

DAFTAR PUSTAKA

- Aguilar, R.B., Hardigan, P., Mayi, B., Sider, D., Piotrkowski, J., Mehta, J.P., Dev, J., Seijo, Y., Camargo, A.L., Andux, L., Hagen, K., Hernandez, M.B., 2020. Current Understanding of COVID-19 Clinical Course and Investigational Treatments. *Front. Med.* 7, 638. <https://doi.org/10.3389/fmed.2020.555301>
- Akl, E.A., Blažić, I., Yaacoub, S., Frija, G., Chou, R., Appiah, J.A., Fatehi, M., Flor, N., Hitti, E., Jafri, H., Jin, Z.-Y., Kauczor, H.U., Kawooya, M., Kazerooni, E.A., Ko, J.P., Mahfouz, R., Muglia, V., Nyabanda, R., Sanchez, M., Shete, P.B., Ulla, M., Zheng, C., van Deventer, E., Perez, M.D.R., 2021. Use of Chest Imaging in the Diagnosis and Management of COVID-19: A WHO Rapid Advice Guide. *Radiology* 298, E63–E69. <https://doi.org/10.1148/radiol.2020203173>
- Albrandt-Salmeron, A., Espejo-Fonseca, R., Roldan-Valadez, E., 2021a. Correlation between Chest X-Ray Severity in COVID-19 and Age in Mexican-Mestizo Patients: An Observational Cross-Sectional Study. *Biomed Res. Int.* 2021, 5571144. <https://doi.org/10.1155/2021/5571144>
- Albrandt-Salmeron, A., Espejo-Fonseca, R., Roldan-Valadez, E., 2021b. Correlation between Chest X-Ray Severity in COVID-19 and Age in Mexican-Mestizo Patients: An Observational Cross-Sectional Study. *Biomed Res. Int.* 2021. <https://doi.org/10.1155/2021/5571144>
- Ambrosino, I., Barbagelata, E., Ortona, E., Ruggieri, A., Massiah, G., Giannico, O.V., Politi, C., Moretti, A.M., 2020. Gender differences in patients with COVID-19: A narrative review. *Monaldi Arch. Chest Dis.* 90, 318–324. <https://doi.org/10.4081/monaldi.2020.1389>
- Baranwal, A., Mahapatra, S., Purohit, B., Roy, S., Chandra, P., 2020. Insights into Novel Coronavirus and {COVID}-19 Outbreak, in: *Medical Virology: From Pathogenesis to Disease Control*. Springer Singapore, pp. 1–17. https://doi.org/10.1007/978-981-15-6006-4_1
- Barhoumi, T., Kasal, D.A., Li, M.W., Shbat, L., Laurant, P., Neves, M.F., Paradis, P., Schiffrin, E.L., 2011. T Regulatory lymphocytes prevent angiotensin II-induced hypertension and vascular injury. *Hypertension* 57, 469–476. <https://doi.org/10.1161/HYPERTENSIONAHA.110.162941>
- Bekdas, M., Goksugur, S.B., Sarac, E.G., Erkocoglu, M., Demircioglu, F., 2014. Neutrophil/lymphocyte and c-reactive protein/mean platelet volume ratios in differentiating between viral and bacterial pneumonias and diagnosing early complications in children. *Saudi Med. J.* 35, 442–447.
- Bernheim, A., Mei, X., Huang, M., Yang, Y., Fayad, Z.A., Zhang, N., Diao, K., Lin, B., Zhu, X., Li, K., Li, S., Shan, H., Jacobi, A., Chung, M., Cai, W., Yang, J., Fan, G., Xu, L., Zhang, B., Liu, R., 2020. Chest CT Findings in Coronavirus Disease-19 (COVID-19): Relationship to Duration of Infection. *Radiology* 295, 200463. <https://doi.org/10.1148/radiol.2020200463>
- Bilge, M., Akilli, I.K., Karaayvaz, E.B., Yesilova, A., Kart Yasar, K., 2021. Comparison of systemic immune-inflammation index (SII), early warning score (ANDC) and prognostic nutritional index (PNI) in hospitalized patients

- with malignancy, and their influence on mortality from COVID-19. *Infect. Agent. Cancer* 16. <https://doi.org/10.1186/s13027-021-00400-4>
- Borghesi, A., Maroldi, R., 2020. COVID-19 outbreak in Italy: experimental chest X-ray scoring system for quantifying and monitoring disease progression. *Radiol. Medica* 125, 509–513. <https://doi.org/10.1007/s11547-020-01200-3>
- Borghesi, A., Zigliani, A., Golemi, S., Carapella, N., Maculotti, P., Farina, D., Maroldi, R., 2020a. Chest X-ray severity index as a predictor of in-hospital mortality in coronavirus disease 2019: A study of 302 patients from Italy. *Int. J. Infect. Dis.* 96, 291–293. <https://doi.org/10.1016/j.ijid.2020.05.021>
- Borghesi, A., Zigliani, A., Masciullo, R., Golemi, S., Maculotti, P., Farina, D., Maroldi, R., 2020b. Radiographic severity index in COVID-19 pneumonia: relationship to age and sex in 783 Italian patients. *Radiol. Med.* <https://doi.org/10.1007/s11547-020-01202-1>
- British Society of Thoracic Imaging, 2020. Thoracic imaging in COVID-19 infection v2. Guid. Report. *Radiol.* 28.
- British Society Thoracic Imaging, 2020a. COVID-19: CXR reporting.
- British Society Thoracic Imaging, 2020b. COVID-19 : CXR examples.
- Brodin, P., 2021. Immune determinants of COVID-19 disease presentation and severity. *Nat. Med.* 27, 28–33. <https://doi.org/10.1038/s41591-020-01202-8>
- Burian, E., Jungmann, F., Kaissis, G., Lohöfer, F., Spinner, C.D., Lahmer, T., Treiber, M., Dommasch, M., Schneider, G., Geisler, F., Huber, W., Protzer, U., Schmid, R.M., Schwaiger, M., Makowski, M.R., Braren, R.F., 2020. Intensive Care Risk Estimation in COVID-19 Pneumonia Based on Clinical and Imaging Parameters: Experiences from the Munich Cohort. *SSRN Electron. J.* 2, 1–9. <https://doi.org/10.2139/ssrn.3572889>
- Burki, T.K., 2020. Coronavirus in China. *Lancet. Respir. Med.* [https://doi.org/10.1016/S2213-2600\(20\)30056-4](https://doi.org/10.1016/S2213-2600(20)30056-4)
- Chen, J., Bai, H., Liu, J., Chen, Ge, Liao, Q., Yang, J., Wu, P., Wei, J., Ma, D., Chen, Gang, Ai, J., Li, K., 2020. Distinct Clinical Characteristics and Risk Factors for Mortality in Female Inpatients With Coronavirus Disease 2019 (COVID-19): A Sex-stratified, Large-scale Cohort Study in Wuhan, China. *Clin. Infect. Dis.* 71, 3188–3195. <https://doi.org/10.1093/cid/ciaa920>
- Chen, N., Zhou, M., Dong, X., Qu, J., Gong, F., Han, Y., Qiu, Y., Wang, J., Liu, Y., Wei, Y., Xia, J., Yu, T., Zhang, X., Zhang, L., 2020. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *Lancet (London, England)* 395, 507–513. [https://doi.org/10.1016/S0140-6736\(20\)30211-7](https://doi.org/10.1016/S0140-6736(20)30211-7)
- Chen, T., Wu, D., Chen, H., Yan, W., Yang, D., Chen, G., Ma, K., Xu, D., Yu, H., Wang, H., Wang, T., Guo, W., Chen, J., Ding, C., Zhang, X., Huang, J., Han, M., Li, S., Luo, X., Zhao, J., Ning, Q., 2020. Clinical characteristics of 113 deceased patients with coronavirus disease 2019: retrospective study. *BMJ* 368, m1091. <https://doi.org/10.1136/bmj.m1091>
- Cheng, C., Zhang, D.D., Dang, D., Geng, J., Zhu, P., Yuan, M., Liang, R., Yang, H., Jin, Y., Xie, J., Chen, S., Duan, G., 2021. The incubation period of COVID-19: a global meta-analysis of 53 studies and a Chinese observation study of 11 545 patients. *Infect. Dis. Poverty* 10, 1–13. <https://doi.org/10.1186/s40249-021-00901-9>

- Chobanian, A. V, Bakris, G.L., Black, H.R., Cushman, W.C., Green, L.A., Izzo, J.L.J., Jones, D.W., Materson, B.J., Oparil, S., Wright, J.T.J., Roccella, E.J., 2003. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: the JNC 7 report. *JAMA* 14, 161–168. <https://doi.org/10.1097/00001573-199903000-00014>
- Choi, J.Y., Smith, D.M., 2021. SARS-CoV-2 variants of concern. *Yonsei Med. J.* 62, 961–968. <https://doi.org/10.3349/ymj.2021.62.11.961>
- Chowdhury, M.A., Hossain, N., Kashem, M.A., Shahid, M.A., Alam, A., 2020. Immune response in COVID-19: A review. *J. Infect. Public Health* 13, 1619–1629. <https://doi.org/10.1016/j.jiph.2020.07.001>
- Cohen, P.A., Hall, L.E., John, J.N., Rapoport, A.B., 2020. The Early Natural History of SARS-CoV-2 Infection: Clinical Observations From an Urban, Ambulatory COVID-19 Clinic. *Mayo Clin. Proc.* 95, 1124–1126. <https://doi.org/10.1016/j.mayocp.2020.04.010>
- Cozzi, D., Albanesi, M., Cavigli, E., Moroni, C., Bindi, A., Luvarà, S., Lucarini, S., Busoni, S., Mazzoni, L.N., Miele, V., 2020. Chest X-ray in new Coronavirus Disease 2019 (COVID-19) infection: findings and correlation with clinical outcome. *Radiol. Medica* 125, 730–737. <https://doi.org/10.1007/s11547-020-01232-9>
- Dahlan, S., 2010a. *Besar Sampel Dan Cara Pengambilan Sampel*, 3rd ed. Salemba Medika, Jakarta.
- Dahlan, S., 2010b. *Statistik Untuk Kedokteran Dan Kesehatan*, 3rd ed. Salemba Medika, Jakarta.
- de Andrade Santos, I., Grosche, V.R., Bergamini, F.R.G., Sabino-Silva, R., Jardim, A.C.G., 2020. Antivirals Against Coronaviruses: Candidate Drugs for {SARS}-{CoV}-2 Treatment? *Front. Microbiol.* 11. <https://doi.org/10.3389/fmicb.2020.01818>
- Driggin, E., Madhavan, M. V, Bikdeli, B., Chuich, T., Laracy, J., Biondi-Zoccai, G., Brown, T.S., Der Nigoghossian, C., Zidar, D.A., Haythe, J., Brodie, D., Beckman, J.A., Kirtane, A.J., Stone, G.W., Krumholz, H.M., Parikh, S.A., 2020. Cardiovascular Considerations for Patients, Health Care Workers, and Health Systems During the COVID-19 Pandemic. *J. Am. Coll. Cardiol.* 75, 2352–2371. <https://doi.org/10.1016/j.jacc.2020.03.031>
- European Medicines Agency, 2021. Considerations on the use of self-tests for COVID-19 in the EU/EEA.
- Fatima, S., Ratnani, I., Husain, M., Surani, S., 2020. Radiological Findings in Patients with COVID-19. *Cureus* 12, 10–13. <https://doi.org/10.7759/cureus.7651>
- Feng, W., Zong, W., Wang, F., Ju, S., 2020. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2): A review. *Mol. Cancer* 19, 892–893. <https://doi.org/10.1186/s12943-020-01218-1>
- 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* 25. <https://doi.org/10.3390/molecules25235725>

- Foust, A.M., Phillips, G.S., Chu, W.C., Daltro, P., Das, K.M., Garcia-Peña, P., Kilborn, T., Winant, A.J., Lee, E.Y., 2020. International expert consensus statement on chest imaging in pediatric covid-19 patient management: Imaging findings, imaging study reporting, and imaging study recommendations. *Radiol. Cardiothorac. Imaging* 2. <https://doi.org/10.1148/ryct.2020200214>
- Fu, Y., Pan, Y., Li, Z., Li, Y., 2021. The Utility of Specific Antibodies Against SARS-CoV-2 in Laboratory Diagnosis. *Front. Microbiol.* 11. <https://doi.org/10.3389/fmicb.2020.603058>
- Garg, P.K., Khera, P.S., Saxena, S., Sureka, B., Garg, M.K., Nag, V.L., Purohit, A., Dutt, N., Tiwari, S., Yadav, T., Singh, S., Misra, S., 2021. Chest-x-ray-based scoring, total leukocyte count, and neutrophil-to-lymphocyte ratio for prediction of covid-19 in patients with severe acute respiratory illness. *Turkish Thorac. J.* 22, 130–136. <https://doi.org/10.5152/TurkThoracJ.2021.20239>
- Gharaibeh, M., Elheis, M., Khasawneh, R., Al-Omari, M., Jibril, M., Dilki, K., El-Obeid, E., Altalhi, M., Abualigah, L., 2022. Chest Radiograph Severity Scores, Comorbidity Prevalence, and Outcomes of Patients with Coronavirus Disease Treated at the King Abdullah University Hospital in Jordan: A Retrospective Study. *Int. J. Gen. Med.* Volume 15, 5103–5110. <https://doi.org/10.2147/ijgm.s360851>
- Gomez, J.M.D., Du-Fay-De-Lavallaz, J.M., Fugar, S., Sarau, A., Simmons, J.A., Clark, B., Sanghani, R.M., Aggarwal, N.T., Williams, K.A., Doukky, R., Volgman, A.S., 2021. Sex Differences in COVID-19 Hospitalization and Mortality. *J. Women's Heal.* 30, 646–653. <https://doi.org/10.1089/jwh.2020.8948>
- Gorbalenya, A.E., Baker, S.C., Baric, R.S., de Groot, R.J., Drosten, C., Gulyaeva, A.A., Haagmans, B.L., Lauber, C., Leontovich, A.M., Neuman, B.W., Penzar, D., Perlman, S., Poon, L.L.M., Samborskiy, D., Sidorov, I.A., Sola, I., Ziebuhr, J., 2020. Severe acute respiratory syndrome-related coronavirus: The species and its viruses {textendash} a statement of the Coronavirus Study Group. *bioRxiv.* <https://doi.org/10.1101/2020.02.07.937862>
- Guan, W., Liang, W., Zhao, Y., Liang, H., Chen, Zi-sheng, Li, Y., Liu, X., Chen, R., Tang, C., Wang, T., Ou, C., Li, L., Chen, P., Sang, L., Wang, W., Li, J., Li, C., Ou, L., Cheng, B., Xiong, S., Ni, Z., Xiang, J., Hu, Yu, Liu, L., Shan, H., Lei, C., Peng, Y., Wei, L., Liu, Y., Hu, Ya-hua, Peng, P., Wang, J., Liu, J., Chen, Zhong, Li, G., Zheng, Z., Qiu, S., Luo, J., Ye, C., Zhu, S., Cheng, L., Ye, F., Li, S., Zheng, J., Zhang, N., Zhong, N., He, J., 2020. Comorbidity and its impact on 1590 patients with COVID-19 in China: a nationwide analysis. *Eur. Respir. J.* 55. <https://doi.org/10.1183/13993003.00547-2020>
- Gunay, S., Çalışkan, S., Sigirli, D., 2021. Inflammation and Nocturnal Pattern of Blood Pressure in Normotensives. *Int. J. Cardiovasc. Sci.* <https://doi.org/10.36660/ijcs.20200298>
- Guo, L., Ren, L., Yang, S., Xiao, M., Chang, D., Yang, F., Dela Cruz, C.S., Wang, Y., Wu, C., Xiao, Y., Zhang, L., Han, L., Dang, S., Xu, Y., Yang, Q.-W., Xu, S.-Y., Zhu, H.-D., Xu, Y.-C., Jin, Q., Sharma, L., Wang, L., Wang, J., 2020. Profiling Early Humoral Response to Diagnose Novel Coronavirus Disease (COVID-19). *Clin. Infect. Dis.* 71, 778–785.

<https://doi.org/10.1093/cid/ciaa310>

- Harapan, H., Itoh, N., Yufika, A., Winardi, W., Keam, S., Te, H., Megawati, D., Hayati, Z., Wagner, A.L., Mudatsir, M., 2020. Coronavirus disease 2019 (COVID-19): A literature review. *J. Infect. Public Health* 13, 667–673. <https://doi.org/10.1016/j.jiph.2020.03.019>
- Hare, S.S., Tavare, A.N., Musaddaq, B., Beal, I., Cleverley, J., Cash, C., Lemoniati, E., Barnett, J., 2020. Validation of the British Society of Thoracic Imaging guidelines for COVID-19 chest radiograph reporting. *Clin. Radiol.* 75, 710.e9-710.e14. <https://doi.org/10.1016/j.crad.2020.06.005>
- Ho, J.C., Chan, K.N., Hu, W.H., Lam, W.K., Zheng, L., Tipoe, G.L., Sun, J., Leung, R., Tsang, K.W., 2001. The effect of aging on nasal mucociliary clearance, beat frequency, and ultrastructure of respiratory cilia. *Am. J. Respir. Crit. Care Med.* 163, 983–988. <https://doi.org/10.1164/ajrccm.163.4.9909121>
- Hoffmann, M., Kleine-Weber, H., Schroeder, S., Krüger, N., Herrler, T., Erichsen, S., Schiergens, T.S., Herrler, G., Wu, N.H., Nitsche, A., Müller, M.A., Drosten, C., Pöhlmann, S., 2020. SARS-CoV-2 Cell Entry Depends on ACE2 and TMPRSS2 and Is Blocked by a Clinically Proven Protease Inhibitor. *Cell* 181, 271-280.e8. <https://doi.org/10.1016/j.cell.2020.02.052>
- Hu, B., Yang, X.R., Xu, Y., Sun, Y.F., Sun, C., Guo, W., Zhang, X., Wang, W.M., Qiu, S.J., Zhou, J., Fan, J., 2014. Systemic immune-inflammation index predicts prognosis of patients after curative resection for hepatocellular carcinoma. *Clin. Cancer Res.* 20, 6212–6222. <https://doi.org/10.1158/1078-0432.CCR-14-0442>
- Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Zhang, L., Fan, G., Xu, J., Gu, X., Cheng, Z., Yu, T., Xia, J., Wei, Y., Wu, W., Xie, X., Yin, W., Li, H., Liu, M., Xiao, Y., Gao, H., Guo, L., Xie, J., Wang, G., Jiang, R., Gao, Z., Jin, Q., Wang, J., Cao, B., 2020. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet (London, England)* 395, 497–506. [https://doi.org/10.1016/S0140-6736\(20\)30183-5](https://doi.org/10.1016/S0140-6736(20)30183-5)
- Hui, T.C.H., Khoo, H.W., Young, B.E., Mohideen, S.M.H., Lee, Y.S., Lim, C.J., Leo, Y.S., Kaw, G.J.L., Lye, D.C., Tan, C.H., 2020. Clinical utility of chest radiography for severe COVID-19. *Quant. Imaging Med. Surg.* 10, 1540–1550. <https://doi.org/10.21037/QIMS-20-642>
- Inui, S., Gono, W., Kurokawa, R., Nakai, Y., Watanabe, Y., Sakurai, K., Ishida, M., Fujikawa, A., Abe, O., 2021. The role of chest imaging in the diagnosis, management, and monitoring of coronavirus disease 2019 (COVID-19). *Insights Imaging* 12, 1–14. <https://doi.org/10.1186/s13244-021-01096-1>
- Jackson, C.B., Farzan, M., Chen, B., Choe, H., 2021. Mechanisms of SARS-CoV-2 entry into cells. *Nat. Rev. Mol. Cell Biol.* 1–18. <https://doi.org/10.1038/s41580-021-00418-x>
- Joynt, G.M., Wu, W.K., 2020. Understanding COVID-19: what does viral RNA load really mean? *Lancet Infect. Dis.* 20, 635–636. [https://doi.org/10.1016/S1473-3099\(20\)30237-1](https://doi.org/10.1016/S1473-3099(20)30237-1)
- Kanne, J.P., Bai, H., Bernheim, A., Chung, M., Haramati, L.B., Kallmes, D.F., Little, B.P., Rubin, G., Sverzellati, N., 2021. COVID-19 Imaging: What We Know Now and What Remains Unknown. *Radiology* 299, E262–E279. <https://doi.org/10.1148/radiol.2021204522>

- Kart Yaşar, K., Sezen, A.İ., 2022. Predictive role of NLR, SII, and PLR in COVID-19 patient mortality and disease severity. *Curr. Med. Res.* 3, 43–50. <https://doi.org/10.47482/acmr.2022.47>
- Karyono, D.R., Wicaksana, A.L., 2020. Current prevalence, characteristics, and comorbidities of patients with COVID-19 in Indonesia. *J. Community Empower. Heal.* 3, 77. <https://doi.org/10.22146/jcoemph.57325>
- Keni, R., Alexander, A., Nayak, P.G., Mudgal, J., Nandakumar, K., 2020. COVID-19: Emergence, Spread, Possible Treatments, and Global Burden. *Front. Public Heal.* 8, 216. <https://doi.org/10.3389/fpubh.2020.00216>
- Klok, F.A., Kruip, M.J.H.A., van der Meer, N.J.M., Arbous, M.S., Gommers, D.A.M.P.J., Kant, K.M., Kaptein, F.H.J., van Paassen, J., Stals, M.A.M., Huisman, M. V, Endeman, H., 2020. Incidence of thrombotic complications in critically ill ICU patients with COVID-19. *Thromb. Res.* 191, 145–147. <https://doi.org/10.1016/j.thromres.2020.04.013>
- Kumar, P.A., Hu, Y., Yamamoto, Y., Hoe, N.B., Wei, T.S., Mu, D., Sun, Y., Joo, L.S., Dagher, R., Zielonka, E.M., Wang, D.Y., Lim, B., Chow, V.T., Crum, C.P., Xian, W., McKeon, F., 2011. Distal airway stem cells yield alveoli in vitro and during lung regeneration following H1N1 influenza infection. *Cell* 147, 525–538. <https://doi.org/10.1016/j.cell.2011.10.001>
- Li, G., Chen, X., Xu, A., 2003. Profile of Specific Antibodies to the SARS-Associated Coronavirus. *N. Engl. J. Med.* 349, 508–509. <https://doi.org/10.1056/NEJM200307313490520>
- Li, H., Huang, J., Pan, W., Zhang, C., Chang, X., Yang, B., 2020. Systemic Immune-Inflammatory Index predicts prognosis of patients with COVID-19: a retrospective study. <https://doi.org/10.21203/rs.3.rs-30701/v1>
- Liotta, E.M., Batra, A., Clark, J.R., Shlobin, N.A., Hoffman, S.C., Orban, Z.S., Koralknik, I.J., 2020. Frequent neurologic manifestations and encephalopathy-associated morbidity in Covid-19 patients. *Ann. Clin. Transl. Neurol.* 7, 2221–2230. <https://doi.org/10.1002/acn3.51210>
- Litmanovich, D.E., Chung, M., Kirkbride, R.R., Kicska, G., Kanne, J.P., 2020. Review of Chest Radiograph Findings of COVID-19 Pneumonia and Suggested Reporting Language. *J. Thorac. Imaging* 35, 354–360. <https://doi.org/10.1097/RTI.0000000000000541>
- Liu, J., Tang, X., Lei, C. (Eds.), 2021. Atlas of Chest Imaging in {COVID}-19 Patients. Springer Singapore. <https://doi.org/10.1007/978-981-16-1082-0>
- Martínez Chamorro, E., Díez Tascón, A., Ibáñez Sanz, L., Ossaba Vélez, S., Borruel Nacenta, S., 2021. Radiologic diagnosis of patients with COVID-19. *Radiologia* 63, 56–73. <https://doi.org/10.1016/j.rx.2020.11.001>
- Mason, R.J., 2020. Pathogenesis of COVID-19 from a cell biology perspective. *Eur. Respir. J.* 55, 9–11. <https://doi.org/10.1183/13993003.00607-2020>
- Mcintosh, K., 2021. COVID-19: Clinical features. UpToDate.
- Mehta, P., McAuley, D.F., Brown, M., Sanchez, E., Tattersall, R.S., Manson, J.J., 2020. COVID-19: consider cytokine storm syndromes and immunosuppression. *Lancet* (London, England). [https://doi.org/10.1016/S0140-6736\(20\)30628-0](https://doi.org/10.1016/S0140-6736(20)30628-0)
- Merkler, A.E., Parikh, N.S., Mir, S., Gupta, A., Kamel, H., Lin, E., Lantos, J., Schenck, E.J., Goyal, P., Bruce, S.S., Kahan, J., Lansdale, K.N., LeMoss,

- N.M., Murthy, S.B., Stieg, P.E., Fink, M.E., Iadecola, C., Segal, A.Z., Cusick, M., Champion, T.R.J., Diaz, I., Zhang, C., Navi, B.B., 2020. Risk of Ischemic Stroke in Patients With Coronavirus Disease 2019 (COVID-19) vs Patients With Influenza. *JAMA Neurol.* 77, 1–7. <https://doi.org/10.1001/jamaneurol.2020.2730>
- Meyer, B., Drosten, C., Müller, M.A., 2014. Serological assays for emerging coronaviruses: Challenges and pitfalls. *Virus Res.* 194, 175–183. <https://doi.org/https://doi.org/10.1016/j.virusres.2014.03.018>
- Mudatsir, M., Fajar, J.K., Wulandari, L., Soegiarto, G., Ilmawan, M., Purnamasari, Y., Mahdi, B.A., Jayanto, G.D., Suhendra, S., Setianingsih, Y.A., Hamdani, R., Suseno, D.A., Agustina, K., Naim, H.Y., Muchlas, M., Alluza, H.H.D., Rosida, N.A., Mayasari, M., Mustofa, M., Hartono, A., Aditya, R., Prastiwi, F., Meku, F.X., Sitio, M., Azmy, A., Santoso, A.S., Nugroho, R.A., Gersom, C., Rabaan, A.A., Masyeni, S., Nainu, F., Wagner, A.L., Dhama, K., Harapan, H., 2020. Predictors of COVID-19 severity: a systematic review and meta-analysis. *F1000Research* 9, 1107. <https://doi.org/10.12688/f1000research.26186.2>
- Muhammad, S., Fischer, I., Naderi, S., Jouibari, M.F., Abdolreza, S., Karimialavijeh, E., Aslzadeh, S., Mashayekhi, M., Zojaji, M., Kahlert, U.D., Hänggi, D., 2021. Systemic inflammatory index is a novel predictor of intubation requirement and mortality after SARS-CoV-2 infection. *Pathogens* 10, 1–9. <https://doi.org/10.3390/pathogens10010058>
- Mukherjee, S., Pahan, K., 2021. Is COVID-19 Gender-sensitive? *J. Neuroimmune Pharmacol.*
- Musuuzza, J.S., Watson, L., Parmasad, V., Putman-Buehler, N., Christensen, L., Safdar, N., 2021. Prevalence and outcomes of co-infection and superinfection with SARS-CoV-2 and other pathogens: A systematic review and meta-analysis. *PLoS One* 16, e0251170. <https://doi.org/10.1371/journal.pone.0251170>
- Nityanand, S., Pande, I., Bajpai, V.K., Singh, L., Chandra, M., Singh, B.N., 1993. Platelets in essential hypertension. *Thromb. Res.* 72, 447–454. [https://doi.org/10.1016/0049-3848\(93\)90245-J](https://doi.org/10.1016/0049-3848(93)90245-J)
- Özdemir, L., Polat, V., 2022. Association between systemic inflamatuary index and epicardial adipose tissue in patients with Type 2 Diabetes Mellitus. *Cumhur. Med. J.* 44, 62–66.
- Pal, M., Berhanu, G., Desalegn, C., Kandi, V., 2020. Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2): An Update. *Cureus* 12, e7423–e7423. <https://doi.org/10.7759/cureus.7423>
- Pang, N.Y.L., Pang, A.S.R., Chow, V.T., Wang, D.Y., 2021. Understanding neutralising antibodies against SARS-CoV-2 and their implications in clinical practice. *Mil. Med. Res.* 8, 1–17. <https://doi.org/10.1186/s40779-021-00342-3>
- 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. *BMJ* 369, m1966. <https://doi.org/10.1136/bmj.m1966>

- Ponti, G., Maccaferri, M., Ruini, C., Tomasi, A., Ozben, T., 2020. Biomarkers associated with COVID-19 disease progression. *Crit. Rev. Clin. Lab. Sci.* 57, 389–399. <https://doi.org/10.1080/10408363.2020.1770685>
- Public Health England, 2021. SARS-CoV-2 variants of concern and variants under investigation in England. Sage 1–50.
- Qian, Z., Travanty, E.A., Oko, L., Edeen, K., Berglund, A., Wang, J., Ito, Y., Holmes, K. V., Mason, R.J., 2013. Innate immune response of human alveolar type II cells infected with severe acute respiratory syndrome-coronavirus. *Am. J. Respir. Cell Mol. Biol.* 48, 742–748. <https://doi.org/10.1165/rcmb.2012-0339OC>
- Radiology Assistant, 2020. <https://radiologyassistant.nl/chest/covid-19/> [WWW Document]. URL <https://radiologyassistant.nl/chest/covid-19/>
- Restivo, D.A., Centonze, D., Alesina, A., Marchese-Ragona, R., 2020. Myasthenia Gravis Associated With SARS-CoV-2 Infection. *Ann. Intern. Med.* <https://doi.org/10.7326/L20-0845>
- Revel, M.P., Parkar, A.P., Prosch, H., Silva, M., Sverzellati, N., Gleeson, F., Brady, A., 2020. COVID-19 patients and the radiology department – advice from the European Society of Radiology (ESR) and the European Society of Thoracic Imaging (ESTI). *Eur. Radiol.* 30, 4903–4909. <https://doi.org/10.1007/s00330-020-06865-y>
- Rouchka, E.C., Chariker, J.H., Chung, D., 2020. Variant analysis of 1,040 SARS-CoV-2 genomes. *PLoS One* 15, 495–504. <https://doi.org/10.1371/journal.pone.0241535>
- Rubin, G.D., Ryerson, C.J., Haramati, L.B., Sverzellati, N., Kanne, J.P., Raoof, S., Schluger, N.W., Volpi, A., Yim, J.-J., Martin, I.B.K., Anderson, D.J., Kong, C., Altes, T., Bush, A., Desai, S.R., Goldin, J., Goo, J.M., Humbert, M., Inoue, Y., Kauczor, H.-U., Luo, F., Mazzone, P.J., Prokop, M., Remy-Jardin, M., Richeldi, L., Schaefer-Prokop, C.M., Tomiyama, N., Wells, A.U., Leung, A.N., 2020. The Role of Chest Imaging in Patient Management During the COVID-19 Pandemic: A Multinational Consensus Statement From the Fleischner Society. *Chest*. <https://doi.org/10.1016/j.chest.2020.04.003>
- Salman, E., Çelikbilek, N., Aydoğan, S., Özdem, B., Gökay, S., Kirca, F., Toyran, A., Salman, R.B., Dinç, B., 2021. Investigation of the relationship of systemic immune-inflammation index, C-Reactive protein and interleukin-6 with viral dynamics in patients with COVID-19. *Mikrobiyol. Bul.* 55, 539–552. <https://doi.org/10.5578/mb.20219706>
- Samudra, R.R., Setyonaluri, D., 2020. Inequitable Impact of COVID-19 in Indonesia: Evidence and Policy Response. *Unesco* 1–32.
- Sastroasmoro, S., Sofyan Ismael, 2011. *Dasar-dasar Metodologi Penelitian Klinis*, 4th ed. Sagung Seto, Jakarta.
- Saylik, F., Sarıkaya, R., 2021. Can Systemic Immune-Inflammation Index Detect the Presence of Exaggerated Morning Blood Pressure Surge in Newly Diagnosed Treatment-Naive Hypertensive Patients? *Clin. Exp. Hypertens.* 43, 772–779. <https://doi.org/10.1080/10641963.2021.1960366>
- Schaefer-prokop, C., Prokop, M., 2021. Chest Radiography in COVID-19: No Role in Asymptomatic and Oligosymptomatic Disease. *Radiology* 298, E156–E157. <https://doi.org/10.1148/radiol.2020204038>

- Schoeman, D., Fielding, B.C., Arias-Reyes, C., Zubieta-DeUrioste, N., Poma-Machicao, L., Aliaga-Raduan, F., Carvajal-Rodriguez, F., Dutschmann, M., Schneider-Gasser, E.M., Zubieta-Calleja, G., Soliz, J., 2019. Coronavirus envelope protein: current knowledge. *Virology* 16, 69. <https://doi.org/10.1186/s12985-019-1182-0>
- Sela, S., Mazor, R., Amsalam, M., Yagil, C., Yagil, Y., Kristal, B., 2004. Primed polymorphonuclear leukocytes, oxidative stress, and inflammation antecede hypertension in the Sabra rat. *Hypertension* 44, 764–769. <https://doi.org/10.1161/01.HYP.0000144480.10207.34>
- Shah, V.K., Firmal, P., Alam, A., Ganguly, D., Chattopadhyay, S., 2020. Overview of Immune Response During SARS-CoV-2 Infection: Lessons From the Past. *Front. Immunol.* 11, 1–17. <https://doi.org/10.3389/fimmu.2020.01949>
- Shekapure, S., Pagar, N., Kulkarni, B., Choudhary, D., Parkhad, P., 2021. Predicting COVID-19 Pneumonia Severity based on Chest X-ray with Deep Learning. *Int. J. Comput. Appl.* 183, 9–11. <https://doi.org/10.5120/ijca2021921353>
- Shojaee, S., Pourhoseingholi, M.A., Ashtari, S., Vahedian-Azimi, A., Asadzadeh-Aghdaei, H., Zali, M.R., 2020. Predicting the mortality due to Covid-19 by the next month for Italy, Iran and South Korea; a simulation study. *Gastroenterol. Hepatol. from bed to bench* 13, 177–179.
- Siddiqi, H.K., Mehra, M.R., 2020. COVID-19 illness in native and immunosuppressed states: A clinical–therapeutic staging proposal. *J. Hear. Lung Transplant.* 39, 405–407. <https://doi.org/10.1016/j.healun.2020.03.012>
- Sidiq, Z., Hanif, M., Dwivedi, K.K., Chopra, K.K., 2020. Benefits and limitations of serological assays in COVID-19 infection. *Indian J. Tuberc.* 67, S163–S166. <https://doi.org/10.1016/j.ijtb.2020.07.034>
- Simpson, S., Kay, F.U., Abbara, S., Bhalla, S., Chung, J.H., Chung, M., Henry, T.S., Kanne, J.P., Kligerman, S., Ko, J.P., Litt, H., 2020. Radiological society of North America expert consensus document on reporting chest CT findings related to COVID-19: Endorsed by the society of thoracic radiology, the American college of radiology, and RSNA. *Radiol. Cardiothorac. Imaging* 2. <https://doi.org/10.1148/ryct.2020200152>
- Sims, A.C., Baric, R.S., Yount, B., Burkett, S.E., Collins, P.L., Pickles, R.J., 2005. Severe acute respiratory syndrome coronavirus infection of human ciliated airway epithelia: role of ciliated cells in viral spread in the conducting airways of the lungs. *J. Virol.* 79, 15511–15524. <https://doi.org/10.1128/JVI.79.24.15511-15524.2005>
- Siordia, J.A.J., 2020. Epidemiology and clinical features of COVID-19: A review of current literature. *J. Clin. Virol. Off. Publ. Pan Am. Soc. Clin. Virol.* 127, 104357. <https://doi.org/10.1016/j.jcv.2020.104357>
- Soelistijo SA, Novida H, Rudijanto A, Soewondo P, Suastika K, Manaf A, et al., 2015. Konsensus pengelolaan dan pencegahan diabetes melitus tipe 2 di Indonesia 2015, Perkeni.
- Stokes, E.K., Zambrano, L.D., Anderson, K.N., Marder, E.P., Raz, K.M., El Burai Felix, S., Tie, Y., Fullerton, K.E., 2020. Coronavirus Disease 2019 Case Surveillance - United States, January 22-May 30, 2020. *MMWR. Morb. Mortal. Wkly. Rep.* 69, 759–765. <https://doi.org/10.15585/mmwr.mm6924e2>

- Struyf T, D.J.J.D.J.T.Y.D.C.L.M.M.G.S.R.H.L.E.D.D.S.D.J.H.S.R.A., den Bruel, A., 2020. Signs and symptoms to determine if a patient presenting in primary care or hospital outpatient settings has COVID-19 disease. *Cochrane Database Syst. Rev.* <https://doi.org/10.1002/14651858.CD013665>
- Tahamtan, A., Ardebili, A., 2020. Real-time RT-PCR in COVID-19 detection: issues affecting the results. *Expert Rev. Mol. Diagn.* 20, 453–454. <https://doi.org/10.1080/14737159.2020.1757437>
- Tan, W., Lu, Y., Zhang, J., Wang, J., Dan, Y., Tan, Z., He, X., Qian, C., Sun, Q., Hu, Q., Liu, H., Ye, S., Xiang, X., Zhou, Y., Zhang, W., Guo, Y., Wang, X.-H., He, W., Wan, X., Sun, F., Wei, Q., Chen, C., Pan, G., Xia, J., Mao, Q., Chen, Y., Deng, G., 2020. Viral Kinetics and Antibody Responses in Patients with COVID-19. *medRxiv.* <https://doi.org/10.1101/2020.03.24.20042382>
- Tang, N.L.-S., Chan, P.K.-S., Wong, C.-K., To, K.-F., Wu, A.K.-L., Sung, Y.-M., Hui, D.S.-C., Sung, J.J.-Y., Lam, C.W.-K., 2005. Early enhanced expression of interferon-inducible protein-10 (CXCL-10) and other chemokines predicts adverse outcome in severe acute respiratory syndrome. *Clin. Chem.* 51, 2333–2340. <https://doi.org/10.1373/clinchem.2005.054460>
- Tanni, F., Akker, E., Zaman, M.M., Figueroa, N., Tharian, B., Hupart, K.H., 2020. Eosinopenia and COVID-19. *J. Am. Osteopath. Assoc.* <https://doi.org/10.7556/jaoa.2020.091>
- Taylor, E., Haven, K., Reed, P., Bissielo, A., Harvey, D., McArthur, C., Bringans, C., Freundlich, S., Ingram, R.J.H., Perry, D., Wilson, F., Milne, D., Modahl, L., Huang, Q.S., Gross, D., Widdowson, M.A., Grant, C.C., Alley, D., Baker, M.G., Bandaranayake, D., Davey, K., Duque, J., Lawrence, S., Mackereth, G., Pierse, N., Radke, S., Roberts, S., Seeds, R., Taylor, S., Thomas, P., Thompson, M., Trenholme, A., Turner, N., Webby, R., Williamson, D., Wong, C., Wood, T., 2015. A chest radiograph scoring system in patients with severe acute respiratory infection: A validation study. *BMC Med. Imaging* 15, 1–10. <https://doi.org/10.1186/s12880-015-0103-y>
- To, K.K.W., Tsang, O.T.Y., Leung, W.S., Tam, A.R., Wu, T.C., Lung, D.C., Yip, C.C.Y., Cai, J.P., Chan, J.M.C., Chik, T.S.H., Lau, D.P.L., Choi, C.Y.C., Chen, L.L., Chan, W.M., Chan, K.H., Ip, J.D., Ng, A.C.K., Poon, R.W.S., Luo, C.T., Cheng, V.C.C., Chan, J.F.W., Hung, I.F.N., Chen, Z., Chen, H., Yuen, K.Y., 2020. Temporal profiles of viral load in posterior oropharyngeal saliva samples and serum antibody responses during infection by SARS-CoV-2: an observational cohort study. *Lancet Infect. Dis.* 20, 565–574. [https://doi.org/10.1016/S1473-3099\(20\)30196-1](https://doi.org/10.1016/S1473-3099(20)30196-1)
- Trougakos, I.P., Stamatelopoulos, K., Terpos, E., Tsitsilonis, O.E., Aivalioti, E., Paraskevis, D., Kastiritis, E., Pavlakis, G.N., Dimopoulos, M.A., 2021. Insights to SARS-CoV-2 life cycle, pathophysiology, and rationalized treatments that target COVID-19 clinical complications. *J. Biomed. Sci.* 28, 9. <https://doi.org/10.1186/s12929-020-00703-5>
- Tsai, P.-H., Lai, W.-Y., Lin, Y.-Y., Luo, Y.-H., Lin, Y.-T., Chen, H.-K., Chen, Y.-M., Lai, Y.-C., Kuo, L.-C., Chen, S.-D., Chang, K.-J., Liu, C.-H., Chang, S.-C., Wang, F.-D., Yang, Y.-P., 2021. Clinical manifestation and disease progression in COVID-19 infection. *J. Chinese Med. Assoc.* 84.
- Usul, E., San, I., Bekgöz, B., Sahin, A., 2020. Role of hematological parameters in

- COVID-19 patients in the emergency room. *Biomark. Med.* 14, 1207–1215. <https://doi.org/10.2217/bmm-2020-0317>
- Uzer, F., Uzer, B., Guven, F.K., Kirhan, I., Coplu, N., 2021. Chest radiography findings and hematological values: Early findings on COVID-19 patients from Turkey. *J. Acute Dis.* 10, 17. <https://doi.org/10.4103/2221-6189.307390>
- Wang, D., Hu, B., Hu, C., Zhu, F., Liu, X., Zhang, J., Wang, B., Xiang, H., Cheng, Z., Xiong, Y., Zhao, Y., Li, Y., Wang, X., Peng, Z., 2020. Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus–Infected Pneumonia in Wuhan, China. *JAMA* 323, 1061–1069. <https://doi.org/10.1001/jama.2020.1585>
- Wang, L., Li, J., Guo, S., Xie, N., Yao, L., Cao, Y., Day, S.W., Howard, S.C., Graff, J.C., Gu, T., Ji, J., Gu, W., Sun, D., 2020. Real-time estimation and prediction of mortality caused by COVID-19 with patient information based algorithm. *Sci. Total Environ.* 727, 138394. <https://doi.org/https://doi.org/10.1016/j.scitotenv.2020.138394>
- Warren, M.A., Zhao, Z., Koyama, T., Bastarache, J.A., Shaver, C.M., Semler, M.W., Rice, T.W., Matthay, M.A., Calfee, C.S., Ware, L.B., 2018. Severity scoring of lung oedema on the chest radiograph is associated with clinical outcomes in ARDS. *Thorax* 73, 840–846. <https://doi.org/10.1136/thoraxjnl-2017-211280>
- WHO Regional Office For Europe, 2021. SARS-CoV-2 Delta variant now dominant in much of European region; efforts must be reinforced to prevent transmission, warns WHO Regional Office for Europe and ECDC [WWW Document]. URL <https://www.euro.who.int/en/media-centre/sections/press-releases/2021/sars-cov-2-delta-variant-now-dominant-in-much-of-european-region-efforts-must-be-reinforced-to-prevent-transmission,-warns-who-regional-office-for-europe-and-ecdc> (accessed 1.17.22).
- Wölfel, R., Corman, V.M., Guggemos, W., Seilmaier, M., Zange, S., Müller, M.A., Niemeyer, D., Jones, T.C., Vollmar, P., Rothe, C., Hoelscher, M., Bleicker, T., Brünink, S., Schneider, J., Ehmann, R., Zwirgmaier, K., Drosten, C., Wendtner, C., 2020. Virological assessment of hospitalized patients with COVID-2019. *Nature* 581, 465–469. <https://doi.org/10.1038/s41586-020-2196-x>
- World Health Organization, 2020a. SARS-CoV-2 antigen-detecting rapid diagnostic tests: an implementation guide, Country & Technical Guidance - Coronavirus disease (COVID-19).
- World Health Organization, 2020b. Laboratory testing for coronavirus disease 2019 (COVID-19) in suspected human cases 1–7.
- Wu, C., Chen, X., Cai, Y., Xia, J., Zhou, Xing, Xu, S., Huang, H., Zhang, L., Zhou, Xia, Du, C., Zhang, Y., Song, J., Wang, S., Chao, Y., Yang, Z., Xu, J., Zhou, Xin, Chen, D., Xiong, W., Xu, L., Zhou, F., Jiang, J., Bai, C., Zheng, J., Song, Y., 2020. Risk Factors Associated With Acute Respiratory Distress Syndrome and Death in Patients With Coronavirus Disease 2019 Pneumonia in Wuhan, China. *JAMA Intern. Med.* 180, 934–943. <https://doi.org/10.1001/jamainternmed.2020.0994>
- Wu, J., Wu, X., Zeng, W., Guo, D., Fang, Z., Chen, L., Huang, H., Li, C., 2020. Chest CT Findings in Patients with Coronavirus Disease 2019 and Its

- Relationship with Clinical Features. *Invest. Radiol.* 55, 257–261. <https://doi.org/10.1097/RLI.0000000000000670>
- Wu, J., Yan, L., Chai, K., 2021. Systemic immune- inflammation index is associated with disease activity in patients with ankylosing spondylitis. *J. Clin. Lab. Anal.*
- Wu, Z., McGoogan, J.M., 2020. Characteristics of and Important Lessons from the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72314 Cases from the Chinese Center for Disease Control and Prevention. *JAMA - J. Am. Med. Assoc.* 323, 1239–1242. <https://doi.org/10.1001/jama.2020.2648>
- Xu, B., Xing, Y., Peng, J., Zheng, Z., Tang, W., Sun, Y., Xu, C., Peng, F., 2020. Chest CT for Detecting COVID-19: A Systematic Review and Meta-Analysis of Diagnostic Accuracy. <https://doi.org/10.21203/rs.3.rs-20481/v1>
- Xu, Z., Shi, L., Wang, Y., Zhang, J., Huang, L., Zhang, C., Liu, S., Zhao, P., Liu, H., Zhu, L., Tai, Y., Bai, C., Gao, T., Song, J., Xia, P., Dong, J., Zhao, J., Wang, F.-S., 2020. Pathological findings of COVID-19 associated with acute respiratory distress syndrome. *Lancet Respir Med.* 8, 420–22.
- Ya'qoub, L., Elgendy, I.Y., Pepine, C.J., 2021. Sex and gender differences in COVID-19: More to be learned! *Am. Hear. J. Plus Cardiol. Res. Pract.* 3, 100011. <https://doi.org/10.1016/j.ahjo.2021.100011>
- Yoon, S.H., Lee, K.H., Kim, J.Y., Lee, Y.K., Ko, H., Kim, K.H., Park, C.M., Kim, Y.H., 2020. Chest Radiographic and CT Findings of the 2019 Novel Coronavirus Disease (COVID-19): Analysis of Nine Patients Treated in Korea. *Korean J. Radiol.* 21, 494–500. <https://doi.org/10.3348/kjr.2020.0132>
- Zayet, S., Kadiane-Oussou, N.J., Lepiller, Q., Zahra, H., Royer, P.-Y., Toko, L., Gendrin, V., Klopfenstein, T., 2020. Clinical features of COVID-19 and influenza: a comparative study on Nord Franche-Comte cluster. *Microbes Infect.* 22, 481–488. <https://doi.org/10.1016/j.micinf.2020.05.016>
- Zeng, F., Huang, Y., Guo, Y., Yin, M., Chen, X., Xiao, L., Deng, G., 2020. Association of inflammatory markers with the severity of COVID-19: A meta-analysis. *Int. J. Infect. Dis.* 96, 467–474. <https://doi.org/10.1016/j.ijid.2020.05.055>
- Zhang, Y., Wu, W., Du, M., Luo, W., Hou, W., Shi, Y., Cheng, L., Ji, B., Mei, J., Chen, F., Li, X., Xiang, H., Cao, Y., Xu, M., Chen, W., Wang, J., 2020. Neutrophil-to-Lymphocyte Ratio may Replace Chest Computed Tomography to Reflect the Degree of Lung Injury in Patients with Corona Virus Disease 2019 (COVID-19) 2019, 1–22.
- Zhang, Y., Yin, Y., Kuai, S., Shan, Z., Pei, H., Wang, J., 2016. Combination of neutrophil to lymphocyte ratio and platelet to lymphocyte ratio as diagnostic biomarker for rheumatoid arthritis. *Int. J. Clin. Exp. Med.* 9, 22076–22081.
- Zhavoronkov, A., 2020. Geroprotective and senoremediative strategies to reduce the comorbidity, infection rates, severity, and lethality in gerophilic and gerolavic infections. *Aging (Albany. NY).* 12, 6492–6510. <https://doi.org/10.18632/AGING.102988>
- Zhou, P., Yang, X. Lou, Wang, X.G., Hu, B., Zhang, L., Zhang, W., Si, H.R., Zhu, Y., Li, B., Huang, C.L., Chen, H.D., Chen, J., Luo, Y., Guo, H., Jiang, R. Di, Liu, M.Q., Chen, Y., Shen, X.R., Wang, X., Zheng, X.S., Zhao, K., Chen, Q.J.,

Deng, F., Liu, L.L., Yan, B., Zhan, F.X., Wang, Y.Y., Xiao, G.F., Shi, Z.L.,
2020. A pneumonia outbreak associated with a new coronavirus of probable
bat origin. *Nature* 579, 270–273. <https://doi.org/10.1038/s41586-020-2012-7>