

Abstract

We deal with Cox regression models with varying coefficients. In this paper we concentrate on time-varying coefficient models and just give a brief comment on another kind of varying coefficient model. When we have p -dimensional covariates and p increases with the sample size, it is often the case that only a small part of the covariates are relevant. Therefore we consider variable selection and estimation of the coefficient functions by using the group SCAD-type estimator and the adaptive group Lasso estimator. We examine the theoretical properties of the estimators, especially the L_2 convergence rate, the sparsity, and the oracle property. Simulation studies and a real data analysis show the performance of these procedures.