# COVID-19 diagnosis in the emergency department: seeing the tree but losing the forest

Dear Editor,

We have read with the greatest interest the article by Reynard *et al*.[1] They have compared rapid antigen tests with PCR, which they consider to be the only molecular method. However, lateral flow assays (LFAs) together with several other laboratory methods are performed for the 'molecular' diagnosis of SARS-CoV-2.[2] Furthermore, since the appearance of rapid nucleic assays, the term 'rapid test' for antigen/antibody assays can lead to misunderstanding and should be avoided.

Moreover, it is impossible to compare substantially different methods, referring to PCR and rapid point-of-care tests. It is obvious that 'PCR inhibitors' would lead to higher Ct values and subsequent false-negative results.[3] Also, while PCR assay results are accurate in high viral loads, the so-called Hook effect would lead to false-negative results in LFAs, thus trammelling the comparison of these assays.[3]

Current literature has revealed several reasons for false COVID-19 test results, among different assays.[3] The authors have tried to rate the sensitivity of each test but instead of that, we believe that emergency physicians should identify potential reasons for false test results and, thus, prevent misdiagnosis. Retesting and alternative testing (alternative sample/target/test kit) is the key for COVID-19 management in ambiguous cases.

Finally, the authors propose mass-testing as a future direction. Although we agree, this is an epidemiological prospect, far away from the emergency department practice. It is also suggested that future studies should correlate infectivity with viral load, omitting that a positive test result indicates SARS-CoV-2 carriers and not patients. Furthermore, pre-existent immunity (previous infection or vaccination) could prevent a severe COVID-19 disease, despite the detected viral load.

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**Correction notice** Since this letter was published online, the corresponding author title has been updated from Dr to Ms.

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3 Mouliou DS, Gourgoulianis KI. False-Positive and false-negative COVID-19 cases: respiratory prevention and management strategies, vaccination, and further perspectives. *Expert Rev Respir Med* 2021;15:993–1002.