Appendix G. Evidence tables: Economic studies

Abbreviations

CABG	Coronary artery bypass graft
CCS	Canadian cardiovascular society
CI	Confidence interval
CVD	Cardiovascular disease
EECP	Enhanced external counterpulsation
EVPI	Expected value of perfect information
HRQoL	Health-related quality of life
ICER	Incremental cost-effectiveness ratio
ICU	Intensive care unit
ITT	Intention to treat analysis
Int	Intervention
LOS	Length of stay
MACCE	Major adverse cardiac and cerebrovascular event
M/F	Male/female
MI	Myocardial infarction
N	Total number of patients randomised
NA	Not applicable
NR	Not reported
PCI	Percutaneous coronary intervention
PTCA	Percutaneous transluminal coronary angioplasty
QALY	Quality-Adjusted Life Years
RCT	Randomised controlled trial
SA	Sensitivity analysis
SAQ	Seattle Angina Questionnaire
SD	Standard deviation
SE	Standard error
Sig	Statistically significant at 5%

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Abizaid 2001{Abizaid, 2001 9151 /id} USA **Economic analysis:** Cost consequences analysis **Study design** RCT* **Duration of follow-up:** 1 year **Perspective:** Healthcare provider **Discount rates:** Costs: NA Effects: NA	**Patient group:** Patients with diabetes and multi-vessel coronary artery disease from the ARTS trial. **<u>All patients</u>** **N:** 208 **Age (mean):** NR **M/F:** 149/59 **Unstable angina:** 82 **Drop outs:** 0 **<u>Group 1</u>** **N:** 112 **Age (mean):** 62.4 **M/F**: 82/30 **Unstable angina:** 44 **Drop outs:** 0 **<u>Group 2</u>** **N:** 96 **Age (mean):** 62.6 **M/F**: 67/29 **Unstable angina:** 38 **Drop outs:** 0	**Group 1:** PCI Stent **Group 2:** CABG	Number of patients dead at 1 year	**Group 1:** 7 (6.3%) **Group 2:** 3 (3.1%) **p value:** 0.294	**Funding/conflict of interest:** NR **Limitations:** Short time-horizon. Cost of further medications not included (only hospital costs). Costs of resources from one hospital only. No sensitivity analysis. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Data sources:** Unit costs from Dijkzigt Hospital. **Notes:** * based on a subgroup from the ARTS trial **calculated by NCGC
			Number of patients experiencing cerebrovascular events at 1 year	**Group 1:** 2 (1.8%) **Group 2:** 6 (6.3%) **p value:** 0.096	
			Number of patients experiencing myocardial infarction at 1 year	**Group 1:** 7 (6.3%) **Group 2:** 3 (3.1%) **p value:** 0.294	
			Number of patients having repeated vascularisation (CABG and PTCA) at 1 year	**Group 1:** 25 (22.3%) **Group 2:** 3 (3.1%) **p value:** <0.001	
			Number of event-free patients alive at 1 year	**Group 1:** 71 (63.4%) **Group 2:** 81 (84.4%) **p value:** <0.001	
			Mean cost per patient 1998 USD, cost of procedure and follow-up	**Group 1:** $12,855 (£8,291) **Group 2:** $16,585 (£10,052) **p value:** <0.001	
			Cost-effectiveness** Incremental cost per additional event-free patient	Group 2 vs Group 1: $8,386 (£5,409)	
			Sensitivity analysis	NR	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Borghi 2000{Borghi, 2000 78 /id} UK **Economic analysis:** Cost analysis **Study design** Cross-sectional study **Duration of follow-up:** One year **Perspective:** UK NHS **Discount rates:** Costs: NA Effects: NA	**Patient group:** New, switched and existing stable angina patients. **<u>All patients</u>** **N:** 1825 **N with comorbidities:** 640 (35%) **<u>Group 1</u>** **N:** 1253 **N with comorbidities:** 473 (38%) **<u>Group 2</u>** **N:** 572 **N with comorbidities:** 167 (29%)	**Group 1:** Beta-blocker (Tenormin) **Group 2:** Calcium-channel blocker (Tildiem)	**Mean cost per patient without comorbidities over one year** **a) new patient** **b) after switching** **c) existing patient** 1997/98 GBP. Cost of anti-anginal drugs, additional medication, GP-initiated tests, GP and practice nurse visits, outpatient visits, elective and emergency admissions.	**Group 1:** a) £656 b) £871 c) £320 **Group 2:** a) £1,014 b) £774 c) £336 **p value:** NR	**Funding/conflict of interest:** NR **Limitations:** Based on a cross-sectional study. No measure of effectiveness was assessed. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Data sources:** Resource use data obtained from the IMS Health Database, UK Mediplus ® Resource costs obtained from NHS databases and UK cost studies.
			Cost-effectiveness	NR	
			Sensitivity analysis One-way SA	The costs in patients with comorbidities had the same trend in the year after switching and for existing patients. Only for new patients with comorbidities treatment with beta-blocker was associated with higher costs. The overall results do not change when: - frequency of GP visits is varied - incidence of hospitalisation is varied (from 0 to double) - the cost of generic drugs is used.	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
De Feyter 2002{de Feyter, 2002 39 /id} Netherlands **Economic analysis:** Cost-effectiveness analysis **Study design** RCT* **Duration of follow-up:** 12 months **Perspective:** Healthcare provider **Discount rates:** Costs: NA Effects: NA	**Patient group:** patients with stable angina from the ARTS trial **<u>All patients**</u>** **N:** 755 **Age (mean):** NR **M/F:** 574/181 **Drop outs:** 0 **<u>Group 1</u>** **N:** 381 **Mean age (range):** 62 (32-81) **M/F**: 293/88 **Drop outs:** 0 **<u>Group 2</u>** **N:** 374 **Mean age (range):** 61 (35-83) **M/F**: 281/93 **Drop outs:** 0	**Group 1:** Stented angioplasty **Group 2:** CABG	Number of patients dead at 1 year	**Group 1:** 9 (2.4%) **Group 2:** 12 (3.2%) **p value:** Not sig	**Funding/conflict of interest:** NR **Limitations:** No sensitivity analysis was performed. No HRQoL outcomes were considered. Some costs (e.g. GP visits) might have been missed. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Data sources:** Unit cost from the Netherlands. **Notes:** *ARTS trial **Only subset of stable angina patients is included in our review.
			Number of patients experiencing cerebrovascular accidents at 1 year	**Group 1:** 9 (2.1%) **Group 2:** 5 (1.3%) **p value:** Not sig	
			Number of patients experiencing myocardial infarction at 1 year	**Group 1:** 19 (5.1%) **Group 2:** 11 (2.9%) **p value:** Not sig	
			Number of patients having repeat revascularisation at 1 year	**Group 1:** 63 (16.8%) **Group 2:** 13 (3.5%) **p value:** <0.01	
			Number of angina and medication free patients at 1 year	**Group 1:** 67 (18%) **Group 2:** 160 (42%) **p value:** <0.003	
			Number of MACCE-free patients at 1 year	**Group 1:** 275 (73.5%) **Group 2:** 340 (89.2%) **p value:** <0.0001	
			Mean cost per patient 1998 USD, cost of procedure, hospitalisation, follow-up, rehospitalisation, medication.	**Group 1:** $10,368 (£6,687) **Group 2:** $12,960 (£8,359) **p value:** Not sig	
			Cost-effectiveness Incremental cost per additional MACCE-free patient.	Group 2 vs Group 1: $16,510 (£10,649)	
			Sensitivity analysis	NR	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Eefting 2003{Eefting, 2003 1030 /id} The Netherlands **Economic analysis:** Cost-utility analysis **Study design** RCT **Duration of follow-up:** 1 year **Perspective:** NHS **Discount rates:** Costs: NA Effects: NA	**Patient group:** Patients with stable or unstable angina and/or documented ischemia. **<u>All patients</u>** **N:** 280 **Age (mean):** NR **Stable angina CCS I or II:** 60 **Stable angina CCS III or IV:** 128 **M/F:** 199/81 **Drop outs:** 0 [a] **<u>Group 1</u>** **N:** 138 **Age (mean):** 60.3 **Stable angina CCS I or II:** 22 [b] **Stable angina CCS III or IV:** 73 [b] **M/F**: 97/41 **Drop outs:** 0 [a] **<u>Group 2</u>** **N:** 142 **Age (mean):** 58.9 **Stable angina CCS I or II:** 38 [b] **Stable angina CCS III or IV:** 55 [b] **M/F**: 102/40 **Drop outs:** 0 [a]	**Group 1:** Stenting performed by use of standard techniques. **Group 2:** Off-pump bypass surgery by use of the Octopus tissue stabilizer.	Number of patients dead at 1 year	**Group 1:** 0 (0.0%) **Group 2:** 4 (2.8%) **p value:** NR	**Funding/conflict of interest:** Netherlands National Health Insurance Council. **Limitations:** Short follow-up. Lack of blinding. At baseline patients in Group 1 had more severe angina symptoms. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Notes:** [a] 7 in Group 1 and 6 in Group 2 did not undergo the assigned treatment [b] significantly more patients in Group 1 were in CCS III or IV. [c] costs were estimated in Dutch florins and converted to US dollars ($1 = 2.5 DFL). [d] The main cost drivers were operating room, intensive care, ward, additional investigations and outpatient rehab.
			Number of patients experiencing myocardial infarction at 1 year	**Group 1:** 6 (4.4%) **Group 2:** 7 (4.9%) **p value:** Not Sig	
			Number of patients with repeated revascularisation at 1 year	**Group 1:** 21 (15.2%) **Group 2:** 6 (4.2%) **p value:** Sig	
			Number of event-free patients still alive at 1 year	**Group 1:** 118 (85.5%) **Group 2:** 130 (91.5%) **p value:** Not Sig	
			QALYs	**Group 1:** 0.82 **Group 2:** 0.79 **p value:** 0.09	
			Mean cost per patient at 1 year 1999 USD [c], direct cost of procedure, hospitalisation, follow-up including reoperation, rehabilitation, medications and tests [d].	**Group 1:** $7,043 (£4,599) **Group 2:** $9,518 (£6,215) **p value:** <0.01	
			Cost-effectiveness Incremental cost per QALY gained	Stenting is dominant	
			Sensitivity analysis Bootstrap simulation	Stenting is dominant in 95% of the 500 simulations.	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Griffin 2007{Griffin, 2007 53 /id} UK **Economic analysis:** Cost-utility analysis **Study design** Cohort study **Duration of follow-up:** 6 years **Perspective:** NHS **Discount rates:** Costs: 3.5% Effects: 3.5%	**Patient group:** Consecutive patients who had coronary angiography between 15 April 1996 and 14 April 1997 at three hospitals of one NHS trust in London and who were suitable for both CABG and PCI. Their suitability to have revascularisation was assessed using the RAND appropriateness method. **<u>All patients</u>** **N:** 520 **Age (mean):** 59 **M/F:** 403/117 **Drop outs:** NR **<u>Group 1</u>** **N:** 173 **Age (mean):** NR **M/F**:NR **Drop outs:** NR **<u>Group 2</u>** **N:** 149 **Age (mean):** NR **M/F**: NR **Drop outs:** NR **<u>Group 3</u>** **N:** 198 **Age (mean):** NR	**Group 1:** PCI **Group 2:** CABG **Group 3:** Medical management	Number of patients who died at 6 years	**Group 1:** 28 (16%) **Group 2:** 18 (12%) **Group 3:** 34 (17%) **p value:** Adjusted HR sig for Group 2 vs Group 1	**Funding/conflict of interest:** British Heart Foundation. The authors declared no competing interests. **Limitations:** Not a randomised study. PCI procedure could have been without stents. EQ-5D data were not collected at baseline and at one year; scores were only predicted at these time points from other variables. Criteria for assessment of the suitability for revascularisation could have changed since time of study. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Data sources:** Occurrence of admissions and LOS from the NHS-wide clearing service; data on drugs from hospital case notes, GP and patients' questionnaires; unit costs from published studies and pricing lists for the UK
			Number of patients with angina at 6 years	**Group 1:** 61/102 (60%) **Group 2:** 52/89 (58%) **Group 3:** 82/119 (69%) **p value:** Adjusted odd ratio not sig	
			Number of patients experiencing non-fatal myocardial infarction at 6 years	**Group 1:** 19 (11%) **Group 2:** 15 (10%) **Group 3:** 16 (8%) **p value:** NR	
			Number of patients having further revascularisation at 6 years	**Group 1:** 47 (27%) **Group 2:** 9 (6%) **Group 3:** 83 (42%) **p value:** NR	
			Number of patients admitted for chest pain at 6 years	**Group 1:** 73 (42%) **Group 2:** 58 (39%) **Group 3:** 82 (41%) **p value:** NR	
			Discounted mean QALYs (SD) over 6 years	**Group 1:** 2.93 (1.65) (n=127) **Group 2:** 3.13 (1.37) (n=114) **Group 3:** 2.83 (1.39) (n=164) **p value:** NR	
			Discounted mean cost per patient over 6 years 2004 GBP, cost of intervention, angiography, hospital stay, drugs, admissions for chest pain, GP and outpatient visits, visits to the emergency department.	**Group 1:** 14,007 (SD 10,453) **Group 2:** 17,859 (SD 6,940) **Group 3:** 10,690 (SD 7,888) **p value:** Sig	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
	M/F: NR **Drop outs:** NR		**Cost-effectiveness** incremental cost per QALY gained	Group 1 vs 3: £22,900/QALY* Group 2 vs 1: £15,917/QALY* Group 2 vs 3: £18,603/QALY*	**Notes:** * based on the adjusted mean difference of QALYs (0.24 vs Group 1 and 0.39 vs Group 3) and costs (£3,820 vs Group 1 and £7,255 vs group 3).
			Sensitivity analysis	For patients deemed appropriate for CABG only, the ICERs become: Group 1 vs 3 £10,560/QALY Group 2 vs 1 £21,533/QALY Group 2 vs 3 £14,675/QALY For patients deemed appropriate for PCI only, CABG is dominated and the ICER of Group 1 vs 3 is £47,450. At a threshold of £20,000/QALY all the strategies have a similar probability of being cost-effective.	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Hambrecht 2004{Hambrecht, 2004 9023 /id} Germany **Economic analysis:** cost-consequences analysis **Study design** RCT **Duration of follow-up:** 1 year **Perspective:** Health care provider **Discount rates:** Costs: NA Effects: NA	**Patient group: male** patients aged 70 years or less with stable CAD and one native coronary artery stenosis of at least 75% by visual assessment amenable to PCI; class I to II of angina with documented myocardial ischemia. Patients who had CABG or PCI within the last 12 months were excluded. **<u>All patients</u>** **N:** 101 **Age (mean):** **M/F:** 101/0 **Drop outs:** 4 **<u>Group 1</u>** **N:** 50 **Age (mean):** 60±1 **M/F**: 50/0 **Drop outs:** 2 **<u>Group 2</u>** **N:** 51 **Age (mean):** 62±1 **M/F**: 50/0 **Drop outs:** 2	**Group 1:** Stent angioplasty **Group 2:** Exercise training. During the first two weeks patients exercised in the hospital 6 times per day for 10 minutes on a bicycle ergometer at 70% of the symptom-limited maximal heart rate. At discharge, patients were asked to exercise for 20 minutes per day and to participate in one 60-minute group training session of aerobic exercise per week.	Number of deaths of cardiac causes	**Group 1:** 0 **Group 2:** 0 **p value:** NA	**Funding/conflict of interest:** Unconditional scientific grant from Aventis, Germany. **Limitations:** A breakdown of costs was not provided. An overall summary of cost-effectiveness was provided only in the text. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Additional outcomes:** To gain 1CCS class, the cost was $6956 (£4,396) in the angioplasty group and $3429 (£2,167) in the exercise group.
			Number of cerebrovascular accidents (%)	**Group 1:** 3 (6%) **Group 2:** 2 (3.9%) **p value:** Not sig	
			Number of revascularisation (%), including CABG, PTCA of target lesion as event and PTCA of other coronary segments as event	**Group 1:** 10 (20%) **Group 2:** 3 (5.9%) **p value:** Not sig	
			Hospitalisation and coronary angiography	**Group 1:** 7 (14%) **Group 2:** 1 (2%) **p value:** Not sig	
			Mean cost per patient (±SE) 2003 USD, cost of interventions including hospital charges, expenses for supervised training sessions, bicycle ergometer, coronary angiographies, and rehospitalisation.	**Group 1:** $6,086 (±370) (£3,846) **Group 2:** $3,708 (±156) (£2,344) **p value:** <0.001	
			Cost-effectiveness	NR	
			Sensitivity analysis	NR	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Henderson 1998{Henderson, 1998 263 /id} UK **Economic analysis:** Cost consequences analysis **Study design** RCT* **Duration of follow-up:** 6.5 years (median) **Perspective:** NHS **Discount rates:** Costs: 6% Effects: NR	**Patient group:** Patients with angina, with single- or multi-vessel disease, in whom equivalent revascularisation could be achieved by either CABG or PTCA. **<u>All patients</u>** **N:** 1011 **Age (mean):** NR (the majority was in the range 50-59) **M/F:** 815/196 **Drop outs:** 28 **<u>Group 1**</u>** **N:** 510 **Age (mean):** NR **M/F**: NR **Drop outs:** 17 **<u>Group 2**</u>** **N:** 501 **Age (mean):** NR **M/F**: NR **Drop outs:** 11	**Group 1:** PTCA without stents. Stents were used in only 14 PTCAs. **Group 2:** CABG	Number of patients dead at follow-up	**Group 1:** 39 (7.6%) **Group 2:** 45 (9.0%) **p value:** 0.51	**Funding/conflict of interest:** UK Department of Health; British Heart Foundation and the British Cardiac Society. **Limitations:** Not an incremental analysis. HRQoL was not assessed. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Data sources:** Unit costs taken from one London centre and one centre from elsewhere. **Notes:** * based on the RITA-1 trial ** An intention-to-treat analysis was performed.
			Number of patients experiencing non-fatal myocardial infarction	**Group 1:** 55 (10.8%) **Group 2:** 37 (7.4%) **p value:** 0.08	
			Number of patients having repeated revascularisation (either PTCA or CABG) at follow-up	**Group 1:** 226 (44.3%) **Group 2:** 54 (10.8%) **p value:** NR	
			Patients with improved or no angina between 1-year and 5-year follow-up visits	**Group 1:** 312/461 (67.8%) **Group 2:** 334/446 (74.9%) **p value:** NR	
			Discounted mean cost per patient at 5 years 1997 GBP, cost of initial procedure, subsequent procedures, other inpatient care, medications.	**Group 1:** £8,842 (SD £7,516) **Group 2:** £9,268 (SD £5,384) **p value:** Not sig	
			Cost-effectiveness	NR	
			Sensitivity analysis One-way SA	When a 3% discount rate was used the costs of PTCA were 96% of the costs of CABG; if no discount rate is used the ratio is 98% (cost difference not statistically significant at any of these rates)	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Hlatky 2009{Hlatky, 2009 9244 /id} USA **Economic analysis:** Cost-utility analysis **Study design** Multi-centre RCT* **Duration of follow-up:** 4 years **Perspective:** Healthcare provider **Discount rates:** Costs: 3% Effects: NR	**Patient group:** patients with type 2 diabetes mellitus and stable, angiographically documented coronary disease. **<u>All patients</u>** **N:** 2005 **Drop outs:** 1323** **<u>Group 1</u>** **N:** 988 **<u>Group 2</u>** **N:** 1017	**Group 1:** Early revascularisation with a) CABG b) PCI as decided by the physician **Group 2:** Medical therapy	Life years***	**a) CABG stratum** **Group 1:** 3.56 **Group 2:** 3.59 **p value:** NR **b) PCI stratum** **Group 1:** 3.58 **Group 2:** 3.65 **p value:** NR	**Funding/conflict of interest:** National Heart, Lung and Blood Institute, GlaxoSmithKline, Lantheus Medical Imaging, Astellas Pharma, Merck & Co, Abbott Laboratories, Pfizer, MediSense Products, Bayer Diagnostics, Becton, Dickinson and Co, J.R. Carlson Labs, Centocor Inc, Eli Lilly, lipoScience, Merck Sante, Novartis, Novo Nordisk. **Limitations:** Not clear how utilities were used to calculate results in the study. In the clinical paper the probability of cardiovascular events was lower in the CABG stratum (inconsistent with the QALYs calculation). QALYs were not adjusted by baseline values. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Additional outcomes:** A regression analysis showed the baseline factors that affected cumulative costs at 2 years (intervention assigned, use of insulin, baseline HbA level, gender, body mass index). None of these factors had a significant interaction with treatment
			QALY ***	**a) CABG stratum** **Group 1:** 3.267 **Group 2:** 3.274 **p value:** NR **b) PCI stratum** **Group 1:** 3.221 **Group 2:** 3.248 **p value:** NR	
			Mean 4 year cost per patient [#] 2007 USD, hospitalisation, outpatient visits, nursing home/rehab, medications, test and procedure. Hospital costs calculated using a ratio of cost to charges.	**a) CABG stratum** **Group 1:** $124,400 (£69,115) **Group 2:** $103,600 (£57,560) **p value:** NR **b) PCI stratum** **Group 1:** $106,300 (£59,060) **Group 2:** $96,400 (£53,560) **p value:** NR	
			Cost-effectiveness incremental cost per QALY gained	Medical therapy is dominant.	
			Sensitivity analysis	Medical therapy was not dominant but still cost-effective when: - results were extrapolated to lifetime assuming costs after 4	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
				years are the same in the 2 groups - QALYs were adjusted by baseline values - a reduced survival after MI (2 and 3 years) and after non-fatal stroke (3 years) was assumed When cost differences persist indefinitely medical treatment is reported to be less cost-effective (counterintuitive).	assignment. **Notes:** *Based on the BARI 2D trial. ** At the end of follow-up economic outcomes were available for 34% of the participants. *** PCI stratum results only (n=667 Group1, n=680 Group 2) # 2008 GBP obtained by using the purchasing power parities and GDP deflator indexes (http://eppi.ioe.ac.uk/costconversion/default.aspx)

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Legrand 2004{Legrand, 2004 1001 /id} The Netherlands **Economic analysis:** Cost-effectiveness analysis **Study design** RCT* **Duration of follow-up:** 3 years **Perspective:** Healthcare provider **Discount rates:** Costs: NR Effects: NR	**Patient group:** Patients with multivessel disease** **<u>All patients</u>** **N:** 1205 **Age (mean):** 61 **M/F:** 922/283 **Drop outs:** 6*** **<u>Group 1</u>** **N:** 600 **Age (mean):** 61 **M/F**: 462/138 **Drop outs:** NR **<u>Group 2</u>** **N:** 605 **Age (mean):** 61 **M/F**: 460/145 **Drop outs:** NR	**Group 1:** Stent **Group 2:** CABG	Number of patients dead at 3 years	**Group 1:** 22 (3.7%) **Group 2:** 28 (4.6%) **p value:** Not Sig	**Funding/conflict of interest:** NR **Limitations:** Baseline quality of life was not reported. Number of patients and percentages reported do not match. Unclear if discounting was applied to costs and effects. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Additional outcomes:** At 3 years patients in Group 2 had significantly less angina (12.8% vs 18.4%, P=0.011) and lower rate of use of antianginal medications (65.4% vs 78.4%, P<0.001). **Notes:** * based on the ARTS trial. ** both stable and unstable angina patients ***1 lost to follow-up, 3 withdrew consent, 2 never treated by either modality.
			Number of patients experiencing cardiovascular accident at 3 years	**Group 1:** 20 (3.3%) **Group 2:** 20 (3.3%) **p value:** Not sig	
			Number of patients experiencing myocardial infarction at 3 years	**Group 1:** 44 (7.3%) **Group 2:** 34 (5.7%) **p value:** Not sig	
			Number of patients having repeated procedure (either PCI or CABG) at 3 years	**Group 1:** 175 (29.2%) **Group 2:** 44 (7.3%) **p value:** Sig	
			Number of event-free patients still alive at 1 year	**Group 1:** 395 (65.8%) **Group 2:** 504 (83.3%) **p value:** <0.0001	
			Summary of EQ-5D score at 3 years (mean ± SD)	**Group 1:** 85 ± 17 **Group 2:** 86 ± 17 **p value:** 0.74	
			Mean cost per patient over 3 years 1998 Euro, diagnostic tests, devices and material, procedures, hospital stay, medications, rehabilitation.	**Group 1:** €14,302 (£10,183) **Group 2:** €16,100 (£11,463) **p value:** 0.0001	
			Cost-effectiveness Incremental cost for additional event-free patient	Group 2 vs Group 1: €10, 492 (£7,470) 95%CI €3,722 – €20,772 (£2,650–£14,790)	
			Sensitivity analysis One-way SA	The ICER is less favourable to CAGB when repeated procedure is excluded as an efficacy end point or when a shorter follow-up (1 year) is considered.	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
McKenna 2009{McKenna, 2009 9392 /id} UK **Economic analysis:** CUA **Study design** Decision analysis based on the MUST-EECP RCT. **Time horizon:** lifetime **Perspective:** UK NHS and Personal Social Services **Discount rates:** Costs:3.5% Effects: 3.5%	**Patient group:** patients with angina with an average age of 64 years.	**Intervention 1:** No treatment **Intervention 2:** EECP	QALY	**Int 1:** 7.237 **Int 2:** 7.492 **p value:** NR	**Funding/conflict of interest:** HTA programme **Limitations:** The analysis was based on limited data (one small RCT). Utilities were obtained from an algorithm converting SF-36 to EQ-5D. Durability of benefits obtained from expert opinion. The model does not consider: the effect of intervention on mortality or MI, the cost of escalating medical treatment over time, costs associated with no intervention. Only 20% of the patients in the EUROPA trial had angina and they could have a different mortality compared to refractory angina patients. **Overall quality and applicability** Potentially serious limitations; direct applicability. **Additional outcomes:** At a threshold £20k/QALY individual patient EVPI is £971 and population EVPI is £107,556,668. **Data sources:** Based on the MUST-EECP (Arora 1999 and 2002). QoL improvement calculated as EQ-5D scores using an algorithm to convert the SF-36 scores into EQ-5D. QoL after one year was estimated with expert elicitation techniques (frequency
			Mean cost per patient 2008 GBP, capital cost of EECP machine, equipment replacement costs, consumables, staffing costs, overheads, repeat operations.	**Int 1:** 0 **Int 2:** 4,750 **p value:** NR	
			Cost-effectiveness Cost per QALY gained	Int 2 vs Int 1: £18,643/QALY	
			Sensitivity analysis One-way SA:	Ranges of ICER calculated varying the following: Probability of sustaining QoL benefits over time from separate expert opinion: £10,664 - £28,158. Cost of EECP per patient increased/decreased by £1000: £14,353 - £22,932. Results not sensitive to the rate of repeat EECP within two years (varied from 10% to 30%), subgroup analysis of women/men and different ages; discount rates 6% for costs and 1.5% for outcomes.	
			Worst-case/best-case scenario	When QoL benefits from EECP are only sustained in the first year, the ICER =£63,000. When QoL benefits are sustained over a lifetime, the ICER = £5,830	
			Monte Carlo simulation	Probability of being cost-effective at £20k/QALY threshold: 44.4% EECP.	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
					chart). Mortality data from CVD causes obtained from the EUROPA trial. General mortality based on standard UK rates adjusted to exclude CVD deaths. Cost data from personal communication and price list of supplier.

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
O'Neill 1996{O'Neill, 1996 321 /id} UK **Economic analysis:** cost-consequences analysis **Study design** RCT{O'Neill, 1996 9181 /id},{Cupples, 1994 9190 /id} **Duration of follow-up:** 2 years **Perspective:** NHS **Discount rates:** Costs: NR Effects: NR	**Patient group:** patients in the Belfast area aged less than 75 years and known to have angina for at least 6 months **<u>All patients</u>** **N:** 688 **Drop outs:** 29 **<u>Group 1</u>** **N:** 342 **Age (mean):** 62.7 (SD 7.1) **M/F**: 203/139 **Drop outs:** 12 **<u>Group 2</u>** **N:** 346 **Age (mean):** 63.6 (SD 6.8) **M/F**: 205/141 **Drop outs:** 17	**Group 1:** Three visits per year from a health visitor whose brief was discuss ways of living more easily with their disease and in which risks of further events might be reduced. **Group 2:** control	**Number of deaths**	**Group 1:** 13 (3.8%) **Group 2:** 29 (8.4%) **p value:** Not sig	**Funding/conflict of interest:** Medical Research Council. **Limitations:** Unclear whether the costs are per patient over two years. Old study, medical treatment might have not been optimal at that time. Unclear what intervention the control group received. Not all the important outcomes were evaluated (e.g. angina symptoms, MI). **Overall quality and applicability** Potentially serious limitations; partial applicability.
			Mean cost per patient 1996 GBP, Cost of intervention (staff time and travel related costs), drugs, GP visits, hospital visits (inpatient and outpatient), tests and other treatments.. Community care costs were excluded.	**Group 1:** £1,851 **Group 2:** £1,812 **p value:** Not sig	
			Cost-effectiveness	NR	
			Sensitivity analysis	NR	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Sculpher 1994{Sculpher, 1994 86 /id} UK **Economic analysis:** cost consequences analysis **Study design** RCT [a] **Duration of follow-up:** 2 years **Perspective:** **Discount rates:** Costs: 6% Effects: NA	**Patient group:** patients with arteriographically proven coronary artery disease requiring revascularisation. Patients with previous PTCA or CABG were excluded. **All patients** **N:** 1011 **Group 1** **N:** 510 [b, c] **Group 2** **N:** 501 [b, c]	**Group 1:** Percutaneous transluminal coronary angioplasty (PTCA) **Group 2:** Coronary artery bypass grafting (CABG)	Number of patients dead at 2 years	**Group 1:** 13 (2.5%) **Group 2:** 9 (1.8%) **p value:** Not sig	**Funding/conflict of interest:** British Heart Foundation, British Cardiac Society, and Department of Health; ACS UK (Basingstoke, Nats), Medtronic Ltd (Watford, Herts), Schneider (Staines, Middx). **Limitations:** Not an incremental analysis. HRQoL was not assessed. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Data sources:** Hospital unit costs from two hospitals (one in London, one outside). Drugs cost from BNF. **Notes:** [a] based on the RITA trial [b] cost data were missing for 6 patients. [c] ITT analysis: in the CABG group 5 patients had PCTA and 6 no intervention; in the PTCA group 7 patients had CABG, 29 PTCA and CABG in the same admission, and 10 no intervention. [c] Data from non-London centre
			Number of patients experiencing non-fatal myocardial infarction at 2 years	**Group 1:** 32 (6.3%) **Group 2:** 25 (4.9%) **p value:** Not sig	
			Number of patients with no angina at 1 year	**Group 1:** 343 (69.1%) **Group 2:** 398 (82.9%) **p value:** <0.0001	
			Number of patients with no angina at 2 years	**Group 1:** 328 (64.3%) **Group 2:** 373 (79.1%) **p value:** 0.0023	
			Mean cost per patient over 2 years [d] 1994 GBP, cost of procedures, admissions, reoperations, coronary arteriograms, hospital stay for reasons not related to revascularisation, antianginal medications.	**Group 1:** £5,448 (SE £173) **Group 2:** £6,498 (SE £134) **p value:** Sig	
			Cost-effectiveness	NR	
			Sensitivity analysis	The difference in cost was £1823 (sig) when data from the London hospital were used; £1145 in the single vessel disease subgroup; £970 in the multiple vessel disease subgroup.	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Sculpher 2002{Sculpher, 2002 44 /id} UK **Economic analysis:** Cost consequences analysis. **Study design** RCT* **Duration of follow-up:** 3 years **Perspective:** NHS **Discount rates:** Costs: 6% Effects: NA	**Patient group:** patients with arteriographically proven coronary artery disease recruited from 20 centres in the UK and Ireland and suitable for both continued medical therapy and PTCA. **<u>All patients</u>** **N:** 1018 **Age (mean):** **M/F:** **Drop outs:** **<u>Group 1**</u>** **N:** 514 **Age (mean):** **M/F**: **Drop outs:** **<u>Group 2**</u>** **N:** 504 **Age (mean):** **M/F**: **Drop outs:**	**Group 1:** Medical management with possible discontinuation if a patient no longer had angina symptoms. **Group 2:** PTCA. Stents and other coronary interventional techniques were only used if initial revascularisation with balloon angioplasty was unsatisfactory.	Number of deaths at 3 years	**Group 1:** 9 (1.8%) **Group 2:** 14 (2.8%) **p value:** 0.3***	**Funding/conflict of interest:** British Heart Foundation; Medical Research Council; Advanced Cardiovascular Systems Inc. (USA), Interventions (UK), Cordis Ltd, Schneider (UK) and Nycomed Ltd. **Limitations:** Utility values were not estimated. No incremental analysis was conducted. Stents were not used in the primary intervention. **Overall quality and applicability** Minor limitations; partial applicability. **Data sources:** Unit costs from five UK hospitals in different locations and national sources. Cost of drugs from the Prescription Pricing Authority. **Notes:** * based on RITA-2{Chamberlain, 1997 3544 /id} ** ITT analysis: 471 of group 2 underwent the randomised PTCA. *** calculated by NCGC using a two-tailed Fisher's exact test
			Number of deaths and MI at 3 years	**Group 1:** 21 (4.1%) **Group 2:** 37 (7.3%) **p value:** 0.025	
			Patients with grade 2 or worse angina at 1 year	**Group 1:** 139 (27.4%) **Group 2:** 83 (17.0%) **p value:** 0.001	
			Patients with grade 2 or worse angina at 3 years	**Group 1:** 106 (21.5%) **Group 2:** 93 (19.5%) **p value:** 0.43	
			Number of subsequent revascularisation (CABG or PTCA) at 3 years	**Group 1:** 155 **Group 2:** 111 **p value:** NR	
			Mean cost per patient 1999 GBP, cardiac procedures, in-hospital stay, subsequent procedures, GP and outpatient visits, antianginal and cardiac drugs	**Group 1:** £3,613 **Group 2:** £6,299 **p value:** Sig	
			Cost-effectiveness	NR	
			Sensitivity analysis Subgroup analysis One-way SA	Similar results when patients were stratified by CCS score, breathlessness, exercise time, and overall score. Similar results when no discount rate is applied, the cost of visits for non-cardiac reasons is excluded, or when unit costs from the 5 hospitals are used separately.	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Walker 2006{Walker, 2006 8950 /id} UK **Economic analysis:** Cost-effectiveness analysis **Study design** RCT **Duration of follow-up:** 1.6 years **Perspective:** UK NHS **Discount rates:** Costs: 0% Effects: 0%	**Patient group:** high risk angina patients participating in the IONA trial{Dargie, 2002 6190 /id}. **All patients** **N:** 5126 **Group 1** **N:** 2561 **Group 2** **N:** 2565	**Group 1:** Placebo + usual care **Group 2:** Nicorandil + usual care Usual care was 57% beta-blockers, 56% calcium channel blockers, 87% nitrates, 88% aspirin.	Primary end points averted (coronary heart disease death, non-fatal myocardial infarction, hospital admission for cardiac chest pain)*	**Group 2 - Group 1:** 2.4% **p value:** NR	**Funding/conflict of interest:** Merck KGaA **Limitations:** Effectiveness data were reported only in the incremental analysis. SA was made only on the primary analysis (cost of care after discharge excluded). HRQoL was not assessed. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Data sources:** Resources used from RCT{Dargie, 2002 6190 /id}. Cost of units from national sources. **Notes:** * calculated by NCGC from the incremental analysis
			Cases of definite acute coronary syndromes (coronary heart disease death, non-fatal myocardial infarction or unstable angina)*	**Group 2 - Group 1:** 1.5% **p value:** NR	
			Number of people free from any major cardiovascular event (coronary heart disease death, non-fatal myocardial infarction, unstable angina, definite or probable angina, stroke or hospital admission for transient ischaemic attack).	**Group 1:** 2069 (80.8%) **Group 2:** 2136 (83.3%) **p value:** NR	
			Mean cost per patient 2002 GBP, cost of nicorandil (including 10% dispensing fee and two additional physician visits), adverse events related to nicorandil, hospital admissions, surgical procedures	**Group 1:** 243.7 **Group 2:** 243.6 **p value:** NR	
			Cost-effectiveness Cost per additional unit of effectiveness	Nicorandil+usual care was dominant for all the three outcomes considered	
			Sensitivity analysis One-way SA	Nicorandil is more costly than usual care when: - cost of care after discharge is included - either cost of cardiology, cardiac surgery or ICU is reduced by 20%	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Weintraub 1995{Weintraub, 1995 350 /id} USA **Economic analysis:** Cost consequences analysis **Study design** RCT* **Duration of follow-up:** 3 years **Perspective:** Health care provider **Discount rates:** Costs: NR Effects: NR	**Patient group:** patients with multivessel coronary artery disease (60% two-vessel disease and 40% three-vessel disease) **<u>All patients**</u>** **N:** 392 **M/F:** 289/103 **Diabetes:** 90 **Prior MI:** 160 **Drop outs:** 8 **<u>Group 1</u>** **N:** 198 **Age (mean±CI):** 62±10 **M/F**: 148/50 **Diabetes:** 49 **Prior MI:** 81 **Drop outs:** 2 **<u>Group 2</u>** **N:** 194 **Age (mean±CI):** 61±10 **M/F**: 141/53 **Diabetes:** 41 **Prior MI:** 79 **Drop outs:** 6	**Group 1:** PTCA **Group 2:** CABG	Number of in-hospital deaths	**Group 1:** 2 (1%) **Group 2:** 2 (1%) **p value:** Not sig	**Funding/conflict of interest:** Grant from the National Heart, Lung and Blood Institute. **Limitations:** Other direct medical costs (e.g. medications) were not included. Costs were calculated based on charges. The authors note that costs and outcomes of procedures could vary over time. Costs from one US hospital only. HRQoL was not assessed. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Additional outcomes:** Proportions of patients with overall good health, complete recovery, same economic status than before, returned to work, retired after procedure were not statistically different in the two groups. **Data sources:** Costs were calculated from hospital charges applying the cost-to-charge ratios. **Notes:**
			Number of in-hospital MI	**Group 1:** 6 (3%) **Group 2:** 20 (10.3%) **p value:** 0.005	
			Number of deaths during 3-year follow-up	**Group 1:** 14 (7.1%) **Group 2:** 12 (6.2%) **p value:** Not sig	
			Number of MI during 3-year follow-up	**Group 1:** 29/173 (14.6%) **Group 2:** 38/172 (19.6%) **p value:** Not sig	
			Patients requiring additional procedures during follow-up	**Group 1:** 89 (45%) **Group 2:** 25 (13%) **p value**: <0.0001	
			Proportion of patients in angina class 0 – 1 – 2 – 3 – 4 at 3 years.	**Group 1:** 76% - 4% - 7% - 5% - 7% **Group 2:** 86% - 2% - 5% - 1% - 6% **p value**: 0.056	
			Proportion of patients on 0 – 1 – 2 – 3 antianginal medication	**Group 1:** 34% - 47% - 17% - 2% **Group 2:** 49% - 39% - 10% - 2% **p value**: 0.029	
			Mean cost per 3-year procedure 1987 USD, hospital costs and physician charges.	**Group 1:** $23,735 (£13,078) **Group 2:** $25,310 (£13,946) **p value:** <0.0001	
			Cost-effectiveness	NR	
			Sensitivity analysis	When costs were inflated to 1993 USD or when charges were used instead of costs, the overall results did not change. The two interventions had similar costs (difference not significant) in patients with triple vessel disease	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
				with ≥50% diameter luminal narrowing in more than one site in at least one affected vessel. Multiple regression analysis: the surgical group was strongly correlated with initial hospital costs but it was not correlated with 3-year cumulative costs.	* Based on the EAST trial ** Intention-to-treat analysis

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Weintraub 2000{Weintraub, 2000 9168 /id} USA **Economic analysis:** Cost consequences analysis **Study design** RCT* **Duration of follow-up:** 8 years **Perspective:** Health care provider **Discount rates:** Costs: 3% Effects: NR	**Patient group:** patients with multivessel coronary artery disease (60% two-vessel disease and 40% three-vessel disease) **<u>All patients**</u>** **N:** 392 **M/F:** 289/103 **Diabetes:** 90 **Prior MI:** 160 **Drop outs:** 8 **<u>Group 1</u>** **N:** 198 **Age (mean±CI):** 62±10 **M/F**: 148/50 **Diabetes:** 49 **Prior MI:** 81 **Drop outs:** 2 **<u>Group 2</u>** **N:** 194 **Age (mean±CI):** 61±10 **M/F**: 141/53 **Diabetes:** 41 **Prior MI:** 79 **Drop outs:** 6	**Group 1:** PTCA **Group 2:** CABG	Number of deaths during 8-year follow-up	**Group 1:** 41 (20.7%) **Group 2:** 34 (17.3%) **p value:** 0.40	**Funding/conflict of interest:** NR **Limitations:** Other direct medical costs (e.g. medications) were not included. Costs were calculated based on charges. The authors note that costs and outcomes of procedures could vary over time. Costs from one US hospital only. HRQoL was not assessed. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Data sources:** Costs were calculated from hospital charges applying the cost-to-charge ratios. **Notes:** * Based on the EAST trial ** Intention-to-treat analysis *** cost data available for 197 patients in Group 1 and 189 in Group 2.
			Discounted mean cost per 8-year procedure*** 1997 USD, hospital costs and physician charges.	**Group 1:** $43,758 (£27,786) **Group 2:** $46,225 (£29,353) **p value:** 0.29	
			Cost-effectiveness	NR	
			Sensitivity analysis	NR	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Weintraub 2004{Weintraub, 2004 114 /id} UK **Economic analysis:** Cost-utility analysis **Study design** RCT** **Duration of follow-up:** One year **Perspective:** UK NHS **Discount rates:** Costs: NA Effects: NA	**Patient group:** patients with multivessel disease **<u>All patients</u>** **N:** 988 **<u>Group 1</u>** **N:** 488 **<u>Group 2</u>** **N:** 500	**Group 1:** Stent assisted PCI **Group 2:** CABG	Mortality rate	**Group 1:** 2.5% **Group 2:** 0.8% **p value:** 0.05	**Funding/conflict of interest:** consortium of stent manufacturers: Medtronic, Switzerland; Guidant, USA; Boston Scientific, Germany **Limitations:** Very short follow-up. Utility data were missing at one or more time points for 30% of the overall sample. No sensitivity analysis was conducted. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Data sources:** Resources used calculated for all the patients in the trial. Costs per unit were obtained from BNF and NHS reference costs. Utilities were estimated from participants using EQ-5D scores. **Notes:** * based on the SoS trial **utility was imputed when missing at one or more of the three time points for 30% of the overall sample. ***calculated by NCGC
			Repeat revascularisation	**Group 1:** 17.2% **Group 2:** 4.2% **p value:** <0.001	
			QALY at one year**	**Group 1:** 0.6938 **Group 2:** 0.6954 **p value:** not sig	
			Mean cost per patient 2004 GBP, cost of hospitalisation, procedure, ward, complications, follow-up, readmission, rehabilitation, medications.	**Group 1:** 6,296 **Group 2:** 8,905 **p value:** sig	
			Cost-effectiveness*** incremental cost per QALY gained	Group 2 vs Group 1: £1,630,525	
			Sensitivity analysis	NR	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Weintraub 2008{Weintraub, 2008 9247 /id} USA **Economic analysis:** Cost-utility analysis **Study design** RCT* **Duration of follow-up:** 4.6 years 3 years for costs **Perspective:** Healthcare provider **Discount rates:** Costs: 3% Effects: 3%	**Patient group:** patients with stable coronary artery disease with >70% stenosis in at least one major epicardial coronary artery with objective evidence of myocardial ischemia or at least one coronary stenosis >80% and classic angina without provocative testing. **<u>All patients</u>** **N:** 2287 **Age (mean):** 62 **M/F:** 1947/340 **Previous MI:** 876 **Angina**: 88% **Multivessel disease**: 69% **Drop outs:** 0 **<u>Group 1</u>** **N:** 1149 **Age (mean):** 62 **M/F**: 979/170 **Previous MI:** 437 **Utility**: 0.90 (95% CI ±0.20) (n=775) **Drop outs:** 0 **<u>Group 2</u>** **N:** 1138 **Age (mean):** 62 **M/F**: 968/170 **Previous MI:** 439 **Utility**: 0.87 (95% CI ±0.22) (n=748)	**Group 1:** PCI – Stents and angioplasty **Group 2:** Medical therapy	Utility estimated by Standard Gamble at 1 month – mean ± 95%CI	**Group 1:** 0.92±0.19 (n=665) **Group 2:** 0.91±0.20 (n=699) **p value:** 0.66	**Funding/conflict of interest:** Dept of Veterans Affairs, Canadian Institutes for Health research; Merck&Co; Pfizer; Bristol-Myers Squibb Medical Imaging; Kos Pharmaceuticals; Data Scope; Astra Zeneca; Key Pharmaceutical, Sanofi-Aventis; First Horizon; Nycomed Amersham. **Limitations:** Valuation of utilities not obtained from public but from patients. Patients in the study were low risk. Effectiveness was estimated for the total duration of the trial (4.6 years) while costs only for 3 years. These results were combined. PCI group included angioplasty too. **Overall quality and applicability** Minor limitations; partial applicability. **Notes:** * based on the COURAGE trial{Boden, 2007 483 /id} ** 2008 GBP obtained by using the purchasing power parities
			Utility estimated by Standard Gamble at 3 months – mean ± 95%CI	**Group 1:** 0.93±0.17 (n=669) **Group 2:** 0.92±0.19 (n=678) **p value:** 0.008	
			Utility estimated by Standard Gamble at 6 months – mean ± 95%CI	**Group 1:** 0.93±0.17 (n=701) **Group 2:** 0.93±0.15 (n=665) **p value:** 0.20	
			Utility estimated by Standard Gamble at 1 year – mean ± 95%CI	**Group 1:** 0.93±0.17 (n=648) **Group 2:** 0.93±0.15 (n=636) **p value:** 0.53	
			Utility estimated by Standard Gamble at 2 years – mean ± 95%CI	**Group 1:** 0.93±0.17 (n=550) **Group 2:** 0.92±0.17 (n=532) **p value:** 0.59	
			Utility estimated by Standard Gamble at 3 years – mean ± 95%CI	**Group 1:** 0.92±0.20 (n=385) **Group 2:** 0.90±0.21 (n=379) **p value:** 0.004	
			Discounted in-trial life years – mean ± 95%CI	**Group 1:** 4.15±1.50 **Group 2:** 4.12±1.51 **p value:** 0.03	
			Discounted in-trial QALYs – mean ± 95%CI	**Group 1:** 3.56±1.34 **Group 2:** 3.51±1.36 **p value:** 0.05	
			Mean cost per patient over 3 years** 2004 USD, hospitalisation, PCI, medication, outpatient services.	**Group 1:** $34,843 (£21,247) **Group 2:** $24,718 (£15,073) **p value:** Sig (95% CI of difference is always positive)	
			Cost-effectiveness** Incremental cost per QALY gained	PCI vs Medical Treatment: $206,229 (£125,759)	

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
	Drop outs: 0		**Sensitivity analysis** Structural SA One-way SA Threshold analysis PSA	 Extrapolating beyond RCT follow-up: PCI is still significantly more costly and more effective (not sig); If drug-eluting stents are used, they assumed no revascularisation after PCI, added cost of $600 in the initial PCI and clopidogrel for one year, PCI would not be cost-effective (ICER=$197,465). Life-years gained with PCI was varied from -40% to +40% → PCI still not cost-effective. To achieve an ICER<$50,000/QALY, PCI would need to improve QALYs by 0.60. Ranges of incremental QALY with PCI -0.5 to 0.5; incremental costs $4,000 to $16,000. At a $50k/QALY threshold PCI has a 25% probability of being cost-effective.	and GDP deflator indexes (http://eppi.ioe.ac.uk/costconversion/default.aspx)

Study details	Patients	Interventions	Outcome measures	Effect size	Comments
Zhang 2006{Zhang, 2006 532 /id} UK **Economic analysis:** cost-consequences analysis **Study design** RCT* **Duration of follow-up:** 1 year **Perspective:** Hospital **Discount rates:** Costs: NA Effects: NA	**Patient group:** symptomatic patients with typical angina and multivessel disease eligible for both CABG and PCI. **<u>All patients</u>** **N:** 395 **Age (range):** NR **M/F:** 296/99 **Drop outs:** 0 **<u>Group 1</u>** **N:** 190 **Age (mean):** 70.4 **M/F**: 136/54 **Drop outs:** 0 **<u>Group 2</u>** **N:** 205 **Age (mean):** 70.6 **M/F**: 150/55 **Drop outs:** 0	**Group 1:** Stent-assisted PCI **Group 2:** CABG	Number patients dead at 1 year (%)	**Group 1:** 4 (2.1%) **Group 2:** 1 (0.5%) **p value:** 0.168	**Funding/conflict of interest:** NR **Limitations:** Source of costs not clear. No incremental analysis was conducted. Short follow-up. **Overall quality and applicability** Potentially serious limitations; partial applicability. **Additional outcomes:** In-hospital death, myocardial infarction, bleeding and cerebrovascular accident were not significantly different in the two groups. Average LOS was 13.2 days in group 2 vs 5.4 days in group 1 (Sig). **Data sources:** UK unit costs were applied to resource use recorded in the trial **Notes:** * based on the SoS trial ** scores of the Seattle Angina Questionnaire (SAQ) range from 0 to 100. A clinically important change is between 5 and 8 points. *** The difference was £2,948 (95% CI £1,432 – £4,198)
			Number of patients experiencing Q-wave myocardial infarction at 1 year (%)	**Group 1:** 13 (6.8%) **Group 2:** 17 (8.3%) **p value:** 0.998	
			Number of patients experiencing bleeding at 1 year (%)	**Group 1:** 3 (1.6%) **Group 2:** 5 (2.4%) **p value:** 0.219	
			Number of patients experiencing cerebrovascular accidents at 1 year (%)	**Group 1:** 5 (2.6%) **Group 2:** 5 (2.4%) **p value:** 0.388	
			Number of patients having a repeat revascularisation (%)	**Group 1:** 37 (19.5%) **Group 2:** 7 (3.4%) **p value:** <0.0001	
			Adjusted improvement in SAQ Quality of Life score at 6 months**	**Group 1:** 25.5 **Group 2:** 30.5 **p value:** 0.0335	
			Adjusted SAQ Quality of Life score at 1 year**	**Group 1:** 30.7 **Group 2:** 32.1 **p value:** 0.5601	
			Mean cost per patient 2000 GBP, cost of hospitalisation and follow-up	**Group 1:** £6,611 **Group 2:** £9,559 **p value:** Sig***	
			Cost-effectiveness	NR	
			Sensitivity analysis	Results were similar for younger patients (≤65 years).	

All non-UK costs converted into GBP using the Purchasing Power Parities{Organisation for Economic Cooperation and Development, 2010 15954 /id}.