UCLA

BIOSTATISTICS SEMINAR

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A Bayesian Joint Model for DAS28 scores and Time-to-Dropout Data

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3:30pm - 4:30pm, CHS 33-105A

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

ABSTRACT: We developed a data-driven Bayesian joint model for the longitudinal evaluation of DAS28 scores and time-to-dropout data. The motivating example is a double-blinded randomized clinical trial evaluating the efficacy and safety of a combined therapy for the treatment of rheumatoid arthritis. We developed a Bayesian hierarchical change-point model for the longitudinal component and a competing-risk survival model for the dropout process. Our model uses a mixture of latent variables proposed in the literature to link the longitudinal and dropout process. We used selection model criterion Deviance Information Criterion(DIC) to determine which latent random variables to use. Separate and joint analyses are provided for the motivating rheumatoid arthritis study (TEMPO).