

Help Patients and Staff Understand Test Results

You'll need to **put results of lab tests in perspective**...as patients ask about testing for COVID-19.

Provide staff with tips to help educate patients.

Explain that a positive SARS-CoV-2 molecular or antigen test suggests an **ACTIVE** infection with COVID-19.

On the other hand, a positive antibody test suggests a **RECENT** or **PRIOR** infection with COVID-19...but can't yet confirm immunity or give people a "pass" to get back to work.

Remind staff and patients that results need to be considered along with symptoms, exposure risk, etc.

Help clarify how often false results may occur.

SENSITIVITY lets you know how much you can trust a negative result...a highly sensitive test will have few false negatives.

If a test is 90% sensitive, 1 in 10 patients **WITH** the disease will have a false-negative result. Think "**SnNO**ut rules out"...a highly **Sensitive** test, if **Negative**, rules **Out** the condition.

SPECIFICITY lets you know how much you can trust a positive result...a highly specific test will have few false positives.

If a test is 90% specific, 1 in 10 patients **withOUT** the disease will have a false-positive result. Think "**SpP**in rules in"...a highly **Specific** test, if **Positive**, rules **In** the condition.

For example, the *Sofia 2 SARS Antigen* rapid diagnostic test is 100% specific, so you can trust a positive result. But it's only 80% sensitive, so don't rely on a negative result in a symptomatic patient.

These details are usually in the "performance characteristics" of test package labels. Expect some tests to list sensitivity as "positive percent agreement"...and specificity as "negative percent agreement."

Keep in mind, false results may also occur from a poor sample, testing too soon or late in an illness, viral cross-reactivity, etc.

Plus baseline rates of illness come into play. For example, if few people are infected, the chance of false positives goes up.

Stick with tests with an "emergency use authorization." This doesn't mean the test is approved...but FDA has quickly reviewed it.

Use our chart, *COVID-19 Testing FAQs*, for test specifics, tips about positive and negative predictive value, and more.

Key References:

- JAMA Published online May 6, 2020; doi:10.1001/jama.2020.8259
- JAMA 1994;271(9):703-7
- Front Public Health 2017;5:307
- www.fda.gov/medical-devices/emergency-situations-medical-devices/emergency-use-authorizations#covid19ivd (5-28-20)
- www.cdc.gov/coronavirus/2019-ncov/lab/resources/antibody-tests-guidelines.html (5-28-20)

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