

Table1. Characteristics between survivor and non-survivor groups of patients with heat stroke at admission

	Total (N=72)	Survivors (n=51)	Non-survivors (n=21)	<i>P</i>
Male	48 (66.7%)	33 (64.7%)	15 (71.4%)	0.582
Age(years)	58.6 (19,87)	57.1 (19,87)	62.1 (34,82)	0.241
CHS	38 (52.8%)	22 (43.2%)	16 (66.7%)	0.011
Time from onset to treatment(hours)	7.17 (0.5,72)	7.54 (0.5,72)	6.29 (1,21)	0.658
Underlying disease	45 (62.5%)	30 (79.0%)	15 (44.1%)	0.947
T at admission(°C)	39.01±1.68	38.66±1.56	39.87±1.70	0.005
HR(per minute)	115.9±29.2	110.55±28.65	129.00±26.82	0.014
MAP(mmHg)	86.97±23.43	94.10±17.4	69.67±27.33	0.001
RR(per minute)	24.02±6.29	22.22±5.23	28.43±6.54	0.000
T at the 30mins after admission(°C)	38.52±1.56	38.17±1.29	39.36±1.85	0.003
T at 2 hours after admission(°C)	38.06±1.36	37.82±1.19	38.66±1.61	0.043
T at 3 hours after admission(°C)	37.71±1.29	37.45±1.02	38.36±1.67	0.007
The cooling time(hours)	6.76 (0,48)	4.80 (0,48)	4.62 (0,10)	0.915
WBC(10 ⁹ /L)	12.94 (1.98,28.21)	12.17 (1.98,28.21)	14.82 (4.57,27.44)	0.141
Hb(g/L)	134.36 (68,450)	128.65 (68,181)	148.24 (99,450)	0.083
PLT(10 ⁹ /L)	143.46 (9,461)	148.59 (14,461)	131.00 (9,342)	0.457
Hs-CRP(mg/L)	29.67 (0.1,200)	27.56 (0.1,167.7)	34.84 (0.5,200)	0.55
APTT(s)	48.00 (28.8,180)	47.15 (28.8,180)	50.07 (29.2,106.1)	0.694
PT(s)	19.61 (12.1,120)	18.55 (12.1,89.8)	22.21 (13.4,120)	0.381
Fib(g/L)	2.88 (0.3,10)	2.77 (0.3,5.74)	3.17 (1.51,10)	0.283
D-D(ug/ml)	6.44 (0.1,30)	5.57 (0.1,30)	8.56 (0.2,30)	0.271
Scr(umol/L)	145.68 (28.4,653.4)	102.7 (28.4,348)	250.1 (49,653.4)	0.000
Lac(umol/L)	6.48 (0.770,25)	4.31 (0.770,25)	11.77 (6.103,25)	0.000
BG(mmol/L)	10.43 (4.2,56.9)	9.77 (4.2,29.1)	12.05 (5.1,56.9)	0.258
AST(U/L)	206.92 (13,3738)	142.47 (13,2526)	363.43 (19,3738)	0.238
ALT(U/L)	115.74 (7,1557)	88.78 (7,1557)	181.19 (8,852)	0.188
Alb(g/L)	37.37 (20.1,49.7)	38.05 (20.1,48.2)	35.72 (20.2,49.7)	0.176
CK(U/L)	2012.92 (58,15360)	1554.86 (58,15000)	3125.33 (79,15360)	0.165
Mb(ng/mL)	1758.34 (2.6,36025)	1537.36 (2.6,36025)	2295.00 (109,23091)	0.583
TNI(ng/L)	75.99 (0.005,1000)	55.41 (0.005,1000)	125.98 (0.01,1000)	0.316
The Lac/Alb ratio(umol/g)	0.18 (0.020,0.847)	0.11 (0.02,0.617)	0.34 (0.13,0.847)	0.000
Ventilator invasive	23 (31.94%)	14 (27.45%)	9 (42.86%)	0.203

non-invasive	10 (13.89%)	8 (15.67%)	2 (9.52%)	0.492
GCS score	8.28 (3,15)	8.77 (3,15)	7.10 (3,15)	0.036
APACHE II score	23.03 (6,48)	19.75 (6,37)	31.00 (16,48)	0.000
The hospital stay(days)	5.54 (0.04,29)	5.91 (0.29,26)	4.65 (0.04,29)	0.436
The hospitalization fee(dollars)	2510.95 (153.11,21356.32)	1808.59 (153.11,9624.17)	4216.66 (300.94,21356.32)	0.034

CHS, classic heat stroke; T, the core temperature; HR, heart rate; MAP, mean arterial pressure; RR, respiratory rate; WBC, white blood cell count; Hb, hemoglobin; PLT, platelets; Hs-CRP, hypersensitive C-reactive protein; APTT, activated partial thromboplastin time; PT, prothrombin time; Fib, fibrinogen; D-D, D-dimer; Scr, serum creatinine; Lac, Lactic acid; BG, blood glucose; AST, aspartate aminotransferase; ALT, alanine aminotransferase; ALB, albumin; CK, creatine kinase; Mb, Myohemoglobin; TNI, troponin I; GCS score, Glasgow coma scale scores; APACHE-II scores, acute physiology and chronic health evaluation.

Table2. Risk factors for mortality of HS patients in multivariable Cox regression model

	HR	HR 95% CI	<i>P</i>
APACHE II score	1.089	1.036 - 1.146	0.001
The Lac/Alb ratio(umol/g)	8.081	1.381 - 47.296	0.02
T at the 30mins after admission(°C)	1.596	1.078 - 2.361	0.019

Table3. Logistic regression of APACHE II score, Lac/Alb ratio, T at the 30mins after admission and The predictive model

	AUC	Sensitivity	Specificity	Cut-off	<i>P</i>	95% CI
APACHE II score	0.820	0.571	0.922	29.000	0.000	0.716 - 0.924
Lac/Alb ratio(umol/g)	0.902	0.905	0.882	0.160	0.000	0.830 - 0.975
T at the 30mins after admission(°C)	0.700	0.619	0.804	39.500	0.008	0.544 - 0.855
The predictive model	0.917	0.762	0.922	0.365	0.000	0.851 - 0.983