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## Towards Optimal Management of Left Main Coronary Artery Disease



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A study published in *The New England Journal of Medicine* indicates that patients with left main artery coronary artery disease can be managed equally well by coronary-artery bypass grafting (CABG) and percutaneous coronary intervention (PCI).

Past research has demonstrated that CABG is strikingly superior to medical treatment among patients with coronary artery disease. Moreover, there is a general agreement that, in the absence of contraindications, patients suffering from left main coronary artery disease should undergo revascularisation. The evolution of revascularisation techniques over the years has resulted in greater use of PCI and CABG. Multiple randomized and multicentre studies and studies based on registry data have compared the two strategies and have produced very similar results with respect to the composite end point of death, myocardial infarction, stroke or unplanned ischemia-driven revascularisation. The incidence of stroke has been found to be higher in the CABG group than in the PCI (with drug-eluting stents) group. Consequently, PCI has been increasingly used, thus exceeding the frequency of CABG use.

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However, there is uncertainty about these findings, as they have been based on inadequately sized, hypothesis-generating trials and meta-analyses, many of which involved a mixture of trials as well as studies based on registry data. The Evaluation of XIENCE versus Coronary Artery Bypass Surgery

For Effectiveness of Left Main Revascularization (EXCEL) trial aims at shedding light on this issue. EXCEL is a large, multinational, multicentre trial that randomly assigned 1,905 patients with unprotected left main coronary artery disease, who were considered suitable for revascularisation with either CABG or PCI by an interventional cardiologist and a cardiac surgeon. The goal of both modalities was to achieve complete anatomical revascularisation.

The results of the EXCEL study showed that the rate of all-cause mortality was numerically higher in the PCI group than in the CABG group. However, this was partly associated to a trend of an increased incidence of deaths from non-cardiovascular causes. The rate of stroke was numerically higher in the CABG group than in the PCI group, and the rate of ischemia-driven revascularisations was significantly higher in the PCI group than in the CABG group.

In conclusion, the EXCEL trial suggests that the majority of patients with unprotected left main coronary artery disease, which was used to be a very serious, life-shortening and disabling condition, can now be successfully treated by means of both CABG and PCI, if carried out by expert, experienced teams such as those participating in the EXCEL trial. The outcomes of shorter hospital stay, rapid recovery and return to normal activity favour PCI over CABG. Despite the similar results with respect to the primary end point of death, stroke or myocardial infarction at 3 years, the PCI group exhibited a greater increase in these events between 30 days and 3 years. Therefore, EXCEL investigators plan further follow-up of these patients.

Source : [The New England Journal of Medicine](#)

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