

**AKURASI DIAGNOSTIK *RAPID DIAGNOSTIC TEST*
METODE DETEKSI ANTIBODI DALAM MENDETEKSI
CORONAVIRUS DISEASE 2019
SYSTEMATIC REVIEW**

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Abstrak

Coronavirus disease 2019 (COVID-19) merupakan suatu penyakit infeksi saluran pernapasan yang disebabkan oleh coronavirus jenis baru yakni *Severe Acute Respiratory Syndrome-Coronavirus-2 (SARS-CoV-2)*. Transmisi COVID-19 sangat cepat, sehingga dibutuhkan metode deteksi yang akurat, cepat dan terjangkau. *Rapid Diagnostic Test (RDT)* dinilai sebagai alat yang praktis dalam deteksi COVID-19, khususnya pada masa pandemi seperti ini. Penelitian bertujuan untuk mengetahui akurasi diagnostik RDT berbasis antibodi dalam mendeteksi COVID-19, meliputi sensitivitas, spesifisitas, *Positive Predictive Value (PPV)* dan *Negative Predictive Value (NPV)*. Desain penelitian berupa *systematic review* dengan data gabungan (*pooled data*). Pencarian literatur dilakukan pada empat *database* jurnal berbeda menggunakan metode *Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols (PRISMA-P) 2015* yang mencakup artikel dari bulan Januari hingga Agustus 2020. Dua puluh empat studi memenuhi kriteria inklusi. Hasil penelitian menunjukkan bahwa alat RDT memiliki sensitivitas dan NPV paling tinggi pada metode deteksi IgM atau IgG yakni 72.42% (95% CI, 71.15-73.67%) dan 73.30% (95% CI, 72.39-74.19%). Metode deteksi IgG memiliki spesifisitas dan PPV paling tinggi yakni 96.70% (95% CI, 96.13-97.21%) dan 95.75% (95% CI, 95.04-96.36%). Berdasarkan akurasi diagnostiknya, RDT tidak disarankan sebagai alat diagnostik utama, namun memiliki manfaat dalam surveilans serologi.

Kata Kunci: COVID-19, *Rapid Diagnostic Test*, akurasi diagnostik

**DIAGNOSTIC ACCURACY OF ANTIBODY-BASED RAPID
DIAGNOSTIC TEST IN DETECTING CORONAVIRUS
DISEASE 2019
SYSTEMATIC REVIEW**

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Abstract

Coronavirus disease 2019 (COVID-19) is a respiratory tract infection caused by a new type of coronavirus, Severe Acute Respiratory Syndrome-Coronavirus-2 (SARS-CoV-2). A fast, accurate, and affordable diagnostic method is needed to overcome its rapid transmission. Rapid Diagnostic Test (RDT) is considered a practical test kit in this pandemic situation. The purpose of this study was to determine the diagnostic accuracy of antibody detection RDTs in detecting COVID-19, which includes sensitivity, specificity, Positive Predictive Value (PPV), and Negative Predictive Value (NPV). This is a systematic review with a pooled data analysis. Data was collected through literature searches on four different databases using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols (PRISMA-P) 2015. This systematic review included all relevant articles from January-August 2020. Twenty-four studies met the inclusion criteria. The results showed that the IgM or IgG detection method had the highest sensitivity and NPV of 72.42% (95% CI, 71.15-73.67%) and 73.30% (95% CI, 72.39-74.19%), respectively. The IgG detection method had the highest specificity and PPV of 96.70% (95% CI, 96.13-97.21%) and 95.75% (95% CI, 95.04-96.36%), respectively. Based on the diagnostic accuracy, RDT is not recommended as a primary diagnostic test, but it has utilities in screening and serological surveillance.

Keyword: COVID-19, Rapid Diagnostic Test, diagnostic accuracy