction from 2015 to 2019 was 9% (from 142 to 130 new cases per 100,000 population), including a decrease of 2.3% between 2018 and 2019. The WHO European Region achieved the most positive results, reducing the incidence of TB by 19% between 2015 and 2019. Globally, the incidence of tuberculosis is declining by about 2% per year. In order to achieve the targets set by the TB Elimination Strategy, these rates of decline need to be accelerated to 4-5% per year. In Ukraine, the incidence of tuberculosis is significantly declining. According to WHO estimates, the incidence of TB in 2018 was 80 new cases and relapses per 100,000 population. The average annual reduction in the estimated incidence of TB over the last five years was about 4.0%, which is lower than the observed average annual reduction in the incidence of TB in 5.6 priority countries in the WHO European Region over the same period.

Worldwide, the leading cause of death among infectious diseases is TB, which is also one of 10 most common causes of death in general. In 2019, TB caused 1.4 million deaths, including 208,000 among HIV-positive people. The annual number of TB deaths is declining worldwide, but not fast enough to reach the first phase of the End TB Strategy; i.e. a reduction of 35% between 2015 and 2020. The cumulative reduction between 2015 and 2019 was only 14%, which is less than half the way to reach this limit. From 2015 to 2019, the WHO European Region achieved significant results towards reaching this limit, reducing TB mortality by 31%. According to WHO estimates, in 2000 the TB mortality rate (excluding TB / HIV deaths) was estimated at 23 cases per 100,000 population. Over the past five years, Ukraine has maintained a steady trend towards a gradual reduction in TB mortality by an average of 8% per year, from 10.8 per 100,000 population in 2015 to 8.8 per 100,000 population in 2019. To implement the TB strategy by 2035, the mortality rate must be reduced by 95% compared to 2015 (from 10.8 to 0.5 per 100,000 population).

Thus, the high level of morbidity and mortality on TB at the present stage is associated with the socio-economic crisis both in Ukraine and in the world as a whole, shortcomings in the health care system, increasing proportion of multidrug-resistant strains of the *M. tuberculosis* complex, the HIV epidemic, and low effectiveness of TB control measures among vulnerable groups.

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## **INCIDENCE AND MORTALITY FROM GASTRIC CANCER AMONG MEN AND WOMEN IN UKRAINE**

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Gastric cancer is an important contributor to the global burden of cancer, and less than a century ago it was the most common type of cancer in the world. Ukraine is one of the countries with a high level of cancer and is among the top ten countries in the world in this regard. Moreover, according to scientists, by 2020 the number of people in Ukraine who got cancer for the first time exceeded 200 thousand people. Ukraine ranks 8-9 in the list of 49 countries with registered cancer (incidence of men - 39.5 per 100 thousand population, women - 22.4), annually the country registers 16-17 thousand new cases.

The aim is to study the ten-year trends in morbidity and mortality due to malignant neoplasms of the stomach in Europe and Ukraine. Analyzed the database of the National Cancer Registry of Ukraine for 2010-2019 and Global cancer statistics 2018, used methods: epidemiological, medical and statistical.

There are significant regional differences in current GC incidence and mortality. The highest rates are observed in East Asia, Eastern and Central Europe and South and Central America. Gastric cancer rates are also significantly lower in more economically developed regions of the world than in less developed ones (age-standardized incidence rate [ASIR] per 100,000: men = 15.6 vs. 18.1; ASIR women = 6.7 vs. 7.8 Age-standardized mortality rate [ASMR] per 100,000: men = 9.2 vs. 14.4; ASMR women 4.2 vs. 6.5) [9]. More developed countries, as defined by the UN, include all regions of Europe plus North America, Australia / New Zealand and Japan; less developed

countries include all regions of Africa, Asia (except Japan), Latin America and the Caribbean, Melanesia, Micronesia and Polynesia (Fig.1). More than 70% of GC occurs in less developed countries.

According to the results of cancer records in 2018, 133133 cases of GC were recorded among all European countries for both sexes. The highest incidence of GC 64482 cases (48.4%) was associated with Central / Eastern Europe, and the lowest - 11244 cases (8.4%) - with Northern Europe. The incidence of GC in Ukraine (7492 new cases) as well as in European countries shows a tendency to decrease over the last decade from 25.5 per 100 thousand population in 2010 to 19.5 similar cases in 2019, which corresponds to intermediate level. Also in our study, for comparison, we evaluated the incidence and mortality of GC in the least region of Ukraine, namely Chernivtsi. Thus, in the Chernivtsi region, the incidence of GC decreased from 20.6 in 2010 to 16.0 in 2019 per 100 thousand population, respectively.

The total number of deaths from gastric cancer in 2018 among all European countries was 102167 cases, indicating the second place of death due to GC, after lung cancer. The highest mortality rate, as well as morbidity, was observed in Central / Eastern Europe - 54268 cases (53.1%), and the lowest mortality rate was in Northern Europe and 8014 cases (7.8%) were counted. Mortality from GC in Ukraine also decreased slightly from 19.2 to 14.0 per 100 thousand population during 2010-2019 (which is - 27% in terms of visibility). Similar to the incidence rates, gastric mortality rates in Chernivtsi region are also not significantly lower than similar rates for GC in Ukraine and showed approximately the same trends as in the primary incidence over the past ten years, fluctuated with varying intensity in the range of 18.3-13.2 cases per 100 thousand population, which is 27.9% showing a generally stable trend and equalization of indicators over the past five years to national values.

The epidemiological situation with gastric cancer remains threatening and is characterized by an increase in the primary incidence of the population of Ukraine, in half of the cases due to neglected stages. This leads to low survival (over 40% die within a year) and increased mortality, mainly male.

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### **THE INFLUENCE OF CORONAVIRUS DISEASE 2019 ON CARDIOVASCULAR DISEASES**

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The first cases of coronavirus disease 2019 (COVID-19) were registered in Wuhan in December 2019. At the end of October 2021 2.78 million cases of infection had already been registered in Ukraine, and more than 65,000 people had died. After a year and a half of life in the new realities a fairly large array of data on the manifestations and most common complications of this infection was accumulated. Acute respiratory disease COVID-19 caused by the coronavirus SARS-CoV-2 has been shown to have an adverse effect on the cardiovascular system.

The aim of the study is to analyze the cardiac complications after coronavirus disease 2019. The task of the study: to analyze the impact of coronavirus disease 2019 on cardiovascular disease. Research methods: epidemiological - to study the sources of statistical information; medical and statistical - for the collection, processing and analysis of information obtained during the study.

At the present stage of knowledge it is necessary to allocate at least three directions of researches in the context of defeat of cardiovascular system at COVID-19: acute cardiac manifestations of SARS-CoV-2 infection (acute coronary syndromes, exacerbation of heart failure, arrhythmias, etc.); post-covid lesions, characterized by the appearance of cardiac symptoms only a few weeks after recovery (most often: arrhythmias, signs of myocarditis, vasculitis); chronic organ damage as part of the so-called "prolonged COVID-19 syndrome", which is the least known and which is defined as complications that exist within a few months after the disease and equate to cardiac, pulmonary or neurological complications.