An updated treatment of categorical data analysis in the biomedical sciences that now explores applications to translational research

Thoroughly updated with the latest advances in the field, Applied Categorical Data Analysis and Translational Research, Second Edition maintains the accessible style of its predecessor while also exploring the importance of translational research as it relates to basic scientific findings within clinical practice. With its easy-to-follow style, updated coverage of major methodologies, and broadened scope of coverage, this new edition provides an accessible guide to statistical methods involving categorical data and the steps to their application in problem solving in the biomedical sciences.

Delving even further into the applied direction, this update offers many real-world examples from biomedicine, epidemiology, and public health along with detailed case studies taken straight from modern research in these fields. Additional features of the Second Edition include:

- A new chapter on the relationship between translational research and categorical data, focusing on design study, bioassay, and Phase I and Phase II clinical trials
A new chapter on categorical data and diagnostic medicine, with coverage of the diagnostic process, prevalence surveys, the ROC function and ROC curve, and important statistical considerations

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A revised chapter on logistic regression models featuring an updated treatment of simple and multiple regression analysis

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An added section on quantal bioassays

Each chapter features updated and new exercise sets along with numerous graphs that demonstrate the highly visual nature of the topic. A related Web site features the book’s examples as well as additional data sets that can be worked with using SAS® software.

The only book of its kind to provide balanced coverage of methods for both categorical data and translational research, *Applied Categorical Data Analysis and Translational Research, Second Edition* is an excellent book for courses on applied statistics and biostatistics at the upper-undergraduate and graduate levels. It is also a valuable reference for researchers and practitioners in the biomedical and public health fields.

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**ABOUT THE AUTHOR**

Chap T. Le, PhD, is Distinguished Professor and Director of Biostatistics at the University of Minnesota Cancer Center. In addition to providing statistical consulting for a variety of biomedical research projects, he has worked on collaborations that have focused on the analyses of survival and categorical data and, currently, in the areas of cancer and tobacco research. Dr. Le is the author of *Health and Numbers: A Problems-Based Introduction to Biostatistics, Third Edition; Introductory Biostatistics;* and *Applied Survival Analysis,* all published by Wiley.

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**NEW TO EDITION**

• A new chapter focuses on the relationship between translational research and categorical data that is found in modern practice, treating the topics of Phase I clinical trials, Phase II clinical trials, and bioassay.
A revised chapter on logistic regression models features updated treatment of simple and multiple regression analysis, along with new treatment of quantal bioassays as well as modeling a probability using PROBIT and other models.

A new chapter on categorical data and diagnostic medicine takes this second edition, with coverage of the diagnosis process, prevalence surveys, the ROC Function and ROC Curve, and important statistical considerations.

New and revised exercises are included at the end of each chapter.

FEATURES

• The author’s accessible, user-friendly writing style, combined with minimal use of mathematics, facilitates a basic comprehension of categorical data analysis in the biomedical field.

• Real-world examples from the fields of epidemiology, biostatistics, and public health are employed throughout to illustrate modern applications to discussed method.

• The inclusion of SAS codes has been maintained to assist readers with the analysis and interpretation of the presented data.

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