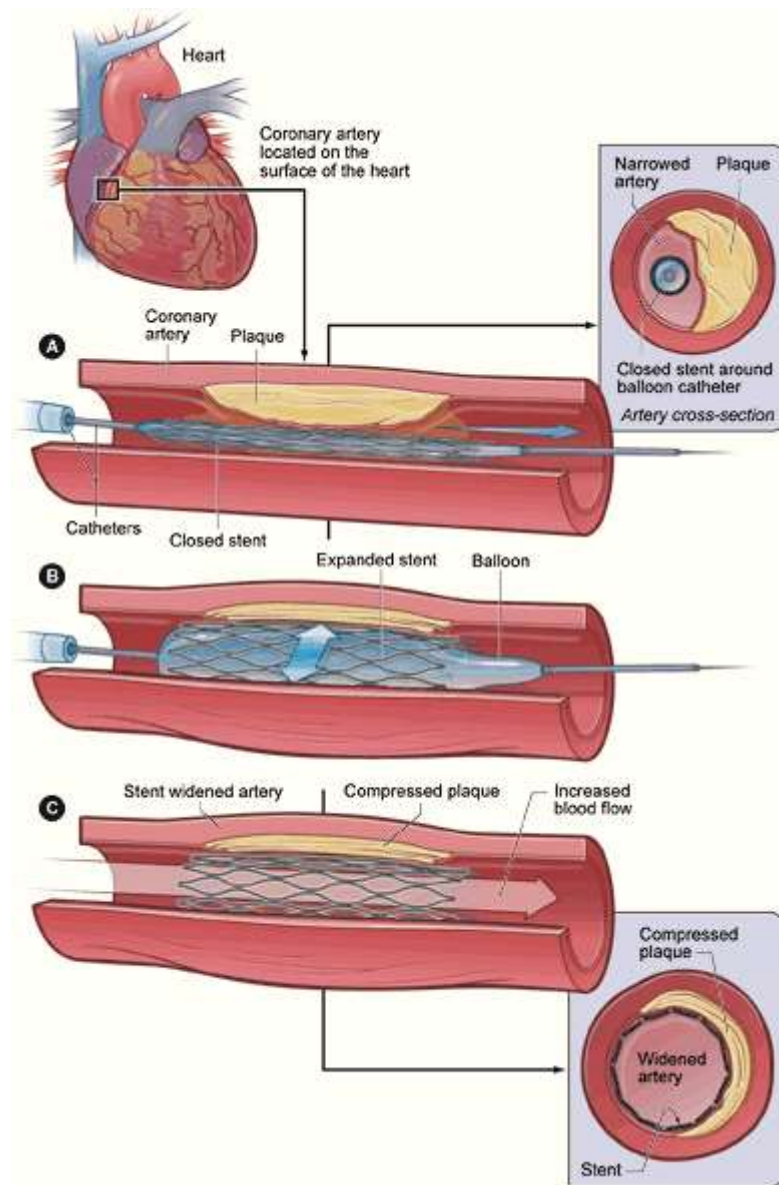


# Long-term management of recurrent in-stent restenosis



A recent study published in *JACC: Cardiovascular Interventions* has provided new insights into the long-term management of patients suffering from recurrent in-stent restenosis (ISR), a condition presenting notable challenges in cardiovascular treatment. With minimal data and guidelines available for repeat percutaneous coronary interventions (PCI), this research offers valuable guidance for clinicians.

The study aimed to explore the long-term incidence of recurrent revascularization events after percutaneous treatment of drug-eluting

stent (DES) ISR. Researchers conducted a post hoc analysis involving 402 patients, accounting for 500 lesions, who were part of the randomized ISAR-DESIRE 3 trial. Participants were assigned to one of three treatment groups: plain balloon (PB), drug-coated balloon (DCB), or drug-eluting stent (DES). The median follow-up period was 10.3 years, and the primary endpoint was the total number of repeat target lesion revascularizations (R-TLR), which included all first and recurrent events.

### **Key Findings**

At the conclusion of the follow-up period, 204 lesions required a first R-TLR, with distribution as follows:

- PB group: 82 lesions
- DCB group: 70 lesions
- DES group: 52 lesions

The total number of R-TLRs amounted to 373:

- PB group: 162 events
- DCB group: 124 events
- DES group: 87 events

During the initial year of follow-up, both DCB (HR: 0.36; 95% CI: 0.24-0.54) and DES (HR: 0.23; 95% CI: 0.14-0.38) treatments significantly reduced the risk of total R-TLR compared to PB treatment. Post the first year, DCB treatment continued to show a nonsignificant reduction in risk (HR: 0.77; 95% CI: 0.51-1.16), whereas DES treatment maintained a significant reduction (HR: 0.61; 95% CI: 0.39-0.95) compared to PB treatment. The risk levels between the DCB and DES groups were comparable during the first year (HR: 1.54; 95% CI: 0.89-2.69) and after one year (HR: 1.26; 95% CI: 0.82-1.92).

The authors concluded that the total number of R-TLRs over a decade following treatment for DES ISR was substantial. However, both DCBs and, more notably, DES treatments significantly reduced the need for both initial and recurrent revascularizations compared to PB treatment. These findings underscore the long-term benefits of DCB and DES in managing ISR, providing critical insights for the ongoing improvement of patient outcomes in cardiovascular interventions.

Original article: Koch T et al. J Am Coll Cardiol Intv. 2024 Jan, 17 (1) 1–13.