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Abbott initiates groundbreaking study to treat CAD

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Trial will assess if stent procedures guided by high-resolution imaging result in larger vessel diameters and improved patient clinical outcomes versus stent procedures that use standard-of-care imaging



Singapore - Abbott announced the initiation of a clinical trial evaluating long-term outcomes of patients who undergo stent implantation guided by high-resolution light-based imaging technology—called optical coherence tomography (OCT)—compared to a common X-ray-guided technique called angiography. The trial (ILUMIEN IV) is the first large-scale randomized global study using Abbott's OCT imaging in patients with high-risk, complex coronary artery disease. Patients in the study will be randomized to either OCT-guided or traditional angiography to guide placement of one or more XIENCE everolimus-eluting coronary stents.

"Today, most of the world uses angiography for stent implantation using a two-dimensional view of the coronary artery to assess a complex three-dimensional structure. Physicians need new technology to help optimize percutaneous coronary intervention, and OCT provides just that, the ability to look at the artery from the outside-in and the inside-out," said Ziad A. Ali, M.D., director of Intravascular Imaging and Physiology at Columbia University Medical Center's Center for Interventional Vascular Therapy and co-principal investigator of the study. "I'm confident this technology will have a positive impact on clinical practice around the world and we hope to provide evidence for leading medical organizations to update clinical guidelines for stent implantation based on the results of this study."

The ILUMIEN IV trial's focus on high-risk patients will build on findings from the previous ILUMIEN series of trials which showed stent procedures using OCT imaging resulted in superior stent expansion and greater rates of procedural success compared to angiography, and non-inferiority to intravascular ultrasound (IVUS) in post-procedure minimal stent area (MSA). Those trials also showed that use of the OCT high-resolution imaging enabled physicians to better detect damage to artery walls, called dissection, which sometimes happens during the placement of a stent compared to IVUS or angiography, which could then be repaired as necessary.