

## DAFTAR PUSTAKA

- Adhitya, A.S., Hasan, H., Sitepu, A., & Mukhtar, Z., 2018. Clinical Research Editorial 39: 68–78. doi:10.30701/ijc.v39i2.735
- Akinboboye, O. O., Chou, R.-L., & Bergmann, S. R. (2002). Augmentation of myocardial blood flow in hypertensive heart disease by angiotensin antagonists: A comparison of lisinopril and losartan. *Journal of the American College of Cardiology*, 40(4), 703–709. [https://doi.org/https://doi.org/10.1016/S0735-1097\(02\)02033-8](https://doi.org/https://doi.org/10.1016/S0735-1097(02)02033-8)
- Alex, M., Frans, V. de W., Johan, N., Guy, B., Walter, D., & Luc, M. (1995). Impaired Myocardial Tissue Perfusion Early After Successful Thrombolysis. *Circulation*, 92(8), 2072–2078. <https://doi.org/10.1161/01.CIR.92.8.2072>
- Ali, M.R., Salim Hossain, M., Islam, M.A., Saiful Islam Arman, M., Sarwar Raju, G., *et al.*, 2014. Aspect of thrombolytic therapy: A review. *Sci. World J.* 2014. doi:10.1155/2014/586510
- Amaya, N., Nakano, A., Uzui, H., Mitsuke, Y., Geshi, T., Okazawa, H., Ueda, T., & Lee, J. D. (2012). Relationship between microcirculatory dysfunction and resolution of ST-segment elevation in the early phase after primary angioplasty in patients with ST-segment elevation myocardial infarction. *International Journal of Cardiology*, 159(2), 144–149. <https://doi.org/10.1016/j.ijcard.2011.02.045>
- Angeja, B.G., Gunda, M., Murphy, S.A., Sobel, B.E., Rundle, A.C., *et al.*, 2002. TIMI Myocardial Perfusion Grade and ST Segment Resolution : Association With Infarct Size as Assessed by Single Photon Emission Computed Tomography Imaging 282–285. doi:10.1161/hc0302.103588
- Angers-goulet, A., Bouchard, O., & Simon, B., 2024. Outcome of STEMI Patients With Reperfusion Delay of 120 Minutes or More Treated With the Pharmacoinvasive Approach vs PPCI: A Retrospective Study 6: 632–638. doi:10.1016/j.cjco.2023.11.018
- Ar, H., & Khafaji, H., 2018. Issue 3 | Article 1015 Citation: Hadi AR Khafaji. Fibrinolysis in Acute Myocardial Infarction; State of the Art. *Ann Cardiovasc Surg* 1: 1015.
- Araiza-garaygordobil, D., Gopar-nieto, R., Cabello-lópez, A., Martínez-amezcua, P., Eid-lidt, G., *et al.*, 2021. Pharmacoinvasive Strategy vs Primary Percutaneous Coronary Intervention in Patients With ST-Elevation Myocardial Infarction: Results From a Study in Mexico City 3. doi:10.1016/j.cjco.2020.11.012
- Arias-mendoza, A., Ortega-hernández, J.A., Araiza-garaygordobil, D., González-pacheco, H., Martínez-garcía, M., *et al.*, 2023. Real-World Evaluation of a Pharmacoinvasive Strategy for STEMI in Latin America : A Cost-Effective Approach with Short-Term Benefits 903–911.
- Armstrong, P.W., 2019. Insights From the Vital Heart Response Registry 1–12. doi:10.1161/CIRCINTERVENTIONS.119.008059
- Armstrong, P.W., Bogaerts, K., Welsh, R., & Sinnaeve, P.R., n.d. The Second Strategic Reperfusion Early After Myocardial Infarction ( STREAM-2 ) study optimizing pharmacoinvasive reperfusion strategy in older ST-elevation

- myocardial infarction patients. *Am. Heart J.* 226. doi:10.1016/j.ahj.2020.04.029
- Armstrong, P.W., Zheng, Y., Westerhout, C.M., & Rosell-ortiz, F., 2015. Reduced dose tenecteplase and outcomes in elderly ST-segment elevation myocardial infarction patients: Insights from the Strategic Reperfusion Early After Myocardial infarction trial. *Am. Heart J.* 1–10. doi:10.1016/j.ahj.2015.03.011
- Arso, I.A., Setianto, B.Y., Taufiq, N., & Hartopo, A.B., 2014. In-hospital major cardiovascular events between STEMI receiving thrombolysis therapy and primary PCI. *Acta Med. Indones.* 46: 124–130.
- Bailey, K.R., Armstrong, P.W., Zheng, Y., Brass, N., Tyrrell, B.D., *et al.*, 2019. Pharmacoinvasive Strategy Versus Primary Percutaneous Coronary Intervention in ST-Elevation Myocardial Infarction in Clinical Practice: Insights from the Vital Heart Response Registry. *Circ. Cardiovasc. Interv.* 12: 1–12. doi:10.1161/CIRCINTERVENTIONS.119.008059
- Bailey, K.R., Welsh, R.C., Zheng, Y., Arias-Mendoza, A., Ristic, A.D., *et al.*, 2024. Pharmacoinvasive Strategy With Half-Dose Tenecteplase in Patients With STEMI: Prespecified Pooled Analysis of Patients Aged  $\geq 75$  Years in STREAM-1 and 2. *Circ. Cardiovasc. Interv.* 17: e014251. doi:10.1161/CIRCINTERVENTIONS.124.014251
- Bender, J.R., Russel, K.S., Rosenfeld, L.E., & Chaudry, S., 2011. Oxford American Handbook of Cardiology, in: Bender, J.R., Russel, K.S., Rosenfeld, L.E., Chaudry, S. (Eds.), Oxford University Press. Oxford University Press, New York, pp. 365–381. doi:10.1016/B978-032304438-7.50036-X
- Bhatt, N.S., Solhpour, A., Balan, P., Barekatin, A., McCarthy, J.J., *et al.*, 2013. Comparison of In-Hospital Outcomes With Low-Dose Fibrinolytic Therapy Followed by Urgent Percutaneous Coronary Intervention Versus Percutaneous Coronary Intervention Alone for Treatment of ST-Elevation Myocardial Infarction. *Am. J. Cardiol.* 111: 1576–1579. doi:10.1016/j.amjcard.2013.01.326
- Birnbaum, Y., & Drew, B.J., 2003. The electrocardiogram in ST elevation acute myocardial 490–504.
- Bouyaddid, S., Bouchlarhem, A., Bazid, Z., & El, N., 2023. Pharmacoinvasive Therapy: A Continued Role for Fibrinolysis in the Primary PCI era. doi:10.1177/10760296231221549
- Bundhun, P.K., Janoo, G., & Chen, M.-H., 2016. Bleeding events associated with fibrinolytic therapy and primary percutaneous coronary intervention in patients with STEMI. *Medicine (Baltimore)*. 95: e3877. doi:10.1097/md.0000000000003877
- Byrne, R.A., Rossello, X., Coughlan, J.J., Barbato, E., Berry, C., *et al.*, 2023. 2023 ESC Guidelines for the management of acute coronary syndromes. *Eur. Heart J.* 44: 3720–3826. doi:10.1093/eurheartj/ehad191
- Canu, M., Khouri, C., Marliere, S., Vautrin, E., Piliero, N., *et al.*, 2022. Prognostic significance of severe coronary microvascular dysfunction post-PCI in patients with STEMI: A systematic review and meta-analysis. *PLoS One* 17: 1–13. doi:10.1371/journal.pone.0268330
- Chan, Y., & Ramji, D.P., 2022. Atherosclerosis: Pathogenesis and Key Cellular

- Processes, Current and Emerging Therapies, Key Challenges, and Future Research Directions 2419. doi:10.1007/978-1-0716-1924-7
- Chow, S.-C., Shao, J., Wang, H., & Lokhnygina, Y., 2016. Sample Size Calculations in Clinical Research.
- Crea, F., Montone, R.A., & Rinaldi, R., 2022. Pathophysiology of Coronary Microvascular Dysfunction. *Circ. J.* 86: 1319–1328. doi:10.1253/circj.CJ-21-0848
- de Andrade, P.B., Rinaldi, F.S., Bergonso, M.H., Tebet, M.A., Nogueira, E.F., *et al.*, 2013. ST-Segment Resolution after Primary Percutaneous Coronary Intervention: Characteristics, Predictors of Failure, and Impact on Mortality. *Rev. Bras. Cardiol. Invasiva (English Ed.* 21: 227–233. doi:10.1016/s2214-1235(15)30136-8
- De Lemos, J.A., Antman, E.M., Giugliano, R.P., McCabe, C.H., Murphy, S.A., *et al.*, 2000. St-segment resolution and infarct-related artery patency and flow after thrombolytic therapy. *Am. J. Cardiol.* 85: 299–304. doi:10.1016/S0002-9149(99)00736-5
- De Luca, G., Maas, A. C., Suryapranata, H., Ottervanger, J. P., Hoorntje, J. C. A., Gosselink, A. T. M., Dambrink, J. H., De Boer, M. J., & Van't Hof, A. W. J. (2005). Prognostic significance of residual cumulative ST-segment deviation after mechanical reperfusion in patients with ST-segment elevation myocardial infarction. *American Heart Journal*, 150(6), 1248–1254. <https://doi.org/10.1016/j.ahj.2005.01.056>
- Denktas, A.E., Athar, H., Henry, T.D., Larson, D.M., Simons, M., *et al.*, 2008. Reduced-Dose Fibrinolytic Acceleration of ST-Segment Elevation Myocardial Infarction Treatment Coupled With Urgent Percutaneous Coronary Intervention Compared to Primary Percutaneous Coronary Intervention Alone 1. doi:10.1016/j.jcin.2008.06.009
- Diaz-arocutipa, C., Vargas-rivas, C., Mendoza-quispe, D., Benites-moya, C.J., Torres-valencia, J., *et al.*, 2025. Systematic Review / Meta-analysis Pharmacoinvasive Strategy Vs Primary Percutaneous Coronary Intervention for ST-Segment Elevation Myocardial Infarction in Latin America : A Meta-Analysis. *CJC Open* 7: 78–87. doi:10.1016/j.cjco.2024.10.005
- Dizon, J.M., Brenner, S.J., Maehara, A., Witzensichler, B., Biviano, A., *et al.*, 2014. Relationship between ST-segment resolution and anterior infarct size after primary percutaneous coronary intervention: Analysis from the INFUSE-AMI trial. *Eur. Hear. J. Acute Cardiovasc. Care* 3: 78–83. doi:10.1177/2048872613508658
- Dokter, P., & Kardiovaskular, S., n.d. Pedomana Tata Laksana Sindrom Koroner Akut.
- Dong, Q., Wen, X., Chang, G., Xia, R., Wang, S., *et al.*, 2021. ST - segment resolution as a marker for severe myocardial fibrosis in ST - segment elevation myocardial infarction. *BMC Cardiovasc. Disord.* 1–9. doi:10.1186/s12872-021-02269-y
- Dou, J., Gao, J., Yang, H., & Guo, R., 2024. Efficacy and Safety of a Pharmacoinvasive Strategy Using Half-Dose Recombinant Human Prourokinase in Patients with ST-Segment Elevation Myocardial Infarction During

- Hospitalization. doi:10.1177/10760296231221772
- Engel Gonzalez, P., Omar, W., Patel, K. V., De Lemos, J.A., Bavry, A.A., *et al.*, 2020. Fibrinolytic Strategy for ST-Segment-Elevation Myocardial Infarction: A Contemporary Review in Context of the COVID-19 Pandemic. *Circ. Cardiovasc. Interv.* 13: E009622. doi:10.1161/CIRCINTERVENTIONS.120.009622
- Falk, E., Nakano, M., Bentzon, J.F., Finn, A. V, & Virmani, R., 2013. Basic Science for the Clinician Update on acute coronary syndromes : the pathologists ' view 1–14. doi:10.1093/eurheartj/ehs411
- Fazel, R., Joseph, T.I., Sankardas, M.A., Pinto, D.S., Yeh, R.W., *et al.*, 2020. Comparison of reperfusion strategies for st-segment–elevation myocardial infarction: A multivariate network meta-analysis. *J. Am. Heart Assoc.* 9. doi:10.1161/JAHA.119.015186
- Foerster, J. M., Vera, Z., Janzen, D. A., Foerster, S. J., & Mason, D. T. (1977). Evaluation of precordial orthogonal vectorcardiographic lead ST segment magnitude in the assessment of myocardial ischemic injury. *Circulation*, 55(5), 728–732. <https://doi.org/10.1161/01.CIR.55.5.728>
- Frangogiannis, N.G., 2015. Pathophysiology of Myocardial Infarction 5: 1841–1875. doi:10.1002/cphy.c150006
- Fu, Y., Goodman, S., Chang, W.C., Van De Werf, F., Granger, C.B., *et al.*, 2001. Time to treatment influences the impact of ST-segment resolution on one-year prognosis: Insights from the Assessment of the Safety and Efficacy of a New Thrombolytic (ASSENT-2) Trial. *Circulation* 104: 2653–2659. doi:10.1161/hc4701.099731
- Galli, M., Niccoli, G., De Maria, G., Brugaletta, S., Montone, R.A., *et al.*, 2024. Coronary microvascular obstruction and dysfunction in patients with acute myocardial infarction. *Nat. Rev. Cardiol.* 21: 283–298. doi:10.1038/s41569-023-00953-4
- Ghaffari, S., Kolahdouzan, K., Rahimi, M., & Tajlil, A., 2020a. Predictors of ST depression resolution in STEMI patients undergoing primary PCI and its clinical significance. *Int. J. Gen. Med.* 13: 271–279. doi:10.2147/IJGM.S258573
- Gibson, C.M., Murphy, S.A., Rizzo, M.J., Ryan, K.A., Marble, S.J., *et al.*, 1999. Relationship between TIMI frame count and clinical outcomes after thrombolytic administration. *Circulation* 99: 1945–1950. doi:10.1161/01.CIR.99.15.1945
- Hassell, M.E.C.J., Bax, M., Van Lavieren, M.A., Nijveldt, R., Hirsch, A., *et al.*, 2017. Microvascular dysfunction following ST-elevation myocardial infarction and its recovery over time. *EuroIntervention* 13: e578–e584. doi:10.4244/EIJ-D-16-00818
- Hathaway, W. R., Peterson, E. D., Wagner, G. S., Granger, C. B., Zabel, K. M., Pieper, K. S., Clark, K. A., Woodlief, L. H., & Califf, R. M. (1998). Prognostic significance of the initial electrocardiogram in patients with acute myocardial infarction. *Journal of the American Medical Association*, 279(5), 387–391. <https://doi.org/10.1001/jama.279.5.387>
- Heffernan, M., Cohen, E.A., Morrison, L.J., Langer, A., Dzavik, V., *et al.*, 2009.

- new england journal 2705–2718.
- Houser, K.W., 2015. Supplemental material. *LEUKOS - J. Illum. Eng. Soc. North Am.* 11: 1–2. doi:10.1080/15502724.2014.1001685
- Husser, O., Bodi, V., Sanchis, J., Nunez, J., Lopez-Lereu, M.P., *et al.*, 2013. Predictors of cardiovascular magnetic resonance-derived microvascular obstruction on patient admission in STEMI. *Int. J. Cardiol.* 166: 77–84. doi:10.1016/j.ijcard.2011.09.083
- Jamal, J., Idris, H., Faour, A., Yang, W., Mclean, A., *et al.*, 2023. Late outcomes of ST-elevation myocardial infarction treated by pharmaco-invasive or primary percutaneous coronary intervention. *Eur. Heart J.* 44: 516–528. doi:10.1093/eurheartj/ehac661
- Jebari-benslaiman, S., Galicia-garc, U., Larrea-sebal, A., & Olaetxea, J.R., 2022. Pathophysiology of Atherosclerosis 1–38.
- Jinatongthai, P., Kongwatcharapong, J., Foo, C.Y., Phrommintikul, A., Nathisuwan, S., *et al.*, 2017a. Comparative efficacy and safety of reperfusion therapy with fibrinolytic agents in patients with ST-segment elevation myocardial infarction: a systematic review and network meta-analysis. *Lancet* 390: 747–759. doi:10.1016/S0140-6736(17)31441-1
- Jinatongthai, P., Kongwatcharapong, J., Foo, C.Y., Phrommintikul, A., Nathisuwan, S., *et al.*, 2017b. Comparative efficacy and safety of reperfusion therapy with fibrinolytic agents in patients with ST-segment elevation myocardial infarction: a systematic review and network meta-analysis. *Lancet* 390: 747–759. doi:10.1016/S0140-6736(17)31441-1
- Jollis, J.G., Granger, C.B., Zègre-hemsey, J.K., Henry, T.D., Goyal, A., *et al.*, 2022. Treatment Time and In-Hospital Mortality Among Patients With ST-Segment Elevation Myocardial Infarction, 2018–2021 45219: 2018–2021. doi:10.1001/jama.2022.20149
- Jortveit, J., 2022. Outcomes after delayed primary percutaneous coronary intervention vs . pharmaco-invasive strategy in ST -segment elevation myocardial infarction in Norway 442–451. doi:10.1093/ehjcvp/pvab041
- Juzar, D.A., Muzakkir, A.F., Ilhami, Y.R., Taufiq, N., A, I.M.J.R., *et al.*, 2022. Original Editorial Article 43: 45–55. doi:10.30701/ijc.1098
- Khattak, S., Townend, J.N., & Thomas, M.R., 2024. Impact of antiplatelet therapy on microvascular thrombosis during ST-elevation myocardial infarction. *Front. Mol. Biosci.* 11: 1–12. doi:10.3389/fmolb.2024.1287553
- Kim, B. G., Cho, S. W., Ha, J., Ahn, H. S., Lee, H. Y., Kim, G. S., Byun, Y. S., Rhee, K. J., Nah, J. C., & Kim, B. O. (2019). *Relationship between the ST-Segment Resolution and Microvascular Dysfunction in Patients Who Underwent Primary Percutaneous Coronary Intervention. 2019*
- Koch, K.T., Henriques, P.S., Baan, J., & Vis, M.M., 2010. Prediction of 1-Year Mortality With Different Measures of ST-Segment Recovery in All-Comers After Primary Percutaneous Coronary Intervention for Acute Myocardial Infarction 522–529. doi:10.1161/CIRCOUTCOMES.109.923797
- Kodama, K., & Hirayama, A., 1994. Reperfusion Injury in Patients with Acute Myocardial Infarction. *Card. Adapt. Fail.* 83: 119–130. doi:10.1007/978-4-431-67014-8\_9

- Koh, H.P., 2024. Bleeding characteristics and mortality outcomes following ST-elevation myocardial infarction thrombolysis: a 5-year analysis in an Asian population. *World J. Emerg. Med.* 15. doi:10.5847/wjem.j.1920-8642.2024.077
- Konijnenberg, L.S.F., Damman, P., Duncker, D.J., Kloner, R.A., Nijveldt, R., *et al.*, 2020. Pathophysiology and diagnosis of coronary microvascular dysfunction in ST-elevation myocardial infarction. *Cardiovasc. Res.* 116: 787–805. doi:10.1093/cvr/cvz301
- Lal, V., 2017. Fibrinolytic Drug Therapy in the Management of Intravascular Thrombosis, Especially Acute Myocardial Infarction - A Review. *J. Pharmacol. Clin. Res.* 2: 1–5. doi:10.19080/jpcr.2017.02.555593
- Lanza, G.A., & Crea, F., 2010. Primary coronary microvascular dysfunction: Clinical presentation, pathophysiology, and management. *Circulation* 121: 2317–2325. doi:10.1161/CIRCULATIONAHA.109.900191
- Larson, D.M., Duval, S., Sharkey, S.W., Garberich, R.F., Madison, J.D., *et al.*, 2012. Safety and efficacy of a pharmaco-invasive reperfusion strategy in rural ST-elevation myocardial infarction patients with expected delays due to long-distance transfers 1232–1240. doi:10.1093/eurheartj/ehr403
- Lemos, J.A. De, & Braunwald, E., 2001. ST Segment Resolution as a Tool for Assessing the Efficacy of Reperfusion Therapy. *J. Am. Coll. Cardiol.* 38: 1283–1294. doi:10.1016/S0735-1097(01)01550-9
- Lethen, H., Tries, H. P., Kersting, S., Bramlage, P., & Lambertz, H. (2011). Improvement of Coronary Microvascular Function After Angiotensin Receptor Blocker Treatment With Irbesartan in Patients With Systemic Hypertension. *Journal of Clinical Hypertension*, 13(3), 155–161. <https://doi.org/10.1111/j.1751-7176.2010.00401.x>
- Li, K., Zhang, B., Zheng, B., Zhang, Y., & Huo, Y., 2022. Reperfusion Strategy of ST-Elevation Myocardial Infarction: A Meta-Analysis of Primary Percutaneous Coronary Intervention and Pharmaco-Invasive Therapy 9: 1–9. doi:10.3389/fcvm.2022.813325
- Li, Y., Ye, Z., Guo, Z., Xie, E., Wang, M., *et al.*, 2023. Ticagrelor vs. clopidogrel for coronary microvascular dysfunction in patients with STEMI: a meta-analysis of randomized controlled trials. *Front. Cardiovasc. Med.* 10: 1–9. doi:10.3389/fcvm.2023.1102717
- Libby, P., 2001. Coronary Syndromes 365–372. doi:10.1161/01.CIR.104.3.365
- Lilly, L.S., 2013. Pathophysiology of heart disease: A collaborative project of medical students and faculty: Fifth edition.
- Locorotondo, G., Galiuto, L., Porto, I., Fedele, E., Paraggio, L., *et al.*, 2021. Coronary microvascular dysfunction beyond microvascular obstruction in ST-elevation myocardial infarction: Functional and clinical correlates. *Microcirculation* 28: 1–9. doi:10.1111/micc.12696
- Luca, G. De, Maas, A.C., Suryapranata, H., Ottervanger, J.P., Hoorntje, J.C.A., *et al.*, 2005. Acute Ischemic Heart Disease Prognostic significance of residual cumulative ST-segment deviation after mechanical reperfusion in patients with ST-segment elevation myocardial infarction. doi:10.1016/j.ahj.2005.01.056

- Luca, G. De, Suryapranata, H., Boer, M. De, Ottervanger, J.P., Hoorntje, J.C.A., *et al.*, 2007. Combination of electrocardiographic and angiographic markers of reperfusion in the prediction of infarct size in patients with ST-segment elevation myocardial infarction undergoing successful primary angioplasty 117: 232–237. doi:10.1016/j.ijcard.2006.04.082
- Mentias, A., & Girotra, S., 2020. Pharmac Invasive Strategy The Answer to Improving ST-Elevation Myocardial Infarction Care.pdf.
- Mishra, S., 2017. What is the ideal fi brinolysis to PCI time : Pharmacoinvasive strategy with streptokinase? *Indian Heart J.* 69: 569–570. doi:10.1016/j.ihj.2017.07.022
- Misumida, N., Ogunbayo, G.O., Kim, S.M., Olorunfemi, O., Elbadawi, A., *et al.*, 2018. Higher Risk of Bleeding in Asians Presenting With ST-Segment Elevation Myocardial Infarction: Analysis of the National Inpatient Sample Database. *Angiology* 69: 548–554. doi:10.1177/0003319717730168
- Młynarska, E., Czarnik, W., Fularski, P., Hajdys, J., Majchrowicz, G., *et al.*, 2024. From Atherosclerotic Plaque to Myocardial Infarction — The Leading Cause of Coronary Artery Occlusion.
- Noriega, F.J., Jorge, E., Arzamendi, D., & Cinca, J., 2013. Mechanism and diagnostic potential of reciprocal ECG changes induced by acute coronary artery occlusion in pigs. *Heart Rhythm* 10: 883–890. doi:10.1016/j.hrthm.2013.02.022
- Pathophysiology of Heart Disease - A Collaborative Project of Medical Students and Faculty 5th - Lilly, n.d.
- Poorhosseini, H., Saadat, M., Salarifar, M., Mortazavi, S. H., & Geraiely, B. (2019). Pre-Hospital Delay and Its Contributing Factors in Patients with ST-Elevation Myocardial Infarction; a Cross sectional Study. *Archives of Academic Emergency Medicine*, 7(1), e29. <https://doi.org/10.22037/aaem.v7i1.349>
- Przyluski, J., Karcz, M., Kalińczuk, Ł., Kruk, M., Pręgowski, J., *et al.*, 2007. Comparison of different methods of ST segment resolution analysis for prediction of 1-year mortality after primary angioplasty for acute myocardial infarction. *Ann. Noninvasive Electrocardiol.* 12: 5–14. doi:10.1111/j.1542-474X.2007.00132.x
- Pu, J., Ding, S., Ge, H., Han, Y., Guo, J., *et al.*, 2017. Efficacy and Safety of a Pharmacoinvasive Strategy with Half-Dose Alteplase Versus Primary Angioplasty in ST-Segment-Elevation Myocardial Infarction: EARLY-MYO Trial (Early Routine Catheterization after Alteplase Fibrinolysis Versus Primary PCI in Acute . *Circulation* 136: 1462–1473. doi:10.1161/CIRCULATIONAHA.117.030582
- Rasmussen, P.V., Nielsen, J.B., Pietersen, A., Graff, C., Lind, B., *et al.*, 2014. Electrocardiographic precordial st-segment deviations and the risk of cardiovascular death: Results from the Copenhagen ECG study. *J. Am. Heart Assoc.* 3: 1–16. doi:10.1161/JAHA.113.000549
- Rationale and design of the OPTIMAL REPERFUSION trial A prospective randomized multicenter clinical trial comparing different fibrinolysis transfer percutaneous coronary intervention strategies in acute STEMI.pdf, n.d.
- Rehan, R., Virk, S., Wong, C.C.Y., Passam, F., Layland, J., *et al.*, 2024.

- Intracoronary thrombolysis in ST-elevation myocardial infarction: A systematic review and meta-analysis. *Heart* 988–996. doi:10.1136/heartjnl-2024-324078
- Rehan, R., Yong, A., Ng, M., Weaver, J., & Puranik, R., 2023. Coronary microvascular dysfunction: A review of recent progress and clinical implications. *Front. Cardiovasc. Med.* 10: 1–11. doi:10.3389/fcvm.2023.1111721
- Reinstadler, S.J., Baum, A., Rommel, K., Eitel, C., Desch, S., *et al.*, 2015. ST-segment depression resolution predicts infarct size and reperfusion injury in ST-elevation myocardial infarction 1–7. doi:10.1136/heartjnl-2015-307876
- Reinstadler, S.J., Stiermaier, T., Fuernau, G., De Waha, S., Desch, S., *et al.*, 2016. The challenges and impact of microvascular injury in ST-elevation myocardial infarction. *Expert Rev. Cardiovasc. Ther.* 14: 431–443. doi:10.1586/14779072.2016.1135055
- Ross, A.M., Gao, R., Coyne, K.S., Chen, J., Yao, K., *et al.*, 2001. A randomized trial confirming the efficacy of reduced dose recombinant tissue plasminogen activator in a Chinese myocardial infarction population and demonstrating superiority to usual dose urokinase: The TUCC trial. *Am. Heart J.* 142: 244–247. doi:10.1067/mhj.2001.116963
- Salari, N., Morddarvanjoghi, F., Abdolmaleki, A., Rasoulpoor, S., Khaleghi, A.A., *et al.*, 2023. The global prevalence of myocardial infarction: a systematic review and meta-analysis. *BMC Cardiovasc. Disord.* 23: 1–12. doi:10.1186/s12872-023-03231-w
- Schröder, R., 2004. Prognostic impact of early ST-segment resolution in acute ST-elevation myocardial infarction. *Circulation* 110: 506–510. doi:10.1161/01.cir.0000147778.05979.e6
- Schröder, R., Wegscheider, K., Schröder, K., Dissmann, R., & Meyer-Sabellek, W., 1995. Extent of early ST segment elevation resolution: A strong predictor of outcome in patients with acute myocardial infarction and a sensitive measure to compare thrombolytic regimens. A substudy of the International Joint Efficacy Comparison of Thrombolytic. *J. Am. Coll. Cardiol.* 26: 1657–1664. doi:10.1016/0735-1097(95)00372-X
- Silvain, J., Collet, J., Nagaswami, C., Beygui, F., Edmondson, K.E., *et al.*, 2011. Composition of Coronary Thrombus in Acute Myocardial Infarction. *JAC* 57: 1359–1367. doi:10.1016/j.jacc.2010.09.077
- Sinnaeve, P.R., Danays, T., Bogaerts, K., Werf, F. Van De, Armstrong, P.W., *et al.*, 2016. Drug Treatment of STEMI in the Elderly: Focus on Fibrinolytic Therapy and Insights from the STREAM Trial. *Drugs Aging.* doi:10.1007/s40266-016-0345-6
- Tern, P.J.W., Ho, A.K.H., Sultana, R., Ahn, Y., Almahmeed, W., *et al.*, 2021. Comparative overview of ST-elevation myocardial infarction epidemiology, demographics, management, and outcomes in five Asia-Pacific countries: A meta-analysis. *Eur. Hear. J. - Qual. Care Clin. Outcomes* 7: 6–17. doi:10.1093/ehjqcco/qcaa057
- Thygesen, K., Alpert, J.S., Jaffe, A.S., Chaitman, B.R., Bax, J.J., *et al.*, 2018. Circulation ESC / ACC / AHA / WHF EXPERT CONSENSUS DOCUMENT

- Fourth Universal Definition of Myocardial Infarction ( 2018 ).  
doi:10.1161/CIR.0000000000000617
- Timmis, A., Kazakiewicz, D., Townsend, N., Huculeci, R., Aboyans, V., *et al.*, 2023. Global epidemiology of acute coronary syndromes 20: 778–788.  
doi:10.1038/s41569-023-00884-0
- Tjandrawidjaja, M.C., Fu, Y., Westerhout, C.M., White, H.D., Todaro, T.G., *et al.*, 2010. Coronary heart disease Resolution of ST-segment depression : a new prognostic marker in ST-segment elevation myocardial infarction 573–581.  
doi:10.1093/eurheartj/ehp494
- Toma, M., Fu, Y., Wagner, G., Goodman, S.G., Granger, C., *et al.*, 2008. Risk stratification in ST-elevation myocardial infarction is enhanced by combining baseline ST deviation and subsequent ST-segment resolution 6: 1–7.  
doi:10.1136/hrt.2007.118166
- Trial, M.I.A., Buller, C.E., Fu, Y., Mahaffey, K.W., Todaro, T.G., *et al.*, 2008. ST-Segment Recovery and Outcome After Primary Percutaneous Coronary Intervention for ST-Elevation Myocardial Infarction Insights From the Assessment of Pexelizumab in Acute.  
doi:10.1161/CIRCULATIONAHA.108.767772
- Van De Hoef, T.P., Bax, M., Meuwissen, M., Damman, P., Delewi, R., *et al.*, 2013. Impact of coronary microvascular function on long-term cardiac mortality in patients with acute ST-segment-elevation myocardial infarction. *Circ. Cardiovasc.Interv.* 6:207–215.doi:10.1161/CIRCINTERVENTIONS.112.000168
- Van De Werf, F., Ristić, A.D., Averkov, O. V., Arias-Mendoza, A., Lambert, Y., *et al.*, 2023. STREAM-2: Half-Dose Tenecteplase or Primary Percutaneous Coronary Intervention in Older Patients With ST-Segment-Elevation Myocardial Infarction: A Randomized, Open-Label Trial. *Circulation* 148: 753–764. doi:10.1161/CIRCULATIONAHA.123.064521
- Viana, M., Laszczy, O., Araújo, C., Borges, A., Barros, V., *et al.*, 2020. coronary syndrome 39. doi:10.1016/j.repce.2019.07.007
- Vidal-Calés, P., Cepas-Guillén, P.L., Brugaletta, S., & Sabaté, M., 2021. New interventional therapies beyond stenting to treat ST-segment elevation acute myocardial infarction. *J. Cardiovasc. Dev. Dis.* 8. doi:10.3390/jcdd8090100
- Weaver, J. C., Ramsay, D. D., Rees, D., Binnekamp, M. F., Prasan, A. M., & McCrohon, J. A. (2011). Dynamic Changes in ST Segment Resolution After Myocardial Infarction and the Association with Microvascular Injury on Cardiac Magnetic Resonance Imaging. *Heart Lung and Circulation*, 20(2), 111–118. <https://doi.org/10.1016/j.hlc.2010.09.006>
- Wellens, H., Gorgels, A., & Doevedans, P. (2002). *The ECG in Acute Myocardial Infarction and Unstable Angina*. Kluwer Academic Publishers.
- Werf, F. Van De, Risti, A.D., Averkov, O. V, Arias-mendoza, A., Lambert, Y., *et al.*, 2023. STREAM-2 : Half-Dose Tenecteplase or Primary Percutaneous Coronary Intervention in Older Patients With ST-Segment – Elevation Myocardial Infarction : A Randomized , Open-Label Trial 753–764. doi:10.1161/CIRCULATIONAHA.123.064521
- Wang, J., Geng, T., Li, X., Zeng, J., Hu, C., *et al.*, 2024. Risk factor analysis of

- microvascular obstruction after percutaneous coronary intervention for ST-segment elevation myocardial infarction. *Hell. J. Cardiol.* D. doi:10.1016/j.hjc.2024.10.011
- Wong, C., De, L., & Herbison, P., n.d. Does ST resolution achieved via different reperfusion strategies ( fibrinolysis vs percutaneous coronary intervention ) have different prognostic meaning in ST-elevation myocardial infarction ? A systematic review. *Am. Heart J.* 160: 842-848.e2. doi:10.1016/j.ahj.2010.06.050
- Wong, C., Gao, W., & White, H.D., 2015. Resolution of ST depression after fi brinolysis can be more important than resolution of ST elevation for many patients with inferior STEMIs. *Int. J. Cardiol.* 182: 232–234. doi:10.1016/j.ijcard.2014.12.117
- Wu, C., Gao, X., Li, L., Jing, Q., Li, Weimin, *et al.*, 2023. Role of ST-Segment Resolution Alone and in Combination With TIMI Flow After Primary Percutaneous Coronary Intervention for ST-Segment–Elevation Myocardial Infarction. *J. Am. Heart Assoc.* 12. doi:10.1161/JAHA.123.029670
- Yong, A.S.C., & Fearon, W.F., 2013. Coronary microvascular dysfunction after ST-segment-elevation myocardial infarction: Local or global phenomenon? *Circ. Cardiovasc.Interv.* 6:201–203. doi:10.1161/CIRCINTERVENTIONS.113.000462
- Zhang, S., Lin, Z., Yu, B., Liu, J., Jin, J., *et al.*, 2024. Smoking paradox in coronary function and structure of acute ST-segment elevation myocardial infarction patients treated with primary percutaneous coronary intervention. *BMC Cardiovasc. Disord.* 24. doi:10.1186/s12872-024-04093-6