DAFTAR PUSTAKA

Bultink, I. E. M. (2018). Bone Disease in Connective Tissue Disease/Systemic Lupus Erythematosus. *Calcified Tissue International*, *102*(5), 575–591. https://doi.org/10.1007/s00223-017-0322-z

Chavda, S., Chavda, B., & Dube, R. (2022). Osteoporosis Screening and Fracture Risk Assessment Tool: Its Scope and Role in General Clinical Practice. *Cureus*, *14*(7), e26518. https://doi.org/10.7759/cureus.26518

Chew, C., Reynolds, J. A., Lertratanakul, A., Wu, P., Urowitz, M., Gladman, D. D., Fortin, P. R., Bae, S.-C., Gordon, C., Clarke, A. E., Bernatsky, S., Hanly, J. G., Isenberg, D., Rahman, A., Sanchez-Guerrero, J., Romero-Diaz, J., Merrill, J., Wallace, D., Ginzler, E., … Bruce, I. N. (2021). Lower vitamin D is associated with metabolic syndrome and insulin resistance in systemic lupus: Data from an international inception cohort. *Rheumatology (Oxford, England)*, *60*(10), 4737–4747. https://doi.org/10.1093/rheumatology/keab090

Dai, X., Fan, Y., & Zhao, X. (2025). Systemic lupus erythematosus: Updated insights on the pathogenesis, diagnosis, prevention and therapeutics. *Signal Transduction and Targeted Therapy*, *10*(1), 1–51. https://doi.org/10.1038/s41392-025-02168-0

El-Husseiny, P. N., Al-Adle, S. S., Eesa, N. N., & Gheita, T. A. (2023). *Clinical significance of the lipid profile, neutrophil-lymphocyte ratio (NLR) and platelet-lymphocyte ratio (PLR) in different rheumatic disease patients*. https://doi.org/DOI: 10.37897/RJR.2023.4.8

El-Sherbiny, D. A., El-Badawy, M. A., & Elmahdi, A. R. (2021). Body Mass Index in Systemic Lupus Erythematosus: Relation to Disease Activity, Bone Mineral Density And Vitamin D Level. *The Egyptian Journal of Hospital Medicine*, *82*(1), 89–95. https://doi.org/10.21608/ejhm.2021.137953

Fernández-Codina, A., & Pope, J. E. (2021). Osteoporosis and osteonecrosis in systemic lupus erythematosus. *Revista Colombiana de Reumatología*, *28*, 3–11. https://doi.org/10.1016/j.rcreu.2021.02.005

Firizal, A. S., Sugianli, A. K., & Hamijoyo, L. (2020). Cut off point of neutrophil-to-lymphocyte ratio as a marker of active disease in systemic lupus erythematosus. *Lupus*, *29*(12), 1566–1570. https://doi.org/10.1177/0961203320950822

Forget, P., Khalifa, C., Defour, J.-P., Latinne, D., Van Pel, M.-C., & De Kock, M. (2017). What is the normal value of the neutrophil-to-lymphocyte ratio? *BMC Research Notes*, *10*, 12. https://doi.org/10.1186/s13104-016-2335-5

González, L. A., Santamaría-Alza, Y., & Alarcón, G. S. (2021). Organ damage in systemic lupus erythematosus. *Revista Colombiana de Reumatología*, *28*, 66–81. https://doi.org/10.1016/j.rcreu.2021.01.008

Gu, C., Zhao, R., Zhang, X., Gu, Z., Zhou, W., Wang, Y., Guo, J., Bao, Y., Sun, C., Dong, C., & Gao, J. (2019). A meta-analysis of secondary osteoporosis in systemic lupus erythematosus: Prevalence and risk factors. *Archives of Osteoporosis*, *15*(1), 1. https://doi.org/10.1007/s11657-019-0667-1

Han, B. K., Wysham, K. D., Cain, K. C., Tyden, H., Bengtsson, A. A., & Lood, C. (2020). Neutrophil and lymphocyte counts are associated with different immunopathological mechanisms in systemic lupus erythematosus. *Lupus Science & Medicine*, *7*(1), e000382. https://doi.org/10.1136/lupus-2020-000382

Ho, L.-J., Wu, C.-H., Luo, S.-F., & Lai, J.-H. (2024). Vitamin D and systemic lupus erythematosus: Causality and association with disease activity and therapeutics. *Biochemical Pharmacology*, *227*, 116417. https://doi.org/10.1016/j.bcp.2024.116417

Hoi, A., Igel, T., Mok, C. C., & Arnaud, L. (2024). Systemic lupus erythematosus. *The Lancet*, *403*(10441), 2326–2338. https://doi.org/10.1016/S0140-6736(24)00398-2

Hong, Y., Yang, Y., & Yao, Y. (2024). Prevalence and risk factors of osteoporosis in lupus nephritis patients in China: A cross-sectional study. *BMC Nephrology*, *25*(1), 428. https://doi.org/10.1186/s12882-024-03882-7

Ibrahim, I., Wan Mohamed, W. M. I., Kah, K. W., Tuan Ismail, T. S., & Wan Ghazali, W. S. (2022). *Vitamin D levels and steroid usage are not associated with disease activity in systemic lupus erythematosus patients*. https://medic.upm.edu.my/upload/dokumen/2022031418332104_MJMHS_0766.pdf

Jung, J.-Y., Choi, S. T., Park, S.-H., Kwon, S.-R., Kim, H.-A., Kim, S.-S., Kim, S. H., & Suh, C.-H. (2020). Prevalence of osteoporosis in patients with systemic lupus erythematosus: A multicenter comparative study of the World Health Organization and fracture risk assessment tool criteria. *Osteoporosis and Sarcopenia*, *6*(4), 173–178. https://doi.org/10.1016/j.afos.2020.11.001

Justiz Vaillant, A. A., Goyal, A., & Varacallo, M. A. (2025). Systemic Lupus Erythematosus. Dalam *StatPearls*. StatPearls Publishing. http://www.ncbi.nlm.nih.gov/books/NBK535405/

Kementerian Kesehatan Republik Indonesia. (2017). *INFODATIN Pusat Data dan Informasi Kementerian Kesehatan RI Situasi Lupus di Indonesia*. Kementerian Kesehatan Republik Indonesia.

Kementerian Kesehatan Republik Indonesia. (2023). *Pedoman Nasional Pelayanan Kedokteran (PNPK) Tata Laksana Osteoporosis*. Kementerian Kesehatan Republik Indonesia.

Kementerian Kesehatan Republik Indonesia. (2025). *Pedoman Nasional Pelayanan Kedokteran (PNPK) Tata Laksana Obesitas Dewasa*. Kementerian Kesehatan Republik Indonesia.

Koesnoe, S., Khoirunnisa, D., Awanis, G. S., & Larasati, A. (2022). Peran Vitamin D dalam Aktivitas Penyakit Lupus Eritematosus Sistemik (LES). *MEDICINUS*, *35*(2), 3–9. https://doi.org/10.56951/medicinus.v35i2.87

Kusumawardani, K. A., Supartono, B., Hadiwiardjo, Y. H., & Citrawati, M. (2025). Parental history and body mass index as predictors of osteoporosis among urban elderly women in Depok, Indonesia. *BKM Public Health and Community Medicine*, e14618–e14618. https://doi.org/10.22146/bkm.v41i02.14618

Lagunas-Rangel, F. A. (2025). Neutrophil-to-lymphocyte ratio in aging: Trends and clinical implications. *Experimental Gerontology*, *211*, 112908. https://doi.org/10.1016/j.exger.2025.112908

Li, L., Xia, Y., Chen, C., Cheng, P., & Peng, C. (2015). Neutrophil-lymphocyte ratio in systemic lupus erythematosus disease: A retrospective study. *International Journal of Clinical and Experimental Medicine*, *8*(7), 11026–11031.

Liu, Y.-C., Yang, T.-I., Huang, S.-W., Kuo, Y.-J., & Chen, Y.-P. (2022). Associations of the Neutrophil-to-Lymphocyte Ratio and Platelet-to-Lymphocyte Ratio with Osteoporosis: A Meta-Analysis. *Diagnostics*, *12*(12), 2968. https://doi.org/10.3390/diagnostics12122968

Lubis, A. F., Zubir, Z., & Ginting, A. W. (2021). *Korelasi Rasio Neutrofil Limfosit dan Kadar Vitamin D terhadap Aktivitas Penyakit Sistemik Lupus Eritematosus* [Thesis, Universitas Sumatera Utara]. https://repositori.usu.ac.id/handle/123456789/82277

Ma, L., Zeng, A., Chen, B., Chen, Y., & Zhou, R. (2019). Neutrophil to lymphocyte ratio and platelet to lymphocyte ratio in patients with systemic lupus erythematosus and their correlation with activity: A meta-analysis. *International Immunopharmacology*, *76*, 105949. https://doi.org/10.1016/j.intimp.2019.105949

Maged, L. A., Soliman, E., & Rady, H. M. (2023). Disease damage in systemic lupus erythematosus patients: Disease activity, male gender and hypertension as potential predictors. *The Egyptian Rheumatologist*, *45*(2), 121–126. https://doi.org/10.1016/j.ejr.2022.12.001

Mahrami, P. Z., Liana, P., & Rahmawati, E. (2024). *Hubungan Parameter Inflamasi Hematologi Dengan Aktivitas Penyakit Pasien Lupus Eritematosus Sistemik* [Undergraduate, Sriwijaya University]. https://doi.org/10/RAMA_11201_04011282126173_0003088102_0003096702_06_ref.pdf

McKenzie, S. B., Landis-Piwowar, K., & Williams, L. (2019). *Clinical Laboratory Hematology*. Pearson Education.

Mercader-Salvans, J., García-González, M., Quevedo-Abeledo, J. C., Quevedo-Rodríguez, A., Romo-Cordero, A., Ojeda-Bruno, S., Gómez-Bernal, F., López-Mejías, R., Martín-González, C., González-Gay, M. Á., & Ferraz-Amaro, I. (2023). Blood Composite Scores in Patients with Systemic Lupus Erythematosus. *Biomedicines*, *11*(10), 2782. https://doi.org/10.3390/biomedicines11102782

Nakajima, T., Doi, H., Watanabe, R., Murata, K., Takase, Y., Inaba, R., Itaya, T., Iwasaki, T., Shirakashi, M., Tsuji, H., Kitagori, K., Akizuki, S., Nakashima, R., Onishi, A., Yoshifuji, H., Tanaka, M., Ito, H., Hashimoto, M., Ohmura, K., & Morinobu, A. (2023). Factors associated with osteoporosis and fractures in patients with systemic lupus erythematosus: Kyoto Lupus Cohort. *Modern Rheumatology*, *34*(1), 113–121. https://doi.org/10.1093/mr/road014

Nugroho, A. W., Paramaiswari, A., & Achadiono, D. N. W. (2021). Association between Serum Vitamin D Level and Clinical Manifestations of Systemic Lupus Erythematous Patients in Dr. Sardjito General Hospital. *Acta Interna: The Journal of Internal Medicine*, *10*(2), Article 2. https://doi.org/10.22146/actainterna.62844

Pabón-Porras, M. A., Molina-Ríos, S., Flórez-Suárez, J. B., Coral-Alvarado, P. X., Méndez-Patarroyo, P., & Quintana-López, G. (2019). Rheumatoid arthritis and systemic lupus erythematosus: Pathophysiological mechanisms related to innate immune system. *SAGE Open Medicine*, *7*, 2050312119876146. https://doi.org/10.1177/2050312119876146

Papachristodoulou, E., Kakoullis, L., Christophi, C., Psarelis, S., Hajiroussos, V., & Parperis, K. (2023). The relationship of neutrophil-to-lymphocyte ratio with health-related quality of life, depression, and disease activity in SLE: A cross-sectional study. *Rheumatology International*, *43*(10), 1841–1848. https://doi.org/10.1007/s00296-023-05381-8

Perhimpunan Reumatologi Indonesia. (2019). *Rekomendasi Perhimpunan Reumatologi Indonesia: Diagnosis dan Pengelolaan Lupus Eritematosus Sistemik*. Perhimpunan Reumatologi Indonesia. https://reumatologi.or.id/wp-content/uploads/2020/10/Diagnosis_dan_pengelolaan_SLE.pdf

Puspitarini, D. K., Supartono, B., & Suciati, Y. (2021). Hubungan Antara Kelebihan Berat Badan dengan Kekuatan Tulang Perempuan Lansia. *Jurnal Ilmiah Kedokteran Wijaya Kusuma*, *10*(2), 123–130. https://doi.org/10.30742/jikw.v10i2.1197

Puspitasari, G. (2021). *Hubungan Kadar Kalsium Darah dengan T-Score Bone Mineral Density pada Pasien Lupus Eritematosus Sistemik* [Thesis, UNS (Sebelas Maret University)]. https://digilib.uns.ac.id/dokumen/105321/Hubungan-Kadar-Kalsium-Darah-

dengan-T-Score-Bone-Mineral-Density-pada-Pasien-Lupus-Eritematosus-Sistemik

Rebelos, E., Tentolouris, N., & Jude, E. (2023). The Role of Vitamin D in Health and Disease: A Narrative Review on the Mechanisms Linking Vitamin D with Disease and the Effects of Supplementation. *Drugs*, *83*(8), 665–685. https://doi.org/10.1007/s40265-023-01875-8

Resnasari, S. D., Supartono, B., & EkaPurwani, L. (2020). The Correlation Between Low Body Mass Index (underweight) With Bone Strength On Eldery Women. *Saintika Medika*, *16*(1), 14–20. https://doi.org/10.22219/sm.Vol16.SMUMM1.10598

Salimi, M., Khanzadeh, M., Nabipoorashrafi, S. A., Seyedi, S. A., Yaghoobpoor, S., Brismée, J.-M., Lucke-Wold, B., Ebadi, M., Ghaedi, A., Kumar, V. S., Mirghaderi, P., Rabie, H., & Khanzadeh, S. (2024). Association of neutrophil to lymphocyte ratio with bone mineral density in post-menopausal women: A systematic review and meta-analysis. *BMC Women's Health*, *24*, 169. https://doi.org/10.1186/s12905-024-03006-1

Salman-Monte, T. C., Torrente-Segarra, V., Muñoz-Ortego, J., Mojal, S., & Carbonell-Abelló, J. (2015). Prevalence and predictors of low bone density and fragility fractures in women with systemic lupus erythematosus in a Mediterranean region. *Rheumatology International*, *35*(3), 509–515. https://doi.org/10.1007/s00296-014-3087-y

Shevchuk, S., Malovana, T., Marynych, L., & Denyshchych, L. (2025). Vitamin D receptor expression level in patients with SLE and its relationship with vitamin D status, disease course and bone mineral density. *Lupus Science & Medicine*, *12*(2). https://doi.org/10.1136/lupus-2025-001730

Shevchuk, S., Marynych, L., Malovana, T., & Denyshchych, L. (2023). Vitamin D level in patients with systemic lupus erythematosus: Its relationship to disease course and bone mineral density. *Lupus Science & Medicine*, *10*(2), e000968. https://doi.org/10.1136/lupus-2023-000968

Song, B.-W., Kim, A.-R., Moon, D.-H., Kim, Y.-K., Kim, G.-T., Ahn, E.-Y., So, M.-W., & Lee, S.-G. (2022). Associations of Neutrophil-to-Lymphocyte Ratio, Platelet-to-Lymphocyte Ratio and Monocyte-to-Lymphocyte Ratio with Osteoporosis and Incident Vertebral Fracture in Postmenopausal Women with Rheumatoid Arthritis: A Single-Center Retrospective Cohort Study. *Medicina*, *58*(7), Article 7. https://doi.org/10.3390/medicina58070852

Song, M., Graubard, B. I., Rabkin, C. S., & Engels, E. A. (2021). Neutrophil-to-lymphocyte ratio and mortality in the United States general population. *Scientific Reports*, *11*(1), 464. https://doi.org/10.1038/s41598-020-79431-7

Srikantiah, C., Panchagnula, R., & Kr, A. (2020). Neutrophil-to-lymphocyte ratio in systemic lupus erythematosus is influenced by steroids and may not

completely reflect the disease activity. *Internet Journal of Rheumatology and Clinical Immunology*, *8*(1), 01–10. https://doi.org/10.15305/ijrci/v8i1/319

Su, X., Yu, H., Lei, Q., Chen, X., Tong, Y., Zhang, Z., Yang, W., Guo, Y., & Lin, L. (2024). Systemic lupus erythematosus: Pathogenesis and targeted therapy. *Molecular Biomedicine*, *5*(1), 54. https://doi.org/10.1186/s43556-024-00217-8

Suhaida, F. T., Supartono, B., Savitri, P. M., & Rifkia, V. (2022). Hubungan Derajat Penyakit Osteoartritis Lutut dengan Neutrophil Lymphocyte Ratio pada Pasien di RSU Al Fauzan Jakarta Periode 2019-2021. *Jurnal Ilmu Kedokteran (Journal of Medical Science)*, *16*(2), 108–114.

Sumardi, A. N., & Isnaeni, F. N. (2019). *Penggunaan Rumus Estimasi Tinggi Badan Berdasarkan Panjang Ulna pada Pasien Rawat Jalan Usia Dewasa dan Lansia di Wilayah Kerja Puskesmas Klaten Selatan* [S1, Universitas Muhammadiyah Surakarta]. https://doi.org/10/SURAT%20PERNYATAAN%20PUBLIKASI%20ILMIAH.pdf

Supartono, B. (2022). Skrining osteoporosis di masa pandemi covid-19 dengan protokol kesehatan, pengukuran densitas tulang, dan identifikasi faktor risiko. *Jurnal Bakti Masyrakat Indonesia*, *5*(1), 104–115.

Supartono, B., & Mahardika, H. (2025). Late Onset Atypical Fracture Resulting from a Neglected Tibia Malunion: A 45-Year Case Study. *Bangladesh Journal of Medical Science*, *24*(2), 663–669. https://doi.org/10.3329/bjms.v24i2.81539

Supartono, B., Wardhani, S., & Kusumaningsih, P. (2021). Skrining Osteoporosis Dengan Ultrasonografi Kalkaneus Sebagai Upaya Pencegahan Patah Tulang Pada Usia Lanjut. *Society: Jurnal Pengabdian Dan Pemberdayaan Masyarakat*, *1*(2), 122–134.

Susanto, E., Yuniza, Legiran, Kurniati, N., & Salim, E. M. (2025). Systemic Inflammatory Immune Index (SII) Predicts Disease Activity in Systemic Lupus Erythematosus (SLE) Patients: A Cross-Sectional Study. *Bioscientia Medicina : Journal of Biomedicine and Translational Research*, *9*(4), 1032–1045. https://doi.org/10.37275/bsm.v9i4.1237

Sutrisno, R. N., Rahmadi, A. R., Novita, N., & Hamijoyo, L. (2018). Most Frequent Musculoskeletal Manifestation of Systemic Lupus Erythematosus Patients in Dr. Hasan Sadikin General Hospital Bandung. *Indonesian Journal of Rheumatology*, *9*(2). https://doi.org/10.37275/ijr.v9i2.71

Suzan, R. (2018). Korelasi Antara Asupan Vitamin D dengan Kadar 25(OH)D Serum pada Pasien Lupus Eritematosus Sistemik Perempuan Dewasa. *Jambi Medical Journal : Jurnal Kedokteran Dan Kesehatan*, *6*(1), 56–67. https://doi.org/10.22437/jmj.v6i1.4821

Tian, J., Zhang, D., Yao, X., Huang, Y., & Lu, Q. (2023). Global epidemiology of systemic lupus erythematosus: A comprehensive systematic analysis and

modelling study. *Annals of the Rheumatic Diseases*, *82*(3), 351–356. https://doi.org/10.1136/ard-2022-223035

Wang, L., Wang, C., Jia, X., Yang, M., & Yu, J. (2020). Relationship between Neutrophil-to-Lymphocyte Ratio and Systemic Lupus Erythematosus: A Meta-analysis. *Clinics*, *75*, e1450. https://doi.org/10.6061/clinics/2020/e1450

Waseso, L. B., Supartono, B., & Fauziah, C. (2018). Physical Activity and The Strength of Bone in Menopause Patients in National Sports Hospital in 2017. *Berkala Kedokteran*, *14*(1), 69–74.

Xia, J., Luo, R., Guo, S., Yang, Y., Ge, S., Xu, G., & Zeng, R. (2019). Prevalence and Risk Factors of Reduced Bone Mineral Density in Systemic Lupus Erythematosus Patients: A Meta-Analysis. *BioMed Research International*, *2019*, 3731648. https://doi.org/10.1155/2019/3731648

Xu, D., & Wu, B. (2024). Association between systemic lupus erythematosus and osteoporosis: A mendelian randomization analysis. *BMC Rheumatology*, *8*(1), 17. https://doi.org/10.1186/s41927-024-00388-5

Xue, Y., Bao, W., Huang, W., Zou, X., & Guo, Y. (2024). Relationship between neutrophil-to-lymphocyte ratio, monocyte-to-lymphocyte ratio, platelet-to-lymphocyte ratio and osteoporosis in postmenopausal type 2 diabetic patients: A retrospective study. *Medicine*, *103*(50), e40869. https://doi.org/10.1097/MD.0000000000040869

Zahorec, R. (2021). Neutrophil-to-lymphocyte ratio, past, present and future perspectives. *Bratislavske Lekarske Listy*, *122*(7), 474–488. https://doi.org/10.4149/BLL_2021_078

Zhang, X., Guo, Q., Sun, S., Tang, X., Shen, W., Liang, J., Yao, G., Geng, L., Ding, S., Chen, H., Wang, H., Hua, B., Wang, D., Zhang, H., Feng, X., Sun, L., & Jin, Z. (2024). Factors associated with 25-hydroxyvitamin D level in Chinese hospitalized patients with systemic lupus erythematosus: A retrospective cohort study. *Rheumatology International*, *44*(10), 2067–2078. https://doi.org/10.1007/s00296-023-05465-5