

DAFTAR PUSTAKA

1. Ikatan Reumatologi Indonesia. *Rekomendasi IRA Untuk Diagnosis Dan Penatalaksanaan Osteoarthritis.*; 2014.
2. Kohn MD, Sasoon AA, Fernando ND. Classifications in Brief. *Clin Orthop Relat Res.* 2016;474(8):1886-1893.
3. Berenbaum F, Walker C. Osteoarthritis and inflammation : a serious disease with overlapping phenotypic patterns. *Postgrad Med.* 2020;00(00):1-8.
4. Issa SN, Sharma L. Epidemiology of Osteoarthritis : An Update. *Curr Rheumatol Rep.* 2006;8.
5. Soeroso J., Isbagio H., Kalim H., Broto R. PR. Osteoarthritis. In: *Buku Ajar Ilmu Penyakit Dalam.* ; 2006:3197-3209.
6. Faridin H, Syakib B. Obesity Contribution in Synthesis and Degradation of Cartilage Markers Through Inflammation Pathway in Osteoarthritis Patients: Analisis of Adiponectin, Leptin, YKL-40, Cartilage Oligomeric Matrix Protein (COMP) Synovial Fluid. *ijphrd.* 2020;11(12):148-153.
7. Pendleton A, Arden N, Dougados M, et al. EXTENDED REPORTS EULAR recommendations for the management of knee osteoarthritis : report of a task force of the Standing Committee for International Clinical Studies Including Therapeutic Trials (ESCISIT). *Ann Rheum Dis.* Published online 2000:936-944.
8. Chen W, Wang Y, Zhao J, Bao N. The effect of single nucleotide polymorphism on susceptibility of osteoarthritis : recent progression and implications. *Ann Jt.* 2017;1(9):1-10.
9. Bayram B, Gu HV, Doganer F, Cos DT. DD genotype of ace gene I / D polymorphism is associated in a turkish study population with osteoarthritis. *Mol Biol Rep.* Published online 2011:1713-1716.
10. Neogi T. Epidemiology of Osteoarthritis Osteoarthritis Epidemiology Risk factors Pain. *Rheum Dis Clin N Am.* 2013;39(1):1-19.
11. Magnusson K, Turkiewicz A, Englund M. Nature vs nurture in knee osteoarthritis e the importance of age , sex and body mass index. *Osteoarthr Cartil.* 2019;27(4):586-592.
12. Loeser RF. Changes in the Musculoskeletal System and the Development of Osteoarthritis.

- Clin Geriatr Med.* 2010;26(3):371-386.
13. Loeser RF. Aging and Osteoarthritis. *Curr Opin Rheumatol.* 2012;23(5):492-496.
 14. Loeser RF, Collins JA, Diekman BO. Ageing and the pathogenesis of osteoarthritis. *Nat Publ Gr.* Published online 2016.
 15. Anderson AS, Loeser RF. Best Practice & Research Clinical Rheumatology Why is osteoarthritis an age-related disease? *Best Pract Res Clin Rheumatol.* 2010;24(1):15-26.
 16. Chevalier X, Eymard F, Richette P. Biologic agents in osteoarthritis: hopes and disappointments. *Nat Publ Gr.* 2013;9(7):400-410.
 17. Cheung PP, Gossec L, Dougados M. Best Practice & Research Clinical Rheumatology What are the best markers for disease progression in osteoarthritis (OA)? *Best Pract Res Clin Rheumatol.* 2010;24(1):81-92.
 18. Lee R, Kean WF. Obesity and knee osteoarthritis. *Inflammopharmacol.* Published online 2012:53-58.
 19. Messier SP. Obesity and Osteoarthritis : Disease Genesis and Nonpharmacologic Weight Management. *Rheum Dis Clin N Am.* 2008;34:713-729.
 20. Sokolove J, Lepus CM. Role of inflammation in the pathogenesis of osteoarthritis : latest findings and interpretations. *Ther Adv Musculoskel Dis.* 2013:77-94.
 21. Krasnokutsky S, Belitskaya-l I, Bencardino J, et al. Quantitative Magnetic Resonance Imaging Evidence of Synovial Proliferation Is Associated With Radiographic Severity of Knee Osteoarthritis. *Arthritis Rheum.* 2011;63(10):2983-2991.
 22. Robinson WH, Lepus CM, Wang Q, et al. Low-grade inflammation as a key mediator of the pathogenesis of osteoarthritis. *Nat Rev.* 2016;12.
 23. Houard X, Goldring MB, Berenbaum F. Homeostatic Mechanisms in Articular Cartilage and Role of Inflammation in Osteoarthritis. *Curr Rheumatol Rep.* 2014;15(11).
 24. Ni F, Zhang Y, Peng X, Li J. Correlation between osteoarthritis and monocyte chemotactic protein-1 expression : a meta-analysis. *J Orthop Surg Res.* 2020;2:1-9.
 25. Vina ER, Kwoh CK. Epidemiology of osteoarthritis : literature update. *Curr Opin Rheumatol.* 2018;30(2):160-167.
 26. Deveza L, Hunter D. Expert Opinion on Pharmacotherapy An update on the treatment of

- osteoarthritis in obese patients. *Expert Opin Pharmacother*. 2016;6566.
27. Mora JC, Przkora R, Cruz-Almeida Y. Knee osteoarthritis: Pathophysiology and current treatment modalities. *J Pain Res*. 2018;11:2189-2196.
 28. Martel-pelletier J, Boileau C, Roughley PJ. Cartilage in normal and osteoarthritis conditions. *berh*. 2008;22(2):351-384.
 29. Brooks P. Inflammation as an important feature of osteoarthritis. *AMA*. 2003;81(03815):689-690.
 30. Scanzello CR. Role of low-grade inflammation in osteoarthritis. *Curr Opin Rheumatol*. Published online 2017:79-85.
 31. Lee AS, Ellman MB, Yan D, et al. A current review of molecular mechanisms regarding osteoarthritis and pain. *Gene*. Published online 2013:1-8. doi:10.1016/j.gene.2013.05.069
 32. Abram F, Dorais M, Martel-pelletier J, et al. The ratio adipsin / MCP-1 is strongly associated with structural changes and CRP / MCP-1 with symptoms in obese knee osteoarthritis subjects : data from the Osteoarthritis Initiative. *Osteoarthr Cartil*. 2019;27.
 33. Matsushima K, Larsen CG, Dubois GC, Oppenheim JJ. Purification and Characterization of A Novel Monocyte Chemotactic and Activating Factor. *J Exp Med*. 1989;169(April):1485-1490.
 34. Larsen CG, Zachariae COC, Oppenheim JJ, Matsushima K, Modifiers BR. Production of Monocyte Chemotactic and Activating Factor (MCAF) by Human Dermal Fibroblast in Response to Interleukin 1 or Tumor Necrosis Factor. *Biochem Biophys Res Commun*. 1989;1(3):1403-1408.
 35. Panee J. Monocyte Chemoattractant Protein 1 (MCP-1) in Obesity and Diabetes. *Cytokine*. 2013;60(1):1-12.
 36. Proost P, Struyf S, Couvreur M, et al. Posttranslational Modifications Affect the Activity of the Human Monocyte Chemotactic Proteins MCP-1 and MCP-2: Identification of MCP-2(6-76) as a Natural Chemokine Inhibitor. *jimmunol*. 1998.
 37. Yoshimura T, Yuhki N, Moore SK, Appella E, Lerman MI, Leonard EJ. Human monocyte chemoattractant mononuclear leukocytes , and sequence similarity to mouse competence. *febs*. 1989;244(2).
 38. Symmons D, Mathers C, Pfleger B. Global burden of osteoarthritis in the year 2000. *World Heal Organ*. 2000;2002(4):1-26.

39. Chadha R. Revealed aspect of metabolic osteoarthritis. *J Orthop.* 2016;13(4):347-351. doi:10.1016/j.jor.2016.06.029
40. Young-Min SA. Markers of joint destruction: principles, problems, and potential. *Ann Rheum Dis.* Published online 2001:545-549.
41. Kapoor M, Martel-pelletier J, Lajeunesse D, Pelletier J, Fahmi H. role of proinflammatory cytokines in the pathophysiology of osteoarthritis. *Nat Rev.* 2010;7(1):33-42.
42. Vuolteenaho K, Koskinen A, Moilanen E. Leptin – A Link between Obesity and Osteoarthritis. Applications for Prevention and Treatment. *bcpt.* Published online 2014:103-108.
43. Aspden RM. obesity punches above its weight in osteoarthritis. *Nat Publ Gr.* 2010;7(1):65-68. doi:10.1038/nrrheum.2010.123
44. Man GS, Moghianu G. Osteoarthritis pathogenesis - a complex process that involves the entire joint. *J Med Life.* 2014;7(1):37-41.
45. Wluka AE, Lombard CB, Cicuttini FM. Tackling obesity in knee osteoarthritis. *Nat Publ Gr.* 2012;9(4):225-235. doi:10.1038/nrrheum.2012.224
46. Zeng N, Yan Z, Chen X, Ni G. Infrapatellar Fat Pad and Knee Osteoarthritis. *Aging Dis.* 2020;11(5):1317-1328.
47. Bays HE. Adiposopathy Is “ Sick Fat ” a Cardiovascular Disease ? *jacc.* 2011;57(25).
48. Ferranti S De, Mozaffarian D. The Perfect Storm : Obesity , Adipocyte Dysfunction ,. *Clin Chem.* 2008;955:945-955.
49. Takahashi M, Naito K, Abe M, Sawada T, Nagano A. Research article Relationship between radiographic grading of osteoarthritis and the biochemical markers for arthritis in knee osteoarthritis. *Arthritis Res Ther.* 2004;6(3).
50. Cho HJ, Morey V, Ortho MS, Kang JY. Prevalence and Risk Factors of Spine , Shoulder , Hand , Hip , and Knee Osteoarthritis in Community-dwelling Koreans Older Than Age 65 Years. *Clin Orthop Relat Res.* 2015;473(10):3307-3314.
51. Hame SL, Alexander RA. Knee osteoarthritis in women. *Curr Rev Musculoskelet Med.* 2013;6(2):182-187. doi:10.1007/s12178-013-9164-0
52. Angelis G De, Chen Y. Obesity among women may increase the risk of arthritis : observations from the Canadian Community Health Survey ,. *Rheumatol Int.* Published online 2013.

53. World Health Organization. *Men Ageing And Health.*; 1999.
54. Li Y, Wei X, Zhou J, Wei L. The Age-Related Changes in Cartilage and Osteoarthritis. *Biomed Res Int.* 2013;2013.
55. Cevenini E, Monti D, Franceschi C. Inflamm-ageing. *Curr Opin Clin.* 2013;16(1):14-20. doi:10.1097/MCO.0b013e32835ada13
56. Pirker W, Katzenbach R. Gait disorders in adults and the elderly: A clinical guide. *Wien Klin Wochenschr.* 2017;129(3-4):81-95. doi:10.1007/s00508-016-1096-4
57. Raud B, Gay C, Guiguet-aucclair C, et al. Level of obesity is directly associated with the clinical and functional consequences of knee osteoarthritis. *Sci Rep.* Published online 2020:1-7.
58. Holliday KL, Mcwilliams DF, Maciewicz RA, Muir KR, Zhang W, Doherty M. Lifetime body mass index , other anthropometric measures of obesity and risk of knee or hip osteoarthritis in the GOAL case-control study. *Osteoarthr Cartil.* 2011;19(1):37-43.
59. King LK, March L, Anandacoomarasamy A. Obesity & osteoarthritis. *Indian J Med Res.* 2013;63(August):185-193.
60. Study AC, Flugsrud GB, Nordsletten L, Espelaug B, Havelin LI, Meyer HE. Risk Factors for Total Hip Replacement Due to Primary Osteoarthritis. *Arthritis Rheum.* 2002;46(3):675-682. doi:10.1002/art.10115
61. Faridin. Contribution of obesity on joint cartilage synthesis and degradation markers through inflammation pathway in Osteoarthritis patients: Analysis of synovial fluid Adiponectin, Leptin, YKL-40, Cartilage Oligomeric Matrix Protein (COMP)itle. Published online 2014.
62. Morrisette-thomas V, Cohen AA, Li Q, Milot E, Ferrucci L. Inflamm-aging does not simply reflect increases in pro-inflammatory markers. *med.* 2014;139:49-57.
63. Kim HO, Kim H, Youn J, Shin E, Park S. Serum cytokine profiles in healthy young and elderly population assessed using multiplexed bead-based immunoassays. *J Transl Med.* 2011;2:1-7.
64. Lim JP, Leung BP, Ding YY, Ismail NH, Yew S. Monocyte chemoattractant protein-1 : a proinflammatory cytokine elevated in sarcopenic obesity. *Clin Interv Aging.* Published online 2015:605-609.
65. Calder PC, Bosco N, Bourdet-sicard R, et al. Health relevance of the modifi cation of low

- grade inflammation in ageing (inflammageing) and the role of nutrition. *Ageing Res Rev.* 2017;40(August):95-119. doi:10.1016/j.arr.2017.09.001
66. Azamar-Llamas D, Hernández-Molina G, Ramos-Ávalos B, Furuzawa-Carballeda J. Adipokine Contribution to the Pathogenesis of Osteoarthritis. *Mediators Inflamm.* 2017;2017. doi:10.1155/2017/5468023
 67. Sukumar D, Partridge NC, Wang X, Shapses SA. The High Serum Monocyte Chemoattractant Protein-1 in Obesity Is Influenced by High Parathyroid Hormone and Not Adiposity. *jcem.* 2011;96(June):1852-1858.
 68. Dahlman I, Kaaman M, Olsson T, et al. A Unique Role of Monocyte Chemoattractant Protein 1 among Chemokines in Adipose Tissue of Obese Subjects. *J Clin Endocrinol Metab.* 2005;90(10):5834-5840. doi:10.1210/jc.2005-0369
 69. Peairs AD, Abbey EL. Chapter 35 - Antioxidants and Inflammation in Obesity. In: *Bioactive Food as Dietary Interventions for Diabetes.* Elsevier Inc.; 2013:413-434.
 70. Longobardi L, Jordan JM, Shi XA, et al. Associations between the chemokine biomarker CCL2 and knee osteoarthritis outcomes: the Johnston County Osteoarthritis Project. *Osteoarthr Cartil.* 2018;26(9):1257-1261.
 71. Li L, Jiang B. Serum and synovial fluid chemokine ligand 2 / monocyte chemoattractant protein 1 concentrations correlates with symptomatic severity in patients with knee osteoarthritis. *Ann Clin Biochem.* 2015;52(1):276-282.
 72. Bilgic H, Ytterberg SR, Amin S, et al. Interleukin-6 and Type I Interferon – Regulated Genes and Chemokines Mark Disease Activity in Dermatomyositis. *Arthritis Rheum.* 2009;60(11):3436-3446.
 73. Harman-boehm I, Blu M, Redel H, et al. Macrophage Infiltration into Omental Versus Subcutaneous Fat across Different Populations: Effect of Regional Adiposity and the Comorbidities of Obesity. *jcem.* 2007;92:2240-2247.
 74. Ueda A, Ishigatsubo Y, Okubo T, Yoshimura T. Transcriptional Regulation of The Human Monocyte. *J Biol Chem.* 1997;272(49):31092-31099.



REKOMENDASI PERSETUJUAN ETIK

Nomor : 421/UN4.6.4.5.31/ PP36/ 2021

Tanggal: 12 Agustus 2020

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

| | | | | |
|--|--|--|---|---------------------------|
| No Protokol | UH20050220 | | No Sponsor | |
| Peneliti Utama | dr. Achmad Fikry | | Sponsor | |
| Judul Peneliti | Pengaruh Umur, Berat Badan dan MCP-1 terhadap Derajat keparahan OA Lutut | | | |
| No Versi Protokol | 2 | | Tanggal Versi | 10 Agustus 2020 |
| No Versi PSP | 2 | | Tanggal Versi | 10 Agustus 2020 |
| Tempat Penelitian | RSUP Dr.Wahidin Sudirohusodo dan RS Universitas Hasanuddin serta RS Jejaring di Makassar | | | |
| Jenis Review | <input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal | | Masa Berlaku 12 Agustus 2020 sampai 12 Agustus 2021 | Frekuensi review lanjutan |
| Ketua Komisi Etik Penelitian Kesehatan FKUH | Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K) | | Tanda tangan | |
| Sekretaris Komisi Etik Penelitian Kesehatan FKUH | 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 Lapor 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

