

DAFTAR PUSTAKA

1. Kementerian Kesehatan RI. Hasil Utama Riskesdas.2018.
2. AmericanCollegeofAmericanRheumatology.(2019).Osteoarthritis.<https://www.rheumatology.org/I-Am-A/Patient-Caregiver/Diseases-Conditions/Osteoarthritis>. –diakses Januari 2020.
3. Afina SN, Yuniarti L, Masria S. Hubungan Derajat Nyeri dan Klasifikasi Radiologik dengan Kualitas Hidup Pasien Osteoartritis Lutut. JIKS. 2019;1(2):91–96.
4. Neogi T. The epidemiology and impact of pain in osteoarthritis. OARSI. 2013;21:1145-53.
5. Zhang Y, Jordan JM. Epidemiology of Osteoarthritis. Clin Geriatr Med. 2010; 26(3): 355–369.
6. World Health Organization. 2019. WHO Chronic rheumatic conditions. <http://www.who.int//chp/topics/rheumatic> –diakses Januari 2020.
7. Soeroso J, Isbagio H, Kalim H, Broto R, Pramusiyo R. Osteoartritis. Dalam: Sudoyo AW, Setiyohadi B, Alwi L, Simadibrata M, Setiati S(eds). Buku ajar ilmu penyakit dalam jilid 2, 6th ed. Jakarta: Pusat penerbitan Ilmu Penyakit Dalam Fakultas Kedokteran Universitas Indonesia.2014.p: 3197-3209.
8. Kementrian Kesehatan RI. Laporan Nasional RISKESDAS 2018. 2018. <https://dinkes.kalbarprov.go.id/wp-content/uploads/2019/03/Laporan-Riskesdas-2018-Nasional.pdf> -diakses Januari 2020.
9. Y.Henrotin, B. Kurz. Antioxidant to treat osteoarthritis: dream or reality?. Curr Drug Targets. 2007;8(2):347-57.
10. Sinaga Fa. Stress Oksidatif Dan Status Antioksidan Pada Aktivitas Fisik Maksimal. Jurnal Generasi Kampus. 2016;9(2):176-89.
11. Elbarbari AM, Khalek MA, Elsalawi AM, Hazza SM. Assessment of lipid peroxidation and antioxidant status in rheumatoid arthritis and osteoarthritis patients. The Egyptian Rheumatologist. 2011;33(4):179-85.
12. Yan Z, Xiong J, Zhao C, Qin C, He. 2015. Decreasing cartilage damage in a rat model of osteoarthritis by intra-articular injection of deoxycholic acid. Int J Clin Exp Med 2015;8(6):9038-9045.

13. Choi YJ, Ra MJ. Patient Satisfaction ater Total Knee Arthroplasty. 2016;28(1):1-15.
14. Demoor M, Ollitrault D, Gomez LT, Bouyoucef M, Hervieu M, Fabre H et al, 2014. Cartilage tissue engineering molecular control of chondrocyte differentiation for proper cartilage. *Biochemical et Biophysica Acta*, 1840. Elsevier , 2414-2440.
15. Pawitan JA, Pratama G, Jusuf A, Liem IK, Dologo IH, Indrani DJ, et al. Aspek Biologi, Pemrosesan dan Apikasi Klinis Sel Punca Mesenkimal. Jakarta:CME-CPD Fakultas Kedokteran Universitas Indonesia.2018.p:11-12.
16. Dologo IH. Mewujudkan Terobosan dan Kemandirian Reparasi, Restorasi, Regenerasi, Rekonstruksi, serta Replacement Tulang, Sendi Panggul, dan Lutut di Indonesia. *eJKI*.2019;7(1):1-7
17. Endrinaldi, Darwin E, Zubir N, Revilla G. The Effect of Mesenchymal Stem Cell Wharton's Jelly on Matrix Metalloproteinase-1and Interleukin-4 Levels in Osteoarthritis Rat Model. *Macedonian Journal of Medical Sciences*.2019; 7(4):529-35.
18. Koh YG, Choi YJ, Kwon SK, Kim YS, Yeo JE. Clinical results and second-look arthroscopic findings after treatment with adipose-derived stem cells for knee osteoarthritis. *Knee Surgery, Sport Traumatol Arthrosc*. 2015;23(5):1308–16.
19. Bongso, A., & Fong, C.-Y.The Therapeutic Potential, Challenges and Future Clinical Directions of Stem Cells from the Wharton’s Jelly of the Human Umbilical Cord. *Stem Cell Reviews and Reports*. 2012; 9(2):226–240.
20. Wojcik SB, Moncerieff, Kempisty B. Current state of umbilical cord stem cells in humans. 2019;7(3):86-9.
21. Sihombing M, Raflizar. Status gizi dan Fungsi Hati Mencit (Galur CBS-Swiss) dan Tikus Putih Galur Wistar di Laboratorium Hewan Percobaan Puslitband Biomedis dan Farmasi. *Media Litbang Kesehatan*. 2010;10(1):33-40.
22. Janusz M. J, Hookfin E. B, Heitmeyer S. A, Woessner J. F, Freemont A. J, Hoyland J. A, Brown K. K, Hsieh L. C, Almstead N. G, De B, Natchus M. G, Pikul S and Taiwo Y. O.Moderation of iodoacetate-induced experimental

- osteoarthritis in rats by matrix metalloproteinase inhibitors. *J. OsteoArthritis Research Society Int.* 2001.9(8):751–60.
23. Rajabzadeh N, Fathi E, Farahzadi R. Stem cell-based regenerative medicine. 2019;(7).
 24. Biehl JK, Russell B. Introduction to Stem Cell Therapy. 2009;24(2):98–103.
 25. Dubie T, Admassu B, Sisay T, Shiferaw H. Basic Biology and Therapeutic Application of Stem Cells in Various Human and Animal Disease. *Journal of Cell Biology and Genetics.* 2014;4(4):40-52
 26. Halim D, Murti H, Sandra F, Boediono A, Djuwantono T, Setiawan B. *Stem Cell DasarTeori dan Aplikasi Klinis.* Jakarta: EMS; 2010.
 27. Bharti D, Shivakumar SB, Park J, Ullah I, Park B, Rho G. Comparative analysis of human Wharton's jelly mesenchymal stem cells derived from different parts of the same umbilical cord. 2017
 28. Kalaszczynska I., Ferdyn K. Wharton's jelly derived mesenchymal stem cells: Future of regenerative medicine? Recent findings and clinical significance. *BioMed Res. Int.*2015;2015:430847.
 29. Janczewski AM, Wojtkiewicz J. Can Youthful Mesenchymal Stem Cells from Wharton's Jelly Bring a Breath of Fresh Air for COPD? *Int J Mol Sci.* 2017;18(11): 2449.
 30. Kim DW, Staples M, Shinozuka K, Pantcheva P, Kang SD, Borlongan CV. Wharton's Jelly-Derived Mesenchymal Stem Cells: Phenotypic Characterization and Optimizing Their Therapeutic Potential for Clinical Applications. *Int. J. Mol. Sci.*2013;14:11692-712.
 31. Ayala-Cuellar AP, Kang JH , Jeung EB, Choi KC. Roles of Mesenchymal Stem Cells in Tissue Regeneration and Immunomodulation. *Biomol Ther.*2019;27(1):25-33.
 32. Lepetsos P, Papavassiliou. ROS/oxidative stress signaling in osteoarthritis. *Biochimica et Biophysica Acta.*2016;1862(4):576–591.
 33. Aggarwal S, Pittenger MF. Human mesenchymal stem cells modulate allogeneic immune cell responses. *Blood.* 2005;105(4):1815-22.

34. Atashi F, Modarressi A, Peppe MS. The Role of Reactive Oxygen Species in Mesenchymal Stem Cell Adipogenic and Osteogenic Differentiation: A Review. *Stem cell and development*. 2015;24(10):1150-62.
35. Ayala A, Munoz MF, Arguelles S. Lipid Peroxidation: Production, Metabolism, and Signaling Mechanisms of Malondialdehyde and 4-Hydroxy-2-Nonenal. *Oxid Med Cell Longev*. 2014; 2014: 360438.
36. Wang, L.; Seshareddy, K.; Weiss, M.L.; Detamore, M.S. Effect of initial seeding density on human umbilical cord mesenchymal stromal cells for fibrocartilage tissue engineering. *Tissue Eng. A*. 2009;15:1009–1017.
37. Zalukhu ML, Phyma AR, Pinzon RT. Proses Menua, Stres Oksidatif, dan Peran Antioksidan. *CDK-245*;43(10):733-35.
38. Sinaga FA, Sres Oksidatif dan Status Antioksidan pada Aktivitas Fisik Maksimal. *Jurnal Generasi Kampus*. 2016;9(2):176-89.
39. Werdhasari A. Peran Antioksidan Bagi Kesehatan. *J Biomedik Medisiana Indones*. 2014;3(2):59–68
40. Yustika A, Aulanni'am, dan Prasetyawan S. Kadar MDA (MDA) dan gambaran histologi pada ginjal tikus putih (*rattus norvegicus*) pasca induksi cylosporine-a. *Kimia Student Journal*. 2013;1(2):222-8.
41. Winarsi, H., 2007. Antioksidan alami dan radikal bebas, potensi dan aplikasinya dalam kesehatan. Yogyakarta: Kanisius
42. Murray RK, Granner DK, Mayes PA, Rodwell VW. *Biokimia Harper* edisi 24. EGC. Jakarta;1999.
43. Ganesha GH, Linawati NM, Satriyasa BK. Pemberian Ekstrak Etanol Kubis Ungu (*Brassica Oleraceae* L.) Menurunkan Kadar Malondialdehid dan Jumlah Makrofag Jaringan Paru Tikus yang Terpapar Asap Rokok. 2020;6(1):1-9.
44. Sheu JY, Chen PH, Tseng WC, Chen CY, Tsai LY, Huang YL. Spectrophotometric determination of a thiobarbituric acid reactive substance in human hair. *Anal sci*. 2003;19(6):957-60
45. Kumar V, Abbas AK, Aster JC. *Buku Ajar Patologi Robbins* Edisi 9. Elseiver Saunders: Singapura. 2015.p :782-783.

46. Price SA, Wilson LM. 2006. Patofisiologi, Konsep Klinis Proses-Proses Penyakit Edisi 6. Jakarta: EGC
47. Palazzo C, Nguyen C, Lefevre-Colau MM, Rannou F, Poiraudou S. Risk factors and burden of osteoarthritis. *Ann Phys Rehabil Med.* 2016;59(3):134-138.
48. Fransen M, Brigdgett L, March L, Hoy D, Penserga E, Brook P. The Epidemiology of osteoarthritis in Asia. *Int J Rheum Dis.* 2011;14: 113–21.
49. Suri P, Morgenroth DC, Hunter DJ. Epidemiology of osteoarthritis and associated comorbidities. *American Academy of Physical Medicine and Rehabilitation.* 2012;4:S10-19.
50. Anggraini NE, Hendrati LY. Hubungan Obesitas dan Faktor-Faktor Pada Individu dengan Kejadian Osteoarthritis Genu. *Jurnal Berkala Epidemiologi.* 2014;2(1):93-104
51. Johnson V.L., Hunter D.J. The Epidemiology of Osteoarthritis. *Res Clin Rheum.* 2014;28:5-15.
52. Hunter DJ, Zainstra SB. Osteoarthritis. *Lancet.* 2019;393:1745-59.
53. Pratiwi AI. Diagnosis and Treatment Osteoarthritis. *J Majority.* 2015;4(4):10-7
54. Perhimpunan Ahli Penyakit Dalam Indonesia. Rekomendasi IRA untuk diagnosis dan penatalaksanaan osteoarthritis. 2014:13-23.
55. Kohn MD, Sassoon AA, Fernando ND. Classifications in Brief Kellgren-Lawrence Classification of Osteoarthritis. *Clin Orthop Relat Res.* 2016;474:1886–1893
56. Horie M, Choi H, Lee R.H, Reger R.L, Ylostalo J, Muneta T, Sekiya I, Prockop D.J. 2012. Intra-articular injection of human mesenchymal stem cells (MSCs) promote rat meniscal regeneration by being activated to express Indian hedgehog that enhances expression of type II collagen. *Osteoarthritis and Cartilage* 20 : 1197- 1207
57. van Buul GM, Siebelt M, Leijns MJC, Bos PK, Waarsing JH, Kops N, et al. 2014. Mesenchymal Stem Cells Reduce Pain But Not Degenerative Changes in a Monoiodoacetate Rat Model of Osteoarthritis. *J Orthop Res* 32:1167–1174.

58. Momuat LI, Sangi MS, Purwati NP. Pengaruh VCO Mengandung ekstrak wortel terhadap peroksidasi lipid plasma. *Jurnal ilmiah sains*. 2013;11(2):296-301.
59. Place ZA, Johnson BC, Cushman LL. Estimation of product lipid peroxidation (Malonyl Dialdehyde) in biochemical systems. *Analytical Biochemistry*.1966;16(2):359.
60. Yamada EF, Salgueiro AF, Goulart A da S, Mendes VP, Anjos BL, Folmer V, et al. Evaluation of monosodium iodoacetate dosage to induce knee osteoarthritis: Relation with oxidative stress and pain. *Int J Rheum Dis*. 2019;22(3):399–410.
61. Inan M, Bakar E, Cerkezkayabekir A, Sanal F, Ulucam E, Subaşı C, et al. Mesenchymal stem cells increase antioxidant capacity in intestinal ischemia/reperfusion damage. *J Pediatr Surg*. 2017;52(7):1196–206.

