

**Disseminated intravascular coagulation immediately after trauma predicts a poor prognosis in severely injured patients**

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Table S1. Japanese Association for Acute Medicine disseminated intravascular coagulation scoring system

	Score
Systemic inflammatory response syndrome criteria	
$\geq 3$	1
0-2	0
Platelet counts ( $10^9/L$ )	
$<80$ or a $\geq 50\%$ decrease within 24 h	3
$\geq 80$ to $<120$ or a $\geq 30\%$ decrease within 24 h	1
$\geq 120$	
0	
Prothrombin time (value of patient/normal value)	
$\geq 1.2$	1
$<1.2$	0
Fibrin/fibrinogen degradation products (mg/L)	
$\geq 25$	3
$\geq 10$ to $<25$	1
$<10$	0
Diagnosis	
Four points or more	DIC

The detailed scoring system is described in reference 16.

Table S2. Abbreviated injury scale and Glasgow Coma Scale of the patients

	Non-DIC	DIC	<i>P</i> -Value
<b>Abbreviated injury scale</b>			
Head	3 (0-4)	3 (0-4)	0.138
Face	0 (0 -1)	0 (0-0)	0.391
Neck	0 (0-0)	0(0-0)	0.597
Thorax	3 (0-4)	3(0-4)	0.007
Abdomen	0 (0-0)	0 (0-2)	0.005
<b>Spine</b>			
Cervical	0 (0-0)	0 (0-0)	0.421
Thoracic	0 (0-0)	0 (0-0)	0.522
Lumbar	0 (0-0)	0 (0-1)	0.001
Upper extremity	0 (0-1)	0 (0-2)	0.169
Lower extremity	0 (0-2)	2 (0-3)	<0.001
External	0 (0-1)	0 (0-1)	0.053
<b>Glasgow Coma Scale</b>			
0 h	14 (11-15)	12 (6-14)	<0.001
3 h	14 (7-15)	7 (3-14)	<0.001
24 h	15 (10-15)	9 (3-14)	<0.001

Values are expressed as the median with the 25<sup>th</sup> -75<sup>th</sup> interquartile range.

DIC, disseminated intravascular coagulation

Table S3. Disseminated intravascular coagulation scores, platelet counts, global markers of coagulation and fibrinolysis

	0 h	3 h	24 h
<b>DIC score</b>			
Non-DIC	3(1-3)	3(1-4)	2(1-4)
DIC	4(4-5) <sup>c</sup>	5(4-6) <sup>c,y</sup>	4(3-6) <sup>c</sup>
<b>Platelet counts (10<sup>9</sup>/L)</b>			
Non-DIC	220(186-250)	181(130-214)	159(118-194)
DIC	201(161-257) <sup>a</sup>	132(90-177) <sup>c,z</sup>	110(79-150) <sup>c,z</sup>
<b>Prothrombin time (sec)</b>			
Non-DIC	12.1(11.4-13.0)	12.8(12.0-14.0)	12.8(12.2-13.8)
DIC	13.4(12.2-15.0) <sup>c</sup>	14.5(13.0-15.9) <sup>c,y</sup>	13.5(12.7-14.6) <sup>b</sup>
<b>Prothrombin time INR</b>			
Non-DIC	1.02(1.02-1.09)	1.09(1.00-1.15)	1.09(1.03-1.15)
DIC	1.12(1.02-1.23) <sup>c</sup>	1.20(1.07-1.32) <sup>c,y</sup>	1.12(1.05-1.22) <sup>c</sup>
<b>APTT (sec)</b>			
Non-DIC	26.8(24.6-29.8)	29.1(26.4-32.3)	31.3(28.8-34.0)
DIC	29.1(25.8-37.0) <sup>c</sup>	33.4(27.5-40.6) <sup>c,y</sup>	33.1(29.0-37.1) <sup>z</sup>
<b>Fibrinogen (g/L)</b>			
Non-DIC	2.38(2.11-2.85)	2.05(1.70-2.60)	3.02(2.59-3.85)
DIC	2.07(1.61-2.47) <sup>c</sup>	1.67(1.19-2.08) <sup>c,z</sup>	2.78(2.38-3.47) <sup>a,z</sup>
<b>FDP (mg/L)</b>			
Non-DIC	31.0(14.5-87.5)	40.0(13.3-103.8)	17.0(7.0-38.4)
DIC	117.0(60.6-258.5) <sup>c</sup>	100.5(55.3-198.4) <sup>c</sup>	32.3(15.3-64.6) <sup>c,z</sup>
<b>FDP/D-dimer ratio</b>			
Non-DIC	2.21(1.53-3.13)	2.02(1.52-2.58)	2.19(1.87-2.55)
DIC	2.76(2.08-3.52) <sup>b</sup>	2.31(1.67-3.45) <sup>a</sup>	2.11(1.80-2.37) <sup>z</sup>

Values are expressed as the median with the 25<sup>th</sup> -75<sup>th</sup> interquartile range.

APTT, activated partial thromboplastin time; DIC, disseminated intravascular coagulation; FDP, fibrin/fibrinogen degradation products; INR, international normalized ratio. a,  $P < 0.05$ ; b,  $P < 0.01$ ; c,  $P < 0.001$  vs. non-DIC. x,  $P < 0.05$ ; y,  $P < 0.01$ ; z,  $P < 0.001$  vs. 0 h.

Table S4. Demographics of the 9 patients who died within 24-h after arrival

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Age (year)	60 (35-88)
Male gender n (%)	7 (77.8)
DIC n (%)	9 (100)
DIC score at 0 h	4 (4-5)
DIC score at 3 h	7 (4-8)
Injury Severity Score	34 (24-52)
Abbreviated injury scale	
Head	5.0 (2.5-5.0)
Shock n (%)	5 (55.6)
Hemodynamics	
0 h	
Systolic blood pressure (mmHg)	71 (52-113)
Diastolic blood pressure (mmHg)	37 (25-59)
Heart rate (beats/min)	104 (93-129)
Respiratory rate (times/min)	15 (11-30)
3 h	
Systolic blood pressure (mmHg)	86 (51-100)
Diastolic blood pressure (mmHg)	45 (24-64)
Heart rate (beats/min)	96 (72-107)
Respiratory rate (times/min)	19 (24)
Massive transfusion n (%)	3 (33.3)
3-h transfusion	
Packed red blood cell (ml)	1400 (280-2100)
Fresh frozen plasma	1440 (240-1680)
Platelet concentrate (U)	0 (0-20)

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Values are expressed as the median with the 25<sup>th</sup> -75<sup>th</sup> interquartile range or number (percentage).

DIC, disseminated intravascular coagulation

Table S5. Utility of soluble fibrin, plasmin antiplasmin complex, plasminogen activator inhibitor-1 for the detection of massive transfusion and multiple organ dysfunction syndrome within 24 h of and at 24 h after admission

	AUC (SE)	<i>P</i> -Value
Massive transfusion		
Soluble fibrin 0 h	0.627 (0.05)	0.023
Soluble fibrin 3 h	0.530 (0.05)	0.588
Plasmin antiplasmin complex 0 h	0.685 (0.05)	0.001
Plasmin antiplasmin complex 3 h	0.552 (0.05)	0.357
Plasminogen activator inhibitor-1 0 h	0.535 (0.05)	0.530
Plasminogen activator inhibitor-1 3 h	0.638 (0.05)	0.014
Multiple organ dysfunction syndrome		
Soluble fibrin 0 h	0.696 (0.04)	<0.001
Soluble fibrin 3 h	0.600 (0.04)	0.025
Plasmin antiplasmin complex 0 h	0.653 (0.04)	0.001
Plasmin antiplasmin complex 3 h	0.640 (0.05)	0.002
Plasminogen activator inhibitor-1 0 h	0.566 (0.05)	0.139
Plasminogen activator inhibitor-1 3 h	0.622 (0.04)	0.006

AUC, area under receiver operating characteristic curve; SE, standard error.



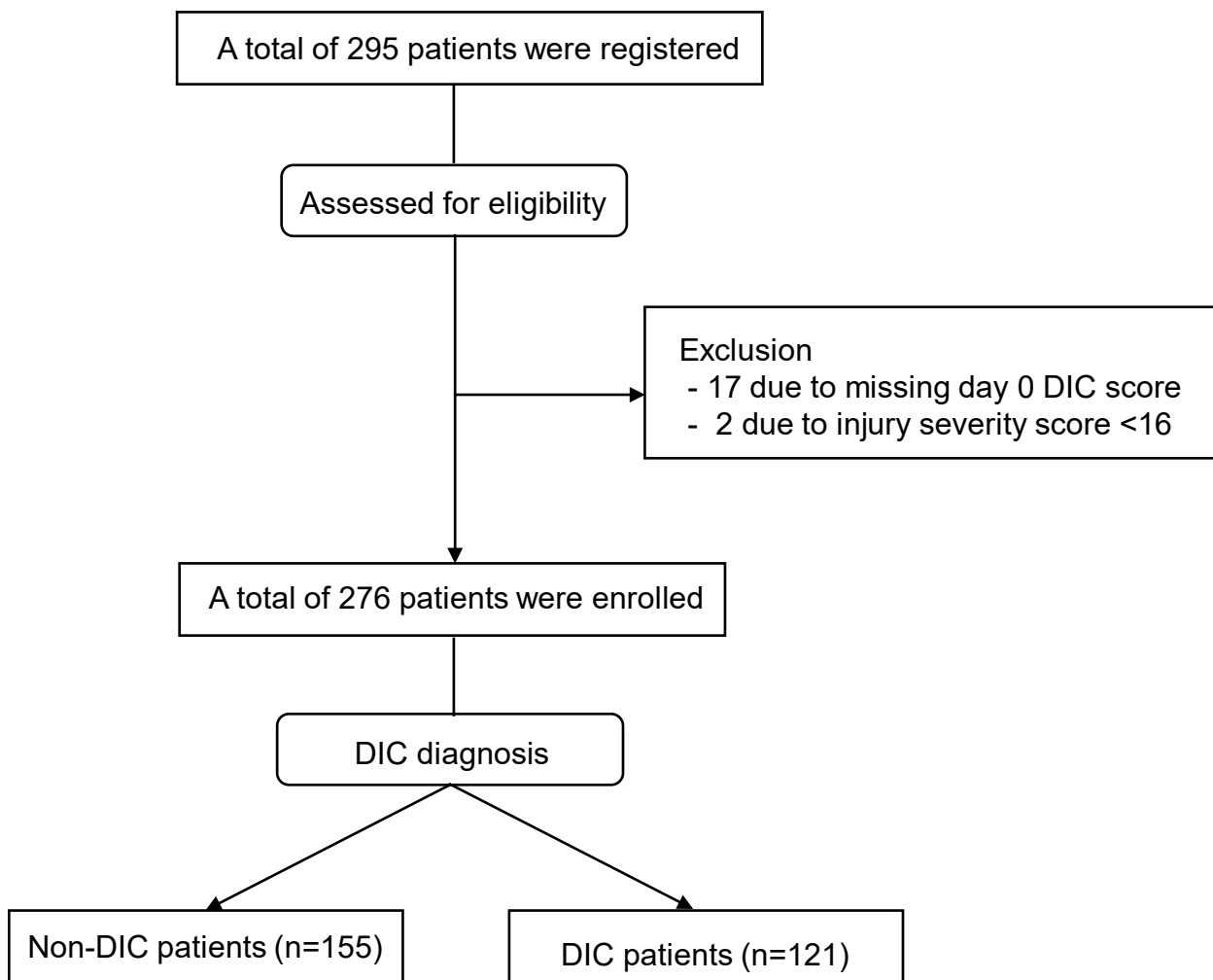


Figure S1