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DYNAMICS OF STATISTICAL INDICATORS AND POPULATION CHARACTERISTICS OF SURVIVAL IN CERVICAL CANCER IN THE REPUBLIC OF UZBEKISTAN

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Abstract

The relevance of the problem: Cervical cancer (cervical cancer) is one of the most common types of malignant tumors, ranking 4th among all cancers in women in the world and 2nd among malignant tumors of the reproductive organs [4]. Breast cancer accounts for almost 10% of all malignant tumors in women. The human papillomavirus plays a very important role in the carcinogenesis of breast cancer [1-5]. According to the International Agency for Research on Cancer, 570,000 new cases of cancer associated with the human papillomavirus occur in women worldwide every year, and most of them (530,000) are cases of breast cancer [7,8]. Most cases of breast cancer (78%) It is registered in developing countries and accounts for 15% of all cancers there.

Over the past 10 years, the incidence of breast cancer has increased by 150%. Among women aged 15-39 years, it ranks 1st among malignant tumors. The incidence of breast cancer at the age of 20-29 years increases annually by 6.7%, and at the age of 30-39 years – by 3% [9]. However, among the fatal outcomes, breast cancer firmly occupies the 2nd place [5].

In developed countries, breast cancer accounts for 4.4% of all cancers. Breast cancer is most often observed in Latin America, Eastern and Southern Africa, and South and Southeast Asia. In North America and Europe, breast cancer is relatively rare. Breast cancer is also relatively rare in China and Western Asian countries. The occurrence of breast cancer may differ not only in countries, but in different regions of some large countries [4]. This may be due to most factors, such as socio-economic status, national traditions, medical culture of the population, screening programs, etc.

All this information confirms that the most effective method of combating breast cancer is early detection and timely treatment, and the study of population characteristics of survival is an important factor in the organization of the fight against this disease.

Materials and Methods:

The specialized Scientific and Practical Medical Center of Oncology and Radiology of the Republic of Uzbekistan regularly studies statistical data on oncological diseases in the Republic, and every year a manual entitled "The state of oncology in the Republic of Uzbekistan" is published. This article analyzes and presents data studied by region on the dynamics, survival rates and mortality from cervical cancer in the country for the period from 2015 to 2022

Results and Discussions:

During the statistical survey of the Republic of Uzbekistan conducted in 2022, 26,367 primary cancer patients were identified. In the structure of the incidence of oncological diseases in the population, cervical cancer among women ranks second in prevalence after breast cancer and accounts for about 11.9% of all oncological diseases occurring in women (Figure 1).

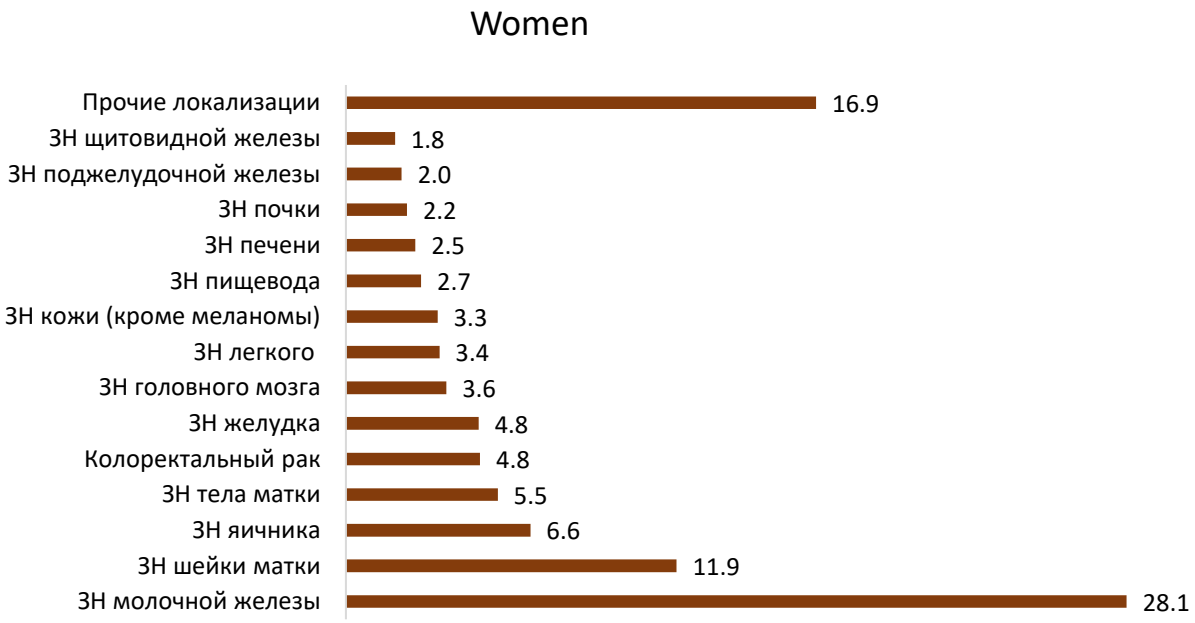
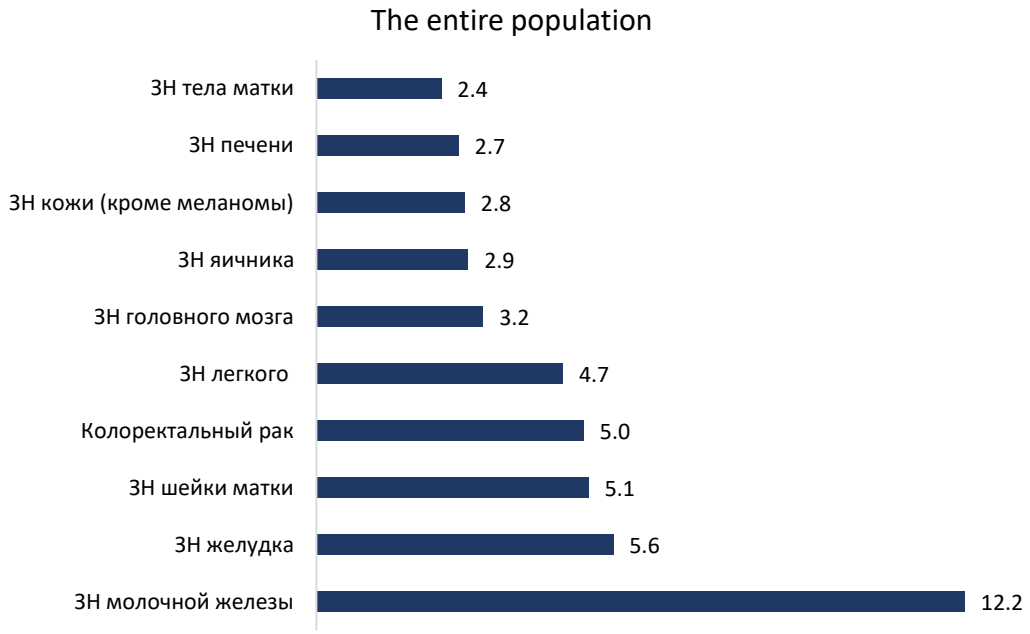


Figure 1. Structure of oncological diseases of the female population in 2022, %.

Of the total population, cervical cancer accounts for 5.1% of oncological diseases (Figure 2).



The Entire Population

As of the beginning of 2023, a total of 118,471 oncological patients were under medical supervision in the republic. Cervical cancer accounts for about 8.4% of patients under control (Figure 3).

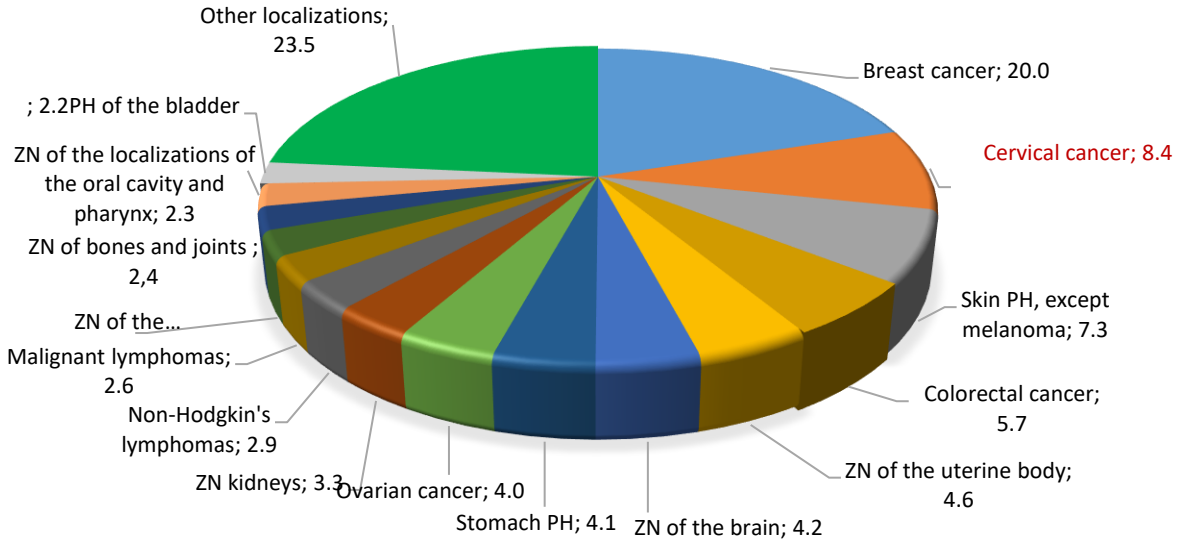


Figure 3. Distribution of the contingent of cancer patients in the Republic of Uzbekistan by nosology in 2022.

Cervical cancer also occupies one of the leading places in the Republic of Uzbekistan in 2022 in terms of the death rate of the population. Naturally, among women, this disease accounted for about 12.6% of patients who died of cancer (Figure 4). When studying the total population, the mortality rate from cervical cancer was 2.7 per 100,000 inhabitants (Fig. 5).

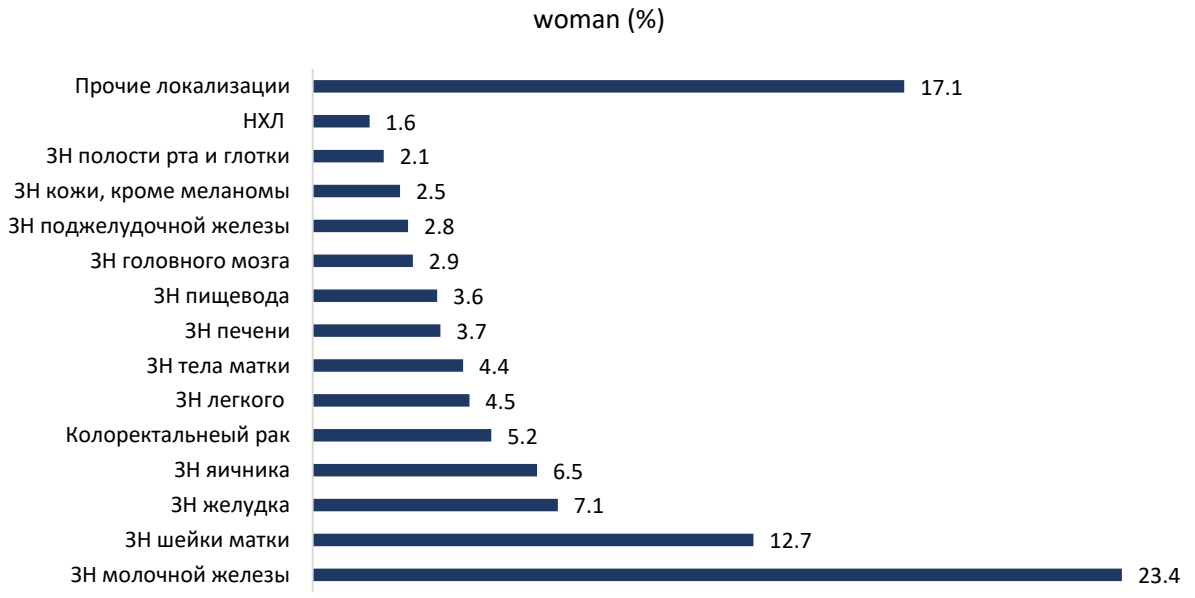


Figure 4. The structure of mortality from cancer in the female population in 2022, (%).

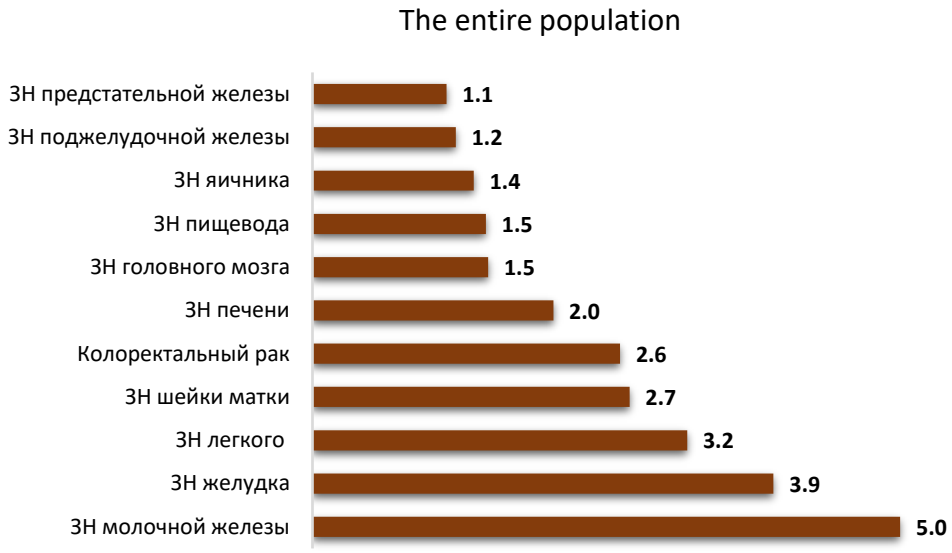


Figure 5. Structure of cancer mortality from the total population in 2022 (per 100 thousand population).

We have analyzed statistical indicators on cervical cancer over the past 8 years in the Republic of Uzbekistan as a whole. At the same time, in 2022, an analysis of the dynamics of indicators for the Republic as a whole and indicators for this disease in the regions of the Republic was carried out.
We can observe that over the past 8 years, the incidence of cervical cancer has been gradually increasing (Fig. 6). In particular, in 2015, this figure was 4.7 per 100,000 inhabitants, while by 2022 it increased by 0.4 and amounted to 5.1. In 2019, this figure was 5.6.

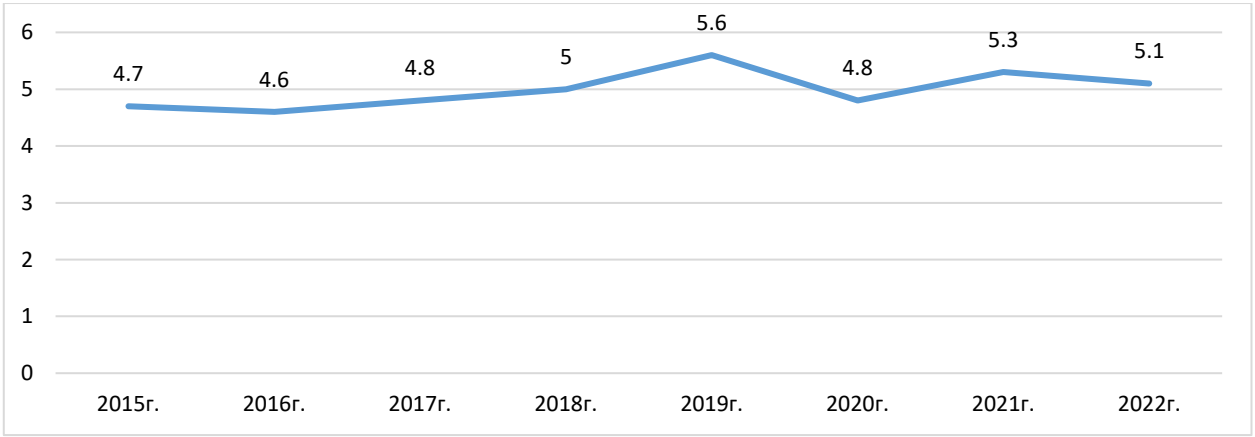


Figure 6. Dynamics of the incidence of cervical cancer in 2022 among the population of Uzbekistan (per 100 thousand population).

In 2022, 1,851 women were diagnosed with primary cervical cancer.When broken down by region, of course, the largest number of patients were identified in the largest cities. These were: Tashkent city – 266 patients, Andijan – 209 patients and Namangan region – 204 patients. The smallest number of patients was found in relatively small regions, namely in Syrdarya – 37 patients, Navai – 54 patients and Surkhandarya – 68 patients (Fig. 7).

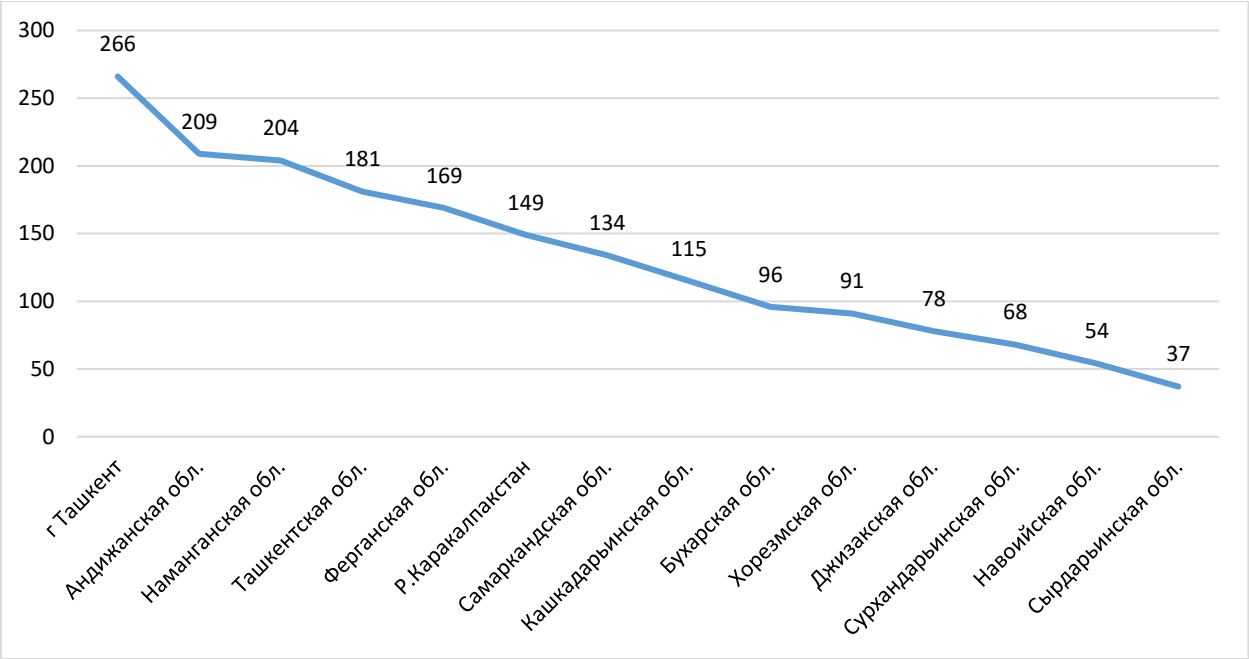


Figure 7. Information on initially diagnosed patients with cervical cancer in 2022.

At the beginning of last year, 2023, a total of 9,918 patients with cervical cancer were under medical supervision in our republic. Over 8 years, their number has increased by 845 people, or 9.3% (Figure 8).

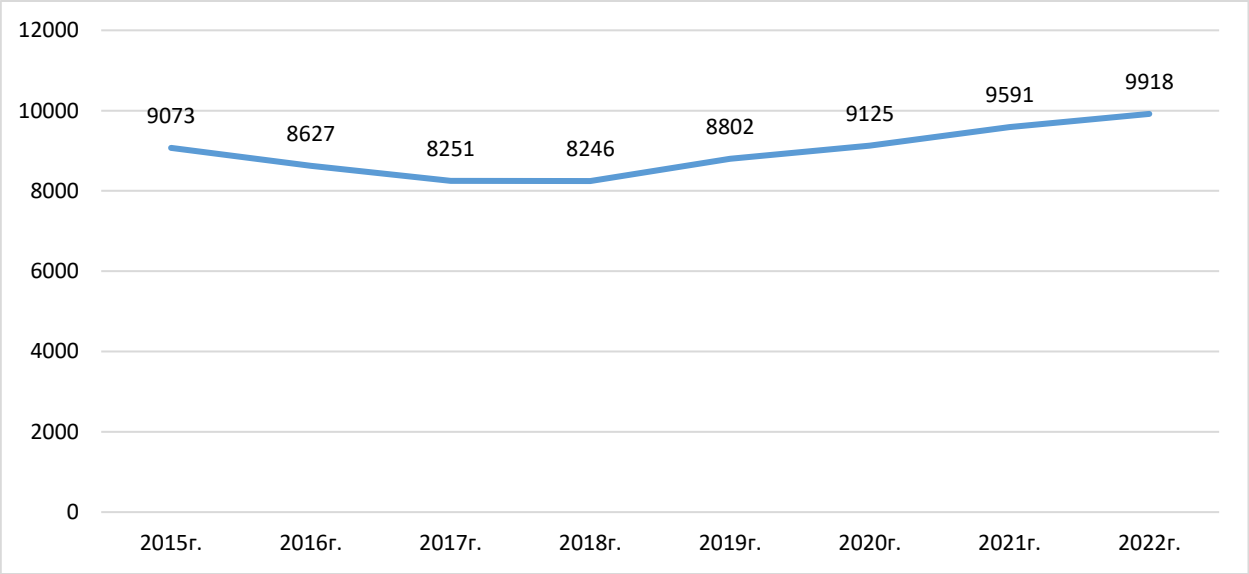


Figure 8. Information on patients with cervical cancer who are under medical supervision at the beginning of 2023.

The largest number of patients under dynamic supervision were in Namangan (1,303 people), Tashkent (1,268 people) and Ferghana region (889), while the least were in Navoi (211 people), Syrdarya (215 people) and Bukhara region (430 people) (Figure 9).

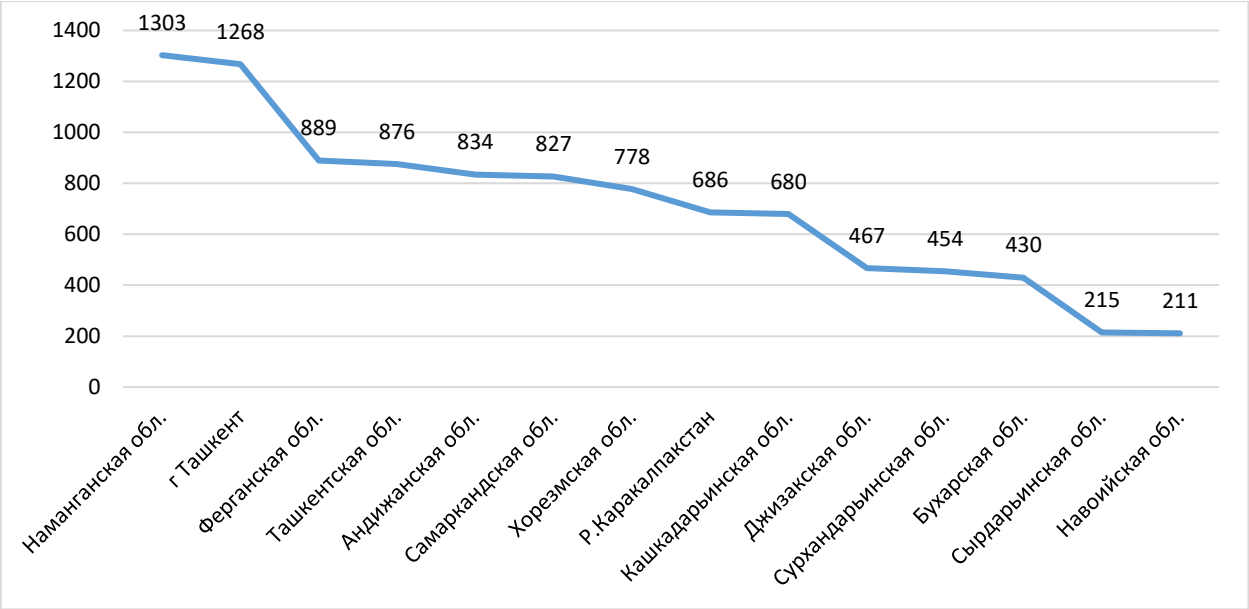


Figure 9. Distribution of patients registered at the dispensary with breast cancer by region.

Indicators of early detection of cervical cancer in stages I-II also affect the case of subsequent effective treatment of these diseases. If we take into account the percentage of early detection, then if in 2015 63.2% of patients were detected in stages I-II, then by 2022 this figure was 71%, which means that early detection improved by 6.8% (Figure 10).

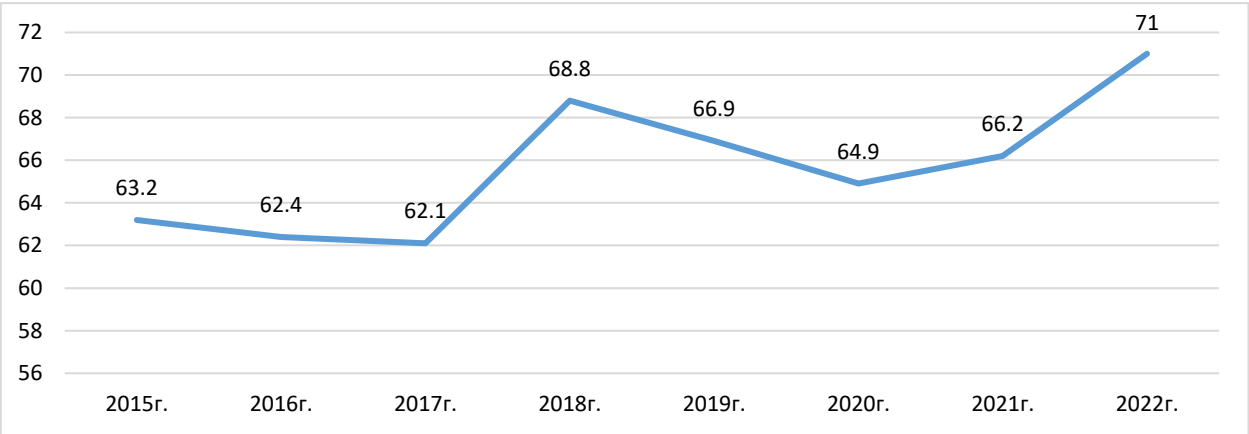


Figure 10. Detection in early stages I-II of breast cancer, (%)

In turn, there is also a decrease in the percentage of detection of the disease in the late III-IV stages from year to year. For example, in 2015, 36.8% of primary patients were diagnosed with late stages II-IV of the disease, while in 2022, 27.7% of patients were diagnosed with late stages of breast cancer, which means a decrease of 9.1% (Figure 11).

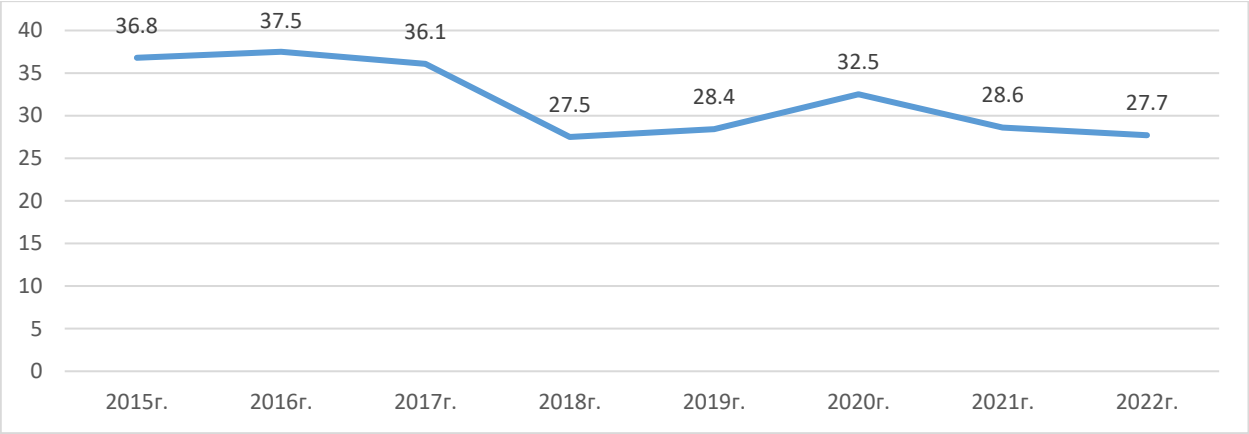


Figure 11. Detection in the late III-IV stages of breast cancer, (%)

When studying mortality from breast cancer per 100,000 population, no significant changes were observed over the past period. This figure was 2.6 in 2015 and 2.7 at the end of 2022 (Figure 12).

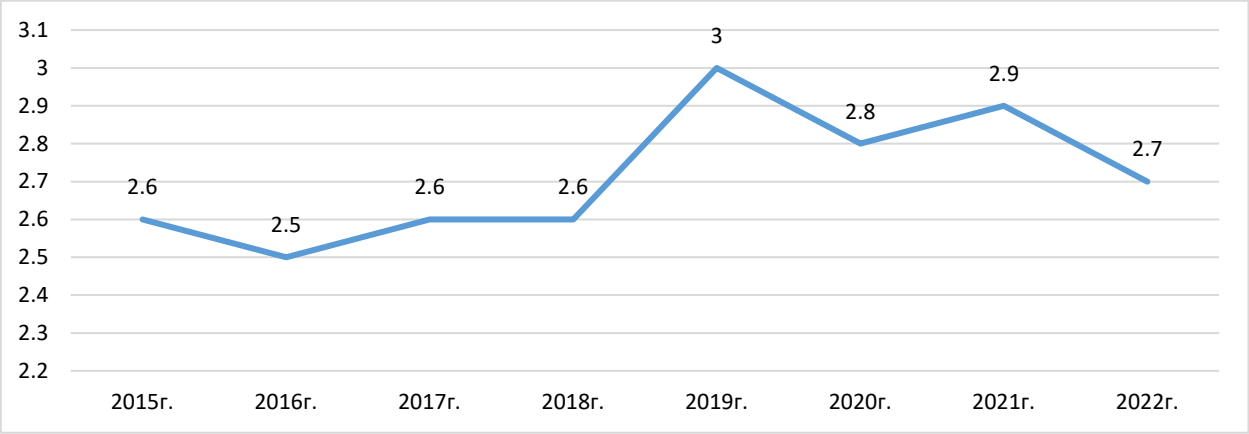


Figure 12. Dynamics of mortality from breast cancer (per 100 thousand population)

As a result of increased anti-cancer control in the country, the mortality rate from breast cancer is gradually decreasing.. If this indicator was 10% in 2015, a decrease of 0.8% was noted in 2022 and amounts to 9.2% (Figure 13).

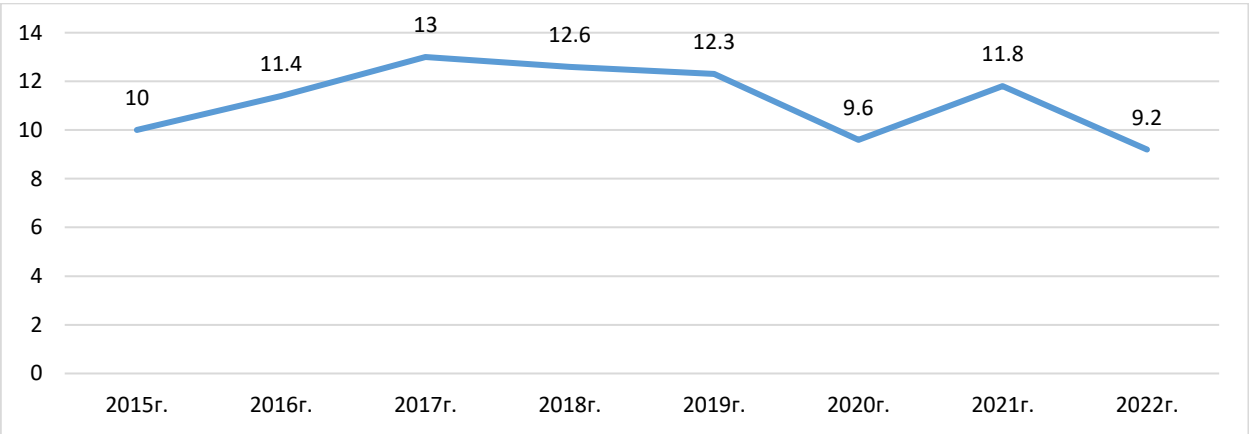


Figure 13. 1-year mortality rate from breast cancer in dynamics (%)

The 1-year mortality rate was highest in Karakalpakstan (17.6%), Navoi (15.1%) and Jizzakh (14.7%) oblasts, while the lowest was observed in Syrdarya (2.5%), Namangan (3.2%) and Samarkand oblasts (4.3%) (Figure 14).

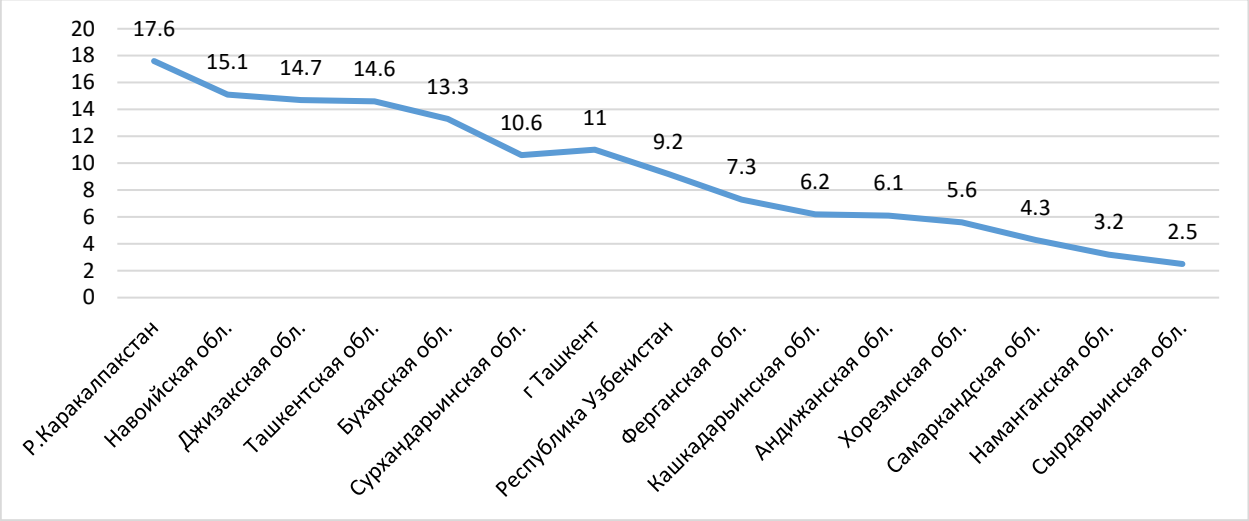


Figure 14. The condition in the regions of 1-year mortality from breast cancer (%)

When studying the 5-year survival rate, it showed that if in 2015 it was 48.2%, then by 2018 it will decrease to 40.6%. However, since 2018, there has been an increase in the 5-year survival rate, and over the past 5 years this indicator has increased from 40.5% to 42.4%, that is, by 1.9% (Figure 15).

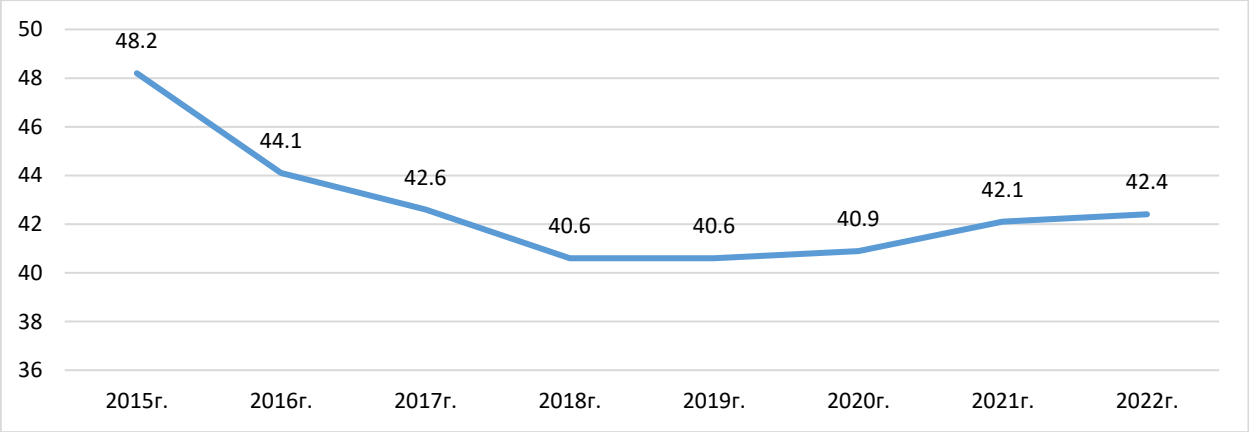


Figure 15. Dynamics of 5-year survival in breast cancer (%)

When studying the 5-year survival rate in the regions of the republic, it can be seen that the highest rates are observed in the Syrdarya region (65.6%), Surkhandarya region (56.4%) and Khorezm region (52.4%), and the lowest in the Republic of Karakalpakstan (31.6%), Samarkand (32.3%) and Navoi region (34.1%) (fig. 16).

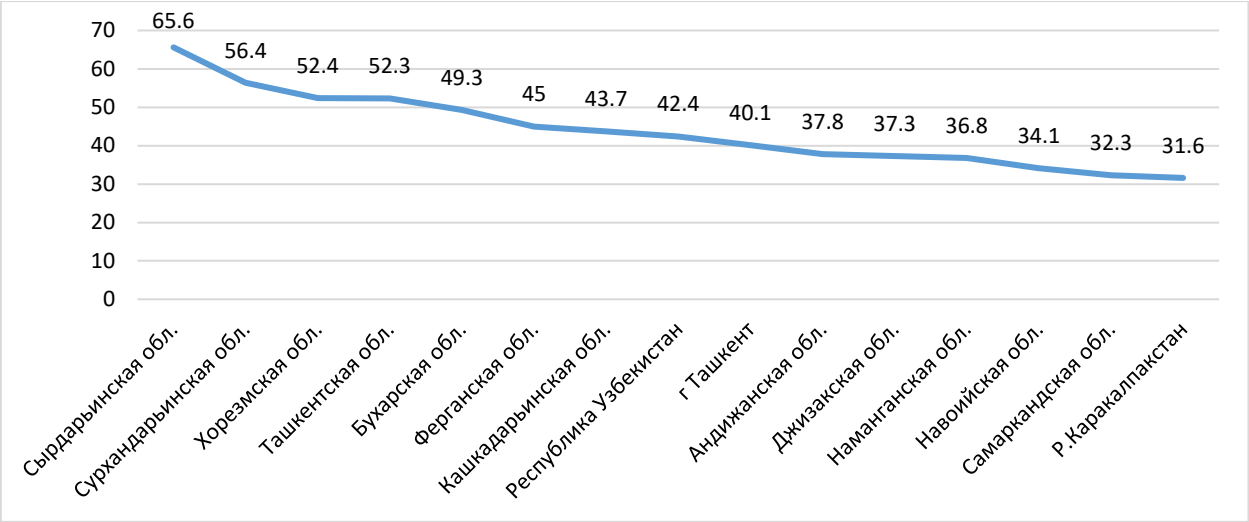


Figure 16. 5-year survival rate for breast cancer by region (%)

Conclusion:

1. Cervical cancer is one of the most common malignant diseases in the Republic of Uzbekistan, ranking 2nd among women and 3rd among the entire population of the country. Cervical cancer also occupies leading positions in the structure of mortality – 2nd place among women and 4th place among the entire population
2. Most of the detected cases of breast cancer and patients under observation are in large cities of the country like Tashkent, Andijan, Namangan and Ferghana and the disease does not have a population and regional character among the population of Uzbekistan. Due to the improvement of diagnostics due to the equipping of medical institutions in the country, the proportion of early stages among the initially identified patients is growing every year and the fluidity tends to decrease.
3. Due to the improvement of diagnosis and provision of specialized oncological care in the republic, over the past 5 years there has been an improvement in the 5-year survival rate, the 1-year mortality rate remains stable. Based on the above, the study of population and regional characteristics of survival in the regions of our country in cervical cancer is an urgent task.

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