

Fas-FasL linfocitários, a linfopenia e o pior prognóstico. Sendo responsáveis, portanto, pela apoptose de linfócitos T ativado. Diante disso, avaliaram o uso de um inibidor de caspase-1 para bloquear o Fas, o qual aumentou a resposta antiviral. **Conclusão:** O sFAS é um potencial biomarcador para a avaliação preditiva prognóstica, desta forma, nossos dados sugerem que as vias da apoptose devem ser estudadas a fim de confirmar estes dados e ainda, explorar seu potencial como alvo terapêutico.

<https://doi.org/10.1016/j.htct.2022.09.1129>

ALTERED PLASMA CYTOKINE CONCENTRATIONS ARE ASSOCIATED WITH THE CLINICAL SEVERITY OF PATIENTS WITH COVID-19

AE Alagbe^a, GA Pedrosa^a, AS Justo-Junior^b, E Costa^c, BB Oliveira^c, GAF Maia^c, DM Albuquerque^d, JLP Módena^e, FF Costa^d, MNND Santos^a

^a Departamento de Patologia, Faculdade de Ciências Médicas, Universidade Estadual de Campinas (UNICAMP), Campinas, SP, Brazil

^b Centro Nacional de Pesquisa em Energia e Materiais (CNPEM), Laboratório Nacional de Biociências (LNBio), Campinas, SP, Brazil

^c Laboratório de Hematologia e Hemoterapia, Divisão de Patologia Clínica, Hospital das Clínicas, Universidade Estadual de Campinas (UNICAMP), Campinas, SP, Brazil

^d Centro de Hematologia e Hemoterapia, Universidade Estadual de Campinas (UNICAMP), Campinas, SP, Brazil

^e Departamento de Genética, Evolução, Microbiologia e Imunologia, Instituto de Biologia, Universidade Estadual de Campinas (UNICAMP), Campinas, SP, Brazil

Introduction: The novel Coronavirus (SARS-CoV-2), responsible for severe acute respiratory syndrome, has emerged as a threat to humans since December 2019, and the search for a better understanding of the pathophysiology of coronavirus disease 2019 (COVID-19) and its definitive treatment is still in progress. **Objective:** To evaluate the plasma pro- and anti-inflammatory cytokines in COVID-19 patients and their associations with the disease severity and outcome. **Methods:** Reverse-Transcriptase Polymerase Chain Reaction (RT-PCR)-confirmed COVID-19 unvaccinated patients at the Hospital de Clínicas (HC), UNICAMP, Campinas, SP, were enrolled. Clinical and laboratory data were extracted from the medical records, and the plasma cytokines levels were quantified using LUMINEX and ELISA. **Results:** There were 154 COVID-19 patients (99 survivors and 55 non-survivors) with male:female of 1.4:1, and a median age of 60 years. The non-survivors were older than survivors (65 vs. 55 years, $p < 0.0001$); and coronary artery disease and autoimmunity, disease severity, and oxygen therapy, intensive care, and intubation were associated with mortality. Non-survivors had higher leukocyte and

neutrophil counts, and RDW and lower lymphocyte count at diagnosis. Non-survivors had higher levels of pro-inflammatory (TNF- α , IL-6, IFN- γ , CCL3, IL-17/IL-17A, IL-8, G-CSF, CCL2/MCP-1) and anti-inflammatory (IL-1ra and IL-27) cytokines, but lower TGF- β levels than the survivors. TNF- α levels were positively correlated with all studied cytokines except TGF- β , while TGF- β levels were negatively correlated with TNF- α , IL-6, CCL3, G-CSF, and IL-27. IL-27 levels were significantly correlated with all the cytokines except IL-37 and IL-17E. More than half (55.2%) of our patients had severe COVID-19, 18.8% had moderate, 16.2% had critical, 5.2% had mild, and 4.5% were asymptomatic. Majority of the patients (68.2%) required ICU care and had higher TNF- α , IL-6, IL-8, IL-17, CCL3, CCL2, IL-1ra, and IL-27 than others. 59.7% of the patients required endotracheal intubation and had higher TNF- α , IL-6, IL-8, CCL3, CCL2, and IL-1ra than those who did not have intubation. TNF- α , IL-6, and IL-8 had the highest Area Under the Receiver Operating Characteristics (AUROC) curve, sensitivity, and specificity for predicting mortality in these COVID-19 patients. **Discussion and conclusion:** The altered levels of pro- and anti-inflammatory cytokines support the role of SARS-CoV-2 in inducing cytokine storm, and higher concentrations seen in the deceased patients meant a more severe storm. Also, the increased leukocytes and neutrophils in our patients could have led to the release of reactive oxygen species, and end-organ damage, thus leading to poor outcomes. This study showed that the levels of these cytokines could be used as markers of mortality in COVID-19. It is possible to suggest that TNF, IL-6, and IL-8 levels at diagnosis could be efficient predictors of fatal outcomes in COVID-19 patients. If properly measured at diagnosis, these markers could be useful for triaging and predicting the outcome of COVID-19, thus guiding the treatment of the COVID-19. **Funding:** CNPq (#190374/2017-9), CAPES, FAPESP and FAEPEX (#338619).

<https://doi.org/10.1016/j.htct.2022.09.1130>

AValiação por Citometria de Fluxo de Células no Sangue Periférico de Gestantes e Puérperas com Suspeita de COVID-19

MLL Machado^a, ATB Souza^b, RD Lima^c, FCM Theodoro^b, MDGP Araújo^d, JDAS Camargo^e, AJM Vale^f, GHM Oliveira^d, GBC Junior^g, RN Cobucci^h

^a Programa de Pós-Graduação em Ciências Aplicadas à Saúde da Mulher, Maternidade Escola Januário Cicco (MEJC/EBSEH), Universidade Federal do Rio Grande do Norte (UFRN), Natal, RN, Brasil

^b Departamento de Farmácia, Centro de Ciências da Saúde, Universidade Federal do Rio Grande do Norte (UFRN), Natal, RN, Brasil

^c Programa de Pós-Graduação em Ciências Farmacêuticas (PPGCF), Centro de Ciências da Saúde, Universidade Federal do Rio Grande do Norte (UFRN), Natal, RN, Brasil