ACMS Statistics Seminar

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154 Hurley Hall
3:30– 4:30 PM

Individualized Treatment Recommendation (ITR) for Survival Outcomes

ITR is a method to recommend treatment based on individual patient characteristics to maximize clinical benefit. During the past a few years, we have developed and published methods on this topic with various applications including comprehensive search algorithms, tree methods, benefit risk algorithm, multiple treatment & multiple ordinal treatment algorithms. In this talk, we propose a new ITR method to handle survival outcomes for multiple treatments. This new model enjoy the following practical and theoretical features.

- Instead of fitting the data, our method directly search the optimal treatment police which improve the efficiency.
- To adjust censoring, we propose a doubly robust estimator. Our method only requires either censoring model or survival model is correct, but not both. When both are correct, our method enjoys better efficiency.
- Our method handles multiple treatments with intuitive geometry explanations.
- Our method is Fisher's consistent even under either censoring model or survival model misspecification (but not both).