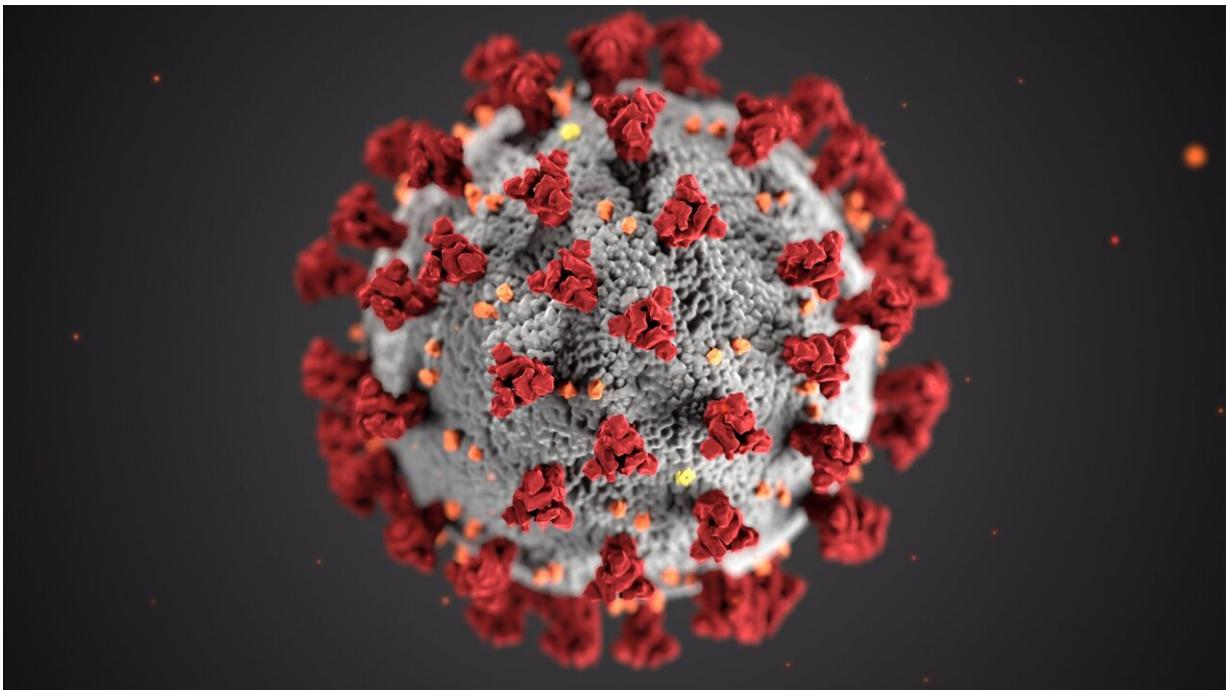


Study suggests link between decreasing viral load and proportion of COVID-19 patients needing intensive care

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New research presented at this week's ESCMID Conference on Coronavirus Disease (ECCVID, online 23-25 September) suggests that, as lockdown took effect and case numbers dropped, the amount of virus patients were exposed to (viral load) fell, and this could be linked to

lower proportions of patients requiring intensive care and dying. The study is by Dr. Chiara Piubelli, IRCCS Sacro Cuore Don Calabria Hospital, Negrar, Italy, and colleagues.

In March 2020, Italy was one of the countries most severely hit by the SARS-CoV-2 (COVID-19). Then, the burden of cases gradually decreased until the end of May. The aim of this work was the evaluation of a possible association between the severity of clinical manifestations and [viral load](#) over time, during the epidemiological transition from high to low transmission setting.

The authors analysed 373 cases of COVID-19 diagnosed at the emergency room of the IRCCS Sacro Cuore Don Calabria Hospital, and obtained the proportion of patients admitted to the [intensive care unit](#). To estimate viral load, they estimated the so-called cycle threshold (Ct) for each sample—a higher cycle threshold indicates a lower viral load.

The proportion of patients requiring intensive care significantly reduced from 6.7% in March, to 1.1% in April, and to zero in May. For viral load, they observed a trend of Ct increasing from 24 to 34 (median values) (indicating decreasing viral load) between March and May, with a statistically significant difference between March and April.

The authors conclude: "We observed a reduction over time of the proportion of patients with COVID-19 requiring [intensive care](#), along with decreasing median values of viral load. As the epidemiological context changed from high to low transmission setting, people were presumably exposed to a lower viral load, which has been previously associated with less severe clinical manifestations."

Provided by European Society of Clinical Microbiology and Infectious Diseases

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