Focus Assessed Transthoracic Echo (FATE)  

1. Look for obvious pathology
2. Assess wall thickness + chamber dimensions
3. Assess biventricular function
4. Image pleura on both sides
5. Relate the information to the clinical context
6. Apply additional ultrasound

**Dimensions and contractility:**

\[
FS = \frac{(LVd - LVsd)}{LVd} \\
EF \sim 2 \times FS
\]

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**Right ventricle**

- Systole: 
- Preload: 
- Afterload: 
- Contractility: Heart rate

**Left ventricle**

- Systole: 
- Diastole: 
- Preload: 
- Compliance: 
- Afterload: 
- Relaxation: 
- Contractility: Heart rate

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The global function of the heart is determined by the interaction between:

Start of QRS (LVd)

Max. post wall contract (LVsd)

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**Important pathology**

1 □
2 △
3 ○
4 □
5 △
6 ○
7 □
8 △
9 ○
10 ○
11 ■
12 ■

**PATHOLOGY TO BE CONSIDERED IN PARTICULAR:**

- □ Post DP cardiac surgery, following cardiac catheterisation, trauma, renal failure, infection.
- △ Pulmonary embolism, RV infarction, pulmonary hypertension, volume overload.
- ○ Ischemic heart disease, dilated cardiomyopathy, sepsis, volume overload, aortic insufficiency.
- ■ Aortic stenosis, arterial hypertension, LV outflow tract obstruction, hypertrophic cardiomyopathy, myocardial deposit diseases.

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Hemodynamic instability: Perform a systematic evaluation of these determinants plus concomitant pathology (e.g. pericardial effusion, pulmonary embolism, pleural effusion, pneumothorax, valvulopathy, dissection, defects).
Focus Assessed Transthoracic Echo (FATE)
Scanning through position 1-4 in the most favourable sequence

**Basic FATE views**

**Pos 1:** Subcostal 4-chamber
- Point right (patient's left)
- Point right (patient's left back)

**Pos 2:** Apical 4-chamber
- Point left (patient's right shoulder)
- Point right (patient's left shoulder)

**Pos 3:** Parasternal long axis
- Point cranial

**Pos 4:** Pleural scanning
- Liver/spleen
- Diaphragm
- Lung

**Systolic Ventricular Function**

<table>
<thead>
<tr>
<th>Ventricle</th>
<th>M-Mode</th>
<th>Normal (cm/s)</th>
<th>Mild (cm/s)</th>
<th>Moderately</th>
<th>SeVERELY</th>
</tr>
</thead>
<tbody>
<tr>
<td>LV</td>
<td>Pos 3, PS long</td>
<td>≥ 55</td>
<td>45 - 54</td>
<td>30 - 44</td>
<td>&lt; 30</td>
</tr>
<tr>
<td>LV</td>
<td>Pos 3, PS long</td>
<td>≥ 25</td>
<td>20 - 24</td>
<td>15 - 19</td>
<td>&lt; 15</td>
</tr>
<tr>
<td>LV</td>
<td>Pos 3, PS long</td>
<td>&lt; 10</td>
<td>7 - 12</td>
<td>13 - 24</td>
<td>&gt; 24</td>
</tr>
<tr>
<td>LV</td>
<td>Pos 2, AP 4ch</td>
<td>≥ 11</td>
<td>9 - 10</td>
<td>6 - 8</td>
<td>&lt; 6</td>
</tr>
<tr>
<td>RV</td>
<td>Pos 2, AP 4ch</td>
<td>≥ 16 - 20</td>
<td>11 - 15</td>
<td>6 - 10</td>
<td>&lt; 6</td>
</tr>
</tbody>
</table>

Right and left ventricle: Eye Balling use all views

For additional information: www.usabc3.org

GE Healthcare