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Results from the ABSORB IV trial reported

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Thirty-day results from ABSORB IV, the largest randomized everolimus-eluting bioresorbable vascular scaffold (BVS) trial to date, found BVS to be noninferior to a cobalt-chromium everolimus-eluting stent (CoCr-EES) for target lesion failure (TLF).

Findings were reported today at the 29th annual Transcatheter Cardiovascular Therapeutics (TCT) scientific symposium. Sponsored by the Cardiovascular Research Foundation (CRF), TCT is the world's premier educational meeting specializing in interventional cardiovascular medicine.

First generation BVS have been associated with higher rates of TLF and device thrombosis than current metallic drug-eluting stents. It has been thought that this may be in part due to suboptimal implantation technique used in early studies. Therefore, the ABSORB IV trial mandated the avoidance of smaller vessels, and aggressive pre-dilatation and routine high-pressure post-dilatation were emphasized.

ABSORB IV also permitted the enrollment of more complex and higher-risk patients than ABSORB III, with inclusion of troponin-positive acute coronary syndrome (ACS) and up to three lesions in a maximum of two epicardial coronary arteries, including thrombus. Patients were randomized 1:1 to BVS or CoCr-EES after successful pre-dilatation with a 1:1 sized balloon.

Between August 15, 2014 and March 31, 2017, 2,604 patients at 140 sites in five countries were randomized to BVS (N=1,296) versus CoCr-

EES (N=1,308). Median age was 63 years; 28.0% of patients were female and 31.7% had diabetes. Among patients receiving BVS, pre-dilatation was performed in 99.8% of lesions, and post-dilatation was performed in 82.6% of lesions. The acute device success (delivery and deployment of the study scaffold/stent with residual stenosis