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| Nota di contenuto | Front Cover; Statistics in Medicine, Second Edition; Copyright Page; Contents; Foreword to the Second Edition; Foreword to the First Edition; Acknowledgments; Databases; Part I: A Study Course of Fundamentals; Chapter 1. Data, Notation, and Some Basic Terms; 1.1. About This Book; 1.2. Stages of Scientific Knowledge; 1.3. Quantification and Accuracy; 1.4. Data Types; 1.5. Notation (or Symbols); 1.6. Samples, Populations, and Randomness; Chapter 2. Distribution; 2.1. Frequency Distributions; 2.2. Relative Frequencies and Probabilities; 2.3. Characteristics of a Distribution 2.4. What Is Typical? 2.5. The Spread About the Typical; 2.6. The Shape; 2.7. Statistical Inference; 2.8. Distributions Commonly Used in Statistics; 2.9. Standard Error of the Mean; 2.10. Joint Distributions of Two Variables; Chapter 3. Summary Statistics; 3.1. Numerical Summaries, One Variable; 3.2. Numerical Summaries, Two Variables; 3.3. Pictorial Summaries, One Variable; 3.4. Pictorial Summaries, Two Variables; 3.5. Good Graphing Practices; Chapter 4. Confidence Intervals and Probability; 4.1. Overview; 4.2. The Normal Distribution 4.3. Confidence Interval on an Observation from an Individual Patient 4.4. Concept of a Confidence Interval on a Descriptive Statistic; 4.5. Confidence Interval on a Mean, Known Standard Deviation; 4.6. The t Distribution; 4.7. Confidence Interval on a Mean, Estimated Standard Deviation; 4.8. The Chi-square Distribution; 4.9. Confidence Interval on a Variance or Standard Deviation; 4.10. Other Frequently Seen |

Confidence Intervals and Probabilities; Chapter 5. Hypothesis Testing: Concept and Practice; 5.1. Hypotheses in Inference; 5.2. Error Probabilities; 5.3. Two Policies of Testing
5.4. Organizing Data for Inference; 5.5. Evolving a Way to Answer Your Data Question; Chapter 6. Statistical Testing, Risks, and Odds in Medical Decisions; 6.1. Overview; 6.2. Categorical Data: Basics; 6.3. Categorical Data: Tests on 2 x 2 Tables; 6.4. Categorical Data: Risks and Odds; 6.5. Rank Data: Basics; 6.6. Rank Data: The Rank-Sum Test to Compare Two Samples; 6.7. Continuous Data: Basics of Means; 6.8. Continuous Data: Normal (z) and t Tests to Compare Two Sample Means; 6.9. Other Tests of Hypotheses; Chapter 7. Sample Size Required for a Study; 7.1. Overview
7.2. Is the Estimate of Minimum Required Sample Size Adequate? 7.3. Sample Size in Means Testing; 7.4. Minimum Sample Size Estimation for a Test of Two Means; 7.5. Other Situations in Which Minimum Sample Size Estimation Is Used; Chapter 8. Statistical Prediction; 8.1. What Is a "Model"?; 8.2. Straight-Line Models; 8.3. What Is "Regression" (and Its Relation to Correlation)?; 8.4. Assessing and Predicting Relationships by Regression; 8.5. Other Questions That Can Be Answered by Regression; 8.6. Clinical Decisions and Outcomes Analysis; Chapter 9. Epidemiology
9.1. The Nature of Epidemiology

Sommario/riassunto

Medicine deals with treatments that work often but not always, so treatment success must be based on probability. Statistical methods lift medical research from the anecdotal to measured levels of probability. This book presents the common statistical methods used in 90% of medical research, along with the underlying basics, in two parts: a textbook section for use by students in health care training programs, e.g., medical schools or residency training, and a reference section for use by practicing clinicians in reading medical literature and performing their own research. The book does no
