Conclusion. The study showed an immediate massive release of endothelial vascular growth factor by tumor tissue in the event of acute ischemia, and its equally immediate inactivation by a targeted drug, which indicates the need for timely, targeted and dosed administration of a chemotherapy drug. The proposed method of targeted chemoembolization most fully meets the above criteria and, together with superselective balloon embolization, allows the most minimally traumatic, with maximum preservation of organ function, safely, economically, and at the same time, radically and carcinoprotectively, to remove a malignant tumor of the kidney. In the context of the growing incidence of kidney cancer throughout the world, with the expansion of the arsenal of radiation diagnostic methods, the need for organ-preserving operations on the kidney increases every year, and this technique can significantly help in solving this problem.

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ORGANIZATION OF HEALTHCARE, MEDICAL SCIENCE AND EDUCATION

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MEDICAL AND DEMOGRAPHIC SITUATION IN THE REPUBLIC OF SAKHA (YAKUTIA)

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In the Republic of Sakha (Yakutia) for the period 2015-2020, an increase in mortality and a decrease in fertility were noted, as well as higher rates of primary morbidity, including in the class of respiratory diseases, 1.4 times higher than in the Russian Federation, while the incidence rate of COVID-19 was higher; also, higher incidence of digestive diseases was noted (1.7 three times higher than in the Russian Federation). Indicators of primary morbidity of children and adolescents are higher than those of the total population in almost all classes of diseases for all 6 years of analysis (2015-2020). Differences in the indicators of primary morbidity in uluses (regions) of the Republic of Sakha (Yakutia) are higher by 3.3 times, which is associated with difference in availability of medical care in different areas of residence. The information obtained is important for development of management decisions at the regional level.

Keywords: medical and demographic situation, mortality, morbidity, age groups, uluses.

Introduction. The key objectives of the national project «Demography» are to improve the medical and demographic situation, reduce the morbidity of the population, increase the birth rate and healthy life expectancy [7, 4, 12, 8].

Geographical, climatic, territorial, national and ethnic features in Russia determine the inequality in the provision of medical care to the population [9]. The Far Eastern Federal District (FEFD) is the largest and most strategically important region in Russia and in the Asia-Pacific area. Since the 1990s, there has been a decline in population at a catastrophic rate in the Far Eastern Federal District, including the Sakha Republic (Yakutia) [11, 3, 10].

The COVID-19 pandemic has exacerbated the challenges of rising noncommunicable diseases (NCDs); scientific studies have shown that NCDs are risks of poor outcome [2, 6]. The way out of the demographic crisis requires an increase in the effectiveness of assistance, taking into account the regional characteristics of the territories [5].

Purpose of the Study. Based on the study of demographic indicators and a comparative analysis of the incidence in the Sakha Republic (Yakutia), in the Far Eastern Federal District and in the Rus-

sian Federation, recommendations are given for making managerial decisions at the federal, regional and municipal levels.

Materials and methods of research: statistical, analytical. The materials of official state statistics of the Ministry of Health of the Russian Federation, Rosstat and Sakha (Yakutia) (statistical bulletin) were used - URL: https://sakha.gks.ru/folder/53475 (date of access 03/23/2022), collection "The incidence of the entire population of Russia", FGBU "Federal Research Institute for Health Organization and Informatics of Ministry of Health of the Russian Federation "(TsNIIOIZ), 2016-2021).

Results and discussion. The Sakha Republic (Yakutia) is the largest region of Russia, the largest administrative-territorial unit in the world, larger than Argentina, the eighth state in the world in terms of area. The territory of Yakutia is characterized by low population density, the average population density is ten times lower than in the European regions of Russia. Representatives of more than 120 nationalities live in the Sakha Republic (Yakutia).

The population of the Sakha Republic (Yakutia) comprised of 992,115 people on January 1, 2022. The percentage of the urban population is 64.1%, rural - 35.9%. Between 2015 to 2020 in the Sakha Republic (Yakutia), the working-age population has decreased, and the number of people older than working age has increased, both in urban and rural settlements. In 2020 the provision with doctors in the Sakha Republic (Yakutia) amounted to 52.1 per 10 thousand population (in the Russian Federation - 38 per 10 thousand population), the provision with paramedical personnel in the Sakha Republic (Yakutia) amounted to 115.8 per 10 thousand population (in the Russian Federation - 85, 3).

In the Sakha Republic (Yakutia), an increase in mortality rates over the period of analysis (2015-2021) was noted from 8.5 to 10.7 per 1000 population, the birth rate decreased from 17.1 to 12.3 per 1000 population, while the natural increase population decreased from 8.8 to 1.6 per 1000 population.

The study showed that the incidence of newly diagnosed morbidity in the Sakha Republic (Yakutia) (2020) was 90425.5 per 100 thousand of the population, in the Far Eastern Federal District the figure is lower - 74596.5‰00, in the Russian Federation - 75840.1 (Table. 1).

In all regions of the Russian Federation in 2020, high rates of primary morbidity in the class Respiratory diseases were noted, which is associated with the COVID-19 pandemic, while in the Sakha Republic (Yakutia) this figure is 1.3-1.4 times higher than in Far Eastern Federal District and in the Russian Federation. The incidence of COVID-19 in the Sakha Republic (Yakutia) is higher and amounted to 4831.4‰00, in the Far Eastern Federal District - 3394.9 and in the Russian Federation - 3384.5, respectively.

In the second place in the frequency of primary morbidity in the Sakha Republic (Yakutia) is the class of injury, poisoning and some other consequences of external causes. In the Sakha Republic (Yakutia), this indicator is higher (9643.2‰00) than in the Far Eastern Federal District and the Russian Federation (8563.9 and 8114.7, respectively).

In the Sakha Republic (Yakutia), for the first time a high incidence of digestive diseases - 4365.3 ‰00 (1.7 times higher than in the Russian Federation), higher rates than in the Russian Federation, in the classes of respiratory diseases - by 36%, injuries, poisoning and some other consequences of external causes - by 18.8%, diseases of the nervous system - by 17.2%.

Table 1

Frequency of newly diagnosed morbidity in the population of the Far Eastern Federal District, the Sakha Republic (Yakutia) and the Russian Federation by disease classes, 2020 (per 100,000 population)

Disease classes (ICD-10)	RF	FEFD	Sakha Republic (Yakutia)
Total (including)	*75840.1*	*74596.5*	*90425.5*
I. Some infectious and parasitic diseases	2043.9	2165.9	1627.4
II. Neoplasms	981.3	807.0	697.3
III. Diseases of the blood, hematopoietic organs and individual disorders involving the immune mechanism	327.2	255.3	270.6
IV. Diseases of the endocrine system, eating disorders and metabolic disorders	1101.9	813.7	638.8
V. Mental and behavioral disorders	346.1	381.1	316.7
VI. Diseases of the nervous system	1251.5	1102.8	1466.4
VII. Diseases of the eye and adnexa	2389.5	2110.9	2304.3
VIII. Diseases of the ear and mastoid process	2049.8	1787.7	1505.3
IX. Diseases of the circulatory system	2931.9	2220.2	1902.0
X. Diseases of the respiratory system	*36983.9*	*37192.7*	*50266.1*
XI. Diseases of the digestive system	*2627.0*	*3496.8*	*4365.3*
XII. Diseases of the skin and subcutaneous tissue	3392.9	3187.7	3363.8
XIII. Diseases of the musculoskeletal system and connective tissue	2495.8	2031.0	2381.1
XIV. Diseases of the genitourinary system	3589.9	3103.9	2796.8
XIX. Injuries, poisoning and some other consequences of external causes	8114.7	8563.9	9643.2
COVID-19	*3384.5*	*3394.9*	*4831.4*

Table 2

Primary morbidity of the population of the Sakha Republic (Yakutia) by age groups in the dynamics of 2015-2020

	2015	2016	2017	2018	2019	2020
0-14 age	221864.6	231081.5	232991.1	233579.1	234784.1	183819.6
15-17 age	155390.6	153268.0	144461.7	144483.7	148806.9	121566.7
Over working age	62939.5	62251.9	57212.5	55261.9	58978.4	59242.4
Adults	61903.4	61008.0	57653.6	56627.0	58908.9	59057.3
Total	102664.3	102664.3	102191.0	101667.3	103558.1	90425.5

The first detected incidence of the entire population in the Sakha Republic (Yakutia) for 6 years of analysis (2015-2020) decreased from 102664.3 to 90425.5‰00. Over the past year, there has been a decrease in indicators in all age groups due to the COVID-19 pandemic, which is associated with a weakening of preventive and dispensary work with the population (Table 2).

It is worth paying attention to the high rates (2020) of the primary incidence of children (0-14 years old) - 183819.6 per 100 thousand of the corresponding population and adolescents (15-17 years old) - 121566.7‰00, respectively. Higher rates of primary morbidity in children and adolescents were noted in almost all classes of diseases over the entire period of analysis, these are, first of all, diseases of the blood and hematopoietic organs, diseases of the endocrine system, eating disorders and metabolic disorders, diseases of the digestive system, nervous system, mental diseases and others.

The study indicates the need for an in-depth analysis of the incidence of adolescents and children and strengthening of preventive work with this age group. It is necessary to develop federal, republican programs of preventive work, introduce new organizational technologies and forms of work with children and adolescents, and it is also necessary to strengthen the Health Modernization Program of the Sakha Republic (Yakutia) with a focus on the health of the future generation.

An analysis of the primary morbidity of the population in the uluses of the Sakha Republic (Yakutia) showed that the highest rates were noted in the Suntarsky ulus - 15384.9‰0. In second place is the Srednekolymsky ulus - 15189.4‰0, in third place - Tomponsky ulus - 13629.1‰0, in fourth place - Amginsky ulus 13141.0‰0). These uluses had higher rates of primary morbidity for all years of analysis. Low rates of primary morbidity were noted in Vilyuisky - 4726.0‰0, in Verkhoyansk - 5832.1‰0, in Verkhnekolymsky uluses - 6237.0‰0 and others.

The existing differences in primary morbidity rates in the uluses of the Sakha Republic (Yakutia) are 3.3 times and associated with different detection of diseases and the availability of medical care. At the same time, the high incidence in uluses indicates the need to develop management decisions at the regional level.

Discussion and conclusion. Over 6 years of analysis (2015-2020) in the Sakha Republic (Yakutia) there was an increase in mortality, a decrease in the birth rate and a decrease in natural population growth. In the Sakha Republic (Yakutia) in 2020, a high primary incidence in the class of respiratory diseases was noted, this figure is 1.3-1.4 times higher than in the Far Eastern Federal District and the Russian Federation. The incidence of COVID-19 in the Sakha Republic (Yakutia) is also higher and amounted to 8431.4‰00, in the Far Eastern Federal District - 3394.9 and in the Russian Federation - 3384.5. In the Sakha Republic (Yakutia), a higher primary incidence was noted than in the Russian Federation in the following classes: diseases of the digestive system (in 1.7), respiratory diseases - by 36%, injuries, poisoning and some other consequences of external causes - by 18.8% and others

The analysis revealed differences in primary morbidity rates in the uluses of the Sakha Republic (Yakutia) by 3.3 times, which indicates the need for an in-depth study of the causes of morbidity, taking into account the medical and demographic characteristics of the territories. Higher rates of primary morbidity in children and adolescents were revealed in almost all classes of diseases over the entire 6-year period of analysis, which determines the need to strengthen preventive work with this age group.

Conclusions. The information obtained is important and should be used to develop management decisions to improve the availability and quality of medical care for the population in different areas of residence in the Sakha Republic (Yakutia).

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HYGIENE, SANITATION, EPIDEMIOLOGY AND MEDICAL ECOLOGY

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EPIDEMIOLOGICAL CHARACTERISTICS AND DYNAMICS OF BRUCELLOSIS INCIDENCE AMONG PEOPLE IN AZERBAIJAN (2017-2021)

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Relevance. The development of preventive measures and the improvement of the system of medical care for the treatment of zoonotic infections depend on the identification of the incidence rate and important risk factors. The present study aims to determine some epidemiological indicators and trends in the incidence of brucellosis among people in Azerbaijan from 2017 to 2021.

Methods. Descriptive cross-sectional retrospective study was carried out on the basis of the Electronic Surveillance System for Infectious Diseases of the Ministry of Health of the Republic of Azerbaijan for 2017-2021. Epidemiological reports on each case of the disease were used to collect data on demographic and background characteristics, risk factors, laboratory test results.

Results. In total, 1,711 newly reported cases of brucellosis have been registered in Azerbaijan from 2017 to 2021. The highest (5.3) and lowest (2.2) incidence rates per 100,000 population were observed in 2019 and 2021, respectively. The highest rates during the observation period were in the cities of Baku and Sumgayit, Shemkir region. The cumulative percentages of the disease were estimated for various variables by the following indicators: by sex: 70.6% for men; by age groups: 10.7% for the age group 26-30; by occupation: unemployed 45.8%; by place of residence: 81.6% for residents of districts and villages.

Conclusions. Despite the general decrease in the number of newly reported cases of brucellosis by years and cumulative characteristics, a detailed descriptive analysis revealed epidemiological features of the spread of cases by years depending on risk groups.

Keywords: brucellosis, incidence, trends, zoonosis, Azerbaijan.

Introduction. An analysis of the incidence of brucellosis among the population of Azerbaijan in the early years showed that over the past 10 years, the number of cases has gradually increased with a peak in 2019 (550 confirmed cases) [3, 5]. In 2020 and 2021, the number of confirmed cases of brucellosis among humans dropped sharply (by 2.8 times). This fact can be explained by quarantine measures during the COVID-19 pandemic in Azerbaijan and, accordingly, by the low rate of people applying to medical institutions. It can also be assumed that the promotion of veterinary vaccination, public education and other measures have been effective in reducing the detection of new cases of brucellosis. The study of the epidemiological characteristics and dynamics of the incidence of brucellosis among people in Azerbaijan at the present stage is of interest. Identification of changes in the prevalence of this zoonotic disease in humans will allow a better assessment of the public health measures and management practices needed to address the current situation. Despite the downward trend observed in recent years, the geographical position of Azerbaijan and its proximity to countries endemic for brucellosis, such as Iran, Georgia, are important risk factors for the reappearance and spread of this infection. [4, 5]. Therefore, it is important to conduct continuous monitoring of this zoonosis both among humans and among animals.

The purpose of the study: To determine some epidemiological indicators and dynamics of the incidence of brucellosis among people in Azerbaijan in 2017-2021.

Material and methods. The epidemiological descriptive assessment of brucellosis rates and dynamics included elements related to demographic and background characteristics such as age, sex, occupation, and area of residence. The data was obtained from the database of the Electronic Surveillance System for Infectious Diseases for 2017-2021. Inclusion criteria were human cases of newly reported brucellosis meeting the country's standard case definition, with a final classification of "Confirmed" by the date of final classification.

The standard definition of a suspected case includes a case with musculoskeletal pain and fever lasting more than 5 days and at least 5 of the following clinical features [2]:

- general signs of an infectious pro-

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