

## Coronary artery surgery versus percutaneous coronary intervention in octogenarians: long-term results

Nicolini F, Contini GA, Fortuna D, Pacini D, Gabbieri D, Vignali L, Campo G, Manari A, Zussa C, Guastaroba P, De Palma R, Gherli T

### Abstract

#### BACKGROUND:

The aim of this study was to compare 7-year rates of all-cause death, cardiac death, myocardial infarction, target vessel revascularization, and stroke in a large cohort of octogenarians with left main coronary artery or multivessel disease, treated with coronary artery bypass grafting or percutaneous coronary intervention.

#### METHODS:

Two propensity score-matched cohorts of patients undergoing revascularization procedures at regional public and private centers of Emilia-Romagna, Italy, from July 2002 to December 2008 were used to compare long-term outcomes of percutaneous coronary intervention (947 patients) and coronary artery bypass grafting (441 patients).

#### RESULTS:

There were no significant differences between groups in 30-day mortality. In the follow-up the overall and the matched percutaneous coronary intervention population experienced significantly worse outcomes in terms of cardiac mortality, myocardial infarction, and target vessel revascularization. No difference was found for stroke between treatment groups. Percutaneous coronary intervention was an independent predictor of increased death at long-term follow-up. The subgroups in which coronary artery bypass grafting reduced more clearly the risk of death were age 80 to 85 years, previous myocardial infarction, history of cardiac heart failure, chronic renal failure, peripheral vascular disease, and patients with three-vessel disease associated with the left main coronary artery.

#### CONCLUSIONS:

In this real-world setting, surgical coronary revascularization remains the standard of care for patients with left main or multivessel disease. The long-term outcomes of current percutaneous coronary intervention technology in octogenarians are yet to be determined with adequately powered prospective randomized studies.