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Table S1. Correlation coefficients (Spearman's rho) of the C3a-to-C3 ratio and citrullinated histone H3 with disease severity, early mortality risk and parameters of the prothrombotic state and inflammation in the study patients

Parameter	Correlation with the C3a-to-C3 ratio		Correlation with H3Cit (ng/mL)	
	r	p	r	p
Parameters of disease severity and early mortality risk				
sPESI	0.34	**<0.001**	0.33	**<0.001**
NT-proBNP (pg/mL)	0.22	**0.020**	0.29	**0.002**
Parameters of the prothrombotic state				
Factor VIII (%)	0.26	**0.007**	0.12	0.231
ETP (nM*min)	0.18	0.063	0.29	**0.002**
CLT (min)	0.28	**0.003**	0.55	**<0.001**
K_s ($10^{-9}cm^2$)	- 0.24	**0.011**	- 0.11	0.238
TAFI (%)	- 0.21	**0.032**	0.01	0.917
PAI-1 (ng/mL)	0.12	0.213	0.44	**<0.001**
Parameters of inflammation				

White blood cells (10^9/L)	0.25	**0.009**	0.04	0.660
Neutrophils (10^9/L)	0.30	**0.002**	0.01	0.948
hsCRP (mg/L)	0.28	**0.003**	0.02	0.847
Interleukin-6 (pg/mL)	0.26	**0.011**	0.05	0.662

Abbreviations: CLT – clot lysis time, CRP – C-reactive protein, ETP – endogenous thrombin potential, H3Cit – citrullinated histone H3, hs – high-sensitivity, K$_s$ – permeation coefficient, NT-proBNP – N-terminal pro-B-type natriuretic peptide, PAI-1 – plasminogen activator inhibitor-1, RV – right ventricular, sPESI – simplified pulmonary embolism severity index, TAFI – thrombin-activatable fibrinolysis inhibitor

Table S2. Predictors of the C3a-to-C3 ratio >0.21 and citrullinated histone H3 >3.1 ng/mL in the study patients*

Parameter	C3a-to-C3 ratio > 0.21 and H3Cit > 3.1 ng/mL							
	Unadjusted		Age-adjusted		Age- and sex-adjusted		Sex - and CKD-adjusted	
	OR (95% CI)	p	OR (95% CI)	p	OR (95% CI)	p	OR (95% CI)	p
NT-proBNP >300 pg/mL	3.65 (1.40-9.51)	0.008	3.49 (1.33-9.14)	0.011	3.49 (1.33-9.16)	0.011	3.86 (1.45-10.30)	0.007
NT-proBNP >600 pg/mL	2.78 (1.16-6.65)	0.022	2.58 (1.05-6.30)	0.038	2.57 (1.05-6.29)	0.038	2.82 (1.17-6.82)	0.022
Intermediate-high risk APE	2.65 (1.04-6.76)	0.042	2.37 (0.87-6.44)	0.091	2.36 (0.86-6.46)	0.095	2.66 (1.02-6.90)	0.045
sPESI	2.21 (1.31-3.72)	0.003	2.13 (1.25-3.63)	0.005	2.14 (1.25-3.66)	0.005	2.25 (1.32-3.85)	0.003
PAI-1, ng/mL	1.05 (1.01-1.09)	0.009	1.05 (1.01-1.09)	0.009	1.05 (1.01-1.09)	0.009	1.05 (1.01-1.09)	0.008
CLT, min	1.03 (1.01-1.05)	0.002	1.03 (1.01-1.05)	0.004	1.03 (1.01-1.05)	0.004	1.03 (1.01-1.05)	0.002

* The cut-off values of H3Cit and the C3a-to-C3 ratio were determined by ROC curve analysis for sPESI ≥1

Abbreviations: APE – acute pulmonary embolism, CI – confidence interval, H3Cit – citrullinated histone H3, CKD – chronic kidney disease, CLT – clot lysis time, NT-proBNP – N-terminal pro-B-type natriuretic peptide, OR – odds ratio, PAI-1 – plasminogen activator inhibitor-1, sPESI – simplified pulmonary embolism severity index

Table S3. Diagnostic value of the C3a-to-C3 ratio >0.21 and citrullinated histone H3 >3.1 ng/mL in the study patients*

Diagnostic value	C3a-to-C3 ratio > 0.21 and H3Cit > 3.1 ng/mL	C3a-to-C3 ratio > 0.21	H3Cit > 3.1 ng/mL
Intermediate-high risk APE			
Sensitivity, %	42.3 (23.4-63.1)	76.9 (56.4-91.0)	61.5 (40.6-79.8)
Specificity, %	78.3 (67.9-86.6)	50.6 (39.4-61.8)	63.9 (52.6-74.1)
Accuracy, %	69.7 (60.2-78.2)	56.9 (47.1-66.3)	63.3 (53.5-72.3)
Positive predictive value, %	37.9 (25.0-52.9)	32.8 (26.5-39.8)	34.8 (26.0-44.7)
Negative predictive value, %	81.3 (75.4-86.0)	87.5 (77.1-93.6)	84.1 (76.1-89.9)
sPESI ≥ 1			
Sensitivity, %	31.2 (22.0-41.6)	64.5 (53.9-74.2)	49.5 (38.9-60.0)
Specificity, %	100.0 (79.4-100.0)	93.8 (69.8-99.8)	100.0 (79.4-100.0)
Accuracy, %	41.3 (31.9-51.1)	68.8 (59.2-77.3)	56.9 (47.1-66.3)
Positive predictive value, %	100.0 (88.1-100.0)	98.4 (89.9-99.8)	100.0 (92.3-100.0)
Negative predictive value, %	20.0 (17.9-22.3)	31.3 (25.2-38.1)	25.4 (21.8-29.4)
Right ventricular dilatation			
Sensitivity, %	37.5 (22.7-54.2)	72.5 (56.1-85.4)	50.0 (33.8-66.2)
Specificity, %	79.7 (68.3-88.4)	53.6 (41.2-65.7)	62.3 (49.8-73.7)
Accuracy, %	64.2 (54.5-73.2)	60.6 (50.7-69.8)	57.8 (48.0-67.2)
Positive predictive value, %	51.7 (36.7-66.5)	47.5 (39.8-55.5)	43.5 (33.3-54.3)
Negative predictive value, %	68.8 (62.7-74.2)	77.1 (66.0-85.4)	68.3 (60.0-75.5)

* The cut-off values of H3Cit and the C3a-to-C3 ratio were determined by ROC curve analysis for sPESI ≥1

Abbreviations: APE – acute pulmonary embolism, H3Cit – citrullinated histone H3, sPESI – simplified pulmonary embolism severity index