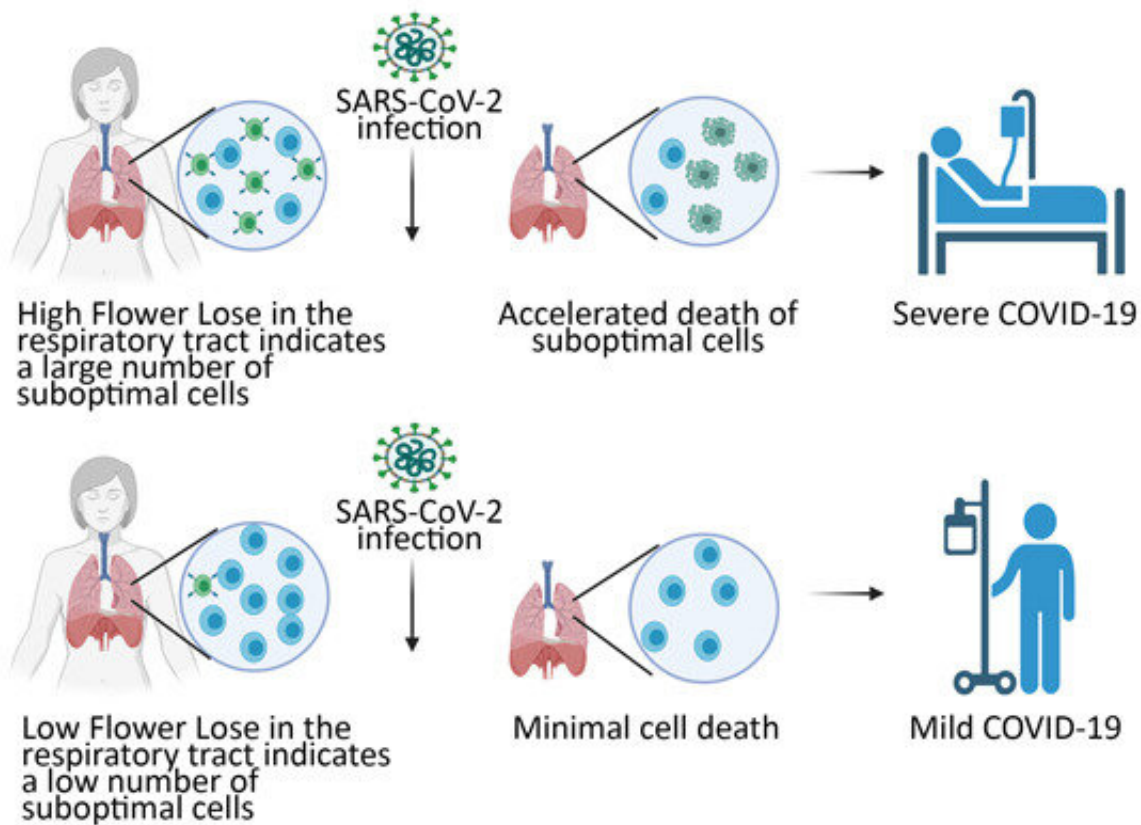


# Cell fitness used to determine outcomes in COVID patients

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Graphical abstract. Credit:

<https://www.embopress.org/doi/full/10.15252/emmm.202013714>

Cell fitness has been identified as a way of predicting health outcomes in COVID patients, according to a University of Queensland study.

The study investigated a cellular fitness marker, known as hfwe-Lose, to identify sub-optimal cells in patients who had been hospitalized or died from COVID at the start of the pandemic.

UQ Diamantina Institute's Dr. Arutha Kulasinghe said researchers conducted post-mortem analysis on COVID-infected [lung tissues](#) and found that the cell fitness marker influenced a person's immune response to infection.

"We found that patients with [acute lung injury](#) had higher levels of the biomarker in their [lower respiratory tract](#) and areas of cell death," Dr. Kulasinghe said.

"More importantly, we also found that the cell fitness marker outperformed conventional methods, such as age, inflammation and co-existing diseases, in predicting [health outcomes](#), such as hospitalization and death, in COVID patients."

Assessing the level of risk in developing severe COVID infection is an important consideration in the management of the current pandemic.

Dr. Kulasinghe said the study findings might be useful in the early triage of patients who test positive for COVID as the cell fitness marker could be identified via a simple nasal swab.

"The cell fitness marker would enable medical teams to identify patients more likely to develop severe symptoms, provide closer monitoring and earlier access to hospitalization and intensive care," he said.

"We are now looking to validate our findings in larger patient populations to determine the robustness of the marker.

"The [cell fitness](#) marker is part of the body's process for removing

unwanted cells."

**More information:** Michail Yekelchik et al, Flower lose, a cell fitness marker, predicts COVID-19 prognosis *EMBO Molecular Medicine* (2021). [www.embopress.org/doi/full/10.15252/emmm.202013714](https://www.embopress.org/doi/full/10.15252/emmm.202013714)

Provided by University of Queensland

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