

## PRESS RELEASE

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### **The right test at the right time**

#### Recommendations for SARS-CoV-2 testing in different clinical situations

Medical diagnostics play a major role in countering the Covid-19 pandemic. Various diagnostic tools are available for different diagnostic purposes, and discussions about which tool to implement in which case come at a cost of valuable time and resources, when both are of exponential essence. The differing approaches stem from the fact that the novel coronavirus is approached with novel test solutions – newly developed, they have yet to prove their advantages and disadvantages in medical practice.

At SYNLAB, we are leveraging our diagnostics experience and capabilities to support our public health partners in breaking chains of infection around the world. For us, that also means continuously evaluating the available testing methods and procedures and specifying their respective implementation in

- Detecting the virus and diagnosing acute illness
- Investigating asymptomatic contacts and asymptomatic carriers
- Treating, discharging and following up on patients
- Assessing immunity within the population
- Keeping healthcare professionals safe

SYNLAB scientists have drawn up the following recommendation for testing in the beforementioned clinical situations:

#### 1. Diagnosis of acute Covid-19 illness

- RT-PCR is the laboratory test of choice. It is the most sensitive test for this purpose. A positive or negative result from a RT-PCR test is likely to be true. The method selected must be against specific genetic sequences of SARS-CoV-2.
- In clinical situations in which RT-PCR is not available within the necessary time window, or which require a rapid turnaround to speed up the management of acute patients, we recommend the use of antigen tests. The tests should be designed to detect at least Protein S of SARS-CoV-2 and to be positive for samples of medium and high viral load. In this clinical situation, it is mandatory to confirm negative results with RT-PCR.
- Although not recommended for diagnostic purposes, we support the hypothesis of additional serological laboratory testing for antibodies in patients that are symptomatic for a prolonged time period, as well as in patients with a clinical diagnosis of Covid-19 and several negative results for RT-PCR specific tests.

## 2. Investigation of asymptomatic carriers and contacts

Recommendations for detecting infections in individuals without symptoms and tracing the spread of SARS-CoV-2 through their contacts.

### a) Investigation of asymptomatic carriers

- The laboratory test of choice is RT-PCR. It is the most sensitive test for this purpose. A positive or negative result from a RT-PCR test is likely to be true. The method selected must be addressed to genes specific of SARS-CoV-2.

### b) Investigation of asymptomatic contacts

- The laboratory test of choice is RT-PCR. It is the most sensitive test for this purpose. A positive or negative result from a RT-PCR test is likely to be true. The method selected must be addressed to genes specific of SARS-CoV-2.
- Specific IgG tests for close contacts showing negative RT-PCR results, after quarantine.

## 3. Follow-up of hospitalized patients

- No Covid-19 specific tests during the follow up of hospitalized patients are recommended. Clinical follow-up and laboratory tests according to patient progress are recommended.
- In this phase of such an unknown disease, a request for specific antibodies to understand the seroconversion response may be considered.

## 4. Hospital discharge

- Hospitalized patients should be discharged according to clinical criteria. Many countries mandate at least two negative tests in the 24-hour period before discharge, however, these negative results do not provide assurance that the patient is not able to infect others.
- In this phase of such an unknown disease and for academic purposes, we recommend testing RT-PCR and specific antibodies at discharge. The same protocol applies to those patients in home quarantine.

## 5. Healthcare professionals

- For first line healthcare professionals, we recommend periodical testing by means of SARS-CoV-2 RT-PCR (range between 7-10 days) and IgG antibodies (range between 14-21 days). This procedure improves the occupational safety for healthcare professionals as well as the safety of Covid-19 patients and patients that do not seek medical consultation in due time for fear of infection.

There is a variety of rapid tests for SARS-CoV-2 antibodies with different quality levels. As medical professionals reported mixed experiences with those fast antibody tests, we generally recommend reaching out to the local lab, if any questions related to antibody testing occur. In principle, the results of serological laboratory tests for antibodies are more reliable than the results drawn from rapid antibody tests.

Determining the right test in the right situation at the right time frees up resources, conserves capacities and keeps us that crucial one step ahead in managing the pandemic and recovering from this global crisis.

## References

### **Institutions**

Coronavirus disease (COVID-19) Technical guidance: The Unity Studies: Early Investigations Protocols, WHO, 2020

Coronavirus disease (COVID-19) outbreak: rights, roles and responsibilities of health workers, including key considerations for occupational safety and health, WHO, 2020

Evaluating and Testing Persons for Coronavirus Disease 2019 (COVID-19), US Center for Disease Control and Prevention, 2020

Criteria to Guide Evaluation and Laboratory Testing for COVID-19, US Center for Disease Control and Prevention, 2020

Coronavirus disease 2019 (COVID-19) situation summary. US Center for Disease Control and Prevention, 2020

### **Literature**

Estimating clinical severity of COVID-19 from the transmission dynamics in Wuhan, China. *Nature medicine*, 04.2020,26: Vol 4, 506-510 DOI: 10.1038/s41591-020-0822-7 Wu, J T

Antibody responses to SARS-CoV-2 in patients of novel coronavirus disease 2019. *Clin Infect Dis*. 2020 Mar 28. pii: ciaa344. doi: 10.1093/cid/ciaa344. [Epub ahead of print], Zhao J et al.

The Laboratory Diagnosis of COVID-19 Infection: Current Issues and Challenges. *J. Clin. Microbiol*. doi:10.1128/JCM.00512-20, Yi-Wei Tang et al

Stability issues of RT-PCR testing of SARS-CoV-2 for hospitalized patients clinically diagnosed with COVID-19. *J Medical Virology* DOI: 10.1002/jmv.25786 Yafang Li et al.

Detection of antibodies against SARS-CoV-2 in patients with COVID-19. *J Med Virol*. 2020 Apr 3. doi: 10.1002/jmv.25820. [Epub ahead of print] Du Z et al.



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## About SYNLAB Group

- SYNLAB Group is the leading medical diagnostic services provider in Europe. SYNLAB offers a full range of innovative and reliable medical diagnostics for patients, practising doctors, clinics and the pharmaceutical industry.
- Providing the leading level of service within the industry, SYNLAB is the partner of choice for healthcare professionals. SYNLAB's services also encompass veterinary and environmental laboratory analysis.
- SYNLAB is present in more than 40 countries across four continents and holds leading positions in most markets. Over 20,000 employees contribute every day to the Group's success across different geographies. SYNLAB carries out 500 million laboratory tests per year, achieving sales revenues of EUR 2.0 billion.

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