Volume Responsive Algorithm © WT McGee MD 2005

Volume Responsive SVV>13%

YES
- Volume Challenge
  - SVI Normal (40-50)
  - SVI Low (<40)
  - SVI High (>50)

NO
- Pressor
- Inotrope
- Diuretic

SVmean

SVmax

SVmin

%SVV = \frac{SV_{max} - SV_{min}}{SV_{mean}}

SQUARE WAVE TEST (for assessing dynamic performance):
1-Pull and release snap-tab, 2-Observe square wave on monitor, 3-Count oscillations

Optimally Damped 1.5-2 oscillations before returning to baseline.

Underdamped >2 oscillations: SBP overestimated & DBP may be low or normal. Results - false widening of pulse pressure and overestimation of CO. See product insert for potential causes.

Overdamped <1 oscillation: SBP falsely low & DBP may be high or normal. Results - false narrowing of pulse pressure and underestimation of CO. See product insert for potential causes.

FloTrac System

Stroke Volume Variation
A sensitive indicator of preload responsiveness (on control ventilated patients)
1. **Cardiac Output**
   Blood pumped from heart in liters/min.

2. **Central Venous Oxygen Saturation***
   Assessment of balance between DO₂ and VO₂. Lower values indicate increased oxygen extraction or decreased delivery. Higher levels are seen with impaired oxygen utilization and extraction.

3. **Stroke Volume**
   Blood ejected from left ventricle per beat. Low value indicates poor ventricular performance.

4. **Stroke Volume Variation**
   (For use on control ventilated patients). Variation in arterial pulsations caused by volume changes during positive pressure inspiration. >15% may indicate hypovolemia.

5. **Systemic Vascular Resistance†**
   Clinical indicator of afterload.

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### Vigileo Monitor Hemodynamic Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Normal Range</th>
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<tbody>
<tr>
<td>CO (Cardiac Output)</td>
<td>4.0 - 8.0 L/min</td>
</tr>
<tr>
<td>CI (Cardiac Index)</td>
<td>2.5 - 4.0 L/min/m²</td>
</tr>
<tr>
<td>SV (Stroke Volume)</td>
<td>60 - 100 mL/beat</td>
</tr>
<tr>
<td>SVI (Stroke Volume Index)</td>
<td>33 - 47 mL/beat/m²</td>
</tr>
<tr>
<td>SVR (Systemic Vascular Resistance)</td>
<td>800 - 1200 dynes - sec/cm²</td>
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<tr>
<td>SVRI (Systemic Vascular Resistance Index)</td>
<td>1970-2390 dynes - sec/cm²/m²</td>
</tr>
<tr>
<td>ScvO₂ (Stroke Volume Variation)</td>
<td>&lt;15%</td>
</tr>
<tr>
<td></td>
<td>≥70%</td>
</tr>
</tbody>
</table>

*Available when used with the PreSep catheter
†Available when interfaced with CVP from appropriate bedside monitor

Rx only. See instructions for use for full prescribing information.

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