1. Record Nr. UNINA9910554873403321

Autore	Rosenkranz Gerd <1955->
Titolo	Exploratory subgroup analyses in clinical research / / Gerd Rosenkranz
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , 2020
ISBN	1-119-53700-2 1-119-53673-1 1-119-53695-2
Descrizione fisica	1 online resource (247 pages)
Collana	Statistics in practice
Disciplina	519.53
Soggetti	Cluster analysis Clinical Trials as Topic Models, Statistical
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Some history of subgroup analysis -- Objectives and current practice of subgroup analyses -- Pitfalls of subgroup analyses -- Subgroup analysis and modeling -- Hierarchical models in subgroup analysis -- Selection bias in regression -- The predicted individual treatment effect -- Prediction models -- Outlook.
Sommario/riassunto	"A few years ago I started a book by first writing a fairly extensive preface. I never finished that book and resolved that in the future I would write first the book and then the preface. Leo Breiman (1928-2005) -Preface to "Probability" (Breiman, 1968) When I eventually agreed to write a book on subgroup analyses I remembered the first paragraph of the preface that the late (and great) probabilist and statistician Leo Breiman added to his book "Probability," a classic textbook during my study days. I interpreted Leo's words as a warning to all potential authors not to start from the wrong end. Hence I postponed writing this part of the book if not to the very end but to the point when progress looked encouraging. This book is about a topic of intense research driven on one hand by the promises of precision medicine and on the other by the intention of regulating agencies to obtain information about the consistency of findings from clinical trials in drug applications. It can therefore be at best a snapshot of the state

of the art at a given point in time from the author's perspective of the topic. To whom may the book concern? First, its main parts require a solid knowledge of statistical concepts like random variables, bias, variance, confidence intervals, and statistical tests, but also a background in statistical modeling, re-sampling, and model selection. Re-sampling iswell presented in "An Introduction to the Bootstrap" (Efron and Tibshirani, 1993) while "Statistical Learning with Sparsity" (Hastie et al., 2015) covers the modern aspects of modeling and model selection. On the practical side, knowledge about concepts of clinical trials and drug development like efficacy and safety, and randomization and blinding are helpful. "Statistical Issues in Drug Development" (Senn, 2007) covers many of these topics. Notwithstanding what is said above, parts of the book should be readable by a non-statistical audience, mainly the chapters on history and to a lesser extent on pitfalls. Chapters digging a bit deeper into methodology (those coming with a heavier load of equations) should be primarily appreciated by statisticians. With this in mind, clinicians and statisticians from the area of clinical development and regulation should benefit most, although the topic of subgroup analysis has a much wider scope"--