

DAFTAR PUSTAKA

- American Diabetes Association. Panduan Terbaru ADA, 2017. Berfokus pada Pendekatan Holistik. *Kalbemed.* 44 (9), pp. 638—639.
- Alexander, C., Weiss, R., Kumar, D., and Nimni, M. Diabetes 1981. Decreased Plasma Fibronectin in Untreated Diabetes Mellitus.
- Andresen JL, Rasmussen L, Ledet T, 1996. Diabetic macroangiopathy and atherosclerosis. *Diabetes* 45 (Suppl. 1):S91—S94
- Bandiara, Ria & Soelaeman M. Rachmat, 2011. Podosit dan Penyakit Ginjal Diabetes. *JKM.* 11 (1): 80-91.
- Bennet, C.M., Guo, M., & Dharmagem S.C, 2007. HbA1c as a Screening Tool for Detection of Type 2 Diabetes: a Systematic Review. *Diabetic Medicine.* 24: 333-343.
- Carraro M, Mancini W, Artero M et al. 2000. *Albumin permeability in isolated glomeruli in incipient experimental diabetes mellitus.* *Diabetologia;* 43: 235—241.
- C-L Lin, F-S Wang, Y-R Kuo, Y-T Huang, H-C Huang, Y-C Sun, dan Y-H Kuo. 2006. *Ras Modulation of Superoxide Activates ERK-dependent Fibronectin Expression in Diabetes-induced Renal Injuries.* *Kidney International.* 69:1593-1600.
- Diabetes Meal Plans. 2022. How Does Diabetes Affect the Kidneys?. Diakses di How Does Diabetes Affect the Kidneys? (diabetesmealplans.com). Pada tanggal 22 Juni 2022.
- Elfa Lailatul Izza. Kepatuhan Penderita Diabetes Mellitus Tipe 2 yang Menjalani Terapi Diet Ditinjau Dari Theory of Planned Behaviour: Penelitian Studi Kasus. Tesis. Universitas Airlangga Surabaya. 2019.
- Essner E, Lin WL. Immunocytochemical localization of laminin, type IV collagen, and fibronectin in rat retinal vessels. *Exp Eye Res.* 1988;47:317-32
- Fitriyani. 2012. Faktor Risiko Diabetes Melitus Tipe 2 di Puskesmas Kecamatan Citangkil dan Puskesmas Kecamatan Pulo Merak Kota Cilegon. Skripsi. Universitas Indonesia Depok.
- Goldstein, B.J., & Muller, W.D. 2008. *Type 2 Diabetes: Principles and Practice: Pathogenesis of Type 2 Diabetes.* Edisi Kedua. London: Infoma Healthcare. Hal. 13-26.
- Ha H, Lee HB. 2003. Reactive oxygen species and matrix remodeling in diabetic kidney. *J Am Soc Nephrol;* 14: S246—S249.
- Harie, Satria.ES., Eva, Decroli., Afriwardi. 2018. Faktor Risiko Pasien Nefropati Diabetik yang Dirawat di Bagian Penyakit Dalam RSUP Dr. M. Djamil Padang. 2018. *Jurnal Kesehatan Andalas.* 7 (2).
- Hasanah, Nunung. 2014. Pemberian Ekstrak Etanol Daun Salam Untuk Menurunkan Ekspresi Fibronektin Mesangial Tikus Sprague Dawley DM. Doctoral Dissertation, Master Thesis,, Master Program of Biomedical Science.

- Hastuti, Rini Tri. 2008. Faktor — Faktor Risiko Ulkus Diabetika pada Penderita Diabetes Melitus (Studi Kasus di RSUD Dr. Moewardi Surakarta). Tesis. Universitas Diponegoro.
- Hayashida T, Schnaper HW. 2004. High ambient glucose enhances sensitivity to TGF-beta1 via extracellular signal-regulated kinase and protein kinase Cdelta activities in human mesangial cells. *J Am Soc Nephrol*; 15: 2032—2041.
- Hynes RO, 1986. Fibronectins. *Sci Am* 254:42—51,
<https://www.alomedika.com/penyakit/endokrinologi/diabetes-mellitus-tipe-2>
- Kemenkes RI. 2020. Infodatin: Tetapi Produktif, Cegah, dan Atasi Diabetes Melitus.
- Kohno T, Sorgente N, Ishibashi T, Goodnight R, Ryan SJ. 1987. Immunofluorescent studies of fibronectin and laminin in the human eye. *Invest Ophthalmol Vis Sci*.;28:506-514.
- PERKENI. 2021. Pedoman Pengelolaan dan Pencegahan Diabetes Melitus Tipe 2 Dewasa di Indonesia. Jakarta: PB. PERKENI.
- Peters JH, Sporn LA, Ginsberg MH, Wagner DD. 1990. Human endothelial cells synthesize, process, and secrete fibronectin molecules bearing an alternatively spliced type II homology (ED1). *Blood* 75:1801—1808,
- Reddy GR, Kotlyarevska K, Ransom RF, Menon RK. 2008. The podocyte and diabetes mellitus: is the podocyte the key to the origin of diabetic nephropathy? *Curr Opin Nephrol Hypertens* ;17:32-6.
- Riawati. 2022. Penatalaksanaan Diabetes Melitus Tipe 2. Artikel Online. Alomedika. Diakses pada tanggal 29 Maret 2022.
- Rob Fijnheer, 2001. Plasma Levels of Cellular Fibronectin in Diabetes. *Diabetes Care*, 24 (2).
- Sayon Roy, Enrico Cagliero, & Mara Lorenzi, 1996. Fibronectin Over expression in Retinal Microvessel of Patients With Diabetes. *Investigative Ophthalmology & Visual Science*, 37 (2).
- Sayon Roy, Roberto Sala, Enrico Cagliero, & Mara Lorenzi, 1990. Overexpression of Fibronectin Induced by Diabetes or High Glukosa: Phenomenon with a Memory. *Proc. Natl. Acad. Sci. USA*, 87: 404-408,
- Schrijvers BF, De Vriese AS, Flyvbjerg A. 2004. From hyperglycemia to diabetic kidney disease: the role of metabolic, hemodynamic, intracellular factors and growth factors/cytokines. *Endocr Rev.*;25:971-1010.
- Schena FP, Gesualdo L, 2005. Pathogenetic mechanisms of diabetic nephropathy. *J Am Soc Nephrol*;16 Suppl 1:S30S33.
- Septawati, Tunik, 2014. Pemberian Ekstrak Etanol Daun Salam untuk Menurunkan Ekspresi Kolagen Mesangial Tikus Sprague Dawley Diabetes Melitus. Tesis. Fakultas Kedokteran Universitas Diponegoro.

- Shinta Nur Affisa. 2018. Faktor – Faktor Risiko Diabetes Melitus Tipe 2 pada Laki- Laki di Kelurahan Demangan Kota Madiun. Skripsi. Stikes Bhakti Husara Mulia Madiun.
- Sino Biological. 2022. Fibronectin Protein Overview: Sequence, Structure, Function and Protein Interaction. Diakses di Fibronectin Protein.
- Suzan, D.J.M., Kanters., Jan-Dirk Banga, Ale Algra, Rini C.J.M. Frijns., Jaap J. Beutler., Rob Fijnheer., Plasma Levels of Cellular Fibronectin in Diabetes. *Diabetes Care*, 24 (2) February 2001.
- Overview: Sequence, Structure, Function and Protein Interaction | Sino Biological. Pada tanggal 22 Juni 2022.
- Soewondo, P. 2007. *Hidup Sehat dengan Diabetes*. Jakarta: Balai Penerbit FK UI. Suzan, D.J.M., Kanters., Jan-Dirk Banga, Ale Algra, Rini C.J.M. Frijns., Jaap J. Beutler.,
- Tomasik, Wyczałwska., et al. 2012. Strong Association Between Fibronectin Accumulation and Lowered Cathepsin B Activity in Glomeruli of Diabetics Rats. *Journal of Physiology and Pharmacology*. 63 (5); 525-530.
- Van der Plas RM, Schiphorst ME, Huizinga EG, Hene RJ, Verdonck LF, Sixma JJ, Fijnheer R. 1999. Von Willebrand factor proteolysis is deficient in classis, but not in bone marrow transplantation-associated, thrombotic thrombocytopenic purpura. *Blood* 93: 3798–3802.
- Wang JJ, Zhang SX, Lu K, Chen Y, Mott R, Sato S, Ma JX Decreased expression of pigment epithelium-derived factor is involved in the pathogenesis of diabetic nephropathy. *Diabetes* 2005;54:243250.
- WHO. *The World Health Report. Continuous improvement of oral health in the 21st century – the approach of the WHO Global Oral Health Programme*. 2003.
- Wolf G, Chen S, Ziyadeh FN, 2005. From the periphery of the glomerular capillary wall toward the center of disease: podocyte injury comes of age in diabetic nephropathy. *Diabetes*;54:16261634
- Yuxi Feng, Quansheng Wang, Yumei Wang, Benito Yard, & Florian Lang. 2005. SGK1- mediated Fibronectin Formation in Diabetic Nephropathy. *Cell Physiol Biochem*. 16:237-244. 2005.
- Z, Bongor., S, Shiferaw., & E.Z, Tariku. 2018. Adherence to diabetic self-care practices and its associated factors among patients with type 2 diabetes in addis Ababa, Ethiopia. *Patient Preference and Adherence*, 12, pp. 963-970. Doi: 10.2147/PPA.S156043.
- Zunayroh Nasution. 2013. *Nefropati Diabetik pada Pasien Diabetes Melitus Tipe 2 yang Terkontrol dan Tidak Terkontrol: Kajian Terhadap Mikroalbumin Urin sebagai Marker Nefropati Diabetes*. Tesis. Universitas Sumatera Utara. Medan.

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Riwayat pekerjaan :

1. Nusantara sehat di Biak Numfor, Papua (2019-2021)
2. Nusantara sehat di Kota Tual, Maluku (2022-2023)

LAMPIRAN

MASTER TABEL PENELITAIN

NO	KODE SPESIMEN	JENIS KELAMIN	UMUR (Tahun)	RIWAYAT DM	FIBRONE KTIN URINE (ng/mL)	ALBUMIN URIA
1	1	P	48	DMT2	0,74	75
2	2	P	66	DMT2	11,47	146,00
3	3	P	50	DMT2	1,12	13
4	4	P	64	DMT2	0,95	643
5	5	P	52	DMT2	1,98	178,6
6	6	P	51	DMT2	2,21	1096
7	7	L	55	DMT2	0,75	34,9
8	8	L	53	DMT2	1,07	3
9	21	P	56	DMT2	0,75	59
10	41	P	47	DMT2	11,47	128
11	43	P	58	DMT2	0,95	6
12	24	P	64	DMT2	0,99	109
13	25	L	68	DMT2	6,36	12
14	26	L	69	DMT2	1,14	19
15	27	P	56	DMT2	0,77	4
16	28	P	55	DMT2	0,66	456
17	30	P	51	DMT2	0,91	12
18	31	P	79	DMT2	1,11	13
19	32	P	62	DMT2	0,77	7
20	33	P	50	DMT2	0,59	4
21	62	L	54	DMT2	0,81	21
22	35	L	57	DMT2	1,07	47
23	36	L	52	DMT2	1,55	128
24	37	L	37	DMT2	0,88	7
25	19	L	60	DMT2	0,79	6
26	9	P	37	NON	1,06	14
27	10	P	31	NON	0,91	4
28	11	L	43	NON	0,64	5
29	12	P	35	NON	1,06	5

30	13	L	37	NON	1,01	10
31	15	L	39	NON	0,79	5
32	16	P	35	NON	1,27	2
33	17	P	40	NON	0,64	12
34	18	P	34	NON	2,72	4
35	20	L	38	NON	1,17	5
36	29	L	35	NON	2,78	2
37	38	P	36	NON	0,65	5
38	51	P	34	NON	0,71	3
39	55	P	33	NON	1,37	3
40	59	L	33	NON	0,71	4
41	63	L	34	NON	1,27	4
42	64	L	38	NON	0,65	2
43	68	L	34	NON	1,36	2
44	100	P	50	NON	0,85	2
45	107	L	51	NON	0,91	6
46	108	L	43	NON	0,79	8
47	109	L	33	NON	0,76	6
48	110	L	36	NON	0,69	5
49	111	L	40	NON	0,86	2
50	112	L	41	NON	1,66	2

Case Processing Summary

	Cases Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
		t		t		t
Albumin Urin_DMT2	25	100.0 %	0	0.0%	25	100.0 %
Albumin Urin_Non DM	25	100.0 %	0	0.0%	25	100.0 %

Descriptives

				Statistic	Std. Error
Albumin Urin_DMT2	Mean			128.54	50.352
	95% Confidence Interval for Mean	Lower Bound		24.62	
		Upper Bound		232.46	
	5% Trimmed Mean			86.79	
	Median			19.00	
	Variance			63382.528	
	Std. Deviation			251.759	
	Minimum			3	
	Maximum			1096	
	Range			1093	
	Interquartile Range			121	
	Skewness			2.987	.464
	Kurtosis			9.382	.902
	Albumin Urin_Non DM	Mean			4.88
95% Confidence Interval for Mean		Lower Bound		3.57	
		Upper Bound		6.19	
5% Trimmed Mean			4.56		
Median			4.00		
Variance			10.027		
Std. Deviation			3.166		
Minimum			2		
Maximum			14		
Range			12		
Interquartile Range			4		

Skewness	1.574	.464
Kurtosis	2.325	.902

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Albumin Urin_DMT2	.312	25	.000	.549	25	.000
Albumin Urin_Non DM	.245	25	.000	.810	25	.000

a. Lilliefors Significance Correction

Case Processing Summary

	Cases Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Fibronectin_DM T2	25	100.0%	0	0.0%	25	100.0%
Fibronectin_Non DM	25	100.0%	0	0.0%	25	100.0%

Descriptives

		Statistic	Std. Error	
Fibronectin_DM T2	Mean	4.2192	1.55465	
	95% Confidence Interval for Mean	Lower Bound	1.0106	
		Upper Bound	7.4278	
	5% Trimmed Mean	2.9804		
	Median	1.0700		
	Variance	60.424		
	Std. Deviation	7.77326		
	Minimum	.59		
	Maximum	31.76		
	Range	31.17		
	Interquartile Range	1.32		
	Skewness	2.728	.464	
	Kurtosis	7.210	.902	

Fibronectin_Non DM	Mean	1.0916	.11383
	95% Confidence Interval for Mean	Lower Bound	.8567
		Upper Bound	1.3265
	5% Trimmed Mean	1.0236	
	Median	.9100	
	Variance	.324	
	Std. Deviation	.56913	
	Minimum	.64	
	Maximum	2.78	
	Range	2.14	
	Interquartile Range	.56	
	Skewness	2.139	.464
	Kurtosis	4.513	.902

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Fibronectin_DM T2	.402	25	.000	.520	25	.000
Fibronectin_Non DM	.214	25	.005	.725	25	.000

a. Lilliefors Significance Correction

Case Processing Summary

	Subjek DMT2	Cases Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Fibronectin	ND	12	100.0%	0	0.0%	12	100.0%
	Non ND	13	100.0%	0	0.0%	13	100.0%

Descriptives

	Subjek DMT2			Statistic	Std. Error
Fibronectin	ND	Mean		97.5100	95.41212
		95% Confidence Interval for Mean	Lower Bound	-112.4907	

		Upper Bound	307.5107	
		5% Trimmed Mean	44.5856	
		Median	1.0300	
		Variance	109241.682	
		Std. Deviation	330.51729	
		Minimum	.66	
		Maximum	1147.00	
		Range	1146.34	
		Interquartile Range	1.40	
		Skewness	3.464	.637
		Kurtosis	11.997	1.232
	Non ND	Mean	5.4531	2.80701
		95% Confidence Interval for Mean	Lower Bound Upper Bound	
			-6629 11.5690	
		5% Trimmed Mean	4.2618	
		Median	1.0700	
		Variance	102.431	
		Std. Deviation	10.12083	
		Minimum	.59	
		Maximum	31.76	
		Range	31.17	
		Interquartile Range	2.97	
		Skewness	2.210	.616
		Kurtosis	3.854	1.191

Tests of Normality

	Subjek DMT2	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statisti c	df	Sig.	Statisti c	df	Sig.
Fibronekt in	ND	.519	12	.000	.332	12	.000
	Non ND	.434	13	.000	.539	13	.000

a. Lilliefors Significance Correction

Case Processing Summary

	Cases		
	Valid	Missing	Total
Subjek DMT2			

		N	Percent	N	Percent	N	Percent
Albumin Urin	ND	12	100.0%	0	0.0%	12	100.0%
	Non ND	13	100.0%	0	0.0%	13	100.0%

Descriptives

	Subjek DMT2		Statistic	Std. Error	
Albumin Urin	ND	Mean	258.3750	92.60151	
		95% Confidence Interval for Mean	Lower Bound	54.5604	
			Upper Bound	462.1896	
		5% Trimmed Mean	224.2556		
		Median	128.0000		
		Variance	102900.480		
		Std. Deviation	320.78105		
		Minimum	34.90		
		Maximum	1096.00		
		Range	1061.10		
	Interquartile Range	323.65			
	Skewness	2.009	.637		
	Kurtosis	3.767	1.232		
	Non ND	Mean	8.6923	1.30278	
		95% Confidence Interval for Mean	Lower Bound	5.8538	
			Upper Bound	11.5308	
		5% Trimmed Mean	8.4359		
		Median	7.0000		
		Variance	22.064		
		Std. Deviation	4.69724		
Minimum		3.00			
Maximum		19.00			
Range		16.00			
Interquartile Range	7.50				
Skewness	.839	.616			
Kurtosis	.141	1.191			

Tests of Normality

	Subjek DMT2	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Albumin	ND	.348	12	.000	.703	12	.001
Urin	Non ND	.256	13	.020	.898	13	.126

a. Lilliefors Significance Correction

Mann-Whitney Test Ranks

	Subjek	N	Mean Rank	Sum of Ranks
Fibronekt in	DMT2	25	28.24	706.00
	Non DM	25	22.76	569.00
	Total	50		

Test Statistics^a

	Fibronekt in
Mann-Whitney U	244.000
Wilcoxon W	569.000
Z	-1.330
Asymp. Sig. (2-tailed)	.184

a. Grouping Variable: Subjek

Mann-Whitney Test Ranks

	Subjek	N	Mean Rank	Sum of Ranks
Albumin Urin	DMT2	25	35.12	878.00
	Non DM	25	15.88	397.00
	Total	50		

Test Statistics^a

	Albumin Urin
Mann-Whitney U	72.000
Wilcoxon W	397.000
Z	-4.683
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: Subjek

Mann-Whitney Test**Ranks**

	Subjek DMT2	N	Mean Rank	Sum of Ranks
Fibronekt in	ND	12	12.88	154.50
	Non ND	13	13.12	170.50
	Total	25		

Test Statistics^a

	Fibronekt in
Mann-Whitney U	76.500
Wilcoxon W	154.500
Z	-.082
Asymp. Sig. (2-tailed)	.935
Exact Sig. [2*(1-tailed Sig.)]	.936 ^b

a. Grouping Variable: Subjek DMT2

b. Not corrected for ties.

Mann-Whitney Test**Ranks**

	Subjek DMT2	N	Mean Rank	Sum of Ranks
Albumin Urin	ND	12	19.50	234.00
	Non ND	13	7.00	91.00
	Total	25		

Test Statistics^a

	Albumin Urin
Mann-Whitney U	.000
Wilcoxon W	91.000
Z	-4.250
Asymp. Sig. (2-tailed)	.000
Exact Sig. [2*(1-tailed Sig.)]	.000 ^b

a. Grouping Variable: Subjek DMT2

b. Not corrected for ties.

Correlations

			Albumin Urin_DMT2	Fibronektin _DMT2
Spearman's rho	Albumin Urin_DMT2	Correlation Coefficient	1.000	.153
		Sig. (2-tailed)	.	.464
		N	25	25
	Fibronektin_DM T2	Correlation Coefficient	.153	1.000
		Sig. (2-tailed)	.464	.
		N	25	25

Correlations

			Albumin Urin_Nefro pati diabetik	Fibronektin _ Nefropati diabetik
Spearman's rho	Albumin Urin_Nefropati diabetik	Correlation Coefficient	1.000	.302
		Sig. (2-tailed)	.	.340
		N	12	12
	Fibronektin_Nefropa ti diabetik	Correlation Coefficient	.302	1.000
		Sig. (2-tailed)	.340	.
		N	12	12

Correlations

		Albumin Urin_Subjek DMT2 Non ND	Fibronektin _Subjek DMT2 Non ND
Spearman's rho	Albumin Urin_Subjek DMT2 Non Nefropati diabetik	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	13
	Fibronektin_Subjek DMT2 Non Nefropati diabetik	Correlation Coefficient	.438
		Sig. (2-tailed)	.134
		N	13



REKOMENDASI PERSETUJUAN ETIK

Nomor : 656/UN4.6.4.5.31/ PP36/ 2022

Tanggal: 27 Oktober 2022

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH22080488	No Sponsor	
Peneliti Utama	MUH ANSHAR J, S.Tr.AK	Protokol	
Judul Peneliti	ANALISIS FIBRONEKTIN URIN PADA PENDERITA DIABETES MELITUS TIPE 2		
No Versi	2	Tanggal	
Protokol		Versi	
No Versi PSP		Tanggal	
		Versi	
Tempat Penelitian	RSUP Dr. Wahidin Sudirohusodo Makassar		
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku 27 Oktober 2022 sampai 27 Oktober 2023	Frekuensi review lanjutan
Ketua KEP Universitas Hasanuddin	Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)	Tanda tangan	
Sekretaris KEP Universitas Hasanuddin	Nama dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)	Tanda tangan	

Kewajiban Peneliti Utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Laporan SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

