Seminar Advanced Topics in Survival Analysis

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General Information


ECTS: 4

Language: English

Requirements: familiarity with the contents of the course Survival Analysis

Days: one or two talks per week, after some weeks of preparation

Presentations: about one hour

Hand in: report of a few pages length
The road so far

- simple survival models
- competing risks models
- more general multistate models (mainly Markov models)
- continuous-time models
- discrete-time models
- nonparametric models (e.g. Aalen)
- semiparametric models (e.g. Cox)
- parametric models (e.g. AFT, frailty)
- resampling methods (basics)
- ...
Ideas for the seminar talks (potentially combinations):

- martingale theory and its applications in survival analysis
- more on kernel estimation of hazard rates
- more on tests (more samples, more theory)
- two-sample problems, e.g., generalized pairwise comparisons
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- more on frailty models
- more on non-Markov multistate models
- more on resampling (also more theory)
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- (regression) models based on inverse probability of censoring weighting (IPCW)
- pseudo-value regression in survival analysis
- nested case-control designs
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- various estimands, e.g., restricted mean survival times (simple survival), restricted mean time lost (competing risks), relative treatment effect
- causality in survival analysis
References (only some book references)