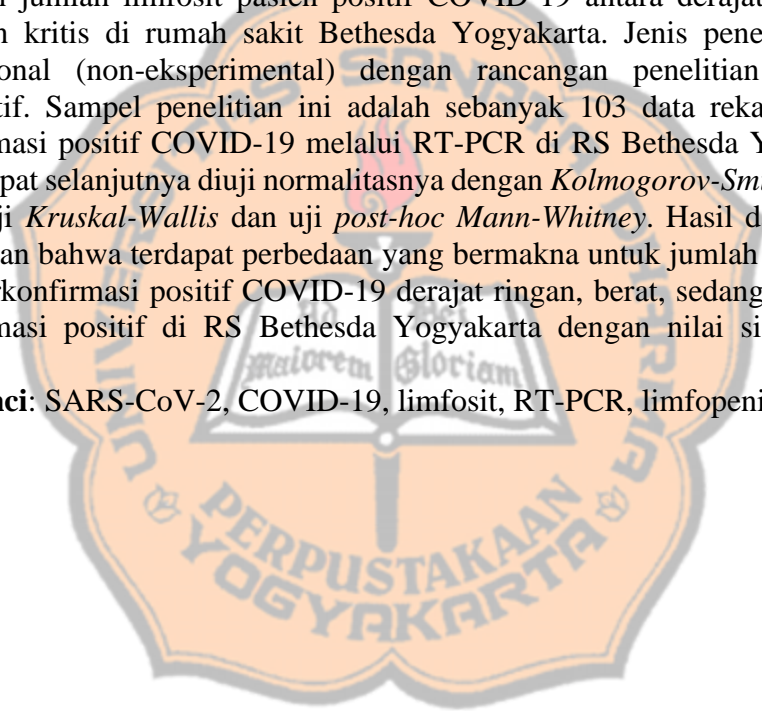


### ABSTRAK

SARS-CoV-2 adalah perkembangan virus SARS baru yang dapat menyebabkan penyakit COVID-19. Penyakit ini ditemukan pertama kali di Wuhan, Provinsi Hubei, China. Secara global, terdapat 2.249.662 jiwa terinfeksi COVID-19 per 18 April. Kemenkes RI mencatat adanya 5.923 kasus infeksi COVID-19 di Indonesia. Pada pasien yang terkonfirmasi positif COVID-19, sekitar 83% pasien mengalami limfopenia. Limfosit adalah salah satu sel imun aktif dalam tubuh manusia, ketika jumlah limfosit menurun, sistem imun akan terganggu sehingga rentan terhadap keparahan penyakit. Infeksi gejala klinis COVID-19 terbagi menjadi: derajat ringan, sedang, berat, dan kritis. Penelitian ini bertujuan untuk mengidentifikasi adanya perbedaan jumlah limfosit pasien positif COVID-19 antara derajat ringan, sedang, berat, dan kritis di rumah sakit Bethesda Yogyakarta. Jenis penelitian ini adalah observasional (non-eksperimental) dengan rancangan penelitian *cross-sectional* retrospektif. Sampel penelitian ini adalah sebanyak 103 data rekam medis pasien terkonfirmasi positif COVID-19 melalui RT-PCR di RS Bethesda Yogyakarta. Data yang didapat selanjutnya diuji normalitasnya dengan *Kolmogorov-Smirnov* dilanjutkan dengan uji *Kruskal-Wallis* dan uji *post-hoc Mann-Whitney*. Hasil dari penelitian ini menyatakan bahwa terdapat perbedaan yang bermakna untuk jumlah limfosit diantara pasien terkonfirmasi positif COVID-19 derajat ringan, berat, sedang, dan kritis yang terkonfirmasi positif di RS Bethesda Yogyakarta dengan nilai signifikansi 0,000 ( $p < 0,05$ ).

**Kata kunci:** SARS-CoV-2, COVID-19, limfosit, RT-PCR, limfopenia.



## ABSTRACT

SARS-CoV-2 is the development of a new SARS virus that can cause the COVID-19 disease. Globally, there were 2,249,662 people infected with COVID-19 as of April 18. The Indonesian Ministry of Health recorded 5,923 cases of COVID-19 infection in Indonesia. In patients who are confirmed positive for COVID-19, approximately 83% of patients have lymphopenia. Lymphocytes are one of the active immune cells in the human body, when the number of lymphocytes decreases, the immune system is compromised, making it susceptible to disease severity. Infection with the clinical symptoms of COVID-19 is divided into: mild, moderate, severe and critical degrees. The aim of this study is to identifying the differences of the positive COVID-19 patient's lymphocytes number between the mild, moderate, severe, and critical degrees in Bethesda Hospital Yogyakarta. This research is observational with retrospective cross-sectional study design. The sample of this study were 103 medical records of patients who were confirmed positive for COVID-19 through RT-PCR at Bethesda Hospital Yogyakarta. The data obtained were tested for normality by Kolmogorov-Smirnov and continued with the Kruskal-Wallis test also the post-hoc test using Mann-Whitney. This research showed that there is a significant difference in the number of lymphocytes between mild, severe, moderate, and critical confirmed COVID-19 patients who were confirmed positive at Bethesda Hospital Yogyakarta with a significance value of 0,000 ( $p < 0,05$ ).

**Keyword:** SARS-CoV-2, COVID-19, lymphocyte, RT-PCR, lymphopenia.

