

**POLITEKNIK KESEHATAN TANJUNG KARANG**  
**PROGRAM STUDI SARJANA TERAPAN**  
Skripsi, Juni 2022

Tetty Rohani Sinurat

**Perbandingan Jumlah Neutrofil, Jumlah Limfosit dan  
*Neutrophil to Lymocyte Ratio (NLR)* pada Pasien COVID-19 Derajat  
Ringan, Sedang dan Berat di RSUD Ragab Begawe Caram Kabupaten  
Mesuji Tahun 2021**

xiv + 33 halaman, 10 gambar, 3 tabel dan 5 lampiran

**ABSTRAK**

*Coronavirus disease* 2019 (COVID-19) adalah penyakit baru yang menggemparkan dunia pada Desember 2019 yang kemudian menyebar luas di dunia. Berdasarkan gejala klinisnya, COVID-19 dibedakan menjadi tanpa gejala, gejala ringan, sedang, berat dan kritis. COVID-19 disebabkan oleh virus SARS-CoV-2. Limfosit merupakan sel utama yang berperan dalam proses imunitas tubuh. Neutrofil berperan penting dalam proses fagositosis yaitu menyerang dan menghancurkan mikroba patogen. Peningkatan NLR dapat merefleksikan proses inflamasi yang meningkat dan prognosis yang buruk. Penelitian ini bertujuan untuk menghitung adanya perbandingan jumlah neutrofil, jumlah limfosit dan NLR pada pasien COVID-19 derajat ringan, sedang dan berat di Rumah Sakit Umum Daerah Ragab Begawe Caram tahun 2021. Penelitian ini adalah penelitian observasional dengan rancangan *cross-sectional*. Analisa data dilakukan dengan uji Kruskal walis. Penelitian dilakukan di RSUD Ragab Begawe Caram pada bulan Februari-Maret 2022. Sampel penelitian ini adalah rekam medik 232 pasien positif COVID-19 yang melakukan pemeriksaan darah rutin dan berusia > 18 tahun. Hasil analisa data menunjukkan bahwa terdapat perbedaan bermakna antara jumlah neutrofil yang dibandingkan derajat keparahan dengan p value 0,000. Terdapat perbedaan bermakna antara jumlah limfosit yang dibandingkan derajat keparahan dengan p value 0,003 dan terdapat perbedaan bermakna antara NLR yang dibandingkan derajat keparahan dengan p value 0,000.

Kata kunci : COVID-19, Neutrofil, Limfosit, NLR  
Daftar Bacaan : 30 (2020-2021)

# **TANJUNG CORAL HEALTH POLYTECHNIC**

## **APPLIED UNDERGRADUATE STUDY PROGRAM**

Thesis, June 2022

Tetty Rohani Sinurat

Comparison of Neutrophil Count, Lymphocyte Count and Neutrophil to Lymphocyte Ratio (NLR) in Mild, Moderate and Severe COVID-19 Patients at Ragab Begawe Caram Hospital, Mesuji Regency in 2021

xiv + 33 pages, 10 pictures, 3 tables and 5 appendices

### **ABSTRACT**

Coronavirus disease 2019 (COVID-19) is a new disease that took the world by storm in December 2019 which then spread widely in the world. Based on clinical symptoms, COVID-19 is divided into asymptomatic, mild, moderate, severe and critical symptoms. COVID-19 is caused by the SARS-CoV-2 virus. Lymphocytes are the main cells that play a role in the body's immune process. Neutrophils play an important role in the phagocytosis process, namely attacking and destroying pathogenic microbes. Elevated NLR may reflect an increased inflammatory process and poor prognosis. This study aims to calculate the comparison of the number of neutrophils, lymphocyte counts and NLR in mild, moderate and severe COVID-19 patients at the Ragab Begawe Caram Regional General Hospital in 2021. This study was an observational study with a cross-sectional design. Data analysis was carried out with the Kruskal walis test. The study was conducted at the Ragab Begawe Caram Hospital in February-March 2022. The sample of this study was the medical records of 232 positive COVID-19 patients who had routine blood tests and were > 18 years old. The results of data analysis showed that there was a significant difference between the number of neutrophils compared to the degree of severity with a p value of 0.000. There is a significant difference between the number of lymphocytes compared to the severity level with a p value of 0.003 and there is a significant difference between the NLR compared to the severity level with a p value of 0.000.

Keywords: COVID-19, Neutrophils, Lymphocytes, NLR  
Reading List : 30 (2020-2021)