

# Prognosis of patients based on treatment strategy and ischemic extent on myocardial perfusion scintigraphy

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## Conclusion

The results support the current recommendation that patients with proven ischemia > 10% should receive ER, whereas patients with < 10% ischemia should receive OMT.

## Background

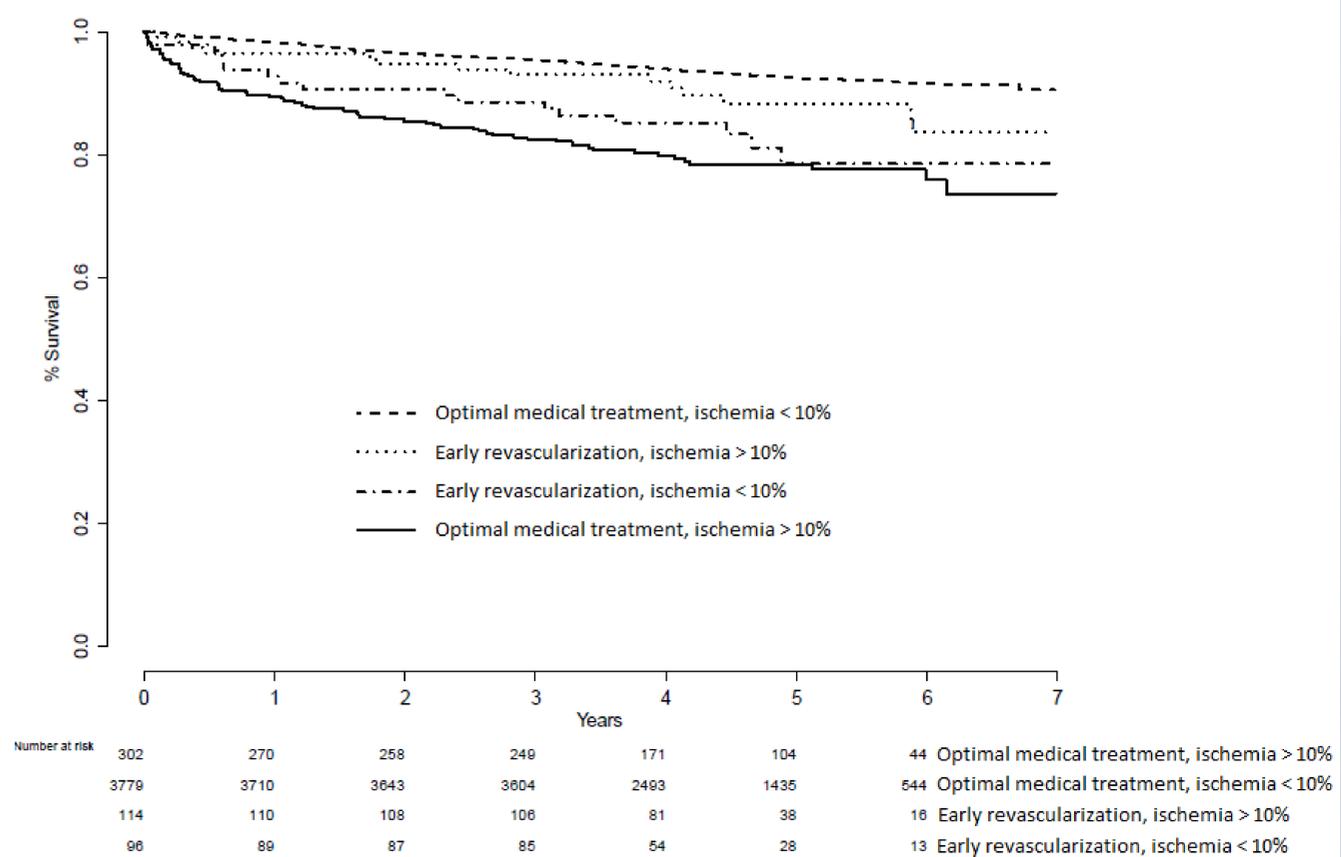
Recent studies have shown that patients with ischemia >10% of the left ventricle had a survival benefit from early revascularization (ER), whereas the survival of patients with ischemia <10% was superior with optimal medical therapy (OMT). Therefore, determination of the amount of ischemia is essential for patient management. In the studies, ischemic myocardium was calculated using 5 point/20-segment myocardial perfusion scintigraphy (MPS) scoring. The results were recently incorporated into European guidelines on revascularization. We investigate the prognosis of ischemia on MPS measured as automatically derived extent values as opposed to scoring values in a Swedish population.

## Results

In total, 2100 (48.9%) patients were females. Mean age was 62.6 years ( $\pm 11.3$ ) and mean follow-up time was 4.5 years ( $\pm 1.3$ ). 96 patients in the ER group had <10% ischemia and 114 had >10%. For the OMT group, 3779 patients had <10% ischemia and 302 had >10%. Annualized event rates were 4.2% in the “ER + <10% ischemia” group, 2.5% in the “ER + >10% ischemia” group, 1.5% in the “OMT + <10% ischemia” group, and 5.3% in the “OMT + >10% ischemia” group ( $p < 0.0001$ ), Figure 1.

## Methods

4291 patients who underwent MPS 2004-2007 were included. The primary endpoints were non-fatal acute coronary syndrome or death from ischemic cardiac origin. The Register of Information and Knowledge about Swedish Heart Intensive Care Admissions (RIKS-HIA), which includes all patients admitted to hospitals with coronary care units in Sweden, were used to identify patients who had acute coronary syndromes during the follow-up time after the MPS. Data on mortality were obtained from the Swedish National Cause of Death Register. ER was defined as percutaneous coronary intervention or coronary artery bypass grafting within 5 months of the MPS. Automatic extent values for infarct and ischemia were obtained using EXINI Heart™. Patients were divided into groups based on ER or OMT and whether the ischemia was more or less than 10%.



**Figure 1.**

Kaplan-Meier curves for the four study groups.