

Virus in the blood can predict severe COVID-19

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A blood test on hospital admission showing the presence or absence of SARS-CoV-2 can identify patients at a high risk of severe COVID-19. Admitted patients without virus in their blood have a good chance of rapid recovery. This according to researchers at Karolinska Institutet and Danderyd Hospital in a new study published in the scientific journal *Clinical Infectious Diseases*.

Blood samples were taken from patients with a confirmed COVID-19 infection within three days of admission to the Department of Infectious Diseases, Danderyd Hospital, Sweden. Patients with measurable levels of the new coronavirus SARS-CoV-2 in their blood were seven times more likely to develop critical symptoms and eight times more likely to die within 28 days.

"This readily available test allows us to identify patient groups at high or low risk of severe COVID-19, which enables us to better guide the treatment and monitoring of these patients," says the study's lead author Karl Hagman, infectious diseases consultant at Danderyd Hospital and doctoral student at Karolinska Institutet's Department of Clinical Sciences at the same

hospital.

The researchers analyzed the presence of viral RNA in the blood using a standard hospital technique called PCR on samples taken from a total of 167 patients. Sixty-one patients had measurable levels of the virus in their blood and 15/61 (25 percent) died within 28 days of blood sampling. This can be compared with three deaths (three percent) amongst the 106 patients who did not have measurable levels of virus in their blood. The presence of virus in the blood increased with age and was much more common in [patients](#) over the age of 60.

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More information: Karl Hagman et al. SARS-CoV-2 RNA in serum as predictor of severe outcome in COVID-19: a retrospective cohort study, *Clinical Infectious Diseases* (2020). [DOI: 10.1093/cid/ciaa1285](https://doi.org/10.1093/cid/ciaa1285)

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