

**HUBUNGAN ANTARA RASIO NEUTROFIL LIMFOSIT
DENGAN DERAJAT KEPARAHAN COVID-19 PADA PASIEN
DI RSUD PROF. DR. MARGONO SOEKARJO**

ABSTRAK

Latar belakang : Virus Corona atau *Severe Acute Respiratory Syndrome Coronavirus 2* (SARS-CoV2) atau yang dikenal dengan COVID 19 merupakan virus corona yang dapat menyebabkan gangguan pada sistem pernapasan, pneumonia akut, sampai kematian. Kasus infeksi SAR-COV-2 di Indonesia mencapai 4.229.813 orang dengan kematian sebesar 142.763 orang. Derajat keparahan COVID-19 dibagi menjadi 4 kategori yaitu ringan, sedang, berat, dan kritis. Identifikasi derajat keparahan dapat dilakukan dengan pemeriksaan petanda inflamasi yaitu rasio neutrofil limfosit (RNL) atau *neutrophile lymphocyte ratio* (NLR).

Tujuan : Mengetahui hubungan antara rasio neutrofil limfosit dengan derajat keparahan COVID-19 pada pasien di RSUD Prof. dr. Margono Soekarjo.

Metode : Penelitian ini merupakan penelitian observasional analitik dengan pendekatan *cross sectional*. Subjek penelitian diperoleh dengan menggunakan metode *consecutive sampling* sebanyak 142 pasien sesuai kriteria inklusi dan eksklusi. Uji normalitas dengan *Kolmogorov Smirnov* dan dianalisis menggunakan uji *Kruskal Wallis*.

Hasil : Hasil penelitian menunjukkan jenis kelamin laki-laki 79 pasien (55,6%) dan perempuan 63 pasien (44,4%). Kelompok usia 18-60 tahun 113 pasien (79,6%) dan >60 tahun 29 pasien (20,4%). Derajat keparahan penyakit didapatkan derajat sedang 95 (66,9%), derajat berat 41 (28,9%), dan derajat kritis 6 (4,2%). Rata - rata nilai RNL pada pasien COVID-19 dengan derajat sedang 5,40, derajat berat 18,77 dan derajat kritis 32,37. Uji nonparametrik *Kruskal Wallis* memiliki nilai signifikansi sebesar $0,000 < 0,05$.

Kesimpulan : Terdapat hubungan nilai Rasio Neutrofil Limfosit (RNL) dengan derajat keparahan COVID-19 pada pasien di RSUD Prof. dr. Margono Soekarjo.

Kata kunci : COVID-19, Derajat Keparahan, Rasio Neutrofil Limfosit (RNL)

**CORRELATION BETWEEN NEUTROPHIL-LYMPHOCYTE RATIO
WITH THE SEVERITY OF COVID-19 PATIENTS IN HOSPITAL
PROF. DR. MARGONO SOEKARJO**

ABSTRACT

Background: Corona Virus or Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV2) or better known as COVID 19 is a corona virus that can cause disorders of the respiratory system, acute pneumonia, to death. Cases of SAR-COV-2 infection in Indonesia reached 4,229,813 people with 142,763 deaths. The severity of COVID-19 is divided into 4 categories, namely mild, moderate, severe and critical. Identification of the severity can be done by examining inflammatory markers, namely the neutrophil lymphocyte ratio (NLR).

Objective: To know the correlation between the neutrophil lymphocyte ratio and the severity of COVID-19 patients in Hospital Prof. Dr. Margono Soekarjo.

Method: This research is an analytic observational study with a cross sectional approach. The research subjects were obtained using the consecutive sampling method as many as 142 patients according to the inclusion and exclusion criteria. Normality test with Kolmogorov Smirnov and analyzed using the Kruskal Wallis test.

Result: The results of research showed that 79 patients (55,6%) were male and 63 patients (44,4%) were female. Age group 18-60 years 113 patients (79,6%) and >60 years 29 patients (20,4%). A moderate severity was 95 (66.9%), a severe degree was 41 (28.9%), and a critical degree was 6 (4.2%). The average NLR value in COVID-19 patients with a moderate severity was 5.40, a severe degree was 18.77 and a critical degree was 32.37. The Kruskal Wallis nonparametric test has a significance value of 0.000 <0.05.

Conclusion: There is a correlation between Neutrophil Lymphocyte Ratio (NLR) value and the severity of COVID-19 patients in Hospital Prof. Dr. Margono Soekarjo.

Keywords: COVID-19, Severity, Neutrophil Lymphocyte Ratio (NLR)