Abstract

"Pseudo-observations, landmarking and dynamic prediction"

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Landmarking was originally introduced as a way of dealing with the problem of immortal time bias in the context of time-dependent covariates in survival analysis. It has later been proposed as a method of obtaining dynamic predictions for a survival outcome without the need of constructing comprehensive models for the stochastic behaviour of intermediate events or longitudinal measurements in relation with the survival outcome of interest.

The aim of this talk is to show how landmarking can be used in conjunction with another popular method in survival analysis, pseudo-observations, to construct dynamic regression models for non-standard outcomes. Two illustration of the use of "dynamic pseudo-observations" will be given. The first is in a competing risks context, where interest is in estimating the conditional cumulative incidence of a given cause, given covariates. In the other application, interest is in direct regression models for expected residual healthy life in an illness-death multi-state model.