Yale SCHOOL OF PUBLIC HEALTH

Biostatistics

"An Innovative Bayesian Design for Basket Trials with Survival Endpoints"

Hao Liu, PhD,
Professor in the Department of Biostatistics at Indiana University School of Medicine

12:00 noon Eastern Time, Wednesday, January 20,2021
Virtual Seminar via Zoom

Abstract: Master protocol clinical trial designs including basket, umbrella, and platform trials have been hailed as a transforming drug development paradigm. However, many challenges remain including biostatistical trial designs and data analysis methods. In this talk, we present a novel Bayesian design for basket trials with survival endpoint. The proposed trial design is based on a new Bayesian hierarchical model for survival data that accounts for the potential dependence across baskets while allows sequential accrual and monitoring with adaptive efficacy and futility stopping. We perform extensive simulation study to investigate the properties of the proposed design. The results demonstrate that the proposed design performs well under various practical scenarios.

Brief Bio: Dr. Liu, is also the Director of Biostatistics and Data Management Core for the IU Simon Comprehensive Cancer Center. Dr. Liu studied mathematics for his undergraduate degree at Peking University in China and earned his PhD in Biostatistics at the University of Washington in Seattle. He has more than 15 years of experience in collaborative biostatistics research and served on numerous national study sections as well as journal editorial boards. Before moving to Indiana University School of Medicine, he was a faculty biostatistician and Co-Director of Biostatistics at the Dan L. Duncan Comprehensive Cancer Center of Baylor College of Medicine in Houston.