

Two-Stage Multi-Factor Adaptive Clinical Trials

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Abstract: Efficacious and effective interventions usually involve multiple factors. And it is fantasy to have pilot information about the main effects and their interactions for all factors at the time of initial study design. Hence it will be beneficial for such studies to adopt adaptive designs that use continuously updated data to modify certain aspects of trial characteristics without undermining its validity. There has been increasing interest in adaptive trial designs that appropriately use accrued data over time to modify key trial characteristics in order to improve trial efficiency and gain ethical benefits. In this talk we will present some adaptive strategies that explore the specific structure of factorial designs based on two real studies. In addition, we will discuss new statistical design and inference procedures for two-stage multi-factor adaptive clinical trials to identify active factors.