Supplementary Appendix

Contents:

Table S1. Kuijer and RIETE scores and staging systems for risk of major bleeding complications within 30 days of anticoagulation for PE

A) Kuijer score

Predictor variable	Points
Age >60 year	1.6
Female sex	1.3
Active malignancy	2.2

Points are assigned for the presence of each variable. The sum of the variable points produces the total point score (Kuijer risk score; range, 0–5.1). Kuijer risk staging increased with point totals: low-risk (0 points), intermediate-risk (1-3 points), or high-risk (>3 points).

B) RIETE score

Predictor variable	Points
Recent bleeding	2
Abnormal renal function	1.5
Anemia	1.5
Age >75 years	1
Active malignancy	1
PE diagnosis*	1

Abbreviations: PE, pulmonary embolism.

Points are assigned for the presence of each variable. The sum of the variable points produces the total point score (RIETE risk score; range, 0–8). RIETE risk staging increased with point totals: low-risk (0 points), intermediate-risk (1-4 points), or high-risk (>4 points).

*This variable was not considered for the present analysis.

Table S2. Observed proportion of major bleeding events for each of the risk score points

Point(s)	Patients N (%)	Major bleeding events* N (%)
0	446 (38.1)	13 (2.9)
1	517 (44.1)	30 (5.8)
2	174 (14.8)	19 (10.9)
3	26 (2.2)	3 (11.5)
4	7 (0.6)	2 (28.6)
5	2 (0.2)	2 (100)

*Per risk stratum

Table S3. Test and performance characteristics of the BACS score in the subgroup of 858 patients with complete data on renal function

Risk classification	Low	Intermediate	High
Points	0	1-3	>3
RIETE derivation cohort (N =858)			
Patients, %	37.2	61.9	0.9
30-day major bleeding, %	3.4	7.3	50.0
30-day intracranial bleeding, %	0.6	1.7	12.5
30-day fatal bleeding, %	0	1.1	25.0

Table S4. Reclassification of patients who bled or who did not bleed

A) Comparison with Kuijer score

Patients who did not bleed (N =1,103)			
		Kuijer score	
		Low-risk	High-risk
BACS score N (%)	Low-risk	120 (56%)	313 (35%)
	High-risk	95 (44%)	575 (65%)
Patients who bled (N =69)			
		Kuijer score	
		Low-risk	High-risk
BACS score N (%)	Low-risk	4 (33%)	9 (16%)
	High-risk	8 (67%)	48 (84%)

B) Comparison with RIETE score

Patients who did not bleed (N =1,103)			
		RIETE score	
		Low-risk	High-risk
BACS score N (%)	Low-risk	236 (60%)	197 (28%)
	High-risk	157 (40%)	513 (72%)
Patients who bled (N =69)			
		RIETE score	
		Low-risk	High-risk
BACS score N (%)	Low-risk	9 (50%)	4 (7.8%)
	High-risk	9 (50%)	47 (92%)

Table S5. Bleeding definition per some of the commonly used criteria

	Major	Minor	Comment
RIETE	Bleeding episodes that require a transfusion of at least 2 units of blood, are retroperitoneal, spinal or intracranial, intraocular, intrapericardial, or are fatal	All non-major bleeds	The RIETE bleeding definition has been in use since 2001
TIMI	Intracranial, clinical signs of hemorrhage with a hemoglobin decrease greater than 5 g/dL	Observed blood loss and decrease in hemoglobin level of 3 to 5 g/dL	Initially developed for cardiovascular diseases other than pulmonary embolism
GUSTO	Intracranial hemorrhage or bleeding that causes hemodynamic compromise and requires intervention	Bleeding that requires blood transfusion but does not result in hemodynamic compromise	Initially developed for cardiovascular diseases other than pulmonary embolism
ISTH	Fatal bleeding and/or symptomatic bleeding in critical area or organ, and/or bleeding causing fall in hemoglobin to 2 g/dL leading to transfusion of two or more units of whole blood or red cells	Clinically relevant: hospital admission for bleeding, physician guidance for bleeding, or change in antithrombotic therapy	Similar to the RIETE bleeding definition