

Learning Optimal Treatment Regimes Using Electronic Health Records for T2D Patients

Donglin Zeng

*University of North Carolina
E-mail: dzeng@email.unc.edu*

Abstract: We consider using a large scale EHR data from T2D patients to learn optimal treatments among multiple treatment options such as metformin, insulin or their combinations. We first use an integrated model for sparsely measured biomarkers to uncover different subgroups that represent patient's heterogeneity in disease progression. Within each subgroup, we adopt inverse probability weighting to adjust potential confounders and use match-learning to estimate optimal treatment strategies. Application to the EHRs from T2D patients in one particular healthcare system shows some interesting findings.