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Friday, March 8, 2019

12:00 – 1:00p in Biotech Auditorium

Bias and Efficiency of Model-Based Single-Arm Basket Trial Designs

Abstract: Basket trials are quickly gaining popularity as the design of choice in the development of targeted agents in oncology. In a basket trial of a targeted treatment regimen, all patients expressing the target are enrolled and placed in baskets defined by histology (site of the primary cancer). There are typically two objectives in a single-arm basket trial: (1) Does the regimen work at all? (2) If so, in which baskets? I will present a number of designs in increasing complexity including a simple, parallel design, designs based on Bayesian hierarchical models, Bayesian mixture models, Dirichlet process models and their combinations. I will evaluate each design based on rejection probabilities as well as bias in estimation of treatment effects. This is joint work with Kristen Cunanan of Stanford University, and Alexia Iasonos and Ronglai Shen of Memorial Sloan Kettering Cancer Center.



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