1. Record Nr. UNINA9910155108403321 Autore Mallinckrodt Craig H. <1958, > Titolo Analyzing longitudinal clinical trial data: a practical guide / / by Craig Mallinckrodt and Ilya Lipkovich Boca Raton, FL:,: Chapman and Hall/CRC, an imprint of Taylor and Pubbl/distr/stampa Francis, , 2016 **ISBN** 1-351-73768-6 1-315-18663-2 1-351-73769-4 Descrizione fisica 1 online resource (330 pages): illustrations, tables Collana Chapman & Hall/CRC Biostatistics Series Disciplina 615.5072/4 Soggetti Clinical trials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references and index. Nota di bibliografia Cover -- Half Title -- Title Page -- Copyright Page -- Table of Nota di contenuto Contents -- Preface -- Acknowledgments -- List of Tables -- List of Figures -- List of Code Fragments -- Section I: Background and Setting -- 1: Introduction -- 2: Objectives and EstimandsDetermining What to Estimate -- 3: Study DesignCollecting the Intended Data -- 4: Example Data -- 5: Mixed-Effects Models Review -- Section II: Modeling the Observed Data -- 6: Choice of Dependent Variable and Statistical Test -- 7: Modeling Covariance (Correlation) -- 8: Modeling Means Over Time -- 9: Accounting for Covariates -- 10: Categorical Data -- 11: Model Checking and Verification -- Section III: Methods for Dealing with Missing Data -- 12: Overview of Missing Data -- 13: Simple and Ad Hoc Approaches for Dealing with Missing Data -- 14: Direct Maximum Likelihood -- 15: Multiple Imputation -- 16: Inverse Probability Weighted Generalized Estimated Equations -- 17: Doubly Robust Methods -- 18: MNAR Methods -- 19: Methods for Incomplete Categorical Data -- Section IV: A Comprehensive Approach to Study Development and Analyses -- 20: Developing Statistical Analysis Plans -- 21: Example Analyses of Clinical Trial Data -- References -- Index. Sommario/riassunto Analyzing Longitudinal Clinical Trial Data: A Practical Guide provides practical and easy to implement approaches for bringing the latest

theory on analysis of longitudinal clinical trial data into routine

practice. The book, with its example-oriented approach that includes numerous SAS and R code fragments, is an essential resource for statisticians and graduate students specializing in medical research. The authors provide clear descriptions of the relevant statistical theory and illustrate practical considerations for modeling longitudinal data. Topics covered include choice of endpoint and statistical test; modeling means and the correlations between repeated measurements; accounting for covariates; modeling categorical data; model verification; methods for incomplete (missing) data that includes the latest developments in sensitivity analyses, along with approaches for and issues in choosing estimands; and means for preventing missing data. Each chapter stands alone in its coverage of a topic. The concluding chapters provide detailed advice on how to integrate these independent topics into an over-arching study development process and statistical analysis plan.