

# Signs and symptoms may ID COVID-19 even with negative RT-PCR

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Hospitalized patients early in the pandemic who repeatedly tested

negative with reverse-transcriptase polymerase chain reaction (RT-PCR) but had signs and/or symptoms of COVID-19 had similar seropositivity as RT-PCR-confirmed COVID-19 patients, but were less likely to receive treatment, according to a study published online Feb. 13 in *BMC Infectious Diseases*.

Heta Parmar, from Rutgers New Jersey Medical School in Newark, and colleagues used comparative serology from early in the COVID-19 pandemic to estimate the likelihood of COVID-19 infection among RT-PCR-negative patients with [clinical signs](#) and/or symptoms compatible with COVID-19. Serological testing was conducted between April and October 2020 for 20 patients with signs and symptoms of COVID-19 who were repeatedly negative by RT-PCR ("probables"); 15 patients with signs and symptoms of COVID-19 but with a potential alternative diagnosis ("suspects"); 43 patients with no signs or symptoms of COVID-19 ("nonsuspects"); 40 RT-PCR-confirmed COVID-19 patients; and 55 prepandemic samples.

The researchers found that seropositivity and levels of immunoglobulin (Ig)G and IgM antibodies were similar for probables and propensity score-matched RT-PCR-confirmed COVID-19 patients, but they had multifold higher seropositivity rates compared with suspects and matched nonsuspects. Compared with RT-PCR-confirmed COVID-19 patients with similar disease severity, probables were half as likely to receive COVID-19 treatment.

"What we found was quite surprising," a coauthor said in a statement. "The people who repeatedly tested negative and had symptoms without an alternative diagnosis had a similar antibody profile as those who were RT-PCR-confirmed positive."

**More information:** Heta Parmar et al, RT-PCR negative COVID-19, *BMC Infectious Diseases* (2022). [DOI: 10.1186/s12879-022-07095-x](https://doi.org/10.1186/s12879-022-07095-x)

Several authors disclosed financial ties to the biotechnology industry.

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