

## Perbandingan Sensitivitas dan Spesifisitas Uji Serologi Dan PCR Dalam Mendeteksi SARS-CoV-2 = Comparison Of Test Sensitivity And Specifity Serology And PCR In Detecting SARS-CoV-2

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### Abstrak

Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) merupakan coronavirus baru, pertama kali terdeteksi di Wuhan, Cina. Tingginya jumlah kasus dan cepatnya proses infeksi membutuhkan deteksi cepat dan akurat untuk menegakan diagnosis COVID-19. Studi bertujuan memperoleh sensitivitas dan spesifisitas uji serologi IgG SARS-CoV-2 Architect dibandingkan dan RT-PCR pada pasien COVID19. Studi ini menggunakan pendekatan potong lintang uji diagnostik, dengan menggunakan 128 pasien yang diperoleh di RSUP Persahabatan. Studi ini berlangsung sejak bulan April sampai Juli 2021 di RSUP Persahabatan. Sampel berupa swab nasofaring diambil dari pasien untuk diperiksa dengan uji RT PCR dan darah untuk uji serologi menggunakan Architect® i2000SR Abbott. Hasil uji sensitivitas Architect sebesar 27.37% (18.72%-37,48%) dan spesifisitas 63.64% (45,12% - 79,60%). NPV 23,33% dan PPV 68,42%. Kesimpulan: Secara keseluruhan uji serologi SARS-CoV-2 IgG Architect memiliki sensitivitas dan spesifisitas yang rendah dibanding dengan RTPCR. Architect dapat digunakan untuk screening, dapat digunakan pada fase akut, hasil negatif perlu dikonfirmasi dengan RT-PCR. Tidak ada hubungan antara Ct-value RTPCR dengan derajat keparahan COVID-19, dan terdapat hubungan antara titer Architect dengan derajat keparahan COVID-19. Tidak ada hubungan onset COVID-19 dengan hasil pemeriksaan RT-PCR dan Architect

.....Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is a new coronavirus, which was first detected in Wuhan, China. The high number of cases and the rapid process of infection require fast and accurate detection to establish the diagnosis of COVID-19. The study aimed to obtain the sensitivity and specificity of the SARS-CoV2 Architect IgG serological test compared to RT-PCR in COVID-19 patients. This study used a cross-sectional approach to diagnostic testing, using 128 patients obtained from Persahabatan Hospital. This study took place from April 2021 to July 2021 at the Persahabatan Hospital. Nasopharyngeal swab samples were taken for RT-PCR and blood was drawn for serological testing using the Architect® i2000SR from Abbott. The sensitivity of Architect test was 27.37% (18.72–37.48%), specificity was 63.64% (45.12–79.60%), whereas NPV was 23.33% and PPV was 68.42%. Conclusion: Architect's SARS-CoV-2 IgG serological test has low sensitivity and specificity compared to RT-PCR. Architect can be used for screening, can be used in the acute phase, negative results need to be confirmed by RT-PCR. There is no relationship between the Ct-value RT-PCR and the severity of COVID-19, and there is a relationship between Architect titers and the severity of COVID-19. There is no relationship between the onset of COVID-19 and the results of the RT-PCR and Architect examinations.