

DAFTAR PUSTAKA

- Ambade V, Singh P, Somani B, and Basannar D, 2006, Urinary N-Acetyl Beta-Glucosaminidase and Gamma Glutamyl Transferase As Early Markers of Diabetic Nephropathy, *Indian J Clin Biochem*, 21(2):142–8.
- American Diabetes Association, 2013, Diagnosis and Classification of Diabetes Mellitus, *Diabetes Care*, 36(1):S67-74
- Anynomous, 2014a, Creatinine_2 for Advia Chemistry 1800, Siemens
- Anynomous, 2014b, Microalbuminuria_2 for Advia Chemistry 1800, Siemens.
- Anynomous, 2015, Human NAGase Elisa Kit, Elabscience
- Anynomous, 2016, diunduh dari <http://www.lookfordiagnosis.com> pada tanggal 01 Juni 2016
- Arya A, Aggarwal S, and Yadav H, 2010, Pathogenesis of Diabetic Nephropathy, *Int J Pharm Pharm Sci*, 2(4): 24-29
- Assal H, Tawfeek S, Rasheed E, El-Lebedy D, and Thabet E, 2013, Serum Cystatin C and Tubular Urinary Enzymes as Biomarkers of Renal Dysfunction in Type 2 Diabetes Mellitus, *Clin Med Insights Endocrinol Diabetes*, 6:7–13.
- Basi S, Fesler P, Mimran A, and Lewis J, 2008, Microalbuminuria in Type 2 Diabetes and Hypertension, *Diabetes Care*, 31(2):s194-201
- Bazzi C, Petrini C, Rizza V, Arrigo G, Napodano P, Paparella M, *et al.*, 2002, Urinary N-acetyl-beta-D-glucosaminidase Excretion is a Marker of Tubular Cell Dysfunction and a Predictor of Outcome in Primary Glomerulonephritis, *Nephrol Dial Transplant* 17:1890-96
- Bosomworth M, Aparicio S, and Hay A, 1999, Urine N-Acetyl-Beta-D-Glucosaminidase – A Marker of Tubular Damage, *Nephro Dial Transplant* 14:620-26
- Bouvet B, Paparella C, Arriaga S, Monje A, Amarilla A, and Almará A, 2014, Evaluation of urinary N-acetyl-beta-D-glucosaminidase as a marker of early renal damage in patients with type 2 diabetes mellitus, *Arq Bras Endocrinol Metab*, 58(8):798-801
- Brownlee M, Aiello L, Cooper M, Vinik A, Nesto R and Boulton A, 2011, Complication of Diabetes Mellitus in Williams Textbook of Endocrinology, 12th edition, ed.Melmed S, Polonsky K, Larsen P and Kronenberg H, Philadelphia:Elsevier. p: 1462-1551
- Carter C, Gansevoort R, Scheven L, Heerspink H, Shlipak M, deJong E, *et al.*, 2012, Influence of Urine Creatinine on the Relationship between the Albumin to Creatinine Ratio and Cardiovascular Events, *Clin J Am Soc Nephrol*, 7(4):595-603
- Chowta N, Pant P and Chowta M, 2009, Microalbuminuria in Diabetes Mellitus:Association with Age, Sex, Weight, and Creatinine Clearance, *Indian J Nephrol*, 19(2):53-6
- Cirillo M., Laurenzi M, Mancini M, Zanchetti A, DeSanto N, 2006, Low Muscular Mass and Overestimation of Microalbuminuria by Urinary Albumin/Creatinine Ratio, *Hypertension*, 47:56-61
- Codario RA, 2005. Type 2 Diabetes, Pre-Diabetes, and the Metabolic Syndrome. The Primary Care Guide to Diagnosis and Management. Human Press, p: 1- 9

- Crippa G, 2002, Microalbuminuria in Essential Hypertensi, *Journal of Human Hypertensi*, 16: s74-77.
- Currie G, McKay G, Delles C, 2014, Biomarkers in diabetic nephropathy: Present and future, *World J Diabetes*, 5(6):763-76
- DeJong P and Curhan G, 2006, Screening, Monitoring, and Treatment of Albuminuria: Public Health Prespective, *Journal American Society of Nephrology*, 17: 2120-26
- Feldmann D, Fiandrola C, Jardel A, Phan T and Aymard P, 1989, Circadian Variation and Reference Intervals for Some Enzymes in Urine of Healthy Children, *Clin Chem* 35(5):864-67
- Fiseha T, 2015, Urinary biomarkers for early diabetic nephropathy in type 2 diabetic patients, *Biomarker Research* 3:16-23
- Forbes J and Cooper M, 2013, Mechanisms of Diabetic Complications, *Physiol Rev* 93: 137–188
- Garg J and Bakris G, 2002, Microalbuminuria : Marker of Vascular Dysfunction, Risk Factor for Cardiovascular Disease, *Vascular Medicine*, 7: 35-43
- Gale E and Gilespe, 2001, Diabetes and Gender, *Diabetologia* 44:3-15
- Ghost S and Collier A, 2012, ‘ Acute Metabolic Complication’ in Churchill’s Pocketbook of Diabetes, 2nd Edition, ed Ghost S and Collier A, London: Elsevier. p:127-64
- Giacco F and Brownlee M, 2010, ‘Pathogenesis of Microvascular Complication’ in Textbook of Diabetes, 4th Edition,ed. Holt R, Cockram A, Flyvbjerg A and Goldstin B, Sussex:Blackwell. P: 555-74
- Gibb D, Tomlinson P, Dalton T, Turner T, Shah T, and Barratt T, 1989, Renal Tubular Proteinuria and Microalbuminuria in Diabetic Patients, *Archives of Disease in Childhood*, 64:129-134
- Gowda S, Desai P, Kulkarni S, Hull V, Math and Vernekar S, 2010, Marker of Renal Function Test, 2(4):170-3
- Grechman F, Tong J, Utzschneider K, Zraika S, Udayasankar J, Mcneely M, et al., (2009), Body Mass Index is Associated with increased Creatinine Clearance by a Mechanism Independent of Body Fat Distribution, *J Clin Endocrinol Metab*, 94 (10):3781-8.
- Haryandini F and Rostini T, 2015, Hyperuricemia and Proteinuria in Type 2 Diabetic Patients, *Althea Medical Journal*, 2(1): 50-3
- Hilbert H, Lifshitz MS, 2007.”Lipids and Dyslipoproteinemia”. In: Hendry’s Clinical Diagnosis and Management by Laboratory Methods Ed 21th. H200-10
- Hong C and Chia K, 1998, Markers of Diabetic Nephropathy, *J Diab Comp* 12:43-60
- Jafar T, Qadri Z and Hashmi S, 2009, Prevalence of Microalbuminuria and Associated Electrocardiographic Abnormalities in Indo-Asian Population, *Nephrology Dialysis Transplantation*, 24: 2111-16
- Jarraya F, Lakhdar R, Kammoun K, Mahfoudh H, Drissa H, Kammoun S, et al., 2013, Microalbuminuria A Useful Marker of Cardiovascular Disease, *Iranian Journal of Kidney Disease*, 7:178-86
- Kanauchi M, Ishihara K, Nishioka H, Nishiura K and Dohi K, 1993, Glomerular Lesions in Patients with Non-Insulin-Dependent Diabetes Mellitus and Microalbuminuria, *Internal Medicine* 32(10):753-7

- Kanauchi M and Dohi K, 2001, Predictors of Diabetic Renal Lesion in Type 2 Diabetes Associated with Microalbuminuria, *European Journal of Clinical Investigation*, 31(2):110-12
- Kariadi S, 2005, 'Resistensi Insulin dan Disfungsi Sel Beta Pankreas sebagai Dasar Pemilihan Obat pada Diabetes Melitus tipe 2'. *Forum Diabetes Nasional III*. p: 112-22
- Kavukcu S, Soyulu A and Turkmen M, 2002, The Clinical Value of Urinary N-Acetyl-- β -D-glucosaminidase Level in Childhood Age Group, *Acta Med Okayama*, 56(1):7-11
- Kim S, Lee Y, Lee S, Kang E, Cha B, Kim J, et al., 2016, Urinary N-Acetyl-B-D-Glucosaminidase, an Early Marker of Diabetic Kidney Disease, might Reflect Glucose Excursion in Patients with Type 2 Diabetes, *Medicine* 95:27-34
- Kohei K, 2010, Pathophysiology of Type 2 Diabetes and Its Treatment Policy, *JMAJ* 53(1): 41-46
- Manjunatha B, Mallick AK, Devi S, Raghuvveer CV, Nayal B, Ahsan M, et al, 2011, Diabetes Mellitus and Microalbuminuria : Factors Affecting Collection of Urine Sample for Microalbuminuria, *International Journal of Pharma and Bio Sciences*, 2 : 132-37
- Mihardja L, Soetrisno U, Soegondo S, 2014, Prevalence And Clinical Profile Of Diabetes Mellitus In Productive Aged Urban Indonesians, *J Diabetes Invest* 5:507-512
- Mohan M and Sekhar C, 2015, Prevalence and Risk Factors of Microalbuminuria in Type 2 Diabetes Mellitus, *Int J Adv Med*, 2(4):383-86
- Mohkam M and Ghafari A, 2015, The Role of Urinary N-Acetyl- β -glucosaminidase in Diagnosis of Kidney Diseases, *J Ped. Nephrology*, 3(3):84-91
- Montero R, Covic A, Gnudi L, Goldsmith D, 2016, Diabetic Nephropathy: What Does The Future Hold?, *Int Urol Nephrol* 48:99-113
- Muller D, Sievers E, and Eggert P, 1999, Influence of hyperfiltration on the measurement, of urinary N-acetyl-b-D-glucosaminidase *Pediatr Nephrol* 13:519-523
- Muro P, Lepedda A, Nieddu G, Idini M, Nguyen H, Lobina O *et al.*, 2016, Evaluation of Early Markers of Nephropathy in Patients with Type 2 Diabetes Mellitus, *Biochemistry Research International*:1-6
- Naidoo D, 2002, The Link between Microalbuminuria, Endothelial Dysfunction and Cardiovascular Disease in Diabetes, *Cardiovascular Journal of South Africa*, 13: 194-99
- National Kidney Foundation, diunduh dari www2.kidney.org, pada tanggal 06 Oktober 2016
- Olefsky J, 2001. 'Prospects for Research in Diabetes Mellitus'. *Journal of American Medical Association*, 285: 628 - 32
- Ouchi M, Suzuki T, Hashimoto M, Motoyama M, Ohara M, Suzuki K, et al., 2012, Urinary N-acetyl- β -D-Glucosaminidase Levels are Positively Correlated with 2-hr Plasma Glucose Levels during Oral Glucose Tolerance Testing in Prediabetes, *J. Clin. Lab. Anal*, 26: 473-480

- Ozougwu J, Obimba K, Belon C, and Unakalamba C, 2013, The Pathogenesis and Pathophysiology of Type 1 and Type 2 Diabetes Mellitus, JPAP 4(4); 46-57
- Patel D and Kalia K, 2015, Efficacy of Urinary N-Acetyl-B-D-Glucosaminidase to Evaluate Early Renal Tubular Damage as a Consequence of Type 2 Diabetes Mellitus: a Cross-Sectional Study, Int J Diabetes Dev Ctries 35 (3):S449–S457
- Pedrinelli R, Dell’Omo G, DiBello V, Pontremoli R and Mariani M, 2002, Microalbuminuria, an Integrated Marker of Cardiovascular Risk in Essential Hypertensi, *Journal of Human Hypertension*, 16: 79–89
- Piwowar, Knapik-Kordecka M, Fus Izabela, and Warwas M, 2006, Urinary Activities of Cathepsin B, N-Acetyl-B-D-Glucosaminidase, and Albuminuria In Patients with Type 2 Diabetes Mellitus, Med Sci Monit 12(5): 210-214
- Perkeni, 2011. Konsensus Pengelolaan dan pencegahan Diabetes Melitus Tipe 2 di Indonesia, PB Perkeni , Jakarta
- Primanda Y, Kritpracha C, and Thaniwattananon P, 2011, Dietary Behaviors among Patients with Type 2 Diabetes Mellitus in Yogyakarta, Indonesia, Nurse Media Journal of Nursing, 1: 211-23
- Ratzman K, Raskovic M, and Schimke E, 1994, The Effect of Blood Pressure Reducting Therapy with Captopril on Tubular Marker Excretion in Type 1 Diabetic with Nephrophaty, Dtsch Med Wochenschr 119: 796-800
- Robles-Osorio M and Sabath E , 2014, Tubular dysfunction and non-albuminuric renal disease in subjects with type 2 diabetes mellitus, Rev Invest Clin 66(3):234–9.
- Roett M, Liegl S, and Jabbarpour Y, 2012, Diabetic Nephropathy-The Family Physician’s Role, American Family Physician 85(9):883-9
- Rolo A and Palmiera C, 2006, Diabetes and Mitochondrial Function: Role of Hyperglycemia and Oxidative Stress, *Toxicology and Applied Pharmacology* 212:167-178
- Rosner M and Bolton W, 2006, Renal Function Testing, American Journal of Kidney Diseases, 47(1):174-83
- Ruggenti P and Remuzzi G, 2006, Time to Abandon Microalbuminuria, *Kidney International* 70: 1214-22
- Sastroasmoro S, 2014, Perkiraan Besar Sampel in Dasar-Dasar Metodologi Penelitian Klinis, 5th eds, ed Sastroasmoro S and Ismael Sofyan, Sagung Seto:Jakarta; 352-86
- Satchell S and Tooke J, 2008, What is the mechanism of microalbuminuria in diabetes a role for the glomerular endothelium?, Diabetologia 51:714–725
- Shahbazian H and Rezaii I, 2013, Diabetic kidney disease; review of the current knowledge, J Renal Inj Prev, 2(2): 73-80
- Sheira G, Noreldin N, Tamer A, and Saad M, 2015, Urinary biomarker N-acetyl-β-D-glucosaminidase can Predict Severity of Renal Damage in Diabetic Nephropathy, J Diabetes Metab Disord, 14:4-9
- Skalova S, 2005, The Diagnostic Role of Urinary N-Acetyl-β-D-glucosaminidase (NAG) Activity in the Detection of Renal Tubular Impairment, Acta Medica, 48(2):75-80

- Spasovski D, 2013, Renal Markers for Assessment of Renal Tubular and Glomerular Dysfunction, *J Nephroarmacol*, 2(2): 23-25
- Spierenburg E, 2009, Biomarkers in Kidney Damage, Thesis, p.21
- Suastika K, Dwipayana P, Semadi M and Kuswardhani R, Age is an Important Risk Factor for Type 2 Diabetes Mellitus and Cardiovascular Diseases in Glucose Tolerance, ed Chackrewarthy S, InTech:Srilanka:67-80
- Soewondo P, 2011, Current Practice in the Management of Type 2 Diabetes in Indonesia: Results from the International Diabetes Management Practices Study (IDMPS), *J Indon Med Assoc*, 61(12):474-81
- Thomas M, Macisaac R, Jerums G, Weekes A, Moran J, Shaw J, *et al.*, 2009, Nonalbuminuric Renal Impairment in Type 2 Diabetic Patients and in the General Population (National Evaluation of the Frequency of Renal Impairment co-existing with NIDDM [NEFRON] 11), *Diabetes Care*, 32:1497–502.
- Tojo A and Kinugasa S, 2012, Mechanisms of Glomerular Albumin Filtration and Tubular Reabsorption, *International Journal of Nephrology*:1-9
- Toth-Manikowski S and Atta M, 2015, Diabetic Kidney Disease: Pathophysiology and Therapeutic Targets, *Journal of Diabetes Research*:1-16
- Turecky L and Uhlikova E, 2003, Diagnostic Significance of Urinary Enzyme in Nephrology, *Bratisl Lek Listy* 104(1):27-31
- Udomah F, Ekrikpo U, Effa E, Salako B, Arije A, and Kadiri S, 2012, Association between Urinary N-Acetyl-Beta-D-Glucosaminidase and Microalbuminuria in Diabetic Black Africans, *International Journal of Nephrology*:1-5
- Uslu S, Efe B, Alatas O, Kebapci N, Colak O, Demirustu C, *et al.*, 2005, Serum Cystatin C and Urinary Enzymes as Screening Markers of Renal Dysfunction in Diabetic Patients. *J Nephrol* 18:559–67.
- Vlatkovic V, Stojimirovic B and Obrenovic R, 2007, Damage of Tubule Cells in Diabetic Nephropathy Type 2: Urinary N-Acetyl-Beta-D-Glucosaminidase and Gamma-Glutamil-Transferase, *Vojnosanitetski Pregled*, 64(2):123-7
- Weir MR, 2007, Microalbuminuria and Cardiovascular, *Clinical Journal of the American Society of Nephrology*, 2: 581-90
- Wild S, Roglic G, Green A, Sicree R, and King H, 2004, Global Prevalence of Diabetes (Estimates for the Year 2000 and Projection for 2030), *Diabetes Care*, 27(5):1047-53.
- Wu Y, Ding Y, Tanaka Y and Zhang W, 2014, Risk Factors Contributing to Type 2 Diabetes and Recent Advances in the Treatment and Prevention, *Int. J. Med. Sci.*, 11(11): 1185-1200
- Zeeuw D, Parving H and Henning H, 2006, Microalbuminuria as an Early Marker for Cardiovascular Disease, *Journal American Society of Nephrology*, 17:2100-05