

**Inverse sampling and triangular sequential designs to compare a small proportion with a reference value**

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Inverse sampling and formal sequential designs may prove useful in reducing the sample size in studies where a small population proportion  $p$  is compared with a hypothesized reference proportion  $p_0$ . These methods are applied to the design of a cytogenetic study about chromosomal abnormalities in men with a daughter affected by Turner's syndrome. First it is shown how the calculated sample size for a classical design depends on the parameterization used. Later this sample size is compared with the required sample size in an inverse sampling design and a triangular sequential design using four different parameterizations (absolute differences, log-odds ratio, angular transform and Sprott's transform). The expected savings in sample size, when the alternative hypothesis is true, are 20% of the fixed sample size for the inverse sampling design and 40% for the triangular sequential design.

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