

Cardiac interventions II

Cost effectiveness of drug eluting stents vs coronary artery bypass graft in Emilia Romagna: A 24-month analysis

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Objective: To assess the cost effectiveness of Percutaneous Coronary Intervention (PCI) with Stents vs Coronary Artery Bypass Graft (CABG) in patients with multivessel coronary disease in Emilia-Romagna, a 4.2-million inhabitants Italian region.

Methods: Using two prospective registers including all PCI and CABG procedures, we did a 2-year cost effectiveness analysis in 1,590 patients receiving PCI with at least one stent or CABG between 1/7/2002 and 31/12/2004. Two 1:1 groups matched by the propensity score (estimated by logistic regressions) and we used non-parametric bootstrap techniques to determine ICERs. Sensitivity analysis was carried out by altering hospitalization costs of the first procedure.

Results: Overall costs were higher for CABG patients (€23,223.85 [SD 266.39]) than for those with stent (€15,119.07 [304.28]), mean difference €8,104.78 [403.73], $p < 0.0001$. Effectiveness was measured as event-free years (efY) and was respectively 1.875 [0.015] and 1.651 [0.023], mean difference 0.224 [0.028], $p < 0.0001$. We calculated an ICER for CABG of 36,823.16 per efYs gained. Diminishing the hospitalization cost of 30% decreased the ICER to 32,859.37 while with a 30% increase we obtained an ICER of 48,714.52.

Conclusions: We found a better cost effectiveness profile for PCI with stent(s) compared to CABG: for values of willing to pay less than €24k it is definitely a cost effective strategy.

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