The Lindley-Cox model is considered as an alternative model facilitating analyses of time-to-event data with covariates. Covariate information is incorporated using Cox’s proportional hazard model with the Lindley model as the time dependent component.

Simulation studies are performed to assess the size and power of tests of hypotheses on parameters arising from maximum likelihood estimators of parameters in the Lindley-Cox model. Results are contrasted with those arising from Cox’s partial maximum likelihood estimator. The Lindley-Cox model is used to analyze a publicly available data set and is contrasted with other models.

“Size and Power of Tests of Hypotheses on Survival Parameters from the Lindley Distribution with Covariates” is published in Austin Biometrics and Biostatistics.

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