

**TOPIC:** CARDIOLOGY

**TITLE:** Outcomes of a novel abluminal bioabsorbable versus durable-polymer-coated everolimus-eluting stent in complex patients and coronary artery disease.

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**Background** There are currently no reports of outcomes in patients with coronary artery disease (CAD), presenting with complex clinical and angiographic characteristics, treated with Synergy, a newer -generation bioabsorbable polymer-coated everolimus-eluting stent.

**Aim** To investigate the impact of baseline and angiographic complex characteristics on outcomes in patients with CAD, treated with the newer generation stent, Synergy, as compared to the former benchmark Xience, a durable polymer everolimus-eluting stent.

**Methods** We analyzed 2,001 consecutive patients treated with Synergy (n=400) or Xience (n=1601) stents between May 2013 and May 2015 in two Italian centers. We used propensity-score matching to assemble a patient cohort with similar baseline characteristic. We stratified the study population into “complex” and “simple”. We evaluated outcomes at 1-year, in terms of major adverse cardiac events (MACE), defined as all-cause death, myocardial infarction, and target lesion revascularization (TLR).

**Results** Among the 684 patients identified after matching, 433 (63.3%) were complex and treated with Synergy (n=213) or Xience (n=220). At 1-year follow-up, rates of MI (0.9% vs. 0.5%, p=0.630), and stent thrombosis (0.0% vs. 0.0%) were similar between complex and simple patients. Major adverse cardiac event rate was higher in complex population (13.1% vs. 2.5%, p<0.001), mainly driven by higher rate of target lesion revascularization (5.6% vs. 0.5%, p=0.009), and death (5.6% vs. 1.5%, p=0.043). Among complex patients major adverse cardiac event rate was 13.0% vs. 13.1% (p=0.929) between Synergy and Xience group. Death, MI, stent thrombosis, and new lesion revascularization rates, stratified for complexity, resulted similar between both stent at 1 year.

**Conclusion** The novel Synergy stent appears to be safe and effective, regardless of "complex" baseline and angiographic characteristics.