

# Drug-eluting stents: *a systematic review & economic evaluation*

# 5'

Addendum

***Confidential:  
not for release***

No commercial in confidence data have  
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# 4

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## **2<sup>nd</sup> Addendum - additional evidence and analyses requested by Appraisal Committee**

### **Sensitivity Analysis Tables for Drug-Eluting Stent Appraisal including Additional Use of Clopidogrel**

Recent controversy in cardiology conferences and journals has centred on claims by some researchers of accumulating evidence of increased rates of late stent thrombosis with associated sequelae (possibly including mortality) arising from use of drug-eluting stents. Although the issues are not yet resolved, the FDA have suggested that extended use of anti-thrombotics should be considered, and the American Heart Association has issued precautionary guidelines that clopidogrel should be prescribed for at least 12 months post-PCI. It is likely that similar advice will be adopted in the UK.

NICE have indicated that it is important to explore the implications of these developments for the cost-effectiveness of drug-eluting stents in the UK, prior to issuing updated guidance. To this end NICE requested that the analyses previously provided to the Appraisal Committee in Addendum 3 to the LRiG Technology Assessment Report be updated on the assumption that clopidogrel use would be extended in patients receiving drug-eluting stents from 3 months to 12 months post-intervention.

Clopidogrel is normally prescribed as a single daily oral dose of 75mg costing £35.31 per 28 tablet pack (BNF 52, February 2007). This is equivalent to £460.61 per year, and results in an extra cost per DES patient of £345.45 for an additional 9 month period.

Selected updated tables from Addendum 3 are shown below (using the same identifiers to allow ready comparison with the earlier results). In addition, the initial descriptive Table A from Addendum 3 is repeated at the request of NICE.

**This second addendum reproduces the analysis previously reported in the first addendum but with a revised additional cost of clopidogrel on the assumption that 44% of patients will already be receiving clopidogrel therapy prior to**

**undergoing PCI (because of a diagnosis of Acute Coronary Syndrome). This has the effect of reducing the additional cost of clopidogrel per patient to £257.94 per year, or £193.45 per patient for an additional 9 month period.**

## Explanatory Notes

### Initial Descriptive Table A

1. The descriptive table has been prepared using Liverpool CTC audit patient-level data, and the multi-variate model using conventional factors described in the Addendum. This is necessary as no equivalent IPD unselected dataset is currently available to L RiG on which the required analysis could be performed. Readers should bear in mind that none of the three factors in this multi-variate model achieved conventional significance so that the individual relative risks have wide confidence intervals and should be considered as only illustrative.
2. Results for absolute risks and average numbers of stents are simple unadjusted means for all relevant patients. Minor differences from figures previously published are due to the exclusion of some non-elective patients not considered eligible for this review (those for whom PCI was primary treatment for AMI), and to bias adjustments required to previous estimates which made use of non-linear regression techniques.
3. Sub-groups are ordered by increasing size of the relative and absolute risks. The average risks obtained in CTC data set are shown as an additional bold column (marked Base Case) for information.

### Tables (B, C, F & G)

4. The tables have been prepared on the basis of the adjustments identified in the Addendum:
  - stent wastage rates of 1%;
  - alternate disutility estimates for PCI (0.00304 per patient) and CABG (0.03808);
  - adjustments, for reduced numbers of non-fatal AMIs, to costs (saving of £13 per patient) and utility (gain of 0.00055 per patient) when DES are used.
5. For Tables B and F, the mean number of stents used, and the mean repeat intervention rate for the whole patient group are used. However, in Tables C and G, the emboldened absolute risks are calculated specifically for the sub-groups of CTC patients in whom only one index stents was deployed.

6. The threshold premium in the final column of the tables is the maximum value of the price premium which would yield an ICER of £30,000 per QALY gained or less.

7. The final row shows the effect on estimated cost-effectiveness for the Base Case of including a direct benefit from reduced mortality associated with performing repeat interventions. These calculations are made on the following assumptions:

- average CTC proportions of reinterventions by CABG apply (9.0% elective, 17.9% non-elective);
- additional mean life expectancy for patients surviving without reintervention of 10 years;
- mean utility value of patients in such additional life-years of 0.66.

It should be borne in mind that this adjustment depends upon a strong presumption of effect for which there is no direct evidence. It is LRiG's view that such an adjustment is unwarranted and probably involves 'double-counting' of deaths already included in aggregate trial results.

Table A: Parameter values for risk-based subgroups, derived from Liverpool CTC audit data

**Elective patients**

Conventional risk factors							Reintervention rate at 12 months									
Long lesion	Small vessel	Diabetes	Share of elective caseload	Mean stents used	LCL	UCL	Relative risk	Absolute risk								
								6%	7%	<b>7.43%</b>	8%	9%	10%	11%	12%	13%
No	No	No	59.7%	1.54	1.49	1.58	1.00	5.3%	6.1%	<b>6.5%</b>	7.0%	7.9%	8.8%	9.7%	10.5%	11.4%
Yes	No	No	22.5%	1.63	1.55	1.72	1.20	6.3%	7.4%	<b>7.8%</b>	8.4%	9.5%	10.5%	11.6%	12.6%	13.7%
No	No	Yes	8.5%	1.56	1.43	1.69	1.38	7.3%	8.5%	<b>9.0%</b>	9.7%	10.9%	12.1%	13.3%	14.5%	15.8%
No	Yes	No	3.8%	2.30	2.11	2.48	1.52	8.0%	9.3%	<b>9.9%</b>	10.7%	12.0%	13.3%	14.7%	16.0%	17.4%
Yes	No	Yes	4.0%	1.72	1.52	1.91	1.66	8.7%	10.2%	<b>10.8%</b>	11.6%	13.1%	14.5%	16.0%	17.5%	18.9%
Yes	Yes	No	0.9%	2.53	2.19	2.87	1.82	9.6%	11.2%	<b>11.9%</b>	12.8%	14.4%	16.0%	17.6%	19.2%	20.8%
No	Yes	Yes	0.6%	2.67	2.23	3.11	2.10	11.1%	12.9%	<b>13.7%</b>	14.7%	16.6%	18.4%	20.3%	22.1%	23.9%
Yes	Yes	Yes	0.1%	3.00	ne	ne	2.52	13.3%	15.5%	<b>16.4%</b>	17.7%	19.9%	22.1%	24.3%	26.5%	28.7%
Overall			100.0%	1.615	1.580	1.650		Base case								

Patients affected by factor  
 27.4%    5.4%    13.2%                      ne not estimable

**Non-Elective patients**

Conventional risk factors							Reintervention rate at 12 months									
Long lesion	Small vessel	Diabetes	Share of non-elective caseload	Mean stents used	LCL	UCL	Relative risk	Absolute risk								
								8%	9%	<b>10.04%</b>	11%	12%	13%	14%	15%	16%
No	No	Yes	8.0%	1.52	1.34	1.69	0.90	6.5%	7.3%	<b>8.2%</b>	9.0%	9.8%	10.6%	11.4%	12.2%	13.0%
No	No	No	60.1%	1.43	1.37	1.50	1.00	7.2%	8.1%	<b>9.1%</b>	10.0%	10.9%	11.8%	12.7%	13.6%	14.5%
Yes	No	Yes	4.5%	1.54	1.29	1.79	1.07	7.8%	8.7%	<b>9.7%</b>	10.7%	11.6%	12.6%	13.6%	14.5%	15.5%
Yes	No	No	23.7%	1.42	1.33	1.52	1.19	8.6%	9.7%	<b>10.8%</b>	11.9%	12.9%	14.0%	15.1%	16.2%	17.2%
No	Yes	Yes	0.2%	2.00	ne	ne	2.36	17.1%	19.2%	<b>21.4%</b>	23.5%	25.6%	27.8%	29.9%	32.0%	34.2%
No	Yes	No	2.5%	2.00	1.51	2.49	2.62	19.0%	21.4%	<b>23.8%</b>	26.1%	28.5%	30.8%	33.2%	35.6%	38.0%
Yes	Yes	Yes	0.2%	2.00	ne	ne	2.81	20.3%	22.9%	<b>25.5%</b>	27.9%	30.5%	33.0%	35.6%	38.1%	40.7%
Yes	Yes	No	0.7%	2.50	1.40	3.60	3.12	22.6%	25.4%	<b>28.3%</b>	31.1%	33.9%	36.7%	39.5%	42.3%	45.2%
Overall			100.0%	1.467	1.415	1.518		Base case								

Patients affected by factor  
 29.1%    3.7%    12.9%                      ne not estimable

Table B: All Elective Patients, using mean number of stents implanted

Elective Index PCI 1.615 stent per patient

Absolute risk	Incremental utility	Incremental cost by levels of price premium								Incremental cost per QALY by levels of price premium								Threshold premium (£30000)
		£100	£200	£300	£400	£500	£600	£700	£800	£100	£200	£300	£400	£500	£600	£700	£800	
4%	0.00162	£282	£444	£605	£767	£928	£1,089	£1,251	£1,412	£174,600	£274,500	£374,300	£474,200	£574,000	£673,900	£773,700	£873,600	-£45
5%	0.00188	£267	£428	£589	£750	£911	£1,072	£1,233	£1,394	£141,800	£227,200	£312,700	£398,200	£483,700	£569,200	£654,700	£740,200	-£31
6%	0.00215	£252	£412	£573	£733	£894	£1,055	£1,215	£1,376	£117,000	£191,700	£266,400	£341,100	£415,800	£490,500	£565,200	£639,900	-£17
7%	0.00242	£236	£397	£557	£717	£877	£1,037	£1,197	£1,358	£97,800	£164,100	£230,300	£296,600	£362,900	£429,200	£495,400	£561,700	-£2
<b>7.43%</b>	<b>0.00253</b>	<b>£230</b>	<b>£390</b>	<b>£550</b>	<b>£710</b>	<b>£870</b>	<b>£1,030</b>	<b>£1,190</b>	<b>£1,350</b>	<b>£90,700</b>	<b>£153,900</b>	<b>£217,100</b>	<b>£280,300</b>	<b>£343,500</b>	<b>£406,600</b>	<b>£469,800</b>	<b>£533,000</b>	<b>£27</b>
8%	0.00268	£221	£381	£541	£700	£860	£1,020	£1,180	£1,339	£82,400	£141,900	£201,400	£261,000	£320,500	£380,000	£439,500	£499,100	£4
9%	0.00295	£206	£365	£524	£684	£843	£1,002	£1,162	£1,321	£69,700	£123,700	£177,700	£231,700	£285,700	£339,800	£393,800	£447,800	£12
10%	0.00322	£190	£349	£508	£667	£826	£985	£1,144	£1,303	£59,200	£108,600	£158,000	£207,400	£256,800	£306,200	£355,600	£405,000	£41
11%	0.00348	£175	£334	£492	£651	£809	£967	£1,126	£1,284	£50,300	£95,700	£141,200	£186,700	£232,200	£277,700	£323,200	£368,700	£56
12%	0.00375	£160	£318	£476	£634	£792	£950	£1,108	£1,266	£42,600	£84,700	£126,900	£169,000	£211,200	£253,300	£295,500	£337,600	£71
13%	0.00402	£144	£302	£460	£617	£775	£933	£1,090	£1,248	£36,000	£75,200	£114,400	£153,700	£192,900	£232,200	£271,400	£310,700	£86
14%	0.00428	£129	£286	£444	£601	£758	£915	£1,072	£1,230	£30,100	£66,800	£103,500	£140,200	£176,900	£213,700	£250,400	£287,100	£101
15%	0.00455	£114	£271	£427	£584	£741	£898	£1,055	£1,211	£25,000	£59,500	£93,900	£128,400	£162,800	£197,300	£231,800	£266,200	£116
16%	0.00482	£98	£255	£411	£568	£724	£880	£1,037	£1,193	£20,400	£52,900	£85,400	£117,800	£150,300	£182,800	£215,200	£247,700	£131
17%	0.00508	£83	£239	£395	£551	£707	£863	£1,019	£1,175	£16,400	£47,000	£77,700	£108,400	£139,100	£169,700	£200,400	£231,100	£146
18%	0.00535	£68	£223	£379	£534	£690	£846	£1,001	£1,157	£12,700	£41,700	£70,800	£99,900	£129,000	£158,000	£187,100	£216,200	£161
19%	0.00562	£53	£208	£363	£518	£673	£828	£983	£1,138	£9,400	£37,000	£64,600	£92,200	£119,800	£147,400	£175,000	£202,600	£177
20%	0.00588	£37	£192	£347	£501	£656	£811	£965	£1,120	£6,300	£32,600	£58,900	£85,200	£111,500	£137,800	£164,100	£190,400	£192
21%	0.00615	£22	£176	£330	£485	£639	£793	£947	£1,102	£3,600	£28,600	£53,700	£78,800	£103,900	£129,000	£154,100	£179,100	£207
22%	0.00642	£7	£160	£314	£468	£622	£776	£930	£1,083	£1,000	£25,000	£49,000	£72,900	£96,900	£120,900	£144,900	£168,800	£223
23%	0.00668	£-9	£145	£298	£452	£605	£758	£912	£1,065	£-1,300	£21,600	£44,600	£67,600	£90,500	£113,500	£136,400	£159,400	£239
24%	0.00695	£-24	£129	£282	£435	£588	£741	£894	£1,047	£-3,500	£18,600	£40,600	£62,600	£84,600	£106,600	£128,600	£150,600	£255
25%	0.00722	£-39	£113	£266	£418	£571	£724	£876	£1,029	£-5,500	£15,700	£36,800	£58,000	£79,100	£100,200	£121,400	£142,500	£270
26%	0.00748	£-55	£97	£250	£402	£554	£706	£858	£1,010	£-7,300	£13,000	£33,400	£53,700	£74,000	£94,300	£114,700	£135,000	£286
27%	0.00775	£-70	£82	£233	£385	£537	£689	£840	£992	£-9,000	£10,500	£30,100	£49,700	£69,300	£88,900	£108,400	£128,000	£302
28%	0.00802	£-85	£66	£217	£369	£520	£671	£823	£974	£-10,600	£8,200	£27,100	£46,000	£64,800	£83,700	£102,600	£121,500	£319
29%	0.00828	£-101	£50	£201	£352	£503	£654	£805	£956	£-12,200	£6,100	£24,300	£42,500	£60,700	£78,900	£97,100	£115,400	£335
with Procedural mortality estimate																		
7.43%	0.00381	£230	£390	£550	£710	£870	£1,030	£1,190	£1,350	£60,300	£102,300	£144,300	£186,300	£228,300	£270,300	£312,300	£354,300	£51

Table C: Elective patients receiving a single stent

Elective Index PCI 1.0 stent per patient

Absolute risk	Incremental utility	Incremental cost by levels of price premium								Incremental cost per QALY by levels of price premium								Threshold premium (£30000)
		£100	£200	£300	£400	£500	£600	£700	£800	£100	£200	£300	£400	£500	£600	£700	£800	
4%	0.00162	£220	£319	£419	£518	£617	£717	£816	£915	£136,200	£197,600	£259,000	£320,500	£381,900	£443,300	£504,700	£566,200	-£74
5%	0.00188	£205	£304	£403	£502	£600	£699	£798	£897	£108,800	£161,300	£213,800	£266,300	£318,800	£371,300	£423,800	£476,300	-£51
<b>5.53%</b>	<b>0.00202</b>	<b>£197</b>	<b>£295</b>	<b>£394</b>	<b>£493</b>	<b>£591</b>	<b>£690</b>	<b>£789</b>	<b>£887</b>	<b>£97,200</b>	<b>£145,900</b>	<b>£194,600</b>	<b>£243,400</b>	<b>£292,100</b>	<b>£340,800</b>	<b>£389,500</b>	<b>£438,300</b>	<b>-£38</b>
6%	0.00215	£190	£288	£386	£485	£583	£682	£780	£879	£88,200	£133,900	£179,700	£225,500	£271,300	£317,100	£362,900	£408,700	-£27
7%	0.00242	£174	£272	£370	£468	£566	£664	£763	£861	£72,100	£112,700	£153,200	£193,800	£234,400	£274,900	£315,500	£356,100	-£4
8%	0.00268	£159	£257	£354	£452	£549	£647	£745	£842	£59,200	£95,600	£132,000	£168,400	£204,700	£241,100	£277,500	£313,900	£20
9%	0.00295	£144	£241	£338	£435	£532	£630	£727	£824	£48,700	£81,600	£114,600	£147,500	£180,500	£213,400	£246,400	£279,300	£44
10%	0.00322	£128	£225	£322	£419	£515	£612	£709	£806	£39,900	£70,000	£100,000	£130,100	£160,200	£190,300	£220,400	£250,500	£68
11%	0.00348	£113	£209	£306	£402	£498	£595	£691	£787	£32,400	£60,100	£87,700	£115,400	£143,100	£170,700	£198,400	£226,100	£92
12%	0.00375	£98	£194	£290	£385	£481	£577	£673	£769	£26,000	£51,600	£77,200	£102,800	£128,400	£153,900	£179,500	£205,100	£117
13%	0.00402	£82	£178	£273	£369	£464	£560	£655	£751	£20,500	£44,300	£68,000	£91,800	£115,600	£139,400	£163,200	£186,900	£141
14%	0.00428	£67	£162	£257	£352	£447	£542	£638	£733	£15,600	£37,800	£60,000	£82,200	£104,400	£126,600	£148,800	£171,000	£166
15%	0.00455	£52	£146	£241	£336	£430	£525	£620	£714	£11,400	£32,200	£53,000	£73,800	£94,600	£115,400	£136,200	£157,000	£192
16%	0.00482	£36	£131	£225	£319	£413	£508	£602	£696	£7,500	£27,100	£46,700	£66,200	£85,800	£105,400	£124,900	£144,500	£217
17%	0.00508	£21	£115	£209	£303	£396	£490	£584	£678	£4,100	£22,600	£41,100	£59,500	£78,000	£96,400	£114,900	£133,300	£243
18%	0.00535	£6	£99	£193	£286	£379	£473	£566	£660	£1,100	£18,500	£36,000	£53,400	£70,900	£88,400	£105,800	£123,300	£268
19%	0.00562	-£10	£83	£176	£269	£362	£455	£548	£641	-£1,700	£14,800	£31,400	£48,000	£64,500	£81,100	£97,600	£114,200	£294
20%	0.00588	-£25	£68	£160	£253	£345	£438	£530	£623	-£4,200	£11,500	£27,200	£43,000	£58,700	£74,400	£90,200	£105,900	£321
21%	0.00615	-£40	£52	£144	£236	£328	£420	£513	£605	-£6,500	£8,400	£23,400	£38,400	£53,400	£68,400	£83,300	£98,300	£347
22%	0.00642	-£56	£36	£128	£220	£311	£403	£495	£587	-£8,700	£5,600	£19,900	£34,200	£48,500	£62,800	£77,100	£91,400	£374
23%	0.00668	-£71	£20	£112	£203	£294	£386	£477	£568	-£10,600	£3,100	£16,700	£30,400	£44,000	£57,700	£71,400	£85,000	£401
24%	0.00695	-£86	£5	£96	£186	£277	£368	£459	£550	-£12,400	£700	£13,800	£26,800	£39,900	£53,000	£66,100	£79,100	£429
25%	0.00722	-£102	-£11	£79	£170	£260	£351	£441	£532	-£14,100	-£1,500	£11,000	£23,500	£36,100	£48,600	£61,100	£73,700	£456
26%	0.00748	-£117	-£27	£63	£153	£243	£333	£423	£513	-£15,600	-£3,600	£8,500	£20,500	£32,500	£44,500	£56,600	£68,600	£484
27%	0.00775	-£132	-£43	£47	£137	£226	£316	£406	£495	-£17,000	-£5,500	£6,100	£17,600	£29,200	£40,800	£52,300	£63,900	£512
28%	0.00802	-£147	-£58	£31	£120	£209	£299	£388	£477	-£18,400	-£7,300	£3,900	£15,000	£26,100	£37,200	£48,400	£59,500	£540
29%	0.00828	-£163	-£74	£15	£104	£192	£281	£370	£459	-£19,700	-£8,900	£1,800	£12,500	£23,200	£33,900	£44,600	£55,400	£569
with Procedural mortality estimate																		
5.53%	0.00298	£197	£295	£394	£493	£591	£690	£789	£887	£66,100	£99,300	£132,500	£165,600	£198,800	£232,000	£265,100	£298,300	-£9

Table F: All Non-elective Patients, using mean number of stents implanted

Non-Elective Index PCI

1.467 stent per patient

Absolute risk	Incremental utility	Incremental cost by levels of price premium								Incremental cost per QALY by levels of price premium								Threshold premium (£30000)
		£100	£200	£300	£400	£500	£600	£700	£800	£100	£200	£300	£400	£500	£600	£700	£800	
6%	0.00210	£231	£377	£523	£669	£815	£960	£1,106	£1,252	£110,100	£179,400	£248,800	£318,200	£387,500	£456,900	£526,300	£595,600	£17
8%	0.00262	£199	£344	£489	£634	£779	£924	£1,069	£1,214	£76,000	£131,300	£186,700	£242,100	£297,400	£352,800	£408,200	£463,500	£17
10%	0.00314	£167	£311	£455	£599	£744	£888	£1,032	£1,176	£53,100	£99,100	£145,100	£191,100	£237,100	£283,000	£329,000	£375,000	£50
<b>10.04%</b>	<b>0.00315</b>	<b>£166</b>	<b>£310</b>	<b>£454</b>	<b>£599</b>	<b>£743</b>	<b>£887</b>	<b>£1,031</b>	<b>£1,176</b>	<b>£52,800</b>	<b>£98,600</b>	<b>£144,500</b>	<b>£190,300</b>	<b>£236,100</b>	<b>£282,000</b>	<b>£327,800</b>	<b>£373,700</b>	<b>£51</b>
12%	0.00365	£134	£278	£421	£565	£708	£852	£995	£1,139	£36,700	£76,000	£115,300	£154,500	£193,800	£233,000	£272,300	£311,600	£84
14%	0.00417	£102	£244	£387	£530	£673	£815	£958	£1,101	£24,400	£58,600	£92,800	£127,000	£161,200	£195,400	£229,700	£263,900	£118
16%	0.00469	£69	£211	£353	£495	£637	£779	£921	£1,063	£14,800	£45,100	£75,300	£105,600	£135,900	£166,100	£196,400	£226,700	£152
18%	0.00521	£37	£178	£319	£460	£602	£743	£884	£1,025	£7,100	£34,200	£61,300	£88,400	£115,600	£142,700	£169,800	£196,900	£186
20%	0.00572	£5	£145	£285	£426	£566	£707	£847	£987	£800	£25,300	£49,900	£74,400	£98,900	£123,400	£148,000	£172,500	£221
22%	0.00624	£-28	£112	£251	£391	£531	£670	£810	£949	£-4,500	£17,900	£40,300	£62,600	£85,000	£107,400	£129,800	£152,100	£257
24%	0.00676	£-60	£79	£217	£356	£495	£634	£773	£912	£-8,900	£11,600	£32,200	£52,700	£73,300	£93,800	£114,300	£134,900	£292
26%	0.00728	£-93	£45	£183	£322	£460	£598	£736	£874	£-12,700	£6,200	£25,200	£44,200	£63,200	£82,100	£101,100	£120,100	£328
28%	0.00779	£-125	£12	£150	£287	£424	£561	£699	£836	£-16,000	£1,600	£19,200	£36,800	£54,400	£72,000	£89,600	£107,300	£365
30%	0.00831	£-157	£-21	£116	£252	£389	£525	£662	£798	£-18,900	£-2,500	£13,900	£30,300	£46,800	£63,200	£79,600	£96,000	£402
32%	0.00883	£-190	£-54	£82	£217	£353	£489	£625	£760	£-21,500	£-6,100	£9,200	£24,600	£40,000	£55,400	£70,700	£86,100	£439
34%	0.00935	£-222	£-87	£48	£183	£318	£453	£588	£722	£-23,800	£-9,300	£5,100	£19,500	£34,000	£48,400	£62,900	£77,300	£477
36%	0.00986	£-255	£-120	£14	£148	£282	£416	£550	£685	£-25,800	£-12,200	£1,400	£15,000	£28,600	£42,200	£55,800	£69,400	£515
38%	0.01038	£-287	£-154	£-20	£113	£247	£380	£513	£647	£-27,700	£-14,800	£-1,900	£10,900	£23,800	£36,600	£49,500	£62,300	£554
40%	0.01090	£-319	£-187	£-54	£78	£211	£344	£476	£609	£-29,300	£-17,100	£-5,000	£7,200	£19,400	£31,500	£43,700	£55,900	£593
42%	0.01142	£-352	£-220	£-88	£44	£176	£307	£439	£571	£-30,800	£-19,300	£-7,700	£3,800	£15,400	£26,900	£38,500	£50,000	£633
44%	0.01193	£-384	£-253	£-122	£9	£140	£271	£402	£533	£-32,200	£-21,200	£-10,200	£800	£11,700	£22,700	£33,700	£44,700	£673
46%	0.01245	£-417	£-286	£-156	£-26	£105	£235	£365	£495	£-33,500	£-23,000	£-12,500	£-2,100	£8,400	£18,900	£29,300	£39,800	£713
with Procedural mortality estimate																		
10.04%	0.00523	£166	£310	£454	£599	£743	£887	£1,031	£1,176	£31,700	£59,300	£86,800	£114,400	£142,000	£169,500	£197,100	£224,700	£95

Table G: Non-elective patients receiving a single stent

Non-Elective Index PCI

1.0 stent per patient

Absolute risk	Incremental utility	Incremental cost by levels of price premium								Incremental cost per QALY by levels of price premium								Threshold premium (£30000)
		£100	£200	£300	£400	£500	£600	£700	£800	£100	£200	£300	£400	£500	£600	£700	£800	
6%	0.00210	£184	£283	£382	£480	£579	£678	£776	£875	£87,600	£134,600	£181,500	£228,500	£275,400	£322,300	£369,300	£416,200	-£23
8%	0.00262	£152	£250	£348	£446	£543	£641	£739	£837	£58,000	£95,300	£132,700	£170,100	£207,500	£244,800	£282,200	£319,600	£25
<b>8.73%</b>	<b>0.00281</b>	<b>£140</b>	<b>£238</b>	<b>£335</b>	<b>£433</b>	<b>£531</b>	<b>£628</b>	<b>£726</b>	<b>£823</b>	<b>£49,900</b>	<b>£84,700</b>	<b>£119,400</b>	<b>£154,200</b>	<b>£189,000</b>	<b>£223,700</b>	<b>£258,500</b>	<b>£293,300</b>	<b>£43</b>
10%	0.00314	£119	£217	£314	£411	£508	£605	£702	£799	£38,100	£69,000	£100,000	£131,000	£161,900	£192,900	£223,800	£254,800	£75
12%	0.00365	£87	£183	£280	£376	£472	£569	£665	£761	£23,800	£50,200	£76,500	£102,900	£129,300	£155,600	£182,000	£208,400	£125
14%	0.00417	£55	£150	£246	£341	£437	£532	£628	£724	£13,100	£36,000	£58,900	£81,800	£104,700	£127,600	£150,600	£173,500	£176
16%	0.00469	£22	£117	£212	£307	£401	£496	£591	£686	£4,700	£25,000	£45,200	£65,400	£85,600	£105,800	£126,000	£146,300	£227
18%	0.00521	-£10	£84	£178	£272	£366	£460	£554	£648	-£2,000	£16,100	£34,200	£52,200	£70,300	£88,300	£106,400	£124,500	£280
20%	0.00572	-£43	£51	£144	£237	£330	£424	£517	£610	-£7,400	£8,900	£25,100	£41,400	£57,700	£74,000	£90,300	£106,600	£333
22%	0.00624	-£75	£18	£110	£202	£295	£387	£480	£572	-£12,000	£2,800	£17,600	£32,400	£47,300	£62,100	£76,900	£91,700	£387
24%	0.00676	-£107	-£16	£76	£168	£259	£351	£443	£534	-£15,900	-£2,300	£11,200	£24,800	£38,400	£51,900	£65,500	£79,100	£443
26%	0.00728	-£140	-£49	£42	£133	£224	£315	£406	£497	-£19,200	-£6,700	£5,800	£18,300	£30,800	£43,300	£55,800	£68,300	£499
28%	0.00779	-£172	-£82	£8	£98	£188	£279	£369	£459	-£22,100	-£10,500	£1,000	£12,600	£24,200	£35,700	£47,300	£58,900	£556
30%	0.00831	-£205	-£115	-£26	£64	£153	£242	£332	£421	-£24,600	-£13,900	-£3,100	£7,600	£18,400	£29,100	£39,900	£50,700	£614
32%	0.00883	-£237	-£148	-£60	£29	£117	£206	£295	£383	-£26,800	-£16,800	-£6,800	£3,300	£13,300	£23,300	£33,400	£43,400	£673
34%	0.00935	-£269	-£182	-£94	-£6	£82	£170	£258	£345	-£28,800	-£19,400	-£10,000	-£600	£8,800	£18,200	£27,600	£37,000	£733
36%	0.00986	-£302	-£215	-£128	-£41	£46	£133	£220	£307	-£30,600	-£21,800	-£12,900	-£4,100	£4,700	£13,500	£22,400	£31,200	£795
38%	0.01038	-£334	-£248	-£162	-£75	£11	£97	£183	£270	-£32,200	-£23,900	-£15,600	-£7,300	£1,000	£9,400	£17,700	£26,000	£857
40%	0.01090	-£367	-£281	-£196	-£110	-£25	£61	£146	£232	-£33,600	-£25,800	-£17,900	-£10,100	-£2,300	£5,600	£13,400	£21,300	£920
42%	0.01142	-£399	-£314	-£230	-£145	-£60	£25	£109	£194	-£35,000	-£27,500	-£20,100	-£12,700	-£5,300	£2,200	£9,600	£17,000	£985
44%	0.01193	-£431	-£347	-£264	-£180	-£96	-£12	£72	£156	-£36,200	-£29,100	-£22,100	-£15,000	-£8,000	-£1,000	£6,100	£13,100	£1,051
46%	0.01245	-£464	-£381	-£297	-£214	-£131	-£48	£35	£118	-£37,300	-£30,600	-£23,900	-£17,200	-£10,500	-£3,900	£2,800	£9,500	£1,118
with Procedural mortality estimate																		
8.73%	0.00462	£140	£238	£335	£433	£531	£628	£726	£823	£30,300	£51,400	£72,500	£93,700	£114,800	£135,900	£157,000	£178,100	£100

## NICE SPECIFICATION FOR ADDITIONAL ANALYSIS

### Extra analyses (2) for Ischaemic Heart Disease – Coronary Artery Stents– ACD meeting July 2007

Date: March 2007

<b>Project Number</b>	
Appraisal title	<b>Coronary artery stents for the treatment of ischaemic heart disease (part review of NICE technology appraisal guidance no. 71)</b>
Synopsis of the technical issue	<p>Following the recent concerns over the issue of safety of drug-eluting stents (DES) and the recent conclusions of the FDA advisory panel, views have been expressed that the duration of use of anti-platelet therapy (aspirin and clopidogrel) should be extended in patients who have received a DES to 12 months, and in particular in those patients whose lesions are thought to be high risk.</p> <p>As a result of this, further work is requested to be undertaken to examine how the difference in the duration of clopidogrel use between bare-metal stents (BMS) and DES may affect the cost effectiveness.</p>

Question(s) to be answered by the Assessment Group	<p>What is the cost effectiveness of DES in the treatment of ischaemic heart disease, given that there is a difference in the duration of clopidogrel between patients receiving a DES and those receiving a BMS.</p> <ul style="list-style-type: none"> <li>• The base-case scenario should incorporate the cost (using BNF acquisition costs) of clopidogrel in BMS patients (3 months) and the cost of clopidogrel for DES patients (12 months)</li> <li>• Sensitivity analysis should be carried out around the number of stents used, for both the average number of stents and one stent only for both scenarios.</li> </ul>
How will these questions be addressed in an addendum?	<p>The Assessment Group will be asked to:</p> <ul style="list-style-type: none"> <li>• re-run the model, containing these costs</li> <li>• re-run the sensitivity analysis</li> <li>• present the analyses for the same range of absolute rates of revascularisation of BMS for mean number of stents and one stent only, for elective and non-elective patients as seen in tables B, C, F and G and include a copy of table A from addendum 3" (2006).</li> </ul>
Date for delivery of report to Institute	10 <sup>th</sup> April 2007