The Chinese University of Hong Kong
Department of Statistics

Seminar

General Optimal Benchmark for Adaptive Dose Finding Clinical Trials

By

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Abstract

Modern dose finding studies are highly specific to individual clinical settings, and require tailored statistical designs. In addition, as outcome-adaptive designs often involve complex algorithms and induce dependent observations, the theoretical properties of these designs are typically not available. Therefore, for reproducibility purposes, it is crucial to have diagnostic tools at the planning stage to evaluate the plausibility of a specific method's simulated performance and the adequacy of the algorithm. In this talk, I will introduce a simple technique that provides an upper limit, or an optimal benchmark, of accuracy for any dose finding methods. I will discuss the applications of this benchmark, including model selection, lower bound of sample size requirement, and power calculation in dose finding studies. The proposed benchmark is nonparametric optimal, and is demonstrated by simulation to be a practical accuracy upper bound for parametric methods as well. Current work includes investigating benchmarks with sharper upper bound.

Date: November 20, 2018 (Tuesday)
Time: 2:30 p.m. - 3:30 p.m.
Venue: Science Centre L2
The Chinese University of Hong Kong

ALL INTERESTED ARE WELCOME !!