

This work is devoted to seeking methods for analysis of survival data with the Aalen model under special circumstances. We supposed, that all regression functions and all covariates of the observed individuals were nonnegative and we named this class of models monotone Aalen models. To find estimators of the unknown regression functions we considered three maximum likelihood based approaches, namely the nonparametric maximum likelihood method, the Bayesian analysis using Beta processes as the priors for the unknown cumulative regression functions and the Bayesian analysis using a correlated prior approach, where the regression functions were supposed to be jump processes with a martingale structure.