

Joint Seminar

UNIVERSITY OF GEORGIA
DEPARTMENT OF STATISTICS
DEPARTMENT OF EPIDEMIOLOGY AND BIostatISTICS

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Biometrics and Data Management
Boehringer Ingelheim Pharmaceuticals, Inc.

“Empirical Bayesian Methods for Enrollment and Event Projection in Oncology Trials”

In oncology trials with time to event as primary endpoints, the trial duration is mainly driven by the number of events observed to ensure sufficient power to draw confirmatory conclusions. The trial planning determined by clinical staff and the deterministic techniques fails to account for the uncertainties and stochastic fluctuations in the recruitment process and event evolvement. In this project, we incorporate a Poisson-gamma recruitment process into an exponential event prediction model under the empirical Bayesian setting. These processes are estimated using the current trial data information by maximum likelihood method. The projection of enrollment and event is therefore performed from the posterior distributions of model parameters. The statistical properties of our proposed method are evaluated by simulations studies as well as a real data example which demonstrates the accuracy of the projection.

(Joint work with Jingyang Zhang and Wei Zhang)

Thursday, January 12th, 2012

3:30 PM at 306 Statistics Building

Refreshments will be immediately after the talk in
The Cohen Room, room 230, Statistics Building