

A Bayesian Analysis of Correlated Interval-Censored Data

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In epidemiological studies where subjects are seen periodically on follow-up visits, interval-censored data occur naturally. The exact time the change of state (such as HIV seroconversion) occurs is not known exactly, only that it occurred within some time interval. In multi-stage sampling or partner tracing studies, individuals are grouped into smaller subgroups. Individuals within a subgroup share an unobservable specific frailty which induces correlation within the subgroup. In this paper, we consider a Bayesian model for analysing correlated interval-censored data. Parameters are estimated using the Markov chain Monte Carlo methods, specifically the Gibbs sampler.