# Evaluation of Hematological Changes During COVID-19: A Systematic Review

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## ABSTRACT

**Objectives: COVID-19 pandemic has affected more than 6 million people globally. Most of the affected patients presents with fever, cough, nausea, vomiting, fatigue and dyspnea. Molecular testing by PCR is gold standard test to diagnose COVID-19 infection but if unavailable, hematological profile of COVID-19 patients is a good prognostic marker for COVID-19 disease. The aim of our review is to summarize the recently available literature regarding hematological alterations in COVID-19 patients along with their trend in the disease course and their prognostic implications in terms of severe disease.**

**Design: Systematic review.**

**Methods: Literature published between 2020 to 2022 on Google Scholar was included in our review by following PRISMA guidelines. Articles were shortlisted on the basis of inclusion and exclusion criteria.**

**Results: Total 139 articles were initially identified. After removal of duplicates and screening on basis of present exclusion and inclusion criteria 17 articles were found. Out of these 17 articles, there were 10 retrospective studies, 3 prospective studies, 2 case control studies and 2 cross sectional studies.**

**Conclusion: Hematological markers predicts the outcome of COVID in patients irrespective of their age, gender and co-morbidities. There is a positive relationship between disease severity and blood count of neutrophils, leukocytes, NLR, MDW, thrombocytopenia, lymphocytopenia, IL-6 and CRP.**

**Keywords: Hematological changes, Complete blood count, Immunological markers, Lymphopenia, Lymphocytosis, Thrombocytopenia, COVID-19, Corona Virus**

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