

DAFTAR PUSTAKA

- Alsharif, W., & Qurashi, A. (2021). Effectiveness of COVID-19 diagnosis and management tools: A review. In *Radiography* (Vol. 27, Issue 2, pp. 682–687). W.B. Saunders Ltd. <https://doi.org/10.1016/j.radi.2020.09.010>
- Alzoughool, F., Abumweis, S., Alanagreh, L., & Atoum, M. (2022). Associations of pre-existing cardiovascular morbidity with severity and the fatality rate in COVID-19 patients: a systematic review and meta-analysis. In *Osong Public Health and Research Perspectives* (Vol. 13, Issue 1, pp. 37–50). Korea Centers for Disease Control and Prevention. <https://doi.org/10.24171/j.phrp.2021.0186>
- Arendse, L. B., Jan Danser, A. H., Poglitsch, M., Touyz, R. M., Burnett, J. C., Llorens-Cortes, C., Ehlers, M. R., & Sturrock, E. D. (2019). Novel therapeutic approaches targeting the renin-angiotensin system and associated peptides in hypertension and heart failure. *Pharmacological Reviews*, 71(4), 539–570. <https://doi.org/10.1124/pr.118.017129>
- Berbudi, A., Rahmadika, N., Tjahjadi, A. I., & Ruslami, R. (2019). Type 2 Diabetes and its Impact on the Immune System. *Current Diabetes Reviews*, 16(5), 442–449. <https://doi.org/10.2174/1573399815666191024085838>
- Boulle, A., Davies, M. A., Hussey, H., Ismail, M., Morden, E., Vundle, Z., Zweigenthal, V., Mahomed, H., Paleker, M., Pienaar, D., Tembo, Y., Lawrence, C., Isaacs, W., Mathema, H., Allen, D., Allie, T., Bam, J. L., Buddiga, K., Dane, P., ... Tamuhla, T. (2021). Risk Factors for Coronavirus Disease 2019 (COVID-19) Death in a Population Cohort Study from the Western Cape Province, South Africa. *Clinical Infectious Diseases*, 73(7), E2005–E2015. <https://doi.org/10.1093/cid/ciaa1198>
- Cai, S., Wang, Q., Ma, C., Chen, J., Wei, Y., Zhang, L., Fang, Z., Zheng, L., & Guo, C. (2022). Association between glucose-to-lymphocyte ratio and in-hospital mortality in intensive care patients with sepsis: A retrospective observational study based on Medical Information Mart for Intensive Care IV. *Frontiers in Medicine*, 9. <https://doi.org/10.3389/fmed.2022.922280>
- Cansu, G. B., Cansu, D. Ü., Taşkıran, B., Bilge, Ş. Y., Bilgin, M., & Korkmaz, C. (2019). What is the optimal time for measuring glucose concentration to detect steroid-induced hyperglycemia in patients with rheumatic diseases? *Clinical Biochemistry*, 67, 33–39. <https://doi.org/10.1016/j.clinbiochem.2019.03.012>
- Cariou, B., Hadjadj, S., Wargny, M., Pichelin, M., Al-Salameh, A., Allix, I., Amadou, C., Arnault, G., Baudoux, F., Bauduceau, B., Borot, S., Bourgeon-Ghittori, M., Bourron, O., Boutoille, D., Cazenave-Roblot, F., Chaumeil, C., Cosson, E., Coudol, S., Darmon, P., ... Gourdy, P. (2020). Phenotypic characteristics and

- prognosis of inpatients with COVID-19 and diabetes: the CORONADO study. *Diabetologia*, 63(8), 1500–1515. <https://doi.org/10.1007/s00125-020-05180-x>
- Chen, J., Tang, R., Zhan, X., Deng, J., Zhang, Y., Long, H., Peng, F., Tian, N., Wen, Y., Wang, X., Feng, X., Su, N., Tang, X., Wu, X., Zhou, Q., & Xu, Q. (2023). Clinical significance of serum glucose to lymphocyte ratio as a prognostic marker in peritoneal dialysis patients. *Renal Failure*, 45(1). <https://doi.org/10.1080/0886022X.2023.2224893>
- Chen, Y., Klein, S. L., Garibaldi, B. T., Li, H., Wu, C., Osevala, N. M., Li, T., Margolick, J. B., Pawelec, G., & Leng, S. X. (2021). Aging in COVID-19: Vulnerability, immunity and intervention. In *Ageing Research Reviews* (Vol. 65). Elsevier Ireland Ltd. <https://doi.org/10.1016/j.arr.2020.101205>
- Cheng, Y., Yue, L., Zhang, J., & Xiang, G. (2023). Stress hyperglycemia is associated with disease severity in COVID-19. *Endokrynologia Polska*, 74(5), 528–535. <https://doi.org/10.5603/ep.93597>
- Codo, A. C., Davanzo, G. G., Monteiro, L. D. B., de Souza, G. F., Muraro, S. P., Virgilio-da-Silva, J. V., Prodonoff, J. S., Carregari, V. C., de Biagi Junior, C. A. O., Crunfli, F., Farias, A. S., & Moraes-Vieira, P. M. (2020). Elevated Glucose Levels Favor SARS-CoV-2 Infection and Monocyte Response through a HIF-1 α /Glycolysis-Dependent Axis. *Cell Metabolism*, 32(3), 437–446.e5. <https://doi.org/10.1016/j.cmet.2020.07.007>
- Connors, J. M., & Levy, J. H. (2020). *COVID-19 and its implications for thrombosis and anticoagulation*. <http://ashpublications.org/blood/article-pdf/135/23/2033/1743274/bloodbld2020006000c.pdf>
- Esparcia-Pinedo, L., Lancho-Sánchez, Á., Tsukalov, I., Pacheco, M. I., Martínez-Fleta, P., Pérez-Miés, B., Palacios-Calvo, J., Sánchez-Madrid, F., Martín-Gayo, E., & Alfranca, A. (2023). T regulatory lymphocytes specific for SARS-CoV-2 display increased functional plasticity. *Clinical Immunology*, 256. <https://doi.org/10.1016/j.clim.2023.109806>
- Filchakova, O., Dossym, D., Ilyas, A., Kuanysheva, T., Abdizhamil, A., & Bukasov, R. (2022). Review of COVID-19 testing and diagnostic methods. In *Talanta* (Vol. 244). Elsevier B.V. <https://doi.org/10.1016/j.talanta.2022.123409>
- Gabr, H., Abdelaal, A. A., Bastawy, S., Fateen, M., Abd El Dayem, O. Y., Youssef, E. A., Afifi, R., & Kamal, M. (2023). Comparison of T Lymphocyte Subsets and Natural Killer Lymphocytes in Moderate Versus Severe COVID-19 Patients. *Viral Immunology*, 36(4), 250–258. <https://doi.org/10.1089/vim.2022.0125>
- Gregor, M. F., & Hotamisligil, G. S. (2011). Inflammatory mechanisms in obesity. *Annual Review of Immunology*, 29, 415–445. <https://doi.org/10.1146/annurev-immunol-031210-101322>
- Guarnieri, J. W., Lie, T., Soto Albrecht, Y. E., Hewin, P., Jurado, K. A., Widjaja, G. A., Zhu, Y., McManus, M. J., Kilbaugh, T. J., Keith, K., Murdock, D. G., & Wallace, D. C. (2024). Mitochondrial antioxidants abate SARS-COV-2 pathology in mice. *Proceedings of the National Academy of Sciences of the United States of America*, 121(30). <https://doi.org/10.1073/pnas.2321972121>

- He, F., Deng, Y., & Li, W. (2020). Coronavirus disease 2019: What we know? In *Journal of Medical Virology* (Vol. 92, Issue 7, pp. 719–725). John Wiley and Sons Inc. <https://doi.org/10.1002/jmv.25766>
- Hu, T., Liu, X., & Liu, Y. (2022). Usefulness of Glucose to Lymphocyte Ratio to Predict in-Hospital Mortality in Patients with AECOPD Admitted to the Intensive Care Unit. *COPD: Journal of Chronic Obstructive Pulmonary Disease*, 19(1), 158–165. <https://doi.org/10.1080/15412555.2022.2052272>
- Jakubíková, M., Týblová, M., Tesař, A., Horáková, M., Vlažná, D., Ryšánková, I., Nováková, I., Dolečková, K., Dušek, P., Piřha, J., Vohánka, S., & Bednařík, J. (2021). Predictive factors for a severe course of COVID-19 infection in myasthenia gravis patients with an overall impact on myasthenic outcome status and survival. *European Journal of Neurology*, 28(10), 3418–3425. <https://doi.org/10.1111/ene.14951>
- Jana, S., Heaven, M. R., Stauff, C. B., Wang, T. T., Williams, M. C., D’Agnillo, F., & Alayash, A. I. (2023). HIF-1 α -Dependent Metabolic Reprogramming, Oxidative Stress, and Bioenergetic Dysfunction in SARS-CoV-2-Infected Hamsters. *International Journal of Molecular Sciences*, 24(1). <https://doi.org/10.3390/ijms24010558>
- Jin, J. M., Bai, P., He, W., Wu, F., Liu, X. F., Han, D. M., Liu, S., & Yang, J. K. (2020). Gender Differences in Patients With COVID-19: Focus on Severity and Mortality. *Frontiers in Public Health*, 8. <https://doi.org/10.3389/fpubh.2020.00152>
- Kalfaoglu, B., Almeida-Santos, J., Tye, C. A., Satou, Y., & Ono, M. (2020). T-Cell Hyperactivation and Paralysis in Severe COVID-19 Infection Revealed by Single-Cell Analysis. *Frontiers in Immunology*, 11. <https://doi.org/10.3389/fimmu.2020.589380>
- Kaneko, N., Kuo, H.-H., Boucau, J., Farmer, J. R., Allard-Chamard, H., Mahajan, V. S., Piechocka-Trocha, A., Lefteri, K., Osborn, M., Bals, J., Padera, R. F., & Pillai, S. (2020). Loss of Bcl-6-Expressing T Follicular Helper Cells and Germinal Centers in COVID-19. *Cell*, 183(1), 143–157.e13. <https://doi.org/10.1016/j.cell.2020.08.025>
- Kassir, R. (2020). Risk of COVID-19 for patients with obesity. In *Obesity Reviews* (Vol. 21, Issue 6). Blackwell Publishing Ltd. <https://doi.org/10.1111/obr.13034>
- Katzenschlager, S., Zimmer, A. J., Gottschalk, C., Grafeneder, J., Schmitz, S., Kraker, S., Ganslmeier, M., Muth, A., Seitel, A., Maier-Hein, L., Benedetti, A., Larman, J., Weigand, M. A., McGrath, S., & Denking, C. M. (2021). Can we predict the severe course of COVID-19 - a systematic review and meta-analysis of indicators of clinical outcome? In *PLoS ONE* (Vol. 16, Issue 7 July). Public Library of Science. <https://doi.org/10.1371/journal.pone.0255154>
- Klein, F. (2020). Risikofaktor Komorbiditäten bei COVID-19- Erkrankung. In *Pneumologie* (Vol. 74, Issue 10, p. 640). Georg Thieme Verlag. <https://doi.org/10.1183/13993003.00547-2020>
- Kugler, S., Hahnefeld, L., Kloka, J. A., Ginzel, S., Nürnberg-Goloub, E., Zinn, S., Vehreschild, M. J., Zacharowski, K., Lindau, S., Ullrich, E., Burmeister, J.,

- Kohlhammer, J., Schwäble, J., Gurke, R., Dorochow, E., Bennett, A., Dauth, S., Campe, J., Knape, T., ... Behrens, F. (2024). Short-term predictor for COVID-19 severity from a longitudinal multi-omics study for practical application in intensive care units. *Talanta*, 268. <https://doi.org/10.1016/j.talanta.2023.125295>
- Kumar, A., Arora, A., Sharma, P., Anikhindi, S. A., Bansal, N., Singla, V., Khare, S., & Srivastava, A. (2020). Is diabetes mellitus associated with mortality and severity of COVID-19? A meta-analysis. *Diabetes and Metabolic Syndrome: Clinical Research and Reviews*, 14(4), 535–545. <https://doi.org/10.1016/j.dsx.2020.04.044>
- Lei, J., Duan, W., Yao, X., Hu, Z., Fan, H., Liu, Y., Zhong, W., & Li, H. (2025). Association of glucose to lymphocyte ratio with the risk of death in patients with atherosclerotic cardiovascular disease. *Scientific Reports*, 15(1). <https://doi.org/10.1038/s41598-025-87260-9>
- Li, J. W., Han, T. W., Woodward, M., Anderson, C. S., Zhou, H., Chen, Y. D., & Neal, B. (2020). The impact of 2019 novel coronavirus on heart injury: A Systematic review and Meta-analysis. In *Progress in Cardiovascular Diseases* (Vol. 63, Issue 4, pp. 518–524). W.B. Saunders. <https://doi.org/10.1016/j.pcad.2020.04.008>
- Liu, R., Shen, Y., Cui, J., Ma, W., Wang, J., Chen, C., & Wang, W. (2024). Association between glucose to lymphocyte ratio and prognosis in patients with solid tumors. *Frontiers in Immunology*, 15. <https://doi.org/10.3389/fimmu.2024.1454393>
- Mahmoodpoor, A., Hosseini, M., Soltani-Zangbar, S., Sanaie, S., Aghebati-Maleki, L., Saghaleini, S. H., Ostadi, Z., Hajivalili, M., Bayatmakoo, Z., Haji-Fatahaliha, M., Kafil, H. S., & Yousefi, M. (2021). Reduction and exhausted features of T lymphocytes under serological changes, and prognostic factors in COVID-19 progression. *Molecular Immunology*, 138, 121–127. <https://doi.org/10.1016/j.molimm.2021.06.001>
- Maniruzzaman, M., Islam, M. M., Ali, M. H., Mukerjee, N., Maitra, S., Kamal, M. A., Ghosh, A., Castrosanto, M. A., Alexiou, A., Ashraf, G. M., Tagde, P., & Rahman, M. H. (2022). COVID-19 diagnostic methods in developing countries. In *Environmental Science and Pollution Research* (Vol. 29, Issue 34, pp. 51384–51397). Springer Science and Business Media Deutschland GmbH. <https://doi.org/10.1007/s11356-022-21041-z>
- Meng, J., Xiao, G., Zhang, J., He, X., Ou, M., Bi, J., Yang, R., Di, W., Wang, Z., Li, Z., Gao, H., Liu, L., & Zhang, G. (2020). Renin-angiotensin system inhibitors improve the clinical outcomes of COVID-19 patients with hypertension. In *Emerging Microbes and Infections* (Vol. 9, Issue 1, pp. 757–760). Taylor and Francis Ltd. <https://doi.org/10.1080/22221751.2020.1746200>
- Moreno-Torres, V., de Mendoza, C., Mellor-Pita, S., Martínez-Urbistondo, M., Durán-del Campo, P., Tutor-Ureta, P., Vázquez-Comendador, J. M., Calderón-Parra, J., Muñoz-Rubio, E., Ramos-Martínez, A., Fernández-Cruz, A., Castejón, R., & Vargas-Núñez, J. A. (2022). Systemic Autoimmune Diseases in Patients Hospitalized with COVID-19 in Spain: A Nation-Wide Registry Study. *Viruses*, 14(8). <https://doi.org/10.3390/v14081631>

- Nandy, S., Wan, S.-H., & Brenes-Salazar, J. (2021). Cardiovascular Manifestations of COVID-19. *Current Cardiology Reviews*, 17(4). <https://doi.org/10.2174/1573403X16999201102213827>
- Newsholme, P., Keane, K. N., Carlessi, R., & Cruzat, V. (2019). Oxidative stress pathways in pancreatic-cells and insulin-sensitive cells and tissues: importance to cell metabolism, function, and dysfunction. *REVIEW Metabolism, Oxidative Stress and Cell Signaling Am J Physiol Cell Physiol*, 317, 420–433. <https://doi.org/10.1152/ajpcell.00141.2019.-It>
- Nishiga, M., Wang, D. W., Han, Y., Lewis, D. B., & Wu, J. C. (2020). COVID-19 and cardiovascular disease: from basic mechanisms to clinical perspectives. In *Nature Reviews Cardiology* (Vol. 17, Issue 9, pp. 543–558). Nature Research. <https://doi.org/10.1038/s41569-020-0413-9>
- Pan, L., Mu, M., Yang, P., Sun, Y., Wang, R., Yan, J., Li, P., Hu, B., Wang, J., Hu, C., Jin, Y., Niu, X., Ping, R., Du, Y., Li, T., Xu, G., Hu, Q., & Tu, L. (2020). Clinical characteristics of COVID-19 patients with digestive symptoms in Hubei, China: A descriptive, cross-sectional, multicenter study. *American Journal of Gastroenterology*, 115(5), 766–773. <https://doi.org/10.14309/ajg.0000000000000620>
- Parasher, A. (2021). COVID-19: Current understanding of its Pathophysiology, Clinical presentation and Treatment. In *Postgraduate Medical Journal* (Vol. 97, Issue 1147, pp. 312–320). BMJ Publishing Group. <https://doi.org/10.1136/postgradmedj-2020-138577>
- Park, S. H., Kang, I. C., Hong, S. S., Kim, H. Y., Hwang, H. K., & Kang, C. M. (2024). Glucose-to-Lymphocyte Ratio (GLR) as an Independent Prognostic Factor in Patients with Resected Pancreatic Ductal Adenocarcinoma—Cohort Study. *Cancers*, 16(10). <https://doi.org/10.3390/cancers16101844>
- Pavlova, N. N., & Thompson, C. B. (2016). The Emerging Hallmarks of Cancer Metabolism. In *Cell Metabolism* (Vol. 23, Issue 1, pp. 27–47). Cell Press. <https://doi.org/10.1016/j.cmet.2015.12.006>
- Petrilli, C. M., Jones, S. A., Yang, J., Rajagopalan, H., O'Donnell, L., Chernyak, Y., Tobin, K. A., Cerfolio, R. J., Francois, F., & Horwitz, L. I. (2020). Factors associated with hospital admission and critical illness among 5279 people with coronavirus disease 2019 in New York City: Prospective cohort study. *The BMJ*, 369. <https://doi.org/10.1136/bmj.m1966>
- Pijls, B. G., Jolani, S., Atherley, A., Derckx, R. T., Dijkstra, J. I. R., Franssen, G. H. L., Hendriks, S., Richters, A., Venemans-Jellema, A., Zalpuri, S., & Zeegers, M. P. (2021). Demographic risk factors for COVID-19 infection, severity, ICU admission and death: A meta-analysis of 59 studies. *BMJ Open*, 11(1). <https://doi.org/10.1136/bmjopen-2020-044640>
- Popkin, B. M., Du, S., Green, W. D., Beck, M. A., Algaith, T., Herbst, C. H., Alsukait, R. F., Alluhidan, M., Alazemi, N., & Shekar, M. (2020). Individuals with obesity and COVID-19: A global perspective on the epidemiology and biological relationships. *Obesity Reviews*, 21(11). <https://doi.org/10.1111/obr.13128>

- Qiu, X., & Gao, Q. (2025). Glucose to lymphocyte ratio as a predictor of all-cause and cancer-specific mortality in cancer patients: Insights from NHANES data. *Experimental Gerontology*, 207. <https://doi.org/10.1016/j.exger.2025.112799>
- Rochowski, M. T., Jayathilake, K., Balcerak, J.-M., Selvan, M. T., Gunasekara, S., Miller, C., Rudd, J. M., & Lacombe, V. A. (2024). Impact of Delta SARS-CoV-2 Infection on Glucose Metabolism: Insights on Host Metabolism and Virus Crosstalk in a Feline Model. *Viruses*, 16(2). <https://doi.org/10.3390/v16020295>
- Sattar, N., McInnes, I. B., & McMurray, J. J. V. (2020). Obesity Is a Risk Factor for Severe COVID-19 Infection: Multiple Potential Mechanisms. In *Circulation* (Vol. 142, Issue 1, pp. 4–6). Lippincott Williams and Wilkins. <https://doi.org/10.1161/CIRCULATIONAHA.120.047659>
- Seidu, S., Gillies, C., Zaccardi, F., Kunutsor, S. K., Hartmann-Boyce, J., Yates, T., Singh, A. K., Davies, M. J., & Khunti, K. (2021). The impact of obesity on severe disease and mortality in people with SARS-CoV-2: A systematic review and meta-analysis. In *Endocrinology, Diabetes and Metabolism* (Vol. 4, Issue 1). Blackwell Publishing Ltd. <https://doi.org/10.1002/edm2.176>
- Serhatlioglu, F., Cetinkaya, Z., & Yilmaz, Y. (2024). The Role of Glucose–Lymphocyte Ratio in Evaluating the Severity of Coronary Artery Disease. *Journal of Clinical Medicine*, 13(22). <https://doi.org/10.3390/jcm13226711>
- Shams, A., Khosravi, S., Zareiye, A., Lalehzari, Y., Nematollahi, R., & Basti, S. (2023). Behaviors of Human T cells in SARS-CoV-2 Infection: Lessons and Tips. *Iranian Journal of Immunology*, 20(4), 382–399. <https://doi.org/10.22034/iji.2023.98326.2567>
- Shi, Q., Zhang, X., Jiang, F., Zhang, X., Hu, N., Bimu, C., Feng, J., Yan, S., Guan, Y., Xu, D., He, G., Chen, C., Xiong, X., Liu, L., Li, H., Tao, J., Peng, Z., & Wang, W. (2020). Clinical Characteristics and Risk Factors for Mortality of COVID-19 Patients with Diabetes in Wuhan, China: A Two-Center, Retrospective Study. *Diabetes Care*, 43(7), 1382–1391. <https://doi.org/10.2337/dc20-0598>
- Ssentongo, P., Heilbrunn, E. S., Ssentongo, A. E., Advani, S., Chinchilli, V. M., Nunez, J. J., & Du, P. (2021). Epidemiology and outcomes of COVID-19 in HIV-infected individuals: a systematic review and meta-analysis. *Scientific Reports*, 11(1). <https://doi.org/10.1038/s41598-021-85359-3>
- Stascheit, F., Grittner, U., Hoffmann, S., Mergenthaler, P., Schroeter, M., Ruck, T., Pawlitzki, M., Blaes, F., Kaiser, J., Schara, U., Della-Marina, A., Thieme, A., Hagenacker, T., Jacobi, C., Berger, B., Urban, P. P., Knop, K. C., Schalke, B., Lee, D. H., ... Meisel, A. (2023). Risk and course of COVID-19 in immunosuppressed patients with myasthenia gravis. *Journal of Neurology*, 270(1), 1–12. <https://doi.org/10.1007/s00415-022-11389-0>
- Takimoto-Ohnishi, E., & Murakami, K. (2019). Renin–angiotensin system research: from molecules to the whole body. In *Journal of Physiological Sciences* (Vol. 69, Issue 4, pp. 581–587). Springer Tokyo. <https://doi.org/10.1007/s12576-019-00679-4>

- Tan, L., Wang, Q., Zhang, D., Ding, J., Huang, Q., Tang, Y. Q., Wang, Q., & Miao, H. (2020). Lymphopenia predicts disease severity of COVID-19: a descriptive and predictive study. In *Signal Transduction and Targeted Therapy* (Vol. 5, Issue 1). Springer Nature. <https://doi.org/10.1038/s41392-020-0148-4>
- Terlecki, M., Wojciechowska, W., Klocek, M., Olszanecka, A., Bednarski, A., Drożdż, T., Pavlinec, C., Lis, P., Zajac, M., Rusinek, J., Bartuś, S., & Rajzer, M. (2022). Impact of concomitant COVID-19 on the outcome of patients with acute myocardial infarction undergoing coronary artery angiography. *Frontiers in Cardiovascular Medicine*, 9. <https://doi.org/10.3389/fcvm.2022.917250>
- Wang, X., Liu, Z., Li, J., Zhang, J., Tian, S., Lu, S., Qi, M., Ma, J., Qiu, B., Dong, W., & Xu, Y. (2020). Impacts of Type 2 diabetes on disease severity, therapeutic effect, and mortality of patients with COVID-19. *Journal of Clinical Endocrinology and Metabolism*, 105(12). <https://doi.org/10.1210/clinem/dgaa535>
- Wang, X., Xu, W., Song, Q., Zhao, Z., Meng, X., Xia, C., Xie, Y., Yang, C., Jin, P., & Wang, F. (2022). Association between the triglyceride–glucose index and severity of coronary artery disease. *Cardiovascular Diabetology*, 21(1). <https://doi.org/10.1186/s12933-022-01606-5>
- Wei, Q., Bingzhu, H., Zhu, Z., Shi, C., Fajiu, L., Ziyang, Z., Xiaojang, W., Min, L., & Chenghong, L. (2020). Clinical characteristics and death risk factors of severe COVID-19 | 重症新型冠状病毒肺炎的临床特征及死亡因素分析. *Zhonghua Jiehe He Huxi Zazhi Chinese Journal of Tuberculosis and Respiratory Diseases*, 43(8), 648–653. <https://doi.org/10.3760/cma.j.cn112147-20200320-00380>
- Williamson, E. J., Walker, A. J., Bhaskaran, K., Bacon, S., Bates, C., Morton, C. E., Curtis, H. J., Mehrkar, A., Evans, D., Inglesby, P., Cockburn, J., McDonald, H. I., MacKenna, B., Tomlinson, L., Douglas, I. J., Rentsch, C. T., Mathur, R., Wong, A. Y. S., Grieve, R., ... Goldacre, B. (2020a). Factors associated with COVID-19-related death using OpenSAFELY. *Nature*, 584(7821), 430–436. <https://doi.org/10.1038/s41586-020-2521-4>
- Williamson, E. J., Walker, A. J., Bhaskaran, K., Bacon, S., Bates, C., Morton, C. E., Curtis, H. J., Mehrkar, A., Evans, D., Inglesby, P., Cockburn, J., McDonald, H. I., MacKenna, B., Tomlinson, L., Douglas, I. J., Rentsch, C. T., Mathur, R., Wong, A. Y. S., Grieve, R., ... Goldacre, B. (2020b). Factors associated with COVID-19-related death using OpenSAFELY. *Nature*, 584(7821), 430–436. <https://doi.org/10.1038/s41586-020-2521-4>
- Wu, F., Zhao, S., Yu, B., Chen, Y. M., Wang, W., Song, Z. G., Hu, Y., Tao, Z. W., Tian, J. H., Pei, Y. Y., Yuan, M. L., Zhang, Y. L., Dai, F. H., Liu, Y., Wang, Q. M., Zheng, J. J., Xu, L., Holmes, E. C., & Zhang, Y. Z. (2020). A new coronavirus associated with human respiratory disease in China. *Nature*, 579(7798), 265–269. <https://doi.org/10.1038/s41586-020-2008-3>
- Wu, J., Shi, Y., Pan, X., Wu, S., Hou, R., Zhang, Y., Zhong, T., Tang, H., Du, W., Wang, L., Ye, B.-C., & Qi, N. (2021). SARS-CoV-2 ORF9b inhibits RIG-I-

- MAVS antiviral signaling by interrupting K63-linked ubiquitination of NEMO. *Cell Reports*, 34(7). <https://doi.org/10.1016/j.celrep.2021.108761>
- Xu, H., Zhong, L., Deng, J., Peng, J., Dan, H., Zeng, X., Li, T., & Chen, Q. (2020). High expression of ACE2 receptor of 2019-nCoV on the epithelial cells of oral mucosa. *International Journal of Oral Science*, 12(1). <https://doi.org/10.1038/s41368-020-0074-x>
- Yang, L., Liu, S., Liu, J., Zhang, Z., Wan, X., Huang, B., Chen, Y., & Zhang, Y. (2020). COVID-19: immunopathogenesis and Immunotherapeutics. In *Signal Transduction and Targeted Therapy* (Vol. 5, Issue 1). Springer Nature. <https://doi.org/10.1038/s41392-020-00243-2>
- Yang, R., Gui, X., Zhang, Y., Xiong, Y., Gao, S., & Ke, H. (2021). Clinical characteristics of COVID-19 patients with HIV coinfection in Wuhan, China. *Expert Review of Respiratory Medicine*, 15(3), 403–409. <https://doi.org/10.1080/17476348.2021.1836965>
- Yang, X., Yu, Y., Xu, J., Shu, H., Xia, J., Liu, H., Wu, Y., Zhang, L., Yu, Z., Fang, M., Yu, T., Wang, Y., Pan, S., Zou, X., Yuan, S., & Shang, Y. (2020). Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study. *The Lancet Respiratory Medicine*, 8(5), 475–481. [https://doi.org/10.1016/S2213-2600\(20\)30079-5](https://doi.org/10.1016/S2213-2600(20)30079-5)
- Yousefi, H., Mahmud, A., Chang, D., Das, J., Gomis, S., Chen, J. B., Wang, H., Been, T., Yip, L., Coomes, E., Li, Z., Mubareka, S., Mcgeer, A., Christie, N., Gray-Owen, S., Cochrane, A., Rini, J. M., Sargent, E. H., & Kelley, S. O. (2021). Detection of SARS-CoV-2 Viral Particles Using Direct, Reagent-Free Electrochemical Sensing. *Journal of the American Chemical Society*, 143(4), 1722–1727. <https://doi.org/10.1021/jacs.0c10810>
- Zhang, B., Yue, D., Wang, Y., Wang, F., Wu, S., & Hou, H. (2021). The dynamics of immune response in COVID-19 patients with different illness severity. *Journal of Medical Virology*, 93(2), 1070–1077. <https://doi.org/10.1002/jmv.26504>
- Zhang, J. jin, Dong, X., Liu, G. hui, & Gao, Y. dong. (2023). Risk and Protective Factors for COVID-19 Morbidity, Severity, and Mortality. In *Clinical Reviews in Allergy and Immunology* (Vol. 64, Issue 1, pp. 90–107). Springer. <https://doi.org/10.1007/s12016-022-08921-5>
- Zhang, N., Xie, T., Ning, W., He, R., Zhu, B., & Mao, Y. (2021). The severity of covid-19 and its determinants: A systematic review and meta-analysis in china. In *Sustainability (Switzerland)* (Vol. 13, Issue 9). MDPI AG. <https://doi.org/10.3390/su13095305>
- Zhong, A., Cheng, C. S., Kai, J., Lu, R., & Guo, L. (2020). Clinical Significance of Glucose to Lymphocyte Ratio (GLR) as a Prognostic Marker for Patients With Pancreatic Cancer. *Frontiers in Oncology*, 10. <https://doi.org/10.3389/fonc.2020.520330>
- Zhou, F., Yu, T., Du, R., Fan, G., Liu, Y., Liu, Z., Xiang, J., Wang, Y., Song, B., Gu, X., Guan, L., Wei, Y., Li, H., Wu, X., Xu, J., Tu, S., Zhang, Y., Chen, H., & Cao,

- B. (2020). Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *The Lancet*, 395(10229), 1054–1062. [https://doi.org/10.1016/S0140-6736\(20\)30566-3](https://doi.org/10.1016/S0140-6736(20)30566-3)
- Zhou, M., Zhang, X., & Qu, J. (2020). Coronavirus disease 2019 (COVID-19): a clinical update. In *Frontiers of Medicine* (Vol. 14, Issue 2, pp. 126–135). Higher Education Press. <https://doi.org/10.1007/s11684-020-0767-8>
- Zhu, L., She, Z. G., Cheng, X., Qin, J. J., Zhang, X. J., Cai, J., Lei, F., Wang, H., Xie, J., Wang, W., Li, H., Zhang, P., Song, X., Chen, X., Xiang, M., Zhang, C., Bai, L., Xiang, D., Chen, M. M., ... Li, H. (2020). Association of Blood Glucose Control and Outcomes in Patients with COVID-19 and Pre-existing Type 2 Diabetes. *Cell Metabolism*, 31(6), 1068-1077.e3. <https://doi.org/10.1016/j.cmet.2020.04.021>
- Zou, X., Chen, K., Zou, J., Han, P., Hao, J., & Han, Z. (2020). Single-cell RNA-seq data analysis on the receptor ACE2 expression reveals the potential risk of different human organs vulnerable to 2019-nCoV infection. *Frontiers of Medicine*, 14(2), 185–192. <https://doi.org/10.1007/s11684-020-0754-0>