REGRESSION ANALYSIS OF FAILURE TIME DATA WITH INFORMATIVE INTERVAL CENSORING

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Interval censoring arises when a subject misses prescheduled visits at which the failure is to be assessed. Most existing approaches for analyzing interval-censored failure time data assume that the censoring mechanism is independent of the true failure time. However, there are situations where this assumption may not hold. In this talk, we discuss such a situation in which the dependence structure between the censoring variables and the failure time can be modeled through some latent variables and a method for regression analysis of failure time data is proposed. The method makes use of the proportional hazards frailty model and an EM algorithm is presented for estimation. The finite sample properties of the proposed estimators of regression parameters are examined through simulation studies and we illustrate the method with data from an AIDS study.