

## **Higher SYNTAX Score is Not Predictive of Late Mortality in "Real-world" Patients With Multivessel Coronary Artery Disease Undergoing Coronary Artery Bypass Grafting**

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### **Background:**

The SYNTAX score was created by the SYNTAX trial group as a tool to help in determination of the optimal revascularization strategy (coronary artery bypass surgery [CABG] vs. percutaneous coronary intervention [PCI] in patients with complex coronary disease. The scoring system quantifies the complexity of coronary artery disease by assessing each lesion independently. Whereas, an association between higher SYNTAX score and mortality was found for PCI patients, no such association was found for CABG patients. Our aim was to assess whether SYNTAX score predicts late mortality in patients undergoing CABG in a real-world clinical setting.

### **Methods:**

This single center study included 443 consecutive patients referred for CABG during a 2 year period. Baseline and clinical characteristics were abstracted from the patients' charts. Angiographic data was interpreted by an experienced angiographer, and SYNTAX scores calculated using the online calculator (Syntaxscore.com). Patients were divided into 3 groups: low SYNTAX score  $\leq 21$  (N=186); intermediate SYNTAX score 22-31 (N=171); and high SYNTAX score  $\geq 31$  (N=86). Mortality at 5 years was derived from the National Mortality Database.

### **Results:**

Compared with low-SYNTAX score, patients with intermediate and high-SYNTAX scores were older (64 vs 66 and 69 years respectively), had lower LVEF (64% vs 52% and 48%, p), and had greater incidence of ACS, left main disease, presence of chronic total occlusion of the LAD and/or RCA, and had a higher Euroscore (5% vs 5% and 8%, p). Patients with intermediate and high-SYNTAX score had higher 5-year mortality rates (22% and 21% respectively) compared with patients with low SYNTAX score (9.19%, p). On multivariate analysis, SYNTAX score was not an independent predictor of late mortality.

### **Conclusions:**

Patients with lower SYNTAX score had lower mortality following CABG which is attributable to lower baseline risk. SYNTAX score is not predictive of late mortality in patients with multi-vessel CAD undergoing CABG.