

INDICATION

Estimates risk of mortality within ITU.

ADDITIONAL INFORMATION

The following defines “chronic organ insufficiency” and immunocompromise:

- Liver insufficiency
 - Biopsy proven cirrhosis
 - Documented portal hypertension
 - Episodes of past upper GI bleeding attributed to portal hypertension
 - Prior hepatic episodes
- Cardiovascular
 - New York Heart Association Class IV Heart Failure
- Respiratory
 - Chronic restrictive or vascular disease resulting in severe exercise restriction
 - Documented chronic hypoxia, hypercapnia, secondary severe pulmonary hypertension (>40 mmHg), or respirator dependency
- Renal
 - Receiving chronic dialysis
- Immunosuppression
 - Disease that suppresses resistance to infection:
 - Leukaemia
 - Lymphoma
 - AIDS
 - Therapy that suppresses resistance to infection:
 - Immuno-suppression (e.g. DMARDS)
 - Chemotherapy
 - Radiation
 - Recent high dose steroids

INTERPRETATION

APACHE II SCORE	APPROX. IN-HOSPITAL MORTALITY RATE	
	NON-OPERATIVE	OPERATIVE

0-4	4%	1%
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5-9	8%	3%
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10-14	15%	7%
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15-19	25%	12%
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20-24	40%	30%
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25-29	55%	35%
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30-34	73%	73%
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>34	85%	85%
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CALCULATION

Total score = sum of scores for each question

QUESTION	POINTS
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Age

≤44	0
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45-54	2
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55-64	3
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65-74	5
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>74	6
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History of severe organ insufficiency or immunocompromised

Yes, and non-operative or emergency post-operative patient	5
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Yes and elective post-operative patient	2
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No	0
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Rectal temperature °C

≥41	4
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39 to <41	3
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38.5 to <39	1
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36 to <38.5	0
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34 to <36	1
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32 to <34	2
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30 to <32	3
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<30	4
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Mean arterial pressure (mmHg)

>159	4
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>129-159	3
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>109-129	2
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>69-109	0
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>49-69	2
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≤49	4
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Heart rate (bpm)

≥180	4
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140 to <180	3
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110 to <140	2
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70 to <110	0
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55 to <70	2
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40 to <55	3
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<40	4
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Respiratory rate (min)

≥50	4
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35 to <50	3
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25 to <35	1
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12 to <25	0
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10 to <12	1
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6 to <10	2
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<6	4
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Oxygenation (use PaO2 if FiO2 <50%, otherwise use A-a gradient)

A-a gradient >499	4
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A-a gradient 350-499	3
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A-a gradient 200-349	2
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A-a gradient <200 (if FiO2 over 49%) or pO2 >70 (if FiO2 less than 50%)	0
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PaO2 = 61-70	1
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PaO2 = 55-60	3
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PaO2 <55	4
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Arterial PH

≥7.70	4
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7.6 to <7.70	3
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7.50 to <7.60	1
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7.33 to <7.50	0
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7.25 to <7.33	2
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7.15 to <7.25	3
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<7.15	4
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Serum sodium mmol/L

≥180	4
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160 to <180	3
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155 to <160	2
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150 to <155	1
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130 to <150	0
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150 to <130	2
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111 to <120	3
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<111	4
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Serum potassium mmol/L

≥7.0	4
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6.0 to <7.0	3
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5.5 to <6.0	2
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3.5 to <5.5	0
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3.0 to <3.5	1
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2.5 to <3.0	2
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<2.5	4
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Serum creatinine mg/dL

≥3.5 and ACUTE renal failure	8
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2.0 to <3.5 and ACUTE renal failure	6
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≥3.5 and CHRONIC renal failure	4
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1.5 to <2.0 and ACUTE renal failure	4
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2.0 to <3.5 and CHRONIC renal failure	3
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1.5 to <2.0 and CHRONIC renal failure	2
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0.6 to <1.5	0
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<0.6	2
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Haematocrit %

≥60	4
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50 to <60	2
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46 to <50	1
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30 to <46	0
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20 to <30	2
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<20	4
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White blood cell count x10⁹/L

≥40	4
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20 to <40	2
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15 to <20	1
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3 to <15	0
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1 to <3	2
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<1	4
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Glasgow Coma Scale

15 - GCS