

**PROFIL RASIO NEUTROFIL LIMFOSIT DAN  
RASIO TROMBOSIT LIMFOSIT PADA PASIEN COVID-19  
KLINIS KRITIS DI ICU COVID RSUP DR. M. DJAMIL PADANG  
PERIODE 1 AGUSTUS 2021 – 31 MARET 2022**



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## ABSTRACT

### ***PROFILE OF NEUTROPHIL-LYMPHOCYTE RATIO AND PLATELET-LYMPHOCYTE RATIO IN CRITICAL CLINICAL COVID-19 PATIENTS IN THE COVID ICU DR. M. DJAMIL HOSPITAL, PADANG FROM 1 AUGUST 2021 TO 31 MARCH 2022***

By

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*The mortality rate of critical clinical COVID-19 patients tends to be high, so it is necessary to test predictors of early mortality in COVID-19 patients. The value of the Neutrophil Lymphocyte Ratio (NLR) and the Platelet Lymphocyte Ratio (PLR) as a marker of inflammation is a simple, fast, easy to do, and visible to be performed at First Level Health Facilities.*

*The purpose of this study was to determine the profile of NLR and PLR in clinically critical COVID-19 patients in the ICU COVID at RSUP. Dr. M. Djamil Padang from 1 August 2021 to 31 March 2022. This type of research is descriptive retrospective. Medical record data were collected by total sampling technique. There were 221 samples that met the inclusion criteria.*

*The results showed that the most common characteristics were age > 65 years (29.7%), male gender (50.7%), comorbid diabetes mellitus (18.7%), pregnant coincidence (90.5%), leukocytosis (77.8%), normal platelets (71.5%), neutrophilia (84.6%), and lymphopenia (57.9%). Most NLR and PLR examinations were very high (NLR > 5) 88.2% and high (PLR > 180) 71.1%. According to comorbidities by organ system, very high NLR and high PLR were most common in multisystem diseases. Kidney disease was the comorbid with the highest mean NLR of 31.74 and the highest mean PLR of 469.33. Pregnant coincidence had the highest NLR (mean NLR 11.63) and the highest PLR (mean PLR 263.2).*

*The conclusion of this study is the profile of NLR and PLR in clinically critical COVID-19 patients in the ICU COVID RSUP. Dr. M. Djamil from 1 August 2021 to 31 March 2022 are very high NLR and high PLR.*

**Keywords :** COVID-19, NLR, PLR, ICU

## ABSTRAK

### PROFIL RASIO NEUTROFIL LIMFOSIT DAN RASIO TROMBOSIT LIMFOSIT PADA PASIEN COVID-19 KLINIS KRITIS DI ICU COVID RSUP DR. M. DJAMIL PADANG PERIODE 1 AGUSTUS 2021 – 31 MARET 2022

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Angka kematian pasien COVID-19 klinis kritis cenderung tinggi, sehingga perlu dilakukannya uji prediktor mortalitas secara dini pada pasien COVID-19. Nilai rasio neutrofil limfosit (*Neutrophil Lymphocyte Ratio* / NLR) dan rasio trombosit limfosit (*Platelet Lymphocyte Ratio* /PLR) sebagai penanda inflamasi merupakan pemeriksaan yang sederhana, cepat, mudah, dan bisa dilakukan di Fasilitas Kesehatan Tingkat Pertama (FKTP)

Tujuan penelitian ini yaitu untuk mengetahui profil NLR dan PLR pada pasien COVID-19 klinis kritis di ICU COVID RSUP. DR. M. Djamil Padang periode 1 Agustus 2021 - 31 Maret 2022. Jenis penelitian deskriptif dengan pendekatan restropektif. Data rekam medis dikumpulkan dengan teknik *total sampling*. Terdapat 221 sampel yang memenuhi kriteria inklusi.

Hasil penelitian didapatkan karakteristik terbanyak usia > 65 tahun (29,7%), jenis kelamin laki-laki (50,7%), komorbid diabetes melitus (18,7%), koinsiden hamil (90,5%), leukositosis (77,8%), trombosit normal (71,5%), neutrofilia (84,6%), dan limfopenia (57,9%). Pemeriksaan NLR dan PLR terbanyak yaitu sangat tinggi (NLR >5) 88,2% dan tinggi (PLR >180) 71,1% . Menurut komorbid berdasarkan sistem organ, NLR sangat tinggi dan PLR tinggi terbanyak pada penyakit multisistem. Penyakit ginjal merupakan komorbid dengan nilai rerata NLR tertinggi yaitu 31,74 dan nilai rerata PLR tertinggi yaitu 469,33. Koinsiden hamil memiliki NLR paling tinggi (rerata NLR 11,63) dan PLR paling tinggi (rerata PLR 263,2).

Kesimpulan penelitian ini adalah profil NLR dan PLR pada pasien COVID-19 klinis kritis di ICU COVID RSUP. DR. M. Djamil Padang periode 1 Agustus 2021 - 31 Maret 2022 adalah NLR sangat tinggi dan PLR tinggi.

**Kata kunci :** COVID-19, NLR, PLR, ICU