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

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

<u>Abbreviations:</u> 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 subjects = 964 No. of failures = 523 Time at risk = 2033.675565 LR chi2(2) = Prob > chi2 = 14.73 Log likelihood = -3187.5586 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 failures = 915 Number of obs = 915 Time at risk = 1911.227926 LR chi2(10) 68.99 = Log likelihood = -2977.8877 Prob > chi2 0.0000 = _t | Haz. Ratio Std. Err. z P>|z| [95% Conf. Interval] CABG (PCI ref).7160332.0664397-3.600.000.5969685.8588453Time to ESRD1.000261.00008373.120.0021.0000971.000425Race_African-Am.5691123.071976-4.460.000.4441666.7292057Race_others.879551.3382598-0.330.739.41390811.869038Sex_female.5704547.2877776-1.110.266.2122341.533301Age1.028224.00591224.840.0001.0167021.039877Marital_single1.023306.17595490.130.893.7305391.4334Marital_divorced1.061564.11069450.570.567.86534071.302282Marital_widowed1.134877.17322790.830.407.84143591.530652Income19.66e-070.280.779.99999841.000002 -----+ Model 3

No. of subject No. of failure	25 =	893 481		Number (of obs =	893
Time at risk	= 1874.759	9754			(20)	436.06
1 141-141		74.0		LR chi2		136.06
Log likelihood	d = -2831.5	5/18		Prob > 0	chi2 =	0.0000
+	Haz. Ratio	Std. Err.	z	P> z	[95% Conf.	Intervall
		500. 111.		F 2 2	[95% com.	incervalj
CABG (PCI ref)	.6509751	.066776	-4.18	0.000	.5324139	.7959382
Time to ESRD	1.000191	.0000966	1.98	0.048	1.000002	1.00038
Race African-Am	.5238392	.0691761	-4.90	0.000	.4043819	.6785851
Race others	.8165122	.3436967	-0.48	0.630	.3578196	1.863208
Sex female	.6495655	.3314899	-0.85	0.398	.2389093	1.76609
Age	1.027756	.0068284	4.12	0.000	1.01446	1.041227
Marital_single	1.093802	.1946803	0.50	0.614	.7716812	1.550386
Marital_divorced	1.051067	.1149988	0.46	0.649	.8482014	1.302451
Marital_widowed	1.127265	.1779769	0.76	0.448	.8272468	1.536091
Income	1	1.03e-06	0.16	0.870	.9999982	1.000002
Myocardial Inf	1.091731	.1144263	0.84	0.402	.8889957	1.3407
Cong Heart Fail	1.214857	.1233258	1.92	0.055	.9956702	1.482294
Perif vasc dis	1.165184	.1174573	1.52	0.129	.9562876	1.419713
Cerebr vasc dis	1.085647	.1128758	0.79	0.429	.8855	1.331034
Dementia	1.456675	.7633727	0.72	0.473	.5215421	4.068517
	1.067431	.1111536	0.63	0.531	.8703675	1.309113
Chron pulm dis	.6588231	.2155919	-1.28	0.202	.3469153	1.251164
Conn tissue dis	.5948436	.1561601	-1.98	0.048	.3555845	.9950909
Peptic ulcer dis	2.125083	1.037116	1.54	0.122	.8165059	5.530855
AIDS/HIV	1.318167	.162887	2.24	0.025	1.034634	1.6794
Liver_disease	1.062783	.194696	0.33	0.740	.7421796	1.521879
Malignancy	1.446563	.1940624	2.75	0.006	1.112104	1.88161
Anemia	.9818625	.1088198	-0.17	0.869	.7901545	1.220083
Atrial fibrillation	1.613503	.2796404	2.76	0.006	1.148803	2.266176
Depression	.9804514	.1151847	-0.17	0.867	.7787998	1.234316
Hyperlipidemia	1.325837	.1627238	2.30	0.022	1.042365	1.6864
Hypertension	.7145937	.1186453	-2.02	0.043	.5160985	.9894316
Ischemic heart d	.9600305	.1275502	-0.31	0.759	.7399355	1.245593
BMI	.9777187	.0086736	-2.54	0.011	.9608657	.9948672
eGFR	1.009281	.0023098	4.04	0.000	1.004764	1.013818
Model 4						
widdel 4						

= 893	=	obs	of	Number		893		No. of subjects
						481		No. of failures
147 7/		(1)	1.1.1	10 -1-22		9754	= 1874.759	Time at risk
	=			LR chi2 Prob >		2221	= -2825.7	Log likelihood
- 0.0000	=	12	cni	Prob 7		251	= -2023.	rog likelihood
nf. Interval]	6 Conf.	[95%		P> z	z	Std. Err.	Haz, Ratio	_t
								CABG (PCI ref) 📫
	55957			0.000	-4.19	.0684449	.6375721	Time to ESRD
	99544			0.128	1.52	.0001038	1.000158	Race_African-Am
	28641			0.000	-4.51	.0738526	.5398305	Race_others
	57331			0.688	-0.40	.3590652	.8428893	Sex_female
	38676			0.487	-0.69	.3606936	.6984896	Age
		1.014		0.000	4.11	.0070715	1.028686	Marital_single
	87392			0.824	0.22	.1896596	1.041356	Marital_divorced
	12821			0.846	0.19	.113965	1.021924	Marital_widowed
	34402			0.471	0.72	.1792137	1.122028	
같이	99982	105-0400		0.883	0.15	1.00e-06	1	Income
	15406			0.224	1.22	.1256792	1.143135	Myocardial Inf
		1.011		0.039	2.06	.1384223	1.255467	Cong Heart Fail
	10844			0.133	1.50	.1194715	1.166234	Perif vasc dis
	01087			0.445	0.76	.1158217	1.08494	Cerebr vasc dis
	13453			0.477	0.71	.7796359	1.461129	Dementia
	44335			0.421	0.81	.1158518	1.089397	Chron pulm dis
	92619			0.264	-1.12	.229029	.6902939	Conn tissue dis
	39716			0.034	-2.12	.1518267	.5653374	Peptic ulcer dis
	36655			0.153	1.43	1.04883	2.065751	AIDS/HIV
		1.022		0.034	2.12	.1866441	1.342649	Liver_disease
	52432			0.613	0.51	.2049967	1.09896	Malignancy
		1.059		0.017	2.38	.1892996	1.384775	Anemia
	56489			0.975	-0.03	.1144021	.9964353	Atrial fibrillation
		1.149		0.006	2.72	.2878718	1.62185	Depression
	29783			0.927	-0.09	.117943	.9891169	Hyperlipidemia
		1.070		0.013	2.49	.1765778	1.376285	Hypertension
	55273			0.051	-1.95	.1218245	.7186856	Ischemic heart d
	52537			0.508	-0.66	.1310846	.9090606	
	53669			0.029	-2.18	.0087683	.9807048	BMI
7 1.013568	03737	1.003		0.001	3.46	.002508	1.008641	eGFR
	00177			0.203	-1.27	.1024546	.8590826	Anticoagulants
	15018			0.378	0.88	1.060342	1.721869	Thrombolytics
2 1.297255	81422	.7881		0.931	0.09	.1285439	1.011148	Aspirin j
4 1.833783	77054	.8377		0.283	1.07	.2477217	1.239423	Digitalis
9 1.386901	82999	.7182		0.991	-0.01	.1675265	.9981035	Betablockers
2 1.091873	54482	.7064		0.243	-1.17	.0975522	.8782665	Alpha-blockers
6 1.298088	22586	.8602		0.599	0.53	.1109094	1.056736	Ca_chan_blockers
	21759			0.153	1.43	.1314483	1.17349	Antianginals
	16495			0.902	-0.12	.1409892	.9825247	Statins
	86329			0.929	0.09	.1214586	1.010731	Vasodilators
	02284			0.099	-1.65	.089459	.8384454	Thiazides
	85986			0.322	-0.99	.1039961	.8907888	Loop-diuretics
	10397				-0.99			K_sparing_diuret
				0.311		.1478496	.8359263	RAAS inh
	42883			0.623	-0.49	.1135198	.9424705	
	92025			0.790	0.27	.1291894	1.033784	Insulin
8 1.267876	73938	.8473		0.727	0.35	.1065456	1.036528	Treated_vessels

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

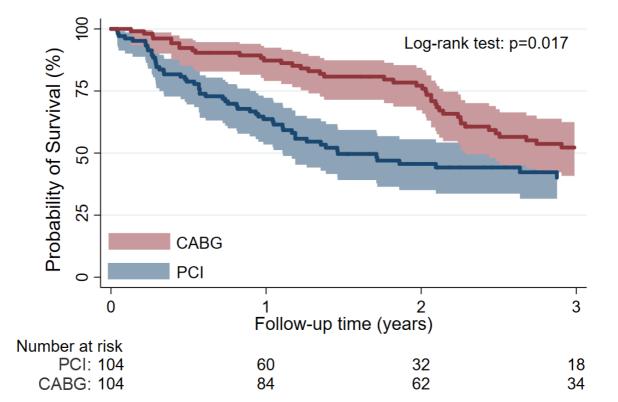


Figure E1. Probability of Survival in the CABG and PCI groups with multi-vessel intervention after propensity score matching