

C-09 Eight-Year Outcomes of Biodegradable- versus Durable-Polymer Drug-Eluting Stents for
In-Stent Restenosis Lesions: An IPTW Analysis

Yangyoun Lee

Department of Cardiology, Ajou University School of Medicine, Suwon, Korea

[Purpose] Evidence on the long-term performance of biodegradable-polymer drug-eluting stents (BP-DES) for in-stent restenosis (ISR) lesions remains limited. We compared 8-year outcomes after BP-DES versus durable-polymer DES (DP-DES) implantation for ISR lesions.[Methods] This retrospective, single-center lesion-level registry included ISR lesions treated with DES between 2005 and 2021. The primary endpoint was target lesion revascularization (TLR) at 8 years. Secondary endpoints included target vessel revascularization (TVR), target vessel myocardial infarction, definite/probable stent thrombosis, and target lesion failure (TLF; cardiac death, target vessel myocardial infarction, or TLR). Stabilized inverse probability of treatment weighting was applied using clinical, angiographic, lesion, procedural, and calendar-year covariates. Time-to-event outcomes were compared using weighted Kaplan-Meier estimates and weighted Cox models.[Results] Among 872 ISR lesions from 775 patients, 354 were treated with BP-DES and 518 with DP-DES. BP-DES was used in a later period than DP-DES (2017.4 ± 3.0 vs 2012.9 ± 2.9 years), with fewer ACS presentations (33.6% vs 64.1%). After IPTW, 8-year TLR was 11.2% with BP-DES and 7.7% with DP-DES (HR 1.55, 95% CI 0.95-2.52; $P=0.077$). TLF was similar between groups (15.7% vs 15.1%; HR 1.05, 95% CI 0.73-1.52; $P=0.776$). TVR was numerically higher with BP-DES (19.9% vs 15.8%; HR 1.30, 95% CI 0.91-1.84; $P=0.146$).[Conclusion] BP-DES did not reduce 8-year TLR or TLF compared with DP-DES for ISR lesions. The findings should be interpreted considering limited treatment overlap due to marked calendar-period imbalance.