PRACTICAL CONSIDERATION IN
SPLINE PROPORTIONAL HAZARDS MODELLING WITH
TIME-DEPENDENT COVARIATES

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The purpose of this paper is to study the method of survival analysis with time-dependent covariates from practical view points. We modify the method developed by Huang et al. (2000) and apply it to the Hisayama data. The method is compared with the model which utilizes only the baseline covariates. It is also compared with the linear model with time-dependent covariates. It is shown that the spline proportional hazard model with time-dependent covariates provides more adequate relationship to the risk factors and brain infarction than the other models. In particular, it gives better relations of BMI and smoking habits to brain infarction.