

Maximum likelihood estimation in a partially observed stratified regression model with censored data

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Abstract The stratified proportional intensity model generalizes Cox’s proportional intensity model by allowing different groups of the population under study to have distinct baseline intensity functions. In this article, we consider the problem of estimation in this model when the variable indicating the stratum is unobserved for some individuals in the studied sample. In this setting, we construct nonparametric maximum likelihood estimators for the parameters of the stratified model and we establish their consistency and asymptotic normality. Consistent estimators for the limiting variances are also obtained.

Keywords Censored data · Maximum likelihood estimation · Missing data · Stratified intensity model