

**Supplement Table 1.** Criteria for discontinuing mechanical ventilation

Criteria	Description
Objective measurements	Adequate oxygenation ( $PO_2 \geq 60$ mm Hg on $FI_{O_2} \leq 0.4$ ; PEEP $\leq 5$ – $10$ cm $H_2O$ ; $PO_2/FI_{O_2} \geq 150$ – $300$ ); Stable cardiovascular system ([HR $\leq 140$ ; stable BP; no (or minimal) pressure) Afebrile (temperature $< 38^\circ C$ ) No significant respiratory acidosis Adequate hemoglobin ( $Hb \geq 8$ – $10$ g/dL) Adequate mentation (arousable, GCS $\geq 13$ , no continuous sedative infusions) Stable metabolic status (acceptable electrolytes)
Subjective clinical assessments	Resolution of the disease' acute phase, physician believes that discontinuation is possible, adequate cough

from reference [11]

**Supplement table 2**  
**Results of Kaplan–Meier analysis**

Control group						
Time	n. risk	n. event	survival	std.err	lower 95% CI	upper 95% CI
1	45	1	0.978	0.0220	0.853	0.997
2	44	1	0.956	0.0307	0.834	0.989
3	43	1	0.933	0.0372	0.807	0.978
5	42	1	0.911	0.0424	0.780	0.966
13	41	1	0.889	0.0468	0.753	0.952
14	40	1	0.867	0.0507	0.727	0.938
16	39	1	0.844	0.0540	0.701	0.923
17	38	1	0.822	0.0570	0.676	0.907
18	37	1	0.800	0.0596	0.651	0.891
38	36	1	0.778	0.0620	0.626	0.874
57	35	1	0.756	0.0641	0.602	0.856
62	34	1	0.733	0.0659	0.578	0.839

  

rhTM group						
time	n. risk	n. event	survival	std.err	lower 95% CI	upper 95% CI
1	47	3	0.936	0.0357	0.815	0.979
3	44	1	0.915	0.0407	0.789	0.967
12	43	1	0.894	0.0450	0.763	0.954
17	42	1	0.872	0.0487	0.738	0.941
20	41	1	0.851	0.0519	0.713	0.926
24	40	1	0.830	0.0548	0.688	0.911
30	39	1	0.809	0.0574	0.664	0.895
35	38	1	0.787	0.0597	0.641	0.879
47	37	2	0.745	0.0636	0.594	0.846
62	35	1	0.723	0.0652	0.572	0.829

n.: number, std: standard, CI: confidence interval

**Supplemental Table 3.** Coagulation and inflammation data

### Coagulation data

Measurement value						Relative change from baseline				
		Control	rhTM	Difference (95% CI)	p value		Control	rhTM	Difference (95% CI)	p value
D-dimer (µg/mL)	day 0	39.5 (21.9, 57.0)	30.2 (13.0, 47.3)	-9.3 (-33.8, 15.2)	0.320					
	day 1	27.4 (17.3, 37.7)	18.3 (8.3, 28.3)	-9.2(-23.4, 5.1)	0.094	delta 1	-0.13 (-0.32, 0.05)	-0.29 (-0.46, -1.09)	-0.15 (-0.41, 0.10)	0.112
	day 2	17.7 (10.4, 25.0)	12.8 (5.5, 20.0)	-4.9(-15.2, 5.4)	0.214	delta 2	-0.17 (-0.42, 0.06)	-0.49 (-0.73, -0.25)	-0.31 (-0.65, 0.03)	0.017
	day 3	16.9 (11.4, 22.5)	9.6 (4.1, 15.0)	-7.4 (-15.1, 0.4)	0.014	delta 3	-0.11 (-0.39, 0.17)	-0.51 (-0.78, -0.24)	-0.40 (-0.79, -0.01)	0.008*
	day 5	18.5 (12.9, 24.1)	8.0 (2.6, 13.5)	-10.5 (-18.2, -2.7)	0.001*	delta 5	-0.01 (-0.37, 0.35)	-0.52 (-0.87, -0.18)	-0.52 (-1.02, -0.02)	0.008*
	day 7	20.6 (12.1, 29.2)	8.0 (-0.4, 16.5)	-12.6 (-24.6, -0.6)	0.007*	delta 7	0.23 (-0.41, 0.86)	-0.55 (-1.17, 0.07)	-0.78 (-1.66, 0.11)	0.024
	day	19.7 (13.2, 26.2)	7.0 (0.6, 13.5)	-12.7 (-21.8, -3.5)	<0.001*	delta 10	0.35 (-0.74, 1.39)	-0.43 (-1.48, 0.62)	-0.76 (-2.25, 0.74)	0.185
FDP (µg/mL)	day 0	78.3 (35.5, 121.1)	62.3 (20.4, 104.1)	-16.0 (-75.9, 43.9)	0.483					
	day 1	55.3 (32.7, 77.9)	32.0 (10.1, 53.8)	-23.4 (-54.8, 8.1)	0.053	delta 1	-0.01 (-0.26, 0.12)	-0.29 (-0.48, -0.10)	-0.22 (-0.49, 0.05)	0.035
	day 2	32.7 (18.2, 47.2)	25.3 (11.0, 39.6)	-7.4 (-27.8, 13.0)	0.339	delta 2	-0.20 (-0.44, 0.03)	-0.47 (-0.70, -0.24)	-0.27 (-0.59, 0.06)	0.036

	day 3	32.6 (21.2, 43.9)	18.9 (7.7, 30.1)	-13.7 (-29.6, 2.2)	0.026	delta 3	-0.09 (-0.38, 0.21)	-0.48 (-0.78, -0.19)	-0.40 (-0.81, 0.0)	0.014
	day 5	32.9 (20.9, 44.9)	14.5 (2.9, 26.1)	-18.4 (-35.1, -1.7)	0.005*	delta 5	-0.13 (-0.41, 0.15)	-0.57 (-0.84, -0.30)	-0.43 (-0.82, -0.05)	0.004*
	day 7	32.2 (20.0, 44.3)	13.3 (1.3, 25.3)	-18.9 (-36.0, -1.8)	0.005*	delta 7	-0.04 (-0.43, 0.35)	-0.58 (-0.96, -0.20)	-0.54 (-1.09, 0.01)	0.011
	day 10	30.7 (19.7, 41.6)	11.4 (0.4, 22.3)	-19.3 (-34.8, -3.8)	0.002*	delta 10	-0.20 (-0.48, 0.08)	-0.66 (-0.94, -0.38)	-0.46 (-0.85, -0.06)	0.003*
Platelet ( $\times 10^4$ / $\mu\text{L}$ )	day 0	13.3 (10.4, 16.3)	13.5 (10.6, 16.3)	0.11 (-4.0, 4.2)	0.946					
	day 1	10.5 (8.2, 12.8)	10.7 (8.5, 13.0)	0.27 (-2.9, 3.5)	0.824	delta 1	-0.12 (-0.31, 0.07)	-0.10 (-0.29, 0.08)	0.02 (-0.25, 0.28)	0.863
	day 2	9.3 (7.1, 11.5)	10.6 (8.4, 12.8)	1.3 (-1.8, 4.4)	0.276	delta 2	-0.17 (-0.34, -0.01)	-0.12 (-0.29, 0.04)	0.05 (-0.18, 0.28)	0.573
	day 3	9.4 (7.0, 11.8)	11.4 (9.1, 13.8)	2.1 (-1.3, 5.4)	0.108	delta 3	-0.17 (-0.36, 0.03)	-0.02 (-0.21, 0.17)	0.15 (-0.12, 0.42)	0.156
	day 5	12.2 (8.7, 15.8)	16.0 (12.5, 19.4)	3.7 (-1.2, 8.6)	0.051	delta 5	0.11 (-0.22, 0.44)	0.41 (0.09, 0.73)	0.30 (-0.16, 0.76)	0.086
	day 7	16.9 (12.7, 21.1)	22.2 (18.0, 26.3)	5.3 (-0.7, 11.2)	0.021	delta 7	0.57 (-0.14, 1.27)	1.30 (0.61, 1.99)	0.73 (-0.26, 1.72)	0.054
	day 10	22.1 (16.8, 27.5)	28.3 (23.1, 33.4)	6.2 (-1.3, 13.6)	0.032	delta 10	1.14 (0.22, 2.06)	1.93 (1.04, 2.81)	0.79 (-0.48, 2.06)	0.11
PT-INR	day 0	1.31 (1.14, 1.48)	1.42 (1.25, 1.58)	0.11 (-0.13, 0.34)	0.244					
	day 1	1.33 (1.23, 1.43)	1.35 (1.25, 1.45)	0.02 (-0.11, 0.16)	0.654	delta 1	0.02 (-0.04, 0.07)	-0.01 (-0.06, 0.05)	-0.03 (-0.10, 0.05)	0.376
	day 2	1.27 (1.17, 1.36)	1.24 (1.15, 1.34)	-0.02 (-0.15, 0.11)	0.655	delta 2	-0.02 (-0.09, 0.05)	-0.09 (-0.16, -0.03)	0.07 (-0.17, 0.02)	0.053
	day 3	1.23 (1.14, 1.32)	1.20 (1.12, 1.29)	-0.02 (-0.15, 0.10)	0.635	delta 3	-0.05 (-0.11, 0.01)	-0.12 (-0.18, -0.06)	-0.07 (-0.16, 0.02)	0.042

	day 5	1.25 (1.17, 1.32)	1.19 (1.12, 1.27)	-0.05 (-0.16, 0.05)	0.196	delta 5	-0.03 (-0.11, 0.05)	-0.12 (-0.20, -0.04)	-0.09 (0.20, 0.02)	0.040
	day 7	1.29 (1.15, 1.44)	1.20 (1.06, 1.34)	-0.09 (-0.25, 0.11)	0.226	delta 7	-0.01 (-0.11, 0.10)	-0.12 (-0.22, -0.016)	-0.11 (-0.26, 0.04)	0.050
	day 10	1.23 (1.11, 1.35)	1.23 (1.11, 1.34)	-0.004 (-0.17, 0.16)	0.951	delta 10	-0.05 (-0.15, 0.04)	-0.10 (-0.19, -0.01)	-0.05 (-0.18, 0.09)	0.374
Fib	day 0	457.1 (376.0, 538.2)	456.4 (376.2, 536.6)	-0.73 (-114.8, 113.3)	0.99					
(mg/dL)	day 1	445.0 (370.1, 519.4)	436.4 (364.5, 508.3)	-8.61 (-112.1, 94.9)	0.827	delta 1	-0.03 (-0.14, 0.09)	0.02 (-0.09, 0.13)	0.05 (-0.11, 0.21)	0.433
	day 2	455.7 (381.3, 530.1)	473.0 (401.25, 544.8)	17.3 (-86.1, 120.7)	0.660	delta 2	0.06 (-0.12, 0.25)	0.18 (-0.01, 0.36)	0.11 (-0.15, 0.37)	0.299
	day 3	434.0 (353.7, 514.3)	457.3 (379.9, 534.8)	23.3 (-88.2, 134.)	0.583	delta 3	0.03 (-0.20, 0.25)	0.17 (-0.05, 0.38)	0.14 (-0.17, 0.45)	0.247
	day 5	414.6 (332.7, 496.6)	424.5 (346.6, 502.3)	9.8 (-103.2, 122.9)	0.819	delta 5	-0.04 (-0.29, 0.20)	0.15 (-0.08, 0.39)	0.19 (-0.14, 0.53)	0.134
	day 7	389.3 (318.4, 460.0)	391.5 (323.4, 459.6)	2.3 (-95.9, 100.5)	0.952	delta 7	-0.11 (-0.36, 0.14)	0.12 (-0.13, 0.37)	0.23 (-0.13, 0.58)	0.094
	day 10	335.8 (264.0, 407.6)	423.4 (354.5, 492.2)	87.6 (-11.916, 187.071)	0.025	delta 10	-0.17 (-0.48, 0.14)	0.19 (-0.11, 0.49)	0.36 (-0.07, 0.79)	0.028
ATIII	day 0	58.8 (50.7, 97.0)	62.8 (54.8, 70.7)	3.93 (-7.5, 15.3)	0.367					
(%)	day 1	48.9 (42.1, 55.7)	54.8 (48.2, 61.3)	5.85 (-3.6, 15.3)	0.106	delta 1	-1.62 (-0.25, -0.08)	-0.12 (-0.20, -0.03)	0.05 (-0.07, 0.16)	0.265
	day 2	51.3 (43.7, 58.8)	57.1 (49.8, 64.4)	5.85 (-4.6, 16.3)	0.144	delta 2	-0.14 (-0.23, -0.05)	-0.09 (-0.17, -0.003)	0.05 (-0.07, 0.17)	0.257
	day 3	55.0 (47.0, 63.0)	62.6 (54.7, 70.4)	7.60 (-3.6, 18.8)	0.078	delta 3	-0.08 (-0.18, 0.02)	0.02 (-0.07, 0.12)	0.10 (-0.03, 0.24)	0.049
	day 5	60.6 (52.4, 68.9)	69.7 (61.6, 77.7)	9.02 (-2.5, 20.6)	0.042	delta 5	0.02 (-0.11, 0.15)	0.17 (0.04, 0.30)	0.15 (-0.03, 0.33)	0.032

day 7	64.5 (54.9, 74.1)	74.1 (64.9, 83.3)	9.58 (-3.7, 22.9)	0.061	delta 7	0.10 ( -0.03, 0.23)	0.20 (0.07, 0.32)	0.10 (-0.09, 0.28)	0.171
day 10	66.5 (55.9, 77.1)	80.0 (69.8, 90.1)	13.4 (-1.3, 28.1)	0.018	delta 10	0.16 (0.02, 0.31)	0.28 (0.14, 0.41)	0.12 (-0.08, 0.31)	0.120

### Inflammation data

Measurement value						Relative change from baseline					
		Control	rhTM	Difference (95% CI)	p value			Control	rhTM	Difference (95% CI)	p value
CRP (mg/dL)	day 0	20.5 (16.0, 25.0)	18.5 (14.0, 23.0)	-2.0 (-8.4, 4.4)	0.409						
	day 1	19.2 (14.9, 23.5)	15.7 (11.5, 19.9)	-3.5 (-9.5, 2.5)	0.130	delta 1	1.7 (0.14, 3.27)	1.4 (-0.12, 2.98)	-0.28 (-2.48, 1.92)	0.740	
	day 2	14.9 (11.5, 18.3)	10.8 (7.5, 14.1)	-4.1 (-8.8, 0.7)	0.027	delta 2	8.0 (-4.21, 20.25)	1.7 (-10.22, 13.67)	-6.3 (-23.39, 10.796)	0.334	
	day 3	10.7 (7.2, 14.2)	7.7 (4.3, 11.0)	-3.0 (-7.8, 1.8)	0.104	delta 3	5.1 (-3.36, 13.48)	0.9 (-7.26, 8.98)	-4.2 (-15.90, 7.50)	0.347	
	day 5	8.2 (5.6, 10.8)	5.2 (2.7, 7.7)	-3.0 (-6.6, 0.6)	0.031	delta 5	3.5 (-2.64, 9.63)	0.4 (-5.34, 6.18)	-3.1 (-11.50, 5.34)	0.337	
	day 7	5.8 (3.7, 7.9)	4.0 (1.9, 6.0)	-1.8 (-4.7, 1.1)	0.100	delta 7	2.9 (-2.48, 8.20)	-0.04 (-5.11, 5.03)	-2.90 (-10.26, 4.46)	0.302	
	day 10	8.5 (2.9, 14.1)	4.0 (-1.5, 9.4)	-4.5 (-12.3, 3.3)	0.131	delta 10	1.4 (-6.25, 9.14)	3.0 (-4.35, 10.41)	1.9(-9.08, 12.25)	0.695	
WBC (×10 <sup>2</sup> /μL)	day 0	12.63 (9.24, 16.02)	14.35 (11.03, 17.67)	1.7 (-3.02, 6.46)	0.343						
	day 1	14.55 (10.38, 18.72)	15.01 (10.89, 19.14)	0.4 (-5.40, 6.33)	0.836	delta 1	0.6 (-0.11, 1.37)	0.4 (-0.36, 1.11)	-0.2 (-1.30, 0.80)	0.532	
	day 2	12.31 (9.14, 15.48)	12.98 (9.84, 16.11)	0.7 (-3.79, 5.12)	0.695	delta 2	0.6 (-0.12, 1.25)	0.2 (-0.43, 0.93)	-0.3 (-1.29, 0.64)	0.383	

day 3	11.13 (8.42, 13.84)	10.97 (8.29, 13.65)	-0.2 (-3.98, 3.65)	0.909	delta 3	0.7 (-0.13, 1.61)	0.04 (-0.81, 0.90)	-0.7 (-1.92, 0.53)	0.137
day 5	10.34 (7.64, 13.04)	11.24 (8.64, 13.84)	0.9 (-2.84, 4.64)	0.528	delta 5	0.6 (-0.36, 1.55)	0.2 (-0.69, 1.15)	-0.4 (-1.7, 0.9)	0.465
day 7	10.88 (8.42, 13.34)	10.84 (8.44, 13.23)	-0.05 (-3.47, 3.39)	0.975	delta 7	0.7 (-0.26, 1.62)	0.1 (-0.83, 0.99)	-0.6 (-1.91, 0.71)	0.230
day 10	11.25 (9.48, 13.04)	9.49 (7.76, 11.22)	-1.8 (-4.24, 0.71)	0.064	delta 10	0.5 (-0.38, 1.40)	0.02 (-0.85, 0.89)	-0.5 (-1.73, 0.75)	0.298

mean (95% confidence interval)

PTINR, prothrombin time–international normalized ratio;

Fib, fibrinogen; AT III, antithrombin III; CRP, C-reactive protein; WBC, white blood cell

Relative change rate from baseline = ([measurement day value – day 0 value]/day 0 value).

This table includes fibrin/fibrinogen degradation products (FDP) value. This information was not noted in the main manuscript to avoid redundancy.

**Supplemental Table 4.** Sequential Organ Failure Assessment score (SOFA score)

Measurement value						Relative change from baseline					
		Control	rhTM	Difference (95% CI)	p value			Control	rhTM	Difference (95% CI)	p value
SOFA(R) (points)	day 0	2.0 (1.4, 2.6)	1.7 (1.1, 2.2)	-0.3 (-1.1, 0.5)	0.334						
	day 1	2.0 (1.5, 2.5)	1.2 (0.7, 1.7)	-0.8 (-1.5, -0.1)	0.004*	delta 1	0.05 (-0.3, 0.4)	-0.4 (-0.7, -0.1)	-0.5 (-0.9, 0.02)	0.013	
	day 2	1.6 (1.1, 2.1)	0.9 (0.4, 1.3)	-0.7 (-1.4, -0.1)	0.004*	delta 2	-0.3 (-0.7, 0.2)	-0.7 (-1.1, -0.2)	-0.4 (-1.0, 0.2)	0.088	
	day 3	1.4 (0.9, 1.8)	0.7 (0.3, 1.2)	-0.6 (-1.3, 0.02)	0.012	delta 3	-0.5 (-1.0, -0.03)	-0.8 (-1.3, -0.3)	-0.3 (-0.9, 0.4)	0.247	
	day 5	1.2 (0.7, 1.7)	0.6 (0.2, 1.1)	-2.2 (-1.3, 0.11)	0.029	delta 5	-0.7 (-1.2, -0.2)	-0.9 (-1.4, -0.4)	-0.2 (-0.9, 0.4)	0.343	
	day 7	1.2 (0.7, 1.7)	0.6 (0.1, 1.1)	-0.6 (-1.3, 0.1)	0.021	delta 7	-0.7 (-1.2, -0.2)	-1.0 (-1.5, -0.5)	-0.3 (-1.1, 0.4)	0.225	
	day 10	0.9 (0.5, 1.3)	0.4 (0.0, 0.8)	-0.5 (-1.1, 0.1)	0.031	delta 10	-1.1 (-1.7, -0.5)	-1.2 (-1.8, -0.6)	-0.1 -0.9, 0.7	0.737	
Total SOFA (points)	day 0	8.1 (7.1, 9.1)	7.3 (6.4, 8.3)	-0.7 (-2.1, 0.6)	0.367						
	day 1	8.0 (6.3, 9.7)	6.5 (4.8, 8.1)	-1.5 (-3.9, 0.8)	0.091	delta 1	0.02 (-0.9, 0.)	-0.8 (-1.7, 0.1)	-0.8 (-2.0, 0.5)	0.121	
	day 2	6.9 (5.9, 7.9)	5.3 (4.2, 6.3)	-1.6 (-3.1, -0.1)	0.071	delta 2	-1.0 (-2.0, -0.01)	-1.8 (-2.8, -0.9)	-0.8 (-2.2, 0.6)	0.118	
	day 3	6.0 (4.3, 7.6)	4.6 (2.9, 6.2)	-1.4 (-3.7, 0.9)	0.120	delta 3	-1.9 (-3.1, -0.8)	-2.6 (-3.7, -1.4)	-0.6 (-2.3, 1.0)	0.308	
	day 5	4.9 (3.2, 6.6)	3.5 (1.8, 5.1)	-1.4 (-3.8, 0.9)	0.113	delta 5	-3.2 (-4.6, -1.9)	-3.7 (-5.0, -2.4)	-0.5 (-2.3, 1.4)	0.490	
	day 7	4.3 (2.6, 6.0)	2.6 (1.0, 4.3)	-1.6 (-4.0, 0.8)	0.075	delta 7	-3.8 (-5.3, -2.4)	-4.6 (-6.0, -3.2)	-0.7 (-2.8, 1.2)	0.317	
	day 10	3.6 (2.0, 5.2)	2.4 (0.8, 4.0)	-1.2 (-3.5, 1.1)	0.159	delta 10	-4.8 (-6.2, -3.3)	-4.7 (-6.1, -3.3)	0.1 (-1.9, 2.1)	0.924	

SOFA (R), SOFA scores of respiratory

Change rate from baseline = SOFA score of measurement day – SOFA score of day 0.

\* shows statistically significance (p &lt; 0.01).



**Supplemental Table 5. Ventilator-free days, blood transfusion, and albumin and heparin use**

Characteristics	Control (n = 45)	rhTM* (n = 47)	p value
Ventilator free day at day 28	15.5 (10.7, 20.2)*	17.5 (9.2, 17.7)*	0.530**
Blood transfusion (within 72 h)			
RBC (U)	8.0 [2.0, 10.0] <sup>\$</sup> , n = 11	3.0 [2.0, 8.0], n = 10	0.089 <sup>\$\$</sup>
FFP (U)	10.0 [8.0, 20.0], n = 5	5.0 [4.0, 24.0], n = 7	0.100 <sup>\$\$</sup>
PC (U)	30.0 [10.0, 70.0], n = 6	20.0 [10.0, 90.0], n = 5	0.710 <sup>\$\$</sup>
Albumin use, n (within 72 h)	16 (35.6)	4 (8.5)	0.002 <sup>\$\$</sup>
Albumin preparation (mg), n = 16, 4	50.0 [34.4, 65.6]	37.5 [12.5, 84.4]	0.632 <sup>\$\$</sup>
*Heparin use, n (%)	7 (15.6)	1 (2.2)	NA

Heparin was used on diagnosis of deep venous thrombosis

Ventilator free day at day 28 was defined as the number of days a patient had breathed without mechanical ventilation for at least 48 h continuously during a 28-day period. Patients who did not survive till 28 days were assigned 0 ventilator free days.

RBC, red blood cell; FFP, fresh freeze plasma; PC, platelet

\* mean (95% confidence interval), \*\* An unpaired t test was performed.

<sup>\$</sup> median [25percentile, 75percentile], <sup>\$\$</sup> Mann-Whitney test was performed.

NA: none available.

Supplemental Table 6. Other Laboratory findings

		Control	rhTM	P value
n		45	47	
Alb (g/dL)	day 0	2.65 (0.72)	2.94 (0.63)	0.051
	day 1	2.07 (0.38)	2.33 (0.40)	0.004*
	day 2	2.05 (0.41)	2.18 (0.42)	0.166
	day 3	2.08 (0.39)	2.23 (0.43)	0.111
	day 5	2.06 (0.42)	2.28 (0.48)	0.041
	day 7	2.11 (0.46)	2.26 (0.49)	0.177
	day 10	2.11 (0.44)	2.36 (0.53)	0.038
Delta Alb		-0.21 (0.15)	-0.17 (0.18)	0.342
		-0.24 (0.16)	-0.22 (0.19)	0.656
		-0.22 (0.17)	-0.21 (0.22)	0.801
		-0.22 (0.19)	-0.19 (0.21)	0.633
		-0.21 (0.21)	-0.20 (0.25)	0.919
		-0.19 (0.22)	-0.15 (0.28)	0.476
ALP (IU/L)	day 0	327.72 (290.90)	362.71 (357.99)	0.674
	day 1	255.81 (194.08)	283.22 (186.25)	0.54
	day 2	252.77 (214.62)	330.24 (330.80)	0.279
	day 3	270.18 (184.96)	323.81 (308.08)	0.382
	day 5	276.21 (166.61)	369.69 (466.70)	0.317
	day 7	296.57 (145.90)	382.18 (341.37)	0.207
	day 10	326.86 (162.12)	418.10 (417.71)	0.284
ALT (IU/L)	day 0	62.84 (89.26)	115.30 (209.89)	0.129
	day 1	78.07 (127.98)	135.07 (233.97)	0.162
	day 2	90.37 (168.76)	115.47 (198.39)	0.537
	day 3	106.90 (224.77)	122.61 (227.07)	0.754
	day 5	94.65 (153.06)	101.85 (171.84)	0.846
	day 7	65.15 (63.89)	79.34 (103.25)	0.469
	day 10	68.19 (68.87)	63.49 (75.34)	0.781
AST (IU/L)	day 0	114.02 (147.40)	229.47 (430.63)	0.092
	day 1	135.29 (188.04)	274.35 (522.03)	0.096

	day 2	153.38 (341.98)	180.19 (246.58)	0.679
	day 3	192.90 (549.88)	159.44 (255.87)	0.719
	day 5	120.82 (305.89)	103.17 (117.07)	0.729
	day 7	61.21 (67.53)	68.68 (100.29)	0.698
	day 10	74.95 (160.93)	44.42 (30.49)	0.255
LDH (IU/L)	day 0	407.14 (207.25)	556.49 (679.65)	0.166
	day 1	368.42 (215.27)	495.57 (548.45)	0.159
	day 2	344.37 (235.32)	381.98 (215.62)	0.447
	day 3	365.35 (308.27)	391.23 (279.30)	0.689
	day 5	351.24 (235.63)	355.95 (155.61)	0.916
	day 7	316.47 (157.25)	332.00 (131.56)	0.635
	day 10	300.60 (146.05)	284.13 (81.80)	0.55
Bil (mg/dL)	day 0	1.15 (0.86)	1.67 (1.24)	0.023
	day 1	0.98 (0.77)	1.69 (3.10)	0.139
	day 2	0.94 (0.88)	1.26 (1.12)	0.141
	day 3	1.02 (1.21)	1.23 (1.08)	0.396
	day 5	1.28 (2.29)	1.64 (3.14)	0.562
	day 7	1.32 (2.66)	1.30 (1.90)	0.972
	day 10	1.33 (3.41)	1.53 (2.74)	0.778
BUN (mg/dL)	day 0	39.89 (26.37)	45.96 (36.80)	0.367
	day 1	39.05 (27.09)	40.15 (28.01)	0.849
	day 2	35.19 (26.29)	133.08 (652.19)	0.334
	day 3	31.43 (24.80)	33.27 (41.88)	0.807
	day 5	26.11 (20.12)	25.73 (28.18)	0.945
	day 7	26.54 (19.53)	22.68 (18.80)	0.371
	day 10	31.60 (34.35)	28.26 (39.51)	0.697
Cr (mg/dL)	day 0	2.21 (2.14)	2.30 (2.44)	0.841
	day 1	1.95 (2.06)	4.77 (20.44)	0.361
	day 2	1.63 (1.98)	1.48 (1.50)	0.693
	day 3	1.50 (1.75)	1.31 (1.39)	0.574
	day 5	1.47 (1.59)	1.15 (1.17)	0.299
	day 7	1.39 (1.60)	1.18 (1.24)	0.505
	day 10	57.95 (344.70)	1.78 (3.31)	0.318
Na	day 0	140.62 (7.94)	139.64 (6.89)	0.527

(mEq/L)	day 1	142.49 (7.64)	140.89 (6.82)	0.308
	day 2	142.33 (6.85)	141.19 (6.91)	0.444
	day 3	140.71 (8.02)	140.53 (6.15)	0.908
	day 5	141.72 (4.51)	140.38 (5.32)	0.228
	day 7	140.92 (5.58)	140.27 (4.52)	0.565
	day 10	140.05 (5.26)	139.92 (3.77)	0.9
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Cl	day 0	102.53 (19.24)	103.16 (7.29)	0.852
(mEq/L)	day 1	106.83 (18.63)	105.34 (18.37)	0.721
	day 2	103.79 (25.81)	108.45 (7.03)	0.276
	day 3	108.95 (6.47)	107.70 (6.66)	0.408
	day 5	102.80 (23.65)	107.13 (6.22)	0.275
	day 7	104.00 (18.53)	107.19 (4.32)	0.312
	day 10	100.58 (25.74)	103.46 (17.81)	0.592
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RBC	day 0	3.93 (0.84)	4.05 (0.98)	0.504
(x 10 <sup>6</sup> /uL)	day 1	9.77 (42.12)	3.50 (0.68)	0.315
	day 2	3.37 (0.55)	3.35 (0.67)	0.9
	day 3	3.35 (0.49)	4.17 (4.97)	0.291
	day 5	3.53 (0.75)	3.74 (1.94)	0.526
	day 7	3.39 (0.57)	53.42 (319.13)	0.331
	day 10	4.31 (5.76)	3.34 (0.76)	0.308
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Hb	day 0	12.72 (4.73)	12.86 (2.87)	0.855
(g/dL)	day 1	11.20 (3.90)	11.03 (1.95)	0.792
	day 2	10.45 (1.74)	10.55 (1.88)	0.797
	day 3	10.37 (1.39)	10.79 (1.98)	0.267
	day 5	10.40 (1.88)	10.89 (2.15)	0.283
	day 7	10.37 (1.83)	12.42 (10.62)	0.238
	day 10	10.27 (1.85)	12.71 (13.06)	0.271

Mean (standard deviation)

Alb: albumin, Bil: bilirubin, Cr: creatinine

\* shows statistically significance (p < 0.01).

**Supplemental Table 7.** Kaplan–Meier analysis of the severe and moderate groups

		Moderate group (n = 51)		Lo- rank test p
		Survival	Non-survival	
28 days	Control (n = 24)	24 (100%)	0	0.178
	rhTM (n= 27)	25 (93%)	2 (7%)	
90 days	Control (n = 24)	22 (92%)	2 (8%)	0.278
	rhTM (n = 27)	22 (81%)	5 (19%)	
		Severe group (n = 41)		Log-rank test p
		Survival	Non-survival	
28 days	Control (n = 21)	12 (57%)	9 (43%)	0.376
	rhTM (n = 20)	14 (70%)	6 (30%)	
90 days	Control (n = 21)	11 (52%)	10 (48%)	0.524
	rhTM ( n = 20)	12 (60%)	8 (40%)	

Moderate group comprises patients with APACHE II score < 20 points.

Severe group comprises patients with APACHE II score  $\leq$  20 points.

**Supplemental Table 8.** Kaplan–Meier analysis of patients who experienced disseminated intravascular coagulation resolution

		Within 3 days		Log-rank test p
		Survival	Non-survival	
28 days	Control	13	4	0.358
	rhTM	27	4	
90 days	Control	11	6	0.231
	rhTM	25	6	
		Within 7 days		Log-rank test p
		Survival	Non-survival	
28 days	Control	28	5	0.676
	rhTM	39	5	
90 days	Control	26	7	0.901
	rhTM	34	10	