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**Application of the method of polymerase chain reaction for diagnostics of bronchial diseases, including non-hospital viral infections of lower breathing rates and economic rationale of the intelligence of its use**

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The introduction of new technology is usually considered as an add-on for traditional methods of detecting a pathogen or the use of rapid tests, which inevitably increases financial costs. In this paper, an analysis of the profitability of the three diagnostic strategies was carried out, which can be used within the framework of the proposed algorithm for diagnosis of NINDS (National Institute of Neurological Disorders and Stroke), depending on the prevalence of the pathogen and the main characteristics of the tests (sensitivity and specificity). The results of the study showed that, despite the relatively high cost, implementation of the multiplex PCR (Polymerase Chain Reaction) method in the strategy of diagnosing respiratory viral pathogens among patients with NF (Neurofibromatosis) is an economically grounded decision. The economic effect when choosing a multiplex PCR method has a weak dependence on the change in the etiological spectrum of pathogens that can be detected by this method. It will be meaningful even if the proposed diagnostic strategy will be applied year-round, including in the season with the lowest prevalence of bronchopulmonary diseases of viral origin in the human population. Recommendations aimed at using economically sound solutions for the diagnosis of community-acquired pneumonia by multiplex PCR.

**Biography**

Oksana Kukalo has completed PhD in the field of Virology with extensive experience of research with the help of molecular techniques, classical cultural methods, monologic and serological methods in the field of laboratory diagnosis of viral infections, as well as studying the antiviral activity of new compounds and more than five years of experience as a Medical Technologist in laboratories in Ukraine. She has professional experience in the diagnosis of viral infections, excellent laboratory skills. She also has experience in accredited ISO 15189 Laboratory of Ukraine.

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