










# Stentless percutaneous coronary interventions: niche or standard?

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**Introduction:** Treatment of epicardial coronary artery stenosis in chronic and acute coronary syndromes has been constantly changing and developing. Currently, the concepts of „leaving nothing behind“ and doing lumen enlargement without permanent scaffolding irrespective of vessel diameter seem feasible, but the contemporary data are conflicting.<sup>1</sup> We present single center experience in percutaneous coronary intervention (PCI) techniques in acute and chronic coronary syndromes in regard to lumen enlargement and scaffolding.

**Patients and Methods:** We analyzed PCI techniques regarding techniques of lumen enlargement and scaffolding in 1577 patients treated between September 2022 and September 2024 and followed-up in a single center PCI registry.

**Results:** There were 843 (53%) patients who received PCI in acute coronary syndromes (ACS), and 734 (47%) patients with PCI in chronic coronary syndromes (CCS). Among ACS patients, 731 (87%) patients received drug eluting stents (DES), 104 (12%) patients were treated with drug coated balloon (DCB) dilatation only, whereas 8 patients (1%) received coronary bioadaptors. There were no differences in cardiovascular mortality or reinfarction within 30 days among different PCI strategies. There were more bleeding events during follow-up (5.6% vs 1.8%) among patients treated with DES in comparison to DCB. Among CCS patients, 468 (64%) patients received DES, 263 (35.5%) patients were treated with DCB dilatation only, whereas 3 (0.5%) patients received coronary bioadaptors, and only 1 patient received bioresorbable vascular scaffolds (BRS). There were no differences in cardiovascular mortality or target lesion failure within 30 days among PCI strategies. Posterolateral part of coronary circulation, bifurcations, late stent failures and distal segment involvement were predictors of DCB only use in both ACS and CCS.

**Conclusion:** DCB only PCI is significantly more represented among patients with CCS in comparison to ACS. In CCS, every third patient received a DCB only intervention. DCB only PCI had comparable short-term results and similar predictors of use in both ACS and CCS. Further studies on routine use of modern stentless PCI principles in both ACS and CCS are needed to evaluate its value as standard PCI techniques.

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## LITERATURE

1. Gao C, He X, Ouyang F, Zhang Z, Shen G, Wu M, et al; REC-CAGEFREE I Investigators. Drug-coated balloon angioplasty with rescue stenting versus intended stenting for the treatment of patients with de novo coronary artery lesions (REC-CAGEFREE I): an open-label, randomised, non-inferiority trial. *Lancet.* 2024 Sep 14;404(10457):1040-1050. [https://doi.org/10.1016/S0140-6736\(24\)01594-0](https://doi.org/10.1016/S0140-6736(24)01594-0)