

## DAFTAR PUSTAKA

1. Badan Pusat Statistik Indonesia. Proyeksi Penduduk Indonesia. Indonesia Population Projection 2010-2035. Badan Pusat Statistik Indonesia. 2013. 978–979 p.
2. Colón CJP, Molina-Vicenty IL, Frontera-Rodríguez M, García-Ferré A, Rivera BP, Cintrón-Vélez G, et al. Muscle and Bone Mass Loss in the Elderly Population: Advances in diagnosis and treatment. *J Biomed* [Internet]. 2018;3(12):40–9. Available from: <http://www.jbiomed.com/v03p0040.htm>
3. Santos LD, Cyrini ES, Antunes M, Santos DA, Sardinha LB. Sarcopenia and physical independence in older adults: the independent and synergic role of muscle mass and muscle function. *J Cachexia*. 2016.
4. Cruz-Jentoft AJ, Bahat G, Bauer J, Boirie Y, Bruyère O, Cederholm T, et al. Sarcopenia: European consensus on definition and diagnosis. *Age Ageing*. 2010;39(4):412–23.
5. Cruz-Jentoft AJ, Bahat G, Bauer J, Boirie Y, Bruyère O, Cederholm T, et al. Sarcopenia: Revised European consensus on definition and diagnosis. *Age Ageing*. 2019;48(1):16–31.
6. Aryana S, Lestari AW, Putrawan IB, Purnami NKR, Astika IN, Kuswardhani RAT. The relationship between IL-6 and CRP with Sarcopenia in indigenous elderly population at Pedawa Village, Buleleng, Bali, Indonesia. *Heal Sci J Indones*. 2018;9(1):37–44.
7. Rong YD, Bian AL, Hu HY, Ma Y, Zhou XZ. Study on relationship between elderly sarcopenia and inflammatory cytokine IL-6, anti-inflammatory cytokine IL-10. *BMC Geriatr*. 2018;18(1):1–6.
8. Kementerian Kesehatan RI, Penyelenggaraan pelayanan kesehatan lanjut usia di pusat kesehatan masyarakat dalam peraturan menteri kesehatan Republik Indonesia nomor 67 tahun 2015.
9. Orimo H, Ito H, Suzuki T, Araki A, Hosoi T, Sawabe M. Reviewing the definition of “elderly”. *Geriatr Gerontol Int*. 2006;6(3):149-58. <https://doi.org/10.1111/j.1447-0594.2006.00341.x>.

10. Setiati S, Harimurti K. Proses menua dan implikasi kliniknya. Dalam: *Buku Ajar Ilmu Penyakit Dalam*. Jilid II. Jakarta. Indonesia. *Interna Publishing*. 2014: 3669-79
11. Dalle S, Rossmeislova L, Koppo K. The role of inflammation in age related sarcopenia. *Frontiers In Physiology*. 2017;8:1045.
12. Nigam Y, Knight J, Bhattacharya S, Bayer A. Physiological changes associated with aging and immobility. *J Aging Res*. 2012;2012(ii):2012-14. doi:10.1155/2012/468469
13. Amarya S, Singh K, Sabharwal M. Ageing process and physiological changes. *Gerontology*. 2018. Available from: <https://www.intechopen.com/books/gerontology/ageing-process-and-physiological-changes>.
14. Vitriana, Defi IR, Nugraha GI, Setiabudiawan B. Prevalensi sarkopenia pada lansia di komunitas (community dwelling) berdasarkan dua nilai cut-off. *Mkb*. 2014;48(38):164-70. <http://dx.doi.org/10.15395/mkb.v48n3.417>
15. Nilwik R, Snijders T, Leenders M, Groen BBL, Kranenburg JV, Verdijk LB, et al. The decline in skeletal muscle mass with aging is mainly attributed to a reduction in type ii muscle fiber size. *Exp Gerontol*. 2013;48(5):492-98.
16. Chen LK, Liu LK, Woo J, Assantachai P, Auyeung TW, Bahyah KS, et al. Sarcopenia in asia: consensus report of the asian working group for sarcopenia. *J Am Med Dir Assoc*. 2014;15(2):95-101.
17. Setiati S, Dwimartutie N. Sarkopenia. dalam: buku ajar ilmu penyakit dalam. Jilid II. Jakarta, Indonesia, *Interna Publishing*. 2014: 3717-24.
18. Gomes MJ, Martinez PF, Pagan LU, Damatto RL, Cezar MDM, Lima ARR, et al. Skeletal muscle aging: influence of oxidative stress and physical exercise. *Oncotarget*. 2017;8(12):20428-40. Available from: [www.impactjournals.com/oncotarget](http://www.impactjournals.com/oncotarget)
19. Maggio, Marcello, Guralnik Jack M, Longo L FL. Interleukin-6 in Aging and Chronic Disease: A Magnificent Pathway. *J Gerontol A Biol Sci Med Sci* [Internet]. 2006;61(6):575–84. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3624763/pdf/nihms412728.pdf>

20. Bioassay Technology Laboratory. Human Interleukin 6 Elisa Kit. China. [www.bt-laboratory.com](http://www.bt-laboratory.com).
21. Hairi NN, Bulgiba A, Hiong TG, Mudla I. Sarcopenia in older people. *Geriatrics*.2012.Availablefrom: <http://www.intechopen.com/books/geriatrics/sarcopenia-in-older-people>.
22. Freiberger E, De vreeede P, Schoene D, Rydwick E, Mueller V, Frandin K, et al. Performance-based physical function in older community-dwelling persons: a systematic review of instruments. *Age Ageing*. 2012;41(6):712-21. doi: 10.1093/ageing/afs099
23. Makizako H, Shimada H, Doi T, Tsutsumimoto K, Lee S, Lee SC, et al. Age-dependent changes in physical performance and body composition in community-dwelling japanese older adults. *J Cachexia Sarcopenia Muscle*. 2017;8(4):607-14. DOI: 10.1002/jcsm.12197
24. Podsiadlo D, Richardson S. The timed “up & go”: a test of basic functional mobility for frail elderly persons. *J Am Geriatr Soc*. 1991;39(2):142-48. doi: 10.1111/j.1532-5415.1991.tb01616.x.
25. Wilson Daisy, Jackson T, Elizabeth S, Janet L. Frailty and sarcopenia: the potential role of an aged immune system. *Ageing Research Reviews*. 2017:1-10. Available from: <http://dx.doi.org/10.1016/j.arr.2017.01.006>
26. Bian AL, Hu HY, Rong YD, Wang J, Wang JX, Zhou XZ. A study on relationship between elderly sarcopenia and inflammatory factors IL-6 and TNF- $\alpha$ . *Eur J Med Res*. 2017;22(1):4–11.
27. Riviati N, Setiati S, Laksmi PW, Abdullah M. Factors Related with Handgrip Strength in Elderly Patients. *Acta Med Indones*. 2017;49(3):215–9.
28. Patel HP, Syddall HE, Jameson K, Robinson S, Denison H, Roberts HC, et al. Prevalence of sarcopenia in community-dwelling older people in the UK using the European Working Group on Sarcopenia in Older People (EWGSOP) definition: Findings from the Hertfordshire Cohort Study (HCS). *Age Ageing*. 2013;42(3):378–84.

29. Kilgour AHM, Firth C, Harrison R, Moss P, Bastin ME, Wardlaw JM, et al. Seropositivity for CMV and IL-6 levels are associated with grip strength and muscle size in the elderly. *Immunity & Ageing*. 2013;10:13. Available from: <http://www.immunityageing.com/content/10/1/33>
30. Sobestiansky S, Michaelsson K, Cederholm T. Sarcopenia prevalence and associations with mortality and hospitalisation by various sarcopenia definitions in 85-89 year old community-dwelling men: A report from the ULSAM study. *BMC Geriatr*. 2019;19(1):1–13. Available from: <https://doi.org/10.1186/s12877-019-1338-1>
31. Pang BWJ, Wee SL, Lau LK, Jabbar KA, Seah WT, Ng DHM, et al. Prevalence and Associated Factors of Sarcopenia in Singaporean Adults—The Yishun Study. *J Am Med Dir Assoc*. 2020. Available from: <https://doi.org/10.1016/j.jamda.2020.05.029>
32. Wu CH, Chen KT, Hou MT, et al. Prevalence and associated factors of sarcopenia and severe sarcopenia in older taiwanese living in rural community: the tianliao old people study 04. *Geriatr gerontol Int*. 2014;14 (Suppl.1):69-75. doi: 10.1111/ggi.12233
33. Putrawan IBP, Kuswardhani RAT. Faktor-faktor yang menentukan kekuatan genggam tangan pada pasien lanjut usia di panti wredha tangtu dan poliklinik geriatri rsup sanglah-denpasar. *Journal of Internal Medicine*. Nov 2012.
34. Guedes R de C, Dias RC, Neri AL, Ferriolli E, Lourenço RA, Lustosa LP. Declínio da velocidade da marcha e desfechos de saúde em idosos: dados da Rede Fibrá. *Fisioter e Pesqui*. 2019;26(3):304–10. DOI: 10.1590/1809-2950/18036026032019
35. Bahat G, Tufan F, Bahat Z, Aydin Y, Tufan A, Akpınar TS, et al. Assessments of functional status, comorbidities, polypharmacy, nutritional status and sarcopenia in Turkish community-dwelling male elderly. *Aging Male*. 2013;16(2):67–72. Available from: <http://informahealthcare.com/tam>
36. Jung EY, Seo JW, Lee HJ. Et al. Association between sarcopenia and diabetes according to age in korean adults. *Korean J Fam Pract*. 2016;6(4):242-48.

37. Han K, Park YM, Kwon HS, KO SH, Lee SH, Yim HW, et al. Sarcopenia as a determinant of blood pressure in older koreans: findings from the korea national health and nutrition examination surveys (knhanes) 2008-2010. *PLoS ONE*. 2014; 9(1).
38. Nemtsova V, Bilovol O, Ilchenko I, Shalimova A. Age-associated features of oxidative stress as marker of vascular aging in comorbid course of hypertension and type 2 diabetes mellitus. *Vessel Plus*. 2018;2(9):27. <https://doi.org/10.20517/2574-1209.2018.48>.
39. Aureli A, Sebastiani P, Del Beato T, Marimpietri AE, Graziani A, Sechi E, et al. Involvement of IL-6 and IL-1 receptor antagonist on intellectual disability. *ImmunolLett*. 2014;162(1):124–  
31. Available from <http://dx.doi.org/10.1016/j.imlet.2014.08.003>
40. Gillum TL, Kuennen MR, Schneider S, Moeseley P. A review of sex difference in immune function after aerobic exercise. *EIR*. 2011:1-18.
41. O'Connor MF, Motivala SJ, Valladares EM, Olmstead R, Irwin MR. Sex differences in monocyte expression of IL-6: Role of autonomic mechanisms. *Am J Physiol - Regul Integr Comp Physiol*. 2007;293(1):145–51. DOI 10.1186/s12979-016-0076-x
42. Puzianowska-Kuźnicka M, Owczarz M, Wieczorowska-Tobis K, Nadrowski P, Chudek J, Slusarczyk P, et al. Interleukin-6 and C-reactive protein, successful aging, and mortality: The PolSenior study. *Immun Ageing*. 2016;13(1):1–12.
43. Gumucio JP, Mendias CL. Atrogin-1, MuRF-1, and sarcopenia. *Endocrine*. 2013;43(1):12-21. doi:10.1007/s12020-012-9751-7.



KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN  
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN  
KOMITE ETIK PENELITIAN KESEHATAN  
RSPTN UNIVERSITAS HASANUDDIN  
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR  
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu  
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.



Contact Person: dr. Agussalim Bukhari.,MMed,PhD, SpGK Telp. 081241850858, 0411 5780103, Fax : 0411-581431

### REKOMENDASI PERSETUJUAN ETIK

Nomor : 77/UN4.6.4.5.31/ PP36/ 2020

Tanggal: 28 Januari 2020

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

No Protokol	UH19110979	No Sponsor Protokol	
Peneliti Utama	<b>dr. Resliany</b>	Sponsor	
Judul Peneliti	Dinamika IL-6 dan Sarkopenia Pada Pasien Usia Lanjut		
No Versi Protokol	3	Tanggal Versi	23 Januari 2020
No Versi PSP	3	Tanggal Versi	23 Januari 2020
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 28 Januari 2020 sampai 28 Januari 2021	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian Kesehatan FKUH	Nama <b>Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)</b>	Tanda tangan	
Sekretaris Komisi Etik Penelitian Kesehatan FKUH	Nama <b>dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)</b>	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 Lapo 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 protokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan