EMPIRICAL LIKELIHOOD FOR THE ADDITIVE RISK MODEL

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Abstract: In this article, we investigate the empirical likelihood method for the additive risk model when the failure times are subject to left-truncation and right-censoring. An empirical likelihood ratio for the p-vector of regression coefficients is defined and it is shown that its limiting distribution is a weighted sum of independent chi-squared distributions with one degree of freedom. This enables one to make empirical likelihood based inference for the regression parameters. Finite sample performance of the proposed methods is illustrated in simulation studies to compare the empirical likelihood method with the normal-approximation-based method.

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