

SUPPLEMENTAL MATERIALS

Table E1. CPT procedural and ICD-9 surgery codes

CABG	PCI
CPT procedure codes for CABG	CPT procedure codes for PCI
33510 - Coronary artery bypass, vein only; single coronary venous graft	92973 - Coronary Therapeutic Services and Procedures
33511 - Coronary artery bypass, vein only; 2 coronary venous grafts	92980 – Stenting, (92981 - Stenting, additional vessel)
33512 - Coronary artery bypass, vein only; 3 coronary venous graft	92982 – Angioplasty (92984 - Angioplasty, additional vessel)
33513 - Coronary artery bypass, vein only; 4 coronary venous grafts	92985 - Percutaneous transluminal coronary atherectomy
33514 - Coronary artery bypass, vein only; 5 coronary venous grafts	92995 – Atherectomy (92996 - Atherectomy, additional vessel)
33516 - Coronary artery bypass, vein only; 6 or more coronary venous graft	92920 - Balloon angioplasty
33517 - Coronary artery bypass, using venous graft(s) and arterial graft(s); single vein graft	92924 - Atherectomy
33518 - Coronary artery bypass, using venous graft(s) and arterial graft(s); 2 venous grafts	92928 - Stenting
33519 - Coronary artery bypass, using venous graft(s) and arterial graft(s); 3 venous grafts	92933 - Atherectomy with stenting
33521 - Coronary artery bypass, using venous graft(s) and arterial graft(s); 4 venous grafts	92941 - PCI of acute total/subtotal lesion
33522 - Coronary artery bypass, using venous graft(s) and arterial graft(s); 5 venous grafts	92943 - PCI of chronic total occlusion
33523 - Coronary artery bypass, using venous graft(s) and arterial graft(s); 6 or more venous grafts	ICD-9-CM surgery codes for PCI
33530 - Combined Arterial-Venous Grafting for Coronary Bypass	00.66 - Percutaneous transluminal coronary angioplasty or coronary atherectomy
33533 - Coronary artery bypass, using arterial graft(s); single arterial graft	36.0 - Removal of Coronary Artery Obstruction and Insertion of Stent(s)
33534 - Coronary artery bypass, using arterial graft(s); 2 coronary arterial graft	36.01 - Single vessel percutaneous transluminal coronary angioplasty or coronary atherectomy without thrombolytic agent

33535 - Coronary artery bypass, using arterial graft(s); 3 coronary arterial graft	36.02 Single vessel percutaneous transluminal coronary angioplasty or coronary atherectomy with thrombolytic agent
33536 - Coronary artery bypass, using arterial graft(s); 4 or more coronary arterial graft	36.05 Multiple vessel percutaneous transluminal coronary angioplasty or coronary atherectomy
33572 - Coronary Endarterectomy Procedures	36.06 - Insertion of Non-Drug-Eluting Coronary Artery Stent(s)
ICD-9-CM surgery codes for CABG	36.07 - Insertion of Drug-Eluting Coronary Artery Stent(s)
36.10 - Aortocoronary Bypass for Heart Revascularization, Not Otherwise Specified	36.09 - Other Removal of Coronary Artery Obstruction
36.11 - Aortocoronary Bypass of One Coronary Artery	00.40 - Procedure on single vessel (secondary code)
36.12 - Aortocoronary Bypass of Two Coronary Arteries	00.41 - Procedure on two vessels (secondary code)
36.13 - Aortocoronary Bypass of Three Coronary Arteries	00.42 - Procedure on three vessels (secondary code)
36.14 - Aortocoronary Bypass of Four or More Coronary Arteries	00.43 - Procedure on four or more vessels (secondary code)
36.15 - Single Internal Mammary-Coronary Artery Bypass	00.45 - Insertion of one vascular stent (secondary code)
36.16 - Double Internal Mammary-Coronary Artery Bypass	00.46 - Insertion of two vascular stents (secondary code)
36.17 - Abdominal-Coronary Artery Bypass	00.47 - Insertion of three vascular stents (secondary code)
36.19 - Other Bypass Anastomosis for Heart Revascularization	00.48 - Insertion of four or more vascular stents (secondary code)

Abbreviations: CABG, coronary artery bypass grafting; CPT, Current Procedural Terminology; ICD-9-CM, International Classification of Diseases 9th Revision Clinical Modification; PCI, percutaneous coronary interventions.

Table E2. Complete adjusted Cox proportional hazard models (STATA output) evaluating association between post-ESRD all-cause mortality and type of revascularization.

Model 1						
No. of subjects =	964			Number of obs =	964	
No. of failures =	523					
Time at risk =	2033.675565					
Log likelihood =	-3187.5586			LR chi2(2) =	14.73	
				Prob > chi2 =	0.0006	

	_t	Haz. Ratio	Std. Err.	z	P> z 	[95% Conf. Interval]

	CABG (PCI ref)	.7414783	.0662199	-3.35	0.001	.622414 .8833189
	Time to ESRD	1.000146	.0000805	1.81	0.070	.999988 1.000303

Model 2						
No. of subjects =	915			Number of obs =	915	
No. of failures =	498					
Time at risk =	1911.227926					
Log likelihood =	-2977.8877			LR chi2(10) =	68.99	
				Prob > chi2 =	0.0000	

	_t	Haz. Ratio	Std. Err.	z	P> z 	[95% Conf. Interval]

	CABG (PCI ref)	.7160332	.0664397	-3.60	0.000	.5969685 .8588453
	Time to ESRD	1.000261	.0000837	3.12	0.002	1.000097 1.000425
	Race_African-Am	.5691123	.071976	-4.46	0.000	.4441666 .7292057
	Race_others	.879551	.3382598	-0.33	0.739	.4139081 1.869038
	Sex_female	.5704547	.2877776	-1.11	0.266	.212234 1.533301
	Age	1.028224	.0059122	4.84	0.000	1.016702 1.039877
	Marital_single	1.023306	.1759549	0.13	0.893	.730539 1.4334
	Marital_divorced	1.061564	.1106945	0.57	0.567	.8653407 1.302282
	Marital_widowed	1.134877	.1732279	0.83	0.407	.8414359 1.530652
	Income	1	9.66e-07	0.28	0.779	.9999984 1.000002

Model 3						

No. of subjects =	893	Number of obs =	893
No. of failures =	481		
Time at risk =	1874.759754		
Log likelihood =	-2825.7231	LR chi2(46) =	147.76
		Prob > chi2 =	0.0000

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]
CABG (PCI ref)	.6375721	.0684449	-4.19	0.000	.5165957 .7868788
Time to ESRD	1.000158	.0001038	1.52	0.128	.9999544 1.000361
Race_African-Am	.5398305	.0738526	-4.51	0.000	.4128641 .7058423
Race_others	.8428893	.3590652	-0.40	0.688	.3657331 1.94257
Sex_female	.6984896	.3606936	-0.69	0.487	.2538676 1.921819
Age	1.028686	.0070715	4.11	0.000	1.014919 1.04264
Marital_single	1.041356	.1896596	0.22	0.824	.7287392 1.488081
Marital_divorced	1.021924	.113965	0.19	0.846	.8212821 1.271582
Marital_widowed	1.122028	.1792137	0.72	0.471	.8204402 1.534476
Income	1	1.00e-06	0.15	0.883	.9999982 1.000002
Myocardial Inf	1.143135	.1256792	1.22	0.224	.9215406 1.418015
Cong Heart Fail	1.255467	.1384223	2.06	0.039	1.011476 1.558315
Perif vasc dis	1.166234	.1194715	1.50	0.133	.9540844 1.425557
Cerebr vasc dis	1.08494	.1158217	0.76	0.445	.8801087 1.337441
Dementia	1.461129	.7796359	0.71	0.477	.513453 4.157924
Chron pulm dis	1.089397	.1158518	0.81	0.421	.8844335 1.341859
Conn tissue dis	.6902939	.229029	-1.12	0.264	.3602619 1.322665
Peptic ulcer dis	.5653374	.1518267	-2.12	0.034	.3339716 .9569868
AIDS/HIV	2.065751	1.04883	1.43	0.153	.7636655 5.587953
Liver_disease	1.342649	.1866441	2.12	0.034	1.022434 1.763151
Malignancy	1.09896	.2049967	0.51	0.613	.762432 1.584026
Anemia	1.384775	.1892996	2.38	0.017	1.059301 1.810252
Atrial fibrillation	.9964353	.1144021	-0.03	0.975	.7956489 1.247891
Depression	1.62185	.2878718	2.72	0.006	1.145317 2.296654
Hyperlipidemia	.9891169	.117943	-0.09	0.927	.7829783 1.249527
Hypertension	1.376285	.1765778	2.49	0.013	1.070284 1.769774
Ischemic heart d	.7186856	.1218245	-1.95	0.051	.5155273 1.001904
BMI	.9090606	.1310846	-0.66	0.508	.6852537 1.205964
eGFR	.9807048	.0087683	-2.18	0.029	.963669 .9980418
Anticoagulants	1.008641	.002508	3.46	0.001	1.003737 1.013568
Thrombolytics	.8590826	.1024546	-1.27	0.203	.6800177 1.085299
Aspirin	1.721869	1.060342	0.88	0.378	.515018 5.756754
Digitalis	1.011148	.1285439	0.09	0.931	.7881422 1.297255
Betablockers	1.239423	.2477217	1.07	0.283	.8377054 1.833783
Alpha-blockers	.9981035	.1675265	-0.01	0.991	.7182999 1.386901
Ca_chan_blockers	.8782665	.0975522	-1.17	0.243	.7064482 1.091873
Antianginals	1.056736	.1109094	0.53	0.599	.8602586 1.298088
Statins	1.17349	.1314483	1.43	0.153	.9421759 1.461593
Vasodilators	.9825247	.1409892	-0.12	0.902	.7416495 1.301632
Thiazides	1.010731	.1214586	0.09	0.929	.7986329 1.279156
Loop-diuretics	.8384454	.089459	-1.65	0.099	.6802284 1.033463
K_sparing_diuret	.8907888	.1039961	-0.99	0.322	.7085986 1.119823
RAAS_inh	.8359263	.1478496	-1.01	0.311	.5910397 1.182277
Insulin	.9424705	.1135198	-0.49	0.623	.7442883 1.193423
Treated_vessels	1.033784	.1291894	0.27	0.790	.8092025 1.320694
	1.036528	.1065456	0.35	0.727	.8473938 1.267876

Table E3. Association between post-ESRD all-cause mortality and type of revascularization (CABG vs PCI (reference)) using multivariable Cox proportional hazards model (final model 4 from original analysis) in a cohort of patients with revascularization performed up to two years and up to one year prior to the first dialysis.

Cohort years	Patients/Events	HR	95% CI	p-value
Two years	421/217	0.46	0.31–0.69	p<0.001
One year	272/133	0.42	0.25–0.68	p=0.001

Table E4. Association between post-ESRD all-cause mortality and type of revascularization (CABG vs PCI (reference)) using multivariable Cox proportional hazards model (final model 4 from original analysis) in a cohort of patients with multi-vessel intervention.

Cohort type	Patients/Events	HR	95% CI	p-value
Multi-vessel	571/302	0.53	0.37–0.75	p<0.001

Table E5. Association between post-ESRD all-cause mortality and type of revascularization (CABG vs PCI (reference)) using multivariable Cox proportional regression analysis in a propensity score-matched cohort of patients with multi-vessel intervention.

PSM 1:1	Patients/Events	HR	95% CI	p-value
Multi-vessel	208/115	0.64	0.44–0.93	p=0.018

Figure E1. Probability of Survival in the CABG and PCI groups with multi-vessel intervention after propensity score matching

