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Geometric Rate Regression for Summarizing the Occurrence of Events

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Abstract

In this thesis we present geometric rates in survival analysis and two different types of regression models to estimate them: quantile regression and generalized linear models. With the latter we estimated the instantaneous geometric rate and the instantaneous geometric odds models. We used data from a Swedish prospective cohort study among patients at Intensive Care Units to fit an instantaneous geometric odds model to estimate the risk of death within different renal disease groups. From this we observed that the risk of death was at the highest in the beginning of the study. The risk of death is approximately the same for all of the patients with different renal diseases except for the patients with acute-on-chronic kidney disease who had the highest risk of death.

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