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MORBIDITY AND MORTALITY FROM CERVICAL CANCER FROM 2010 TO 2014 AFTER INTRODUCTION NATIONAL SCREENING PROGRAMM

Cervical cancer in Kazakhstan among the female population occupies II place after breast cancer, which is carry 2 women's lives in the most active age daily. Analysis of intensive incidence rates of cervical cancer was showed an increase in the detection rate of this disease in the period from 2010 to 2014. The sharp increase in morbidity is associated with increased incidence of cervical cancer due to the introduction of screening programs. The analysis of age morbidity revealed a significant risk of the disease at a young age and noticeable increase it to 40-44 years. In the analysis of cervical cancer in the context of the stages is showed increasing in the detection rate of this disease in the first stage for the period from 2010 to 2014.

Keywords: cervical cancer, incidence, mortality, screening, the Republic of Kazakhstan.

Background.

Cervical cancer in Kazakhstan among the female population occupies II place after breastcancer, which is carry 2 women's lives in the most active age daily [1,2].

Routine inspections in the women's offices have been started in our country since 2005. Order № 607 "On improvement of preventive inspections of certain categories of adult population" was issued by the Ministry of Health of Republic of Kazakhstan in 2008, then in 2009, order №685 «On approval of Rules of carrying out of preventive medical examinations of the target population" was issued. There is a national screening program for cervical cancer using PAP smear with the assessment on the classification of Bethesdas ince 2008 [3]. Screening carried out for women from 30 to 60 years of age with an interval of 5 years. Implementation of this program began in step-by-step, starting with training specialists, the organization of women's offices [4].

Objective. To evaluate the incidence of cervical cancer rates as well as mortality from him for 2010-2014 in the Republic of Kazakhstan after the introduction of screening.

Materials and methods. Used basic medical reporting and recording forms and cancer registry database of malignant neoplasms and cervical cancer, as well as information about the number of the female population and composition by age. Extensive, intensive and standardized indicators, both general and age-specific calculated by the standard method of health statistics.

Results. Analysis of intensive incidence rates of cervical cancer was showed an increase in the detection rate of this disease in the period from 2010 to 2014 (Figure 1). In 2010 the incidence rate was 16.2 per 100 000 female population, and in 2014 was 20.2 per 100 000 female population. A similar trend was confirmed by standardized indicators. The sharp increase in morbidity is associated with increased incidence of cervical cancer due to the introduction of screening programs.

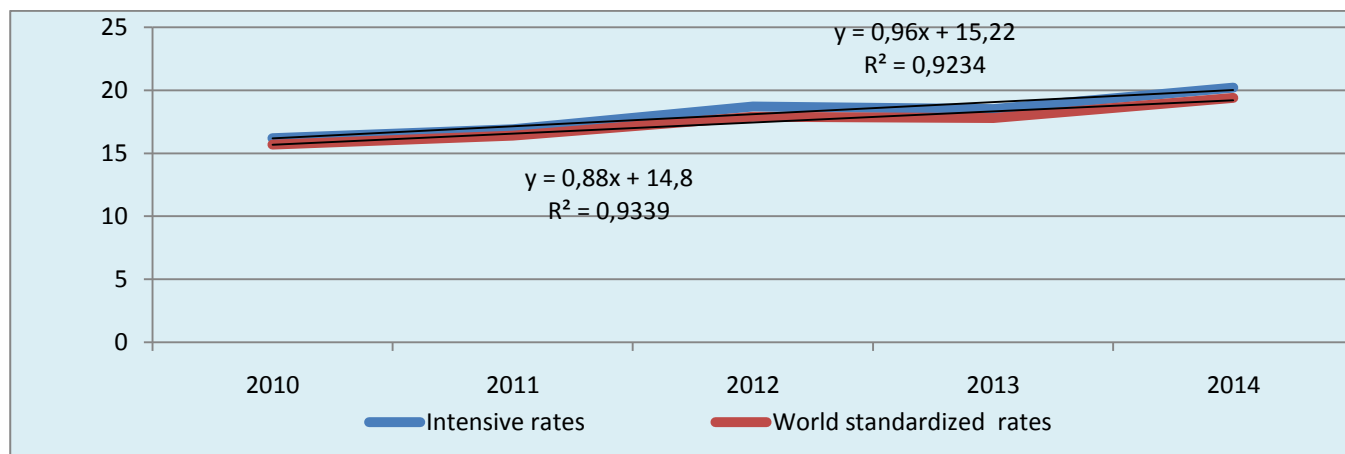


Figure 1 – Dynamics of intensive and World standardized incidence rates of cervical cancer per 100 000 female population of the Republic of Kazakhstan for the period 2010-2014

The analysis of age morbidity (Figure 2) revealed a significant risk of the disease at a young age and noticeable increase it to 40-44 years. The age distribution confirms the necessity of improving and strengthening the screening of young and middle-aged women.

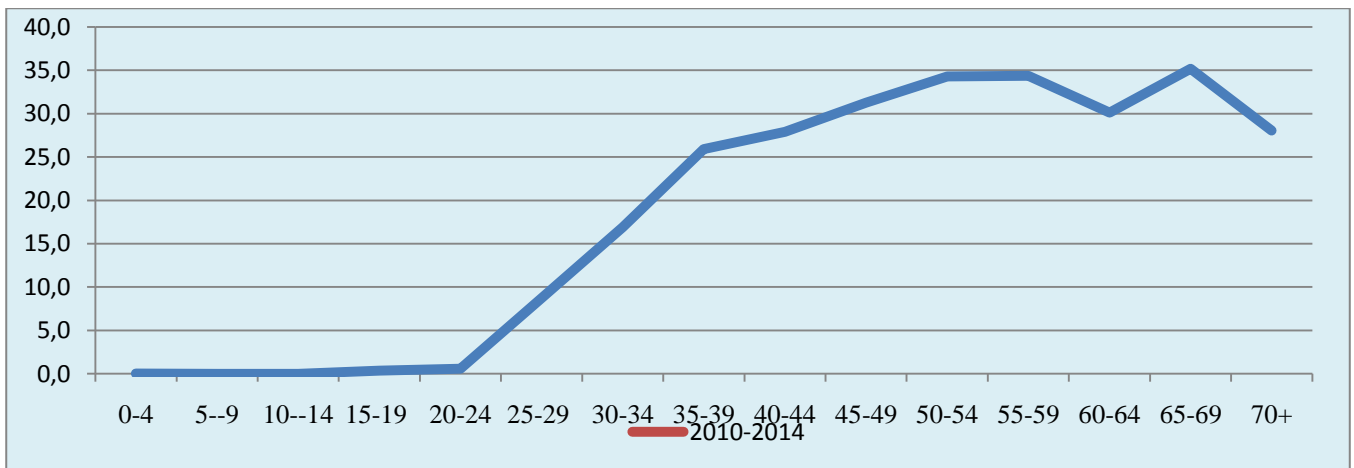


Figure 2 - Age-related incidence rates of cervical cancer of women of the Republic of Kazakhstan (average per 100 000 female population of the appropriate age for 2010-2014)

There are some differences in the frequency of primary cervical cancer depending on the territory (Figure 3). An analysis of the five-year period showed a higher incidence rates in Almaty, Kostanai and Atyrau regions, and lowest incidence in the southern regions of Kazakhstan: South Kazakhstan, Zhambyl and Kyzylorda regions (statistically significant differences of the average values).

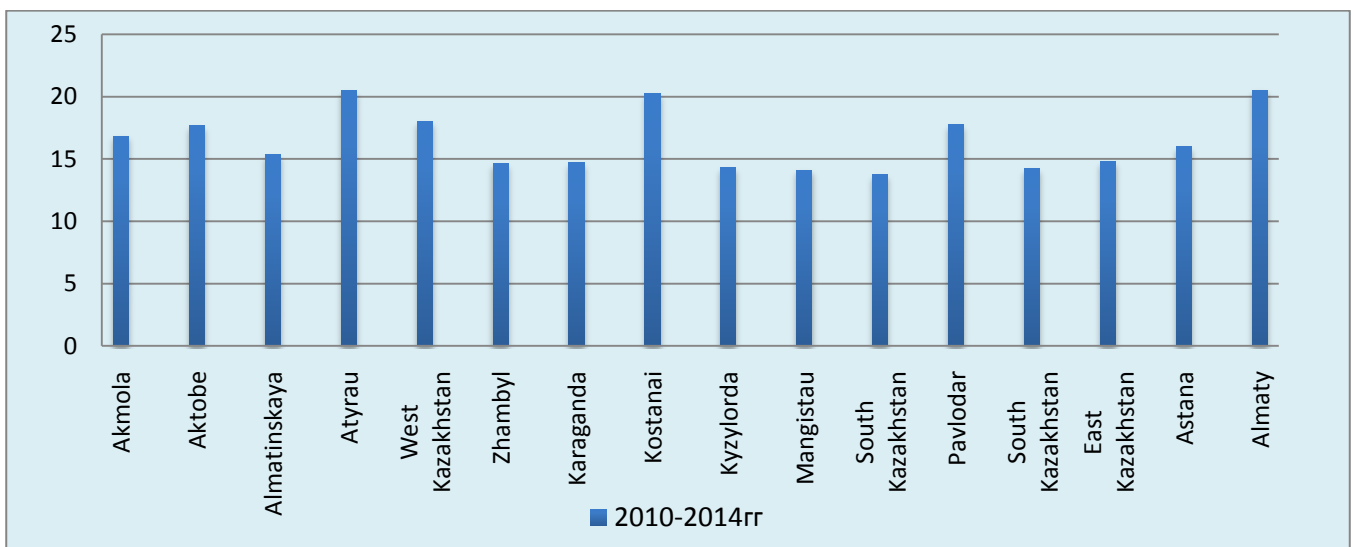


Figure 3 - Territorial incidence rates of cervical cancer in the Republic of Kazakhstan (standardized average World indicators per 100 000 female population) for 2010-2014

In the analysis of cervical cancer in the context of the stages is showed increasing in the detection rate of this disease in the first stage for the period from 2010 to 2014 (Figure4). 1075 women with malignant cervical neoplasms were detected in the first stage in 2009, and 1,467 was detected in 2014 which describes a statistically significant increasing. This trend is associated with the successful implementation of the national screening program for early detection of cervical cancer. You can also notice a decreasing in the detection of cervical cancer in the third stage, but detection in advanced stage remains the same.



Figure 4 - The proportion of I-II, III and IV stages of newly diagnosed cases of malignant cervical tumors in the Republic of Kazakhstan (%)

According to the Cancer Registry in 2014 82% of women were found in the early stages, where 23% were detected by prophylactic examinations. There is a marked increase in the detection of cervical cancer in the initial stages in 2014 compared with 6.68% in 2008 due to the effective operation of the screening program.

It is noted a slight increase observed patients by dispensaries in 2014, 11 111, where 54.18% are registered more than 5 years.

Analysis of the screening work for the period from 2011 to 2014 showed a noticeable increase detection of malignant cervical tumors in stage I-II from 88.7 to 95.4. It is also a marked decline in detection of cervical cancer at advanced stage to 0.8 in 2014, due to the effective work of the national screening program.

| Regions | Cytologic screening | | | | | | | |
|----------------------|---------------------|------|------|------|----------|------|------|------|
| | I-II stages | | | | IV stage | | | |
| | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 |
| RepublicofKazakhstan | 88,7 | 91,2 | 95,2 | 95,4 | 1,2 | 1,5 | 0,5 | 0,8 |

At the moment, the Kazakh Research Institute of Oncology and Radiology and Department of Medical Assistance of the Ministry of Health and Social Development is actively working to improve the quality of screening, designed, carried out organizational and methodical work, is developing national guidelines for the organization and instruction of screening programs. In the long term expansion of the target groups for cervical cancer screening and the introduction of vaccination against human papillomavirus high-risk for adolescent girls.

Screening for cervical cancer is an integral part of the national screening program, which is one of the leading strategies for the protection of public health in Kazakhstan, included in the software development of public health issues and is financed by the national budget.

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ЗАБОЛЕВАЕМОСТЬ И СМЕРТНОСТЬ ОТ РАКА ШЕЙКИ МАТКИ В ПЕРИОД 2010-2014ГГ ПОСЛЕ ВВЕДЕНИЯ НАЦИОНАЛЬНОЙ СКРИНИНГОВОЙ ПРОГРАММЫ

Резюме: В Казахстане рак шейки матки среди женского населения занимает II место после рака молочной железы, ежедневно унося 2 женские жизни в самом активном возрасте, а также нанося колоссальный урон всему государству. При анализе грубых интенсивных показателей заболеваемости раком шейки матки отмечается увеличение частоты выявления данного заболевания за период с 2010 по 2014 годы. Резкое увеличение заболеваемости связано с увеличением выявления рака шейки матки в связи с введением скрининговой программы. Проведенный анализ возрастных показателей заболеваемости выявил значительный риск заболевания уже в молодом возрасте и заметное увеличение его к 40-44 годам. При анализе рака шейки матки в разрезе стадий отмечается увеличение частоты выявления данного заболевания в первой стадии за период с 2010 по 2014 годы.

Ключевые слова: рак шейки матки, заболеваемость, смертность, скрининг, Республика Казахстан.

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СКРИНИНГ ЕҢГІЗУІНЕН КЕЙІНГІ 2010-2014 ЖЖ АРАЛЫҒЫНДА ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДАҒЫ ЖАТЫР МОЙЫНЫ ҚАТЕРЛІ ІСІГІНЕН АУЫРУ ЖӘНЕ ӨЛІМ КӨРСЕТКІШІ

Түйін: Қазақстан Республикасында жатыр мойыны қатерлі ісігі ана безінің қатерлі ісігінен кейін екінші орын алады, күнделікті екі әйел өмірін алады. 2010-2014 жж аралығында жатыр мойыны қатерлі ісігімен ауру көрсеткіші бағаланды. Ауыру шыңы көрсеткіші соңғы 4 жыл бойына жас әйелдер қатарына ауысуда, ауру көрсеткішінің жоғарылауын 40-44 жас аралығындағы әйелдер құрайды. 2004 – 2014 жж аралығында жатыр мойыны қатерлі ісігі стадиялықанализінде бірінші стадияның анықталуы жоғарылауда.

Түйінді сөздер: жатыр мойыны қатерлі ісігі, ауыру, өлім, скрининг, Қазақстан Республикасы.