

LABORATORY DIAGNOSTIC ALGORITHMS FOR COVID-19

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Abstract

The novel coronavirus SARS-CoV-2 causes respiratory diseases in humans, in particular acute respiratory disease COVID-19 (Coronavirus disease 2019), and can be transmitted from person to person. Specific antiviral therapy has not been developed completely. Various vaccines are widely introduced in the world. Non-specific prophylaxis, aimed at preventing the spread of the SARS-CoV-2 virus, is carried out in relation to the source of the infectious agent (patient or virus carrier), the mechanisms of transmission of the virus and the protection of contact person.

During a pandemic, testing for SARS-CoV-2 is a very important part of the first line defense of the population from COVID-19 in any country of the world. It is timely testing that makes it possible to identify and isolate an infected person, slow down the transmission of coronavirus and provide targeted care to the patients. Diagnostic testing for SARS-CoV-2 is considered a very important component of the overall COVID-19 prevention and control strategy. WHO strongly recommends to test individuals suspected of having a COVID-19 immediately or as early as possible to confirm or rule out SARS-CoV-2 infection. The rapid spread of COVID-19 poses a whole list of critical tasks in front of healthcare professionals, the solution of which is closely related to the introduction of effective etiological diagnostics, including the use of rapid tests. For the safe and high-quality use of rapid tests, it is important to have a basic understanding of how they work, what are their advantages and disadvantages, what are the algorithms for their use, where is their place in the etiological diagnosis of COVID-19, and how to record correctly the results and to draw conclusions.

The article sets out the requirements for the use of rapid tests based on immunochromatographic analysis and the procedure for testing for COVID-19 based on WHO materials, analysis of domestic and foreign scientific publications, regulatory documents and orders of the Ministry of Health of Ukraine.

Key words: COVID-19, SARS-CoV-2, diagnostics, rapid tests, nucleic acid amplification method.