

**Hubungan kadar awal D-dimer dengan tingkat keparahan penyakit serta lama rawat pada pasien COVID-19 derajat sedang, berat, dan kritis di RSUP Persahabatan pada Januari - Desember 2021 = The Relationship between initial D-dimer levels and disease severity as well as length of hospital stay in moderate, severe, and critical COVID-19 patients at RSUP Persahabatan from January to December 2021**

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## Abstrak

### Latar Belakang

Pandemi COVID-19, yang disebabkan oleh SARS-CoV-2, berdampak global, termasuk di Indonesia, dengan komplikasi utama seperti trombosis terkait peningkatan kadar D-dimer, biomarker pembekuan darah. Kadar D-dimer yang tinggi dikaitkan dengan prognosis buruk, seperti risiko trombosis, lama rawat inap yang lebih lama, dan kematian. Penelitian ini bertujuan mengeksplorasi hubungan antara kadar D-dimer, tingkat keparahan penyakit, dan lama rawat pasien COVID-19 di RSUP Persahabatan.

### Metode

Penelitian ini bersifat observasional-analitis dengan desain potong lintang pada pasien COVID-19 derajat sedang, berat, dan kritis di RSUP Persahabatan, Jakarta, selama Januari–Desember 2021. Data dikumpulkan dari rekam medis dan dianalisis dengan metode consecutive sampling, melibatkan 57 sampel. Penelitian mencakup pengukuran kadar D-dimer, tingkat keparahan penyakit, dan lama rawat inap. Analisis data dilakukan menggunakan SPSS 25.0 dengan uji univariat dan bivariat, termasuk uji Chi-square atau Fisher's exact untuk memeriksa hubungan antarvariabel.

### Hasil

Hasil penelitian ini menunjukkan bahwa tidak ada hubungan signifikan antara kadar D-dimer awal dengan tingkat keparahan COVID-19 ( $p=0,364$ ), meskipun subjek dengan kadar D-dimer 500 ng/mL lebih banyak mengalami kondisi sedang dan berat. Di sisi lain, kadar D-dimer yang lebih tinggi (500 ng/mL) berhubungan dengan durasi rawat inap yang lebih lama (14 hari) dengan  $p=0,044$ , menunjukkan perbedaan signifikan antara kadar D-dimer dan lama rawat inap pasien COVID-19.

### Kesimpulan

Penelitian ini menunjukkan bahwa tidak ada hubungan signifikan antara kadar D-dimer awal dengan tingkat keparahan COVID-19 ( $p=0,364$ ), namun kadar D-dimer 500 ng/mL berhubungan dengan durasi rawat inap yang lebih lama (14 hari) ( $p=0,044$ ).

### .....Introduction

The COVID-19 pandemic, caused by SARS-CoV-2, has had a global impact, including in Indonesia, with major complications such as thrombosis associated with elevated D-dimer levels, a biomarker of blood coagulation. High D-dimer levels are linked to poor prognosis, including the risk of thrombosis, prolonged hospital stays, and mortality. This study aims to explore the relationship between D-dimer levels, disease severity, and length of hospitalization in COVID-19 patients at RSUP Persahabatan.

### Method

This study is an observational-analytical research with a cross-sectional design conducted on COVID-19

patients with moderate, severe, and critical conditions at RSUP Persahabatan, Jakarta, from January to December 2021. Data were collected from medical records and analyzed using consecutive sampling methods, involving 57 samples. The study includes measurements of D-dimer levels, disease severity, and length of hospitalization. Data analysis was performed using SPSS 25.0 with univariate and bivariate tests, including Chi-square or Fisher's exact tests to examine the relationships between variables.

### Results

The results of this study indicate that there is no significant relationship between initial D-dimer levels and the severity of COVID-19 ( $p=0.364$ ), although subjects with D-dimer levels 500 ng/mL were more likely to experience moderate and severe conditions. On the other hand, higher D-dimer levels (500 ng/mL) are associated with longer hospital stays (14 days) with a p-value of 0.044, indicating a significant difference between D-dimer levels and the duration of hospitalization in COVID-19 patients.

### Conclusion

This study shows that there is no significant relationship between initial D-dimer levels and COVID-19 severity ( $p=0.364$ ), but D-dimer levels 500 ng/mL are associated with longer hospital stays (14 days) ( $p=0.044$ ).