

# **SUPPLEMENTAL MATERIAL**

**Table S1. Current Procedural Terminology codes, descriptions, and categorization for interventions.**

Intervention type	Current Procedural Terminology code	Description
<b>Systemic treatment</b>		
Systemic thrombolysis		Inpatient pharmacy administration record for thrombolytic therapy‡
<b>Local treatment</b>		
Catheter directed intervention (CDI)	36013*†; 36014*†; 36015*†	Introduction of catheter, right heart or main pulmonary artery; left or right pulmonary artery; segmental or subsegmental pulmonary artery
	37212† or 37201*; 37213†; 37214†	Transcatheter therapy, venous infusion for thrombolysis, any method, including radiological supervision and interpretation, initial treatment day; subsequent day during course of thrombolytic therapy; cessation of thrombolysis including removal of catheter and vessel closure by any method
	37187*†; 37188†;	Percutaneous transluminal venous mechanical thrombectomy, including intraprocedural pharmacological thrombolytic injections and fluoroscopic guidance; subsequent day during course of therapy
Surgical embolectomy	33910*†; 33915*†	Pulmonary artery embolectomy with cardiopulmonary bypass; without cardiopulmonary bypass
<b>Preventative</b>		
Inferior vena cava filter placement	37191† or 75940*	Insertion of intravascular vena cava filter, endovascular approach including vascular access, vessel selection, and radiological supervision and interpretation

\* *Current Procedural Terminology* 2010 edition, Category I codes

† *Current Procedural Terminology* 2013, 2015, and 2016 edition, Category I codes

‡ Patients were identified as receiving any pharmacologic dose of any thrombolytic medication (including alteplase, reteplase, and tenecteplase). Charts for patients who were not known to receive a catheter directed intervention (catheter directed thrombolysis) were reviewed for dosing and indication of thrombolytic administration.

**Table S2. Data missingness in the matched cohort.**

<b>Preoperative Variables*</b>	<b>White (n=3264)</b>	<b>Black (n=1210)</b>	<b>P</b>
<b>Demographics, No. (%)</b>			
Area of deprivation index	132 (4.0%)	62 (5.1%)	.120
<b>Comorbid conditions</b>			
Venous thromboembolism	3 (0.1%)	2 (0.2%)	.510
Smoking history	49 (1.5%)	18 (1.5%)	.970
Body mass index $\geq$ 35 kg/m <sup>2</sup>	64 (2.0%)	28 (2.3%)	.460
<b>Medications prior to hospital admission</b>			
Aspirin	187 (5.7%)	72 (6.0%)	.780
Anticoagulation†	187 (5.7%)	72 (6.0%)	.780
<b>Hospital admission ‡</b>			
Laboratory value			
Troponin-I§	1645 (50.4%)	575 (47.5%)	.087
B-type Natriuretic Peptide§	2561 (78.5%)	980 (81.0%)	.064
Creatinine	253 (7.8%)	81 (6.7%)	.230
Hemoglobin	114 (3.5%)	36 (3.0%)	.390
International normalized ratio	1101 (33.7%)	337 (27.9%)	<.001

\*All data not included within the table has no missingness within the matched cohort.

† Anti-coagulation therapies include the presence of warfarin, dabigatran, rivaroxaban, edoxaban, or apixaban prior to admission.

‡ Maximum initially recorded vital sign or resulted laboratory value which first resulted upon admission to the transferring or treating hospital.

§ Missing values for Troponin-I and B-type Natriuretic Peptide were not clinically indicated as determined by the treatment team.

**Table S3. Definitions and clinical adjudication of pulmonary embolism severity on presentation.**

Pulmonary embolism severity	Indicators			
	Hemodynamic instability*	Clinical parameters†	Right heart strain‡	Elevated biomarkers§
<b>High</b>	+	+	+	+
<b>Intermediate</b>	-	<i>At least one +</i>		
		+/-	+/-	+/-
<b>Low</b>	-	-	-	-
Reviewer 2				
Reviewer 1	High	Intermediate	Low	Total
<b>High</b>	15	0	0	15
<b>Intermediate</b>	0	15	0	15
<b>Low</b>	0	0	15	15

\* Cardiac arrest, vasopressor requirement, or systolic blood pressure <90 mm Hg<sup>20-21</sup>

† Simplified pulmonary embolism severity index (sPESI > 0 or intensive care unit admission<sup>22</sup>)

‡ Right ventricular dysfunction on echocardiogram

§ Troponin-I (ng/mL) or B-type natriuretic peptide (pg/mL)

|| On initial review, one patient was found to be mis-classified by our coding algorithm to intermediate severity when clinically they had a low severity PE. This led to recognition and correction of the coding error and the results shown are upon secondary review.

Percent agreement between two reviewers of PE severity on clinical adjudication was 100% in each PE severity.

**Table S4. Baseline and hospitalization characteristics for included and excluded patients after matching.**

Preoperative Variables	White		Black	
	Included (n=3264)	Excluded (n=4228)	Included (n=1210)	Excluded (n=41)
<b>Demographics</b>				
Age, years	56.8 ( $\pm$ 17.0)	68.0 ( $\pm$ 14.5)	55.1 ( $\pm$ 17.5)	38.6 ( $\pm$ 17.9)
Female sex	1769 (54.2%)	2096 (49.6%)	672 (55.5%)	30 (73.2%)
Hispanic ethnicity	20 (0.6%)	16 (0.4%)	4 (0.3%)	0 (0.0%)
Area of deprivation index	58.8 ( $\pm$ 23.5)	57.4 ( $\pm$ 23.5)	80.6 ( $\pm$ 21.4)	86.5 ( $\pm$ 15.2)
<b>Insurance</b>				
Commercial	1274 (39.0%)	1024 (24.2%)	231 (19.1%)	7 (17.1%)
Medicaid	504 (15.4%)	345 (8.2%)	395 (32.6%)	19 (46.3%)
Medicare	1395 (42.7%)	2784 (65.8%)	517 (42.7%)	11 (26.8%)
Self-Pay/ Other	91 (2.8%)	75 (1.8%)	67 (5.5%)	4 (9.8%)
<b>Comorbid conditions</b>				
Cerebrovascular event*	208 (6.4%)	366 (8.7%)	115 (9.5%)	0 (0.0%)
Diabetes mellitus	532 (16.3%)	735 (17.4%)	265 (21.9%)	4 (9.8%)
Hypertension	1389 (42.6%)	2266 (53.6%)	659 (54.5%)	12 (29.3%)
Heart Failure	298 (9.1%)	482 (11.4%)	176 (14.5%)	4 (9.8%)
COPD	476 (14.6%)	739 (17.5%)	209 (17.3%)	4 (9.8%)
Cancer	814 (24.9%)	1314 (29.2%)	236 (19.5%)	6 (8.1%)
End stage renal disease	27 (0.8%)	28 (0.7%)	22 (1.8%)	0 (0.0%)
Venous thromboembolism	979 (30.0%)	1144 (27.1%)	446 (36.9%)	18 (43.9%)
Coronary artery disease	362 (11.1%)	743 (17.6%)	108 (8.9%)	2 (4.9%)
Smoking history	1743 (53.4%)	2274 (53.8%)	726 (60.0%)	26 (63.4%)
Body mass index $\geq$ 35 kg/m <sup>2</sup>	1136 (34.8%)	1166 (27.6%)	454 (37.5%)	17 (41.5%)
Postoperative period†	910 (27.9%)	1169 (27.6%)	304 (25.1%)	9 (22.0%)
<b>Medications prior to hospital admission</b>				
Aspirin	830 (25.4%)	1420 (33.6%)	284 (23.5%)	3 (7.3%)
Anticoagulation‡	313 (9.6%)	445 (10.5%)	179 (14.8%)	4 (9.8%)
<b>Hospital admission §</b>				
<b>Vital signs</b>				
Heart rate, beats per minute	94.8 ( $\pm$ 20.1)	93.2 ( $\pm$ 19.9)	95.5 ( $\pm$ 20.5)	97.4 ( $\pm$ 21.1)
Systolic blood pressure, mm Hg	134.8 ( $\pm$ 23.4)	136.1 ( $\pm$ 25.4)	137.6 ( $\pm$ 25.0)	127.1 ( $\pm$ 26.1)
Laboratory value				

Troponin-I, ng/mL	0.3 (±0.8)	0.6 (±11.5)	0.3 (±1.1)	1.0 (±2.6)
B-type Natriuretic Peptide, pg/mL	277.6 (±465.0)	403.4 (±537.1)	354.2 (±593.3)	570.4 (±1202.3)
Creatinine, mg/dL	1.0 (±0.7)	1.0 (±0.6)	1.2 (±1.2)	0.9 (±0.3)
Hemoglobin, g/dL	12.2 (±2.0)	12.1 (±2.0)	11.7 (±2.1)	11.9 (±1.7)
International normalized ratio	1.2 (±0.6)	1.3 (±0.5)	1.3 (±0.6)	1.2 (±0.3)
<b>Treating hospital characteristics</b>				
Intensive care admission	826 (25.3%)	1135 (26.8%)	310 (25.6%)	12 (29.3%)
Vasopressor exposure	115 (3.5%)	155 (3.7%)	51 (4.2%)	1 (2.4%)
Relevant consultation	539 (16.5%)	468 (11.1%)	167 (13.8%)	4 (9.8%)
Pulmonology	356 (10.9%)	273 (6.5%)	96 (7.9%)	1 (2.4%)
Cardiology	200 (6.1%)	199 (4.7%)	63 (5.2%)	2 (4.9%)
Vascular surgery	41 (1.3%)	44 (1.0%)	23 (1.9%)	1 (2.4%)
Cardiothoracic surgery	18 (0.6%)	17 (0.4%)	7 (0.6%)	0 (0.0%)
Admission echocardiogram	1658 (50.8%)	2272 (53.7%)	578 (47.8%)	17 (41.5%)
Right heart strain	443 (26.7%)	629 (27.7%)	156 (27.0%)	9 (52.9%)
Treating hospital bed size				
Large	2444 (74.9%)	3089 (73.1%)	1028 (85.0%)	34 (82.9%)
Medium	518 (15.9%)	688 (16.3%)	125 (10.3%)	7 (17.1%)
Small	302 (9.3%)	451 (10.7%)	57 (4.7%)	0 (0.0%)
Admission year				
2012	220 (6.7%)	245 (5.8%)	101 (8.3%)	4 (9.8%)
2013	276 (8.5%)	336 (7.9%)	111 (9.2%)	5 (12.2%)
2014	406 (12.4%)	489 (11.6%)	138 (11.4%)	6 (14.6%)
2015	440 (13.5%)	561 (13.3%)	159 (13.1%)	2 (4.9%)
2016	497 (15.2%)	643 (15.2%)	162 (13.4%)	5 (12.2%)
2017	500 (15.3%)	681 (16.1%)	194 (16.0%)	6 (14.6%)
2018	495 (15.2%)	659 (15.6%)	179 (14.8%)	5 (12.2%)
2019	430 (13.2%)	614 (14.5%)	166 (13.7%)	8 (19.5%)

\* Includes a pre-hospitalization stroke or transient ischemic attack, as defined by *International Classification of Diseases – Clinical Management* of the 9<sup>th</sup> or 10<sup>th</sup> editions.

† Any surgical intervention in the 90 days prior to pulmonary embolism hospitalization

‡ Anti-coagulation therapies include the presence of warfarin, dabigatran, rivaroxaban, edoxaban, apixiaban prior to admission.

§ Maximum initially recorded vital sign or resulted laboratory value which first resulted upon admission to the transferring or treating hospital. || Hospital bed size is based upon the admission capacity (i.e., hospital beds), rural or urban location, and teaching status.<sup>19</sup>

COPD indicates, chronic obstructive pulmonary disease.

**Table S5. Baseline and hospitalization data for each pulmonary embolism presenting severity category, by race in the matched cohort.**

Preoperative Variables	Low		Intermediate		High	
	White (n=417)	Black (n=146)	White (n=2705)	Black (n=1005)	White (n=142)	Black (n=59)
<b>Demographics</b>						
Age, years	51.1 ( $\pm$ 14.7)	48.5 ( $\pm$ 16.2)	57.5 ( $\pm$ 17.2)	55.9 ( $\pm$ 17.4)	61.8 ( $\pm$ 16.0)	58.7 ( $\pm$ 18.4)
Female sex	195 (46.8%)	61 (41.8%)	1489 (55.0%)	571 (56.8%)	85 (59.9%)	40 (67.8%)
Hispanic ethnicity	4 (1.0%)	0 (0.0%)	15 (0.6%)	4 (0.4%)	1 (0.7%)	0 (0.0%)
Area of deprivation index	60.7 ( $\pm$ 23.3)	77.9 ( $\pm$ 24.6)	58.4 ( $\pm$ 23.5)	81.3 ( $\pm$ 20.7)	60.1 ( $\pm$ 25.4)	76.5 ( $\pm$ 24.0)
<b>Insurance</b>						
Commercial	202 (48.4%)	26 (17.8%)	1035 (38.3%)	190 (18.9%)	37 (26.1%)	15 (25.4%)
Medicaid	80 (19.2%)	58 (39.7%)	403 (14.9%)	323 (32.1%)	21 (14.8%)	14 (23.7%)
Medicare	120 (28.8%)	46 (31.5%)	1194 (44.1%)	442 (44.0%)	81 (57.0%)	29 (49.2%)
Self-Pay/ Other	15 (3.6%)	16 (11.0%)	73 (2.7%)	50 (5.0%)	3 (2.1%)	1 (1.7%)
<b>Comorbid conditions</b>						
Cerebrovascular event*	18 (4.3%)	11 (7.5%)	177 (6.5%)	97 (9.7%)	13 (9.2%)	7 (11.9%)
Diabetes mellitus	43 (10.3%)	22 (15.1%)	458 (16.9%)	230 (22.9%)	31 (21.8%)	13 (22.0%)
Hypertension	145 (34.8%)	57 (39.0%)	1167 (43.1%)	569 (56.6%)	77 (54.2%)	33 (55.9%)
Heart Failure	NA	NA	272 (10.1%)	164 (16.3%)	26 (18.3%)	12 (20.3%)
COPD	NA	NA	451 (16.7%)	197 (19.6%)	25 (17.6%)	12 (20.3%)
Cancer	NA	NA	783 (28.9%)	225 (22.4%)	31 (21.8%)	11 (18.6%)
End stage renal disease	1 (0.2%)	4 (2.7%)	24 (0.9%)	16 (1.6%)	2 (1.4%)	2 (3.4%)
Venous thromboembolism	134 (32.1%)	60 (41.1%)	805 (29.8%)	371 (36.9%)	40 (28.2%)	15 (26.3%)
Coronary artery disease	37 (8.9%)	3 (2.1%)	304 (11.2%)	101 (10.0%)	21 (14.8%)	4 (6.8%)
Smoking history	218 (52.3%)	88 (60.3%)	1463 (54.1%)	608 (60.5%)	62 (43.7%)	30 (52.6%)
Body mass index $\geq$ 35 kg/m <sup>2</sup>	143 (34.3%)	44 (30.1%)	936 (34.6%)	388 (38.6%)	57 (40.1%)	22 (37.3%)
Postoperative period†	84 (20.1%)	25 (17.1%)	779 (28.8%)	254 (25.3%)	47 (33.1%)	25 (42.4%)
<b>Medications prior to hospital admission</b>						
Aspirin	86 (20.6%)	14 (9.6%)	699 (25.8%)	255 (22.4%)	45 (31.7%)	15 (28.8%)
Anticoagulation‡	42 (10.1%)	22 (15.1%)	253 (9.4%)	149 (14.8%)	18 (12.7%)	8 (15.4%)
<b>Hospital admission §</b>						
Vital signs						

Heart rate, beats per minute	85.9 ( $\pm$ 13.4)	85.7 ( $\pm$ 13.7)	95.7 ( $\pm$ 20.3)	96.5 ( $\pm$ 20.4)	102.5 ( $\pm$ 24.7)	103.4 ( $\pm$ 27.5)
Systolic blood pressure, mm Hg	138.5 ( $\pm$ 20.8)	138.7 ( $\pm$ 20.7)	135.4 ( $\pm$ 23.0)	138.7 ( $\pm$ 24.5)	112.9 ( $\pm$ 26.4)	115.5 ( $\pm$ 32.3)
Laboratory value						
Troponin-I, ng/mL	0.0 ( $\pm$ 0.0)	0.1 ( $\pm$ 0.0)	0.3 ( $\pm$ 0.8)	0.3 ( $\pm$ 0.9)	0.9 ( $\pm$ 1.5)	1.4 ( $\pm$ 3.2)
B-type Natriuretic Peptide, pg/mL	34.2 ( $\pm$ 24.7)	33.1 ( $\pm$ 29.4)	294.9 ( $\pm$ 443.0)	360.5 ( $\pm$ 547.8)	585.3 ( $\pm$ 824.8)	695.3 ( $\pm$ 977.7)
Creatinine, mg/dL	0.9 ( $\pm$ 0.3)	1.2 ( $\pm$ 1.5)	1.0 ( $\pm$ 0.7)	1.1 ( $\pm$ 1.2)	1.5 ( $\pm$ 1.0)	1.7 ( $\pm$ 1.2)
Hemoglobin, g/dL	12.8 ( $\pm$ 1.7)	12.3 ( $\pm$ 2.1)	12.1 ( $\pm$ 2.0)	11.7 ( $\pm$ 2.0)	11.6 ( $\pm$ 2.3)	11.4 ( $\pm$ 2.9)
International normalized ratio	1.2 ( $\pm$ 0.2)	1.2 ( $\pm$ 0.2)	1.2 ( $\pm$ 0.4)	1.2 ( $\pm$ 0.4)	2.0 ( $\pm$ 2.0)	1.9 ( $\pm$ 1.6)
<b>Treating hospital characteristics</b>						
Intensive care admission	NA	NA	1783 (65.9%)	826 (82.2%)	118 (83.1%)	52 (88.1%)
Vasopressor exposure	NA	NA	NA	NA	115 (81.0%)	51 (86.4%)
Relevant consultation	86 (20.6%)	18 (12.3%)	1376 (50.9%)	479 (47.7%)	23 (16.2%)	13 (22.0%)
Pulmonology	57 (13.7%)	13 (8.9%)	410 (15.2%)	139 (13.8%)	9 (6.3%)	6 (10.2%)
Cardiology	31 (7.4%)	5 (3.4%)	1376 (50.9%)	479 (47.7%)	13 (9.2%)	6 (10.2%)
Vascular surgery	3 (0.7%)	1 (0.7%)	410 (15.2%)	139 (13.8%)	2 (1.4%)	3 (5.1%)
Cardiothoracic surgery	3 (0.7%)	0 (0.0%)	1376 (50.9%)	479 (47.7%)	6 (4.2%)	0 (0.0%)
Admission echocardiogram	213 (51.1%)	62 (42.5%)	1376 (50.9%)	479 (47.7%)	69 (48.6%)	37 (62.7%)
Right heart strain	NA	NA	410 (29.8%)	139 (29.0%)	33 (47.8%)	17 (45.9%)
Treating hospital bed size						
Large	302 (72.4%)	121 (82.9%)	2026 (74.9%)	855 (85.1%)	116 (81.7%)	52 (88.1%)
Medium	78 (18.7%)	18 (12.3%)	423 (15.6%)	101 (10.0%)	17 (12.0%)	6 (10.2%)
Small	37 (8.9%)	7 (4.8%)	256 (9.5%)	49 (4.9%)	9 (6.3%)	1 (1.7%)
Admission year						
2012	23 (5.5%)	10 (6.8%)	190 (7.0%)	86 (8.6%)	7 (4.9%)	5 (8.5%)
2013	33 (7.9%)	20 (13.7%)	227 (8.4%)	83 (8.3%)	16 (11.3%)	8 (13.6%)
2014	62 (14.9%)	18 (12.3%)	327 (12.1%)	110 (10.9%)	17 (12.0%)	10 (16.9%)
2015	54 (12.9%)	16 (11.0%)	367 (13.6%)	134 (13.3%)	19 (13.4%)	9 (15.3%)
2016	53 (12.7%)	27 (18.5%)	423 (15.6%)	129 (12.8%)	21 (14.8%)	6 (10.2%)
2017	69 (16.5%)	15 (10.3%)	416 (15.4%)	170 (16.9%)	15 (10.6%)	9 (15.3%)
2018	72 (17.3%)	25 (17.1%)	396 (14.6%)	146 (14.5%)	27 (19.0%)	8 (13.6%)
2019	51 (12.2%)	15 (10.3%)	359 (13.3%)	147 (14.6%)	20 (14.1%)	4 (6.8%)



\* Includes a pre-hospitalization stroke or transient ischemic attack, as defined by *International Classification of Diseases – Clinical Management* of the 9<sup>th</sup> or 10<sup>th</sup> editions.

† Any surgical intervention in the 90 days prior to pulmonary embolism hospitalization

‡ Anti-coagulation therapies include the presence of warfarin, dabigatran, rivaroxaban, edoxaban, apixaban prior to admission.

§ Maximal initially recorded vital sign or resulted laboratory value which first resulted upon admission to the transferring or treating hospital.

|| Hospital bed size is based upon the admission capacity (i.e., hospital beds), rural or urban location, and teaching status.<sup>19</sup>

NA indicates, not applicable; COPD, chronic obstructive pulmonary disease.

**Table S6. Multivariable model for primary outcome in the matched cohort.**

Covariates	Matched on age and sex			Matched and adjusted for clinical characteristics			Matched and adjusted for clinical and socioeconomic characteristics		
	OR	95%CI	P	OR	95%CI	P	OR	95%CI	P
Black (White)	1.08	(1.03-1.14)	.003	1.13	(1.01-1.27)	.003	1.05	(1.05-1.35)	.002
Age				1.02	(1.02-1.02)	<.001	1.02	(1.02-1.02)	<.001
Female (Male)				1.45	(1.28-1.63)	<.001	1.22	(1.22-1.63)	<.001
Postoperative 90 days				1.61	(1.40-1.85)	<.001	1.36	(1.36-1.78)	<.001
BMI>35mg/kg <sup>2</sup>				1.22	(1.10-1.36)	<.001	1.07	(1.07-1.30)	.001
Prior venous thromboembolism				0.99	(0.92-1.06)	.715	0.93	(0.93-1.09)	.887
Aspirin				1.18	(1.08-1.30)	<.001	1.12	(1.12-1.25)	<.001
Area of Deprivation Index							0.99	(0.99-1.01)	.252
Insurance (Private)									
Medicaid							0.87	(0.87-1.37)	.446
Medicare							1.07	(1.07-1.31)	.001
Self-pay/other							0.50	(0.50 -1.22)	.275
Constant, cut 1	-1.92	(-2.03- -1.81)		-0.50	(-0.95- -0.04)		-0.37	(-0.58- -0.15)	
Constant, cut 2	3.08	(2.89-3.27)		4.81	(4.30-5.33)		4.91	(4.63-5.19)	

All models are clustered on hospital size, as quantified by the National Inpatient Sample, accounting for bed size, rurality, and teaching status of each hospital.<sup>19</sup> OR indicates, odds ratio; CI, confidence Interval; BMI, body mass index.

**Table S7. Multivariable model for any intervention\* in the matched cohort.**

Covariates	Matched on age and sex			Matched and adjusted for clinical characteristics			Matched and adjusted for clinical and socioeconomic characteristics		
	SHR <sup>†</sup>	95%CI	P	SHR	95%CI	P	SHR	95%CI	P
Black (White)	0.77	(0.66-0.89)	<.001	0.73	(0.64-0.84)	<.001	0.77	(0.60-0.98)	.03
Age				1.00	(0.99-1.01)	.51	1.00	(0.99-1.01)	.61
Female (Male)				0.71	(0.62-0.80)	<.001	0.69	(0.61-0.77)	<.001
Postoperative 90 days				1.19	(1.02-1.38)	.03	1.19	(1.03-1.38)	.02
BMI>35mg/kg <sup>2</sup>				1.26	(1.08-1.47)	.003	1.23	(1.12-1.34)	<.001
Prior venous thromboembolism				1.34	(1.05-1.71)	.02	1.31	(1.00-1.73)	.05
Aspirin				0.86	(0.76-0.97)	.01	0.86	(0.77-0.96)	.008
Area of Deprivation Index							1.00	(0.99-1.01)	.92
Insurance (Private)									
Medicaid							1.05	(0.99-1.12)	.11
Medicare							1.06	(0.85-1.33)	.61
Self-pay/other							0.96	(0.58-1.58)	.87

All models are clustered on hospital size, as quantified by the National Inpatient Sample, accounting for bed size, rurality, and teaching status of each hospital.<sup>19</sup>

SHR indicates, subdistribution hazard ratio; CI, confidence Interval; BMI, body mass index.

\*All procedures including systemic thrombolysis, inferior vena cava filters, surgical embolectomy, and catheter directed therapy (CTD).

†Of note, the reported subdistribution hazard ratios are reported to demonstrate the direction of the effect, their quantification of the magnitude of this effect on the cumulative incidence is only approximately correct.

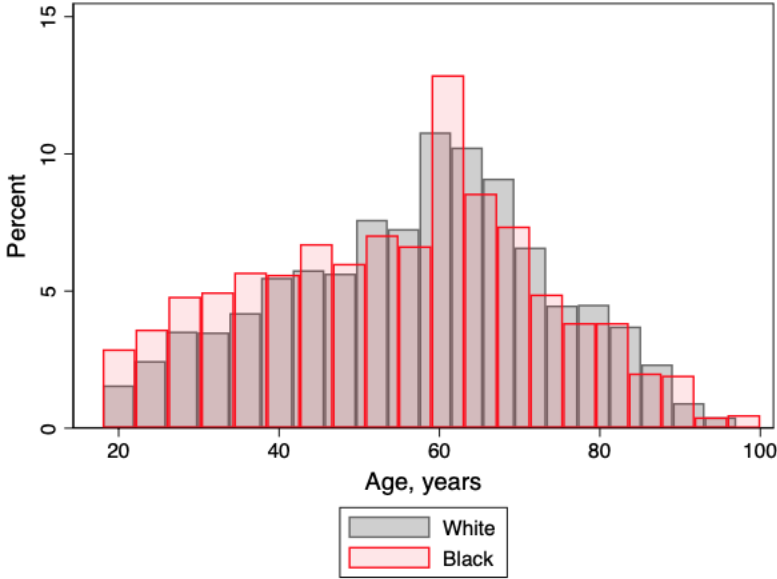
**Table S8. Multivariable model for primary outcome in the full (non-matched) cohort.**

Covariates	Unadjusted		Adjusted for age and sex		Adjusted for clinical characteristics		Adjusted for clinical and socioeconomic characteristics	
	OR	95%CI	OR	95%CI	OR	95%CI	OR	95%CI
Black (White)	0.91	(0.86-0.96)	1.10	(1.01-1.19)	1.12	(1.01-1.25)	1.12	(0.98-1.27)
Age			1.02	(1.02-1.02)	1.02	(1.02-1.02)	1.02	(1.02-1.02)
Female (Male)			1.29	(1.24-1.34)	1.30	(1.24-1.36)	1.27	(1.22-1.32)
Postoperative 90 days					1.59	(1.38-1.83)	1.6	(1.38-1.85)
BMI>35mg/kg <sup>2</sup>					1.12	(1.07-1.17)	1.09	(1.02-1.16)
Prior venous thromboembolism					0.92	(0.82-1.03)	0.95	(0.84-1.08)
Aspirin					1.08	(1.06-1.10)	1.06	(1.00-1.12)
Area of Deprivation Index							1.00	(1.00-1.01)
Insurance (Private)								
Medicaid							1.23	(0.94-1.62)
Medicare							1.16	(1.02-1.32)
Self-pay/other							0.96	(0.65-1.42)
Constant, cut 1	-2.09	(-2.2--1.98)	-0.53	(-0.66--0.39)	-0.43	(-0.6--0.25)	-0.34	(-0.60--0.07)
Constant, cut 2	2.95	(2.73-3.17)	4.67	(4.41-4.94)	4.9	(4.58-5.21)	5.03	(4.62-5.43)

All models are clustered on hospital size, as quantified by the National Inpatient Sample, accounting for bed size, rurality, and teaching status of each hospital.<sup>19</sup>

OR indicates, odds ratio; CI, confidence Interval; BMI, body mass index.

**Figure S1. Distribution of patients by age after matching.**



After matching, Black patients (red) continue to be hospitalized for pulmonary embolism at a younger age than White (gray) patients, although the difference is less pronounced than with the unmatched cohort.