

## ABSTRAK

**Latar belakang:** COVID-19 adalah penyakit infeksius yang menyerang saluran pernapasan, disebabkan oleh *severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)*. Sejak pertama kali muncul hingga saat ini, telah terjadi sebanyak 4.056.354 kasus positif dengan kasus meninggal berjumlah 130.781 (data terbaru: 27 Agustus 2021) di Indonesia. Sementara, Dengue adalah penyakit yang terjadi akibat virus Dengue, bertransmisi melalui gigitan nyamuk *Aedes aegypti* dan *Aedes Albopictus*. Nilai NLCR dan PLR pada pasien dengan COVID-19 dan Dengue dapat dijadikan alat diagnosis. Tetapi, belum banyak yang membahas mengenai perbedaan dari NLCR dan PLR pada COVID-19 dan penyakit Dengue.

**Tujuan:** Untuk mengetahui perbedaan NLCR dan PLR pada COVID-19 dan Dengue.

**Hasil:** Dari 64 data yang terkumpul, terdapat 33 (51,56%) pasien COVID-19 dan 31 (48,43%) pasien Dengue. Hasil analisis Mann-Whitney U mendapatkan *p-value* 0,001 ( $p < 0,05$ ). Sehingga terdapat perbedaan yang signifikan antara NLCR dan PLR pada COVID-19 dan Penyakit Dengue.

**Kesimpulan:** Terdapat perbedaan antara NLCR dan PLR pada COVID-19 dan Penyakit Dengue.

**Metode:** Penelitian ini menggunakan desain studi kasus kontrol dengan populasi penelitian penyandang COVID-19 dan Dengue di Siloam Hospitals Lippo Village dan Rumah Sakit Umum Siloam, dengan jumlah minimum 32 orang, dipilih melalui Teknik *random sampling*. Data akan diperoleh dengan pencatatan rekam medis, lalu dicocokkan dengan kriteria inklusi dan eksklui. Jika cocok, maka data akan dijadikan sampel lalu diolah menggunakan program SPSS 25.

**Kata kunci:** COVID-19, Dengue, Neutrofil, Platelet

## **ABSTRACT**

**Background:** COVID-19 is an infectious disease that attacks the respiratory tract, it is caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). Currently, there have been a total of 4.056.354 positive cases and 130.781 deaths (latest data: 27 august 2021) in Indonesia, accumulated since the first case. Meanwhile, Dengue is a disease caused by the Dengue virus which is transmitted through *Aedes aegypti* and *Aedes Albopictus* mosquito bites. The level of NLCR and PLR in patients with COVID-19 and Dengue has a role as a diagnostic tool. However, not much has been discussed regarding the differences between NLCR and PLR in COVID-19 and Dengue.

**Objective:** To determine the differences between the level of NLCR and PLR in COVID-19 and Dengue.

**Results:** Out of 64 patients, there were 33 (51.56%) COVID-19 patients and 31 (48.43%) Dengue patients. Analysis using the Mann-Whitney U test resulted in a p-value of 0.001 ( $p < 0.05$ ). Hence, there is a significant difference between NLCR and PLR in COVID-19 and Dengue.

**Conclusion:** There is a difference between the NLCR and PLR in people with COVID-19 and Dengue.

**Methods:** This study use case control as the study design, and the study population is patients with COVID-19 and Dengue at Siloam Hospital Lippo Village and Siloam General Hospital, with a minimum number of 32 person that is selected through random sampling technique. Data will be obtained by the medical records, then matched with inclusion and exclusion criteria. If it matches, the data will be sampled and processed using the SPSS 25 program.

**Keywords:** COVID-19, Dengue, Neutrophil, Platelet