Supplemental Appendix

Supplemental Methods

Variables entered into the propensity score

1. Age
2. Frailty score
3. Charlson Score
4. Sex
5. Rural status
6. Hyperlipidemia
7. Hypertension
8. COPD
9. Cerebrovascular disease
10. Peripheral vascular disease
11. Dementia
12. Cancer
13. Dialysis
14. CCS class
15. Smoking history
16. NY Heart Association
17. Income Quintile
18. Creatinine level
19. BMI
20. History of MI
21. Recent MI history
22. Extent of CAD
23. LV Function
24. Year of procedure (sensitivity analysis)

Logistic Regression Outputs

Variable	Level of CLASS Variable 1 for Variable	DF	Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Estimation Type
Intercept		1	-0.6093	0.2303	7.0014	0.0081	MLE
age		1	0.0215	0.00210	104.5244	<.0001	MLE
Frailty_score		1	0.0126	0.00631	4.0065	0.0453	MLE
charl		1	-0.0785	0.0161	23.6739	<.0001	MLE
sex	F	1	0.1210	0.0226	28.5666	<.0001	MLE
rural	Y	1	-0.0454	0.0288	2.4866	0.1148	MLE
hyperlipidemia	1	1	0.0628	0.0192	10.7024	0.0011	MLE
hypertension	1	1	0.00552	0.0258	0.0458	0.8305	MLE
copd	1	1	0.1090	0.0246	19.5766	<.0001	MLE
cvd	1	1	0.1514	0.0404	14.0072	0.0002	MLE
pvd	1	1	0.0753	0.0463	2.6518	0.1034	MLE
dementia	1	1	0.2492	0.0721	11.9274	0.0006	MLE
cancer	1	1	0.2101	0.0370	32.1559	<.0001	MLE
dialysis	1	1	0.2036	0.0645	9.9793	0.0016	MLE
Cath_CcsAcsClass_cre	0	1	0.0977	0.0614	2.5322	0.1115	MLE
Cath_CcsAcsClass_cre	1	1	0.0794	0.0675	1.3840	0.2394	MLE
Cath_CcsAcsClass_cre	2	1	0.1413	0.0535	6.9774	0.0083	MLE
Cath_CcsAcsClass_cre	3	1	0.1583	0.0580	7.4582	0.0063	MLE
Cath_CcsAcsClass_cre	4	1	0.0451	0.1050	0.1843	0.6677	MLE
Cath_CcsAcsClass_cre	5	1	0.1636	0.0767	4.5530	0.0329	MLE
Cath_CcsAcsClass_cre	6	1	-0.1828	0.0596	9.4044	0.0022	MLE
Cath_CcsAcsClass_cre	7	1	-0.0438	0.0666	0.4334	0.5103	MLE
Cath_HistoryOfSmokin	1	1	-0.0151	0.0450	0.1120	0.7378	MLE
Cath_HistoryOfSmokin	2	1	-0.0309	0.0384	0.6465	0.4214	MLE
Cath_HistoryOfSmokin	3	1	0.0691	0.0356	3.7660	0.0523	MLE
Cath_NYHeartAssociat	1	1	-0.0852	0.0408	4.3642	0.0367	MLE
Cath_NYHeartAssociat	2	1	-0.0243	0.0551	0.1942	0.6594	MLE
Cath_NYHeartAssociat	3	1	-0.0613	0.0701	0.7658	0.3815	MLE
Cath_NYHeartAssociat	4	1	0.0799	0.1011	0.6247	0.4293	MLE
incquint	1	1	0.1207	0.0662	3.3263	0.0682	MLE
incquint	2	1	0.0560	0.0661	0.7188	0.3965	MLE
incquint	3	1	0.0594	0.0663	0.8021	0.3705	MLE
incquint	4	1	-0.1056	0.0679	2.4163	0.1201	MLE
incquint	5	1	-0.0263	0.0690	0.1450	0.7034	MLE
CCN_creatiniegrp	0-120	1	-0.1460	0.0398	13.4285	0.0002	MLE
CCN_creatiniegrp	121-180	1	0.0885	0.0535	2.7371	0.0980	MLE
CCN_creatiniegrp	181+	1	-0.0328	0.0818	0.1611	0.6881	MLE
CCN_BMIgrp	0-25	1	0.0471	0.0404	1.3635	0.2429	MLE
CCN_BMIgrp	26-30	1	0.0712	0.0340	4.3880	0.0362	MLE
CCN_BMIgrp	31plus	1	0.0233	0.0346	0.4515	0.5016	MLE
Cath_HistoryOfMiCD	N	1	-0.1173	0.0228	26.5624	<.0001	MLE

Cath_RecentMiCD	N	1	-0.0268	0.0295	0.8279	0.3629	MLE
disease_stat	Double VD	1	0.5685	0.0218	678.3283	<.0001	MLE
Cath_LvFunctionCD	20% - 34%	1	-0.00491	0.0796	0.0038	0.9509	MLE
Cath_LvFunctionCD	35% - 49%	1	-0.1585	0.0612	6.7027	0.0096	MLE
Cath_LvFunctionCD	<20%	1	0.3362	0.1545	4.7348	0.0296	MLE
Cath_LvFunctionCD	>=50%	1	-0.1178	0.0528	4.9697	0.0258	MLE

Supplemental Results

In a sensitivity analysis with dialysis patients excluded, long-term mortality was higher in the PCI group with a HR 1.44 (95%CI; 1.32-1.58, see Supplemental Figure 9) in 4130 well-matched pairs. We excluded patients that underwent PCI with bare metal stents and performed PS matching to form 3457 well matched pairs and found higher long-term mortality in the PCI group with a HR 1.41 (95%CI: 1.27-1.56, see Supplemental Figure 10). Finally, in an analysis where we matched patients by year of procedure in addition to all the other covariates in the propensity score, we found that the primary analysis was robust and again, long-term mortality was higher with PCI compared to CABG with HR 1.35 (95%CI: 1.23-1.47, see Supplemental Figure 11) in 3762 matched-pairs.

Supplemental Tables

Supplemental Table 1. Hazard ratios and 95% confidence intervals (95%CI) before and after

propensity score matching

	Before Propensity Score Matching	After Propensity Score Matching
All cause mortality	1.66 (95%CI:1.54-1.78)	1.39 (95%CI:1.28-1.51)
MACCE	2.26 (95%CI:2.14-2.38)	1.99 (95%CI:1.86-2.12)
Acute MI	2.58 (95%CI:2.33-2.86)	2.32 (95%CI:2.04-2.64)
Repeat Revascularization	3.77 (95%CI:3.45-4.13)	3.65 (95%CI:3.24-4.11)
Stroke	0.83 (95%CI:0.69-0.99)	0.87 (95%CI:0.71-1.08)

Supplemental Table 2. Details of first repeat revascularization event

	Need for repeat revascularization	
	PCI (n=1,149)	CABG (n=358)
Repeat CABG	231 (20.1%)	8 (2.2%)
Repeat PCI	918 (79.9%)	350 (97.8%)
PCI for instent restenosis	69 (6.1%)	N/A
PCI of previous CABG graft	N/A	57 (16.2%)

Supplemental Figures
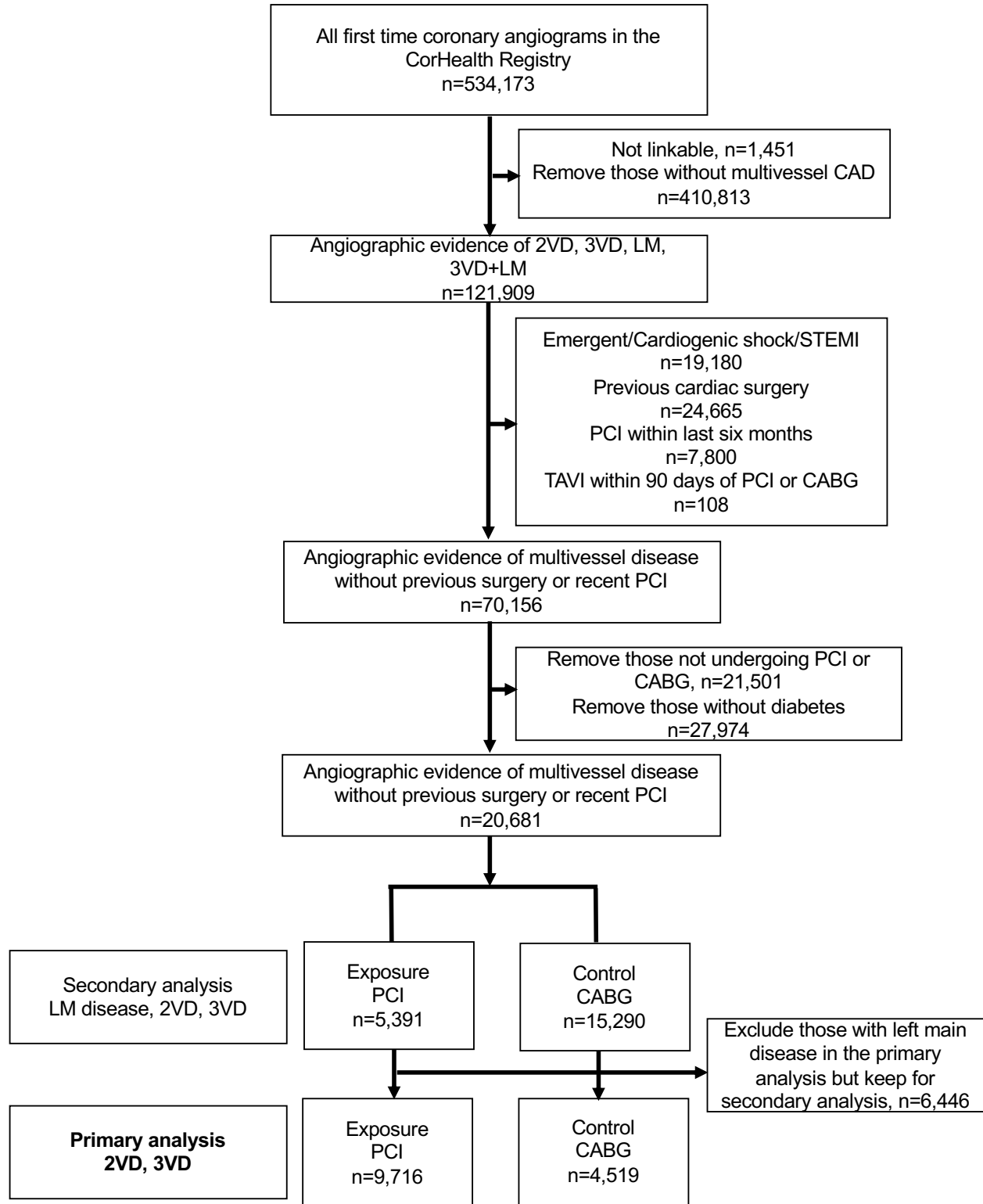
**Supplemental Figure 1.** Patient flow diagram for primary and secondary analysis.
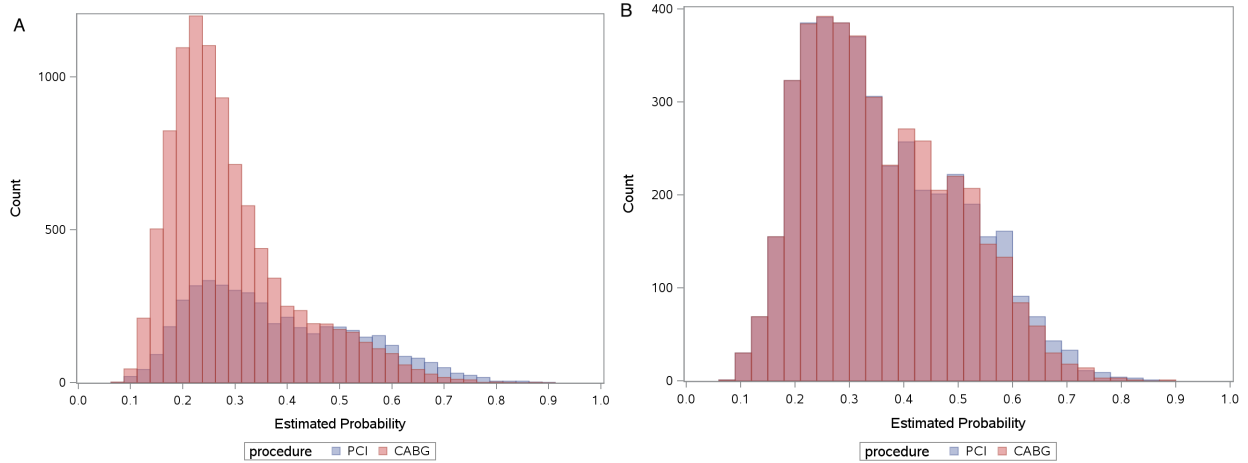
Supplemental Figure 2. A. Distribution of propensity scores before matching. B. Distribution of propensity scores after matching.
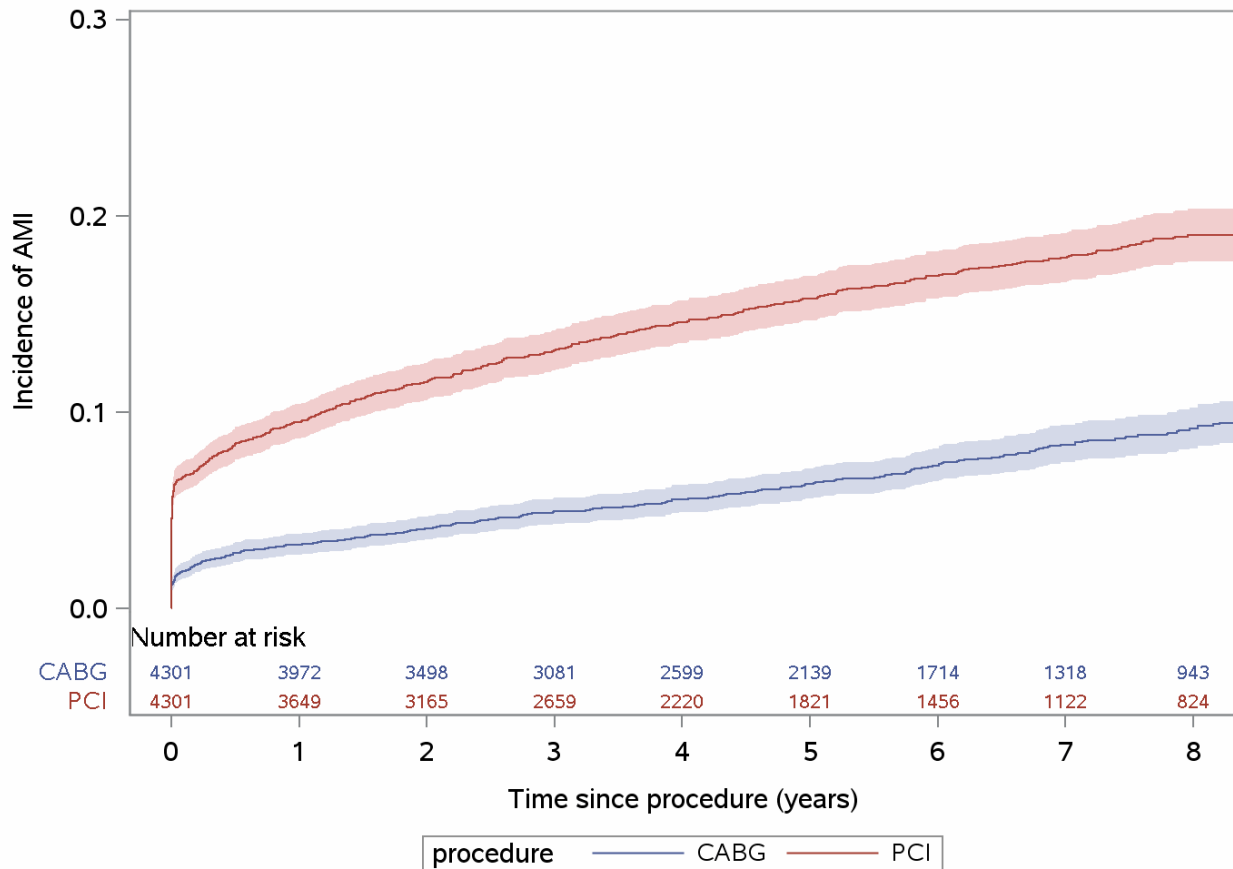
Supplemental Figure 3. Cumulative incidence curves for 8-year acute myocardial infarction (AMI) for the propensity-matched percutaneous coronary intervention (PCI) versus coronary artery bypass grafting (CABG) in patients with diabetes and multivessel coronary artery disease after adjusting for death as a competing risk. The shaded region around the curve represents the 95% confidence interval.
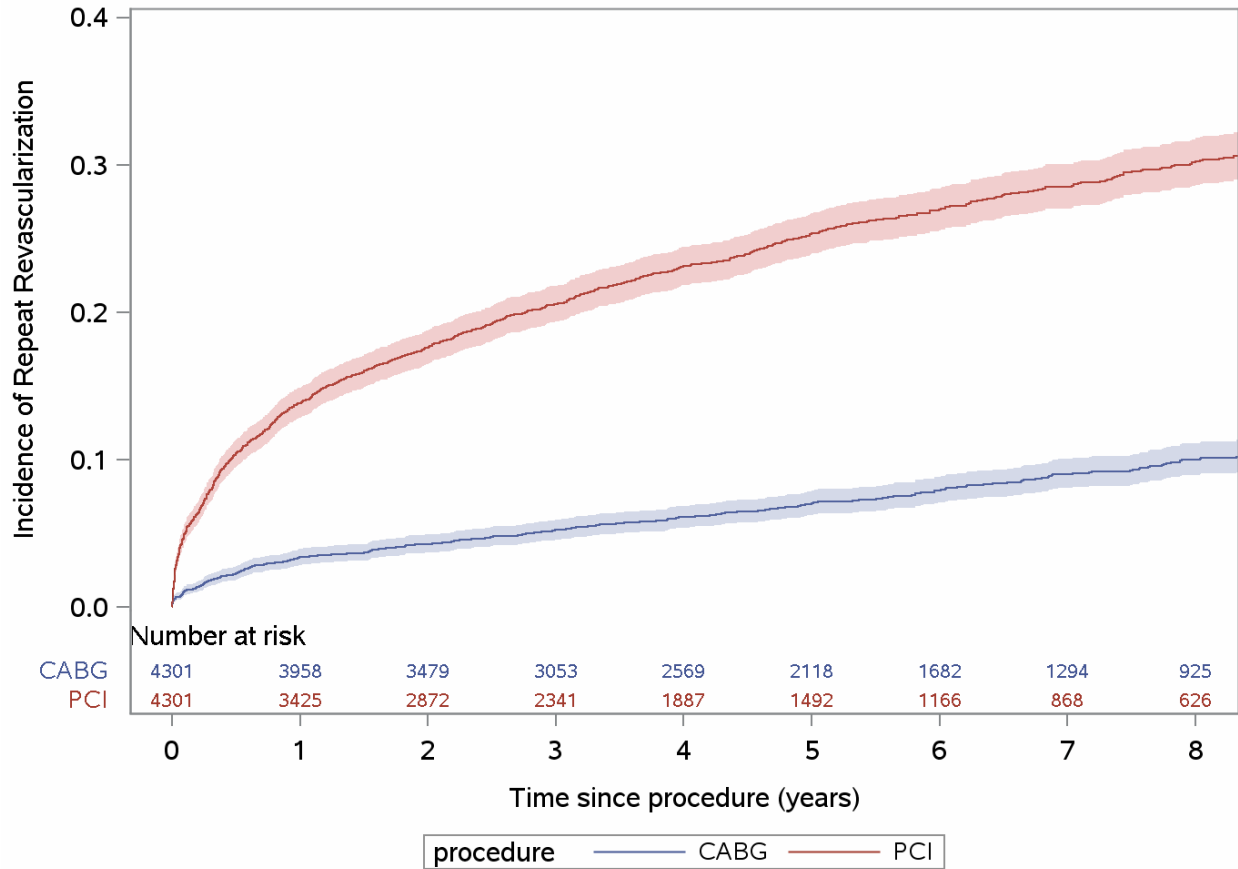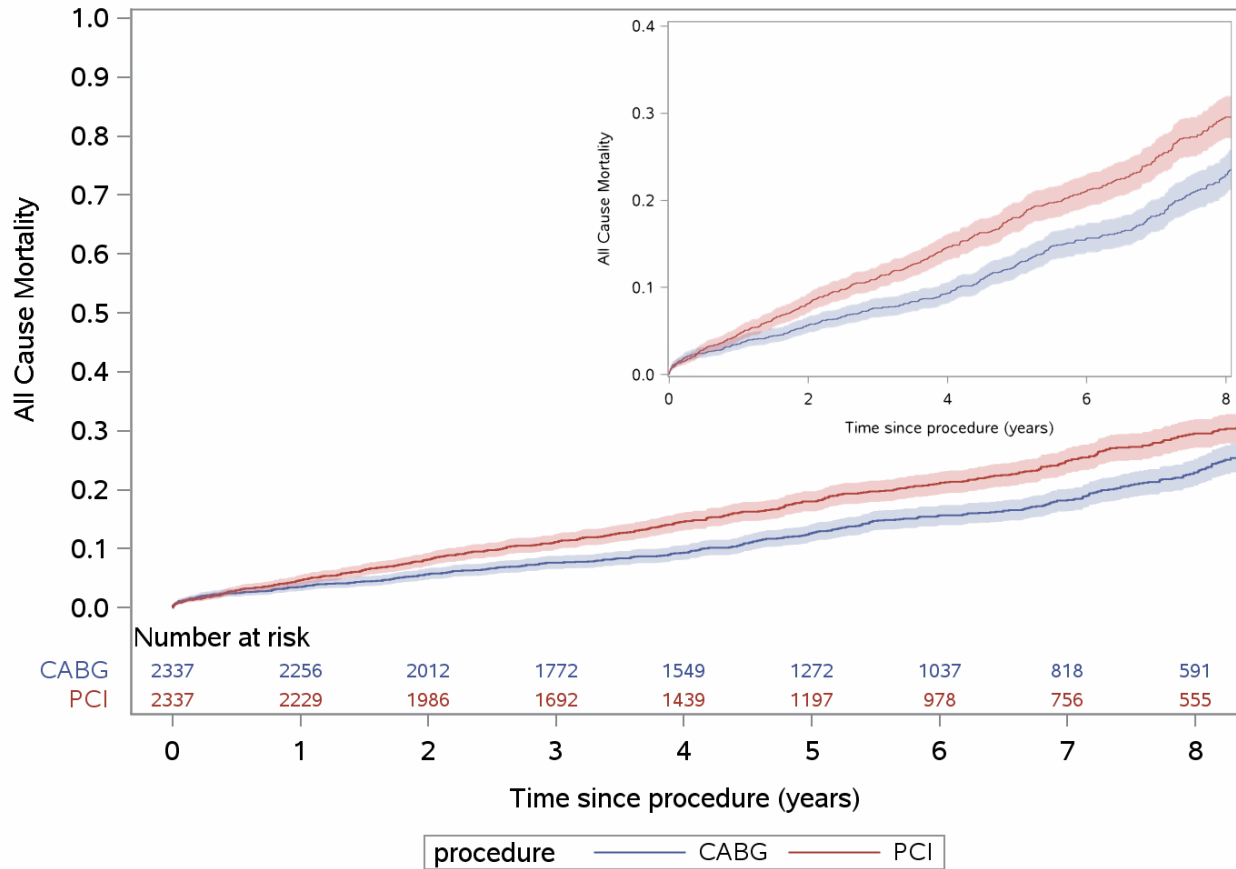
Supplemental Figure 4. Cumulative incidence curves for 8-year repeat revascularization for the propensity-matched percutaneous coronary intervention (PCI) versus coronary artery bypass grafting (CABG) in patients with diabetes and multivessel coronary artery disease after adjusting for death as a competing risk. The shaded region around the curve represents the 95% confidence interval.
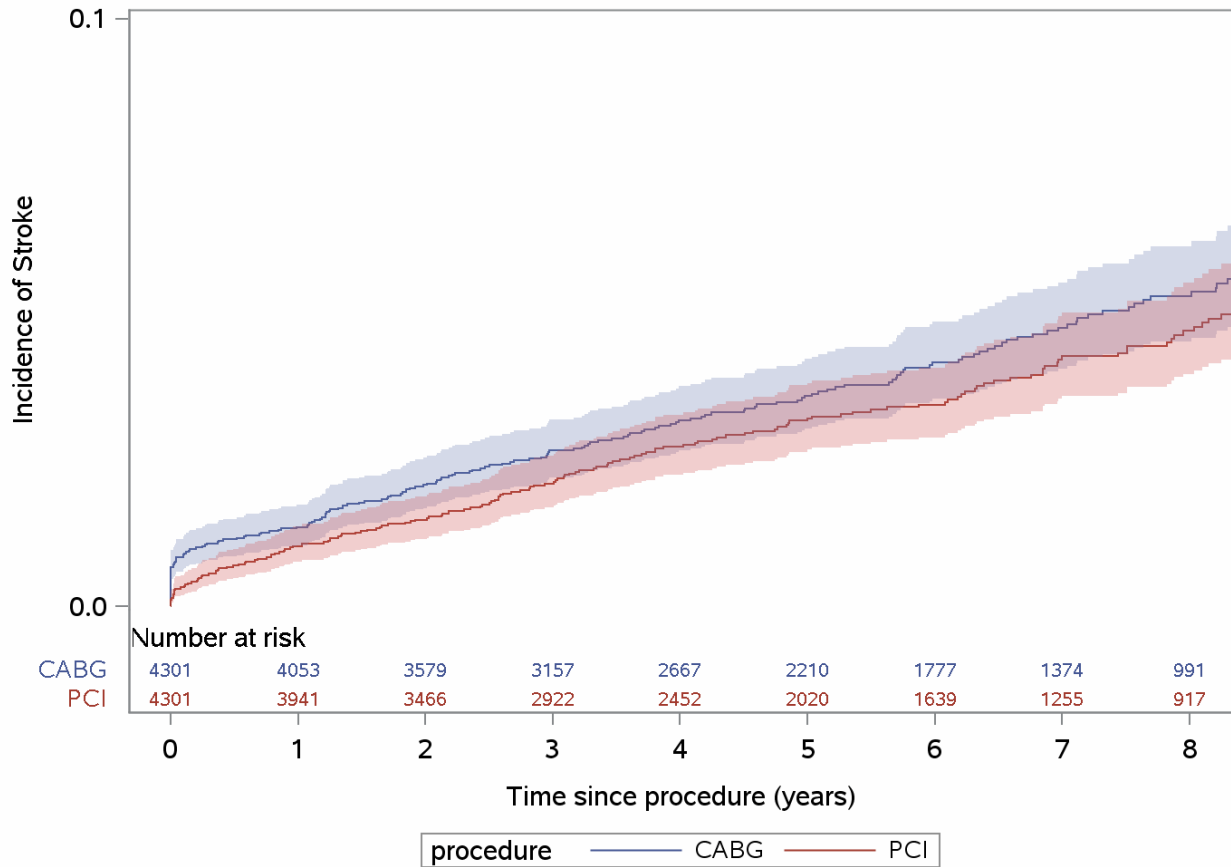
Supplemental Figure 5. Cumulative incidence curves for 8-year stroke for the propensity-matched percutaneous coronary intervention (PCI) versus coronary artery bypass grafting (CABG) in patients with diabetes and multivessel coronary artery disease after adjusting for death as a competing risk. The shaded region around the curve represents the 95% confidence interval.
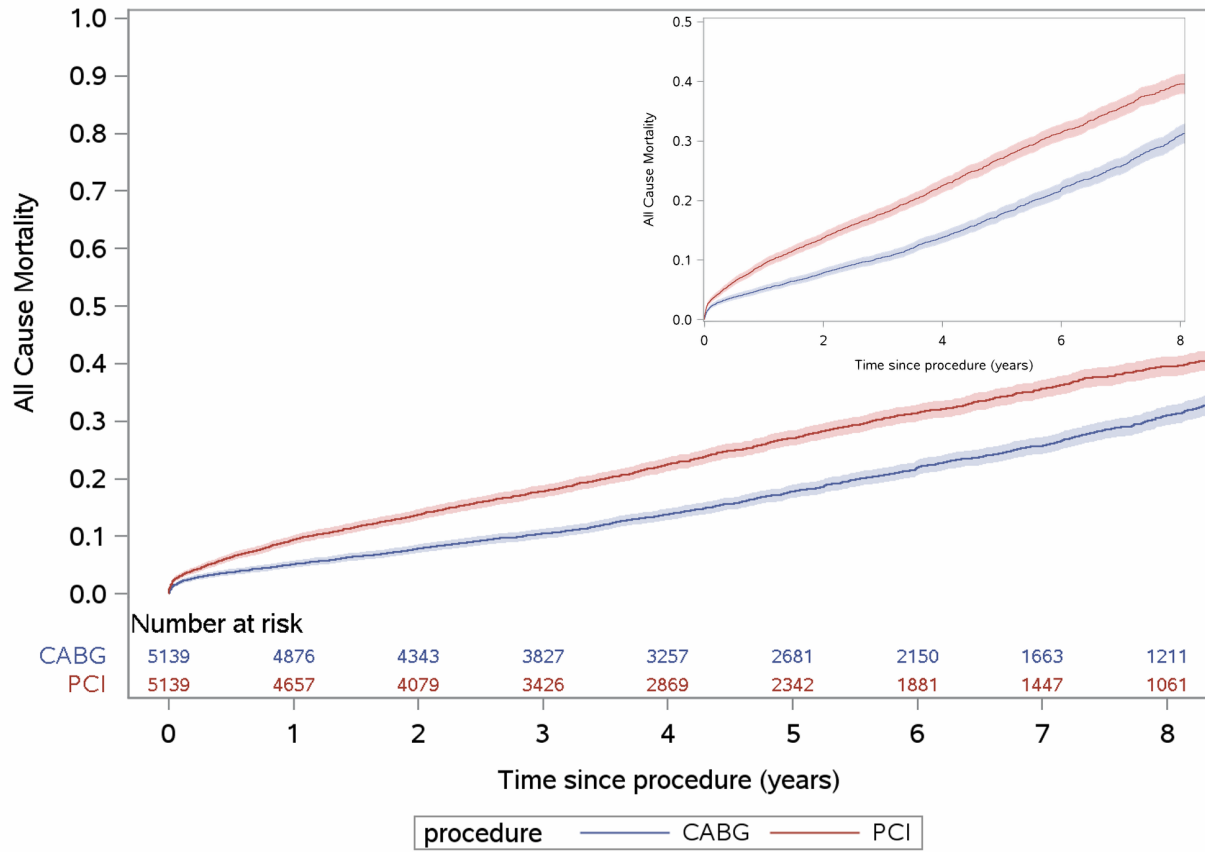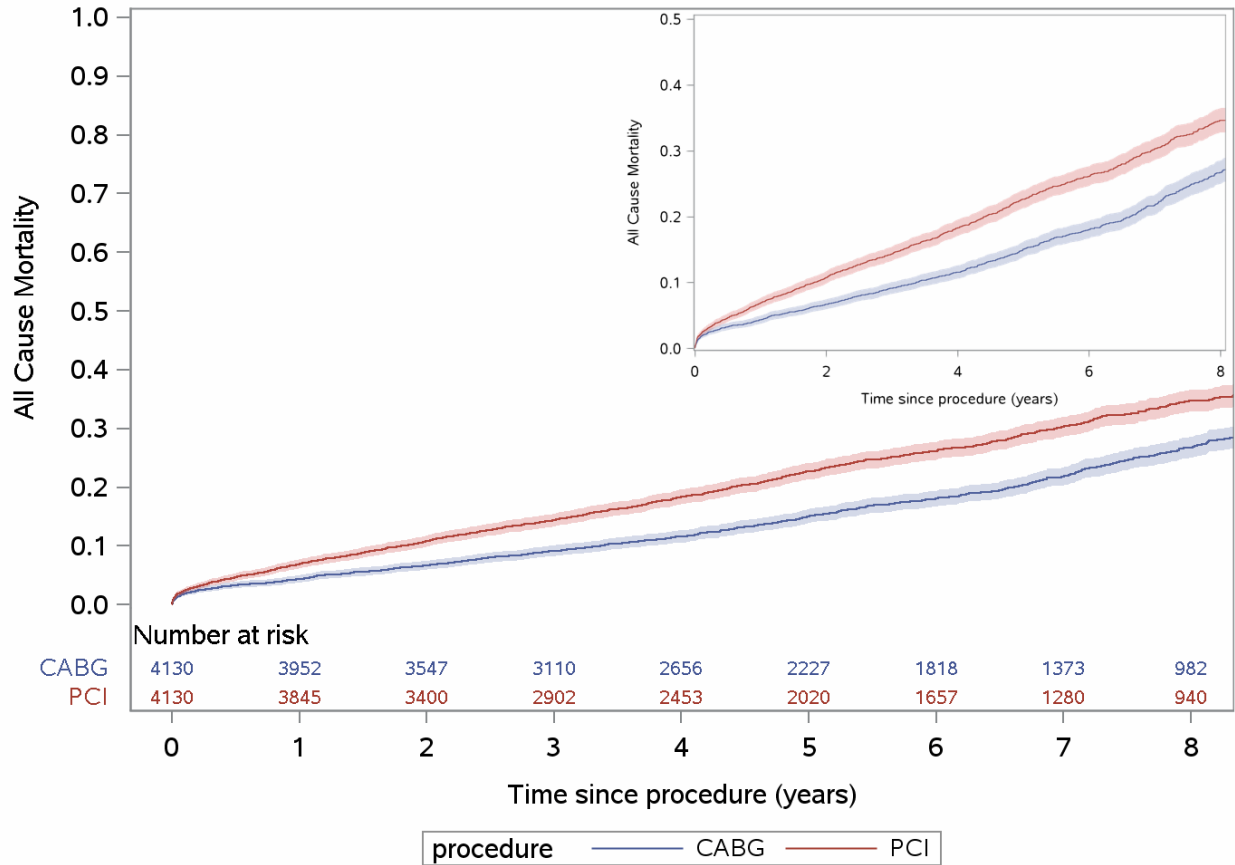
Supplemental Figure 6. Cumulative incidence curves for 8-year all-cause mortality for the propensity-matched percutaneous coronary intervention (PCI) versus coronary artery bypass grafting (CABG) in patients with diabetes and left main, three vessel and two vessel coronary artery disease. The shaded region around the curve represents the 95% confidence interval.
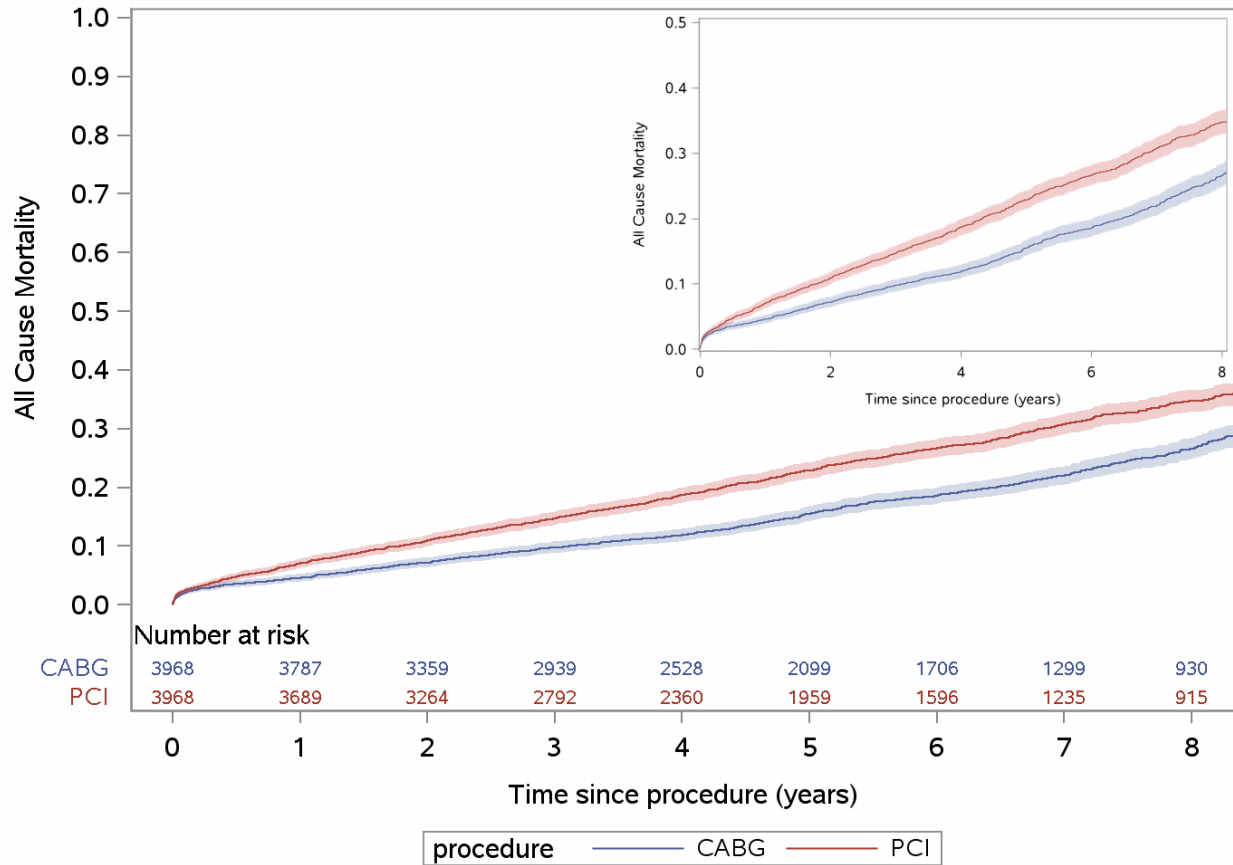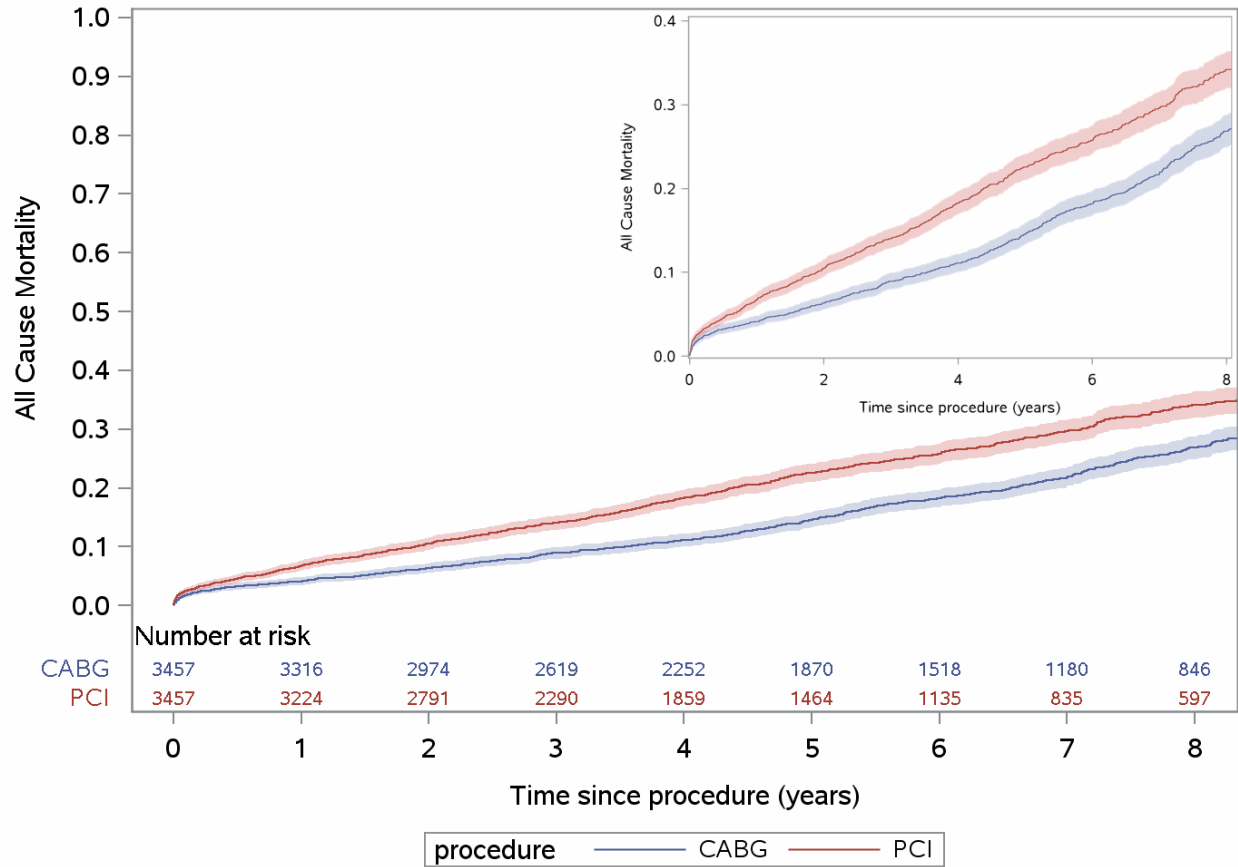
Supplemental Figure 7. Cumulative incidence curves for 8-year all-cause mortality for the propensity-matched percutaneous coronary intervention (PCI) versus coronary artery bypass grafting (CABG) in patients with diabetes and multivessel coronary artery disease after removal of patients undergoing PCI that had a cardiac surgical consult (i.e potential surgical turndown). The shaded region around the curve represents the 95% confidence interval.
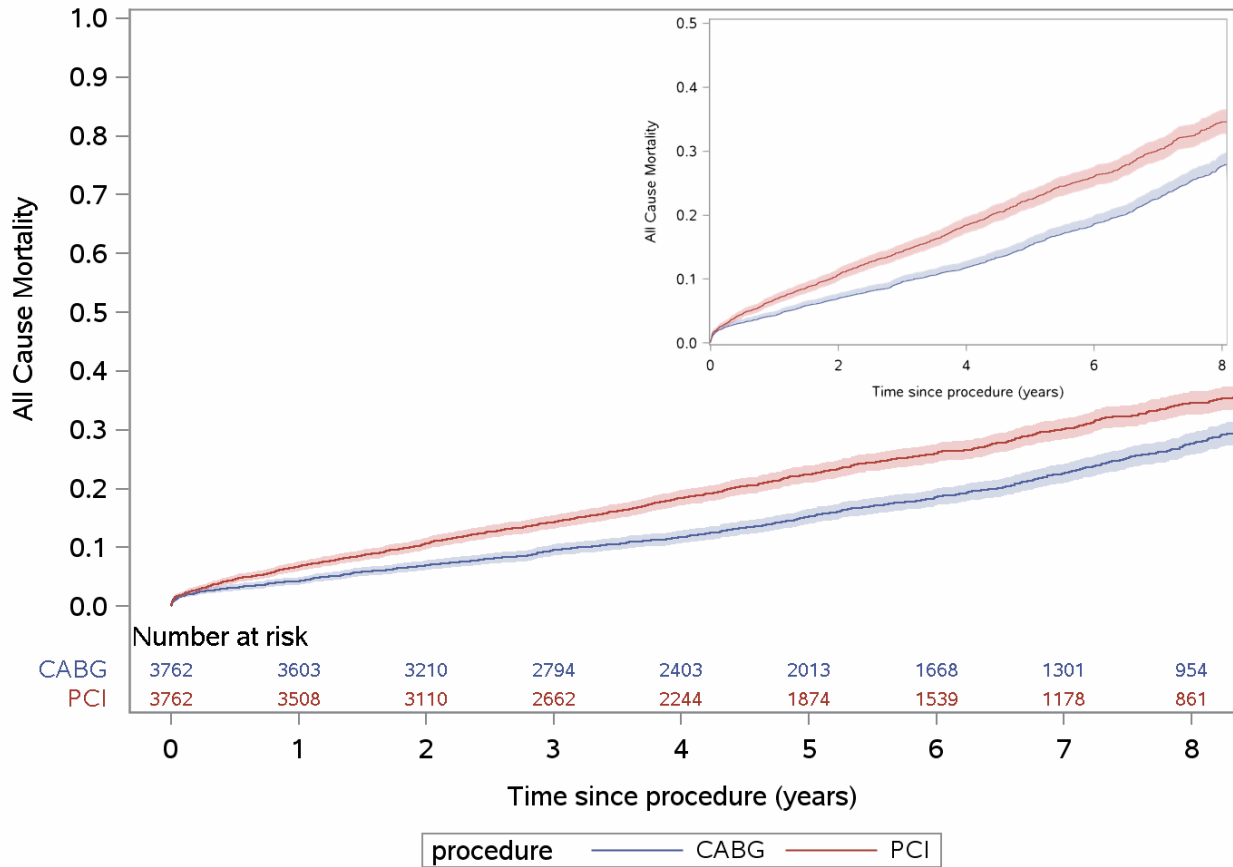
Supplemental Figure 8. Cumulative incidence curves for 8-year all-cause mortality for the propensity-matched percutaneous coronary intervention (PCI) versus coronary artery bypass grafting (CABG) in patients with diabetes and multivessel coronary artery disease after removal of patients undergoing PCI with an admitting diagnosis of acute coronary syndrome. The shaded region around the curve represents the 95% confidence interval.

Supplemental Figure 9. Cumulative incidence curves for 8-year all-cause mortality for the propensity-matched percutaneous coronary intervention (PCI) versus coronary artery bypass grafting (CABG) in patients with diabetes and multivessel coronary artery disease after removal of patients with a history of dialysis. The shaded region around the curve represents the 95% confidence interval.

Supplemental Figure 10. Cumulative incidence curves for 8-year all-cause mortality for the propensity-matched percutaneous coronary intervention (PCI) versus coronary artery bypass grafting (CABG) in patients with diabetes and multivessel coronary artery disease after removal of PCI patients that received a bare metal stent. The shaded region around the curve represents the 95% confidence interval.

Supplemental Figure 11. Cumulative incidence curves for 8-year freedom from all-cause mortality for the propensity-matched on 23 covariates and an exact match on year of procedure for percutaneous coronary intervention (PCI) versus coronary artery bypass grafting (CABG) in patients with diabetes and multivessel coronary artery disease. The shaded region around the curve represents the 95% confidence interval.