

BIostatistics SEMINAR

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Random split-times for flexibly modeling non-proportional hazards covariate effects

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3:30pm - 4:30pm

CENTER FOR HEALTH SCIENCES - 33-105A

Refreshments served at 3:00 PM in room 51-254 CHS

ABSTRACT: In this talk we develop and apply flexible Bayesian survival analysis methods to investigate the risk of lymphoma associated with kidney transplantation among patients with end stage renal disease. Of key interest is the potentially time-varying effect of a time-dependent exposure: transplant status. Bayesian modeling of the baseline hazard and the effect of transplant requires consideration of two time scales; time since study start and time since transplantation, respectively. Previous related work has not dealt with the separation of multiple time scales. Using a hierarchical model for the hazard function, both time scales are incorporated via conditionally independent stochastic processes; smoothing of each process is specified via intrinsic conditional Gaussian autoregressions. Features of the corresponding posterior distribution are evaluated from draws obtained via a Metropolis-Hastings-Green algorithm.