Causal inference with uncertain data

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Massive amounts of medical data from electronic health records and body-worn sensors are being mined by researchers, and could be used to guide the decision-making of both doctors and patients. These time series can potentially let us discover factors affecting the recovery of patients in intensive care, or hypoglycemic episodes during daily life. However, patients are highly heterogeneous, the data are noisy, and we lack ground truth for evaluating algorithms. In this talk, I discuss methods and challenges for causal inference and explanation from complex medical data, and open problems for the future.

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