

Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Mauri L, Silbaugh TS, Garg P, et al. Drug-eluting or bare-metal stents for acute myocardial infarction. *N Engl J Med* 2008;359:1330-42.

Appendix

Table 1. Two-year Unadjusted Clinical Outcomes

Presentation	Outcome	DES	BMS	P-Value
Any MI	Death	9.3% (372/4016)	14.3% (457/3201)	<0.001
	MI	8.9% (358/4016)	11.2% (357/3201)	0.002
	TVR	10.4% (418/4016)	14.8% (473/3201)	<0.001
STEMI	Death	7.6% (119/1558)	12.6% (230/1821)	<0.001
	MI	7.1% (111/1558)	9.1% (166/1821)	0.04
	TVR	10.2% (159/1558)	14.3% (260/1821)	<0.001
NSTEMI	Death	10.3% (253/2458)	16.5% (227/1380)	<0.001
	MI	10.1% (247/2458)	13.8% (191/1380)	<0.001
	TVR	10.5% (259/2458)	15.4% (213/1380)	<0.001

DES, drug-eluting stent. BMS, bare-metal stent. MI, myocardial infarction. TVR, target vessel revascularization

Table 2. Patient Characteristics of Matched MI Cohort.

Characteristic	DES (N=2570)	BMS (N=2570)	% Standardized Difference
Age (years)	64.8	64.0	0.1
Female	33.7%	32.5%	2.6
Race			
White	87.5%	88.4%	-2.9
African-American	2.3%	2.7%	-2.2
Hispanic	3.9%	3.6%	1.6
Other	6.3%	5.3%	4.2
Insurance			
Government	41.8%	42.3%	-0.9
Commercial	19.0%	19.0%	0.0
HMO	32.3%	32.0%	0.6
No insurance	6.9%	6.7%	0.6
Diabetes mellitus	22.0%	22.8%	-2.0
Insulin requiring	6.0%	7.0%	-4.1
Hyperlipidemia	62.7%	63.4%	-1.5
Hypertension	66.0%	66.3%	-0.7
Current smoker	31.1%	30.5%	1.1
Former smoker	34.3%	35.3%	-2.0
Prior MI	25.3%	22.6%	6.5
Prior CABG	9.3%	8.8%	1.8
Prior PCI	12.5%	12.7%	-0.5

Characteristic	DES (N=2570)	BMS (N=2570)	% Standardized Difference
Congestive heart failure	11.4%	10.4%	3.4
Peripheral vascular disease	11.2%	10.6%	2.0
Cerebrovascular disease	9.8%	8.3%	5.3
Chronic lung disease	13.0%	11.4%	4.8
History of neoplasm	3.0%	2.7%	1.6
History of gastrointestinal bleeding	3.3%	3.3%	0.0
Chronic renal insufficiency	6.9%	6.1%	3.5
Dialysis	1.4%	1.4%	0.0
Cardiogenic shock	3.6%	3.8%	-1.2
Procedure status			
Urgent	38.9%	40.2%	-2.7
Emergency/Salvage	50.0%	47.7%	4.6
ACS duration			
0-6 hrs	43.8%	43.5%	0.5
6-24 hrs	23.7%	21.7%	4.6
> 24 hrs	32.1%	34.0%	-4.1
EF < 30%	8.5%	6.7%	6.7
Left main disease	5.8%	5.3%	2.6

Patients matched within propensity caliper and exactly on commercial insurance, STEMI, and number of treated lesions = 3.

Table 3. Procedure Characteristics of Matched MI Cohort.

Characteristic	DES (N=2570)	BMS (N=2570)	% Standardized Difference
Diseased vessels			
0-1	41.1%	42.6%	-3.1
2	34.8%	34.4%	0.8
Lesions treated			
2	18.9%	21.1%	-5.5
3	4.3%	4.3%	0.0
4	0.6%	0.8%	-1.9
>4	0.1%	0.2%	-2.8
Target vessel(s)			
Left main	1.5%	1.3%	1.6
Left anterior descending	40.3%	38.0%	4.6
Circumflex	25.5%	28.0%	-5.5
Right coronary	46.0%	43.9%	4.2
Saphenous vein graft	5.3%	4.6%	3.0
Arterial graft	0.2%	0.2%	-0.9
High-risk lesion	38.1%	37.0%	2.4
Restenosis	1.8%	3.2%	-9.5
Thrombectomy	11.8%	11.3%	1.5
GP IIb/IIIa inhibitor pretreatment	38.3%	37.5%	1.7
Clopidogrel or ticlopidine pretreatment	30.1%	32.0%	-4.2
Pilot program (STEMI only)	0.7%	0.7%	0.5

Patients matched within propensity caliper and exactly on commercial insurance, STEMI, and number of treated lesions = 3.

Table 4. Patient Characteristics of Matched STEMI Cohort.

Characteristic	DES (N=1298)	BMS (N=1298)	% Standardized Difference
Age (years)	61.7	61.8	0.0
Female	31.3%	30.1%	2.7
Race			
White	88.4%	88.9%	-1.5
African-American	2.5%	2.4%	1.0
Hispanic	3.6%	3.6%	0.0
Other	5.4%	5.1%	1.4
Insurance			
Government	36.4%	35.8%	1.3
Commercial	21.1%	23.4%	-5.6
HMO	33.1%	32.1%	2.1
No insurance	9.3%	8.6%	2.4
Diabetes mellitus	17.6%	18.3%	-2.0
Insulin requiring	4.2%	5.1%	-4.4
Hyperlipidemia	53.7%	54.4%	-1.4
Hypertension	58.5%	58.7%	-0.5
Current smoker	37.0%	35.4%	3.4
Former smoker	29.7%	29.5%	0.3
Prior MI	14.6%	15.0%	-0.9
Prior CABG	3.5%	3.5%	0.0
Prior PCI	10.9%	11.1%	-0.7

Characteristic	DES (N=1298)	BMS (N=1298)	% Standardized Difference
Congestive heart failure	4.9%	4.7%	0.7
Peripheral vascular disease	5.7%	5.8%	-0.3
Cerebrovascular disease	6.2%	6.1%	0.6
Chronic lung disease	8.9%	8.4%	1.6
History of neoplasm	2.2%	1.9%	2.2
History of gastrointestinal bleeding	2.9%	2.8%	0.9
Chronic renal insufficiency	3.6%	3.7%	-0.4
Dialysis	0.8%	0.9%	-0.9
Cardiogenic shock	5.8%	5.9%	-0.3
Procedure status			
Urgent	15.6%	16.6%	-2.9
Emergency/Salvage	80.4%	79.7%	1.7
EF <30%	6.5%	7.3%	-3.0
Left main disease	3.2%	3.1%	0.4

Patients matched within propensity caliper.

Table 5. Procedure Characteristics of Matched STEMI Cohort.

Characteristic	DES (N=1298)	BMS (N=1298)	% Standardized Difference
Diseased vessels			
0-1	45.9%	45.4%	1.1
2	33.7%	34.4%	-1.3
Lesions treated			
2	18.2%	19.1%	-2.4
3	3.9%	4.2%	-2.0
4	0.3%	0.5%	-3.6
>4	0.2%	0.2%	-1.8
Target vessel(s)			
Left main	0.5%	0.6%	-1.0
Left anterior descending	42.6%	39.5%	6.3
Circumflex	16.3%	18.8%	-6.5
Right coronary	51.2%	49.8%	2.8
Saphenous vein graft	1.9%	1.9%	0.0
Arterial graft	0.1%	0.2%	-2.3
High-risk lesion	43.7%	44.7%	-2.0
Restenosis	2.0%	3.3%	-8.1
Thrombectomy	16.9%	17.0%	-0.4
GP IIb/IIIa inhibitor pretreatment	41.5%	41.8%	-0.8
Clopidogrel or ticlopidine pretreatment	26.0%	25.4%	1.4
Pilot program (STEMI only)	1.5%	1.3%	1.3

Patients matched within propensity caliper.

Table 6. Patient Characteristics of Matched NSTEMI Cohort.

Characteristic	DES (N=1228)	BMS (N=1228)	% Standardized Difference
Age (years)	68.1	66.8	0.1
Female	36.9%	35.2%	3.6
Race			
White	87.3%	88.3%	-3.0
African-American	1.9%	2.4%	-3.9
Hispanic	3.9%	3.9%	0.0
Other	6.9%	5.4%	6.4
Insurance			
Government	46.7%	49.0%	-4.7
Commercial	15.7%	15.7%	0.0
HMO	32.3%	30.5%	3.9
No insurance	5.3%	4.7%	2.6
Diabetes mellitus	26.4%	28.8%	-5.3
Insulin requiring	8.1%	9.4%	-4.6
Hyperlipidemia	68.9%	72.3%	-7.5
Hypertension	72.6%	74.5%	-4.4
Current smoker	24.8%	24.5%	0.6
Former smoker	39.3%	40.6%	-2.7
Prior MI	34.0%	32.1%	4.0
Prior CABG	15.1%	14.7%	0.9
Prior PCI	13.8%	15.2%	-4.2

Characteristic	DES (N=1228)	BMS (N=1228)	% Standardized Difference
Congestive heart failure	16.5%	15.2%	3.3
Peripheral vascular disease	14.8%	15.3%	-1.4
Cerebrovascular disease	13.6%	11.5%	6.4
Chronic lung disease	15.2%	14.3%	2.5
History of neoplasm	4.0%	3.3%	3.5
History of gastrointestinal bleeding	3.8%	3.3%	2.6
Chronic renal insufficiency	10.0%	9.5%	1.9
Dialysis	1.6%	2.1%	-4.2
Cardiogenic shock	1.3%	1.4%	-0.7
Procedure status			
Urgent	65.8%	66.0%	-0.51
Emergency/Salvage	16.1%	13.6%	7.1
ACS duration			
0-6 hrs	16.2%	15.6%	1.6
6-24 hrs	30.0%	27.4%	5.8
> 24 hrs	52.4%	55.7%	-6.5
EF < 30%	8.2%	6.9%	4.9
Left main disease	9.0%	7.6%	5.0

Patients matched within propensity caliper and exactly on commercial insurance, number of treated lesions = 3, and treatment of right coronary artery.

Table 7. Procedure Characteristics of Matched NSTEMI Cohort.

Characteristic	DES (N=1228)	BMS (N=1228)	% Standardized Difference
<hr/>			
Diseased vessels			
0-1	38.1%	38.5%	-0.8
2	33.7%	33.9%	-0.3
>1 lesion treated	21.5%	22.6%	-2.7
Target vessel(s)			
Left main	2.2%	2.0%	1.7
Left anterior descending	37.3%	36.2%	2.2
Circumflex	39.7%	37.8%	3.8
Right coronary	37.4%	37.4%	0.0
Saphenous vein graft	9.1%	8.4%	2.6
Arterial graft	0.3%	0.2%	3.3
High-risk lesion	30.1%	29.6%	1.1
Restenosis	2.3%	3.3%	-6.4
Thrombectomy	16.8%	17.0%	-0.4
GP IIb/IIIa inhibitor pretreatment	38.0%	33.8%	8.7
Clopidogrel or ticlopidine pretreatment	35.5%	37.5%	-4.2

Patients matched within propensity caliper and exactly on commercial insurance, number of treated lesions = 3, and treatment of right coronary artery.

Table 8. Two-day Adjusted Mortality

Presentation	DES	BMS	Paired Rate Difference	
			(DES-BMS) [95% CI]	P-Value
Any MI	0.7% (18/2571)	1.2% (31/2571)	-0.5% [-1.0%, 0.0%]	0.06
STEMI	0.9% (12/1298)	1.9% (24/1298)	-0.9% [-1.8%, 0.0%]	0.04
NSTEMI	0.5% (6/1228)	0.8% (10/1228)	-0.3% [-1.0%, 0.3%]	0.32

Table 9. Two-year Clinical Outcomes Adjusted for Time

Presentation	Outcome	DES Only	BMS Only	Rate Difference	P-Value
				(DES-BMS) [95% CI]	
Any MI 1679 Pairs	Death	10.3% (173/1679)	13.6% (228/1679)	-3.3% [-5.5%, -1.1%]	0.003
	MI	8.8% (147/1679)	11.1% (186/1679)	-2.3% [-4.4%, -0.3%]	0.03
	TVR	10.1% (171/1679)	15.4% (258/1679)	-5.2% [-7.4%, -3.0%]	<0.001
STEMI 784 Pairs	Death	8.4% (66/784)	12.1% (95/784)	-3.7% [-6.7%, -0.7%]	0.02
	MI	7.5% (59/784)	8.0% (63/784)	-0.5% [-3.2%, 2.1%]	0.71
	TVR	11.1% (87/784)	14.4% (113/784)	-3.3% [-6.6%, 0.0%]	0.04
NSTEMI 851 Pairs	Death	11.9% (101/851)	14.7% (125/851)	-2.8% [-6.0%, 0.4%]	0.08
	MI	10.0% (85/851)	14.5% (123/851)	-4.5% [-7.6%, -1.3%]	0.005
	TVR	8.9% (76/851)	15.8% (134/851)	-6.8% [-10.0%, -3.6%]	<0.001

DES, drug-eluting stent. BMS, bare-metal stent. MI, myocardial infarction. TVR, target vessel revascularization

Table 10. Two-Year Adjusted Mortality in STEMI After Exclusions from Initial Sample of 3379 Patients.

Exclusion	DES	BMS	Paired Rate Difference	P-Value
			(DES-BMS) [95% CI]	
Pilot program	8.7% (110/1272)	11.2% (142/1272)	-2.5% [-4.8%, -0.2%]	0.03
ACS duration >24 hours	8.5% (95/1121)	11.3% (127/1121)	-2.9% [-5.3%, -0.4%]	0.02

Figure 1. Drug-Eluting and Bare Metal Stent Procedure Numbers According to Time.

The number of procedures performed with drug-eluting stents vs bare metal stents are shown according to time before propensity score matching (A and B) and after propensity score matching including adjustment for time (C and D)

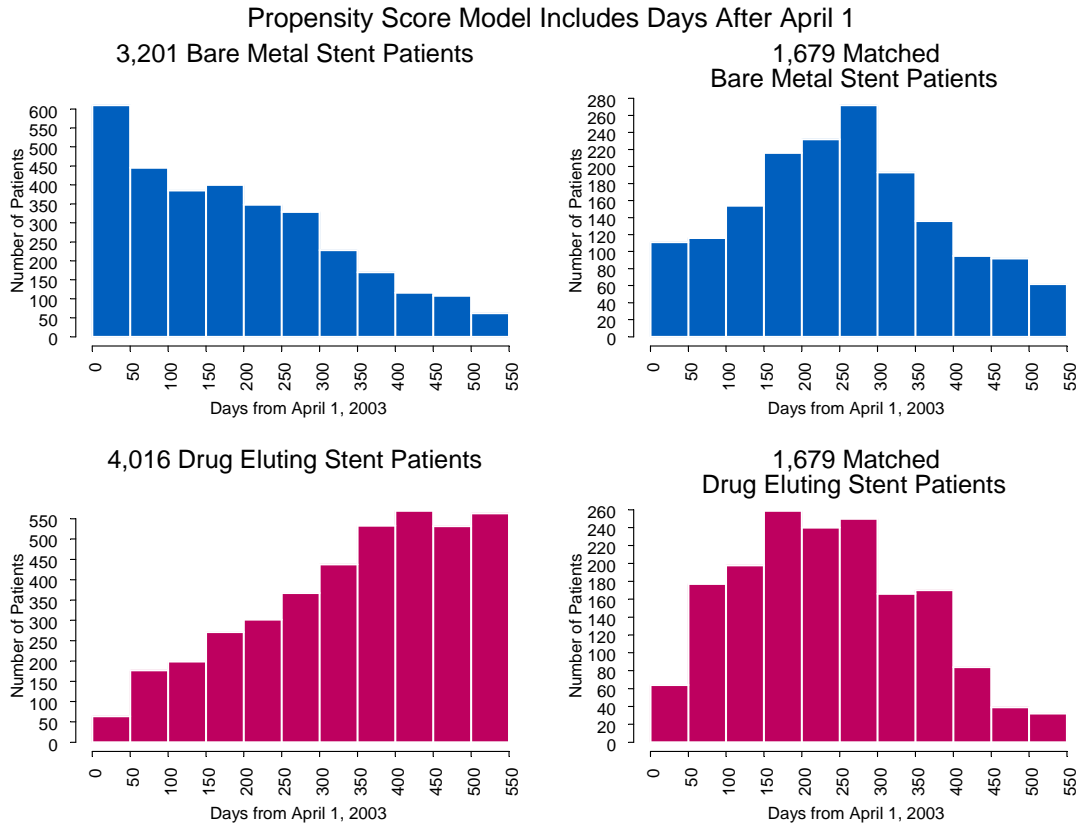


Figure 2. Study Flow Diagram

