SCAI Stages of Cardiogenic Shock

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.

**SCAI SHOCK STAGE** | **PHYSICAL EXAM** | **BIOCHEMICAL MARKERS** | **HEMODYNAMICS**
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A | Normal JVP
Lung sounds clear
Strong distal pulses
Normal mentation | Normal renal function
Normal lactic acid | Normotensive (SBP>100 or normal for pt.) If hemodynamics done: • Cardiac index ≥2.5 • CVP <10 • PA Sat ≥65%

B | Elevated JVP
Rales in lung fields
Strong distal pulses
Normal mentation | Normal lactate
Minimal renal function impairment
Elevated BNP | SBP <90 OR MAP <60 OR >30mmHg drop Pulse >100
If hemodynamics done: • Cardiac Index ≥2.2 • PA Sat ≥65%

C | Ashen, mottled, dusky
Volume overload
Extensive Rales
Killip class 3 or 4
BiPap or mechanical ventilation
Acute alteration in mental status | Lactate ≥2
Creatinine doubling OR >50% drop in GFR
Increased LFT’s
Elevated BNP
Urine Output <30mL/h | Drugs/device used to maintain BP above stage B values. • Cardiac Index <2.2 • PVOP >15 • RAP/POWP >0.8 • PAPI <1.95

D | Any of stage C | Any of stage C AND deteriorating | Any of stage C AND
Requiring multiple pressors OR addition of mechanical circulatory support devices to maintain perfusion

E | Near pulselessness
Cardiac collapse
Mechanical ventilation
Defibrillator used | Lactate ≥5
pH ≤ 7.2 | No SBP without reanimation
PEA or Refractory VT/VF
Hypotension despite maximal support

References:

For more information, please visit: www.scai.org/shockdefinition

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