

## Optimal Information Size (OIS)

Alpha  $\alpha$  error = 0.05;

Beta  $\beta$  error = 0.2;

N=size per group;

$z_{\alpha}$  = the z-score/standard normal deviate for a two-sided  $\alpha$ ;

$\delta$  = a clinically acceptable margin;

$S^2$  = Polled standard deviation of both comparison groups;

$$N = 2 \times \left( \frac{z_{1-\frac{\alpha}{2}} + Z_{1-\beta}}{\delta} \right)^2 \times S^2$$

$N = 2 \times (1.96 + 0.842/4.9)^2 \times 24.0^2 = 377$  per group.

Total =  $2 \times 377 = \underline{\underline{754}}$