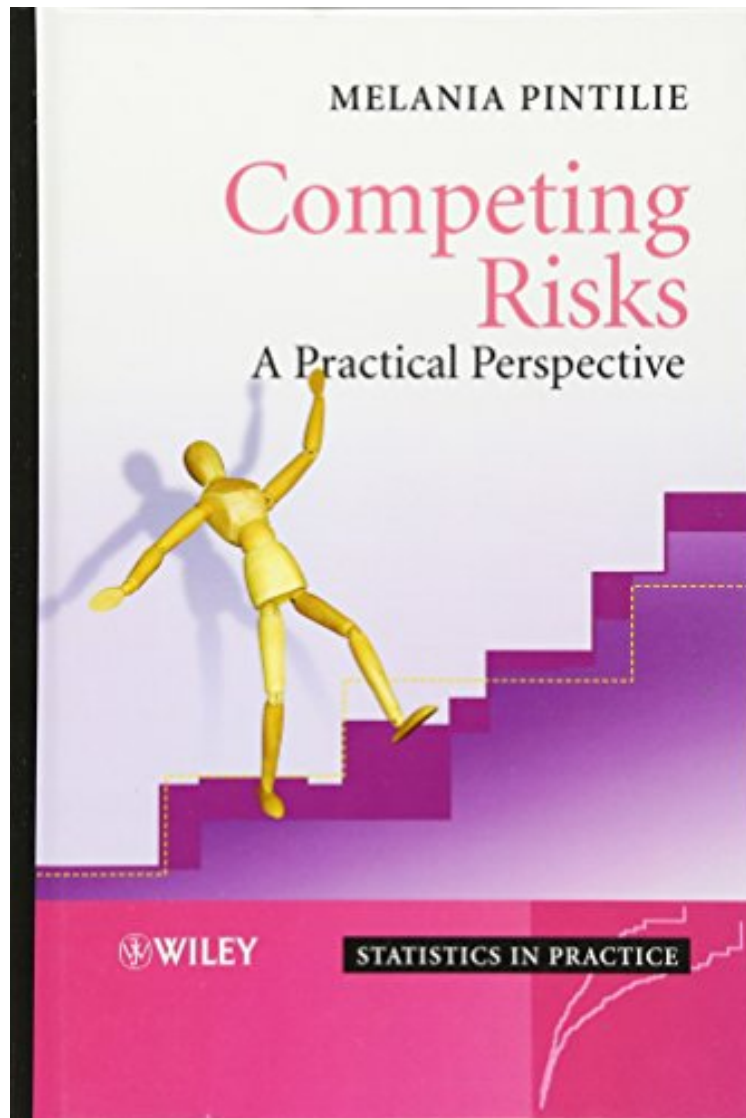


(Ebook pdf) Competing Risks: A Practical Perspective

Competing Risks: A Practical Perspective

Melania Pintilie

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Melania Pintilie : Competing Risks: A Practical Perspective before purchasing it in order to gauge whether or not it would be worth my time, and all praised Competing Risks: A Practical Perspective:

18 of 18 people found the following review helpful. A practical book on an important problem By Brant Inman In the medical world competing risks problems are common. Many times people avoid using competing risks methodology because they are not well understood and not well implemented in software. I have found this book to be a very good introduction to competing risks survival analysis. I particularly liked how sample S-Plus/R code was given at the end of each chapter to demonstrate how to implement the methodologies presented. A major asset is that the author

provides functions for calculating quantities not found in the "cmprsk" library for R. The book is well written with a minimum of mathematical detail, which I appreciated being an MD and not a PhD. I suspect that those people looking for a mathematical development will be disappointed. The last chapter contains some problems that the reader can attempt to solve if he wishes. The nice thing is that these problems all have worked out solutions, a feature that I really appreciated. I did have some critiques of this book, however: A) I think that the author should have spent a bit more time in chapters 2 and 3 developing the concepts of the various survival analysis functions. For instance, in a 4-5 page sequence in chapter 3 the author presents (1) the cumulative incidence function, (2) the overall distribution function, (3) the subsurvivor function, (4) the subdensity function, (5) the subhazard, (6) the overall hazard, (7) the hazard function of the subdistribution, (8) the cumulative subhazard function, (9) the multivariate joint survivor function, (10) the marginal survivor function, (11) the subdistribution function and (12) the hazard of the marginal distribution. This is a common fault that I have found in many survival textbooks and is one major source of reader confusion. How many hazards and distributions can one reader reliably digest in a page of text??? Rather, I would have appreciated a slow presentation of these functions, one at a time, with an example of its calculation using real data and with some intuition as to its meaning and interpretation. Graphs of each would be very useful. This would mean a chapter 3 that is 2-3 times longer but much more useful, especially since understanding these quantities is critical to understanding the rest of the book. B) The book should have dealt with some of the more complicated aspects of the competing risks model. For instance, how does the Fine-Gray model perform with (1) time-dependent covariates, (2) missing data, (3) longitudinal data and repeated measures? There are publications on many of these tough subjects that suggest that the competing risks model may not be interpreted in the same manner as the usual Cox model. C) I think that the book should have provided more contrasts between routine survival analyses and the competing risks versions of these tests. Again, the goal is intuition about the implications, subtleties and complexities of the various ways to look at survival data. Overall, I highly recommend this book to individuals looking to get a good introductory understanding of the competing risks framework and gain some practical knowledge on how to perform these analyses.

The need to understand, interpret and analyse competing risk data is key to many areas of science, particularly medical research. There is a real need for a book that presents an overview of methodology used in the interpretation and analysis of competing risks, with a focus on practical applications to medical problems, and incorporating modern techniques. This book fills that need by presenting the most up-to-date methodology, in a way that can be readily understood, and applied, by the practitioner.

"Competing Risks: A Practical Perspective is a second text in the field that will help statisticians and researchers understand the complexity of the competing-risks problem and to complete the required analysis. I am glad to have it on my shelf. It meets the state goal of the Statistics in Practice series." (Technometrics, August 2008) "Will help statisticians and researchers understand the complexity of the competing-risks problem and to complete the analysis. I am glad to have it on my shelf." (Technometrics, August 2008) "...a concise introduction to the field of competing risks in survival analysis, especially useful for practitioners and researchers in the biostatistics field." (Zentralblatt MATH, 2007) From the Inside Flap The term 'competing risks' refers to the situation when more than one type of failure can occur, and the observation of one type of failure hinders the observation of another. The need to understand, interpret and analyse competing risk data is key to the development of numerous areas of science. There are many research examples in which a specific type of failure is of interest, but practical issues make it extremely difficult to observe the time to the event of interest. Analyzing time to failure data in the presence of competing risks requires special statistical tools. Competing Risks adopts a practical approach, with exercises and detailed examples throughout, using real data from cancer research. Provides a comprehensive overview of the interpretation and analysis of competing risks. Covers the main stages of a statistical analysis: planning and sample size calculation, analysis and interpretation. Compares and contrasts both methods for analysing competing risks: cause specific hazard and hazard of subdistribution. Presents the software available to perform the analysis in R, and includes macros for analysis in SAS. Supplemented by a website featuring data sets, software and further material. Competing Risks provides a practical guide to the area. The book is ideal for statisticians working in medical research, the pharmaceutical industry or public health. It will also prove invaluable for graduate students in applied statistics and biostatistics, as well as researchers in the medical field. The examples are chosen from the medical field, however the methodology can be extended to any other research area where competing risks appear, such as sociology, economics and engineering. From the Back Cover Competing Risks A Practical Perspective. The term 'competing risks' refers to the situation when more than one type of failure can occur, and the observation of one type of failure hinders the observation of another. The need to understand, interpret and analyse competing risk data is key to the development of numerous areas of science. There are many research examples in which a specific type of failure is of interest, but practical issues make it extremely difficult to observe the time to the event of interest. Analyzing time to failure data in the presence of competing risks requires special Statistical tools. Competing Risks adopts a practical approach, with exercises and detailed examples throughout, using real data from cancer research. Provides a comprehensive overview

of the interpretation and analysis of competing risks.