

## Implied $\alpha$ for Overall Synthesis Methodology

Description: evidentiary standard met in at least one of Dockstader et al. or Liggett et al. with  $p < 0.05$  and significance in Beta-blocker Effect On Remodeling and Gene Expression (BORG) data

Within Studies, the implied type-1 error rate given the study-specific evidentiary standard:  
Dockstader  $\alpha \approx 0.003594$ , Liggett  $\alpha \approx 0.000509$

The subsequent application of  $p < 0.05$  with concordant directionality in BORG yields:

$$0.05 \cdot \left( \frac{P(\text{Dockstader}) + P(\text{Liggett}) - 2 \cdot P(\text{Dockstader} \cdot \text{Liggett})}{2} + \frac{P(\text{Dockstader} \cdot \text{Liggett})}{4} \right)$$

$$\therefore \alpha_{\text{Overall}} \approx 0.0001025$$