

S Table 1: Unit costs used to value resource use data collected from ART

Resource category	Unit cost (2016/17 GBP/£)	Assumptions and Source
Health care contact at follow-up		
GP clinic attendance	37.00	Unit Costs of Health and Social Care 2017 (section 10.3b). Per surgery consultation lasting 9.22 minutes.
Visits to practice nurse	14.47	Unit Costs of Health and Social Care 2017. Per patient contact lasting 15.5 minutes
Outpatient clinic attendance	128.72	NHS Reference Costs – Total Outpatient Attendance - Cardiology outpatient clinic (320).
Cardiac rehabilitation clinic attendance	72.96	NHS Reference Costs – Total Outpatient Attendance - Cardiac rehabilitation outpatient clinic (327).
Hospital re-admission bed day	305.85	NHS Reference Costs – Index - Non-elective inpatient excess bed day cost. Weighted average of all admission types.
Medications at follow-up (per day)		
Aspirin	0.01	75mg per day for duration of follow-up.
Clopidogrel	0.02	75 mg per day for a period of three months unless otherwise stated.
Warfarin	0.02	6mg per day for duration of follow-up.
Beta-blockers	0.01	Assumed drug is Bisoprolol at 5mg per day for duration of follow-up.
Calcium-channel antagonists	0.01	Assumed drug is Amlodipine at 5mg per day for duration of follow-up.
Nitrates	0.07	Assumed drug is Isosorbide Mononitrate at 40mg per day for duration of follow-up.
Potassium channel activators	0.13	Assumed drug is Nicorandil at 40mg per day for duration of follow-up.
Statins	0.03	Assumed half of patients received Simvastatin at 40mg per day and half Atorvastatin at 80mg per day for duration of follow-up.
Other lipid lowering drugs	0.00	Assumed drug is Ezetimibe at 10mg per day -up.
ACE inhibitors	0.02	Assumed drug is Ramipril at 5mg per day.
Angiotensin-II antagonists	0.03	Assumed half of patients received Losartan at 100mg per day and half Candesartan at 32mg per day for duration of follow-up.
Diuretics	0.00	Assumed drug is Furosemide at 40mg per day for a period of four weeks after surgery.
Digoxin	0.02	250mcg per day for duration of follow-up.
Amiodarone	0.11	600mg per day for duration of follow-up.
Adverse events at follow-up requiring admission		
Myocardial infarction	2213.04	NHS Reference Costs – Non-elective inpatient - Actual or Suspected Myocardial Infarction (weighted average across CC scores) (EB10).
Cerebrovascular accident	3558.94	NHS Reference Costs – Non-elective inpatient - Cerebrovascular Accident, Nervous System Infections or Encephalopathy (weighted average across CC scores) (AA22).
Further CABG	9804.89	NHS Reference Costs – Non-elective inpatient – Complex / Major / Standard Coronary Artery Bypass Graft (weighted average across CC scores) (ED26/7/8).
Further PCI	3655.15	NHS Reference Costs – Non-elective inpatient – Complex / Standard Percutaneous Transluminal Coronary Angioplasty (weighted average across CC scores) (EY40/1).
Revascularisation with catheterisation only	3582.59	NHS Reference Costs – Non-elective inpatient - Complex / Standard Cardiac Catheterisation Angioplasty (weighted average across CC scores) (EY42/3).
Major bleed	5953.62	Assumed to require surgery for investigation and to incur the same cost as sternal wound infection requiring reconstruction.
Other adverse events	Various	Costed by associated length of hospital stay using the cost of a non-elective inpatient excess bed day (£305.85 per day).
Adverse events at follow-up without admission		
Myocardial infarction	521.99	NHS Reference Costs - Day case - Actual or Suspected Myocardial Infarction, General day case (weighted average across CC scores) (EB10).
Cerebrovascular accident	561.75	NHS Reference Costs – Day case - Cerebrovascular Accident, Nervous System Infections or Encephalopathy (weighted average across CC scores) (AA22).
Further PCI	1980.06	NHS Reference Costs– Day case - Complex / Standard Percutaneous Transluminal Coronary Angioplasty (weighted average across CC scores) (EY40/1).
Major bleed	5953.62	Assumed to require surgery for investigation and to incur the same cost as sternal wound infection requiring reconstruction.
Revascularisation with catheterisation only	1001.19	NHS Reference Costs– Day case - Complex / Standard Cardiac Catheterisation (weighted average across CC scores) (EY42/3).

Emergency investigations	258.38	NHS Reference Costs– A&E category 4 or 5 treatment (weighted average). Used as an estimate for day hospital cost for patients not admitted.
Theatre Resource Use		
Operating theatre time (per minute)	24.74	Average of theatre running costs (inclusive of staff) divided by theatre hours for cardiology at 8 boards in Scotland carrying out CABG (cardiac surgery).
Drugs for anaesthetic induction	4.81	Assuming 1mg Fentanyl , 5mg Midazolam, 1 amp (4mg) Pancuronium bromide
Muscle relaxant maintenance	9.03	Assuming 2 amps of Pancuronium bromide.
Inhalational anaesthetics (per minute)	0.00	Assuming Isoflurane at a concentration of 50% and fresh gas flow of 3 litres per min.
Consumables (all procedures)	416.25	Gray et al. 2017 inflated to 2016/17 prices using PSSRU HCS inflation index.
Additional consumables (on-pump procedures)	104.06	Gray et al. 2017 inflated to 2016/17 prices using PSSRU HCS inflation index.
Bypass machine time (per hour)	15.21	Machine purchase cost plus maintenance contract annuitised assuming a machine lifespan of 7 years and assuming a 3.5% discount rate. Annual usage of machine is assumed to be eight hours per day, five days per week.
Unit of red blood cells	120.00	Assuming 294ml mean volume per unit.
Unit of platelets	193.15	Assuming 297ml mean volume per unit.
Unit of fresh frozen plasma	28.46	Assuming 246ml mean volume per unit.
Unit of cryoprecipitate (pooled)	177.57	Assuming 187ml mean volume per unit
Laboratory issuing costs per blood product unit	2.08	Campbell et al. 2015 inflated to 2016/17 prices using PSSRU HCS inflation index.
Cell saver machine (per hour)	1.44	Machine purchase cost plus maintenance contract annuitised assuming a machine lifespan of 7 years and assuming a 3.5% discount rate. Annual usage of machine is assumed to be eight hours per day, five days per week.
Cell saver consumables	104.06	Gray et al. 2017 inflated to 2016/17 prices using PSSRU HCS inflation index.
Aprotinin (per dose)	333.37	Assuming one-off cost for 6 million Kallikrein Inhibitor Units intravenously; 2012/13 cost inflated to 2016/17 cost year using HCHS Inflation Index.
Post-theatre Resource Use		
Ventilator	37.78	Dasta et al. 2005 inflated to 2016/17 prices using PSSRU HCS inflation index.
Intra-aortic balloon pump plus pressure transducer (per insertion)	582.75	Gray et al. 2017 inflated to 2016/17 prices using PSSRU HCS inflation index.
Inotrope drug days		
Adrenaline	12.75	Assuming average dose of 0.08 mcg/kg/min, 4mg in total volume 50ml with 5% Dextrose
Noradrenaline	5.20	Assuming average dose of 0.05 mcg/kg/min, 4mg in total volume 50ml with 5% Dextrose.
Dobutamine	3.98	Assuming average dose of 6 mcg/kg/min, 250mg in total volume 50ml with 5%
Renal support therapy (per day)	328.38	NHS reference cost – Renal - Haemodialysis for Acute Kidney Injury, 19 years and over (LE01A)
Haemofiltration (single dose)		
Mannitol	6.15	Assumes a one off dose of 0.2-2g/kg intravenously.
Frusemide	0.09	Assumes a one off dose of 20-50mg intravenously.
<i>Treatment of sternal wound infection</i>		
Antibiotics for superficial SWI (per course)	10.32	Assuming antibacterial protocol of 1g Flucloxacillin IV 4 times daily for 2 days; and either 2g Flucloxacillin IV once daily, 500mg Cefalexin 3 times daily, or 450mg Clindamycin 3 times daily for 5 days.
Antibiotics for deep sternal wound infection (per course)	106.23	Assuming antibacterial protocol of 500mg Meropenem and 600mg iv for 3 doses, then 600mg Teicoplanin IV once daily, then 3 times daily for 7 days.
VAC Dressing (per episode)	303.44	Gray et al. 2017 inflated to 2016/17 prices using PSSRU HCS inflation index. Includes VAC canister, dressing and machine and assumes three applications. Costs provided by trial participating hospital.
Debridement procedures	2984.82	Assumed to require two hours of theatre time and prophylactic antibiotics. Time costed using theatre and anaesthetic drug costs
Surgical reconstruction	5953.62	Assumed to require four hours of theatre time and prophylactic antibiotics. Time costed using theatre and anaesthetic drug costs
SAEs during index admission		

Myocardial infarction	880.06	NHS Reference Costs – Non-elective inpatient - Actual or Suspected Myocardial Infarction (weighted average across CC scores) (EB10), less inpatient bed days costed using average excess bed day cost for the same currency code (weighted average across CC scores).
Cerebrovascular accident	1195.47	NHS Reference Costs – Non-elective inpatient - Cerebrovascular Accident, Nervous System Infections or Encephalopathy (weighted average across CC scores) (AA22), less inpatient bed days costed using average excess bed day cost for the same currency codes (weighted average across CC scores).
Further CABG	6794.63	NHS Reference Costs – Non-elective inpatient – Complex / Major / Standard Coronary Artery Bypass Graft (weighted average across CC scores) (ED26/7/8), less inpatient bed days costed using average excess bed day cost for the same currency codes (weighted average across CC scores).
Further PCI	2079.82	NHS Reference Costs – Non-elective inpatient – Complex / Standard Percutaneous Transluminal Coronary Angioplasty (weighted average across CC scores) (EY40/1), less inpatient bed days costed using average excess bed day cost for the same currency codes (weighted average across CC scores).
Cardiac catheterisation only	1607.76	NHS Reference Costs – Non-elective inpatient - Complex / Standard Cardiac Catheterisation Angioplasty (weighted average across CC scores) (EY42/3), less inpatient bed days costed using average excess bed day cost for the same currency codes (weighted average across CC scores).
Major bleed	5953.62	Assumed to require surgery for investigation and to incur the same cost as sternal wound infection requiring reconstruction.
Inpatient bed days		
Intensive Therapy Unit	624.96	NHS Reference costs - Critical care - weighted average across all unventilated critical care service codes (CCU01-91) (Currency code: XC07Z).
High Dependency Unit	385.03	Gray et al. 2017 inflated to 2016/17 prices using PSSRU HCS inflation index.
Cardiac Ward	348.44	NHS Reference costs - Non Elective Inpatients Excess Bed Days - Complex / Major / Standard Coronary Artery Bypass Graft (weighted average across CC scores) (ED26/7/8)
Post-hospital discharge		
Other hospital (per day)	348.44	Assumed same bed day cost as for cardiac ward above.
Nursing home (per day)	158.29	Unit Costs of Health and Social Care 2017 (section 1.3).
Rehabilitation unit (total cost)	2922.06	Unit Costs of Health and Social Care 2014 (section 1.6) inflated to 2016/17 prices using the PSSRU HCS inflation index. Assumes an average stay of 33 days.

S Table 3: Sensitivity analysis showing mean costs for a “available case” analysis

	Year 1 Mean cost		Year 2 Mean cost		Year 3 Mean cost		Year 4 Mean cost		Year 5 Mean cost		Total at year 5 Mean difference (95% CI, p value)		
	SITA	BITA	SITA	BITA	SITA	BITA	SITA	BITA	SITA	BITA	SITA	BITA	BITA vs SITA
Healthcare contacts													
GP visits	243	238	165	162	153	148	147	138	140	140	779	759	-19.4 (-61.3, 22.5; 0.350)
Nurse visits	46	50	17	21	21	21	21	23	20	22	117	130	11.9 (-7.4, 31.3; 0.217)
Outpatient clinic visits	247	317	153	173	128	166	158	150	144	148	774	859	122.9 (53.5, 192.2; 0.001)
Cardiac rehabilitation visits	463	476	89	85	68	46	54	75	41	43	696	717	9.6 (-173.2, 192.3; 0.915)
Number of nights in hospital	849	1029	247	203	237	203	234	235	260	242	1675	1704	74.7 (-165.0, 314.4; 0.528)
Medications													
Total medication	38	38	40	42	41	45	42	47	42	43	189	201	11.9 (-3.5, 27.3; 0.125)
Adverse event treatment													
Myocardial infarction	16	13	3	5	3	9	9	6	11	11	38	40	-1.6 (-20.9, 17.7; 0.866)
Cerebrovascular accident	20	11	10	13	12	5	6	11	24	18	65	51	-11.6 (-42.7, 19.4; 0.448)
Further CABG	0	7	0	0	0	7	0	0	0	0	0	15	13.9 (-4.1, 31.8; 0.125)
Further PCI	56	41	45	24	42	44	18	28	34	26	176	155	-30.3 (-97.7, 37.0; 0.363)
Revascularisation with catheter	3	19	14	20	24	14	17	10	1	16	54	76	24.3 (-18.1, 66.8; 0.250)
Sternal wound problems	104	289	1	0	0	0	0	1	0	0	105	265	184.4 (43.6, 325.2; 0.012)
Major bleed	35	25	0	0	0	0	0	1	0	0	31	26	-10.0 (-46.8, 26.8; 0.582)
Other AEs (cost of hospital stay only)	458	504	203	174	182	142	188	207	285	216	1184	1138	-73.5 (-365.2, 218.2; 0.610)
Death (cost of hospital stay only)	40	4	5	0	2	7	10	2	0	5	58	15	-33.9 (-97.0, 29.1; 0.279)
n	1444	1414	1435	1390	1376	1322	1269	1245	1196	1215	1029	1038	

S Table 4: Costs for subgroups: diabetes

	No history of diabetes			Insulin dependent diabetes			Non-insulin dependent diabetes		
	SITA	BITA	BITA vs SITA	SITA	BITA	BITA vs SITA	SITA	BITA	BITA vs SITA
Total cost of index admission	11775	12562	787 (-30.1, 1604.5; 0.058)	12458	14426	1968 (-154.6, 4090.4; 0.067)	12279	13047	768 (-468.2, 2005.1; 0.211)
Total costs of discharge locations	650	551	-100 (-486.3, 286.4; 0.599)	341	532	191 (-106.0, 487.0; 0.195)	371	548	177 (-275.6, 629.9; 0.427)
GP visits	830	799	-30 (-83.6, 22.8; 0.250)	943	987	44 (-164.3, 252.3; 0.664)	938	916	-22 (-143.5, 98.6; 0.705)
Nurse visits	117	126	9 (-9.7, 28.6; 0.320)	123	225	102 (-76.2, 279.9; 0.247)	141	129	-12 (-47.4, 23.6; 0.495)
Outpatient clinic visits	802	883	81 (-62.6, 225.6; 0.255)	1124	2114	990 (-326.9, 2306.8; 0.133)	824	865	41 (-107.8, 188.9; 0.576)
Cardiac rehabilitation visits	649	654	5 (-183.0, 193.0; 0.957)	300	362	62 (-207.3, 331.7; 0.627)	511	560	49 (-528.6, 626.7; 0.862)
Number of nights in hospital	454	451	-4 (-100.6, 93.0; 0.936)	468	575	107 (-390.2, 604.1; 0.658)	547	734	187 (-380.7, 754.8; 0.503)
Total medication	203	204	1 (-21.3, 23.6; 0.919)	134	216	81 (23.2, 139.2; 0.009)	173	216	43 (6.2, 80.1; 0.024)
Myocardial infarction	40	40	-0 (-32.7, 32.6; 0.996)	56	81	25 (-96.9, 146.6; 0.675)	33	32	-1 (-34.0, 32.2; 0.954)
Cerebrovascular accident	79	57	-22 (-56.7, 13.0; 0.209)	45	75	30 (-127.8, 187.6; 0.697)	69	52	-17 (-120.4, 86.3; 0.737)
Further CABG	0	17	17 (-5.0, 38.3; 0.126)	0	0	.	0	0	.
Further PCI	187	157	-30 (-107.2, 47.6; 0.436)	0	154	154 (-31.8, 339.6; 0.099)	250	214	-37 (-136.7, 63.6; 0.459)
Revascularisation with catheter	66	69	3 (-45.1, 51.4; 0.895)	14	60	47 (-42.6, 136.2; 0.288)	83	129	45 (-32.7, 123.2; 0.242)
Sternal wound problems	68	158	90 (-23.5, 204.2; 0.115)	307	1395	1088 (-288.2, 2465.1; 0.115)	206	507	301 (-63.2, 665.5; 0.101)
Major bleed	32	51	18 (-38.5, 75.2; 0.513)	0	0	.	42	23	-19 (-121.6, 82.9; 0.699)
Other AEs (cost of hospital stay only)	1140	1091	-50 (-381.0, 281.8; 0.761)	2019	2042	23 (-2647.5, 2694.0; 0.986)	1247	1333	86 (-636.3, 809.0; 0.807)
Death (cost of hospital stay only)	178	82	-96 (-195.2, 3.3; 0.057)	23	785	761 (-171.5, 1694.1; 0.104)	242	98	-143 (-341.9, 55.2; 0.149)
Total cost at 5 years	17269	17951	681 (-605.0, 1967.9; 0.285)	18355	24028	5673 (256.9, 11089.1; 0.041)	17957	19403	1447 (-438.1, 3331.3; 0.126)

Total cost of index admission includes the total cost of surgery (Time in theatre (minutes), duration related theatre costs and staff, duration related anaesthetic costs, time on bypass (minutes), and other surgery costs (consumables, blood products, aprotinin), post-operative costs (Ventilation time, Intra-aortic balloon pump, Inotropic support, Renal support therapy, Hemofiltration) and any in hospital adverse events (Myocardial Infarction, Cerebrovascular accident, Further CABG, Further PCI, Revascularisation with catheter, Major bleed, Other AEs (cost of hospital stay only), Death (cost of hospital stay only))

S Table 5: Costs for subgroups: age groups

	Aged < 70 Yrs			Aged >= 70 Yrs		
	SITA	BITA	BITA vs SITA	SITA	BITA	BITA vs SITA
Total cost of index admission	11653	12401	748 (114.4, 1381.9; 0.023)	12562	13780	1218 (-84.8, 2521.3; 0.065)
Total costs of discharge locations	380	429	49 (-99.4, 197.3; 0.502)	1126	887	-238 (-1351.7, 875.3; 0.661)
GP visits	846	862	16 (-28.3, 59.3; 0.471)	879	746	-133 (-266.4, 1.3; 0.052)
Nurse visits	108	122	14 (-5.6, 33.3; 0.154)	159	165	6 (-41.6, 53.9; 0.791)
Outpatient clinic visits	816	933	116 (-32.1, 264.9; 0.119)	838	1019	181 (-143.6, 506.5; 0.259)
Cardiac rehabilitation visits	568	567	-1 (-248.1, 245.7; 0.992)	707	767	60 (-228.4, 348.3; 0.670)
Number of nights in hospital	446	442	-4 (-118.9, 110.0; 0.936)	541	698	157 (-271.2, 584.8; 0.455)
Total medication	190	213	22 (1.9, 43.0; 0.033)	203	190	-13 (-40.8, 14.1; 0.324)
Myocardial infarction	39	47	9 (-14.2, 31.6; 0.443)	42	23	-19 (-54.7, 17.5; 0.297)
Cerebrovascular accident	58	41	-17 (-53.6, 20.1; 0.358)	121	102	-19 (-110.8, 72.3; 0.667)
Revascularisation with catheter	0	17	17 (-5.7, 40.0; 0.134)	0	0	.
Further CABG	222	179	-43 (-148.8, 63.0; 0.412)	101	133	32 (-49.7, 113.2; 0.427)
Further PCI	70	86	16 (-28.0, 60.1; 0.459)	58	61	3 (-65.8, 71.3; 0.935)
Sternal wound problems	112	314	202 (-8.3, 413.2; 0.059)	88	246	158 (-11.2, 327.7; 0.066)
Major bleed	26	20	-6 (-40.6, 28.7; 0.725)	50	106	56 (-90.0, 202.6; 0.433)
Other AEs (cost of hospital stay only)	874	1071	197 (-188.0, 582.1; 0.302)	2081	1533	-549 (-1274.2, 176.9; 0.131)
Death (cost of hospital stay only)	67	100	32 (-33.3, 98.1; 0.320)	486	208	-278 (-559.0, 3.1; 0.052)
Total cost at 5 years	16474	17842	1368 (640.7, 2095.1; 0.001)	20042	20666	623 (-1986.6, 3233.0; 0.624)

Total cost of index admission includes the total cost of surgery (Time in theatre (minutes), duration related theatre costs and staff, duration related anaesthetic costs, time on bypass (minutes), and other surgery costs (consumables, blood products, aprotinin), post-operative costs (Ventilation time, Intra-aortic balloon pump, Inotropic support, Renal support therapy, Hemofiltration) and any in hospital adverse events (Myocardial Infarction, Cerebrovascular accident, Further CABG, Further PCI, Revascularisation with catheter, Major bleed, Other AEs (cost of hospital stay only), Death (cost of hospital stay only))

S Table 6: Costs for subgroups: on/off pump

	Off-pump			On-pump		
	SITA	BITA	BITA vs SITA	SITA	BITA	BITA vs SITA
Total cost of index admission	11851	12018	167 (-863.9, 1197.9; 0.737)	12025	13509	1484 (884.9, 2082.5; 0.000)
Total costs of discharge locations	645	546	-99 (-335.3, 137.6; 0.393)	538	554	16 (-501.0, 532.9; 0.950)
GP visits	706	699	-7 (-41.0, 26.3; 0.650)	955	927	-28 (-94.4, 38.4; 0.391)
Nurse visits	141	147	6 (-17.7, 30.1; 0.594)	110	123	14 (-11.0, 38.5; 0.262)
Outpatient clinic visits	997	1194	197 (0.7, 393.4; 0.049)	707	788	81 (-11.7, 173.1; 0.084)
Cardiac rehabilitation visits	834	620	-214 (-422.4, -6.4; 0.044)	456	623	166 (-11.4, 344.1; 0.065)
Number of nights in hospital	462	471	8 (-98.5, 114.8; 0.874)	481	540	59 (-160.0, 278.6; 0.581)
Total medication	205	215	10 (-11.0, 30.6; 0.333)	187	202	15 (-5.5, 35.4; 0.143)
Myocardial infarction	53	45	-8 (-43.4, 27.4; 0.643)	31	39	8 (-10.9, 26.9; 0.389)
Cerebrovascular accident	87	61	-27 (-70.6, 17.6; 0.224)	68	56	-12 (-62.5, 37.9; 0.617)
Revascularisation with catheter	0	15	15 (-7.7, 38.3; 0.180)	0	11	11 (-12.1, 34.1; 0.335)
Further CABG	228	157	-70 (-196.0, 55.5; 0.257)	165	177	12 (-63.8, 87.9; 0.746)
Further PCI	73	98	26 (-38.4, 90.2; 0.411)	63	67	4 (-43.7, 51.2; 0.871)
Sternal wound problems	41	273	232 (23.8, 439.4; 0.031)	149	319	170 (-37.0, 376.6; 0.103)
Major bleed	52	47	-5 (-79.9, 70.7; 0.900)	20	40	20 (-42.1, 82.3; 0.511)
Other AEs (cost of hospital stay only)	1250	1223	-27 (-280.0, 225.3; 0.823)	1184	1188	4 (-463.2, 471.4; 0.986)
Death (cost of hospital stay only)	280	236	-44 (-290.1, 202.0; 0.712)	118	53	-65 (-141.8, 11.5; 0.092)
Total cost at 5 years	17905	18065	160 (-1181.9, 1501.2; 0.805)	17256	19214	1958 (706.5, 3209.5; 0.004)

Total cost of index admission includes the total cost of surgery (Time in theatre (minutes), duration related theatre costs and staff, duration related anaesthetic costs, time on bypass (minutes), and other surgery costs (consumables, blood products, aprotinin), post-operative costs (Ventilation time, Intra-aortic balloon pump, Inotropic support, Renal support therapy, Hemofiltration) and any in hospital adverse events (Myocardial Infarction, Cerebrovascular accident, Further CABG, Further PCI, Revascularisation with catheter, Major bleed, Other AEs (cost of hospital stay only), Death (cost of hospital stay only))

S Table 7: Costs for subgroups: baseline history of myocardial infarctions

	No prior myocardial infarction			Prior myocardial infarction		
	SITA	BITA	BITA vs SITA	SITA	BITA	BITA vs SITA
Total cost of index admission	11694	12501	807 (32.2, 1582.4; 0.042)	12167	13123	956 (227.9, 1684.2; 0.012)
Total costs of discharge locations	530	599	69 (-208.9, 346.7; 0.614)	654	476	-178 (-768.7, 412.4; 0.540)
GP visits	853	824	-28 (-88.6, 31.6; 0.338)	859	842	-16 (-75.4, 42.5; 0.570)
Nurse visits	122	130	8 (-10.8, 26.9; 0.387)	122	138	16 (-9.2, 41.3; 0.201)
Outpatient clinic visits	799	851	52 (-36.3, 140.1; 0.236)	852	1113	260 (49.8, 471.2; 0.017)
Cardiac rehabilitation visits	657	711	54 (-149.8, 257.9; 0.590)	541	482	-58 (-238.6, 121.6; 0.509)
Number of nights in hospital	473	507	34 (-127.0, 194.8; 0.667)	472	511	40 (-111.0, 190.0; 0.592)
Total medication	192	200	8 (-18.3, 34.0; 0.544)	196	217	21 (-11.4, 53.3; 0.193)
Myocardial infarction	43	32	-11 (-39.7, 17.7; 0.436)	35	54	19 (-14.8, 53.8; 0.253)
Cerebrovascular accident	88	47	-40 (-82.0, 1.2; 0.056)	60	73	13 (-34.0, 59.3; 0.581)
Revascularisation with catheter	0	11	11 (-11.7, 32.8; 0.338)	0	16	16 (-14.7, 46.4; 0.296)
Further CABG	219	174	-45 (-126.0, 36.2; 0.265)	150	156	6 (-114.4, 125.9; 0.922)
Further PCI	79	60	-19 (-59.5, 21.3; 0.340)	51	109	58 (-8.7, 124.2; 0.085)
Sternal wound problems	141	238	96 (-59.9, 252.0; 0.216)	59	385	326 (86.8, 565.2; 0.010)
Major bleed	35	48	13 (-50.6, 76.7; 0.677)	29	34	5 (-48.7, 58.8; 0.847)
Other AEs (cost of hospital stay only)	1119	1062	-58 (-436.6, 321.2; 0.756)	1315	1354	39 (-540.5, 618.5; 0.891)
Death (cost of hospital stay only)	179	95	-84 (-271.8, 103.6; 0.365)	185	178	-8 (-205.2, 189.9; 0.937)
Total cost at 5 years	17222	18088	866 (-151.5, 1883.2; 0.092)	17746	19260	1514 (8.9, 3019.0; 0.049)

Total cost of index admission includes the total cost of surgery (Time in theatre (minutes), duration related theatre costs and staff, duration related anaesthetic costs, time on bypass (minutes), and other surgery costs (consumables, blood products, aprotinin), post-operative costs (Ventilation time, Intra-aortic balloon pump, Inotropic support, Renal support therapy, Hemofiltration) and any in hospital adverse events (Myocardial Infarction, Cerebrovascular accident, Further CABG, Further PCI, Revascularisation with catheter, Major bleed, Other AEs (cost of hospital stay only), Death (cost of hospital stay only))

S Table 8: Costs for subgroups: NYHA class

	NYHA class I & II			NYHA class III & IV		
	SITA	BITA	BITA vs SITA	SITA	BITA	BITA vs SITA
Total cost of index admission	12022	12869	847 (174.1, 1519.6; 0.016)	11451	12394	943 (-50.7, 1937.5; 0.062)
Total costs of discharge locations	609	466	-142 (-394.1, 110.0; 0.256)	493	837	344 (-576.5, 1263.6; 0.448)
GP visits	891	875	-16 (-65.7, 33.0; 0.500)	717	681	-36 (-135.9, 63.9; 0.463)
Nurse visits	113	124	10 (-9.1, 29.6; 0.285)	153	166	13 (-26.8, 53.3; 0.500)
Outpatient clinic visits	786	840	54 (-51.8, 160.7; 0.301)	957	1357	400 (-87.9, 887.5; 0.103)
Cardiac rehabilitation visits	594	633	38 (-122.9, 199.9; 0.628)	650	572	-78 (-373.3, 217.9; 0.592)
Number of nights in hospital	482	436	-46 (-131.6, 40.3; 0.283)	437	763	327 (-166.6, 820.2; 0.184)
Total medication	197	208	10 (-9.8, 30.7; 0.298)	179	203	24 (-9.8, 58.7; 0.152)
Myocardial infarction	37	34	-3 (-27.4, 20.7; 0.777)	48	65	17 (-11.5, 46.5; 0.225)
Cerebrovascular accident	77	67	-10 (-46.5, 26.0; 0.567)	69	24	-45 (-97.6, 6.6; 0.084)
Revascularisation with catheter	0	16	16 (-5.4, 38.0; 0.134)	0	0	0 (., .; .)
Further CABG	186	168	-18 (-85.1, 48.5; 0.577)	186	162	-24 (-141.8, 94.7; 0.685)
Further PCI	53	67	14 (-22.2, 51.1; 0.424)	112	121	9 (-106.1, 123.4; 0.877)
Sternal wound problems	111	302	191 (-14.2, 396.1; 0.067)	84	277	193 (-78.3, 463.8; 0.155)
Major bleed	25	31	6 (-45.4, 56.8; 0.820)	61	84	23 (-92.9, 138.6; 0.687)
Other AEs (cost of hospital stay only)	1149	1048	-100 (-485.2, 284.8; 0.597)	1423	1694	271 (-351.2, 893.1; 0.377)
Death (cost of hospital stay only)	225	113	-112 (-269.3, 45.7; 0.156)	21	181	161 (-9.5, 331.2; 0.063)
Total cost at 5 years	17556	18296	740 (-246.3, 1726.0; 0.135)	17039	19582	2542 (375.6, 4708.6; 0.023)

Total cost of index admission includes the total cost of surgery (Time in theatre (minutes), duration related theatre costs and staff, duration related anaesthetic costs, time on bypass (minutes), and other surgery costs (consumables, blood products, aprotinin), post-operative costs (Ventilation time, Intra-aortic balloon pump, Inotropic support, Renal support therapy, Hemofiltration) and any in hospital adverse events (Myocardial Infarction, Cerebrovascular accident, Further CABG, Further PCI, Revascularisation with catheter, Major bleed, Other AEs (cost of hospital stay only), Death (cost of hospital stay only))

S Table 9: Costs for subgroups: CCS class

	CCS class 0, I, II			CCS class III, IVa/b/c		
	SITA	BITA	BITA vs SITA	SITA	BITA	BITA vs SITA
Total cost of index admission	12045	12825	779 (107.5, 1451.0; 0.025)	11572	12627	1055 (50.1, 2059.7; 0.040)
Total costs of discharge locations	498	468	-30 (-231.8, 171.6; 0.761)	779	726	-53 (-995.9, 889.2; 0.908)
GP visits	856	820	-36 (-91.0, 19.1; 0.201)	853	856	3 (-83.0, 89.4; 0.942)
Nurse visits	118	130	12 (-10.5, 33.6; 0.305)	130	140	10 (-16.6, 37.1; 0.453)
Outpatient clinic visits	775	788	13 (-100.4, 126.0; 0.825)	929	1321	392 (19.3, 764.2; 0.039)
Cardiac rehabilitation visits	639	640	1 (-155.8, 158.2; 0.988)	531	574	43 (-161.8, 247.8; 0.680)
Number of nights in hospital	478	436	-43 (-160.0, 74.4; 0.474)	458	669	211 (-119.5, 542.0; 0.210)
Total medication	194	199	5 (-19.8, 30.5; 0.678)	193	222	30 (-9.2, 68.5; 0.135)
Myocardial infarction	42	33	-10 (-36.8, 17.4; 0.484)	33	59	26 (-16.1, 68.4; 0.224)
Cerebrovascular accident	84	62	-21 (-64.9, 22.1; 0.334)	56	46	-10 (-63.0, 43.1; 0.712)
Revascularisation with catheter	0	18	18 (-6.9, 43.8; 0.154)	0	0	.
Further CABG	174	152	-22 (-95.6, 51.6; 0.557)	222	199	-23 (-149.7, 103.1; 0.718)
Further PCI	53	65	12 (-25.7, 50.5; 0.524)	98	110	12 (-60.3, 84.3; 0.745)
Sternal wound problems	117	330	213 (46.3, 380.5; 0.012)	79	223	144 (-15.4, 302.6; 0.077)
Major bleed	28	27	-1 (-52.6, 51.5; 0.982)	42	75	33 (-63.1, 129.0; 0.501)
Other AEs (cost of hospital stay only)	1231	1043	-188 (-572.5, 196.1; 0.337)	1144	1519	375 (-271.2, 1022.0; 0.255)
Death (cost of hospital stay only)	238	148	-90 (-243.5, 64.3; 0.254)	55	85	30 (-104.4, 165.0; 0.659)
Total cost at 5 years	17571	18185	614 (-497.7, 1725.8; 0.266)	17175	19452	2278 (97.8, 4457.7; 0.041)

Total cost of index admission includes the total cost of surgery (Time in theatre (minutes), duration related theatre costs and staff, duration related anaesthetic costs, time on bypass (minutes), and other surgery costs (consumables, blood products, aprotinin), post-operative costs (Ventilation time, Intra-aortic balloon pump, Inotropic support, Renal support therapy, Hemofiltration) and any in hospital adverse events (Myocardial Infarction, Cerebrovascular accident, Further CABG, Further PCI, Revascularisation with catheter, Major bleed, Other AEs (cost of hospital stay only), Death (cost of hospital stay only))

S Table 10: Costs for subgroups: by selected country

	UK			Poland			Australia		
	SITA	BITA	BITA vs SITA	SITA	BITA	BITA vs SITA	SITA	BITA	BITA vs SITA
Total cost of index admission	11809	12518	709 (53.8, 1364.3; 0.034)	11218	12329	1111 (478.1, 1744.0; 0.001)	15268	15772	504 (-1234.3, 2243.2; 0.568)
Total costs of discharge locations	538	475	-63 (-436.3, 309.5; 0.739)	871	881	10 (-191.9, 211.9; 0.923)	211	181	-30 (-238.9, 178.3; 0.775)
GP visits	697	700	3 (-38.4, 44.4; 0.887)	1328	1340	12 (-86.0, 110.4; 0.807)	1596	1353	-243 (-468.1, -18.1; 0.034)
Nurse visits	176	189	13 (-10.2, 35.2; 0.280)	15	20	5 (-5.3, 15.1; 0.346)	43	6	-36 (-108.3, 35.8; 0.322)
Outpatient clinic visits	891	1048	157 (-45.3, 359.5; 0.128)	695	872	177 (-14.6, 368.9; 0.070)	663	625	-38 (-168.8, 92.3; 0.564)
Cardiac rehabilitation visits	845	855	10 (-173.7, 193.3; 0.916)	126	111	-15 (-103.0, 72.7; 0.734)	322	368	46 (-166.7, 259.2; 0.666)
Number of nights in hospital	531	536	5 (-115.7, 126.1; 0.933)	381	258	-123 (-300.7, 53.7; 0.171)	280	326	46 (-174.2, 266.7; 0.679)
Total medication	206	221	15 (-12.9, 41.9; 0.298)	149	157	9 (-23.6, 40.9; 0.598)	123	139	16 (-21.2, 53.4; 0.396)
Myocardial infarction	51	50	-2 (-33.7, 30.3; 0.918)	7	15	8 (-16.9, 32.7; 0.533)	47	23	-24 (-102.3, 54.7; 0.551)
Cerebrovascular accident	76	61	-15 (-56.6, 27.4; 0.495)	57	24	-33 (-93.8, 27.7; 0.285)	43	147	103 (-89.0, 295.7; 0.290)
Further CABG	0	19	19 (-7.5, 45.5; 0.159)	0	0	.	0	0	.
Further PCI	226	175	-51 (-136.8, 35.5; 0.249)	72	106	34 (-59.9, 127.8; 0.478)	154	97	-57 (-271.6, 158.0; 0.603)
Revascularisation with catheter	91	95	4 (-43.7, 51.3; 0.875)	0	49	49 (2.4, 94.8; 0.039)	0	0	.
Sternal wound problems	126	296	170 (16.7, 324.1; 0.030)	72	184	112 (-102.8, 327.8; 0.305)	69	948	879 (-74.5, 1832.1; 0.071)
Major bleed	39	52	13 (-50.6, 75.9; 0.695)	34	0	-34 (-101.5, 34.2; 0.330)	0	0	.
Other AEs (cost of hospital stay only)	1525	1429	-96 (-578.2, 386.6; 0.697)	605	364	-241 (-501.3, 18.5; 0.069)	792	1766	974 (56.8, 1890.7; 0.038)
Death (cost of hospital stay only)	225	146	-78 (-234.5, 77.8; 0.325)	61	100	40 (-179.0, 258.5; 0.721)	267	16	-251 (-525.6, 22.7; 0.072)
Total cost at 5 years	18052	18864	813 (-306.3, 1931.6; 0.154)	15691	16811	1120 (130.3, 2109.3; 0.027)	19878	21767	1889 (-682.2, 4460.4; 0.149)

Total cost of index admission includes the total cost of surgery (Time in theatre (minutes), duration related theatre costs and staff, duration related anaesthetic costs, time on bypass (minutes), and other surgery costs (consumables, blood products, aprotinin), post-operative costs (Ventilation time, Intra-aortic balloon pump, Inotropic support, Renal support therapy, Hemofiltration) and any in hospital adverse events (Myocardial Infarction, Cerebrovascular accident, Further CABG, Further PCI, Revascularisation with catheter, Major bleed, Other AEs (cost of hospital stay only), Death (cost of hospital stay only))

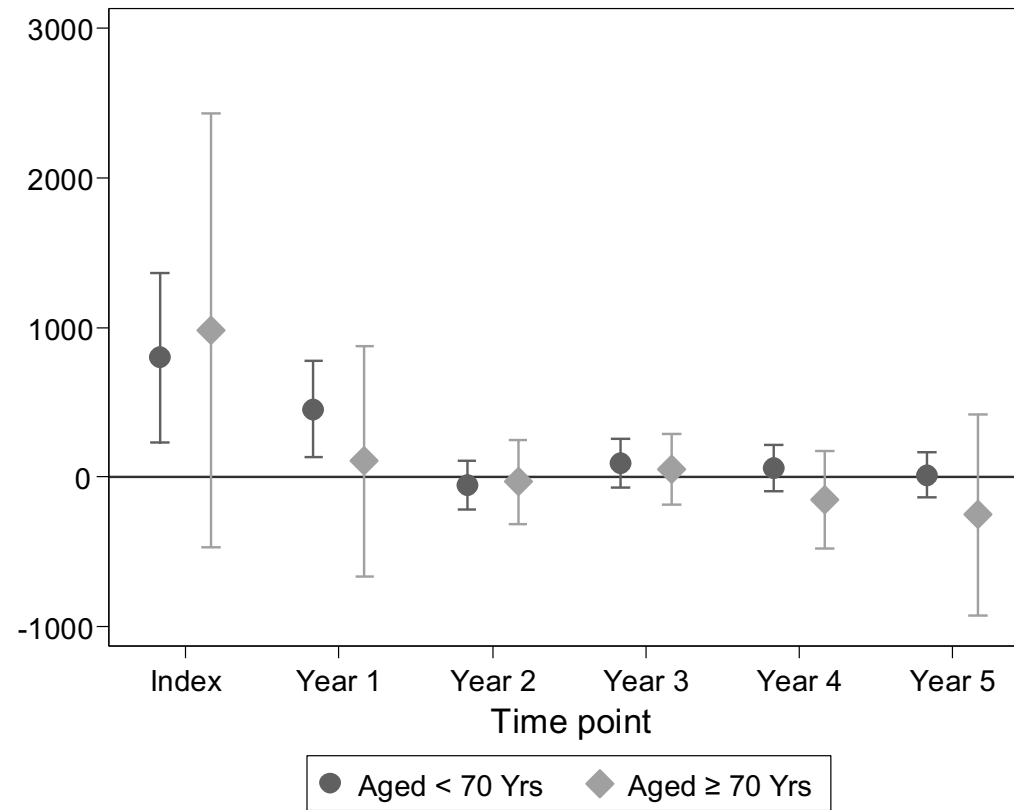


Figure S1 Differences in mean total costs (BITA vs SITA) by age groups over time

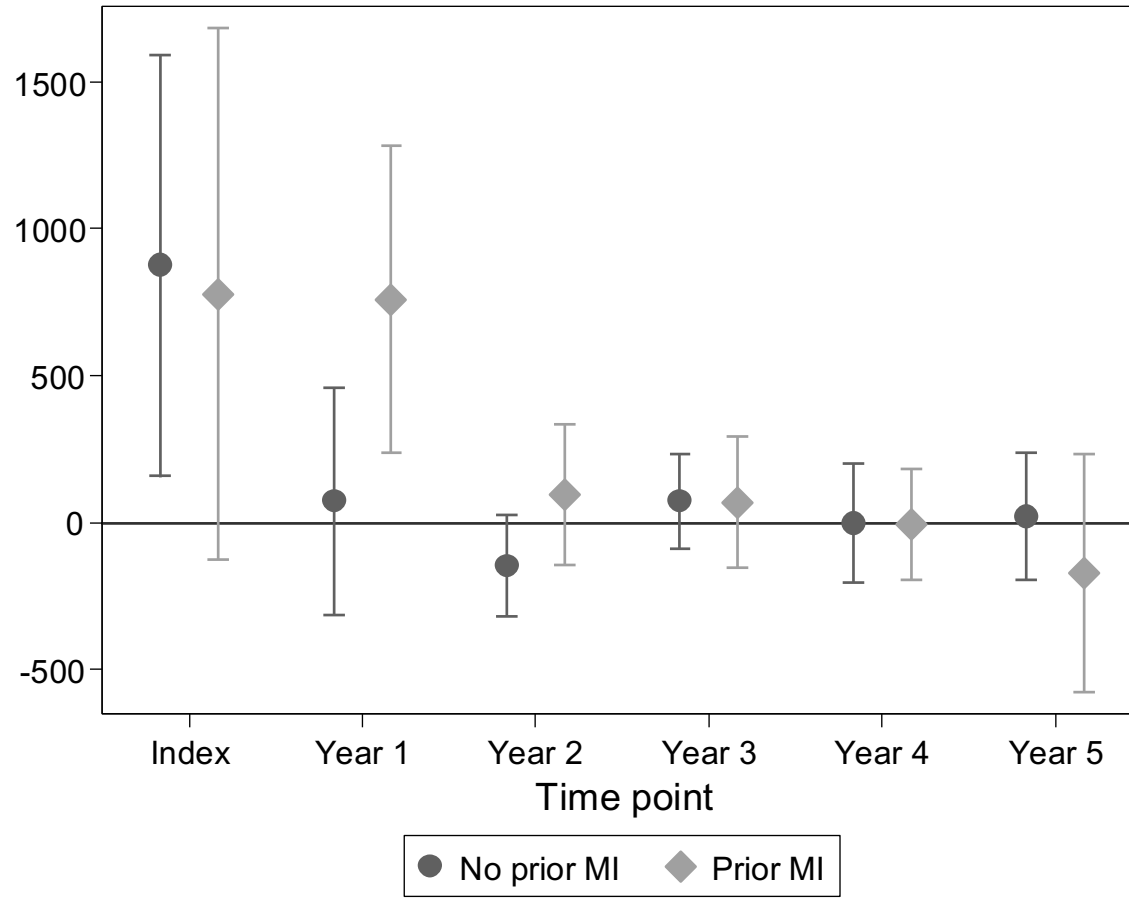


Figure S2 Differences in mean total costs (BITA vs SITA) by baseline prior history of myocardial infarction (MI) over time

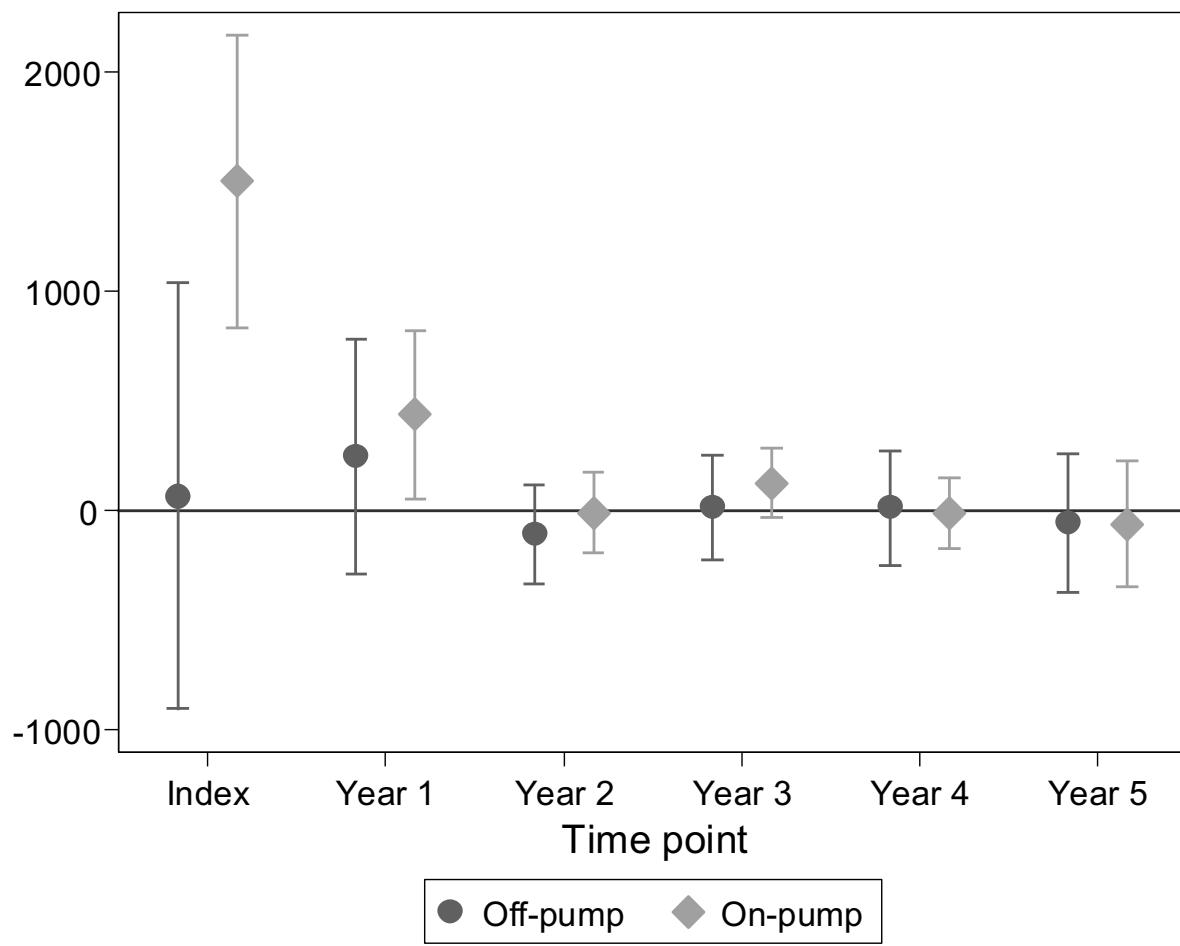


Figure S3 Differences in mean total costs (BITA vs SITA) by cardiopulmonary bypass over time

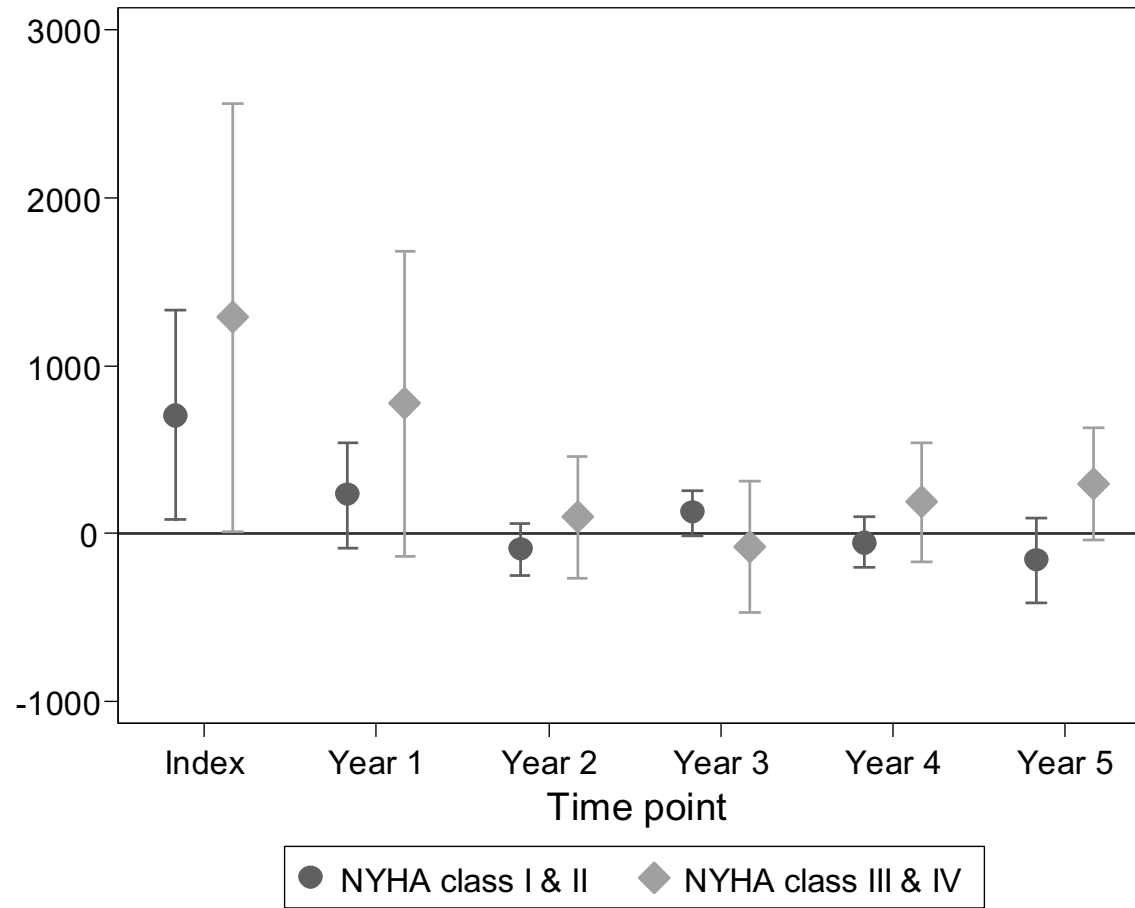


Figure S4 Differences in mean total costs (BITA vs SITA) by baseline New York Heart Association (NYHA) classification over time

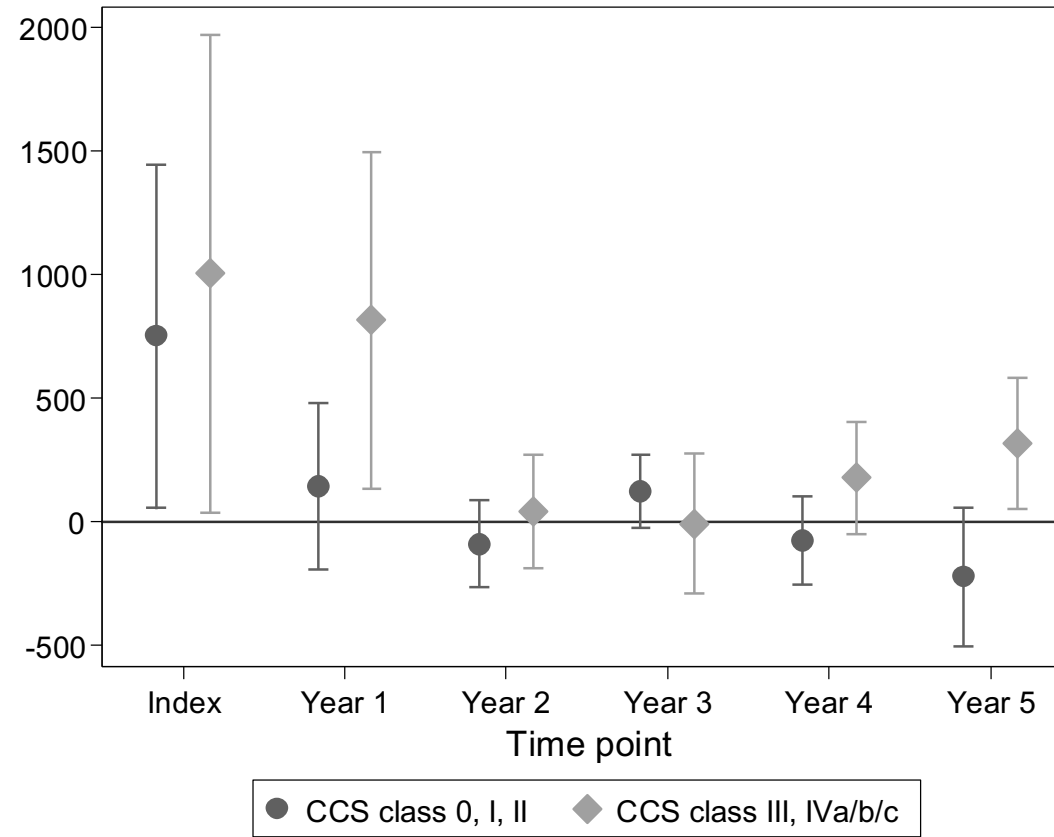


Figure 5 Differences in mean total costs (BITA vs SITA) by baseline Canadian Cardiovascular Society grading over time

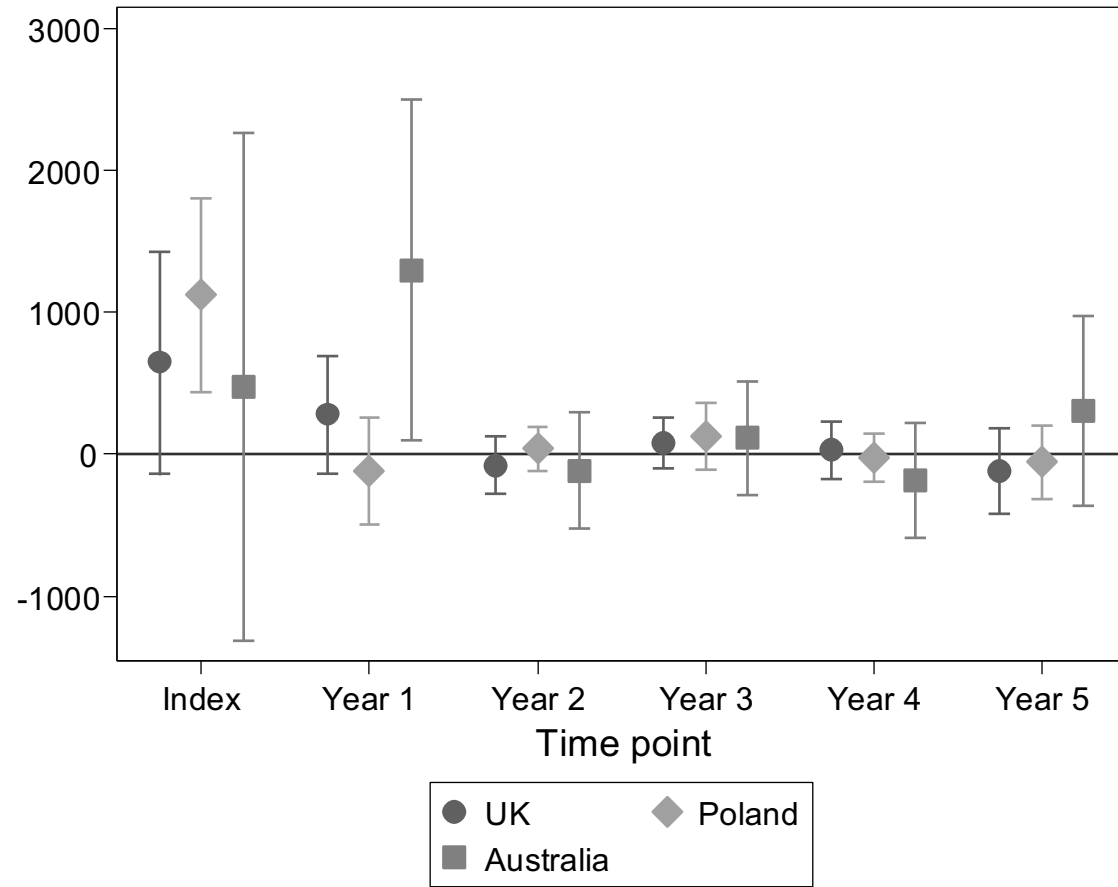


Figure S6 Differences in mean total costs (BITA vs SITA) by country over time

S Table 11: Mean and median total cost to five year follow-up

	SITA	BITA	BITA vs SITA
Mean	17480	18629	1149 (139, 2159; 0.027)
Median	14528	15609	1081 (584, 1577; 0.000)

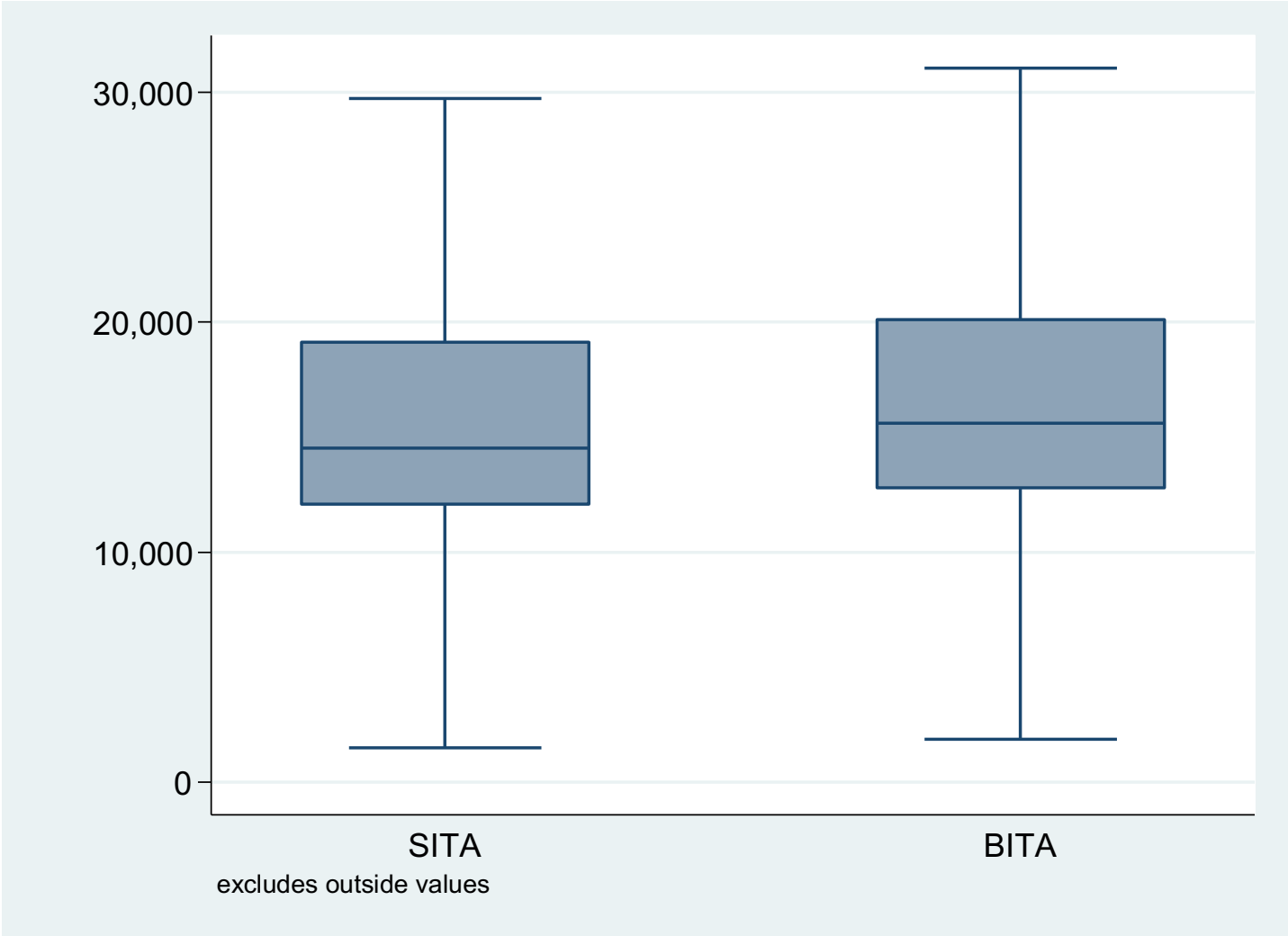


Figure S7 Boxplots of total costs to five year follow up (excluding outliers). Complete cases only.

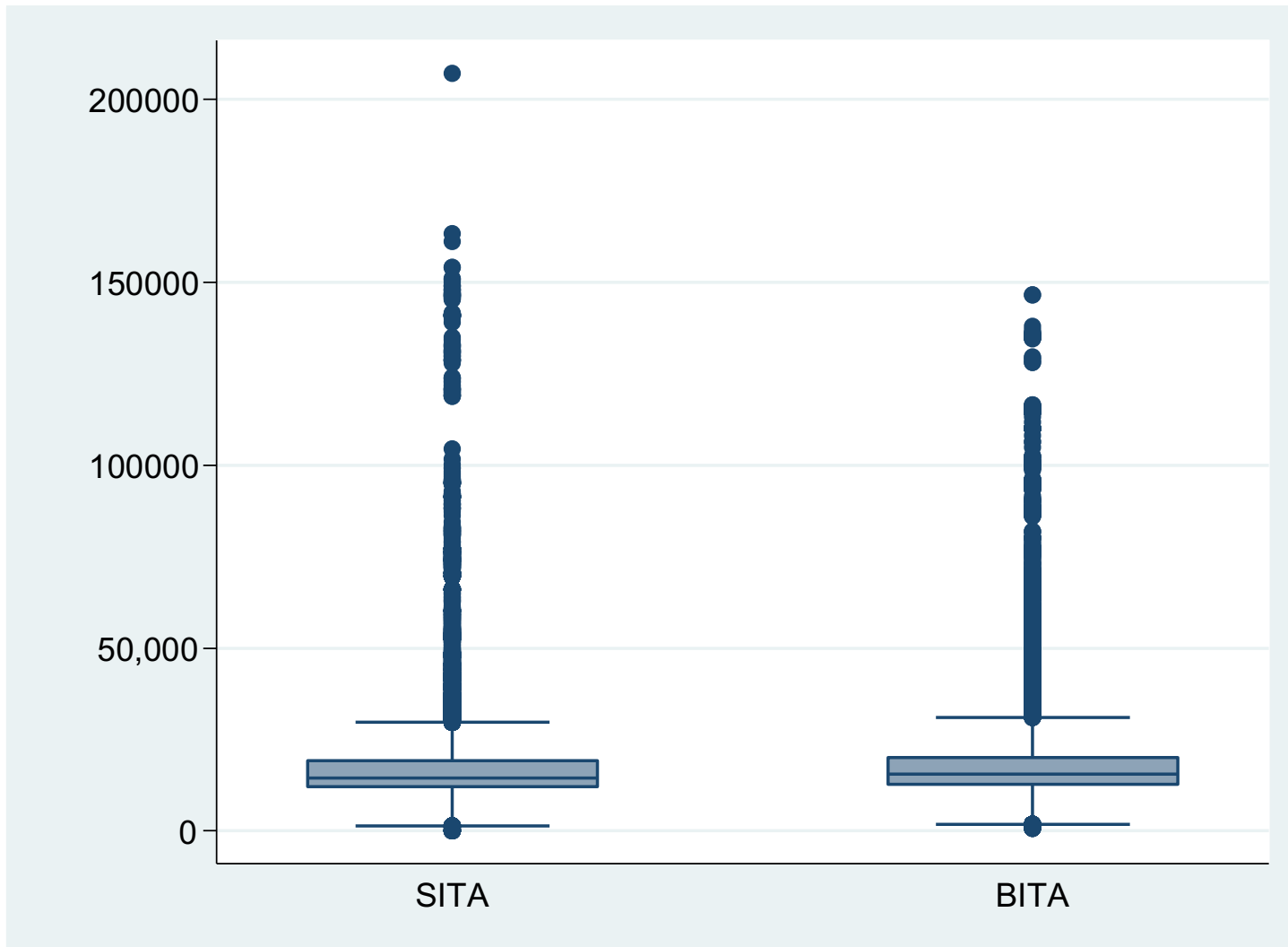


Figure S8 Boxplots of total costs to five year follow up (including outliers). Complete cases only.

S Table 12: Comparison of OLS and GLM estimates

	SITA	BITA	BITA vs SITA (p-value)
OLS	17,480	18,629	1149 (0.027)
GLM (Gamma, log link)	17,480	18,629	1149 (0.000)

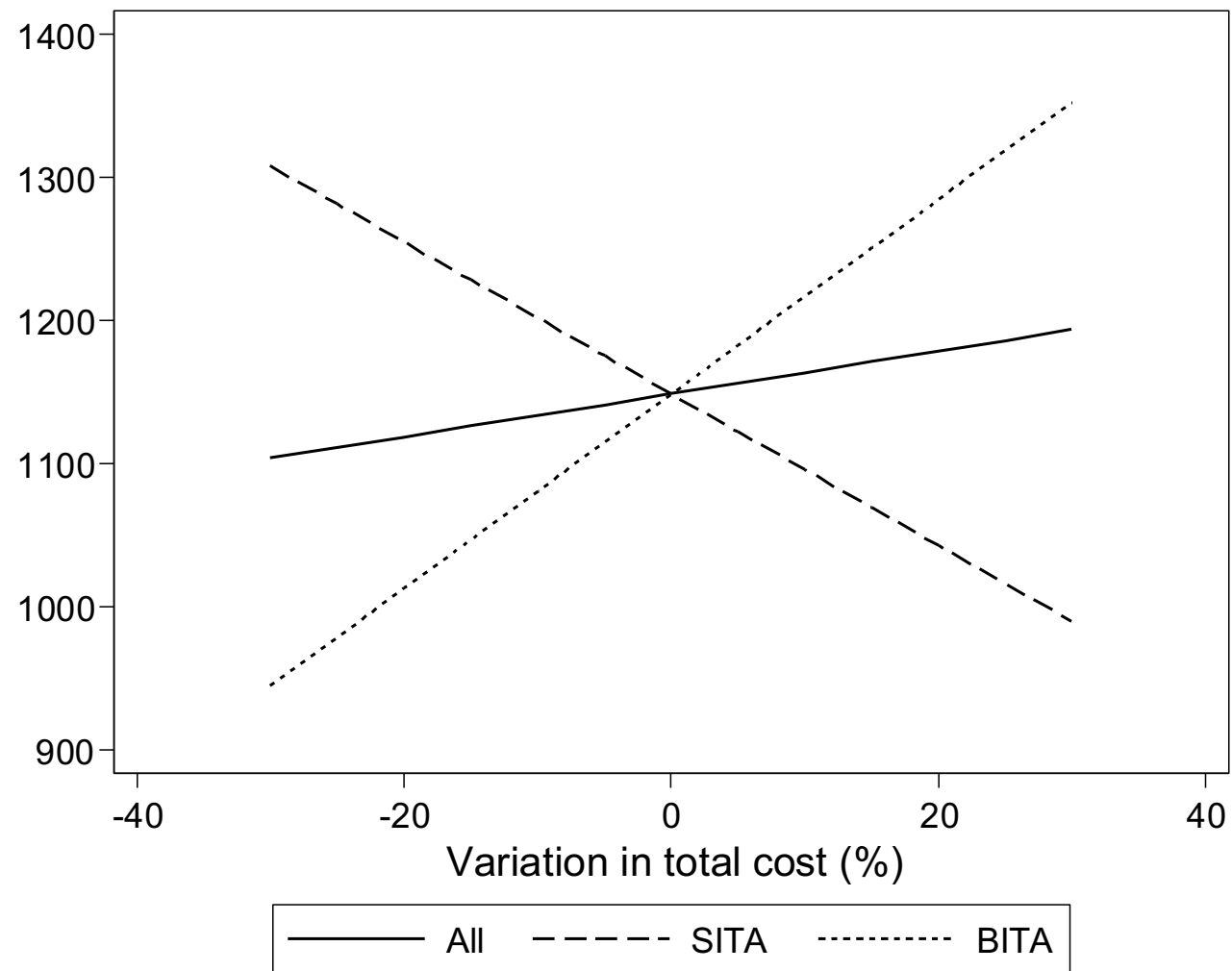


Figure S9 Sensitivity analysis assuming data are missing not at random. Imputed costs are varied between -30% and 30% at 5% point intervals.