## SCAI Stages of Cardiogenic Shock

**SCAI Shock Stage**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Physical Exam</th>
<th>Biochemical Markers</th>
<th>Hemodynamics</th>
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</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>Normal JVP, Lung sounds clear, Strong distal pulses, Normal mentation</td>
<td>Normal renal function, Normal lactate acid</td>
<td>Normotensive (SBP≥100 or normal for pt.) If hemodynamics done: &lt;ul&gt;&lt;li&gt;Cardiac index ≥2.5&lt;/li&gt;&lt;li&gt;CVP &lt;10&lt;/li&gt;&lt;li&gt;PA Sat &gt;65%&lt;/li&gt;&lt;/ul&gt;</td>
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<tr>
<td><strong>B</strong></td>
<td>Elevated JVP, Rales in lung fields, Strong distal pulses, Normal mentation</td>
<td>Normal lactate, Minimal renal function impairment, Elevated BNP</td>
<td>SBP &lt;90 OR MAP &lt;60 OR &gt;30mmHg drop Pulse &gt;100 If hemodynamics done: &lt;ul&gt;&lt;li&gt;Cardiac Index ≥2.2&lt;/li&gt;&lt;li&gt;PA Sat &gt;65%&lt;/li&gt;&lt;/ul&gt;</td>
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<tr>
<td><strong>C</strong></td>
<td>Ashen, mottled, dusky, Volume overload, Extensive Rales, Killip class 3 or 4, BiPap or mechanical ventilation, Acute alteration in mental status</td>
<td>Lactate ≥2, Creatinine doubling OR &gt;50% drop in GFR, Increased LFTs, Elevated BNP, Urine Output &lt;30mL/h</td>
<td>Drugs/device used to maintain BP above stage B values. &lt;ul&gt;&lt;li&gt;Cardiac Index &lt;2.2&lt;/li&gt;&lt;li&gt;POWP &gt;15&lt;/li&gt;&lt;li&gt;RAP/POWP ≥0.8&lt;/li&gt;&lt;li&gt;PAI &lt;1.95&lt;/li&gt;&lt;li&gt;Cardiac Power Output &lt;0.6&lt;/li&gt;&lt;/ul&gt;</td>
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<tr>
<td><strong>D</strong></td>
<td>Any of stage C</td>
<td>Any of stage C AND deteriorating</td>
<td>Any of stage C AND Requiring multiple pressors OR addition of mechanical circulatory support devices to maintain perfusion</td>
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<tr>
<td><strong>E</strong></td>
<td>Near pulselessness, Cardiac collapse, Mechanical ventilation, Defibrillator used</td>
<td>Lactate ≥5 pH &lt; 7.2</td>
<td>No SBP without resuscitation PEA or Refractory VT/VF Hypotension despite maximal support</td>
</tr>
</tbody>
</table>

**SCAI** Society for Cardiovascular Angiography & Interventions

Adapted from the SCAI Clinical Expert Consensus Statement on the Classification of Cardiogenic Shock Endorsed by ACC, AHA, SCCM, and STS

**Extremis**
A patient being supported by multiple interventions who may be experiencing cardiac arrest with ongoing CPR and/or ECMO.

**Deteriorating**
A patient who fails to respond to initial interventions. Similar to stage C and getting worse.

**Classic**
A patient presenting with hypoperfusion requiring intervention beyond volume resuscitation (inotrope, pressor, or mechanical support including ECMO). These patients typically present with relative hypotension.

**Beginning**
A patient who has clinical evidence of relative hypotension or tachycardia without hypoperfusion.

**At Risk**
A patient with risk factors for cardiogenic shock who is not currently experiencing signs or symptoms. For example, large acute myocardial infarction, prior infarction, acute and/or acute on chronic heart failure.

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