

DAFTAR PUSTAKA

- ADA, American Diabetes Association. 2019. "Classification and Diagnosis of Diabetes: Standards of Medical Care in Diabetes." 42(1): S13-S28.
- Ali W., Kushwaha U.P., Wamique M., et al. 2017. "Oxidized LDL as A Biomarker in Metabolik Syndrome." *Journal Diabetes Metab* 8: 764.
- Bartrina J.A, Rodrigo C.P, Aresti G.A , Carrera N.R, Masedo S.L. 2016. "Prevalence of General Obesity and Abdominal Obesity in the Spanish Adult Population (Aged 25–64 Years) 2014–2015: The ENPE Study." *Sociedad Espanola de Cardiologia* 69 (6):579-587.
- Baynest H.W. 2015. "Classification, Pathophysiology, Diagnosis and Managemnet Of Diabetes Mellitus." 6(5).
- Beccuti G. & Pannain S. 2011. "Sleep and Obesity." 14(4): 402–412.
- Cleator J., Abbott J., Judda P., Sutton C., & Wilding JPH. 2012. "Night
- Bertin, B., Desreumaux, P. & Dubuquoy, L. Obesity , visceral fat and Crohn ' s disease. (2010). doi:10.1097/MCO.0b013e32833cf0f4
- Bolignano D, Lacquaniti A, Coppolino G, Campo S, Arena A, Buemi M (2008) Neutrofil gelatinase terkait lipocalin mencerminkan keparahan gangguan ginjal pada subjek yang terkena penyakit kronis penyakit ginjal. *Res Pers Darah Ginjal* 31:255–258
- Eating Syndrome: Implications For Severe Obesity." 2: e44
- EI-Mesallamy HO, Hamdy NM, Sallam AA. Efek obesitas dan glikemik kontrol pada serum lipocalin dan sumbu faktor pertumbuhan seperti insulin dalam tipe 2 subjek diabetes. *Akta Diabetes*. 2013;50(5):67985. doi:[10.1007/s00592-012-0373-6](https://doi.org/10.1007/s00592-012-0373-6).
- Daniels L.B, Barrett-Connor E, Clopton P, Laughlin G.A,Joachim H. Maisel A.S, 2012, "Plasma Neutrophil Gelatinase–Associated Lipocalin Is Independently Associated With Cardiovascular Disease and Mortality in Community-Dwelling Older Adults", in :*Journal of the American College of Cardiology* Vol. 59, No. 12, p: 1101-1109.

- Després, Jean-Pierre. 2006. "Abdominal Obesity: The Most Prevalent Cause of the Metabolik Syndrome and Related Cardiometabolik Risk." *European Heart Journal Supplements* 8(suppl_B): B4–12.
- Devarajan P. Neutrophil gelatinase-associated lipocalin: A promising biomarker for human acute kidney injury. *Biomark Med.* 2010;4(2):265–80. <https://doi.org/10.2217/bmm.10.12>
- Devireddy LR, Gazin C, Zhu X, Green MR (2005) A cell-surface receptor for lipocalin 24p3 selectively mediates apoptosis and iron uptake. *Cell* 123:1293–1305
- Dewi, M. (2007). *Resistensi Insulin Terkait Obesitas: Mekanisme Endokrin Dan Intrinsik Sel (Obesity Related Insulin Resistance: Endocrine and Cell Intrinsic Mechanism)*. 2(2), 49–54.
- Dewi Up, Dieny Ff. Hubungan antara densitas energi dan kualitas diet dengan indeks massa tubuh (IMT) pada remaja *Journal of Nutrition College* 2013, 2 (4);445-57.
- Drolet et al.(2008).*Hypertrophy and Hyperplasia of Abdominal Adipose Tissues in Women.International Journal of Obesity : Nature Publishing Group. Eating Syndrome: Implications For Severe Obesity."* 2: e44.
- Gibson, RS. 2005. *Principle of Nutrition Assessment*. 2nd edition. New York. Oxford University Press.
- Gotera, Wira, dkk. 2006. Korelasi antara Obesitas Sentral dengan Andinopektin pada Subjek Geritari Dengan Penyakit Jantung Koroner. Denpasar: UNUD
- Hadi, Hamam. 2004. "Gizi Lebih Sebagai Tantangan Baru Dan Implikasinya Terhadap Kebijakan Pembangunan Kesehatan Nasional 1,2." 1(2):47–53.
- Holt RIG, Hanley NA. *Essential endocrinology and diabetes*. 6th ed. Chich ester: Wiley-Blackwell;
- Holvoet P., Lee D-H., Steffes M., et al. 2008. "Association Between Circulating Oxidized Low-Density Lipoprotein and Incidence of the Metabolik Syndrome." *JAMA* 299(19):2287-2293.
- Hu L., Xiao H., Chunjiao Y., Juxiang Li., Kui H., Ping L., Yanqing W., Qinhua W., Zengwu W., Runlin G., Huihui B., Xiaoshu C. 2017." *Prevalence of overweight, obesity, abdominal obesity and*

obesity- related risk factors in southern China." PLoS ONE 12(9): e0183934.

Jansen, 2016. Ketahui Kadar Lemak Tubuh anda, available from <http://www.ask-jansen.com/kadar-lemak-tubuh/>, accessed tanggal 5 Desember 2016.

Jafar N. 2011. "*Sindroma Metabolik Di Indonesia: Potret Gaya Hidup Masyarakat Perkotaan.*" Yogyakarta: Penerbit Ombak.

Jiao J., Moudon A.V., Kim S.Y., Hurvitz P.M. & Drewnowski A. 2015. "Health Implications Of Adults' Eating At And Living Near Fast Food Or Quick Service Restaurants." 5:e171

KEMENKES, Kementerian Kesehatan Republik Indonesia. 2019. *Batas Ambang Indeks Masa Tubuh.*" Direktorat Pencegahan Dan Pengendalian Penyakit Tidak Menular Kementerian Kesehatan Republik Indonesia.

Kiranmayi P.V., Vivekanand N., Pandit V.L. 2014. "The Study of lipid Profile and Oxidised-LDL in Type 2 Diabetes Mellitus." *Scholars Journal of Applied Medical Sciences 2(3D):1119-1122.*

Kurniawan L.B, Bahrn N, Arif M, Adam J.MF, Patellongi I, Pakasi R.DN. 2013. "Kadar oxLDL pada Penderita Diabetes Melitus Tipe 2 Terkontrol dan Tidak Terkontrol." *Jurnal Pascasarjana Universitas Hasanuddin.*1-10.

Lee YH, Lee SH, Jung ES, Kim JS, Shim CY, Ko YG, et al. *Visceral adiposity and the severity of coronary artery disease in middle-aged subjects with normal waist circumference and its relation with lipocalin-2 and MCP-1. Atherosclerosis. 2010;213(2):592–7. doi:10.1016/j.atherosclerosis.2010.09.012*

Lemeshow S., David W., Hosmer J. et al. 1997. *Besar Sampel Penelitian Kesehatan.* Yogyakarta: Gajah Mada University Press.

Listiyana, Aulia Dewi, Mardiana Mardiana, and Galuh Nita Prameswari. 2013. "Obesitas Sentral Dan Kadar Kolesterol Darah Total." *Jurnal Kesehatan Masyarakat 9(1): 37–43.*

Long V., Short M., Smith S., Sénéchal M., & Bouchard D.R. 2019. "Testing Bioimpedance to Estimate Body Fat Percentage across Different Hip and Waist Circumferences." *Journal of Sports Medicine 5.*

Mannelqvist, M.; Stefanson, IM; Wik, E.; Kusonmano, K.; Raeder, MB; Oyan, AM; Kalland, KH; Musa, MA; Salvesen, HB; Akslen, LA Lipocalin 2 ekspresi dikaitkan dengan fitur agresif dari kanker endometrium.v Marzo, V. Di. 2008. "The Endocannabinoid System In Obesity And Type 2 Diabetes." 51: 1356–67. Kanker BMC 2012; 12, 169.

Marzo, V. Di. 2008. "The Endocannabinoid System In Obesity And Type 2 Diabetes." 51: 1356–67.

Mishra J, Ma Q, Prada A, Mitsnefes M, Zahedi K, Yang J, dkk. Identifikasilipocalin terkait gelatinase neutrofil sebagai bioteknologi urin awal yang baru penanda untuk cedera ginjal iskemik. J Am Soc Nephrol. 2003;14(10):2534–43

Misnadierly, 2007. *Obesitas Sebagai Faktor Resiko Berbagai Penyakit*. Jakarta : Pustaka Obor Papuler

Murtola, Teemu et al. 2011. "Low Density Lipoprotein: Structure, Dynamics, and Interactions of ApoB-100 with Lipids." 7: 8136–41.

Mustakin. 2016. "Analisis Kadar Adiponektin Dan Lipocalin-2 Serum Pada Subyek Obesitas Sentral Dengan Prediabetes." Tesis. Makassar: Pendidikan Dokter Spesialis Universitas Hasanuddin.

Nagami, S, and B Pavan Naga. 2016. "Obesity and Diabetes: A Review." 2(1).

Njajou, Omer T., Alka M. Kanaya, Paul Holvoet, Stephanie Connelly, Elsa

S. Strotmeyer, Tamara B. Harris, Steve R. Cummings, and Wen Chi Hsueh. 2009. "Association between Oxidized LDL, Obesity and Type 2 Diabetes in a Population-Based Cohort, the Health, Aging and Body

Composition Study." Diabetes/Metabolism Research and Reviews

25(8):733–39.

Panjaitan, Tri Nevita Margareth, Marita Kaniawati, and Ilham Jaya Patellongi. 2013. "Correlation of Oxidized-LDL, Resistin and Interleukin-1 Beta in Centrally Obese Men." The Indonesian Biomedical Journal 5(1): 59.

- Park SY, Eom JS, Lee JS, Ju YS, Park JY. Neutrophil gelatinase-associated lipocalin as a predictor of acute kidney injury in patients during treatment with colistimethate sodium. *Infect Chemother*. 2018;50(2):128–37. <https://doi.org/10.3947/ic.2018.50.2.128>
- Parthasarathy, Sampath, Achuthan Raghavamenon, Mahdi Omar Garelnabi, and Nalini Santanam. 2010. "Oxidized Low-Density Lipoprotein." 610: 403–17.
- Purnell J. Q. 2018. "Definitions, Classification, and Epidemiology of Obesity."
- Puspitasari, N. (2018). Kejadian Obesitas Sentral pada Usia Dewasa. *HIGEIA (Journal of Public Health Research and Development)*, 2(2), 249–259. <https://doi.org/10.15294/higeia.v2i2.21112>
- Riskesdas. 2018. *Hasil Utama Riskesdas 2018*. Kementerian Kesehatan Badan Penelitian dan Pengembangan Kesehatan.
- Ronco C. N-GAL: Diagnosing AKI as soon as possible. *Critical Care* 2007;11:173-7.
- Roca, Y.H., Hector B., Fernandez A.O., Jose M.O., Borja I., Valentin F., Fernando R.A., and Martin L. 2017. "Oxidized LDL Is Associated with Metabolik Syndrome Traits Independently of Central Obesity and Insulin Resistance." *Diabetes* 66(2):474–82.
- Ryder J.R., Sonia V.L, Constantine S.D., and Gabriel Q.S. 2013. "Abdominal Adiposity, Insulin Resistance, and Oxidized Low-Density Lipoproteins in Latino Adolescents." *Diabetology & Metabolik Syndrome* 5(1): 72.
- Soegih, R. Rachmad, and Kunkun K Wiramihardja. 2009. "Obesitas: Permasalahan Dan Terapi Praktis." 1st ed. Jakarta: Sagung Seto.
- Soelistijo, S. A., Novisa, H., Rudijanto, A., et al. 2015. "Konsensus: Pengelolaan dan Pencegahan Diabetes Melitus Tipe 2 Di Indonesia." Jakarta: Pengurus Besar Perkumpulan Endokrinologi Indonesia (PB PERKENI).
- Speliotes E.K, Willer C.J, Berndt S.I. 2010. "Association analyses of 249,796 individuals reveal 18 new loci associated with body mass index." *Nat Genet* 42: 937–948
- Suci, P. (2014). Korelasi Antar Kadar TNF- α Dengan Lingkar

- Pinggang, Indeks Massa Tubuh, Dan Level Visceral, Fat Pada Civitas Akademika Universitas Hasanuddin. 2.
- Sudikno S., Hidayat S., Cesilia M.D., & Hadi R. 2016. "Faktor Risiko Obesitas Sentral Pada Orang Dewasa Umur 25-65 Tahun Di Indonesia (Analisis Data Riset Kesehatan Dasar 2013)." *Penelitian Gizi dan Makanan (The Journal of Nutrition and Food Research)*. 38(2).
- Sugondo, S. 2014. Obesitas. In: Setiati, S., Alwi, I., Sudoyo, A W., Simadibrata, M., Setiyohadi, B. dan Syam, A. F. (eds). Buku Ajar Ilmu Penyakit Dalam. 6 ed. Jakarta Interna Publishing.
- Taslim, N.A et al. 2018. "IbW-CSR IDI Kota Makassar, Menuju Makassar Sehat melalui Peningkatan Konsumsi Ikan, Sayur dan Buah." 2(2): 8.
- Tchernof A & Després J.P. 2013. "Pathophysiology Of Human Visceral Obesity: An Update." 93: 359–404.*
- Wahjuni S. 2013. "Metabolisme Biokimia." Denpasar-Bali: Udayana University Press.
- Waikar SS, Liu KD, Chertow GM. Diagnosis, epidemiology and outcomes of AKI. Clin J Am Soc Nephro 2008;13:844-61.*
- Wang Y, Lam KS, Kraegen EW, Sweeney G, Zhang J, Tso AW, et al. Lipocalin-2 is an inflammatory marker closely associated with obesity, insulin resistance, and hyperglycemia in humans. Clin Chem. 2007;53(1):34–41. doi: 10.1373/clinchem.2006.075614.*
- Wei S. et al. 2006. "Waist Circumference Correlates with Metabolik Syndrome Indicators Better than Percentage Fat." Obesity. 14: 727- 36*
- Weinbrenner T., Schröder H., Escurriol V., et al. 2006. "Circulating Oxidized LDL Is Associated with Increased Waist Circumference Independent of Body Mass Index in Men and Women." The American Journal of Clinical Nutrition 83(1): 30–35.*
- Wen-HuiTsa ,Chung-Hung Shih, Yuan-Bin Yu, Hui-Chi HsuPlasma levels in sepsis patients of annexin A1, lipoxin A4, macrophage inflammatory protein-3a, and neutrophil gelatinase-associated lipocalin.Journal of the Chinese Medical AssociationVolume 76, Issue 9, September 2013, Pages 486–49.*
- World Health Organization. 2018. Library Cataloguing-in-Publication*

Data. Xu F., Xiao M.Y., & Youfa W. 2007. "The Association between Amount of Cigarettes Smoked and Overweight, Central Obesity among Chinese Adults in Nanjing, China." Asia Pacific Journal of Clinical Nutrition. 16 (2): 24-47

Yanita, B. 2017. "Perbedaan Kejadian Displidemia Antara Obesitas Gineral Dengan Obesitas Sentral Pada Laki-Laki Dewasa Di Lingkungan Universitas Lampung." Bandar Lampung: Universitas Lampung.

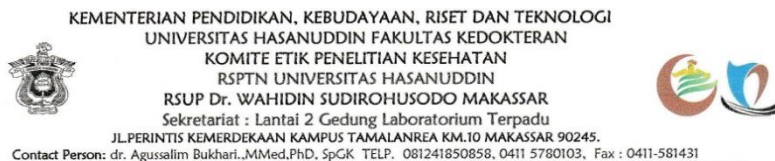
LAMPIRAN

1. Master table penelitian

KODE SPESIMEN	JENIS KELAMIN	UMUR (TAHUN)	IMT kg/m ²	LINGKAR PINGGANG	%LEMAK TUBUH	LEMAK VISCERAL	STATUS	NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN (NGAL) ng/dL
1	L	25	28,71	103	41,7	21	OBESITAS	19,83846
3	L	37	30,87	106	41,3	22	OBESITAS	21,60485
5	L	33	28,08	95	43,1	19	OBESITAS	20,27417
6	L	36	25,11	88	11,5	12	OBESITAS	21,66819
9	L	35	29,65	96	31	17	OBESITAS	21,87945
17	L	29	26,99	88	49,7	30	OBESITAS	22,02543
18	L	27	34,48	108	43,1	30	OBESITAS	21,25985
20	L	27	31,75	102	42,2	27	OBESITAS	23,64939
21	L	36	28,64	105	31,5	15	OBESITAS	22,84171
22	L	28	32,09	110	42,6	19	OBESITAS	20,99939
23	L	39	25,05	90	37,7	13	OBESITAS	22,70888
27	L	30	26,68	94	41	19	OBESITAS	21,19025
33	L	33	33,09	98	41	25	OBESITAS	22,34039
34	L	38	28,40	97	41	13	OBESITAS	21,70716
35	L	32	30,05	100	29,4	14	OBESITAS	21,02273
57	L	30	30,03	100	27,6	10	OBESITAS	21,11547
58	L	30	30,13	102	32,4	18	OBESITAS	20,83556
2	P	35	30,14	107	35,3	30	OBESITAS	23,64939
4	P	34	33,48	100	43,6	26	OBESITAS	21,31364
11	P	32	29,47	91	22,2	10	OBESITAS	20,66334
14	P	38	29,55	85	36	15	OBESITAS	21,64224
15	P	29	31,33	97	31	15	OBESITAS	21,28636
16	P	33	25,59	81	26,2	10	OBESITAS	21,42899
19	P	35	29,59	89	28,4	13	OBESITAS	21,93318
25	P	29	27,50	95	32,2	23	OBESITAS	21,64605
28	P	39	25,64	88	24,5	8	OBESITAS	22,82294
29	P	35	30,06	83	38,6	12	OBESITAS	21,13132
36	P	39	26,93	87	23,8	7	OBESITAS	20,64691
37	P	32	32,37	97	31,2	15	OBESITAS	20,56480
42	P	34	27,41	83	38,8	11	OBESITAS	21,38722
43	P	35	27,03	87	35,3	10	OBESITAS	21,66896
45	P	28	29,60	87	39	14	OBESITAS	24,63010
48	P	34	27,16	73	33,7	7	OBESITAS	22,16799
49	P	23	28,80	92	34,8	9	OBESITAS	21,18194
8	L	33	24,02	79	36	13	NON OBES	23,94118

31	L	29	24,76	78	21,6	5	NON OBES	21,79974
40	L	25	23,00	88	23,7	7	NON OBES	21,95776
46	L	32	24,78	82	41,2	13	NON OBES	23,77036
66	L	27	23,98	88	43,4	23	NON OBES	21,83115
69	L	31	20,78	80	24,7	9	NON OBES	21,83115
70	L	31	23,87	99	24	7	NON OBES	21,83115
72	L	38	19,73	77	26,9	3	NON OBES	20,58718
74	L	29	21,87	77	21,5	6	NON OBES	21,38039
77	L	33	23,39	85	28,1	12	NON OBES	22,35743
80	L	27	20,07	74	33,9	6	NON OBES	21,03554
84	L	23	24,26	81	38,3	12	NON OBES	22,39696
85	L	32	23,61	94	25	9	NON OBES	21,44039
86	L	25	21,37	80	32,7	6	NON OBES	22,01312
89	L	24	24,56	87	36,2	10	NON OBES	22,43419
101	L	29	24,89	87	35,5	8	NON OBES	23,98277
103	L	29	23,84	88	36,7	13	NON OBES	20,74113
104	L	31	21,63	88	15,2	6	NON OBES	21,91245
7	P	28	21,96	74	17	4	NON OBES	22,08009
12	P	31	23,21	77	9,3	5	NON OBES	22,28389
13	P	34	22,55	83	20,9	8	NON OBES	23,19347
24	P	31	24,81	81	33,7	6	NON OBES	24,20489
26	P	40	21,53	80	14,4	4	NON OBES	23,22658
31	P	29	24,76	78	21,6	5	NON OBES	19,91114
32	P	33	21,42	68	14,6	3	NON OBES	21,61705
39	P	29	20,73	71	28,2	3	NON OBES	22,54917
41	P	36	24,89	77	28,6	5	NON OBES	20,95950
44	P	27	24,31	73	32,9	6	NON OBES	21,91322
47	P	27	22,43	71	29,5	4	NON OBES	21,85261
50	P	24	22,75	81	33,5	5	NON OBES	20,09450
51	P	24	22,56	77	28,8	5	NON OBES	21,86948
52	P	29	21,58	71	35,6	7	NON OBES	22,04236
53	P	36	21,22	69	20,2	2	NON OBES	23,22658
73	P	25	24,24	75	21,4	6	NON OBES	21,11321
75	P	34	20,43	68	26,7	4	NON OBES	23,84373
76	P	32	22,03	80	34,5	7	NON OBES	20,14766

2. Rekomendasi Persetujuan Etik





REKOMENDASI PERSETUJUAN ETIK

Nomor : 795/UN4.6.4.5.31/ PP36/ 2021

Tanggal: 15 Desember 2021

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

No Protokol	UH21110677	No Sponsor Protokol	
Peneliti Utama	Hardyansah,S.Tr,Ak	Sponsor	
Judul Peneliti	Hubungan Indeks obesitas dan kadar Neutrophil Gelatinase Associated Lipocalin (NGAL) pada subyek dewasa muda non DM		
No Versi Protokol	2	Tanggal Versi	10 Desember 2021
No Versi PSP	2	Tanggal Versi	10 Desember 2021
Tempat Penelitian	RS Universitas Hasanuddin Makassar		
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku 15 Desember 2021 sampai 15 Desember 2022	Frekuensi review lanjutan
Ketua KEPK FKUH RSUH dan RSWS	Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)	Tanda tangan 	
Sekretaris KEPK FKUH RSUH dan RSWS	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

3. Hasil olah data

Uji korelasi spearman

Correlations

			UMUR	NGAL
Spearman's rho	UMUR	Correlation Coefficient	1.000	.094
		Sig. (2-tailed)	.	.438
		N	70	70
	NGAL	Correlation Coefficient	.094	1.000
		Sig. (2-tailed)	.438	.
		N	70	70

Correlations

			INDEKS MASSA TUBUH	NGAL
Spearman's rho	INDEKS MASSA TUBUH	Correlation Coefficient	1.000	-.200
		Sig. (2-tailed)	.	.096
		N	70	70
	NGAL	Correlation Coefficient	-.200	1.000
		Sig. (2-tailed)	.096	.
		N	70	70

Correlations

			LINGKAR PINGGANG	NGAL
Spearman's rho	LINGKAR PINGGANG	Correlation Coefficient	1.000	-.196
		Sig. (2-tailed)	.	.103
		N	70	70
	NGAL	Correlation Coefficient	-.196	1.000
		Sig. (2-tailed)	.103	.
		N	70	70

Correlations

			LEMAK_TUBU H	NGAL
Spearman's rho	LEMAK_TUBUH	Correlation Coefficient	1.000	-.025

	Sig. (2-tailed)	.	.840
	N	70	70
NGAL	Correlation Coefficient	-.025	1.000
	Sig. (2-tailed)	.840	.
	N	70	70

Correlations

			LEMAK_VISCE RAL	NGAL
Spearman's rho	LEMAK_VISCERAL	Correlation Coefficient	1.000	-.073
		Sig. (2-tailed)	.	.550
		N	70	70
NGAL		Correlation Coefficient	-.073	1.000
		Sig. (2-tailed)	.550	.
		N	70	70

VARIABEL INDEKS OBESITAS DAN NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN

KELOMPOK OBESITAS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	OBESITAS	34	48.6	48.6	48.6
	NON OBESITAS	36	51.4	51.4	100.0
	Total	70	100.0	100.0	

JENIS KELAMIN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	L	35	50.0	50.0	50.0
	P	35	50.0	50.0	100.0
	Total	70	100.0	100.0	

Statistics

UMUR

N	Valid	70
	Missing	0
Mean		31.23

Std. Deviation	4.328
Minimum	23
Maximum	40

Statistics

		INDEKS MASSA TUBUH	LINGKAR PINGGANG	NEUTH ROPHI L GELATI NASE ASSOC IATED LIPOC ALIN
N	Valid	70	70	70
	Missing	0	0	0
	Mean	25.9039	86.66	21.8586
	Median	24.8900	87.00	21.8154
	Std. Deviation	3.76338	10.751	1.06784
	Minimum	19.73	68	19.84
	Maximum	34.48	110	24.63

Menilai normalitas IMT, lingkaran lengan, umur dan NEUTHROPHIL
GELATINASE ASSOCIATED LIPOCALIN

Descriptives

		Statistic	Std. Error
INDEKS MASSA TUBUH	Mean	25.9039	.44981
	95% Confidence Interval for Mean	Lower Bound	25.0065
		Upper Bound	26.8012
	5% Trimmed Mean	25.8006	
	Median	24.8900	

	Variance		14.163	
	Std. Deviation		3.76338	
	Minimum		19.73	
	Maximum		34.48	
	Range		14.75	
	Interquartile Range		6.79	
	Skewness		.359	.287
	Kurtosis		-.872	.566
LINGKAR PINGGANG	Mean		86.66	1.285
	95% Confidence Interval for Mean	Lower Bound	84.09	
		Upper Bound	89.22	
	5% Trimmed Mean		86.48	
	Median		87.00	
	Variance		115.576	
	Std. Deviation		10.751	
	Minimum		68	
	Maximum		110	
	Range		42	
	Interquartile Range		17	
	Skewness		.260	.287
	Kurtosis		-.761	.566
	UMUR	Mean		31.23
95% Confidence Interval for Mean		Lower Bound	30.20	
		Upper Bound	32.26	
5% Trimmed Mean			31.21	
Median			31.00	
Variance			18.730	
Std. Deviation			4.328	
Minimum			23	
Maximum			40	
Range			17	
Interquartile Range			6	
Skewness			.031	.287

	Kurtosis		- .719	.566
NEUTHROPHIL	Mean		21.8586	.12763
GELATINASE	95% Confidence	Lower	21.6040	
ASSOCIATED	Interval for Mean	Bound		
LIPOCALIN		Upper	22.1132	
		Bound		
	5% Trimmed Mean		21.8316	
	Median		21.8154	
	Variance		1.140	
	Std. Deviation		1.06784	
	Minimum		19.84	
	Maximum		24.63	
	Range		4.79	
	Interquartile Range		1.24	
	Skewness		.546	.287
	Kurtosis		.061	.566

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
INDEKS MASSA TUBUH	.126	70	.007	.958	70	.021
LINGKAR PINGGANG	.093	70	.200*	.972	70	.123
UMUR	.097	70	.172	.977	70	.219
NEUTHROPHIL GELATINASE ASSOCIATED LIPOCALIN	.118	70	.017	.965	70	.045

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

a. Lilliefors Significance Correction

Data IMT dan NEUTHROPHIL GELATINASE ASSOCIATED LIPOCALIN (NGAL) tidak normal maka harus dilakukan penormalan data

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TRANSIMT	.100	70	.077	.967	70	.063

TRANSNE UTHROPH IL GELATINA SE ASSOCIAT ED LIPOCALI N	.108	70	.042	.972	70	.119
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a. Lilliefors Significance Correction

DATA NGL TETAP TIDAK NORMAL

Descriptives

			Statistic	Std. Error
KELOMPOK	Mean		31.120	1.0426
	95% Confidence Interval for Mean	Lower Bound	29.040	
		Upper Bound	33.200	
	5% Trimmed Mean		31.391	
	Median		32.300	
	Variance		76.092	
	Std. Deviation		8.7231	
	Minimum		9.3	
	Maximum		49.7	
	Range		40.4	
	Interquartile Range		13.2	
	Skewness		-.388	.287
	Kurtosis		-.312	.566
LEMAK VISCERAL	Mean		11.66	.866
	95% Confidence Interval for Mean	Lower Bound	9.93	
		Upper Bound	13.39	
	5% Trimmed Mean		11.16	

Median	10.00	
Variance	52.547	
Std. Deviation	7.249	
Minimum	2	
Maximum	30	
Range	28	
Interquartile Range	9	
Skewness	1.001	.287
Kurtosis	.270	.566

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
KLP LEMAK	.066	70	.200*	.978	70	.259
LEMAK	.133	70	.004	.899	70	.000
VISCERAL						

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

a. Lilliefors Significance Correction

Data lemak Visceral Tidak Normal maka harus dinormalkan

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Trans_lemak_visceral	.078	70	.200*	.980	70	.329

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

a. Lilliefors Significance Correction

Data lemak Visceral Normal

Tujuan Penelitian : Untuk mengetahui korelasinya indeks obesitas (obesitas/non obesitas, lingkaran pinggang, IMT, jenis kelamin, umur) dengan kadar NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN

1. Untuk mengetahui korelasinya kelompok obesitas (obesitas/non obesitas) dengan kadar NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN

Uji yang digunakan Mann Whitney karena Data NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN (NGAL) tidak Normal

Mann-Whitney Test**Ranks**

	KELOMPOK	N	Mean Rank	Sum of Ranks
NEUT	OBESITAS	34	30.91	1051.00
HROP	NON			
HIL	OBESITAS	36	39.83	1434.00
GELA	Total			
TINAS				
E				
ASSO		70		
CIATE				
D				
LIPOC				
ALIN				

Test Statistics^a

	NEUTHR OPHIL GELATIN ASE ASSOCIA TED LIPOCALI N
Mann-Whitney U	456.000
Wilcoxon W	1051.000
Z	-1.833
Asymp. Sig. (2-tailed)	.067

a. Grouping Variable:
KELOMPOK

P : 0.067 > 0.05 (tidak ada perbedaan rerata (korelasi) kelompok obesitas (obesitas/non obesitas) dengan kadar NEUTHROPHIL GELATINASE ASSOCIATED LIPOCALIN)

Atau uji korelasi spearman

Correlations

			KELOMP OK	
Spearman's rho	KELOMP OK	Correlation Coefficient	1.000	.221
		Sig. (2-tailed)	.	.066
		N	70	70
		Correlation Coefficient	.221	1.000
		Sig. (2-tailed)	.066	.
		N	70	70

P : 0.066 > 0.05 (tidak ada korelasi kelompok obesitas (obesitas/non obesitas) dengan kadar NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN)

Nilai R : 0.221 (korelasi lemah)

2. Untuk mengetahui korelasi lingkar pinggang dengan kadar NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN
Uji yang digunakan uji korelasi pearson karena data Numerik dan salah satu Normal

Correlations

Correlations

		LINGKAR PINGGANG	NEUTHR OPHIL GELATIN ASE ASSOCI ATED LIPOCAL IN
LINGKAR PINGGANG	Pearson Correlation	1	-.154
	Sig. (2-tailed)		.204
	N	70	70
NEUTROPHIL GELATINASE	Pearson Correlation	-.154	1
	Sig. (2-tailed)	.204	

ASSOCIATED LIPOCALIN	N	70	70
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P : 0.204 > 0.05 (tidak ada korelasi lingkaran pinggang dengan kadar NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN)

Nilai R : 0.154 (Korelasi sangat lemah)

3. Untuk mengetahui korelasi IMT dengan kadar NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN

Uji yang digunakan : uji Korelasi Pearson karena data Numerik dan salah satu Normal

Correlations

		INDEKS MASSA TUBUH	NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN
INDEKS MASSA TUBUH	Pearson Correlation	1	-.142
	Sig. (2-tailed)		.241
	N	70	70
NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN	Pearson Correlation	-.142	1
	Sig. (2-tailed)	.241	
	N	70	70

P : 0.241 > 0.05 (tidak ada korelasi IMT dengan kadar NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN)

Nilai R : 0.142 (korelasi sangat lemah)

4. Untuk mengetahui korelasi Jenis kelamin dengan kadar NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN

Uji yang digunakan : uji Mann Whitney Uji yang digunakan Mann Whitney karena Data NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN (NGAL) tidak Normal

Mann-Whitney Test**Ranks**

	JENIS KELAMIN	N	Mean Rank	Sum of Ranks
NEUT	L	35	35.41	1239.50
HROP	P	35	35.59	1245.50
HIL	Total			
GELA				
TINAS				
E				
ASSO		70		
CIATE				
D				
LIPOC				
ALIN				

Test Statistics^a

	NEUTHR OPHIL GELATIN ASE ASSOCIA TED LIPOCALI N
Mann-Whitney U	609.500
Wilcoxon W	1239.500
Z	-.035
Asymp. Sig. (2- tailed)	.972

a. Grouping Variable: JENIS
KELAMIN

P : 0.972 > 0.05 (tidak ada perbedaan rerata (korelasi) Jenis Kelamin dengan kadar NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN)

Atau menggunakan Uji Korelasi Spearman

Correlations

	JENIS KELAMIN	
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Spearman's rho	JENIS KELAMIN	Correlation Coefficient	1.000	.004
		Sig. (2-tailed)	.	.972
		N	70	70
		Correlation Coefficient	.004	1.000
		Sig. (2-tailed)	.972	.
		N	70	70

P : 0.972 > 0.05 (tidak ada korelasi Jenis Kelamin dengan kadar NEUTHROPHIL GELATINASE ASSOCIATED LIPOCALIN)

Nilai R : 0.004 (korelasi Sangat lemah)

5. Untuk mengetahui korelasi Umur dengan kadar NEUTHROPHIL GELATINASE ASSOCIATED LIPOCALIN
Uji yang digunakan uji korelasi pearson karena data Numerik dan salah satu Normal

Correlations

		UMUR	NEUTHROPHIL GELATINASE ASSOCIATED LIPOCALIN
UMUR	Pearson Correlation	1	.130
	Sig. (2-tailed)		.282
	N	70	70
NEUTHROPHIL	Pearson Correlation	.130	1
	Sig. (2-tailed)	.282	

GELATINASE ASSOCIATED LIPOCALIN	70	70
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P : $0.282 > 0.05$ (tidak ada korelasi Umur dengan kadar NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN)
 Nilai R : 0.130 (Korelasi sangat lemah)

6. Untuk mengetahui korelasi lemak tubuh dengan kadar NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN
 Uji yang digunakan uji korelasi pearson karena data Numerik dan salah satu Normal

Correlations

		LEMAK TUBUH	NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN
LEMAK TUBUH	Pearson Correlation	1	-.002
	Sig. (2-tailed)		.984
	N	70	70
NEUTROPHIL GELATINASE	Pearson Correlation	-.002	1
	Sig. (2-tailed)	.984	

E	N		
ASSOCIATE		70	70
D			
LIPOCALIN			

P : 0.984 > 0.05 (tidak ada korelasi lemak tubuh dengan kadar NEUTHROPHIL GELATINASE ASSOCIATED LIPOCALIN)
 Nilai R : 0.002 (Korelasi sangat lemah)

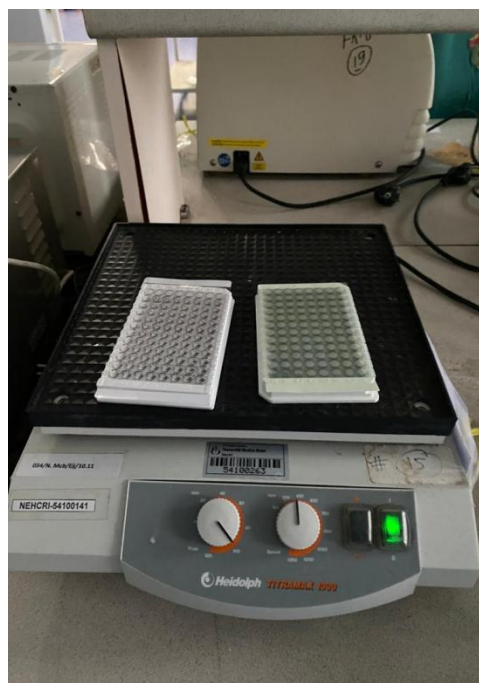
- 7. Untuk mengetahui korelasi lemak visceral dengan kadar NEUTHROPHIL GELATINASE ASSOCIATED LIPOCALIN**
Uji yang digunakan uji korelasi pearson karena data Numerik dan salah satu Normal

Correlations

		LEMAK VISCERAL	NEUTHROPHIL GELATINASE ASSOCIATED LIPOCALIN
LEMAK VISCERAL	Pearson Correlation	1	-.007
	Sig. (2-tailed)		.955
	N	70	70
NEUTHROPHIL GELATINASE ASSOCIATED LIPOCALIN	Pearson Correlation	-.007	1
	Sig. (2-tailed)	.955	
	N	70	70

P : 0.955 > 0.05 (tidak ada korelasi lemak visceral dengan kadar NEUTHROPHIL GELATINASE ASSOCIATED LIPOCALIN)
 Nilai R : 0.007 (Korelasi sangat lemah)

4. Doumentasi





5. Curriculum Vitae

i. Data pribadi

Nama : Hardyansa
 Tempat tanggal lahir : Sungguminasa 17 Oktober 1995
 Pekerjaan : Relawan Rumah Sakit UNHAS
 Alamat : Kec. Bontonompo, Kab. Gowa

ii. Riwayat Pendidikan

NO.	STRATA	INSTITUSI	TEMPAT	TAHUN LULUS
1	SD	SDN Kalase'rena	Gowa	2001
2	SMP	SMPN 1 Bontonompo	Gowa	2009
3	SMA	SMAN 3 Bontonompo	Gowa	2011
4	D3	Universitas Indonesia Timur, Prodi D3 Analis Kesehatan	Makassar	2014
5	S1	Universitas Muhammadiyah Semarang	Semarang	2018
6	S2	Program Pascasarjana UNHAS Prodi Ilmu Biomedik Konsentras Kimia Klinik	Makassar	Penyusunan Tugas Akhir

iii. Riwayat Pekerjaan

No	Kedudukan	Instansi/tempat	Tempat	Tahun
1	Analisis laboratorium	Klinik swasta/Klinik Padaidi	Makassar	2019-2020

