**ABG TIC-TAC-TOE**

### Values

<table>
<thead>
<tr>
<th>Acidotic</th>
<th>Normal</th>
<th>Alkalotic</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>&lt; 7.35</td>
<td>7.35 - 7.45</td>
</tr>
<tr>
<td>(PaCO_2)</td>
<td>&gt; 45</td>
<td>35 - 45</td>
</tr>
<tr>
<td>(HCO_3^-)</td>
<td>&lt; 22</td>
<td>22 - 26</td>
</tr>
</tbody>
</table>

### Grid

<table>
<thead>
<tr>
<th>Acid</th>
<th>Normal</th>
<th>Base</th>
</tr>
</thead>
</table>

### Compensations

- **Uncompensated**: abnormal pH, other value is normal
- **Partially Compensated**: abnormal pH, other value is opposite
- **Fully Compensated**: normal pH

If all 3 values are in different columns, look at pH.

- If acidotic, look at value in acid column to determine if respiratory or metabolic issue (vice versa for alkalotic).

### Instructions

1. Set up Tic-Tac-Toe grid
2. Put the ABG under the correct column based on the value
3. Look at the column that has 2 values under it. Determine if it is a respiratory or metabolic issue.
4. Then determine if it is acidotic or alkalotic.
5. Determine if patient is compensating

**Example:**

- pH: 7.53, \(PaCO_2\): 23, \(HCO_3^-\): 19
- **Answer**: Respiratory alkalosis, partially compensated