

2021년 제 7회 통계세미나

고려대학교 통계연구소와 BK21 통계학교육연구팀이 다음과 같이 공동으로 세미나를 개최하오니 많은 참여 바랍니다.

일시 : 2021년 6월 4일 (금) 오전 11시

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Smoothed Quantile Regression for Censored Residual Lifetime

<Abstract>

We consider a regression modeling of the quantiles of residual lifetime at a specific time given a set of covariates. For estimation of regression parameters, we propose an induced smoothed version of the existing non-smooth estimating equations approaches. The proposed estimating equations are smooth in regression parameters, so solutions can be readily obtained via standard numerical algorithms. Moreover, smoothness in the proposed estimating equations enables one to obtain a closed form expression of the robust sandwich-type covariance estimator of regression estimators. To handle data under right censoring, inverse probabilities of censoring are incorporated as weights. Consistency and asymptotic normality of the proposed estimator are established. Extensive simulation studies are conducted to verify performances of the proposed estimator under various finite samples settings. We apply the proposed method to dental study data evaluating the longevity of dental restorations.

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