Small-sample studies on right censored data with discrete failure times

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Abstract It has been already noticed that the classical Greenwood formula may not be an unbiased estimator for the variance of the Kaplan–Meier Product Limit estimator (PLE). However, a rigorous proof for such a suggestion has not been available. In this paper, we investigate some small-sample properties of the PLE and show that the Greenwood formula strictly underestimates the variance of the PLE. Besides, some existing estimators for the variance of the PLE are also discussed.