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### Title

The Relationship Between Body Mass Index, Treatment, and Mortality in Patients with Established Coronary Artery Disease: A Report from APPROACH

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<https://escholarship.org/uc/item/4349680j>

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### Publication Date

2008

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Peer reviewed

# TOS 2008 ABSTRACT SUPPLEMENT

## ORAL ABSTRACTS

### Body Composition/Methodology Studies

#### 112-OR

#### **The Relationship Between Body Mass Index, Treatment, and Mortality in Patients with Established Coronary Artery Disease: A Report from APPROACH**

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**Background:** The association between obesity, treatment and survival in individuals with established coronary artery disease (CAD) is not clear. We examined this association in a Canadian population-based cohort of patients with CAD.

**Methods:** Patients with CAD were identified in the Alberta Provincial Project for Outcome Assessment in Coronary Heart Disease (APPROACH) registry between January 1, 2001 and Mar 31, 2006. Analyses were conducted separately by treatment strategy (medical management only, percutaneous coronary intervention [PCI] or coronary artery bypass grafting [CABG]) and stratified by sex. Patients were grouped according to six BMI categories. Multivariable-adjusted hazard ratios (HR) were calculated using Cox regression with the referent group for all analyses being normal BMI (18.5-24.9 kg/m<sup>2</sup>).

**Results:** The cohort included 31,021 patients with a median follow-up time of 46 months. In the medically managed only group, a BMI of 25.0-29.9 kg/m<sup>2</sup> and 30.0-34.9 kg/m<sup>2</sup> were associated with significantly lower mortality compared to normal BMI patients (adjusted HR 0.72; 95% CI 0.63-0.83 and adjusted HR 0.82; 95% CI 0.69-0.98, respectively). In the CABG group, BMI of 30.0-34.9 kg/m<sup>2</sup> had the lowest risk of mortality (adjusted HR 0.75; 95% CI 0.61-0.94) whereas in the PCI group, BMI of 35.0-39.9 kg/m<sup>2</sup> had the lowest risk of mortality (adjusted HR 0.65; 95% CI 0.47-0.90).

**Conclusions:** A paradoxical association between BMI and survival exists in patients with established CAD irrespective of treatment strategy. Patients with mild or moderate obesity treated with either revascularization or medical management only are at lower adjusted risk of mortality compared to patients with a normal BMI.