

Letters

Editor's Note

Challenges in Testing for SARS-CoV-2 Among Patients Who Recovered From COVID-19

Among patients who have recovered from COVID-19, repeated testing for SARS-CoV-2 may be done weeks or months after infection either as part of routine screening (eg, screening nursing home personnel on a weekly basis to prevent transmission of infections to patients) or because of the development of symptoms that are worrisome for reinfection. Unfortunately, the interpretation of positive test results in patients who have previously recovered from COVID-19 is fraught. The best widely available test, a real-time polymerase chain reaction (RT-PCR), is very sensitive for fragments of viral RNA and can be positive because of nonviable remnants of the virus. Currently, there is not a widely available test for determining whether the virus can reproduce and transmit infection.

In this issue of *JAMA Internal Medicine*, Liotti et al¹ describe the results of retesting 176 patients who had recovered from COVID-19 with 2 negative RT-PCR test results 24 hours apart. At a mean of 48.6 days from their date of diagnosis, 32 patients (18.2%) had a positive PCR test result for SARS-CoV-2 RNA. Using a specialized assay, only 1 of these 32 patients (3.1%) had evidence of RNA capable of replication. Although this study cannot solve the challenge of interpreting positive PCR results in recovered patients, the data help us to better understand the scope of the problem.

To avoid unnecessary quarantine for patients who have recovered from COVID-19, routine repeated PCR testing should not be done in the 90 days following infection. However, more complicated is what to do about patients who are symptomatic and have positive results on repeated PCR tests. Reinfection with SARS-CoV-2 has been documented² (based on demonstration of different genetic differences between the viruses infecting the person on the first and second episode) but is rare. Until clinical laboratories have the capability to test for the reproductive capacity of coronavirus, interpretation of the epidemiologic significance of positive PCR results among recovered patients will remain challenging.

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