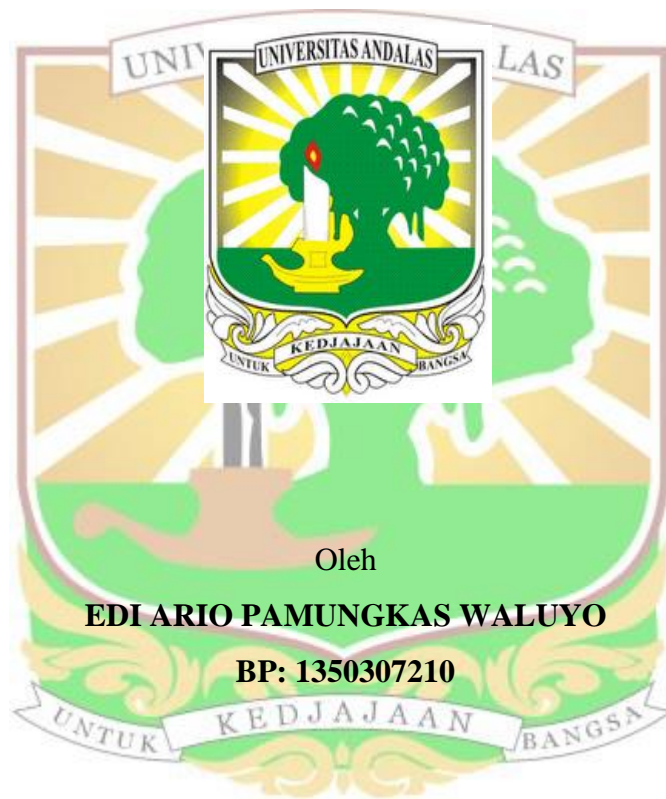


**KORELASI KADAR KREATININ KAPILER METODE *SUBSTRATE-SPECIFIC ELECTRODE* DENGAN KREATININ SERUM METODE ENZIMATIK PADA PASIEN PENYAKIT GINJAL KRONIK**

**TESIS**



**PROGRAM PENDIDIKAN DOKTER SPESIALIS 1  
PATOLOGI KLINIK FK UNAND/RSUP DR. M. DJAMIL PADANG  
2017**

**KORELASI KADAR KREATININ KAPILER METODE *SUBSTRATE-SPECIFIC ELECTRODE* DENGAN KREATININ SERUM METODE ENZIMATIK PADA PASIEN PENYAKIT GINJAL KRONIK**

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**Tesis ini diajukan untuk memenuhi syarat guna memperoleh gelar Dokter Spesialis Patologi Klinik Program Pendidikan Dokter Spesialis 1**

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# KORELASI KADAR KREATININ KAPILER METODE *SUBSTRATE-SPECIFIC ELECTRODE* DENGAN KREATININ SERUM METODE ENZIMATIK PADA PASIEN PENYAKIT GINJAL KRONIK

## ABSTRAK

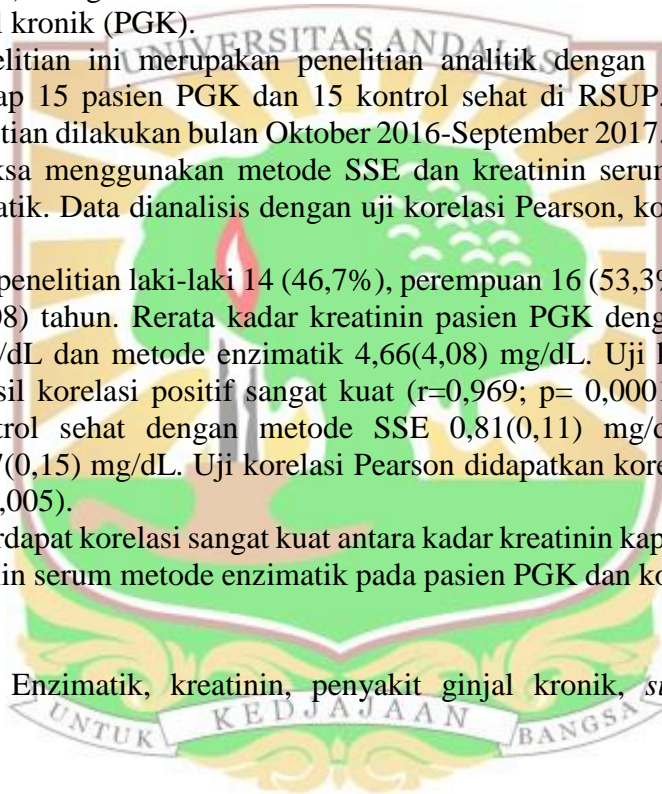
**Latar Belakang:** Kreatinin merupakan penanda paling mudah untuk mengetahui fungsi ginjal. Metode yang selama ini sering digunakan adalah enzimatik yang membutuhkan *turn around time* (TAT) lama. Metode pemeriksaan kreatinin secara *point of care testing* (POCT) merupakan pemeriksaan yang mudah dan cepat sehingga dapat memantau keadaan fungsi ginjal. Penelitian ini bertujuan untuk mengetahui korelasi kadar kreatinin kapiler metode *creatinine substrate-specific electrode* (SSE) dengan kadar kreatinin serum metode enzimatik pada pasien penyakit ginjal kronik (PGK).

**Metode:** Penelitian ini merupakan penelitian analitik dengan rancang potong lintang terhadap 15 pasien PGK dan 15 kontrol sehat di RSUP. Dr. M. Djamil Padang. Penelitian dilakukan bulan Oktober 2016-September 2017. Kadar kreatinin kapiler diperiksa menggunakan metode SSE dan kreatinin serum menggunakan metode enzimatik. Data dianalisis dengan uji korelasi Pearson, korelasi bermakna jika  $p < 0,05$ .

**Hasil:** Subjek penelitian laki-laki 14 (46,7%), perempuan 16 (53,3%) dengan rerata umur 47 (17,08) tahun. Rerata kadar kreatinin pasien PGK dengan metode SSE 5,44(3,78) mg/dL dan metode enzimatik 4,66(4,08) mg/dL. Uji korelasi Pearson didapatkan hasil korelasi positif sangat kuat ( $r=0,969$ ;  $p= 0,0001$ ). Rerata kadar kreatinin kontrol sehat dengan metode SSE 0,81(0,11) mg/dL dan metode enzimatik 0,67(0,15) mg/dL. Uji korelasi Pearson didapatkan korelasi positif kuat ( $r=0,688$ ;  $p= 0,005$ ).

**Simpulan:** Terdapat korelasi sangat kuat antara kadar kreatinin kapiler metode SSE dengan kreatinin serum metode enzimatik pada pasien PGK dan korelasi kuat pada kontrol sehat.

**Kata Kunci:** Enzimatik, kreatinin, penyakit ginjal kronik, *substrate-specific electrode*.



# **CORRELATION OF CREATININE CAPILLARY SUBSTRATE-SPECIFIC ELECTRODE METHOD WITH CREATININE SERUM ENZYMATIC METHOD LEVELS IN CHRONIC KIDNEY DISEASE PATIENTS**

## **ABSTRACT**

**Background:** Creatinine is the easiest marker to know kidney function. The method that is often used is enzymatic that requires long turn around time (TAT) The method of creatinine examination by point of care testing (POCT) is an easy and quick examination so it can monitor the state of kidney function. The aims of this study to determine the correlation of creatinine capillary substrate-specific electrode (SSE) method with creatinine serum enzymatic method levels in patients with chronic kidney disease (CKD).

**Methods:** This was an analytical study with cross sectional design on 15 CKD patients and 15 healthy controls in RSUP. Dr. M. Djamil Padang. The study was conducted in October 2016-August 2017. Capillary creatinine levels were examined using SSE methods and serum creatinine using enzymatic methods. Data were analyzed by Pearson correlation test. Correlation significant if  $p < 0.05$ .

**Results:** The subjects of the study were 14 male (46,7%) and 16 female (53,3%) with mean age 47 (17,08) years. Mean of CKD patient creatinine levels with SSE method 5,44 (3,78) mg/dL and enzymatic method 4,66 (4,08) mg/dL. Pearson correlation test obtained a very strong positive correlation ( $r=0.969$ ;  $p=0.0001$ ). The mean creatinine levels of healthy control with SSE method 0.81 (0.11) mg/dL and enzymatic method 0.67 (0.15) mg/dL. Pearson correlation test obtained strong positive correlation ( $r = 0.688$ ;  $p = 0.005$ ).

**Conclusion:** There is a very strong correlation between capillary creatinine levels of SSE method with serum creatinine enzymatic method in CKD patients and strong correlation in healthy control.

**Keywords:** Enzymatic, creatinine, chronic kidney disease, substrate-specific electrode.

