

## LETTER TO THE EDITOR

# How to Use Imperfect Tests for COVID-19: More Considerations in View of Laboratory Medicine

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Dear Editor, a laboratory test for COVID-19 is important for making clinical decisions. Bell et al. explained some useful clinical statistics that are helpful for decision making in case there might be a problem of “imperfect test for COVID-19” [1]. The use of probability statistics is useful. Each laboratory test has its specific diagnostic property and the practitioner must recognize those specific characteristics of each test. There is a possibility of inaccuracy due to either false positive or false negative. The decision making has to take the probability into consideration.

Nevertheless, there are also other issues to be noted. In laboratory medicine, an imperfect test or error can occur at any phase starting from patient preparation and specimen collection through laboratory analysis to result report and interpretation. The quality control of the laboratory can help assure the laboratory result. Additionally, there are many ways for increasing a diagnostic property of a laboratory test. For example, using more than 1 test assay might help increase detection rate. A good example is the use of multiple tests for diagnosing HIV infection. Also, repetitive reanalysis can also help increase the chance of detection. Many COVID-19 positive cases require more than 1 time of testing for diagnosis [3]. Finally, using alternative specimens might help detect COVID-19, for example, bronchoalveolar lavage fluid can help diagnose in case with negative nasopharyngeal swab RNA test [4].

**Declaration of Interest:**

None.

**References:**

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