

DAFTAR PUSTAKA

1. Sardjito R. Human Immunodeficiency Virus (HIV). Dalam: Staf Pengajar Fakultas Kedokteran Universitas Indonesia. Buku Ajar Mikrobiologi Kedokteran. Jakarta: Binarupa Aksara; 2008. p. 397-412.
2. Komisi Penanggulangan AIDS Indonesia. Info HIV dan AIDS [internet]. Jakarta; c2012-2013 [diakses 18 November 2013]. Dari: <http://www.aidsindonesia.or.id/contents/37/78/Info-HIV-dan-AIDS#sthash.BudXf6LH.dpbs>
3. Knoll B, Lassmann B, Temesgen Z. Current Status of HIV infection: A review for non HIV-treating physicians. *Int J of Dermatol*. 2007; 46:1219-28.
4. UNAIDS. Global Report: State of epidemic. The global epidemic at glance. Geneva: UNAIDS; 2013.
5. Direktorat Jenderal PP dan PL Kementerian Kesehatan RI. Laporan Situasi Perkembangan HIV/AIDS di Indonesia s.d. September 2013. Jakarta (Indonesia); 2013.
6. Hall AM, Hendry BM, Nitsch D, Conolly JO. Tenofovir-Associated Kidney Toxicity in HIV- infected Patients: A review of the evidence. *American Journal of Kidney Diseases*. 2011; 57(5): 773-80.
7. Wyatt CM, Klotman PE. Antiretroviral therapy and the kidney: balancing benefit and risk in patients with HIV infection. *Expert Opin Drug Saf*. 2006; 5:275–87.
8. Roling J, Schmid H, Fischereder M, Draenert R, Goebel FD. HIV-associated renal diseases and highly active antiretroviral therapy-induced nephropathy. *J Clin Infect Dis*. 2006; 42:1488–95.
9. Gallant JE, Staszewski S, Pozniak AL, DeJesus E, Suleiman JM, Miller MD, et al. Efficacy and safety of tenofovir DF vs stavudine in combination therapy in antiretroviral-naive patients: a 3-year randomized trial. *JAMA*. 2004; 292:191–201.

10. Gallant JE, DeJesus E, Arribas JR, Pozniak AL, Gazzard B, Campo RE, et al. Tenofovir DF, emtricitabine, and efavirenz vs zidovudine, lamivudine, and efavirenz for HIV. *N Engl J Med*. 2006; 354:251–60.
11. Cooper RD, Wiebe N, Smith N, Keiser P, Naicker S, Tonelli M. Systematic review and meta-analysis: renal safety of tenofovir disoproxil fumarate in HIV-infected patients. *J Clin Infect Dis*. 2010; 51: 496–505.
12. Castellano C, Williams W, Kepler TB, Kim S, Szczech L, Eron K, et al. Clinical predictors of tenofovir-associated nephrotoxicity in HIV-1-infected patients. XVII International AIDS Conference (AIDS 2008). Mexico City. August 3-8, 2008.
13. Guyton, Arthur C, Hall, John E. Buku Ajar Fisiologi Kedokteran. Edisi 11. Jakarta : Penerbit Buku Kedokteran EGC; 2007. p. 307-65.
14. Scherzer R, Estrella M, Li Y, Choi AI, Deeks SG, Grunfeld C, et al. Association of tenofovir exposure with kidney disease risk in HIV infection. *AIDS*. 2012 Apr 24;26(7):867-75
15. Young J, Schäfer J, Fux CA, Furrer H, Bernasconi E, Vernazza P, et al. Renal function in patients with HIV starting therapy with tenofovir and either efavirenz, lopinavir or atazanavir. *AIDS*. 2012 Mar 13;26(5):567-75.
16. Brennan A, Evans D, Maskew M, Naicker S, Ive P, Sanned I, et al. Relationship between renal dysfunction, nephrotoxicity and death among HIV adult on tenofovir. *Wolter Kluwer Health/AIDS* 2011; 25(13): 1603-9.
17. Labarga P, Barreiro P, Martin-Carbonero L, Rodriguez-Novoa S, Solera C, Medrano J, et al. Kidney tubular abnormalities in the absence of impaired glomerular function in HIV patients treated with tenofovir. *AIDS*. 2009 Mar 27;23(6):689-96.
18. World Health Organization. HIV/AIDS: Online Q&A [internet]. c2013 [diakses 23 November 2013].
Dari:<http://www.who.int/features/qa/71/en/index.html>

19. Centers for Disease Control Prevention. HIV/AIDS: About HIV/AIDS [internet]. c2013 [diakses 23 November 2013]. Dari: <http://www.cdc.gov/hiv/basics/whatishiv.html>
20. Djoerban Z, Djauzi S. HIV/AIDS di Indonesia. Dalam: Sudoyo Aru W, editor. Buku Ajar Ilmu Penyakit Dalam. Jilid III. Edisi 5. Jakarta : Interna Publishing ;2009. p. 2861-70.
21. Fauci AS, Lane HC. Human Immunodeficiency Virus Disease: AIDS and Related Disorder. In: Longo DL, Fauci AS, Kasper DL, Hauser SL, Jameson JL, Localz J, editor. Harrison Principles of Internal Medicine. Jilid I. Edisi 18. New York : Mc Graw Hill Medical; 2012 p. 1506-87.
22. AIDS dan Lentivirus. In: Brooks GF, Butel JS, Morse SA, editor. Jawetz, Melnick, & Adelberg Mikrobiologi Kedokteran. Edisi 23. Jakarta: Penerbit Buku Kedokteran EGC; 2008. p. 617-33.
23. The Institute of Tropical Medicine [Internet]. Antwerp: The Institute of Tropical Medicine; c2013 [diakses 30 November 2013]. Dari: http://www.itg.be/internet/elearning/written_lecture_eng/1_hiv_structure.html
24. Kuby, Thomas T. The HIV viral structure [Internet]. Dari: <http://www.kon.org/urc/v6/moghalu.html>
25. UNAIDS. Core Epidemiology Slides. Global summary of the AIDS epidemic 2012. Geneva: UNAIDS; 2013.
26. Dinas Kesehatan Provinsi Jawa Tengah. Profil Kesehatan Provinsi Jawa Tengah 2012. Semarang; 2013.
27. Acquired Immunodeficiency syndrome (AIDS). Dalam: Subowo. Imunologi klinik. Edisi 2. Jakarta : Sagung Seto; 2013. p. 56-90.
28. Yayasan Spiritia. Siklus hidup HIV [Internet]. Jakarta :Yayasan Spiritia ; c2013 [diakses 30 November 2013]. Dari: <http://spiritia.or.id/li/bacali.php?lino=400>
29. HIV dan AIDS. Dalam: Price SA, Wilson LM. Patofisiologi: Konsep Klinis Proses-Proses Penyakit. jilid I. Edisi 6. Jakarta: Penerbit Buku Kedokteran EGC; 2013. p. 224-46.

30. Sofro MAU, Anurogo D. Diagnosa dan Terapi HIV/AIDS. Dalam: Wee D, editor. 5 Menit Memahami 55 Problematika Kesehatan. Jogjakarta: D-Medika; 2013. p. 126-32.
31. Gallant JE, Deresinski S. Tenofovir disoproxil fumarate. *J Clinical Infectious Diseases*. 2003; 37(7):944-50.
32. Hostetler KY. Alkoxyalkyl prodrugs of acyclic nucleoside phosphonates enhance oral antiviral activity and reduce toxicity: current state of the art. *J Antiviral Research*. 2009; 82(2):A84-98.
33. Birkus G, Hitchcock MJM, Cihlar T. Assessment of mitochondrial toxicity in human cells treated with tenofovir: comparison with other nucleoside reverse transcriptase inhibitors. *J Antimicrobial Agents and Chemotherapy*. 2002; 46(3):716-23.
34. Belongia EA, Costa J, Garen IF. NIH consensus development statement on management of hepatitis B. *NIH Consens State Sci Statements*. 2008;24:1-29.
35. Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the Use of Antiretroviral Agents in HIV-1 Infected Adults and Adolescents, 2011, <http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf>.
36. Rodriguez-Nvoa S, Alvarez E, Labarga P, Soriano V. Renal toxicity associated with tenofovir use. *Expert Opinion on Drug Safety*. 2010; 9(4):545-59.
37. Nelson M R, Katlama C, Montaner J S, Cooper DA, Gazzard B, Clotet B, et al. The safety of tenofovir disoproxil fumarate for the treatment of HIV infection in adults: the first 4 years. *JAIDS*. 2007; 21(10):1273-81.
38. Goicoechea M, Liu S, Best B, Sun S, Jain S, Kemper C, et al. Greater tenofovir associated renal function decline with protease inhibitor based versus nonnucleoside reverse-transcriptase inhibitor based therapy. *Journal of Infectious Diseases*. 2008; 197(1):102-108.

39. Ray AS, Cihlar T, Robinson KL, Tong L, Vela JE, Fuller MD, et al. Mechanism of active renal tubular efflux of tenofovir. *Antimicrobial Agents and Chemotherapy*. 2006; 50(10):3297–304.
40. Gallant JE, Parish MA, Keruly JC, Moore RD. Changes in renal function associated with tenofovir disoproxil fumarate treatment, compared with nucleoside reverse transcriptase inhibitor treatment. *Clinical Infectious Diseases*, 2005;40(8):1194-8.
41. Fernandez BF, Ferrer AM, Sanz Ab, Nino MDS, Izquiere MC, Poveda J, et al. Tenofovir Nephrotoxicity: 2011 Update. *AIDS Research and Treatment*. 2011; 2011:354908.
42. Karras A, Lafaurie M, Furco A, Bourgarit A, Droz D, Sereni D, et al. Tenofovir-related nephrotoxicity in human immunodeficiency virus-infected patients: three cases of renal failure, fanconi syndrome, and nephrogenic diabetes insipidus. *Clinical Infectious Diseases*. 2003; 36(8):1070-3.
43. James CW, Steinhaus MC, Szabo S, Dressier RM. Tenofovir-Related nephrotoxicity: case report and review of the literature. *Pharmacotherapy*, 2004; 24(3):415-8.
44. Izzedine H, Isnard-Bagnis C, Hulot JS, Vittecoq D, Cheng A, Jais CK, et al. Renal safety of tenofovir in HIV treatment-experienced patient. NCBI [internet]. 2004 [diakses 30 November 2013]; 18(7):1074-6. Dari: <http://www.ncbi.nlm.nih.gov/pubmed/15096814>
45. Herlitz LC, Mohan S, Stokes MB, Radhakrishnan J, D'Agati VD, Markowitz GS. Tenofovir nephrotoxicity: acute tubular necrosis with distinctive clinical, pathological, and mitochondrial abnormalities. *Kidney International*. 2010; 78(11):1171-7.
46. Lebrecht D, Venhoff AC, Kirschner J, Wiech T, Venhoff N, Walker UA. Mitochondrial tubulopathy in tenofovir disoproxil fumarate-treated rats. *Journal of Acquired Immune Deficiency Syndromes*. 2009; 51(3):258-63.

47. Libório AB, Andrade L, Pereira LV, Sanches TR, Shimizu MH, Seguro AC. Rosiglitazone reverses tenofovir-induced nephrotoxicity. *Kidney International*. 2008; 74(7):910-8.
48. Cihlar T, Laflamme G, Fisher R, Carey AC, Vela JE, Mackman R, et al. Novel nucleotide human immunodeficiency virus reverse transcriptase inhibitor GS-9148 with a low nephrotoxic potential: characterization of renal transport and accumulation. *Antimicrobial Agents and Chemotherapy*. 2009; 53(1):150-6.
49. Kohler JJ, Hosseini SH, Hoying-Brandt A, Green E, Johnson DM, Russ R. et al. Tenofovir renal toxicity targets mitochondria of renal proximal tubules. *Laboratory Investigation*. 2009; 89(5):513-9.
50. de la Prada FJ, Prados AM, Tugores A, Uriol M, Saus C, Morey A. Acute renal failure and proximal renal tubular dysfunction in a patient with acquired immunodeficiency syndrome treated with tenofovir. *Nefrologia*. 2006; 26:626-30.
51. Malik A, Abraham P, Malik N. Acute renal failure and Fanconi syndrome in an AIDS patient on tenofovir treatment case report and review of literature. *J Infect*. 2005; 51(2):E61-65.
52. Peyrière H, Reynes J, Rouanet I, Daniel N, de Boever CM, Mauboussin JM, et al. Renal tubular dysfunction associated with tenofovir therapy: report of 7 cases. *J Acquir Immune Defic Syndr*. 2004; 35(3):269-73.
53. Quimby D, Brito MO. Fanconi syndrome associated with use of tenofovir in HIV-infected patients: a case report and review of the literature. *AIDS Read*. 2005; 15(7):357-64.
54. Rifkin BS, Perazella MA. Tenofovir-associated nephrotoxicity: Fanconi syndrome and renal failure. *Am J Med*. 2004; 117(4):282 - 4.
55. Irizarry-Alvarado JM, Dwyer JP, Brumble LM, Alvarez S, Mendez JC. Proximal tubular dysfunction associated with tenofovir and didanosine causing fanconi syndrome and diabetes insipidus: a report of 3 cases. *AIDS Reader*. 2009; 19(3):114-21.

56. Papaleo A, Warszawski J, Salomon R, Jullien V, Veber F, Dechaux M, et al. Increased β - 2 microglobulinuria in human immunodeficiency virus-1-infected children and adolescents treated with tenofovir. *Pediatric Infectious Disease Journal*. 2007; 26(10):949-51.
57. Crum – Cianflone N, Ganesan A, Teneza – Mora N, Riddle M, Medina S, Barahona I et al. Prevalence and factor associated with renal dysfunction among HIV – infected patient. *Aids Patient Care and STDs*. 2010; 24(6):353-60.
58. Labarga P, Barreiro P, Martin – Carbonero L, Rodriguez – Nova S, Solera C, Medrano J, Rivas P et al. Kidney tubular abnormalities in the absence of impaired glomerular function in HIV patients treated with tenofovir. *Wolter Kluwer Health*. 2009;23(10):689-96.
59. Laboratorium Amerind Bio-Clinic [Internet]. Jakarta : Amerind Bio-Clinic; c2010 [diakses 30 November 2013]. Dari: <http://www.abclab.co.id/?p=944>
60. Stevens LA, Coresh J, Greene T, Levey AS. Assessing Kidney Function – Measured and Estimated Glomerular Filtration Rate. *New England Journal Medicine* 2006; 354(23):2473-83.
61. Levey AS, Coresh J, Balk E, Kausz AT, Levin A, Steffes MW et al. National Kidney Foundation practice guidelines for chronic kidney disease: evaluation, classification, and stratification. *Ann Intern Med* 2003;139(2):137-47.
62. National Kidney Foundation. K/DOQI clinical practice guidelines for chronic kidney disease: evaluation, classification, and stratification. *Am J Kidney Dis* 2002;39:Suppl 1:S1-266.
63. Levey AS, Eckardt KU, Tsukamoto Y, Levin A, Coresh J, Rossert J, et al. Definition and classification of chronic kidney disease: a position statement from Kidney Disease: Improving Global Outcomes (KDIGO). *Kidney Int*. 2005; 67(6):2089-100.
64. Kosasih EN, Kosasih AS. Tafsiran Hasil Pemeriksaan Laboratorium Klinik, Edisi 2. Tangerang: Karisma Publishing Group; 2008. p. 45-80.

65. Sutedjo AY. Mengenal Penyakit Melalui Pemeriksaan Laboratorium, Edisi 3. Yogyakarta: Penerbit Asmara Books; 2008. p. 92-122.
66. Stevens LA, Levey AS. Measurement of kidney function. *Med Clin North Am* 2005; 89:457-73.
67. Stevens LA, Levey AS. Frequently asked questions about GFR estimates. New York: National Kidney Foundation, 2004.
68. Levey AS, Greene T, Kusek J, Beck G. A simplified equation to predict glomerular filtration rate from serum creatinine. *J Am Soc Nephrol* 2000; 11:155A-72.
69. Myers GL, Miller WG, Coresh J, Fleming J, Greenberg N, Greene T, et al. Recommendations for improving serum creatinine measurement: a report from the Laboratory Working Group of the National Kidney Disease Education Program. *Clin Chem* 2006;52(1):5-18.
70. Levey AS, Coresh J, Greene T. Expressing the MDRD study equation for estimating GFR with IDMS traceable (gold standard) serum creatinine values. *J Am Soc Nephrol* 2005; 16:69A-72.
71. KDIGO 2012 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. *Kidney Int.* 2013;3:1-163 Suppl. http://www.kdigo.org/clinical_practice_guidelines/pdf/CKD/KDIGO_2012_CKD_GL.pdf
72. National Kidney Foundation. Glomerular Filtration Rate (GFR). [internet], c2013,[diakses 19 Juli 2014]. Dari: <http://www.kidney.org/atoz/content/gfr.cfm>
73. Mayo clinic. Acute Kidney Failure. [internet], c2014,[diakses 19 Juli 2014]. Dari: <http://www.mayoclinic.org/diseases-conditions/kidney-failure/basics/risk-factors/con-20024029>
74. Mayo clinic. Chronic kidney disease. [internet], c2014,[diakses 19 Juli 2014]. Dari: <http://www.mayoclinic.org/diseases-conditions/kidney-disease/basics/risk-factors/con-20026778>

75. Pengkajian Paripurna Pada Pasien Geriatri. Dalam: Sudoyo AW, Setiyohadi B, Alwi I, Simadibrata M, Setiati S, editors. Buku ajar ilmupenyakit dalam. Jilid III edisi IV. Jakarta: FKUI, pp.1425-30
76. Gangguan Metabolik Diabetes Melitus. Dalam: Price SA, Wilson LM. Patofisiologi: Konsep Klinis Proses-Proses Penyakit. jilid II. Edisi 6. Jakarta: Penerbit Buku Kedokteran EGC; 2013. p. 940-2.
77. Hipertensi Esensial dan Ginjal. Dalam: Price SA, Wilson LM. Patofisiologi: Konsep Klinis Proses-Proses Penyakit. jilid II. Edisi 6. Jakarta: Penerbit Buku Kedokteran EGC; 2013. p. 933-4.
78. Nefropati Toksik. Dalam: Price SA, Wilson LM. Patofisiologi: Konsep Klinis Proses-Proses Penyakit. jilid II. Edisi 6. Jakarta: Penerbit Buku Kedokteran EGC; 2013. p. 944.

Lampiran 1**INFORMED CONSENT****(PERSETUJUAN SETELAH PENJELASAN)**

Judul Penelitian : ***Pola Tenofovir Induced Nephropathy* pada Pasien HIV-AIDS di RSUP Dr. Kariadi Semarang.**

Peneliti : **Eka Kurniawan Perangin - Angin**

Bapak/Ibu/Sdr Yth :

Anda terpilih sebagai responden penelitian yang bertujuan untuk mengetahui pola kadar ureum dan kreatinin pasien HIV-AIDS dengan terapi tenofovir di RSUP Dr. Kariadi Semarang. Saya akan melakukan pemeriksaan terhadap bapak/ibu/saudara berupa wawancara mengenai identitas dan pengambilan sampel darah.

Manfaat yang akan didapat dari pemeriksaan ini adalah bapak/ibu/saudara boleh mengetahui hasilnya, bapak/ibu/saudara dapat mengetahui ada atau tidaknya penurunan fungsi ginjal yang diakibatkan terapi tenofovir, dan sebagai pertimbangan pemilihan terapi selanjutnya. Keuntungan yang akan didapat bapak/ibu/saudara dari pemeriksaan ini adalah tidak dipungut biaya (gratis) karena biaya pemeriksaan ini ditanggung oleh peneliti. Bahaya yang dapat terjadi dalam pengambilan sampel darah bapak/ibu/saudara adalah minimal.

Peneliti menjamin kerahasiaan identitas dan informasi yang diberikan, informasi tersebut hanya digunakan untuk kepentingan penelitian serta pengembangan ilmu kedokteran.

Tindakan yang akan dilaksanakan bapak/ibu/saudara adalah :

1. Memberi informasi mengenai identitas dan status kesehatan yang diperlukan.
2. Pengambilan darah di laboratorium.

Terima kasih atas kerjasama bapak/ibu/saudara.

Setelah mendengar penjelasan mengenai manfaat, tujuan, risiko dan prosedur penelitian ini, maka saya atas nama pribadi atau keluarga penderita bersedia tanda tangan dibawah secara sukarela dan berpartisipasi dalam penelitian ini.

Nama :

Umur :

Nomer RM : Semarang,.....2014.

Responden

Saksi

Lampiran 2 ... (.....)

DATA SAMPEL TENOFOVIR

(Daftar Pertanyaan mengenai Pasien)

I. IDENTITAS




1. Nama :
2. Jenis Kelamin :
3. Nomer RM :
4. Umur > 45 tahun : (Ya / Tidak)

II. STATUS KESEHATAN

1. Lama Pemakaian Tenofovir :
2. Jumlah CD4 :
3. Jumlah Nadir CD4 :
4. Riwayat Peningkatan Ureum dan Kreatinin : (Ya / Tidak)
5. IMT (Indeks Masa tubuh) < 18,5 : (Ya / Tidak)
6. Riwayat Penyakit Komorbid
(DM, Hipertensi (> 140 /90) , dan Hepatitis C) : (Ya / Tidak)
7. Pemakaian Obat-obat nefrotoksik lain (Non Steroidal Anti-Inflammatory Drug (NSAID), Kaptopril, Siklosporin, Aminoglikosida, Cisplatin, Rifampisin, Litium dan Simetidin). : (Ya / Tidak)

Syarat pasien harus “Tidak” untuk semua daftar pertanyaan kecuali nama, jenis kelamin, nomer RM, lama pemakaian, jumlah CD4 dan jumlah nadir CD4.

Lampiran 3 $\text{Indeks Massa Tubuh : BB (kg) / TB}^2 \text{ (m)}$

	<p>KOMISI ETIK PENELITIAN KESEHATAN (KEPK) FAKULTAS KEDOKTERAN UNIVERSITAS DIPONEGORO DAN RSUP dr KARIADI SEMARANG Sekretariat : Kantor Dekanat FK Undip Lt.3 Jl. Dr. Soetomo 18. Semarang 50231 Telp/Fax. 024-8318350</p>	
<p>ETHICAL CLEARANCE No.126 /EC/FK-RSDK/2014</p>		
<p>Komisi Etik Penelitian Kesehatan Fakultas Kedokteran Universitas Diponegoro/ RSUP Dr. Kariadi Semarang, setelah membaca dan menelaah Usulan Penelitian dengan judul :</p>		
<p>POLA TENOFOVIR INDUCED NEPHROPATHY PADA PASIEN HIV-AIDS DI RSUP DR. KARIADI SEMARANG</p>		
Peneliti Utama :	Eka Kurniawan Perangin -Angin	
Pembimbing :	Dr. dr. Lestariningsih, Sp.PD,KGH,FINASIM	
Penelitian :	Dilaksanakan di Klinik VCT RSUP Dr. Kariadi Semarang.	
<p>Setuju untuk dilaksanakan, dengan memperhatikan prinsip-prinsip yang dinyatakan dalam Deklarasi Helsinki 1975, yang diamended di Seoul 2008 dan Pedoman Nasional Etik Penelitian Kesehatan (PNEPK) Departemen Kesehatan RI 2011</p>		
<p>Peneliti harus melampirkan 2 kopi lembar Informed consent yang telah disetujui dan ditandatangani oleh peserta penelitian pada laporan penelitian. Peneliti diwajibkan menyerahkan :</p> <ul style="list-style-type: none"> - Laporan kemajuan penelitian (clinical Trial) - Laporan kejadian efek samping jika ada - Laporan ke KEPK jika penelitian sudah selesai & dilampiri Abstrak Penelitian. 		
<p>Semarang, 04 APR 2014</p>		
<p>Komis Etik Penelitian Kesehatan Fakultas Kedokteran Undip-RSUP Dr. Kariadi Sekretaris.</p>		
		
<p>Dr. dr. Setiawan Budjiono, M.Si.Med.Sp.B.Sp.B(K),Onk NIP.197108072 008121 001</p>		

Lampiran 4



**KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS DIPONEGORO
FAKULTAS KEDOKTERAN**

Jl. Prof. H. Soedarto, SH – Tembalang – Semarang
Telepon 024-76928010, Fax. 024-76928011, Email : dean_fmdu@undip.ac.id

Nomor : 206 /UN7.3.4/D1/PP/2014
Lampiran : 1 bendel
Perihal : Permohonan ijin penelitian

04 MAR 2014

Yth. Direktur Utama
RSUP Dr. Kariadi
Semarang

Dengan hormat,

Bersama ini kami hadapkan mahasiswa Fakultas Kedokteran Universitas Diponegoro :

Nama : Eka Kurniawan Perangin Angin
NIM : 22010110110023
Semester : VIII (delapan)

Mohon diijinkan melakukan penelitian di Klinik VCT RSUP Dr. Kariadi Semarang, dalam rangka penyusunan Karya Tulis Ilmiah mahasiswa. Terlampir proposal mahasiswa yang bersangkutan.

Judul/ Topik : Pola Tenofovir Induced Nephropathy pada Pasien HIV-AIDS di RSUP Dr. Kariadi Semarang

Pembimbing : Dr. dr. Lestariningsih, Sp.PD, K-GH, FINASIM

Atas perhatian dan kerjasamanya diucapkan terima kasih.

a.n Dekan

Pembantu Dekan I,



dr. Herman Kristanto, MS, Sp. OG(K)
NIP. 196305051989031003

Tembusan :

1. Dekan (sebagai laporan)
2. Ketua Tim Karya Tulis Ilmiah
3. Kepala Bagian Diklit RSUP Dr. Kariadi Semarang
4. Pembimbing
5. Mahasiswa Yang Bersangkutan

Lampiran 5



KEMENTERIAN KESEHATAN RI
DIREKTORAT JENDERAL BINA UPAYA KESEHATAN
RUMAH SAKIT UMUM PUSAT DOKTER KARIADI

Jalan Dr. Sutomo No. 16 Semarang, PO BOX 1104
 Telepon : (024) 8413993, 8413476, 8413764 Fax : (024) 8318617
 Website : <http://www.rskariadi.com> email : rsk@indosat.net.id ; rsk@rskariadi.com



SURAT IZIN
MELAKSANAKAN PENELITIAN

DL.00.02 / I.II / 1626 / 2014

Yang bertanda tangan di bawah ini :

Nama : Dr. Agus Suryanto Sp.PD-KP, MARS
 NIP : 19610818 198812 1001
 Jabatan : Direktur SDM dan Pendidikan RSUP Dr. Kariadi

Memberikan ijin melakukan penelitian untuk :

Nama peneliti : Eka Kurniawan Perangin Angin
 Institusi peneliti : Universitas Diponegoro (Fakultas Kedokteran)
 Judul Penelitian : Pola Tenofovir Induced Nephropathy Pada Pasien HIV-AIDS di RSUP Dr. Kariadi Semarang
 Pembimbing : Dr. dr. Lestariningsih, Sp.PD,KGH,FINASIM
 DPJP : Dr. Muchlis Achsan Udji.S.Sp.PD.KPTL.FINASIM
 Lokasi penelitian : 1. Instalasi Rawat Jalan
 2. Instalasi Laboratorium

untuk melaksanakan kegiatan penelitian selama ±2 Bulan.

Peneliti wajib melakukan :

1. Informed Consent dilampirkan pada rekam medis responden
2. Laporan monitoring evaluasi penelitian secara periodik
3. Laporan selesai penelitian dengan menyerahkan monitoring evaluasi penelitian
4. Menyerahkan laporan hasil akhir penelitian (1 berkas)

Semarang, 11 JUN 2014
 Dr. Agus Suryanto
 Direktur Utama
 Direktur SDM dan Pendidikan
 RSUP Dr. KARIADI

Dr. Agus Suryanto, Sp.PD-KP, MARS
 NIP. 19610818 198812 1 001

Lampiran 6

TABULASI DATA SUBJEK PENELITIAN

No	Inisial Nama	No. CM	Sex	Umur	CD4	Nadir CD4	Lama Terapi	Ureum	Kreatinin	eGFR
1	NT	C340233	P	41	270	270	12	25	0,58	115
2	SA	C345227	P	34	427	427	5	26	0,75	88
3	TH	C191421	L	29	24	15	10	16	0,99	89
4	TJ	C464152	L	42	411	411	22	17	0,78	109
5	Mf	C416979	P	33	234	234	13	18	0,55	127
6	Jn	C362392	L	38	265	265	12	25	1	84
7	Sn	C229878	P	27	175	175	3	17	1	67
8	DN	C337490	L	37	340	340	24	13	1,3	62
9	KN	C176337	P	39	373	373	12	28	0,76	85
10	NK	C403732	P	29	22	22	12	22	0,81	84
11	ABR	B385111	L	35	252	252	20	23	0,86	101
12	SW	C235004	P	31	268	268	41	10	0,47	155
13	WTY	C235229	L	34	394	394	7	22	1,02	84
14	AY	C411707	L	30	20	20	8	23	0,99	89
15	ENH	C185838	P	31	716	473	13	28	0,79	85
16	AS	C451243	L	30	31	31	4	18	0,61	155
17	RA	C348686	P	33	153	55	6	12	0,67	101
18	KT	C252480	P	31	308	308	11	29	1	65
19	SR	C192573	P	24	474	310	46	24	0,63	116
20	SH	275137	P	33	87	87	8	17	1,05	60
21	SD	268862	L	45	102	102	12	26	0,85	97
22	US	092488	P	34	133	133	133	22	0,9	72

Lampiran 7

Dokumentasi penelitian



Peneliti dibantu oleh staff klinik VCT dan residen ilmu penyakit dalam sub-bagian Tropik Infeksi

Lampiran 8

1. Karakteristik dan analisa hubungan jenis kelamin terhadap ureum

Case Processing Summary

Jenis Kelamin		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Ureum	Laki-Laki	9	100,0%	0	0,0%	9	100,0%
	Perempuan	13	100,0%	0	0,0%	13	100,0%

Descriptives

Jenis Kelamin			Statistic	Std. Error	
Ureum	Laki-Laki	Mean	20,33	1,491	
		95% Confidence Interval for Mean	Lower Bound	16,90	
			Upper Bound	23,77	
		5% Trimmed Mean	20,43		
		Median	22,00		
		Variance	20,000		
		Std. Deviation	4,472		
		Minimum	13		
		Maximum	26		
		Range	13		
		Interquartile Range	8		
		Skewness	-,358	,717	
		Kurtosis	-1,215	1,400	
		Perempuan		Mean	21,38
95% Confidence Interval for Mean	Lower Bound			17,66	
	Upper Bound			25,11	
5% Trimmed Mean	21,59				
Median	22,00				
Variance	37,923				
Std. Deviation	6,158				
Minimum	10				
Maximum	29				
Range	19				
Interquartile Range	10				
Skewness	-,559			,616	
Kurtosis	-,736			1,191	

Tests of Normality

Jenis Kelamin		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Ureum	Laki-Laki	,201	9	,200*	,936	9	,537
	Perempuan	,155	13	,200*	,930	13	,338

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Group Statistics

Jenis Kelamin		N	Mean	Std. Deviation	Std. Error Mean
Ureum	Laki-Laki	9	20,33	4,472	1,491
	Perempuan	13	21,38	6,158	1,708

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Ureum	Equal variances assumed	1,058	,316	-,437	20	,667	-1,051	2,405	-6,067	3,965
	Equal variances not assumed			-,464	19,913	,648	-1,051	2,267	-5,782	3,679

2. Karakteristik dan analisa hubungan nadir CD4 terhadap ureum

Case Processing Summary

Nadir CD4		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Ureum	<50	4	100,0%	0	0,0%	4	100,0%
	50-200	5	100,0%	0	0,0%	5	100,0%
	>200	13	100,0%	0	0,0%	13	100,0%

Descriptives

Nadir CD4			Statistic	Std. Error	
Ureum	<50	Mean	19,75	1,652	
		95% Confidence Interval for Mean	Lower Bound	14,49	
			Upper Bound	25,01	
		5% Trimmed Mean	19,78		
		Median	20,00		
		Variance	10,917		
		Std. Deviation	3,304		
		Minimum	16		
		Maximum	23		
		Range	7		
		Interquartile Range	6		
		Skewness	-,229	1,014	
		Kurtosis	-3,869	2,619	
		50-200	50-200	Mean	18,80
95% Confidence Interval for Mean	Lower Bound			12,15	
	Upper Bound			25,45	
5% Trimmed Mean	18,78				
Median	17,00				
Variance	28,700				
Std. Deviation	5,357				
Minimum	12				
Maximum	26				
Range	14				
Interquartile Range	10				
Skewness	,217			,913	
Kurtosis	-,486			2,000	
>200	>200			Mean	22,15
		95% Confidence Interval for Mean	Lower Bound	18,55	
			Upper Bound	25,75	
		5% Trimmed Mean	22,45		
		Median	24,00		
		Variance	35,474		
		Std. Deviation	5,956		
		Minimum	10		
		Maximum	29		
		Range	19		
		Interquartile Range	10		
		Skewness	-,905	,616	
		Kurtosis	-,121	1,191	

Tests of Normality

Nadir CD4	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Ureum <50	,252	4	.	,916	4	,513
50-200	,232	5	,200 [*]	,963	5	,825
>200	,182	13	,200 [*]	,905	13	,155

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

Ureum

Levene Statistic	df1	df2	Sig.
,695	2	19	,511

ANOVA

Ureum

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	47,712	2	23,856	,791	,468
Within Groups	573,242	19	30,171		
Total	620,955	21			

3. Karakteristik dan analisa hubungan lama terapi terhadap ureum

Case Processing Summary

Lama Terapi	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Ureum <12	9	100,0%	0	0,0%	9	100,0%
12-<24	10	100,0%	0	0,0%	10	100,0%
24-<36	2	100,0%	0	0,0%	2	100,0%
>36	1	100,0%	0	0,0%	1	100,0%

Descriptives^a

Lama Terapi	Statistic	Std. Error	
Ureum <12	Mean	20,00	
	95% Confidence Interval for Mean	Lower Bound	15,86
		Upper Bound	24,14
	5% Trimmed Mean	19,94	
	Median	18,00	
	Variance	29,000	
	Std. Deviation	5,385	
	Minimum	12	
	Maximum	29	
	Range	17	
	Interquartile Range	8	
	Skewness	,352	,717
	Kurtosis	-,595	1,400
12-<24	Mean	23,40	
	95% Confidence Interval for Mean	Lower Bound	20,70
		Upper Bound	26,10
	5% Trimmed Mean	23,50	
	Median	24,00	
	Variance	14,267	
	Std. Deviation	3,777	
	Minimum	17	
	Maximum	28	
	Range	11	
	Interquartile Range	6	
	Skewness	-,528	,687
	Kurtosis	-,597	1,334
24-<36	Mean	18,50	
	95% Confidence Interval for Mean	Lower Bound	-51,38
		Upper Bound	88,38
	5% Trimmed Mean	.	
	Median	18,50	
	Variance	60,500	
	Std. Deviation	7,778	
	Minimum	13	
	Maximum	24	
	Range	11	
	Interquartile Range	.	
	Skewness	.	.
	Kurtosis	.	.

a. Ureum is constant when Lama Terapi = >36. It has been omitted.

Tests of Normality^c

Lama Terapi	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Ureum <12	,200	9	,200 [*]	,959	9	,786
12-<24	,164	10	,200 [*]	,926	10	,414
24-<36	,260	2	.			

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

c. Ureum is constant when Lama Terapi = >36. It has been omitted.

Test of Homogeneity of Variances

Ureum

Levene Statistic	df1	df2	Sig.
1,540	2	18	,241

ANOVA

Ureum

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	200,055	3	66,685	2,852	,066
Within Groups	420,900	18	23,383		
Total	620,955	21			

4. Karakteristik dan analisa hubungan jenis kelamin terhadap eGFR

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Jenis Kelamin * eGFR	22	100,0%	0	0,0%	22	100,0%

Jenis Kelamin * eGFR Crosstabulation

			eGFR		Total
			Normal	Menurun	
Jenis Kelamin	Laki-Laki	Count	4	5	9
		Expected Count	3,7	5,3	9,0
	Perempuan	Count	5	8	13
		Expected Count	5,3	7,7	13,0
Total		Count	9	13	22
		Expected Count	9,0	13,0	22,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,079 ^a	1	,779	1,000	,561
Continuity Correction ^b	,000	1	1,000		
Likelihood Ratio	,079	1	,779		
Fisher's Exact Test				1,000	,561
Linear-by-Linear Association	,075	1	,784		
N of Valid Cases	22				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 3,68.

b. Computed only for a 2x2 table

5. Karakteristik dan analisa hubungan nadir CD4 terhadap eGFR

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Nadir CD4 * eGFR	22	100,0%	0	0,0%	22	100,0%

Nadir CD4 * eGFR Crosstabulation

			eGFR		Total
			Normal	Menurun	
Nadir CD4 <50	Count	1	3	4	
	Expected Count	1,6	2,4	4,0	
50-200	Count	2	3	5	
	Expected Count	2,0	3,0	5,0	
>200	Count	6	7	13	
	Expected Count	5,3	7,7	13,0	
Total	Count	9	13	22	
	Expected Count	9,0	13,0	22,0	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,568 ^a	2	,753
Likelihood Ratio	,594	2	,743
Linear-by-Linear Association	,515	1	,473
N of Valid Cases	22		

a. 4 cells (66,7%) have expected count less than 5. The minimum expected count is 1,64.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Nadir CD4 Penggabungan * eGFR	22	100,0%	0	0,0%	22	100,0%

Nadir CD4 Penggabungan * eGFR Crosstabulation

			eGFR		Total
			Normal	Menurun	
Nadir CD4 Penggabungan	<50+50-200	Count	3	6	9
		Expected Count	3,7	5,3	9,0
	>200	Count	6	7	13
		Expected Count	5,3	7,7	13,0
Total	Count	9	13	22	
	Expected Count	9,0	13,0	22,0	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	,362 ^a	1	,548		
Continuity Correction ^b	,026	1	,873		
Likelihood Ratio	,365	1	,546		
Fisher's Exact Test				,674	,439
Linear-by-Linear Association	,345	1	,557		
N of Valid Cases	22				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 3,68.

b. Computed only for a 2x2 table

6. Karakteristik dan analisa hubungan lama terapi terhadap eGFR

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Lama Terapi * eGFR	22	100,0%	0	0,0%	22	100,0%

Lama Terapi * eGFR Crosstabulation

			eGFR		Total
			Normal	Menurun	
Lama Terapi <12	Count	2	7	9	
	Expected Count	3,7	5,3	9,0	
12-<24	Count	5	5	10	
	Expected Count	4,1	5,9	10,0	
24-<36	Count	1	1	2	
	Expected Count	,8	1,2	2,0	
>36	Count	1	0	1	
	Expected Count	,4	,6	1,0	
Total	Count	9	13	22	
	Expected Count	9,0	13,0	22,0	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3,155 ^a	3	,368
Likelihood Ratio	3,597	3	,308
Linear-by-Linear Association	2,642	1	,104
N of Valid Cases	22		

a. 6 cells (75,0%) have expected count less than 5. The minimum expected count is ,41.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Lama Terapi Penggabungan * eGFR	22	100,0%	0	0,0%	22	100,0%

Lama Terapi Penggabungan * eGFR Crosstabulation

			eGFR		Total
			Normal	Menurun	
Lama Terapi Penggabungan	<12	Count	2	7	9
		Expected Count	3,7	5,3	9,0
	12-<24+24-<36+>36	Count	7	6	13
		Expected Count	5,3	7,7	13,0
Total		Count	9	13	22
		Expected Count	9,0	13,0	22,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2,200 ^a	1	,138		
Continuity Correction ^b	1,086	1	,297		
Likelihood Ratio	2,288	1	,130		
Fisher's Exact Test				,203	,149
Linear-by-Linear Association	2,100	1	,147		
N of Valid Cases	22				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 3,68.

b. Computed only for a 2x2 table

Lampiran 9

Identitas

Nama : Eka Kurniawan Perangin-Angin

NIM : 22010110110023

Tempat / tanggal lahir: Bahorok / 20 Oktober 1992

Jenis Kelamin : Laki-laki

Alamat : Jalan Kendeng Barat VI no 8 Sampangan Semarang

Nomor HP : 085658060604

e-mail : eka.kurniawan23@ymail.com

Riwayat Pendidikan Formal

1. SD : SD NEGERI 1 BAHOROK Lulus tahun : 2004
2. SMP : SMP SWASTA AL-AZHAR MEDAN Lulus tahun : 2007
3. SMA : SMA NEGERI 3 MEDAN Lulus tahun : 2010
4. FK UNDIP : Masuk tahun : 2010

Keanggotaan Organisasi

1. OSIS SMAN 3 MEDAN Tahun 2008 s/d 2009
2. PMR SMAN 3 MEDAN Tahun 2008 s/d 2009
3. AMSA FK UNDIP Tahun 2012 s/d 2013