

# Perbandingan uji multiplex nested polymerase chain reaction treponema pallidum pada darah dan serum pasien dengan gambaran klinis sifilis sekunder = Comparative test of multiplex nested polymerase chain reaction treponema pallidum between blood and serum from patient with clinical features of secondary syphilis

Ida Effendi, author

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## Abstrak

### <b>ABSTRAK</b><br>

Sifilis merupakan penyakit multistadium yang ditularkan terutama melalui hubungan seksual. Saat ini penggunaan uji polymerase chain reaction (PCR) untuk *Treponema pallidum* telah banyak digunakan dan diharapkan mampu mengurangi masalah dalam uji diagnostik sifilis. Hasil uji PCR *Treponema pallidum* dipengaruhi oleh jenis spesimen, metode PCR dan gen target. Penelitian ini ditujukan untuk menilai penggunaan darah dan serum untuk uji multiplex nested PCR dengan gen target 23S rRNA *Treponema pallidum*. Studi potong lintang dilakukan dari bulan April 2015 - April 2016. Pengambilan sampel secara konsekutif dari pasien dengan gambaran klinis sifilis sekunder yang datang ke poliklinik Infeksi Menular Seksual (IMS) di Jakarta. Uji PCR dilakukan terhadap 122 spesimen klinis (61 darah dan 61 serum). Uji serologi rapid plasma reagin (RPR) dan *Treponema pallidum* Haemagglutination Assay (TPHA) dilakukan pada semua serum. Hasil positif uji PCR darah sebesar 22,95% dan serum sebesar 6,56%, sedangkan hasil positif uji serologi sebesar 68,85%. Pada hasil uji serologi positif, proporsi hasil positif uji multiplex nested PCR *Treponema pallidum* darah sebesar 30,95% dibandingkan serum 9,52%. Uji PCR terhadap darah mampu mendeteksi 3,25 kali lebih tinggi daripada serum. Penggunaan darah memberikan nilai kepositivan yang lebih tinggi dibandingkan serum pada uji multiplex nested PCR *Treponema pallidum* menggunakan gen target 23S rRNA

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### <b>ABSTRACT</b><br>

Syphilis is a multistage disease transmitted primarily through sexual intercourse. Nowadays, polymerase chain reaction (PCR) test for *Treponema pallidum* has been widely used and expected to overcome problems in diagnostic test for syphilis. The PCR *Treponema pallidum* are influenced by type of specimens, PCR methods and gene targets. This study is aim to assess the use of blood and serum using multiplex nested PCR *Treponema pallidum* targeting 23S rRNA. Cross-sectional study was conducted from April 2015 - April 2016. Sampling was carried out consecutively from patients with clinical features of secondary syphilis who came to sexual transmitted infection (STI) clinics in Jakarta. PCR test performed on 122 clinical specimen ( 61 blood and 61 serum). All serum were tested with RPR and TPHA assay. The positive results of PCR test on blood was 22,95% and serum was 6,56%, while the positive results of serology was 68,85%. On positive serological test results, the proportion of positive results of multiplex nested PCR *Treponema pallidum* on blood was 30,95% compared to serum 9,52%. PCR test on blood is able to detect 3,25 times higher than serum. The use of blood give a higher positivity compared to serum in multiplex nested PCR *Treponema pallidum* using 23S rRNA gene target.