Staying ahead of cytokine storm

Testing for key inflammation markers

1 of 5 COVID-19 patients develop severe pneumonia.

As fluid and damage accumulate in the lungs, it becomes more and more difficult for the lungs to absorb oxygen and exchange it for carbon dioxide.

COVID-19 pneumonia is caused by inflammation and fluid accumulation in the alveoli, the site of oxygen absorption and diffusion into the blood stream.

The SARS-CoV-2 virus utilizes the ACE 2 receptor to bind to alveolar cells which are rich in ACE2 receptors. ACE2 receptors are also found in multiple organs and blood vessels.

~5% of severe COVID-19 patients develop a systemic dysregulated cytokine response.

Early detection of inflammation markers can indicate the onset of a cytokine storm and assist clinicians with timely interventions.

The onslaught of cytokines can cause multi-organ failure and disseminated intravascular coagulation, both contributing to death.

Key Marker

IL-6

Other useful lab tests for cytokine storm patients:

ALT AST BIL LDH CRE

PT/INR D-DIMER PCT CREA CYS

SAA CTNI CRP FERR

IL-6 levels were higher in COVID-19 patients with severe disease.

High serum levels of pro- and anti-inflammatory cytokines were found in patients with severe COVID-19.

Other uses of the analytes described may have not been approved or cleared by the FDA.

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