Scientists identify unique molecular signature in blood that can tell if you'll get severe COVID-19 infection or not

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Identification of healthy people at high risk for severe COVID-19 is a global health priority. Scientists at Nightingale Health investigated

whether blood biomarkers measured by high-throughput metabolomics could be predictive of severe pneumonia and COVID-19 hospitalization years after the blood sampling.

The researchers analyzed over 100,000 blood samples from the UK Biobank and identified a particular molecular signature in the blood that's common among people who get severe symptoms if infected by the coronavirus. Those with this molecular signature are five to 10 times more likely to be hospitalized. These findings are novel, as the blood biomarkers in the molecular signature have not been previously known as risk markers in healthy people for developing severe forms of COVID-19.

This is the world's largest metabolomic study to date and based on the study's findings Nightingale Health is soon launching a blood test that can predict if a person will develop mild symptoms or become severely ill due to COVID-19. The test can, therefore, be used to identify people who'll need special precautions to avoid infection and prioritize those in most need of the COVID-19 vaccine.

"The best way to detect those at high risk is by looking at a molecular signature of multiple biomarkers. It is striking that the risk identification works well even when focusing on a subset of biomarkers in Nightingale's blood test that can be captured by self-collection through a finger-prick blood sample. These novel findings provide a scalable solution for personalized prevention and population-level screening, which can later also be used to prioritize vaccines for those who need it the most," says Dr. Peter Würtz, lead scientist of the study and Scientific Director of Nightingale Health.

  More information: Julkunen et al., Blood biomarker score identifies individuals at high risk for severe COVID-19 a decade prior to diagnosis: metabolic profiling of 105,000 adults in the UK Biobank,

Provided by Nightingale Health