Risk Assessment Using Records of Physician Visits from Cancer Survivors

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Abstract

An on-going cancer program is designated to assess the morbidity and long-term resource needs of young cancer survivors based on a population health insurance database. One of its projects aims at identifying risk factors of the physician visit frequency and the associated cost over time of the study subjects (i.e., young cancer survivors). This talk presents a recent analysis to attain the specific aim. Using information from a general population, we explore finite mixture models for the longitudinal visit counts and medical costs. The modeling allows to stratify the study subjects meaningfully and to identify risk factors associated with both the stratification and the physician visit frequency/cost within a stratum. We consider fully-specified and partially-specified stochastic models, and analyze the physician visit data via likelihood-based methods and extended GEE approaches, respectively.

Keywords: Extended GEE; Longitudinal counts/measures; Medical cost; Mixture model.

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