

some sets, increasing the cell cycle time compared to the normal formation of micronucleus, nuclear protrusions and various pathologies of mitosis.

During the cytological and cytogenetic analysis, the object of the study was smears of tumor breast tissue among women aged 44 to 65 years with invasive breast cancer after radiotherapy.

In the course of our study normal and abnormal mitosis were found. The frequency of cells in mitosis was $0,092 \pm 0,027\%$, cell distribution of the phases of mitosis normally was: 91.3% prophase, telophase 8.7%. Cells at the stage of the metaphase and anaphase were not detected. In the result of smears analysis we identified the following types of abnormal mitosis: c-mitosis (mitosis colchicine), lagging chromosomes in metaphase, anaphase bridges and another mitosis. Among pathological mitosis, anaphase bridges were the most frequent $0,121 \pm 0,003\%$. The frequency of mitosis was $0,014 \pm 0,003\%$, lagging chromosomes in metaphase was $0,007 \pm 0,003\%$, the share of other mitotic was $0,05 \pm 0,007\%$. Along with internuclear chromatin bridges, which are continuously joining the nuclei were seen to explode bridges – "caudate nucleus". The smears were found with multiple nuclei "tails": two ($0,057 \pm 0,021\%$), three or more ($0,007 \pm 0,007\%$). The greatest number of cells amounted to a "tails" ($0,564 \pm 0,066\%$). In this study, we counted the cells with one, two, three or more micronuclei. The total number of cells with micronuclei was $4,592 \pm 0,183\%$. The frequency of cells with a micronuclei was $3,908 \pm 0,170\%$, with two – $0,431 \pm 0,057\%$, and three or more micronuclei – $0,255 \pm 0,044\%$. Total found micronuclei – $5,531 \pm 0,201\%$. It should be noted that cells with two, three or more micronuclei, as a rule, are more common after radiation exposure. We have also taken into consideration the frequency of cells with nuclear protrusions. Analysis of nuclear protrusions in cells of invasive breast cancer showed great variety and high frequency of their occurrence in tumor cells. Cells were detected with a nuclear protrusion ($0,836 \pm 0,08\%$), two – ($0,043 \pm 0,018\%$), three or more – ($0,014 \pm 0,01\%$).

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QUANTITATIVE ANALYSIS INDICATORS OF CHILD MORBIDITY IN BARANOVICHI

Relevance. Today's children are the main reproductive group of the first half of the 21st century, so the study of the children health is especially important.

Objective. Using quantitative methods of evaluation to analyze the incidence of morbidity in child population in Baranovichi within the period from 2005 to 2013.

Objects and methods of investigation. The object of investigation was the information from the form of the state statistical reporting on the number of diseases of child population in Baranovichi. In this work the following methods were used:

the calculation of extensive coefficients, calculation coefficients of the general and primary morbidity; analysis of the reliability of morbidity differences at the end of the study period compared with the beginning; analysis of time series morbidity by aligning a parabola of the first order, and exponential smoothing moving average, calculation coefficient of correlation.

Results and discussion. Significant differences in the direction of increase in overall incidence in 2015 compared to 2007 for the following classes of diseases: respiratory diseases ($t = 16,2$, $p < 0,001$), the eye and adnexa ($t = 4,1$, $p < 0,001$), towards decrease - some infectious and parasitic diseases ($t = 5,2$, $p < 0,001$), injuries, poisonings and some other consequences of influence of the external reasons ($t=3,2$, $p < 0,001$). Comparative analysis of the primary disease at the end of the study period compared to the beginning showed significant differences in the direction of increasing the incidence of upper respiratory tract disease ($t = 18,7$, $p < 0,001$), the downside for the following classes: Certain infectious and parasitic diseases ($t = 9,5$, $p < 0,001$), injuries and poisonings ($t=2,6$, $p < 0,001$). The values of the indicators of the incidence of the primary diseases of the eye and adnexa revealed no significant difference ($t = 1,7$ $p > 0,05$). Based on the values of the general and primary morbidity of children population coefficients of correlation between of general and primary morbidity. They characterize the degree of chronic disease. The coefficient morbidity correlation of the eye and adnexa was the highest for the entire observation period and amounted to 4.2 within 2015.

Conclusions. The coefficient correlation between the general and primary morbidity over the study period did not change significantly, which may indicate a well-established diagnostic and preventive work in the region. However, there is growth in chronic eye disease and adnexa disease.

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TOXICOLOGICAL AND HYGIENIC TESTS AND HAZARD CHARACTERISTICS OF THE HERBICIDES SQUALL AND TYPHOON

Herbicides have now become an integral part of the crops production technology. When used properly, high processing efficiency can be achieved by eliminating the wide range of weed species without damage to crops. Modern crop species and cultivars (hybrids) are characterized by low competitiveness so that without human help they easily lose to weeds that are better adapted to the diverse conditions of the habitat and win without any effort in the struggle for nutrients, water, light and space in the crop. The possibility of weed control has extended through the use of chemical methods. However the massive use of herbicides, higher herbicide appli-