

**This study clinically defined hemodynamic instability as having two or more of the following:**

- Persistent tachycardia (heart rate > 100/min)
- Arterial hypotension (mean arterial pressure < 60 mmHg)
- Need for catecholaminergic support
- Norepinephrine in combination with epinephrine
  - and/or dobutamine;
  - and/or enoximone;
- Lactate acidosis (pH < 7.2);
  - and/or negative base excess (BE < -2 mmol/l)
- Declining diuresis (< 0.5 ml/kg/h)
  - and/or suspicion of pericardial tamponade.

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# Hemodynamic instability and echocardiography-based management algorithm

