DAFTAR PUSTAKA

DAFTAR PUSTAKA

Ahmad, Z., Shahab, A., Amirullah, M.Z. and Bahar, E. (2021) 'Pengaruh diabetes melitus terhadap konversi kultur sputum dini pada pasien tuberkulosis resistan obat ganda', Indonesia Journal of Chest, 8(1), pp. 20–27.

Alene, K.A. et al. (2018) "Comparison of the validity of smear and culture conversion as a prognostic marker of treatment outcome in patients with multidrug-resistant tuberculosis," PLOS ONE, 13(5), p. e0197880. Available at: https://doi.org/10.1371/journal.pone.0197880.

Abubakar, M. et al. (2022) "Prognostic accuracy of time to sputum culture conversion in predicting cure in extensively drug-resistant tuberculosis patients: a multicentre retrospective observational study," BMC Infectious Diseases, 22(1), p. 204. Available at: https://doi.org/10.1186/s12879-022-07202-y.

Alsayed, S.S.R. and Gunosewoyo, H. (2023) 'Tuberculosis: pathogenesis, current treatment regimens and new drug targets', International Journal of Molecular Sciences, 24(6), p. 5202. Available at: https://doi.org/10.3390/ijms24065202.

Artasensi, A., Pedretti, A., Vistoli, G. and Fumagalli, L. (2020) 'Type 2 diabetes mellitus: a review of multi-target drugs', Molecules, 25(8), p. 1987. Available at: https://doi.org/10.3390/molecules25081987.

Azarkar, Z., Sharifzadeh, G., Ebrahimzadeh, A. and Olumi, S. (2016) 'Time to sputum smear conversion in smear-positive pulmonary tuberculosis patients and factors for delayed conversion', Iranian Journal of Medical Sciences, 41(1), pp. 44–47.

Calderwood, C.J., Wilson, J.P., Fielding, K.L., Harris, R.C., Karat, A.S., Mansukhani, R., Falconer, J., Bergstrom, M., Johnson, S.M., McCreesh, N. *et al.* (2021) 'Dynamics of sputum conversion during effective tuberculosis treatment: A systematic review and meta-analysis', *PLoS Medicine*, 18(4), e1003566. https://doi.org/10.1371/journal.pmed.1003566

Centers for Disease Control and Prevention (CDC) (2023) About drug-resistant tuberculosis disease. Available at: https://www.cdc.gov/tb/about/drug-resistant.html.

Centers for Disease Control and Prevention (CDC) (2024) TB 101 for health care workers. Available at: https://www.cdc.gov/tb/hcp/education/tb-101-for-health-care-workers.html.

Centers for Disease Control and Prevention (CDC) (2025) Clinical overview of drug-resistant tuberculosis disease. Available at: https://www.cdc.gov/tb/hcp/clinical-overview/drug-resistant-tuberculosis-disease.html.

Chaubey, G.K., Modanwal, R., Dilawari, R. et al., 2024. Chronic hyperglycemia impairs anti-microbial function of macrophages in response to

Mycobacterium tuberculosis infection. Immunologic Research, 72, pp.644–653. https://doi.org/10.1007/s12026-024-09462-z

Chen, R., Zou, J., Chen, J., Wang, L., Kang, R. and Tang, D. (2024) 'Immune aging and infectious diseases', Chinese Medical Journal, 137(24), pp. 3010–3049. doi:10.1097/CM9.0000000000003410.

Cheng, P., Wang, L. and Gong, W. (2022) "Cellular Immunity of Patients with Tuberculosis Combined with Diabetes," Journal of Immunology Research, 2022, pp. 1–12. Available at: https://doi.org/10.1155/2022/6837745.

Chakravorty, S. et al. (2017) 'The new Xpert MTB/RIF Ultra: improving detection of Mycobacterium tuberculosis and resistance to rifampin in an assay suitable for point-of-care testing', mBio, 8(4), e00812-17. Available at: https://doi.org/10.1128/mBio.00812-17.

Churchyard, G. et al. (2017) 'What we know about tuberculosis transmission: an overview', Journal of Infectious Diseases, 216(Suppl. 6), pp. S629–S635. Available at: https://doi.org/10.1093/infdis/jix362.

Deviernur, S.M. and Adnan, N. (2023) 'Analisis survival: hubungan konversi sputum dengan keberhasilan pengobatan pasien tuberkulosis resistan obat di Indonesia', Jurnal Epidemiologi Kesehatan Indonesia, 7(1), p. 6. Available at: https://doi.org/10.7454/epidkes.v7i1.6955.

Dodd, P.J. et al. (2015) "Age- and Sex-Specific Social Contact Patterns and Incidence of Mycobacterium tuberculosis Infection," American Journal of Epidemiology, p. kwv160. Available at: https://doi.org/10.1093/aje/kwv160.

Dewhare, S.S. (2022) 'Drug resistant tuberculosis: current scenario and impending challenges', The Indian Journal of Tuberculosis, 69(2), pp. 227–233. Available at: https://doi.org/10.1016/j.ijtb.2021.04.008.

Dinas Kesehatan Provinsi Jawa Timur (2024) Profil Kesehatan Provinsi Jawa Timur Tahun 2023. Surabaya: Dinas Kesehatan Provinsi Jawa Timur.

Dookie, N., Ngema, S.L., Perumal, R., Naicker, N., Padayatchi, N. and Naidoo, K. (2022) 'The changing paradigm of drug-resistant tuberculosis treatment: successes, pitfalls, and future perspectives', Clinical Microbiology Reviews, 35(3), e00180-19. Available at: https://doi.org/10.1128/cmr.00180-19.

El-Sheikh, S.M.A., Metwally, A.Sh. and Galal, A.A.A. (2023) "Impact of diabetes mellitus on rifampicin's plasma concentration and bioavailability in patients with tuberculosis: A systematic review and meta-analysis study," Therapies, 78(3), pp. 313–324. Available at: https://doi.org/10.1016/j.therap.2022.05.005.

Gordon, S.V. and Parish, T. (2018) 'Microbe profile: Mycobacterium tuberculosis: humanity's deadly microbial foe', Microbiology, 164(4), pp. 437–439. Available at: https://doi.org/10.1099/mic.0.000601.

Horton, K.C. et al. (2016) 'Sex differences in tuberculosis burden and notifications in low- and middle-income countries: a systematic review and meta-

analysis', PLOS Medicine, 13(9), e1002119. Available at: https://doi.org/10.1371/journal.pmed.1002119.

Indarti, H.T. et al. (2022) 'Treatment outcomes of multidrug-resistant tuberculosis patients in East Java, Indonesia', The International Journal of Mycobacteriology, 11(3), pp. 261–267. Available at: https://doi.org/10.4103/ijmy.ijmy_86_22.

Javeed, N. and Matveyenko, A.V. (2018) 'Circadian etiology of type 2 diabetes mellitus', Physiology, 33(2), pp. 138–150. Available at: https://doi.org/10.1152/physiol.00003.2018.

Jiang, W. et al. (2022) "The co-management of tuberculosis-diabetes co-morbidities in Indonesia under the National Tuberculosis Control Program: results from a cross-sectional study from 2017 to 2019," BMC Public Health, 22(1), p. 689. Available at: https://doi.org/10.1186/s12889-022-13017-y.

Kanabalan, R.D. et al. (2021) 'Human tuberculosis and Mycobacterium tuberculosis complex: a review on genetic diversity, pathogenesis and omics approaches in host biomarkers discovery', Microbiological Research, 246, 126674. Available at: https://doi.org/10.1016/j.micres.2020.126674.

Kassa, G.M., Merid, M.W., Muluneh, A.G. and Fentie, D.T. (2021) 'Sputum smear grading and associated factors among bacteriologically confirmed pulmonary drug-resistant tuberculosis patients in Ethiopia', BMC Infectious Diseases, 21(1), p. 238. Available at: https://doi.org/10.1186/s12879-021-05933-y.

Kementerian Kesehatan Republik Indonesia (2020) Petunjuk teknis penatalaksanaan tuberkulosis resistan obat di Indonesia. Jakarta: Direktorat Jenderal Pencegahan dan Pengendalian Penyakit, Kementerian Kesehatan Republik Indonesia.

Kementerian Kesehatan Republik Indonesia (2023) Petunjuk teknis pemeriksaan Line Probe Assay (LPA) lini satu dan dua. Jakarta: Kementerian Kesehatan Republik Indonesia.

Kementerian Kesehatan Republik Indonesia (2024a) Dashboard Tuberkulosis Indonesia: data 2023 per 1 Maret 2024. Jakarta: Kementerian Kesehatan Republik Indonesia.

Kementerian Kesehatan Republik Indonesia (2024b) Petunjuk teknis penatalaksanaan tuberkulosis resistan obat di Indonesia. Jakarta: Kementerian Kesehatan Republik Indonesia.

Kementerian Kesehatan Republik Indonesia (2024c) Surat Edaran Nomor HK.02.02/C/1453/2024 tentang Pelaksanaan Skrining dan Tata Laksana Tuberkulosis pada Penyandang Diabetes Melitus dalam Rangka Meningkatkan Penemuan Kasus Tuberkulosis di Indonesia. Jakarta: Direktorat Jenderal Pencegahan dan Pengendalian Penyakit, Kementerian Kesehatan Republik Indonesia.

Krishna, S. and Jacob, J.J. (2021) Diabetes Mellitus and Tuberculosis. In: Feingold, K.R., Anawalt, B., Boyce, A. et al. (eds.) Endotext [Internet]. South Dartmouth (MA): MDText.com, Inc. Last updated 18 April 2021. Available at: NCBI Bookshelf (Accessed: 29 June 2026)

Latif, A. et al. (2024) "Body Mass Index a Forecast of Sputum Culture Conversion Among Drug-Resistant Tuberculosis Patients," Cureus [Preprint]. Available at: https://doi.org/10.7759/cureus.63262.

Lee, K.-A., Flores, R.R., Jang, I.H., Saathoff, A. and Robbins, P.D. (2022) 'Immune senescence, immunosenescence and aging', Frontiers in Aging, 3, Article 900028. doi:10.3389/fragi.2022.900028.

Lerner, T.R., Borel, S., Greenwood, D.J., Repnik, U., Russell, M.R.G., Herbst, S., Jones, M.L., Collinson, L.M., Griffiths, G. and Gutierrez, M.G. (2020) 'Mycobacterium tuberculosis replicates within necrotic human macrophages and evades killing by escaping into the cytosol', *Nature Microbiology*, 5(1), pp. 57–69.

Liebenberg, D., Gordhan, B.G. and Kana, B.D. (2022) 'Drug resistant tuberculosis: implications for transmission, diagnosis, and disease management', Frontiers in Cellular and Infection Microbiology, 12, p. 943545. Available at: https://doi.org/10.3389/fcimb.2022.943545.

Lönnroth, K., Roglic, G. and Harries, A.D. (2014) 'Improving tuberculosis prevention and care through addressing the global diabetes epidemic: from evidence to policy and practice', The Lancet Diabetes and Endocrinology, 2(9), pp. 730–739. Available at: https://doi.org/10.1016/S2213-8587(14)70109-3.

Maitra, A. et al. (2019) 'Cell wall peptidoglycan in Mycobacterium tuberculosis: an Achilles' heel for the TB-causing pathogen', FEMS Microbiology Reviews, 43(5), pp. 548–575. Available at: https://doi.org/10.1093/femsre/fuz016.

Mnyambwa, N.P. et al. (2017) 'Assessment of sputum smear-positive but culture-negative results among newly diagnosed pulmonary tuberculosis patients in Tanzania', International Journal of General Medicine, 10, pp. 199–205. Available at: https://doi.org/10.2147/IJGM.S137469.

Muñoz-Torrico, M. et al. (2017) 'Comparison of bacteriological conversion and treatment outcomes among MDR-TB patients with and without diabetes in Mexico: preliminary data', Revista Portuguesa de Pneumologia, 23(1), pp. 27–30. Available at: https://doi.org/10.1016/j.rppnen.2016.11.009.

Olmo-Fontánez, A.M. and Turner, J., 2022. *Tuberculosis in an aging world*. Pathogens, 11(10), p.1101. https://doi.org/10.3390/pathogens11101101

Oyewusi, L. et al. (2024) "Low body mass index as a predictor of sputum culture conversion and treatment outcomes among patients receiving treatment for multidrug-resistant tuberculosis in Lesotho," Global Health Action, 17(1). Available at: https://doi.org/10.1080/16549716.2024.2305930.

Paralija, B. and Mujakovic, A., 2019. Influence of diabetes mellitus on sputum conversion rate in pulmonary tuberculosis and on antituberculous drug resistance. European Respiratory Journal, 54(Suppl. 63), PA2972. https://doi.org/10.1183/13993003.congress-2019.PA2972

Park, H.-O. et al. (2016) "Association between Body Mass Index and Sputum Culture Conversion among South Korean Patients with Multidrug Resistant Tuberculosis in a Tuberculosis Referral Hospital," Infection & Chemotherapy, 48(4), p. 317. Available at: https://doi.org/10.3947/ic.2016.48.4.317.

Perez-Navarro, L.M. et al. (2017) 'The effect size of type 2 diabetes mellitus on tuberculosis drug resistance and adverse treatment outcomes', Tuberculosis, 103, pp. 83–91. Available at: https://doi.org/10.1016/j.tube.2017.01.006.

Perhimpunan Dokter Paru Indonesia (2021) Pedoman diagnosis dan penatalaksanaan tuberkulosis di Indonesia. Jakarta: Perhimpunan Dokter Paru Indonesia.

Perkumpulan Endokrinologi Indonesia (2021) Pedoman pengelolaan dan pencegahan diabetes melitus tipe 2 dewasa di Indonesia. Jakarta: PB PERKENI.

Rahami, N.A., Dewi, R., Raharjo, A.M., Abrori, C., Hermansyah, Y. and Shodikin, M.A., 2024. *Diabetes mellitus associated with sputum conversion time in drug-resistant pulmonary TB patients at Dr. Soebandi Regional General Hospital, Jember*. Jurnal Respirasi, 10(3), pp.195–202.

Receado, O.B. et al. (2025) 'Risk factors associated with multidrug-resistant pulmonary tuberculosis in patients over 15 years old: a retrospective case-control study', Frontiers in Tuberculosis, 3. Available at: https://doi.org/10.3389/ftubr.2025.1608364.

Rehman, A.U. et al. (2023) 'The impact of diabetes mellitus on the emergence of multi-drug resistant tuberculosis and treatment failure in TB-diabetes comorbid patients: a systematic review and meta-analysis', Frontiers in Public Health, 11, p. 1244450. Available at: https://doi.org/10.3389/fpubh.2023.1244450.

Restrepo, B.I. (2016) 'Diabetes and tuberculosis', Microbiology Spectrum, 4(6). Available at: https://doi.org/10.1128/microbiolspec.TNMI7-0023-2016.

Salindri, A.D. et al. (2016) 'Diabetes reduces the rate of sputum culture conversion in patients with newly diagnosed multidrug-resistant tuberculosis', Open Forum Infectious Diseases, 3(3), ofw126. Available at: https://doi.org/10.1093/ofid/ofw126.

Samuel, Apridasari, J., Reviono, Sutanto, Y.S.S. and Harsini (2020) 'Hubungan kategori level Xpert MTB/RIF dengan waktu konversi kultur sputum pasien TB resisten obat (TB-RO)', Cermin Dunia Kedokteran, 47(9), pp. 677–681.

Schwartz, S.S., Epstein, S., Corkey, B.E., Grant, S.F.A., Gavin, J.R. and Aguilar, R.B. (2016) 'The time is right for a new classification system for diabetes: rationale and implications of the β-cell-centric classification schema',

Diabetes Care, 39(2), pp. 179–186. Available at: https://doi.org/10.2337/dc15-1585.

Sinulingga, H.E. et al. (2023) 'Profile and risk factors of pre-XDR-TB and XDR-TB patients in a national reference hospital for Sumatra region of Indonesia', Narra J, 3(3), e407. Available at: https://doi.org/10.52225/narra.v3i3.407.

Sinha, P. et al. (2023) "Impact of Undernutrition on Tuberculosis Treatment Outcomes in India: A Multicenter, Prospective, Cohort Analysis," Clinical Infectious Diseases, 76(8), pp. 1483–1491. Available at: https://doi.org/10.1093/cid/ciac915.

Soeroto, A.Y. et al. (2021) 'Factors affecting outcome of longer regimen multidrug-resistant tuberculosis treatment in West Java Indonesia: a retrospective cohort study', PLOS ONE, 16(2), e0246284. Available at: https://doi.org/10.1371/journal.pone.0246284.

Ssekamatte, P. et al. (2023) 'Immunologic, metabolic and genetic impact of diabetes on tuberculosis susceptibility', Frontiers in Immunology, 14, 1122255. Available at: https://doi.org/10.3389/fimmu.2023.1122255.

Teo, A.K.J., Singh, S.R., Prem, K. and Hsu, L.Y. (2021) 'Duration and determinants of delayed diagnosis and treatment of pulmonary tuberculosis in high-burden countries: a mixed-methods systematic review and meta-analysis', *Respiratory Research*, 22, 251. https://doi.org/10.1186/s12931-021-01841-6

Tran, B.M., Larsson, J., Grip, A., Karempudi, P. and Elf, J. (2025) 'Phenotypic drug susceptibility testing for Mycobacterium tuberculosis variant bovis BCG in 12 hours', Nature Communications, 16(1), p. 4366. Available at: https://doi.org/10.1038/s41467-025-59736-9.

Wagnew, F. et al. (2023) "The effect of undernutrition on sputum culture conversion and treatment outcomes among people with multidrug-resistant tuberculosis: a systematic review and meta-analysis," International Journal of Infectious Diseases, 127, pp. 93–105. Available at: https://doi.org/10.1016/j.ijid.2022.11.043.

Wan, L. et al. (2020) 'Accuracy of a reverse dot blot hybridization assay for simultaneous detection of the resistance of four anti-tuberculosis drugs in Mycobacterium tuberculosis isolated from China', Infectious Diseases of Poverty, 9(1). Available at: https://doi.org/10.1186/s40249-020-00652-z.

Weldemhret, L. et al. (2023) 'Time to sputum culture conversion and its predictors among multidrug resistant tuberculosis patients in Tigray, Northern Ethiopia: retrospective cohort study', Infection and Drug Resistance, 16, pp. 3671–3681. Available at: https://doi.org/10.2147/IDR.S413495.

Wenlu, Y. et al. (2024) 'Time to sputum culture conversion and its associated factors among drug-resistant tuberculosis patients: a systematic review and meta-analysis', BMC Infectious Diseases, 24(1), p. 169. Available at: https://doi.org/10.1186/s12879-024-09009-5.

World Health Organization (2023) Treatment of drug-resistant TB using longer regimens. WHO TB Knowledge Sharing Platform. Available at: https://tbksp.who.int/en/node/2978.

World Health Organization (2024) Global tuberculosis report 2024. Geneva: World Health Organization.

World Health Organization (2025) *TB and gender*. In: *Global Tuberculosis Report 2025: Featured Topics*. Available at: https://www.who.int/teams/global-programme-on-tuberculosis-and-lung-health/tb-reports/global-tuberculosis-report-2025/featured-topics/tb-and-gender

Xu, G., Hu, X., Lian, Y. and Li, X. (2023) 'Diabetes mellitus affects the treatment outcomes of drug-resistant tuberculosis: a systematic review and meta-analysis', BMC Infectious Diseases, 23(1), p. 813. Available at: https://doi.org/10.1186/s12879-023-08765-0.

Zaporojan, N. et al. (2024) 'Evolution of laboratory diagnosis of tuberculosis', Clinics and Practice, 14(2), pp. 388–416. Available at: https://doi.org/10.3390/clinpract14020030.