REFERENCES

Al-Qaaneh, A.M., Alshammari, T., Aldahhan, R., Aldossary, H., Alkhalifah, Z.A. and Borgio, J.F. (2021) 'Genome composition and genetic characterization of SARS-CoV-2', Saudi Journal of Biological Sciences, 28(3), pp. 1978-1989. doi: 10.1016/j.sjbs.2020.12.053.

Asghar, M.S., Akram, M., Yasmin, F., Najeeb, H., Naeem, U., Gaddam, M., Jafri, M.S., Tahir, M.J., Yasin, I., Mahmood, H., Mehmood, Q. and Marzo, R.R. (2022) 'Comparative analysis of neutrophil to lymphocyte ratio and derived neutrophil to lymphocyte ratio with respect to outcomes of in-hospital coronavirus disease 2019 patients: A retrospective study', Frontiers in Medicine, 9, p. 951556. doi: 10.3389/fmed.2022.951556.

Cascella, M., Rajnik, M., Aleem, A., Dulebohn, S.C., and Di Napoli, R. (2023) 'Features, Evaluation, and Treatment of Coronavirus (Covid-19) [Updated 2023 Aug 18]', in StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-.

Ferrer, M. D., Barrueco, Á. S., Martinez-Beneyto, Y., Mateos-Moreno, M. V., Ausina-Márquez, V., García-Vázquez, E., Puche-Torres, M., Giner, M. J. F., González, A. C., Coello, J. M. S., Rueda, I. A., Aubá, J. M. V., Español, C. C., Velasco, A. L., Abad, D. S., García-Esteban, S., Artacho, A., López-Labrador, X., & Mira, A. (2021). Clinical evaluation of antiseptic mouth rinses to reduce salivary load of SARS-CoV-2. Scientific reports, 11(1), 24392. doi: 10.1038/s41598-021-03461-y

Fois, A. G., Paliogiannis, P., Scano, V., Cau, S., Babudieri, S., Perra, R., Ruzzittu, G., Zinellu, E., Pirina, P., Carru, C., Arru, L. B., Fancellu, A., Mondoni, M., Mangoni, A. A., & Zinellu, A. (2020). The Systemic Inflammation Index on Admission Predicts In-Hospital Mortality in COVID-19 Patients. Molecules (Basel, Switzerland), 25(23), 5725. doi: 10.3390/molecules25235725

Gao, J., Zhong, L., Wu, M., Ji, J., Liu, Z., Wang, C., Xie, Q. and Liu, Z. (2021) 'Risk factors for mortality in critically ill patients with Covid-19: a multicenter retrospective case-control study', BMC Infectious Diseases, 21(1), p. 602. doi: 10.1186/s12879-021-06300-7.

Hao, Y.J., Wang, Y.L., Wang, M.Y., Zhou, L., Shi, J.Y., Cao, J.M. and Wang, D.P. (2022) 'The origins of Covid-19 pandemic: A brief overview', Transboundary and Emerging Diseases, 69(6), pp. 3181-3197. doi: 10.1111/tbed.14732.

Kim, J., Song, S.H., Oh, T.R., Suh, S.H., Choi, H.S., Kim, C.S., Ma, S.K., Kim, S.W. and Bae, E.H. (2023) 'Prognostic role of the neutrophil-to-lymphocyte ratio in

patients with chronic kidney disease', Korean Journal of Internal Medicine, 38(5), pp. 725-733. doi: 10.3904/kjim.2023.171.

Li, S., Wang, J., Zhang, B., Li, X. and Liu, Y. (2019) 'Diabetes Mellitus and Cause-Specific Mortality: A Population-Based Study', Diabetes & Metabolism Journal, 43(3), pp. 319-34

Li, X., Liu, M. and Wang, G. (2024) 'The neutrophil–lymphocyte ratio is associated with all-cause and cardiovascular mortality in cardiovascular patients', Scientific Reports, 14, p. 26692. doi: 10.1038/s41598-024-76836-6.

Liu, J., Liu, Y., Xiang, P., Pu, L., Xiong, H., Li, C., Zhang, M., Tan, J., Xu, Y., Song, R., Song, M., Wang, L., Zhang, W., Han, B., Yang, L., Wang, X., Zhou, G., Zhang, T., Li, B., Wang, Y., … Wang, X. (2020). Neutrophil-to-lymphocyte ratio predicts critical illness patients with 2019 coronavirus disease in the early stage. Journal of translational medicine, 18(1), 206. doi: 10.1186/s12967-020-02374-0

Ma, J., Song, Y., Zhang, S., Feng, W., Wei, Z., Shen, Z., Tong, Z. and Bai, X. (2025) 'Association of the derived neutrophil-to-lymphocyte ratio with cardiovascular and all-cause mortality', PLoS One, 20(6), e0324849. doi: 10.1371/journal.pone.0324849.

Mahajan, M., Prasad, M.K., Ashok, C., Guria, R.T., Marandi, S., Vidyapati, Subrat, S. and Chowdhury, A. (2023) 'The Correlation of the Neutrophil-to-Lymphocyte Ratio With Microvascular Complications in Patients With Diabetes Mellitus', Cureus, 15(9), e44601. doi: 10.7759/cureus.44601.

Marra, A., Bondesan, A., Caroli, D., Grugni, G. and Sartorio, A. (2023) 'The neutrophil to lymphocyte ratio (NLR) positively correlates with the presence and severity of metabolic syndrome in obese adults, but not in obese children/adolescents', BMC Endocrine Disorders, 23(1), p. 121. doi: 10.1186/s12902-023-01369-4

Min, YI., Gao, Y., Anugu, P. *et al.* Obesity and overall mortality: findings from the Jackson Heart Study. *BMC Public Health* 21, 50 (2021). https://doi.org/10.1186/s12889-020-10040-9

Motairek, I., Abdulhai, F., Badwan, O., Issa, R., Calcagno, T., Mirzai, S., Tamis-Holland, J.E., Husni, M.E. and Wassif, H.S. (2025) 'Sex Differences in Cardiovascular Mortality Among Patients With Immune Mediated Inflammatory Diseases', Circulation: Cardiovascular Quality and Outcomes, 18(5), p. e011833. doi: 10.1161/CIRCOUTCOMES.124.011833.

Nawaz, R., Arif, M.A., Ahmad, Z., Ahad, A., Shahid, M., Hassan, Z., Husnain, A., Aslam, A., Raza, M.S., Mehmood, U. and Idrees, M. (2023) 'An ncRNA

transcriptomics-based approach to design siRNA molecules against SARS-CoV-2 double membrane vesicle formation and accessory genes', BMC Infectious Diseases, 23(1), p. 872. doi: 10.1186/s12879-023-08870-0.

Ocaña, A., Chacón, J.I., Calvo, L., Antón, A., Mansutti, M., Albanell, J., Martínez, M.T., Lahuerta, A., Bisagni, G., Bermejo, B., Semiglazov, V., Thill, M., Chan, A., Morales, S., Herranz, J., Tusquets, I., Chiesa, M., Caballero, R., Valagussa, P., Bianchini, G., Alba, E. and Gianni, L. (2022) 'Derived Neutrophil-to-Lymphocyte Ratio Predicts Pathological Complete Response to Neoadjuvant Chemotherapy in Breast Cancer', Frontiers in Oncology, 11, p. 827625. doi: 10.3389/fonc.2021.827625.

Paganelli, R. and Di Iorio, A. (2025) 'The neutrophil-to-lymphocyte ratio in aging and immunosenescence', Exploratory Immunology, 5, p. 1003200. doi: 10.37349/ei.2025.1003200.

Papa, G., Mallery, D.L., Albecka, A., Welch, L.G., Cattin-Ortolá, J., Luptak, J., Paul, D., McMahon, H.T., Goodfellow, I.G., Carter, A., Munro, S. and James, L.C. (2021) 'Furin cleavage of SARS-CoV-2 Spike promotes but is not essential for infection and cell-cell fusion', PLoS Pathogens, 17(1), e1009246. doi: 10.1371/journal.ppat.1009246.

Pascual-González, Y., López-Sánchez, M., Dorca, J. and Santos, S. (2018) 'Defining the role of neutrophil-to-lymphocyte ratio in COPD: a systematic literature review', International Journal of Chronic Obstructive Pulmonary Disease, 13, pp. 3651-3662. doi: 10.2147/COPD.S178068.

Petrie, J.R., Guzik, T.J. and Touyz, R.M. (2018) 'Diabetes, Hypertension, and Cardiovascular Disease: Clinical Insights and Vascular Mechanisms', Canadian Journal of Cardiology, 34(5), pp. 575-584. doi: 10.1016/j.cjca.2017.12.005.

Qiang, J.K., Lipscombe, L.L. and Lega, I.C. (2020) 'Association between diabetes, obesity, aging, and cancer: review of recent literature', Translational Cancer Research, 9(9), pp. 5743-5759. doi: 10.21037/tcr.2020.03.14.

Qiu, W., Shi, Q., Chen, F., Wu, Q., Yu, X. and Xiong, L. (2022) 'The derived neutrophil to lymphocyte ratio can be the predictor of prognosis for Covid-19 Omicron BA.2 infected patients', Frontiers in Immunology, 13, p. 1065345. doi: 10.3389/fimmu.2022.1065345.

Vaduganathan, M., Mensah, G., Turco, J., Roth, G.A., Fuster, V., Tanaka, H., Bairey Merz, C.N., and Ezzati, M. (2022) 'The Global Burden of Cardiovascular Diseases and Risk: A Compass for Future Health', Journal of the American College of Cardiology, 80(25), pp. 2361–2371. doi: 10.1016/j.jacc.2022.11.005.

Walicka, M., Puzianowska-Kuznicka, M., Chlebus, M., Śliwczyński, A., Brzozowska, M., Rutkowski, D., Kania, L., Czech, M., Jacyna, A., & Franek, E. (2021). Relationship between age and in-hospital mortality during 15,345,025 non-surgical hospitalizations. *Archives of medical science : AMS*, *17*(1), 40–46. https://doi.org/10.5114/aoms/89768

Won, J.-H. and Lee, H. (2020) 'The current status of drug repositioning and vaccine developments for the Covid-19 pandemic', International Journal of Molecular Sciences, 21, p. 9775. doi: 10.3390/ijms21249775.

World Health Organization (2025) Coronavirus disease (Covid-19) [online]. Available at: https://www.who.int/