Nonparametric estimators of the survival function with twice censored data

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Abstract Patilea and Rolin (*Ann Stat* 34(2):925–938, 2006) proposed a product-limit estimator of the survival function for twice censored data. In this article, based on a modified self-consistent (MSC) approach, we propose an alternative estimator, the MSC estimator. The asymptotic properties of the MSC estimator are derived. A simulation study is conducted to compare the performance between the two estimators. Simulation results indicate that the MSC estimator outperforms the product-limit estimator and its advantage over the product-limit estimator can be very significant when right censoring is heavy.

Keywords Left-censored · Right-censored · Modified self-consistent