

- gioplasty for total coronary artery occlusion: an analysis of 971 lesions in 905 patients. *J Am Coll Cardiol.* 1990;15:849-56.
4. Suero JA, Marso SP, Jones PG, et al. Procedural outcomes and long-term survival among patients undergoing percutaneous coronary intervention of a chronic total occlusion in native coronary arteries: a 20-year experience. *J Am Coll Cardiol.* 2001;38:409-14.
 5. Ybarra LF, Rinfret S, Brilakis ES, et al. Chronic Total Occlusion Academic Research Consortium. Definitions and Clinical Trial Design Principles for Coronary Artery Chronic Total Occlusion Therapies: CTO-ARC Consensus Recommendations. *Circulation.* 2021 Feb 2;143(5):479-500.
 6. Fefer P, Knudtson ML, Cheema AN, et al. Current perspectives on coronary chronic total occlusions: the Canadian Multicenter Chronic Total Occlusions Registry. *J Am Coll Cardiol.* 2012;59:991-7.
 7. Surmely JF, Katoh O, Tsuchikane E, Nasu K, Suzuki T. Coronary septal collaterals as an access for the retrograde approach in the percutaneous treatment of coronary chronic total occlusions. *Catheter Cardiovasc Interv.* 2007;69:826-32.
 8. Colombo A, Mikhail GW, Michev I, et al. Treating chronic total occlusions using subintimal tracking and re-entry: the STAR technique. *Catheter Cardiovasc Interv.* 2005;64:407-11.
 9. Lombardi WL. Retrograde PCI: what will they think of next. *J Invasive Cardiol.* 2009;21:543.
 10. Werner GS, Schofer J, Sievert H, Kugler C, Reifart NJ. Multicentre experience with the BridgePoint devices to facilitate recanalisation of chronic total coronary occlusions through controlled subintimal re-entry. *EuroIntervention.* 2011;7:192-200.
 11. Christopoulos G, Karpaliotis D, Alaswad K, et al. Application and outcomes of a hybrid approach to chronic total occlusion percutaneous coronary intervention in a contemporary multicenter US registry. *Int J Cardiol.* 2015;198:222-8.
 12. Råmunddal T, Høebers LP, Henriques JPS, et al. Prognostic Impact of Chronic Total Occlusions: A Report From SCAR (Swedish Coronary Angiography and Angioplasty Registry). *JACC Cardiovasc Interv.* 2016;9:1535-44.
 13. Banning AP, Serruys P, De Maria GL, et al. Five-year outcomes after state-of-the-art percutaneous coronary revascularization in patients with de novo three-vessel disease: final results of the SYNTAX II study. *Eur Heart J.* 2022;43:1307-16.
 14. Lawton JS, Tamis-Holland JE, Bangalore S, et al. 2021 ACC/AHA/SCAI Guideline for Coronary Artery Revascularization: Executive Summary: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation.* 2022 Jan 18;145(3):e4-e17.
 15. Neumann FJ, Sousa-Uva M, Ahlsson A, et al.; ESC Scientific Document Group. 2018 ESC/EACTS Guidelines on myocardial revascularization. *Eur Heart J.* 2019 Jan 7;40(2):87-165.
 16. Di Mario C, Mashayekhi KA, Garbo R, et al. Recanalisation of coronary chronic total occlusions. *EuroIntervention.* 2022 Sep 20;18(7):535-561.
 17. Tsai TT, Stanislawski MA, Shunk KA, et al. Contemporary Incidence, Management, and Long-Term Outcomes of Percutaneous Coronary Interventions for Chronic Coronary Artery Total Occlusions: Insights From the VA CART Program. *JACC Cardiovasc Interv.* 2017 May 8;10(9):866-875.
 18. Tajti P, Burke MN, Karpaliotis D, et al. Prevalence and Outcomes of Percutaneous Coronary Interventions for Ostial Chronic Total Occlusions: Insights From a Multicenter Chronic Total Occlusion Registry. *Can J Cardiol.* 2018 Oct;34(10):1264-1274.
 19. Sapontis J, Salisbury AC, Yeh RW, et al. Early Procedural and Health Status Outcomes After Chronic Total Occlusion Angioplasty: A Report From the OPEN-CTO Registry (Outcomes, Patient Health Status, and Efficiency in Chronic Total Occlusion Hybrid Procedures). *JACC Cardiovasc Interv.* 2017 Aug 14;10(15):1523-1534.
 20. Stone GW, Reifart NJ, Moussa I, et al. Percutaneous recanalization of chronically occluded coronary arteries: a consensus document: part II. *Circulation.* 2005 Oct 18;112(16):2530-7.
 21. Henriques JP, Høebers LP, Råmunddal T, et al. EXPLORE Trial Investigators. Percutaneous Intervention for Concurrent Chronic Total Occlusions in Patients With STEMI: The EXPLORE Trial. *J Am Coll Cardiol.* 2016 Oct 11;68(15):1622-1632.
 22. Mashayekhi K, Nührenberg TG, Toma A, et al. A Randomized Trial to Assess Regional Left Ventricular Function After Stent Implantation in Chronic Total Occlusion: The REVASC Trial. *JACC Cardiovasc Interv.* 2018 Oct 8;11(19):1982-1991.
 23. Lee SW, Lee PH, Ahn JM, et al. Randomized Trial Evaluating Percutaneous Coronary Intervention for the Treatment of Chronic Total Occlusion. *Circulation.* 2019 Apr 2;139(14):1674-1683.
 24. Werner GS, Martin-Yuste V, Hildick-Smith D, et al.; EURO-CTO trial investigators. A randomized multicentre trial to compare revascularization with optimal medical therapy for the treatment of chronic total coronary occlusions. *Eur Heart J.* 2018 Jul 7;39(26):2484-2493.
 25. Christiansen E. ISCHEMIA-CTO Trial - Revascularisation or Optimal Medical Therapy of CTO (ISCHEMIA-CTO). 2018. Available from: <https://clinicaltrials.gov/ct2/show/NCT03563417>.
 26. Minneapolis Heart Institute Foundation. The SHINE-CTO Trial (SHINE-CTO). 2016. Available from: <https://clinicaltrials.gov/ct2/show/NCT02784418>.
 27. The NORDic-Baltic Randomized Registry Study for Evaluation of PCI in Chronic Total Coronary Occlusion (NOBLE-CTO). 2018. Available from: <https://clinicaltrials.gov/ct2/show/NCT03392415>.
 28. Obedinskiy AA, Kretov EI, Boukhris M, et al. The IMPACTOR-CTO Trial. *JACC Cardiovasc Interv.* 2018 Jul 9;11(13):1309-1311.
 29. Knuuti J, Wijns W, Saraste A, et al. ESC Scientific Document Group. 2019 ESC Guidelines for the diagnosis and management of chronic coronary syndromes. *Eur Heart J.* 2020 Jan 14;41(3):407-477.
 30. Brilakis ES, Banerjee S, Karpaliotis D, et al. Procedural outcomes of chronic total occlusion percutaneous coronary intervention: A report from the NCDR (National Cardiovascular Data Registry). *JACC Cardiovasc Interv.* 2015;8:245-253.
 31. Maeremans J, Walsh S, Knaepen P, et al. The hybrid algorithm for treating chronic total occlusions in Europe: The RECHARGE registry. *J Am Coll Cardiol.* 2016;68:1958-1970.
 32. Galassi AR, Sianos G, Werner GS, et al. Euro CTO Club. Retrograde recanalization of chronic total occlusions in Europe: Procedural, in-hospital, and long-term outcomes from the multicenter ERCTO registry. *J Am Coll Cardiol.* 2015;65:2388-400.
 33. Christakopoulos GE, Christopoulos G, Carlino M, et al. Meta-analysis of clinical outcomes of patients who underwent percutaneous coronary interventions for chronic total occlusions. *Am J Cardiol.* 2015;115:1367-1375.
 34. Mehran R, Claessen BE, Godino C, et al. Multinational Chronic Total Occlusion Registry. Long-term outcome of percutaneous coronary intervention for chronic total occlusions. *JACC Cardiovasc Interv.* 2011;4:952-961.
 35. Claessen BE, Dangas GD, Godino C, et al. Multinational CTO Registry. Long-term clinical outcomes of percutaneous coronary intervention for chronic total occlusions in patients with versus without diabetes mellitus. *Am J Cardiol.* 2011;108:924-931.
 36. Jones DA, Weerackody R, Rathod K, et al. Successful recanalization of chronic total occlusions is associated with improved long-term survival. *JACC Cardiovasc Interv.* 2012;5:380-388.
 37. Grantham JA, Jones PG, Cannon L, et al. Quantifying the early health status benefits of successful chronic total occlusion recanalization: Results from the FlowCardia's Approach to Chronic Total Occlusion Recanalization (FACTOR) Trial. *Circ Cardiovasc Qual Outcomes.* 2010;3:284-290.
 38. Joyal D, Afilalo J, Rinfret S. Effectiveness of recanalization of chronic total occlusions: A systematic review and meta-analysis. *Am Heart J.* 2010;160:179-187.
 39. Borgia F, Viceconte N, Ali O, et al. Improved cardiac survival, freedom from MACE and angina-related quality of life after successful percutaneous recanalization of coronary artery chronic total occlusions. *Int J Cardiol.* 2012;161:31-8.
 40. George S, Cockburn J, Clayton TC, et al.; British Cardiovascular Intervention Society; National Institute for Cardiovascular Outcomes Research. Long-term follow-up of elective chronic total coronary occlusion angioplasty: analysis from the U.K. Central Cardiac Audit Database. *J Am Coll Cardiol.* 2014;64:235-43.
 41. Goel PK, Khanna R, Pandey C, Ashfaq F. Long-term outcomes post chronic total occlusion intervention-implications of completeness of revascularization. *J Interv Cardiol.* 2018;31:293-301.
 42. Tomasello SD, Boukhris M, Giubilato S, et al. Management strategies in patients affected by chronic total occlusions: results from the Italian Registry of Chronic Total Occlusions. *Eur Heart J.* 2015;36:3189-98.
 43. Park TK, Lee SH, Choi KH, et al. Late Survival Benefit of Percutaneous Coronary Intervention Compared With Medical Therapy in Patients With Coronary Chronic Total Occlusion: A 10-Year Follow-Up Study. *J Am Heart Assoc.* 2021;10:e019022.
 44. Juricic SA, Tesic MB, Galassi AR, et al. Randomized Controlled Comparison of Optimal Medical Therapy with Percutaneous Recanalization of Chronic Total Occlusion (COMET-CTO). *Int Heart J.* 2021;62:16-22.
 45. Brilakis ES, Mashayekhi K, Burke MN. How DECISION-CTO Can Help Guide the Decision to Perform Chronic Total Occlusion Percutaneous Coronary Intervention. *Circulation.* 2019 Apr 2;139(14):1684-1687.
 46. Galassi AR, Boukhris M, Toma A, et al. Percutaneous Coronary Intervention of Chronic Total Occlusions in Patients With Low Left Ventricular Ejection Fraction. *JACC Cardiovasc Interv.* 2017;10:2158-70.
 47. Werner GS, Surber R, Kueth F, et al. Collaterals and the recovery of left ventricular function after recanalization of a chronic total coronary occlusion. *Am Heart J.* 2005;149:129-37.
 48. de Winter RW, Schumacher SP, van Diemen PA, et al. Impact of percutaneous coronary intervention of chronic total occlusions on absolute perfusion in remote myocardium. *EuroIntervention.* 2022;18:e314-23.
 49. Maron DJ, Hochman JS, Reynolds HR, et al. ISCHEMIA Research Group. Initial Invasive or Conservative Strategy for Stable Coronary Disease. *N Engl J Med.* 2020;382:1395-407.
 50. Navarese EP, Lansky AJ, Kereiakes DJ, et al. Cardiac mortality in patients randomised to elective coronary revascularisation plus medical therapy or medical therapy alone: a systematic review and meta-analysis. *Eur Heart J.* 2021;42:4638-51.
 51. Al-Lamee R, Jacobs AK. ISCHEMIA Trial: Was It Worth the Wait? *Circulation.* 2020;142:517-9.
 52. King SB 3rd. The ISCHEMIA Trial: "Stable Angina Cured". *Cardiovasc Revasc Med.* 2020;21:254-55.
 53. Velazquez EJ, Lee KL, Deja MA, et al. STICH Investigators. Coronary-artery bypass surgery in patients with left ventricular dysfunction. *N Engl J Med.* 2011;364:1607-16.
 54. Velazquez EJ, Lee KL, Jones RH, et al. STICHES Investigators. Coronary-Artery Bypass Surgery in Patients with Ischemic Cardiomyopathy. *N Engl J Med.* 2016;374:1511-20.
 55. Fujii T, Sakai K, Nakano M, et al. Impact of the origin of the collateral feeding donor artery on short-term mortality in ST-elevation myocardial infarction with comorbid chronic total occlusion. *Int J Cardiol.* 2016;218:158-63.
 56. Kral A, Belohlavek J, Rob D, Smalcova J. Abstract 13434: Chronic Total Occlusions in Refractory Cardiac Arrest Patients. Available from: https://doi.org/10.1161/circ.144.suppl_2.13434.
 57. Antman EM, Braunwald E. Managing Stable Ischemic Heart Disease. *N Engl J Med.* 2020;382:1468-70.
 58. Schumacher SP, Stuijzand WJ, Opolski MP, et al. Per-