



## Chronic CAD/Stable Ischemic Heart Disease

### OPTICAL COHERENCE TOMOGRAPHY-GUIDED ANTIPLATELET THERAPY IN PATIENTS WITH CORONARY ARTERY DISEASE AND CANCER: THE PROTECT-OCT REGISTRY

Oral Contributions

West, Room 3014

Saturday, March 09, 2013, 8:15 a.m.-8:30 a.m.

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Session Title: The Cutting Edge in Revascularization for SIHD

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**Background:** Confirming complete neointimal coverage after implantation of drug-eluting stents (DES) is clinically important because incomplete stent coverage is responsible for late stent thrombosis and sudden cardiac death. Approximately 200,000.00 patients who receive stents annually undergo a non-cardiac surgical procedure less than 12 months after stent placement and require dual antiplatelet therapy (DAPT) discontinuation. Cancer is a hypercoagulable state and increases stent thrombosis risk seven fold. This study used optical coherence tomography (OCT) to guide antiplatelet therapy in the perioperative period in cancer patients.

**Methods:** Diagnostic left heart catheterization and OCT were performed on 14 symptomatic cancer patients referred for precancer therapy risk stratification. All lesions with DES placed within the prior 1 to 12 months were evaluated for endothelialization, apposition, and neointimal hyperplasia throughout each stent. A cutoff of <10% malapposition and >90% endothelialization was used for discontinuation of the second antiplatelet agent after consultation with the referring Oncologist. All patients continued aspirin throughout cancer therapy and were followed for up to 18 months after their procedure.

**Results:** A total of 4355 struts were analyzed in 29 stents across 21 separate lesions. Endothelial strut coverage, luminal cross-sectional area (CSA), and stent CSA were measured on 451 individual OCT frames. Based on our analysis, 13 patients (93%) were sent for a non-cardiac surgery without further percutaneous coronary intervention (PCI). One patient (7%) required repeat PCI to appose a previously malapposed and unendothelialized stent. All procedures were performed with patients on aspirin and off a second antiplatelet agent. No major adverse cardiovascular events occurred in the post-operative period; one patient died of sepsis.

**Conclusion:** OCT can be used to safely discontinue the second antiplatelet agent prior to cancer therapy in a patient population with CAD and recent PCI.