Example of a separate control (parallel) study

Amiodarone versus Control Trial

<table>
<thead>
<tr>
<th>Amiodarone (n)</th>
<th>Control (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amiodarone comparison</td>
<td></td>
</tr>
</tbody>
</table>

\[ \alpha_{\text{Amiodarone}} \]
\[ \beta_{\text{Amiodarone}} \]

Defibrillator versus Control Trial

<table>
<thead>
<tr>
<th>Defibrillator (n)</th>
<th>Control (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defibrillator comparison</td>
<td></td>
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\[ \alpha_{\text{Defibrillator}} \]
\[ \beta_{\text{Defibrillator}} \]

Study-wide \( \alpha \)
Study-wide \( \beta \)

For comparisons within each individual trial, typically:

\[ \alpha_{\text{Amiodarone}} = \alpha_{\text{Defibrillator}} = 0.05 \]
\[ \beta_{\text{Amiodarone}} = \beta_{\text{Defibrillator}} = 0.1 \]

Calculating study-wide error for the complete study (both trials):

study-wide \( \alpha = 1 - (1 - \alpha_{\text{Amiodarone}})(1 - \alpha_{\text{Defibrillator}}) = 0.0975 \)

study-wide \( \beta = \beta_{\text{Amiodarone}} \cdot \beta_{\text{Defibrillator}} = 0.01 \)