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**The proportional hazards regression with a censored covariate. (English summary)**

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This article proposes a method for estimating a proportional hazards regression model when both the response and the covariate are censored. While the proportional hazard regression model with a censored response variable has been extensively investigated, a model in which censoring occurs both in the response variable and the covariate has not been well explored yet. The problem of inference on the regression coefficient in the Cox's proportional hazards regression model with a censored covariate is considered here. The relative risk function depends on the baseline hazard as well as the distribution of the covariate. Since the covariate may not be observed due to censoring, a method is proposed to empirically estimate the relative risk function based on the uncensored covariate data and a partial likelihood function using the estimated relative risk function is derived. This approach enables one to use all possible information contained in the censored covariate data. Asymptotic properties of the proposed estimator are derived, and its efficiency is assessed for exponential failure times using an exponential relative risk function through simulation studies.

Reviewed by *P. Rochus* (Liège)

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