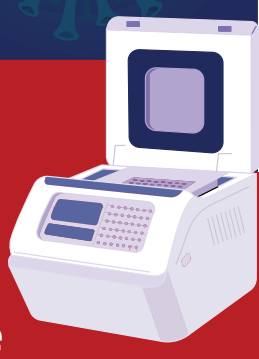
R CONCEPT

Follow us

DIAGNOSTIC TESTS CURRENTLY USED FOR COVID-19

REAL-TIME REVERSE TRANSCRIPTION POLYMERASE CHAIN REACTION (rRT-PCR)



What it detects

SARS-CoV-2 nucleic acid

Diagnostic samples

Nasal swabs, sputum, respiratory tract aspirates/washes

Saliva and stool also found to be viable samples

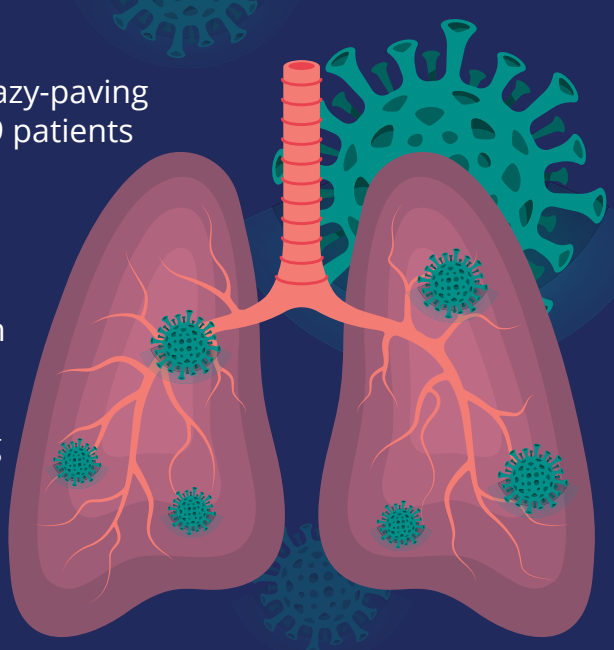
Reliability and use

- Is COVID-19–specific and the current gold-standard diagnostic technique
- Has low sensitivity. False-negative results possible because detection depends on viral load, which in turn, depends on sample type, efficiency of sample collection/transportation, and the phase of infection

CHEST COMPUTED TOMOGRAPHY (CT)

What it detects

Presence of CT features like ground-glass opacities and the crazy-paving pattern, which are typically seen in the lung scans of COVID-19 patients



Reliability and use

- Is not COVID-19–specific but serves as an important non-invasive tool for detecting signs of the disease, such as pneumonia
- Is useful in determining disease severity and monitoring disease progression, because chest CT features in infected patients change with time
- May be used to complement RT-PCR in the early detection of COVID-19 and therefore hasten diagnosis

ENZYME-LINKED IMMUNOSORBENT ASSAY (ELISA)

What it detects

SARS-CoV-2–specific antibodies raised by host immune cells

Diagnostic samples

Blood, plasma, serum

Reliability and use

- Primarily detects past infection or late stages of the infection
- Is useful for COVID-19 surveillance (assessing prevalence of SARS–CoV-2 infection in sub-populations such as healthcare workers and other high-risk groups). Is therefore helpful in informing prevention strategies
- Can be used to determine immunity in patients who have recovered and to identify donors for convalescent plasma therapy

*Information in this infographic is based on literature available until May 21, 2020.

Read regularly updated COVID-19–related literature summaries on covid19.researcher.life.

Want to get weekly updates on new research literature related to COVID-19? **Sign up now!**