A Measure of Explained Risk in the Proportional Hazards Model

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Abstract

A measure of explained risk is developed for application with the proportional hazards model. The statistic, which is called explained relative risk, has a simple analytical form and is robust to censoring. An asymptotic confidence interval for the limiting value of the explained relative risk statistic is derived and the role of individual factors in the computation of the statistic is established. Simulations are performed to compare the results of this statistic to other known explained risk measures with censored data. Prostate cancer data are used to demonstrate an analysis incorporating the proposed approach.

Keywords: Censored data; Entropy; Explained risk; Proportional hazards.

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