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Predicting time-to-event outcomes under different intervention strategies: methods and applications

Prosepe, I.

Stellingen behorende bij het proefschrift getiteld

Predicting time-to-event outcomes under different intervention strategies: methods and applications

1. Misalignment between declared prediction estimand and analysis strategy is pervasive in medical literature. (this dissertation)
2. Patients' conditional survival benefit can be estimated at each time a scarce treatment becomes available by combining cross-sections with inverse probability weighting to address multiple time scales and time-dependent confounding. (this dissertation)
3. Clone-censor-reweighting can be used to estimate outcomes in the presence of a limited number of intervention strategies. However, when there are (too) many intervention strategies different approaches are needed. (this dissertation)
4. In rapidly evolving care settings, standard model updating is insufficient; interventional updating may improve prediction. (this dissertation)
5. Causal inference identifiability assumptions should be seen as guideposts indicating where estimates may go wrong.
6. There is no intervention that does not have multiple versions.
7. Trading the positivity assumption for correct model specification is often necessary, but the consequences of this trade-off are often insufficiently examined.
8. Grace windows aim to align estimands with clinical practice. However, grace windows combined with landmarking may do the opposite.
9. As humans, we tend to make decisions in our lives based on observational data with very low sample size.
10. Fudging estimands provides a straightforward means of misleading the public.