

## Supplementary Online Content

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

## eAppendix 1: Variable Definitions

<b>Variable</b>	<b>Definition</b>
<b>Age</b>	Number of years from NPCD-identified date of birth to date of operation.
<b>Race</b>	VASQIP Race. If VASQIP-assessed race value is missing then most recent NPCD race value. If both VASQIP-assessed and NPCD race are missing then CMS race assessment (RTI) was used.
<b>Sex</b>	VASQIP Gender. If VASQIP-assessed gender value is missing then most recent NPCD gender value. If both VASQIP-assessed and NPCD gender are missing then CMS gender assessment was used.
<b>Coronary Artery Disease</b>	ICD9 codes of 410.xx, 411.xx, 412.xx, 413.xx, 414.xx, 429.2x, V4581, or 492.2x.
<b>Myocardial Infarction</b>	ICD-9-CM codes 410.xx or VASQIP nurse-abstracted MI
<b>Congestive Heart Failure</b>	ICD9 codes of 428.xx
<b>Cerebrovascular Disease</b>	ICD9 codes of 362.34, 430.xx, 431.xx, 432.xx, 433.xx, 434.xx, 435.xx, 436.xx, 437.xx, or 438.xx
<b>Diabetes</b>	ICD9 codes of 250.xx OR VASQIP-defined IDDM
<b>Revised Cardiac Risk Index</b>	Revised Cardiac Risk Index is defined using the following variables:- High-risk surgical procedure (Suprainguinal, Intrathoracic, Intraperitoneal)- History of IHD [CAD within 1 year (from NPCD or CMS), MI within 6 months (from VASQIP, NPCD, or CMS), History of angina within 1 month (VASQIP)]- History of CHF [CHF within 30 days (VASQIP), CHF within 1 year (CMS or NPCD)]- History CVD [History of TIA (VASQIP), CVA/Stroke (VASQIP), History of CVD (NPCD or CMS)]- Preoperative Insulin-Dependent Diabetes (VASQIP-defined IDDM, Diabetes diagnosis within 1 year (VASQIP, NPCD, or CMS) plus at least one outpatient insulin prescription within 1 year prior to surgery)- Preoperative Serum Creatinine > 2.0 mg/dl (VASQIP-collected creatinine value > 2 mg/dl within 1 year, NPCD-identified creatinine value > 2 mg/dl within 1 year)
<b>Chronic Kidney Disease</b>	ICD9 codes of 585.1, 585.2, 585.3, 585.4, 585.5, or 585.6
<b>Stent Type</b>	ICD9 procedure codes of 36.06 = BMS and 36.07 = DES
<b>Work Relative Value Unit</b>	VASQIP-defined work RVU. If VASQIP work RVU is missing, then 2011 RVU was merged in by principal CPT code
<b>Procedure Type</b>	CPT codes of 10040-19999 Integumentary; 20000-29999 Musculoskeletal; 30000-32999 Respiratory; 34000-37799 Vascular; 40000-49999 Digestive; 50000-53999 Urinary; 54000-58999 Genital; 61000-64999 Nervous; and 65000-69999 Eye/Ear. Procedures with a primary CPT code not in this list were categorized as "Other": 10000-10039 General; 38100-39999 Hemic and Lymphatic; and 60000-60999 Endocrine.

<b>Appendix 2: Comparison of Matched Cases to Matched Controls</b>				
		<b>No MACE Event</b>	<b>MACE Event</b>	
		N (%)	N (%)	<b>p-value</b>
<b>Selected</b>		284 (50.0)	284 (50.0)	
Case Type	Cardiac+Death		43 (15.1)	
	Cardiac-Only		241 (84.9)	
<b>Demographics</b>				
Race	White	241 (84.9)	245 (86.3)	0.40
	Black	33 (11.6)	24 (8.5)	
	Other	4 (1.4)	4 (1.4)	
	Missing	6 (2.1)	11 (3.9)	
Sex	Male	278 (97.9)	282 (99.3)	0.15
	Female	6 (2.1)	2 (0.7)	
Age at Time of Surgery	<60	73 (25.7)	57 (50.1)	0.11
	≥60	211 (74.3)	227 (79.9)	
<b>Matching Variables</b>				
Fiscal Year of Surgery	FY00	6 (2.1)	6 (2.1)	1.00
	FY01	15 (5.3)	15 (5.3)	
	FY02	21 (7.4)	21 (7.4)	
	FY03	25 (8.8)	25 (8.8)	
	FY04	29 (10.2)	29 (10.2)	
	FY05	26 (9.2)	26 (9.2)	
	FY06	35 (12.3)	35 (12.3)	
	FY07	29 (10.2)	29 (10.2)	
	FY08	29 (10.2)	29 (10.2)	
	FY09	22 (7.7)	22 (7.7)	
	FY10	27 (9.5)	27 (9.5)	

	FY11	20 (7.0)	20 (7.0)	
<b>Time from Stent to Surgery</b> <sup>a</sup>	6 weeks to 3 months	53 (18.7)	53 (18.7)	0.87
	3 to 12 months	127 (44.7)	127 (44.7)	
	>12 months	104 (36.6)	104 (36.6)	
<b>Operation Type</b>	Vascular	78 (27.5)	78 (27.5)	1.00
	Digestive	74 (26.1)	74 (26.1)	
	Eye/Ear	24 (8.5)	24 (8.5)	
	Genital	2 (0.7)	2 (0.7)	
	Integumentary	12 (4.2)	12 (4.2)	
	Musculoskeletal	40 (14.1)	40 (14.1)	
	Nervous	12 (4.2)	12 (4.2)	
	Other	6 (2.1)	6 (2.1)	
	Respiratory	14 (4.9)	14 (4.9)	
	Urinary	22 (7.7)	22 (7.7)	
<b>Stent Type</b>	BMS	159 (56.0)	159 (56.0)	1.00
	DES	125 (44.0)	125 (44.0)	
<b>Work Relative Value Unit</b> <sup>a</sup>	<10	91 (32.0)	84 (29.6)	0.57
	10-20	120 (42.3)	116 (40.9)	
	>20	73 (25.7)	84 (29.6)	
<b>Revised Cardiac Risk Index</b>	1	58 (20.4)	58 (20.4)	1.00
	2	99 (34.9)	99 (34.9)	
	≥3	127 (44.7)	127 (44.7)	
<b>Cardiac Risk Criteria</b>				
History of Congestive Heart Failure	No	156 (54.9)	139 (48.9)	0.15
	Yes	128 (45.1)	145 (51.1)	
History of Cerebrovascular Disease	No	204 (71.8)	217 (76.4)	0.21
	Yes	80 (28.2)	67 (23.6)	
Insulin-Dependent Diabetes	No	220 (77.5)	228 (80.3)	0.41
	Yes	64 (22.5)	56 (19.7)	

Preoperative Creatinine > 2 mg/dl	No	213 (75.0)	228 (80.3)	0.13
	Yes	71 (25.0)	56 (19.7)	
High Risk Operation	No	216 (76.1)	206 (72.5)	0.34
	Yes	68 (23.9)	78 (27.5)	

<sup>a</sup> Time to surgery was matched to within 2 weeks; Work RVU was matched to within 6 units

**Case Report Form: Exposure**

**Study ID:** \_\_\_\_\_

Abstractor Initials: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_\_\_

**Date of VA Stent:** \_\_\_/\_\_\_/\_\_\_\_\_

Stent procedure indication (**Please select only one primary indication**)

- Acute Coronary Syndrome → *What type?*       STEMI     Non-STEMI     Unstable Angina
- Stable Angina
- Abnormal Stress Test
- Other: \_\_\_\_\_

Was the stent in preparation for surgery?     Yes       No

Number (#) of Stents \_\_\_\_\_       More than one stent episode within the past 30 days

Stent Date and Type (circle one type)	Size (in mm)	Location (circle segment and vessel)					Residual Stenosis?		Bifurcation Lesions		TIMI flow (0,1,2, or 3)
		Proximal	Mid	Distal	Ostial	Other	Yes ≥20%	No <20%	Yes	No	
___/___/_____  DES   BMS   UTD	Diameter _____ Length _____ <input type="checkbox"/> UTD	Proximal    Mid    Distal    Ostial LM    LAD    LCx    RCA    UTD Other: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> UTD <input type="checkbox"/> Not Avail.						
___/___/_____  DES   BMS   UTD	Diameter _____ Length _____ <input type="checkbox"/> UTD	Proximal    Mid    Distal    Ostial LM    LAD    LCx    RCA    UTD Other: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> UTD <input type="checkbox"/> Not Avail.						
___/___/_____  DES   BMS   UTD	Diameter _____ Length _____ <input type="checkbox"/> UTD	Proximal    Mid    Distal    Ostial LM    LAD    LCx    RCA    UTD Other: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> UTD <input type="checkbox"/> Not Avail.						
___/___/_____  DES   BMS   UTD	Diameter _____ Length _____ <input type="checkbox"/> UTD	Proximal    Mid    Distal    Ostial LM    LAD    LCx    RCA    UTD Other: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> UTD <input type="checkbox"/> Not Avail.						
___/___/_____  DES   BMS   UTD	Diameter _____ Length _____ <input type="checkbox"/> UTD	Proximal    Mid    Distal    Ostial LM    LAD    LCx    RCA    UTD Other: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> UTD <input type="checkbox"/> Not Avail.						

**Date of VA Surgery:** \_\_\_/\_\_\_/\_\_\_\_\_

*Surgery Characteristics*

- Admission Status       Inpatient       Elective Surgery Admission       Outpatient       UTD
- Case Status               Elective               Emergent/Urgent               UTD

**Case Report Form: Exposure (Continued)**

Study ID: \_\_\_\_\_

Date of VA Surgery: \_\_\_ / \_\_\_ / \_\_\_\_\_

Date of VA Stent: \_\_\_ / \_\_\_ / \_\_\_\_\_

*Cardiac and Non-Cardiac History (circle one):*

MI	Yes	No	<i>If YES...</i>	Date: ___ / ___ / _____	<input type="checkbox"/> Date Missing
CHF	Yes	No	<i>If YES...</i>	EF _____ %	<input type="checkbox"/> EF% Missing
PVD	Yes	No			
Cerebrovascular Disease	Yes	No			
CABG	Yes	No			
VTE	Yes	No			
Atrial Fibrillation	Yes	No			
Valve Replacement	Yes	No	<i>If YES...</i>	→ <input type="checkbox"/> Aortic <input type="checkbox"/> Mitral <input type="checkbox"/> UTD → <input type="checkbox"/> Mechanical <input type="checkbox"/> Prosthetic <input type="checkbox"/> UTD	
Pacemaker or Defibrillator	Yes	No			
Diabetes	Yes	No	<i>If YES... On Insulin?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> UTD	
Creatinine Available	Yes	No	<i>If YES...</i>	Date: ___ / ___ / _____    Reading: _____	

*Preoperative Medication Management*

Drug	On Pre-op?			Held Pre-Op?			# of Days Held	
	Yes	No	UTD	Yes	No	UTD	_____	UTD
Aspirin	Yes	No	UTD	Yes	No	UTD	_____	UTD
Clopidogrel (Plavix)	Yes	No	UTD	Yes	No	UTD	_____	UTD
Ticlopidine (Ticlid)	Yes	No	UTD	Yes	No	UTD	_____	UTD
Prasugrel (Effient)	Yes	No	UTD	Yes	No	UTD	_____	UTD
Warfarin (Coumadin)	Yes	No	UTD	Yes	No	UTD	_____	UTD
Enoxaparin (Lovenox)	Yes	No	UTD					
SQ Heparin	Yes	No	UTD					
Heparin drip	Yes	No	UTD					
Other: (eg. GIIa/IIb inhibitors)	Yes	No	UTD	Yes	No	UTD	_____	UTD

Transfusion Type	No Evidence	Total Units	Intraoperative Units	Preoperative (within 72 hours of surgery)	
				Units	Date of 1 <sup>st</sup> Transfusion
Red Blood Cells	<input type="checkbox"/>	_____	_____ <input type="checkbox"/> UTD	_____ <input type="checkbox"/> UTD	___ / ___ / _____ <input type="checkbox"/> UTD
Platelets	<input type="checkbox"/>	_____	_____ <input type="checkbox"/> UTD	_____ <input type="checkbox"/> UTD	___ / ___ / _____ <input type="checkbox"/> UTD
Fresh Frozen Plasma	<input type="checkbox"/>	_____	_____ <input type="checkbox"/> UTD	_____ <input type="checkbox"/> UTD	___ / ___ / _____ <input type="checkbox"/> UTD
Other*: _____		_____	_____ <input type="checkbox"/> UTD	_____ <input type="checkbox"/> UTD	___ / ___ / _____ <input type="checkbox"/> UTD

\* For a cell saver, every 500 cc's of fluid equals 1 unit of packed cells. For less than 250 cc of fluid, enter 0.

**Case Report Form: Outcomes**

Study ID: \_\_\_\_\_

Abstractor Initials: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_\_\_

Date of Surgery: \_\_\_/\_\_\_/\_\_\_\_\_

*Postoperative Medication Management*

**When Resumed?**

Drug	On Pre-Op			Held Pre-Op			Per Discharge Instructions	As an Inpatient
	Yes	No	UTD	Yes	No	UTD	___/___/___ <input type="checkbox"/> UTD when resumed	___/___/___ <input type="checkbox"/> Not Resumed
Aspirin	Yes	No	UTD	Yes	No	UTD	___/___/___ <input type="checkbox"/> UTD when resumed	___/___/___ <input type="checkbox"/> Not Resumed
Clopidogrel (Plavix)	Yes	No	UTD	Yes	No	UTD	___/___/___ <input type="checkbox"/> UTD when resumed	___/___/___ <input type="checkbox"/> Not Resumed
Ticlopidine (Ticlid)	Yes	No	UTD	Yes	No	UTD	___/___/___ <input type="checkbox"/> UTD when resumed	___/___/___ <input type="checkbox"/> Not Resumed
Prasugrel (Effient)	Yes	No	UTD	Yes	No	UTD	___/___/___ <input type="checkbox"/> UTD when resumed	___/___/___ <input type="checkbox"/> Not Resumed
Warfarin (Coumadin)	Yes	No	UTD	Yes	No	UTD	___/___/___ <input type="checkbox"/> UTD when resumed	___/___/___ <input type="checkbox"/> Not Resumed
Enoxaparin (Lovenox)	Yes	No	UTD				___/___/___ <input type="checkbox"/> UTD when resumed	___/___/___ <input type="checkbox"/> Not Resumed
SQ Heparin	Yes	No	UTD				___/___/___ <input type="checkbox"/> UTD when resumed	___/___/___ <input type="checkbox"/> Not Resumed
Heparin drip	Yes	No	UTD				___/___/___ <input type="checkbox"/> UTD when resumed	___/___/___ <input type="checkbox"/> Not Resumed
Other: _____	Yes	No	UTD				___/___/___ <input type="checkbox"/> UTD when resumed	___/___/___ <input type="checkbox"/> Not Resumed

*Cardiac complications and death within 30 days post procedure*

**Acute MI?**  Yes  No Date: \_\_\_/\_\_\_/\_\_\_\_\_  Prior to Surgery

**Catheter Lab Visit?**  Yes  No Date: \_\_\_/\_\_\_/\_\_\_\_\_  Prior to Surgery

→ Findings at Cath:

Stent thrombosis **OR**  Stent Restenosis

Type of stent: DES BMS UTD

Vessel(s) involved: \_\_\_\_\_

Non-stent related acute thrombosis/occlusion **OR**  Non-stent Stenosis

Native vessel: \_\_\_\_\_ CABG graft: \_\_\_\_\_

Demand mismatch / stable coronary disease

No significant occlusive disease

→ Resulted in:  Stent  CABG  Balloon Angioplasty  No Intervention

Other: \_\_\_\_\_



**Case Report Form: Outcomes (Continued)**

Study ID: \_\_\_\_\_

Date of Surgery: \_\_\_ / \_\_\_ / \_\_\_\_\_

**Cardiac Arrest?**       Yes       No      Date: \_\_\_ / \_\_\_ / \_\_\_\_\_       Prior to Surgery

Cardiac cause → If yes,       VT/VF       Asystole       PEA       UTD

Respiratory cause

Sepsis

Bleeding

Other: \_\_\_\_\_

**Death within 30 days?**       Yes       No      Date: \_\_\_ / \_\_\_ / \_\_\_\_\_

Cardiac Etiology?       Yes       No

\* If any of the outcomes are UTD please describe why: \_\_\_\_\_

*Postoperative Transfusions **within 72 hours of surgery***

Type	Transfused			Number of Units		Date of 1 <sup>st</sup> Transfusion	
	Yes	No	UTD	_____	<input type="checkbox"/> UTD	___ / ___ / _____	<input type="checkbox"/> UTD
Red Blood Cells	Yes	No	UTD	_____	<input type="checkbox"/> UTD	___ / ___ / _____	<input type="checkbox"/> UTD
Platelets	Yes	No	UTD	_____	<input type="checkbox"/> UTD	___ / ___ / _____	<input type="checkbox"/> UTD
Fresh Frozen Plasma	Yes	No	UTD	_____	<input type="checkbox"/> UTD	___ / ___ / _____	<input type="checkbox"/> UTD
Other: _____	Yes	No	UTD	_____	<input type="checkbox"/> UTD	___ / ___ / _____	<input type="checkbox"/> UTD

**Return to the OR?**       Yes       No      Date: \_\_\_ / \_\_\_ / \_\_\_\_\_

Reason for Return

Bleeding from surgical bed

Thrombosis

Other complication: \_\_\_\_\_

**Non-operative intervention**       Yes       No

Open wound, evacuate hematoma      Date: \_\_\_ / \_\_\_ / \_\_\_\_\_

Percutaneous drainage of hematoma      Date: \_\_\_ / \_\_\_ / \_\_\_\_\_

Catheter embolization      Date: \_\_\_ / \_\_\_ / \_\_\_\_\_

Other \_\_\_\_\_      Date: \_\_\_ / \_\_\_ / \_\_\_\_\_

**Bleeding from other source**       Yes       No      Date: \_\_\_ / \_\_\_ / \_\_\_\_\_

If yes ...       GI       Other: \_\_\_\_\_

eTable: Alternate Models of Perioperative MACE <sup>a</sup>		Pre-Guidelines (N=32,102)			Elective (N=40,334)			Cardiac Outcomes Only (N=41,989)		
		OR (95% CI)	p-value	χ <sup>2</sup> -df Rank	OR (95% CI)	p-value	χ <sup>2</sup> -df Rank	OR (95% CI)	p-value	χ <sup>2</sup> -df Rank
<b>Operation Characteristics</b>										
Admission Status	Outpatient	Ref.		1	Ref.		3	Ref.		2
	Elective Inpatient	2.32 (1.96 - 2.75)	<0.001		2.28 (1.97 - 2.64)	<0.001		1.96 (1.66 - 2.31)	<0.001	
	Non-Elective Inpatient	4.95 (4.11 - 5.95)						2.65 (2.16 - 3.26)		
Operation Type	Eye / Ear	Ref.		4	Ref.		4	Ref.		5
	Integumentary	1.38 (1.03 - 1.84)			1.44 (1.13 - 1.83)			1.17 (0.90 - 1.51)		
	Genital / Urinary	1.78 (1.34 - 2.36)			1.72 (1.35 - 2.19)			1.46 (1.14 - 1.88)		
	Musculoskeletal	1.71 (1.28 - 2.29)			1.61 (1.25 - 2.06)			1.46 (1.13 - 1.90)		
	Nervous	1.71 (1.17 - 2.49)	<0.001		1.71 (1.23 - 2.39)	<0.001		1.09 (0.75 - 1.60)	0.001	
	Vascular	1.97 (1.49 - 2.60)			1.94 (1.53 - 2.45)			1.68 (1.32 - 2.16)		
	Digestive	2.40 (1.80 - 3.19)			2.38 (1.86 - 3.03)			1.58 (1.21 - 2.05)		
	Other <sup>b</sup>	2.98 (1.85 - 4.81)			2.48 (1.60 - 3.83)			1.83 (1.13 - 2.95)		
	Respiratory	3.06 (2.26 - 4.15)			2.80 (2.14 - 3.67)			1.57 (1.17 - 2.12)		
Work Relative Value Unit		1.01 (1.01 - 1.02)	<0.001	7	1.01 (1.00 - 1.02)	0.002	8	1.01 (1.00 - 1.02)	0.01	7
Guideline Timing	Pre							Ref.		8
	Post							0.87 (0.77 - 0.99)	0.04	
<b>Cardiac Risk Factors</b>										
Myocardial Infarction in the past 6 months	No	Ref.		2	Ref.		1	Ref.		1
	Yes	2.47 (2.14 - 2.86)	<0.001		2.85 (2.48 - 3.28)	<0.001		3.25 (2.81 - 3.76)	<0.001	
Revised Cardiac Risk Index	1	Ref.		3	Ref.		2	Ref.		3
	2	1.45 (1.23 - 1.71)	<0.001		1.50 (1.29 - 1.73)	<0.001		1.41 (1.20 - 1.65)	<0.001	
	≥3	2.08 (1.76 - 2.45)			2.25 (1.95 - 2.60)			1.85 (1.58 - 2.15)		
Time Between Stent And Surgery (Weeks) <sup>c</sup>			<0.001	5			5		<0.001	4
Congestive Heart Failure in the past 6 months	No	Ref.		6	Ref.		7			
	Yes	1.58 (1.29 - 1.92)	<0.001		1.46 (1.19 - 1.79)	<0.001				
Percutaneous Coronary Interventions in the past 2 years	Index Only <sup>d</sup>	Ref.		8	Ref.		6	Ref.		6
	1	1.34 (1.13 - 1.59)	0.001		1.33 (1.15 - 1.54)	<0.001		1.35 (1.15 - 1.58)	<0.001	
	≥2	1.32 (0.96 - 1.82)			1.37 (1.02 - 1.85)			1.39 (1.02 - 1.90)		
Stent Type	Bare Metal	Ref.		9	Ref.		9	Ref.		9
	Drug-Eluting	0.97 (0.86 - 1.09)	0.56		0.90 (0.81 - 1.01)	0.06		0.91 (0.81 - 1.02)	0.12	

<sup>a</sup> The final models are also adjusted for operation facility (VA vs. Non-VA). Additional covariates tested include hypertension within the past year, chronic kidney disease, and age at the time of surgery.

<sup>b</sup> "Other" operation types include primary CPT codes of General (1000-10039), Hemic and Lymphatic (38100-39999), and Endocrine (60000-60999) operations.

<sup>c</sup> Time is considered a non-linear effect thus odds ratios vary across time. Please refer to Figure 2 for a plot of adjusted OR across time.

<sup>d</sup> "Index Only" indicates a surgery with only the index intervention in the 2 years preceding surgery. Surgeries with "1" or " $\geq 2$ " refer to the number interventions preceding the index intervention.

Table (Continued) <sup>a</sup>		Excluding Revascularizations (N=41,989)				Weighted by DES Probability <sup>e</sup> (N=28,049)				Excluding rCRI Components (N=41,989)			
		OR	(95% CI)	p-value	$\chi^2$ -df Rank	OR	(95% CI)	p-value	$\chi^2$ -df Rank	OR	(95% CI)	p-value	$\chi^2$ -df Rank
<b>Operation Characteristics</b>													
Admission Status	Outpatient	Ref.			1	Ref.			1	Ref.			1
	Elective Inpatient	2.51	(2.17 - 2.91)	<0.001		2.52	(2.24-2.83)	<0.001		3.26	(2.90-3.66)	<0.001	
	Non-Elective Inpatient	4.97	(4.22 - 5.85)			4.71	(4.11-5.38)			7.23	(6.28-8.33)		
Operation Type	Eye / Ear	Ref.			4	Ref.			4				
	Integumentary	1.51	(1.17 - 1.94)			1.33	(1.10-1.62)						
	Genital / Urinary	1.89	(1.47 - 2.43)			1.65	(1.36-1.99)						
	Musculoskeletal	1.74	(1.35 - 2.24)			1.50	(1.23-1.82)						
	Nervous	1.89	(1.36 - 2.63)	0.001		1.57	(1.21-2.04)	<0.001					
	Vascular	2.01	(1.58 - 2.57)			1.60	(1.32-1.94)						
	Digestive	2.54	(1.98 - 3.26)			2.05	(1.69-2.49)						
	Other <sup>b</sup>	2.70	(1.77 - 4.12)			1.64	(1.13-2.36)						
	Respiratory	3.07	(2.35 - 4.00)			2.82	(2.30-3.46)						
Work Relative Value Unit		1.01	(1.00 - 1.02)	0.003	8	1.01	(1.00-1.01)	0.01	13				
Guideline Timing	Pre					Ref.			10				
	Post					0.87	(0.80-0.94)	<0.001					
<b>Cardiac Risk Factors</b>													
Myocardial Infarction in the past 6 months	No	Ref.			2	Ref.			2				
	Yes	2.70	(2.38 - 3.07)	<0.001		3.18	(2.86-3.53)	<0.001					
Revised Cardiac Risk Index	1	Ref.			3	Ref.			3	Ref.			2
	2	1.58	(1.37 - 1.83)	<0.001		1.61	(1.43-1.80)	<0.001		1.61	(1.41-1.84)	<0.001	
	>3	2.32	(2.00 - 2.68)			2.04	(1.82-2.29)			2.58	(2.27-2.94)		

Time Between Stent And Surgery (Weeks) <sup>c</sup>				<0.001	5			<0.001	5			<0.001	3
Congestive Heart Failure in the past 6 months	No	Ref.			6	Ref.			6				
	Yes	1.51	(1.27 - 1.79)	<0.001		1.62	(1.41-1.87)	<0.001					
Percutaneous Coronary Interventions in the past 2 years	Index Only <sup>d</sup>	Ref.			7	Ref.			11				
	1	1.29	(1.12 - 1.48)	0.001		1.18	(1.06-1.33)	0.01					
	>2	1.15	(0.86 - 1.55)			1.24	(0.97-1.58)						
Chronic Kidney Disease in the past year	None	Ref.			10	Ref.			7				
	Stage 1-5	0.93	(0.72 - 1.18)	0.02		0.95	(0.80-1.13)	<0.001					
	Dialysis	1.51	(1.12 - 2.04)			1.71	(1.39-2.11)						
Age at Surgery	< 60	Ref.			9	Ref.			9	Ref			4
	≥ 60	1.22	(1.07 - 1.39)	0.003		1.19	(1.07-1.32)	0.001		1.16	(1.02-1.31)	0.02	
Stent Type	BMS	Ref.			11	Ref.			8	Ref.			5
	DES	0.90	(0.82 - 1.00)	0.05		0.87	(0.80-0.94)	0.001		0.91	(0.93-1.00)	0.05	

<sup>a</sup> The final models are also adjusted for operation facility (VA vs. Non-VA). Hypertension within the past year was also tested but excluded from the models above.

<sup>b</sup> "Other" operation types include primary CPT codes of General (1000-10039), Hemic and Lymphatic (38100-39999), and Endocrine (60000-60999) operations.

<sup>c</sup> Time is considered a non-linear effect thus odds ratios vary across time. Please refer to Figure 2 for a plot of adjusted OR across time.

<sup>d</sup> "Index Only" indicates a surgery with only the index intervention in the 2 years preceding surgery. Surgeries with "1" or "≥2" refer to the number interventions preceding the index intervention.

<sup>e</sup> Alternate model weighted by the probability of receiving a DES is limited to stents placed after FY2003 when DES were widely available.

**eFigure. Adjusted Odds Ratio of MACE by Stent Type**

