# How do we Calculate Sample Size?

Based on a formula in book “Oxford hand book of medical statistics”

We used a power of 99%, two tails test and 95% confidence level with 1:1 allocation ratio. Each treatment arm requires thirty-four patients , K =18.4[1,2].





P1=0.92. Federico et al. Found that the eradication rate based on ITT was 0.92 % in modified concomitant levofloxacin-containing therapy.[3]

 P2=0.5 We used tinidazole instead of metronidazole in the doxycycline-bismuth regimen for the first time, so we assumed that the eradication rate was 0.5 which give us the largest sample size. [4,5]

$$n=k×\frac{0.92×(1-0.92)+0.5×(1-0.5)}{(0.92-0.5)^{2}}$$

$$n=k×\frac{0.92×0.08+0.5×0.5}{(0.92-0.5)^{2}}$$

$$n=k×\frac{0.0736+0.25}{0.1764}$$

$$n=k×\frac{0.3236}{0.1764}$$

$$n=K×1.8344671201$$

$$33.7531=18.4×1.8344671201$$

We added five patients to each group to compensate for the predicted dropout. [6,7]

The final sample size is 39 patients in each group

Refrence:

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