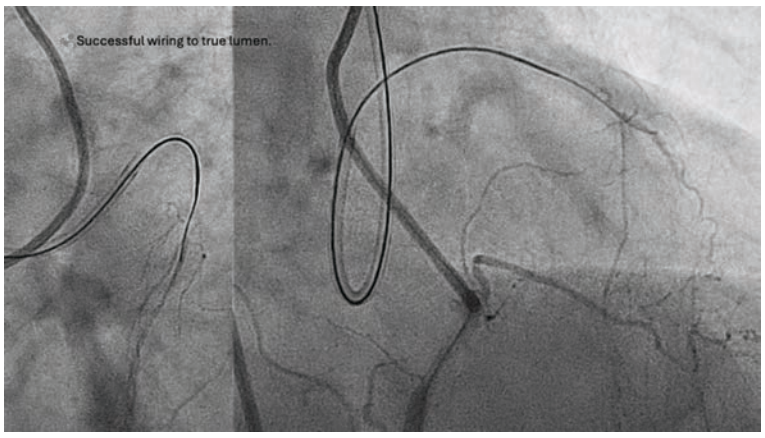
Selected Abstracts From *The Journal of Invasive Cardiology*

Original Research

1. Ten Tips and Tricks for Successful Distal True Lumen Wiring From Three-Dimensional Wiring Experts

Wu E, Nagamatsu W, Okamura A

J Invasive Cardiol. 2024 Jun 6. doi:10.25270/jic/24.00096



Abstract: Antegrade wiring is the dominant method used in chronic total occlusion percutaneous coronary intervention (CTO PCI). However, distal cap puncture for distal true lumen wiring remains a significant barrier toward success. Three-dimensional (3D) fluoroscopic wiring can improve the speed, safety, and success of distal cap wiring. In this article, we provide 10 tips for every CTO interventionist to use when performing 3D wiring in distal true lumen wiring.

2. Comparison of Angiographic Result and Long-Term Outcome in Patients With In-Stent Restenosis Treated With Cutting Balloon or With Scoring Balloon Angioplasty

Leick J, Tobias Rheude T, Cassese S, et al

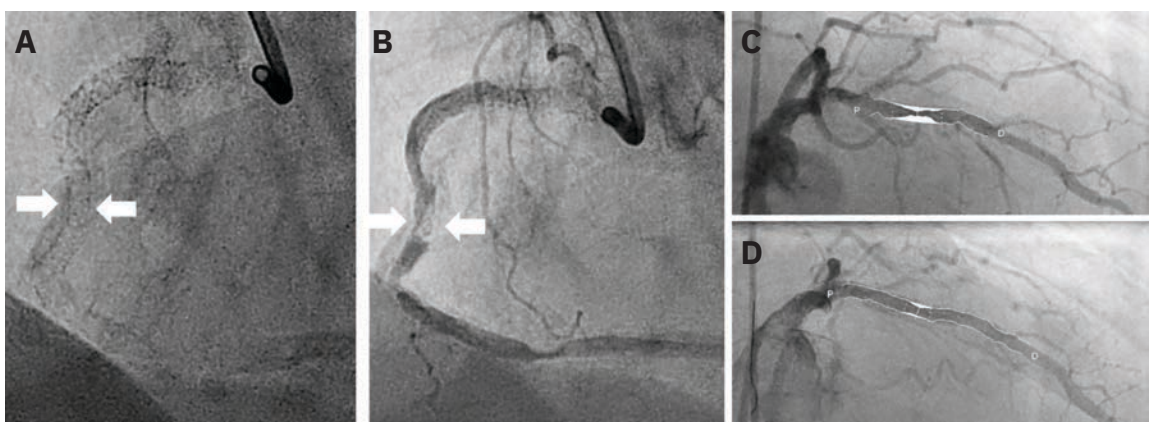
J Invasive Cardiol. 2024 Jun 6. doi:10.25270/jic/24.00070

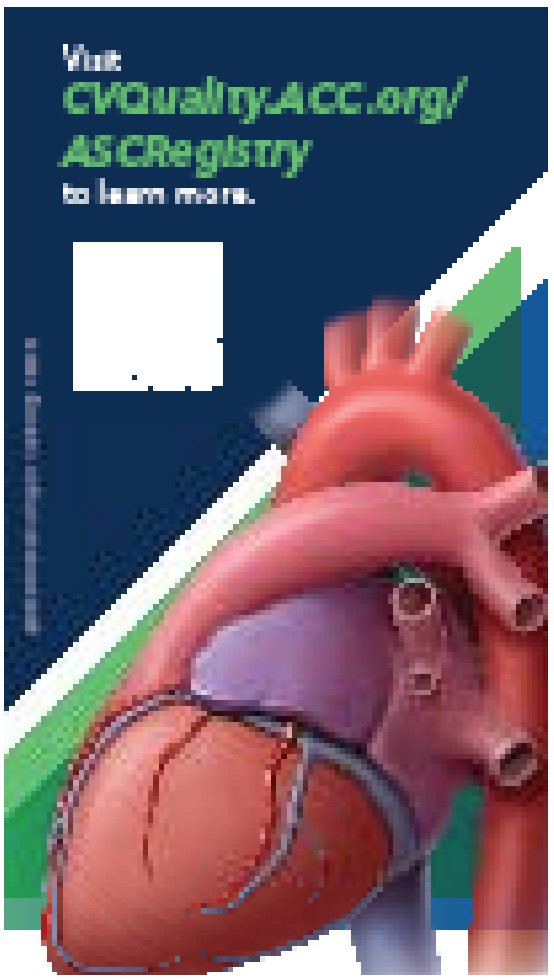
Abstract: Background. Lesion preparation with a cutting (CB) or scoring balloon (SB) is often used in patients with in-stent restenosis (ISR). However, there are no comparative studies.

Methods. We analyzed 81 patients (CB group: n = 38; SB group: n = 43) who had a calcified ISR from November 2019 to September 2021. The primary endpoint was strategy success (< 20% residual stenosis); the secondary endpoints were major adverse cardiovascular events during the 1-year follow-up. Quantitative coronary angiography was performed to evaluate the strategy success.

Results. The patients in the CB group were more likely to have a severe calcified ISR (P = .001) and multiple stent layers (P = .001). A total of 64 patients (79.0%) reached the primary endpoint. Residual stenosis greater than 20% was more common in the CB group (39.5% vs 4.7%; P = .001). In the multivariate analysis, an effect of the intervention group on the achievement of the primary endpoint could be excluded (estimate 1.06; standard error 1.07; P = .322). The time interval of stent implantation prior to CB/SB (P = .007) and severe calcified ISR (P = .009) had a negative impact on reaching the primary endpoint. During the follow-up, there were no differences in rates of cardiac death (CB 2.5% vs. SB 1.2%; P = .598), acute myocardial infarction (CB 0% vs. SB 4.9%; P = .119), and target lesion failure (CB 3.7% vs SB 12.3%; P = .074).

Conclusions. In our cohort, multivariate analysis showed that lesion preparation with CB or SB must be considered equivalent in terms of angiographic results. Factors like severe calcified ISR and the time interval of prior stent implantation negatively influenced the angiographic outcome.





3. Ranolazine in Chronic Total Occlusion Percutaneous Coronary Intervention

Alexandrou M, Mutlu D, Rempakos A, et al

J Invasive Cardiol. 2024 Apr 30. doi: 10.25270/jic/24.00059

Abstract: Ranolazine is an anti-anginal medication given to patients with chronic angina and persistent symptoms despite medical therapy. We examined 11 491 chronic total occlusion (CTO) percutaneous coronary interventions (PCI) that were performed at 41 US and non-US centers between 2012 and 2023 in the PROGRESS-CTO Registry. Patients on ranolazine at baseline had more comorbidities, more complex lesions, lower procedural and technical success (based on univariable but not multivariable analysis), and higher incidence of major adverse cardiac events (MACE) (on both univariable and multivariable analysis).

4. Impact of ACIST CVi Contrast Delivery System on Iodinated Contrast Media Administration and Waste

Shakir MA, Garratt KN, Wimmer NJ

J Invasive Cardiol. 2024 May 24. doi:10.25270/jic/24.00150

Abstract: The COVID-19 pandemic led to disruptions in iodinated contrast media (ICM) production and produced a global product shortage in the spring of 2022. The ACIST CVi system is an automated contrast injector system approved by the FDA for multi-patient dosing of ICM from a single container. A transition from the traditional manifold system for contrast injection to the ACIST CVi automated injector system in our cardiac angiographic labs during the COVID-19 pandemic led to reductions in contrast waste and cost while limiting patient exposure to ICM.

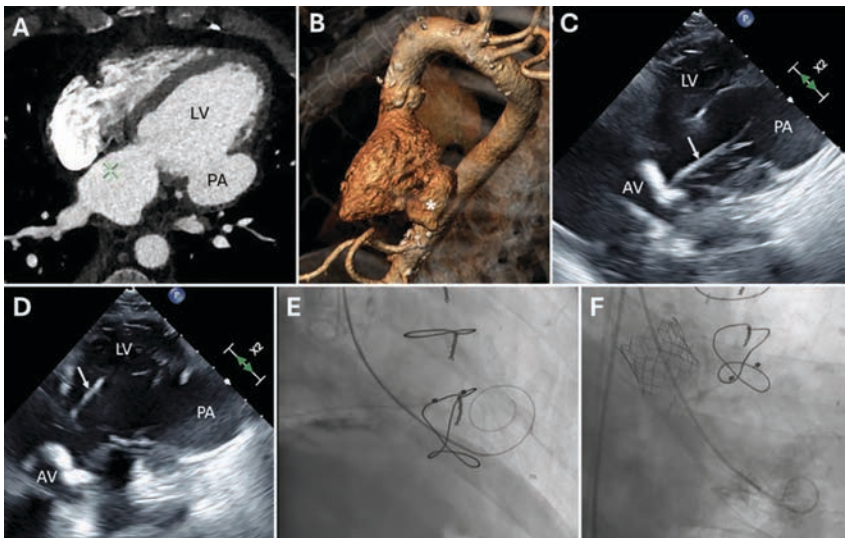
Clinical Images

5. Transcatheter Aortic Valve Replacement in a Patient With Pre-Existing Left Ventricular Pseudoaneurysm: The Importance of Pre- and Intra-Procedural Imaging

Shiran A, Fuks A, Zissman K, Jaffe R

J Invasive Cardiol. 2024 May 20. doi:10.25270/jic/24.00143

An 85-year-old man with a history of myocardial infarction and coronary bypass surgery presented with severe symptomatic aortic stenosis. Echocardiography revealed pressure gradients of 73/40 mm Hg across the aortic valve, an aortic valve area of 0.74 cm2, and a 35% ejection fraction. The left ventricular posterior wall was akinetic, with a large lateral wall pseudoaneurysm.

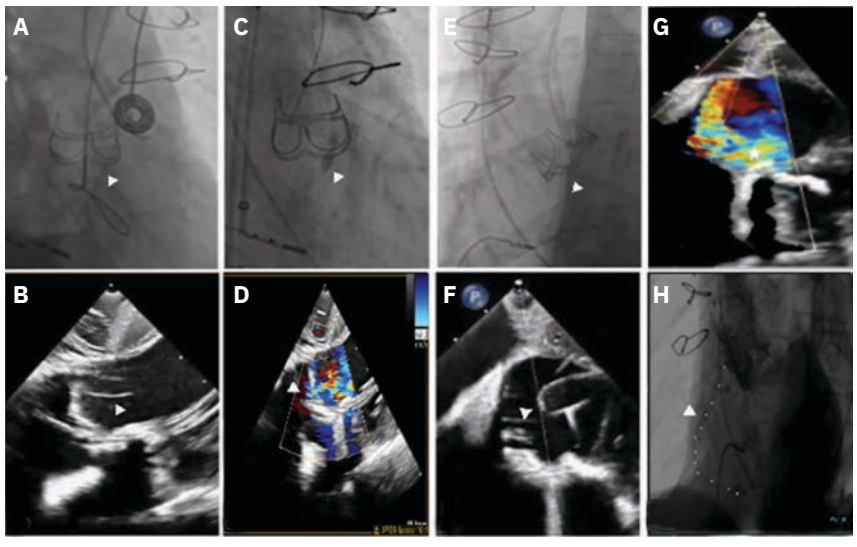


6. IntraCardiac Echocardiography-Guided Leaflet Modification for Coronary Protection Prior to Transcatheter Valve-in-Valve Replacement

Kodra A, Wang D, Mehla P

J Invasive Cardiol. 2024 May 7. doi:10.25270/jic/24.00134

A 79-year-old man with a failed 25-mm CE Magna Ease 3300 surgical prosthesis (Edwards Lifesciences) and of high re-operative surgical risk (STS 8%) presented with dyspnea, NYHA III. Cardiac computed tomography angiography revealed anatomy that was high risk for coronary occlusion with a short right coronary artery height of 6 mm and a valve-to-coronary distance of 2 mm. ■



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