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TRISTIN ACEVEDO

Practical Statistics for Medical Research Cambridge University Press
Statistics can be an intimidating subject for many students and clinicians. This concise text introduces basic concepts that underpin medical statistics and, using everyday clinical examples, highlights the importance of statistical principles to understanding and implementing research findings in routine clinical care.
Systematic Reviews in Health Care CRC Press
Statistical ideas have been integral to the development of epidemiology and continue to provide the tools needed to interpret epidemiological studies. Although epidemiologists do not need a highly mathematical background in statistical theory to conduct and interpret such studies, they do need more than an encyclopedia of "recipes." Statistics for Epidemiology achieves just the right balance between the two approaches, building an intuitive understanding of the methods most important to practitioners and the skills to use them effectively. It develops the techniques for analyzing simple risk factors and disease data, with step-by-step extensions that include the use of binary regression. It covers the logistic regression model in detail and contrasts it with the Cox model for time-to-incidence data. The author uses a few simple case studies to guide readers from elementary analyses to more complex regression modeling. Following these examples through several chapters makes it easy to compare the interpretations that emerge from varying approaches. Written by one of the top biostatisticians in the field, Statistics for Epidemiology stands apart in its focus on interpretation and in the depth of understanding it provides. It lays the groundwork that all public health professionals, epidemiologists, and biostatisticians need to successfully design, conduct, and analyze epidemiological studies.
Statistics in Medicine CRC Press
Clinical trials have become essential research tools for evaluating the benefits and risks of new interventions for the treatment and prevention of diseases, from cardiovascular disease to cancer to AIDS. Based on the authors' collective experiences in this field, Introduction to Statistical Methods for Clinical Trials presents various statistical topics relevant to the design, monitoring, and analysis of a clinical trial. After reviewing the history, ethics, protocol, and regulatory issues of clinical trials, the book provides guidelines for formulating primary and secondary questions and translating clinical questions into statistical ones. It examines designs used in clinical trials, presents methods for determining sample size, and introduces constrained randomization procedures. The authors also discuss how various types of data must be collected to answer key questions in a trial. In addition, they explore common analysis methods, describe statistical methods that determine what an emerging trend represents, and present issues that arise in the analysis of data. The book concludes with suggestions for reporting trial results that are consistent with universal guidelines recommended by medical journals. Developed from a course taught at the University of Wisconsin for the past 25 years, this textbook provides a solid understanding of the statistical approaches used in the design, conduct, and analysis of clinical trials.
Practical Statistics for Medical Research John Wiley & Sons
Praise for the Second Edition: "... this is a useful, comprehensive compendium of almost every possible sample size formula. The strong organization and carefully defined formulae will aid any researcher designing a study." -Biometrics "This impressive book contains formulae for computing sample size in a wide range of settings. One-sample studies and two-sample comparisons for quantitative, binary, and time-to-event outcomes are covered comprehensively, with separate sample size formulae for testing equality, non-inferiority, and equivalence. Many less familiar topics are also covered ..." – Journal of the Royal Statistical Society Sample Size Calculations in Clinical Research, Third Edition presents statistical procedures for performing sample size calculations during various phases of clinical research and development. A comprehensive and unified presentation of statistical concepts and practical applications, this book includes a well-balanced summary of current and emerging clinical issues, regulatory requirements, and recently developed statistical methodologies for sample size calculation. Features: Compares the relative merits and disadvantages of statistical methods for sample size calculations Explains how the formulae and procedures for sample size calculations can be used in a variety of clinical research and development stages Presents real-world examples from several therapeutic areas, including cardiovascular medicine, the central nervous system, anti-infective medicine, oncology, and women's health Provides sample size calculations for dose response studies, microarray studies, and Bayesian approaches This new edition is updated throughout, includes many new sections, and five new chapters on emerging topics: two stage seamless adaptive designs, cluster randomized trial design, zero-inflated Poisson distribution, clinical trials with extremely low incidence rates, and clinical trial simulation.
Basic Skills in Statistics SAGE Publications
This highly popular introduction to confidence intervals has been thoroughly updated and expanded. It includes methods for using confidence intervals, with illustrative worked examples and extensive guidelines and checklists to help the novice.
Health Informatics: Practical Guide for Healthcare and Information Technology Professionals (Sixth Edition) Oxford University Press
Guidelines for Reporting Health Research is a practical guide to choosing and correctly applying the appropriate guidelines when reporting health research to ensure clear, transparent, and useful reports. This new title begins with an introduction to reporting guidelines and an overview of the importance of transparent reporting, the characteristics of good guidelines, and how to use reporting guidelines effectively in reporting health research. This hands-on manual also describes over a dozen internationally recognised published guidelines such as CONSORT, STROBE, PRISMA and STARD in a clear and easy to understand format. It aims to help researchers choose and use the correct guidelines for reporting their research, and to produce more completely and transparently

reported papers which will help to ensure reports are more useful and are not misleading. Written by the authors of health research reporting guidelines, in association with the EQUATOR (Enhancing the QUAlity and Transparency Of health Research) Network, Guidelines for Reporting Health Research is a helpful guide to producing publishable research. It will be a valuable resource for researchers in their role as authors and also an important reference for editors and peer reviewers.

Prognosis Research in Healthcare John Wiley & Sons

At last—a social scientist's guide through the pitfalls ofmodern statistical computing Addressing the current deficiency in the literature onstatistical methods as they apply to the social and behavioralsciences, Numerical Issues in Statistical Computing for the SocialScientist seeks to provide readers with a unique practicalguidebook to the numerical methods underlying computerizedstatistical calculations specific to these fields. The authorsdemonstrate that knowledge of these numerical methods and how theyare used in statistical packages is essential for making accurateinferences. With the aid of key contributors from both the socialand behavioral sciences, the authors have assembled a rich set ofinterrelated chapters designed to guide empirical social scientiststhrough the potential minefield of modern statisticalcomputing. Uniquely accessible and abounding in modern-day tools, tricks,and advice, the text successfully bridges the gap between thecurrent level of social science methodology and the moresophisticated technical coverage usually associated with thestatistical field. Highlights include: A focus on problems occurring in maximum likelihoodestimation Integrated examples of statistical computing (using softwarepackages such as the SAS, Gauss, Splus, R, Stata, LIMDEP, SPSS,WinBUGS, and MATLAB®) A guide to choosing accurate statistical packages Discussions of a multitude of computationally intensivestatistical approaches such as ecological inference, Markov chainMonte Carlo, and spatial regression analysis Emphasis on specific numerical problems, statisticalprocedures, and their applications in the field Replications and re-analysis of published social scienceresearch, using innovative numerical methods Key numerical estimation issues along with the means ofavoiding common pitfalls A related Web site includes test data for use in demonstratingnumerical problems, code for applying the original methodsdescribed in the book, and an online bibliography of Web resourcesfor the statistical computation Designed as an independent research tool, a professionalreference, or a classroom supplement, the book presents awell-thought-out treatment of a complex and multifaceted field.

Clinical Trials John Wiley & Sons

Now in its Fourth Edition, An Introduction to Medical Statistics continues to be a 'must-have' textbook for anyone who needs a clear logical guide to the subject. Written in an easy-to-understand style and packed with real life examples, the text clearly explains the statistical principles used in the medical literature. Taking readers through the common statistical methods seen in published research and guidelines, the text focuses on how to interpret and analyse statistics for clinical practice. Using extracts from real studies, the author illustrates how data can be employed correctly and incorrectly in medical research helping readers to evaluate the statistics they encounter and appropriately implement findings in clinical practice. End of chapter exercises, case studies and multiple choice questions help readers to apply their learning and develop their own interpretative skills. This thoroughly revised edition includes new chapters on meta-analysis, missing data, and survival analysis.

An Introduction to Medical Statistics Wiley

Reviews are needed to provide manageable information on which decisions on health policy, and individual treatment, can bebased. But how can the quality of these reviews be judged? The report of a systematic review, like a primary research paper, contains clear descriptions of the aims of the review, and the materials and methods used by the reviewer. In this book leading practitioners of the science of reviewing health care research illustrate how traditional reviews sometimes arrive at lethally incorrect conclusions and show how the quality of reviews can be improved.

Statistics with Confidence John Wiley & Sons

The success of the Apgar score demonstrates the astounding power of an appropriate clinical instrument. This down-to-earth book provides practical advice, underpinned by theoretical principles, on developing and evaluating measurement instruments in all fields of medicine. It equips you to choose the most appropriate instrument for specific purposes. The book covers measurement theories, methods and criteria for evaluating and selecting instruments. It provides methods to assess measurement properties, such as reliability, validity and responsiveness, and interpret the results. Worked examples and end-of-chapter assignments use real data and well-known instruments to build your skills at implementation and interpretation through hands-on analysis of real-life cases. All data and solutions are available online. This is a perfect course book for students and a perfect companion for professionals/researchers in the medical and health sciences who care about the quality and meaning of the measurements they perform.

Statistical modeling : a fresh approach Cambridge University Press

This concise, easy to understand and learner-friendly book invitesthe readers to actively particpate in the understanding of medicalstatistical concepts that are frequently used in health careresearch and evidence-based practice worldwide. Knowing that the best way to learn statistical concepts is touse them, the authors employ real examples and articles from healthscience literature, complete with the complexities that real lifepresents, in an approach that will help bring researchers andclinicians one step closer towards being statistical savvy andbetter able to critically read research literature and interpretthe results. A practical hands-on workbook for individual or groupexercises Teaches how to understand statistical methods when readingjournals, and how to use them in clinical research Emphasizes the use of statistics in evidence-basedresearch Relevant for anyone needing to use statistics, this workbook isan ideal resource for all health care professionals and students,especially those learning and practising evidence-basedmedicine.

International Measurement of Disability Wiley

Most medical researchers, whether clinical or non-clinical, receive some background in statistics as undergraduates. However, it is most often brief, a long time ago, and largely forgotten by the time it is needed. Furthermore, many introductory texts fall short of adequately explaining the underlying concepts of statistics, and often are divorced

Numerical Issues in Statistical Computing for the Social Scientist National Academies Press

The best-selling introduction to evidence-based medicine In a clear and engaging style, How to Read a Paper demystifies evidence-based medicine and explains how to critically appraise published research and also put the findings into practice. An ideal introduction to evidence-based medicine,

How to Read a Paper explains what to look for in different types of papers and how best to evaluate the literature and then implement the findings in an evidence-based, patient-centred way. Helpful checklist summaries of the key points in each chapter provide a useful framework for applying the principles of evidence-based medicine in everyday practice. This fifth edition has been fully updated with new examples and references to reflect recent developments and current practice. It also includes two new chapters on applying evidence-based medicine with patients and on the common criticisms of evidence-based medicine and responses. How to Read a Paper is a standard text for medical and nursing schools as well as a friendly guide for everyone wanting to teach or learn the basics of evidence-based medicine.

How to Read a Paper Cambridge University Press

"Statistical Modeling: A Fresh Approach introduces and illuminates the statistical reasoning used in modern research throughout the natural and social sciences, medicine, government, and commerce. It emphasizes the use of models to untangle and quantify variation in observed data. By a deft and concise use of computing coupled with an innovative geometrical presentation of the relationship among variables. A Fresh Approach reveals the logic of statistical inference and empowers the reader to use and understand techniques such as analysis of covariance that appear widely in published research but are hardly ever found in introductory texts."-- book cover

Statistics for Epidemiology Boston [Mass.] ; Toronto : Little, Brown

Now in its fourth edition, Medical Statistics at a Glance is a concise and accessible introduction to this complex subject. It provides clear instruction on how to apply commonly used statistical procedures in an easy-to-read, comprehensive and relevant volume. This new edition continues to be the ideal introductory manual and reference guide to medical statistics, an invaluable companion for statistics lectures and a very useful revision aid. This new edition of Medical Statistics at a Glance: Offers guidance on the practical application of statistical methods in conducting research and presenting results Explains the underlying concepts of medical statistics and presents the key facts without being unduly mathematical Contains succinct self-contained chapters, each with one or more examples, many of them new, to illustrate the use of the methodology described in the chapter. Now provides templates for critical appraisal, checklists for the reporting of randomized controlled trials and observational studies and references to the EQUATOR guidelines for the presentation of study results for many other types of study Includes extensive cross-referencing, flowcharts to aid the choice of appropriate tests, learning objectives for each chapter, a glossary of terms and a glossary of annotated full computer output relevant to the examples in the text Provides cross-referencing to the multiple choice and structured questions in the companion Medical Statistics at a Glance Workbook Medical Statistics at a Glance is a must-have text for undergraduate and post-graduate medical students, medical researchers and biomedical and pharmaceutical professionals.

Essential Statistics for Medical Practice John Wiley & Sons

Most medical researchers, whether clinical or non-clinical, receive some background in statistics as undergraduates. However, it is most often brief, a long time ago, and largely forgotten by the time it is needed. Furthermore, many introductory texts fall short of adequately explaining the underlying concepts of statistics, and often are divorced from the reality of conducting and assessing medical research. Practical Statistics for Medical Research is a problem-based text for medical researchers, medical students, and others in the medical arena who need to use statistics but have no specialized mathematics background. The author draws on twenty years of experience as a consulting medical statistician to provide clear explanations to key statistical concepts, with a firm emphasis on practical aspects of designing and analyzing medical research. The text gives special attention to the presentation and interpretation of results and the many real problems that arise in medical research.

Introductory Statistics for Health and Nursing Using SPSS CRC Press

The 5th edition of this popular introduction to statistics for the medical and health sciences has undergone a significant revision, with several new chapters added and examples refreshed throughout the book. Yet it retains its central philosophy to explain medical statistics with as little technical detail as possible, making it accessible to a wide audience. Helpful multi-choice exercises are included at the end of each chapter, with answers provided at the end of the book. Each analysis technique is carefully explained and the mathematics kept to minimum. Written in a style suitable for statisticians and clinicians alike, this edition features many real and original examples, taken from the authors' combined many years' experience of designing and analysing clinical trials and teaching statistics. Students of the health sciences, such as medicine, nursing, dentistry, physiotherapy, occupational therapy, and radiography should find the book useful, with examples relevant to their disciplines. The aim of training courses in medical statistics pertinent to these areas is not to turn the students into medical statisticians but rather to help them interpret the published scientific literature and appreciate how to design studies and analyse data arising from their own projects. However, the reader who is about to design their own study and collect, analyse and report on their own data will benefit from a clearly written book on the subject which provides practical guidance to such issues. The practical guidance provided by this book will be of use to professionals working in and/or managing clinical trials, in academic, public health, government and industry settings, particularly medical statisticians, clinicians, trial co-ordinators. Its practical approach will appeal to applied statisticians and biomedical researchers, in particular those in the biopharmaceutical industry, medical and public health organisations.

Introduction to Statistical Methods for Clinical Trials John Wiley & Sons

"What is going to happen to me?" Most patients ask this question during a clinical encounter with a health professional. As well as learning what problem they have (diagnosis) and what needs to be done about it (treatment), patients want to know about their future health and wellbeing (prognosis). Prognosis research can provide answers to this question and satisfy the need for individuals to understand the possible outcomes of their condition, with and without treatment. Central to modern medical practise, the topic of prognosis is the basis of decision making in healthcare and policy development. It translates basic and clinical science into practical care for patients and populations. Prognosis Research in Healthcare: Concepts, Methods and Impact provides a comprehensive overview of the field of prognosis and prognosis research and gives a global perspective on how prognosis research and prognostic information can improve the outcomes of healthcare. It details how to design, carry out, analyse and report prognosis studies, and how prognostic information can be the basis for tailored, personalised healthcare. In particular, the book

discusses how information about the characteristics of people, their health, and environment can be used to predict an individual's future health. Prognosis Research in Healthcare: Concepts, Methods and Impact, addresses all types of prognosis research and provides a practical step-by-step guide to undertaking and interpreting prognosis research studies, ideal for medical students, health researchers, healthcare professionals and methodologists, as well as for guideline and policy makers in healthcare wishing to learn more about the field of prognosis.

Statistics Workbook for Evidence-based Health Care Cambridge University Press

A guide in basic statistics emphasises its practical use in epidemiology and public health, providing understanding of topics such as study design, data analysis and statistical methods used in the execution of medical research. This title includes sections on Correlation and Linear Regression, as well as exercises reflecting working life.

Medical Statistics Made Easy Springer

Healthcare providers, consumers, researchers and policy makers are inundated with unmanageable amounts of information, including evidence from healthcare research. It has become impossible for all to have the time and resources to find, appraise and interpret this evidence and incorporate it into healthcare decisions. Cochrane Reviews respond to this challenge by identifying, appraising and synthesizing research-based evidence and presenting it in a standardized format, published in The Cochrane Library (www.thecochranelibrary.com). The Cochrane Handbook for Systematic Reviews of Interventions contains methodological guidance for the preparation and maintenance of Cochrane intervention reviews. Written in a clear and accessible format, it is the essential manual for all those preparing, maintaining and reading Cochrane reviews. Many of the principles and methods described here are appropriate for systematic reviews applied to other types of research and to systematic reviews of interventions undertaken by others. It is hoped therefore that this book will be invaluable to all those who want to understand the role of systematic reviews, critically appraise published reviews or perform reviews themselves.