

Nonparametric Inference in Multistate Models with Interval Censored Data

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Multistate interval censored data are becoming prevalent in various disease monitoring studies.

Often patients progress through a succession of disease stages corresponding to states in a multistate system; however they are not constantly monitored due to practical considerations.

This results in a sequence of inspection times for each individuals. Generally, the intervals containing a transition between states are kept and they along with the state information form a multistate interval censored data. We will present nonparametric estimators of various marginal quantities, such as, state occupation probabilities, state entry and exit time distributions, state waiting time distributions based on such data. We will also present nonparametric tests to determine the effect of a categorical covariate on these quantities.