Supplementary Table S1. Causes of Death by Fibrinolysis Groups.

	Physiologic ML, 3-15%; n=25 (6.4%)	Shutdown ML <3%; n=18 (12.7%)	Hyperfibrinolysis ML>15%, n=11 (55%)	All Patients N=55
Anoxic Brain Injury	1 (4)	2 (11.1)	1 (9)	4(7.4)
Bleeding	1 (4)	1 (5.5)	3 (27.2)	5 (9.3)
Traumatic Brain Injury	14 (56)	12 (66.6)	5 (45.4)	31 (57.4)
Multiorgan Failure	3 (12)	2 (11.1)	1 (9)	6 (11.1)
Pulmonary Embolism	0	1 (5.5)	0	1 (1.9)
Withdraw Life Support	3 (12)	0	0	3 (5.6)
Other	3 (12)	0	1 (9)	4(7.4)

Other causes include: cardiac arrest without known preceding event. Withdraw of life support includes patients with significant injuries but otherwise stable.

Supplementary Table S2. Multivariable Logistic Regression Model to Evaluate Association Between ISS and a Physiologic Fibrinolysis Phenotype

Variable, odds ratio units	Physiologic Fibrinolysis OR(95% CI)	p-value
Age, per every 5y increase	0.94 (0.88-1.002)	0.059
ISS, per every 5 points increase	0.94 (0.83-1.06)	0.3266
AIS Head, per every 1 point increase	0.98 (0.87-1.11)	0.7912
Penetrating: Blunt	1.34 (0.67-2.66)	0.4006
Male: Female	0.70 (0.41-1.19)	0.1930
Tranexamic acid Pre-Hospital	0.99 (0.54-1.83)	0.9914
Base Excess, per every 1 mEq/L increase	1.1 (1.04-1.16)	0.0003
Hemoglobin, per every 10 g/dL decrease	0.91 (0.79-1.05)	0.2215
Platelets, per every 20x 10^3/uL increase	0.95 (0.89-1.02)	0.2502
INR, per every 0.1 increase	0.97 (0.79-1.19)	0.7846
Fibrinogen, per every 0.5 g/dL decrease	0.85 (0.70-1.03)	0.1052
aPTT, per every 5 seconds increase	0.76 (0.62-0.93)	0.0098
MCF, per every 2 mm increase	0.84 (0.74- 0.94)	0.0049
CFT, per every 20 seconds increase	0.68 (0.55- 0.85)	0.0005

OR, odds ratio; CI, confidence interval; ISS, injury severity score; AIS, abbreviated injury severity score; INR, international normalized ratio; aPTT, activated prothrombin time; MCF, maximum clot formation; CFT, clot formation time. The independent variables were selected a priori (literature review and biological plausibility) and kept in the model irrespective of their p-value.

Supplementary Table S3. Multivariable Logistic Regression Model to Evaluate Association Between ISS and a Hyperfibrinolysis Phenotype

Variable, odds ratio units	Hyperfibrinolysis OR(95% CI)	p-value
ISS, per every 5 points increase	1.27(1.09-1.47)	0.0015
Systolic Blood Pressure, per every 10mmHg decrease	0.979(0.85-1.11)	0.7544
Base Excess, per every 1 increase	0.88(0.83-0.95)	0.0005

OR, odds ratio; CI, confidence interval; ISS, injury severity score. The independent variables were selected a priori (literature review and biological plausibility) and kept in the model irrespective of their p-value.

Supplementary Table S4. Multivariable Logistic Regression Model to Evaluate Association Between Fibrinolysis Shutdown and Massive Transfusion

Variable, odds ratio units	Massive Transfusion OR (95% CI)	p-value
Shutdown	2.14 (0.79-5.74)	0.1308
ISS, per every 5 points increase	1.23 (1.04-1.45)	0.0149
SBP, per every 10mmHg decrease	1.68 (1.38-2.04)	<.0001
Hemoglobin, per every 10 g/dL decrease	1.29 (1.02-1.64)	0.0332

OR, odds ratio; CI, confidence interval; ISS, injury severity score; SBP, systolic blood pressure. The independent variables were selected a priori (literature review and biological plausibility) and kept in the model irrespective of their p-value.

Supplementary Table S5. Multivariable Logistic Regression Model to Evaluate Association Between Fibrinolysis Shutdown and Thrombotic Events

Variable, odds ratio units	Thrombotic Events OR (95% CI)	p-value
Shutdown	1.08 (0.37- 3.15)	0.8744
Age, per every 5y increase	1.16 (1.028-1.31)	0.0159
ISS, per every 5 points increase	1.07 (0.87-1.3)	0.4875
Transfusion within 24h	3.17 (1.11-9.06)	0.0311

OR, odds ratio; CI, confidence interval; ISS, injury severity score. The independent variables were selected a priori (literature review and biological plausibility) and kept in the model irrespective of their p-value.