

Biomarkers of COVID-19 Diseases

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Description

As an infection attacks an individual, physiological signs that represent the biological condition of the individual change in response to the situation with the disease is called Biomarker. A biomarker is a characteristic feature that is impartially estimated and assessed as an indicator of typical biological processes, pathogenic responses, pharmacologic reactions to therapeutic intervention or any quantifiable diagnostic marker for evaluating the risk or presence of a disease. It can incorporate mRNA articulation profiles, circulating DNA and tumour cells, proteins, proteomic design, lipids, metabolites, imaging techniques or electrical signs. These signs/biomarkers might be obtained from sources like urine, blood and tissues. Infection biomarker discovery that is wanted to be precise, generally non-invasive and simple to perform, even in Point Of Care (POC) settings, can improve on the screening, diagnosis, prognosis and recuperation on treatment of different diseases.

Biomarker is short for biological marker, and is used as a sign that a biological cycle in the body has occurred or is ongoing. While some biomarkers are utilized to show that the body has been exposed to a chemical, poison or other natural effect-most partner biomarkers with medication.

Biomarkers are mostly IL-6, D-dimer, CRP, LDH and ferritin. Raised levels of these biomarkers were related with inflammation and bleeding problem, showing an increased risk for ICU admission, obtrusive ventilator support, and death also.

The developing threat because of the COVID-19 pandemic has made various misfortunes the whole world. Without a coordinated treatment and growing immunization administration for the infection, identifying the basic laboratory biomarkers for disease severity at beginning stage could help

screen and prevent disease progression towards extremity. To that point studies to recognize significant clinical and lab biomarkers that can predict disease severity and result have been directed. So far various clinical, lab and radiologic markers that can anticipate infection severity have been related to varying results of changing behaviour of the disease and geographical disparity. In this manner, understanding predictive of disease severity and result are significant to provide early preventive measures to a better outcome particularly in financially non-industrial nations where intensive care setup probably might not match the increasing demand assistance. Distinctive laboratory markers are involved as a indicator of disease severity, progression and result.

Conclusion

Deranged cell counts, similar to anemia, polycythemia, leukopenia and leukocytosis with neutrophil dominance and diminished platelet count are observed to be related with serious infection and worse outcomes in hospitalized patients. Likewise increased liver enzymes and complete bilirubin levels were recognized in serious and critical patients. Raised inflammatory reaction of the body as showed by raised laboratory values of different interleukins and C-receptive proteins are additionally reported. Raised coagulation markers like fibrinogen and prothrombin time are recognized in extreme and critical patients. Electrolyte imbalance in the two ways, hypo and hyper levels were reported for sodium, potassium and calcium levels among patients with serious sickness and more worse outcomes, estimated to result from the impact of the illness on the body system or the medicine side effects. There is limited investigation that evaluated the role of laboratory markers in estimating infection severity and result.