

Table 2. Characteristics of patients with sepsis, with or without cardiovascular events

	All patients with sepsis n=662	Patients with sepsis and CVE n=350	Patients with sepsis and no CVE n=312	P value
Age, median (IQR), years	70 (60–78)	72 (62–79)	68 (56–77)	<b>&lt;0.001</b>
Male, no. (%)	422 (63.7)	219 (62.6)	203 (65.1)	0.505
Ethnicity, no. (%)				0.063
Chinese	462 (69.8)	232 (66.3)	230 (73.7)	
Malay	92 (13.9)	56 (16.0)	36 (11.5)	
Indian	75 (11.3)	47 (13.4)	28 (9.0)	
Others	33 (5.0)	15 (4.3)	18 (5.8)	
Smoking status, no. (%), n=444				0.482
Smoker	126 (28.4)	66 (27.6)	60 (29.3)	
Ex-smoker	110 (24.8)	55 (23.0)	55 (26.8)	
Non-smoker	208 (46.8)	118 (49.4)	90 (43.9)	
Comorbidities, no. (%)				
Diabetes mellitus	303 (45.8)	185 (52.9)	118 (37.8)	<b>&lt;0.001</b>
Hypertension	436 (65.9)	247 (70.6)	189 (60.6)	<b>0.007</b>
Hyperlipidaemia	338 (51.1)	205 (58.6)	133 (42.6)	<b>&lt;0.001</b>
Ischaemic heart disease	163 (24.6)	114 (32.6)	49 (15.7)	<b>&lt;0.001</b>
Heart failure	64 (9.7)	41 (11.7)	23 (7.4)	0.059
Atrial fibrillation	65 (9.8)	31 (8.9)	34 (10.9)	0.379
Other arrhythmias	11 (1.7)	7 (2.0)	4 (1.3)	0.553
Valvular heart disease	16 (2.4)	10 (2.9)	6 (1.9)	0.435
Cerebrovascular accident	98 (14.8)	56 (16.0)	42 (13.5)	0.359

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Peripheral vascular disease	55 (8.3)	38 (10.9)	17 (5.5)	<b>0.012</b>
Chronic lung disease	137 (20.7)	60 (17.1)	77 (24.7)	<b>0.017</b>
Chronic kidney disease	133 (20.1)	83 (23.7)	50 (16.0)	<b>0.014</b>
Chronic liver disease	50 (7.6)	20 (5.7)	30 (9.6)	0.058
Cancer	83 (12.5)	38 (10.9)	45 (14.4)	0.167
Dementia	24 (3.6)	16 (4.6)	8 (2.6)	0.168
Charlson Comorbidity Index, median (IQR)	2 (1–4)	2 (1–4)	2 (1–4)	<b>0.030</b>
BMI, no. (%)				<b>0.008</b>
Underweight (<18.5kg/m <sup>2</sup> )	94 (14.2)	35 (10.0)	59 (18.9)	
Normal (18.5–22.9kg/m <sup>2</sup> )	305 (46.1)	174 (49.7)	131 (42.0)	
Overweight (23.0–27.4kg/m <sup>2</sup> )	159 (24.0)	83 (23.7)	76 (24.4)	
Obese (≥27.5kg/m <sup>2</sup> )	104 (15.7)	58 (16.6)	46 (14.7)	
Premorbid ADL, no. (%), n=661				<b>0.037</b>
Independent	566 (85.6)	305 (87.1)	261 (83.9)	
Assisted	83 (12.6)	43 (12.3)	40 (12.9)	
Dependent	12 (1.8)	2 (0.6)	10 (3.2)	
Premorbid ambulatory status, no. (%), n=661				<b>0.036</b>
Independent	471 (71.3)	244 (69.6)	227 (73.0)	
Using walking aid/assisted	144 (21.8)	84 (24.0)	60 (19.3)	
Chairbound	37 (5.6)	21 (6.0)	16 (5.1)	
Bedbound	9 (1.4)	1 (0.3)	8 (2.6)	
APACHE II score, mean (SD)	29.4 (7.2)	30.2 (6.8)	28.5 (7.5)	<b>0.003</b>
SOFA score, mean (SD)	8.3 (3.6)	8.6 (3.5)	7.9 (3.6)	<b>0.028</b>
Laboratory investigation at point of ICU admission				
WBC >12x10 <sup>9</sup> /L or <4 x10 <sup>9</sup> /L, no. (%)	435 (65.7)	231 (66.0)	204 (65.4)	0.868
Thrombocytopenia (platelets <150 x10 <sup>9</sup> /L), no. (%)	157 (23.7)	80 (22.9)	77 (24.7)	0.582
Anaemia Hb <8g/dL, no. (%)	59 (8.9)	37 (10.6)	22 (7.1)	0.113
CRP (mg/L), median (IQR), n=637	102.7 (34.8–204.4)	101.4 (32.7– 213.6)	103.2 (38.4–192.5)	0.856
CRP categorical, no. (%)				0.829
CRP <10mg/L	59 (9.3)	34 (9.9)	25 (8.5)	
CRP 10–100mg/L	254 (39.9)	136 (39.7)	118 (40.1)	
CRP >100mg/L	324 (50.9)	173 (50.4)	151 (51.4)	
Procalcitonin (ng/mL), median (IQR), n=642	2.6 (0.5–14.0)	3.8 (0.7–19.2)	1.5 (0.4–10.6)	<b>&lt;0.001</b>
Procalcitonin ≥0.5ng/mL, no. (%), n=642	483 (75.2)	275 (79.9)	208 (69.8)	<b>0.003</b>
Lactate (mmol/L), median (IQR), n=506	2.6 (1.5–5.3)	2.7 (1.6–5.5)	2.4 (1.4–4.9)	0.100
Lactate ≥2mmol/L, no. (%), n=506	310 (61.3)	181 (63.7)	129 (58.1)	0.197

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Trop I (ng/mL), median (IQR), n=589	0.6 (0.2–2.6)	2.1 (0.6–5.5)	0.2 (0.1–0.5)	<0.001
BNP (pg/mL), median (IQR), n=312	761 (270–1896)	1206 (561–2683)	351 (168–900)	<0.001
Creatinine (µmol/L), median (IQR)	156 (94–308)	176 (106–359)	133 (84–262)	<0.001
Baseline medications, no. (%)				
Anti-platelet	218 (32.9)	147 (42.0)	71 (22.8)	<0.001
Anti-coagulation	30 (4.5)	13 (3.7)	17 (5.5)	0.284
Beta blocker	227 (34.3)	148 (42.3)	79 (25.3)	<0.001
Diuretic	142 (21.5)	88 (25.1)	54 (17.3)	0.014
Statin	330 (49.9)	197 (56.3)	133 (42.6)	<0.001
ACEi/ARB	224 (33.8)	136 (38.9)	88 (28.2)	<0.001
Anti-arrhythmic	21 (3.2)	12 (3.4)	9 (2.9)	0.690
Source of infection, no. (%)				
Community-acquired pneumonia	381 (57.6)	202 (57.7)	179 (57.4)	0.929
Hospital-acquired pneumonia	140 (21.2)	73 (20.9)	67 (21.5)	0.846
Ventilator-associated pneumonia	64 (9.7)	43 (12.3)	21 (6.7)	0.016
Urinary tract infection	50 (7.6)	31 (8.9)	19 (6.1)	0.179
Catheter-associated urinary tract infection	24 (3.6)	14 (4.0)	10 (3.2)	0.585
Intra-abdominal infection	74 (11.2)	34 (9.7)	40 (12.8)	0.205
Skin and soft tissue infection	18 (2.7)	11 (3.1)	7 (2.2)	0.478
Bone and joint infection	5 (0.8)	5 (1.4)	0	0.064
Infective endocarditis	3 (0.5)	3 (0.9)	0	0.251
Primary bacteraemia	4 (0.6)	1 (0.3)	3 (1.0)	0.348
Central nervous system infection	8 (1.2)	3 (0.9)	5 (1.6)	0.485
Line infection	36 (5.4)	21 (6.0)	15 (4.8)	0.499
Others	21 (3.2)	10 (2.9)	11 (3.5)	0.624
ICU treatment, no. (%)				
Ventilatory support				0.171
Mechanical ventilation (with/without NIV)	621 (93.8)	334 (95.4)	287 (92.0)	
NIV only	11 (1.7)	5 (1.4)	6 (1.9)	
No ventilatory support	30 (4.5)	11 (3.1)	19 (6.1)	
Vasopressor/Inotropic support	478 (72.2)	272 (77.7)	206 (66.0)	0.001
Renal replacement therapy	185 (28.0)	124 (35.4)	61 (19.6)	<0.001
Packed cell transfusion	231 (34.9)	142 (40.6)	89 (28.5)	0.001
Cardioversion	38 (5.7)	26 (7.4)	12 (3.9)	0.048

ACEi: angiotensin-converting enzyme inhibitor; ADL: activities of daily living; APACHE II: Acute Physiology and Chronic Health Evaluation II; ARB: angiotensin receptor blocker; BMI: body mass index; BNP: brain natriuretic peptide; CRP: C-reactive protein; CVE: cardiovascular event; Hb: haemoglobin; ICU: intensive care unit; IQR: interquartile range; NIV: non-invasive ventilation; SD: standard deviation; SOFA: Sequential Organ Failure Assessment; Trop I: troponin I; WBC: white blood cell