<<生存分析>>

图书基本信息

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内容概要

《应用统计学丛书·生存分析：模型与应用（英文版）》旨在系统地介绍生存分析的基本概念、理论设定和方法运用，重点在于通过SAS统计软件对实际数据进行分析，深入浅出地描述生存分析的各类模型。
书中涉及的统计方法包括Kaplan-Meirer估算法、各类参数回归模型、Cox等比发生率模型、多向发生率模型和重复发生率模型、结构性风险率模型以及一些生存分析方面的专题研究方法。

《应用统计学丛书·生存分析：模型与应用（英文版）》着重于各类生存分析模型的实际运用，而不拘泥于模型的纯理论推导，从而使对生存分析有兴趣的科研人员以及大学生、研究生从中受益。

作者简介

刘宪，1991年5月获密歇根大学社会学博士学位，现任美国国防医科大学（Uniformed Services University of the Health Sciences）精神病学系高级研究员、副教授及美国沃尔特里德国家军事医学中心（Walter Reed Army Medical Center）研究员、高级统计师。
在国际顶级刊物发表学术论文数十篇。
截至2012年3月，所发表学术论文在国际各类刊物被引用1000多次。
刘宪博士的主要研究领域为生存分析与死亡率交叉研究、纵向资料分析、创伤事件与精神疾病。

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书籍目录

章节摘录

版权页： 插图： Another popular graphical method for checking the proportional hazards assumption in the Cox model is using the Arjas(1988)plots.Specifically,the Arjas plots are designed to make direct comparisons between observed and estimated event frequencies without adding a time-dependent variable.Therefore,this method is not based on the estimation of alternative models and only involves parameter estimates already derived from the partial likelihood procedure. According to Arjas(1988),the application of the stratified Cox model is subject to two types of defects:(1)an influential covariate may be deleted from the model(this defect has been discussed in Section 5.5 of this book)and(2)the stratified Cox model is based on the assumption of a common baseline hazard for all individuals,so that the individuals are stratified according to the baseline hazard.These two defects can seriously influence the efficiency of the Cox model,thus making it difficult to perform a graphical check correctly on the validity of the proportionality hypothesis.Accordingly,he proposes to test the pro-portionality assumption directly from the proportional hazard model including all(M+1)covariates. Practically,deriving the Arjas plots can be performed by taking the following steps.First,divide n individuals into K strata of the(M+1)th covariate according to the research interest of a particular study or previous findings.If the(M+1)th covariate is a continuous variable,classify the sample respondents into a few categories according to an existing theory or results from a previous empirical analysis.Second,calculate the estimated cumulative hazard rate at each observed survival time for each stratum using the parameter estimates obtained from the Cox model.Third,compute the cumulative number of actual events at each survival time for each stratum.Fourth,plot the estimated cumulative hazard rate at each actual survival time along the y axis against the corresponding observed cumulative number of events on the x axis for each stratum.Eventually,discrepancies between the estimated cumulative hazard rate and the empirical data can display whether the estimated hazard rates of those stata are scattered randomly or systematically too high or too low.

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编辑推荐

《生存分析:模型与应用(英文)》是由刘宪著，高等教育出版社出版的。
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