

## MEDICAL RELEASE

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### A safe return

#### Minimizing risk of new SARS-CoV-2 infections before returning to the workplace

Discussions about loosening restrictions to ramp up the economy challenge many employers with the question: Under which circumstances is the risk of new infections manageable when returning to the workplace?

The SYNLAB diagnostic protocols provide a basis for making this decision and for detecting if a person is likely to be non-infectious. A clear roadmap for testing on SARS-CoV-2 enables employers and occupational health providers to assess whether staff can return to the workplace or require further isolation in order to protect others. Preventive measures and continuous monitoring by clinical and diagnostic methods will be an equally important factor in maintaining a safe workplace.

To maintain occupational safety in workplace returns, SYNLAB has devised a series of guidance protocols based on three main tools: a [clinical questionnaire](#), an inquiry to outline recent potentially infectious contacts, and specific testing algorithms according to the outcome of the two previous tools.

The testing algorithms combine RT-PCR analysis and serological antibody (Ab) testing. The most comprehensive approach for detecting infectious individuals is to test all candidates for SARS-CoV-2 using molecular biology technology. Based on a mouth/nose swab, **RT-PCR** searches for the virus' RNA. It is the laboratory analysis of choice, as it is the most sensitive test for this purpose — even in absence of symptoms of the disease.

Serological **Antibody tests** (laboratory tests) screen for contact with the novel coronavirus by measuring IgM or IgA and IgG antibodies in the blood. In case of exposure, IgA/IgM are the first ones to appear, followed by IgG.

With **antigen detection technology**, proteins of the virus can be identified in the patient sample. The antigen test is a rapid test and easy to perform on a nasal swab but is not as sensitive and specific as PCR.

The following four testing protocols are designed to assist in the decision on whether an individual is ready and safe to return to the workplace:

- “Gold Standard” – Broad RT-PCR testing
- Basic
- Ultra-Sensitive
- Focus on Healthcare Professionals

To implement the best workplace return program specifically designed for your company according to local regulations and resources, please contact your local SYNLAB expert send an email to [back-to-workplace@synlab.com](mailto:back-to-workplace@synlab.com).

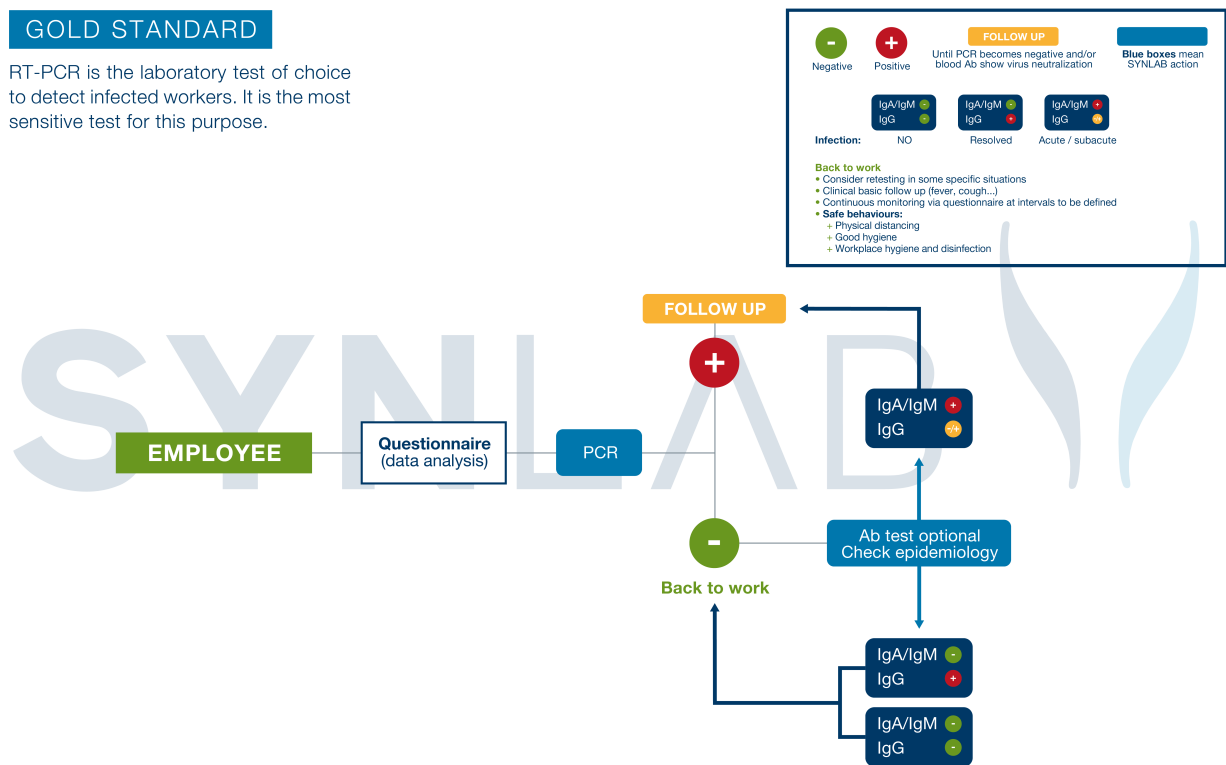
Please note: Workers already diagnosed with Covid-19 should be excluded from this process and instead undergo official health monitoring, recovery check and work authorization processes.

### Back to Workplace: Gold standard protocol

#### GOLD STANDARD

RT-PCR is the laboratory test of choice to detect infected workers. It is the most sensitive test for this purpose.

### COVID-19. Back to the workplace. **Guidance.**



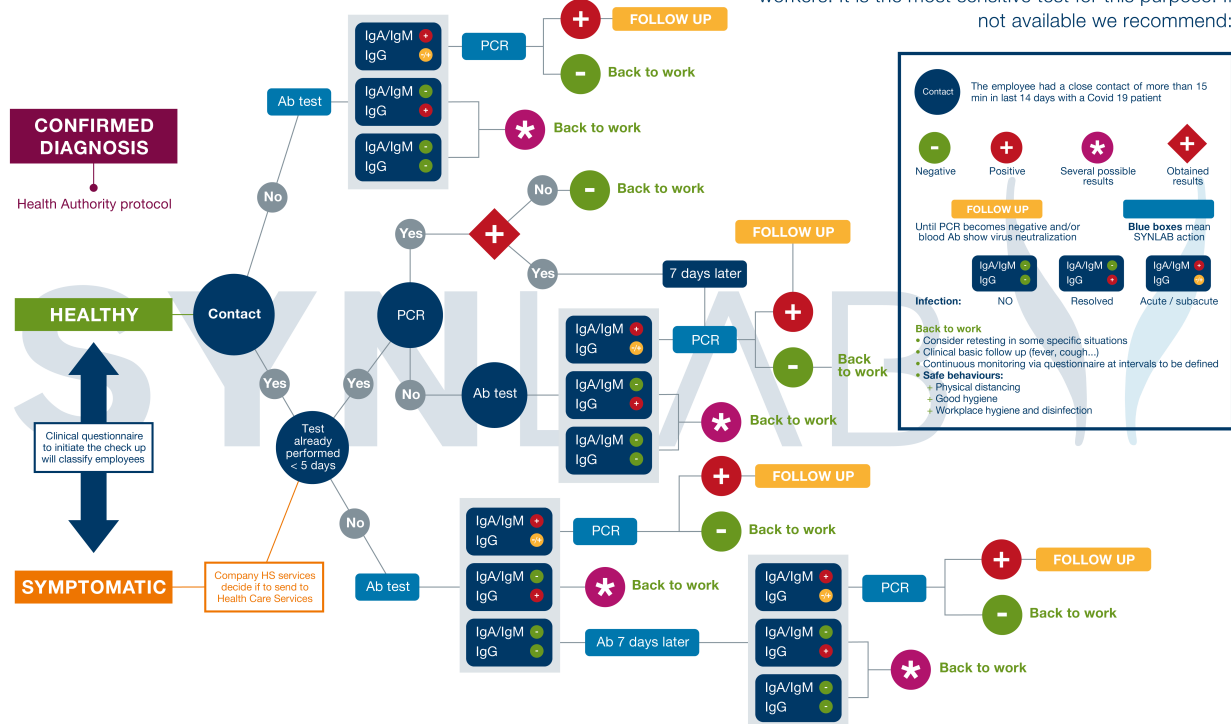
Ideally, widespread testing with RT-PCR would be the “gold standard” for the safest back-to-work strategy. As resources for this complex testing method are limited however, testing a large workforce with RT-PCR in a short time period is challenging. Alternative targeted testing strategies and accessible tools are available for mass screenings.

## Back to Workplace: Basic Testing Protocol

## COVID-19. Back to the workplace. **Guidance.**

BASIC

RT-PCR is the laboratory test of choice to detect infected workers. It is the most sensitive test for this purpose. If not available we recommend:

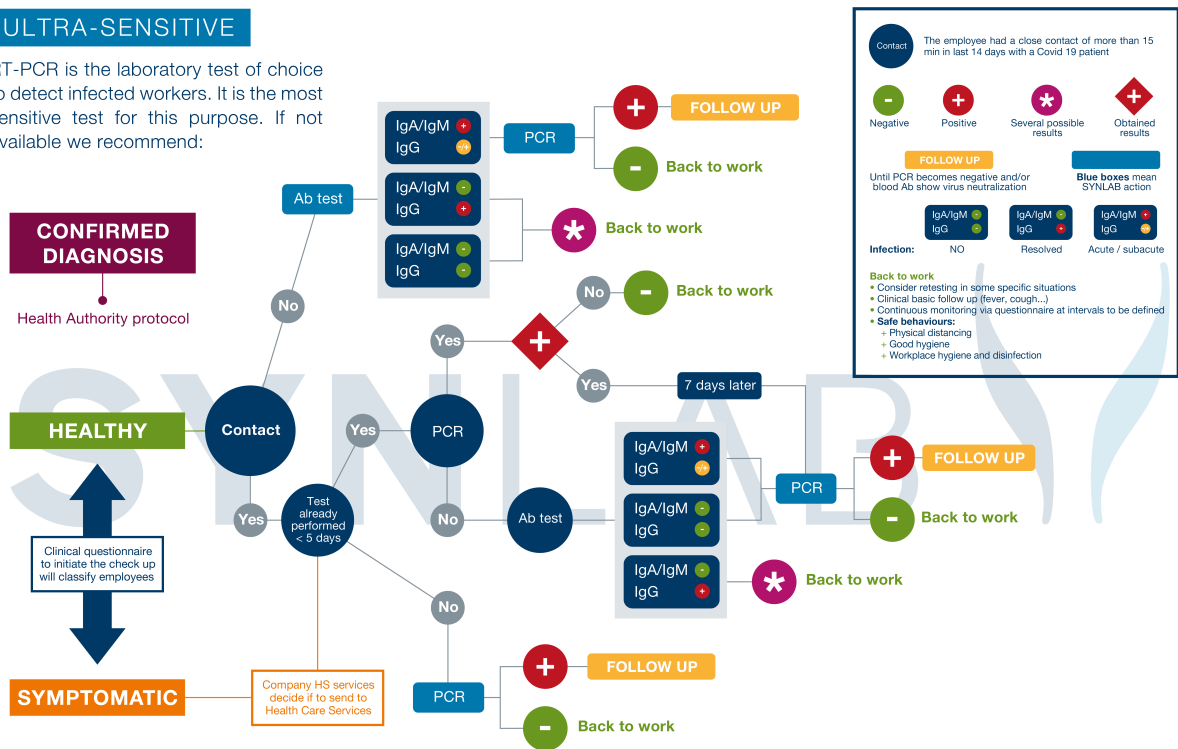


Reading the flow chart from left to right gives an overview of different testing scenarios in different situations. In general, the flow chart follows a yes / no logic – every parameter in the flow chart is either negated or affirmed, resulting in different consequences in the protocol. After classifying the employees with clinical questionnaires as healthy (but with Covid-19 contact) or symptomatic, different test procedures are recommended. The flowchart does not differentiate between IgA and IgM antibody tests – both are feasible and can be used depending on availability.

## Back to Workplace: Ultra-Sensitive Testing Protocol

#### ULTRA-SENSITIVE

RT-PCR is the laboratory test of choice to detect infected workers. It is the most sensitive test for this purpose. If not available we recommend:

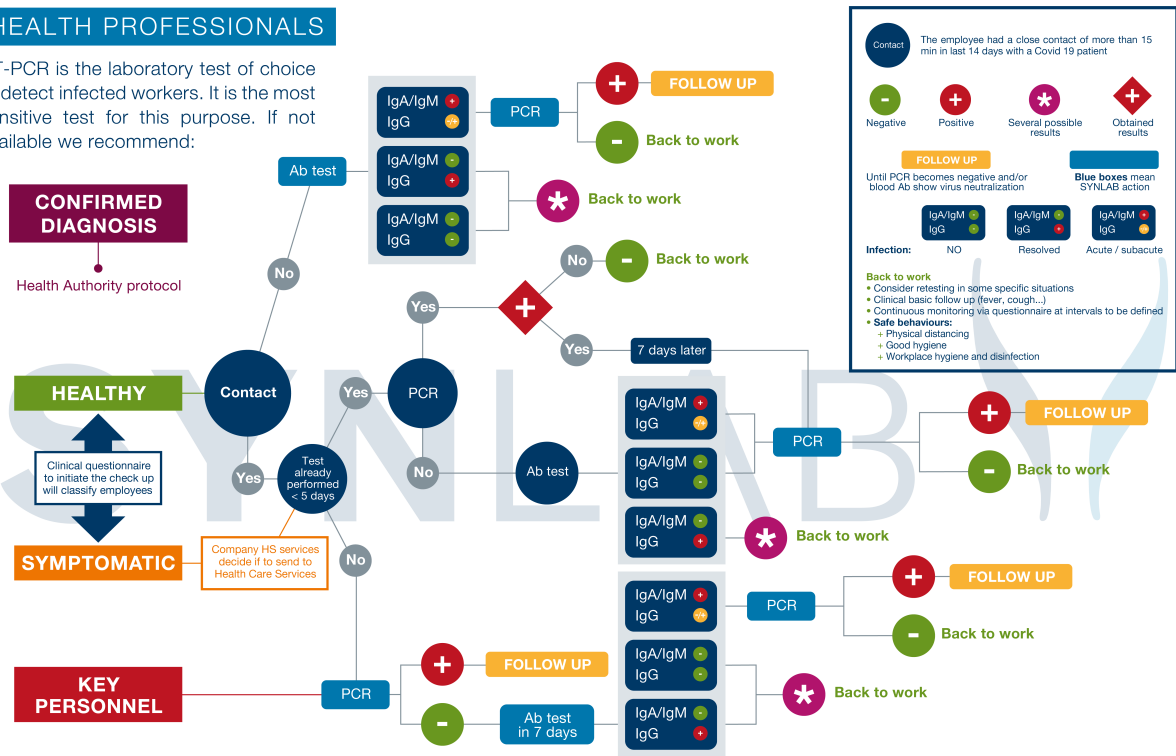


In this more sensitive protocol, all symptomatic persons will be tested by RT-PCR and for Ab. Furthermore, persons who were in contact with a confirmed case will also be tested by RT-PCR and for Ab.

## Back to Workplace: Testing Protocol Healthcare Professionals

#### HEALTH PROFESSIONALS

RT-PCR is the laboratory test of choice to detect infected workers. It is the most sensitive test for this purpose. If not available we recommend:



In addition to the ultra-sensitive protocol, key personnel will be tested exclusively by RT-PCR and Ab.

The introduced testing protocols aim to provide a basis for determining under which circumstances personnel can return to their workplace, based on their risk of being contagious. To make a final decision on workplace returns, the individual risk profile such as age and pre-existing illness needs to be taken into consideration as well. Furthermore, safe working conditions and behaviours need to be assured at all times. Good hygiene, disinfection routines and physical distancing are key to a safe working environment.

Safety and risk response routines should be regularly reinforced by specific training activities to limit any potential spread of infection at any given moment.

SYNLAB also proposes a follow-up process that includes basic daily clinical checks (e.g. body temperature control) as well as continued diagnostic monitoring to identify infectious workers at the earliest opportunity of detection.

For further details, please contact: [back-to-workplace@synlab.com](mailto:back-to-workplace@synlab.com)



The aim of the protocols is best detection of infected people in your organization but SYNLAB cannot guarantee at 100% a person is negative, cannot say someone will be immune or that people can reinfect even after cure.

## 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*

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

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### 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.*



### **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 2.2 billion.

More information can be found on [www.synlab.com](http://www.synlab.com)