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Descrizione fisica	1 online resource (426 p.)
Collana	Wiley series in probability and statistics
Altri autori (Persone)	FriisRobert H
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introductory Biostatistics for the Health Sciences; Contents; Preface; 1. What is Statistics? How is it Applied in the Health Sciences?; 1.1 Definitions of Statistics and Statisticians; 1.2 Why Study Statistics?; 1.3 Types of Studies; 1.3.1 Surveys and Cross-Sectional Studies; 1.3.2 Retrospective Studies; 1.3.3 Prospective Studies; 1.3.4 Experimental Studies and Quality Control; 1.3.5 Clinical Trials; 1.3.6 Epidemiological Studies; 1.3.7 Pharmacoeconomic Studies and Quality of Life; 1.4 Exercises; 1.5 Additional Reading; 2. Defining Populations and Selecting Samples 2.1 What are Populations and Samples?2.2 Why Select a Sample?; 2.3 How Samples Can be Selected; 2.3.1 Simple Random Sampling; 2.3.2 Convenience Sampling; 2.3.3 Systematic Sampling; 2.3.4 Stratified Random Sampling; 2.3.5 Cluster Sampling; 2.3.6 Bootstrap Sampling; 2.4 How to Select a Simple Random Sample; 2.5 How to Select a Bootstrap Sample; 2.6 Why Does Random Sampling Work?; 2.7 Exercises; 2.8 Additional Reading; 3. Systematic Organization and

Display of Data; 3.1 Types of Data; 3.1.1 Qualitative; 3.1.2 Quantitative; 3.2 Frequency Tables and Histograms; 3.3 Graphical Methods
3.3.1 Frequency Histograms3.3.2 Frequency Polygons; 3.3.3 Cumulative Frequency Polygon; 3.3.4 Stem-and-Leaf Diagrams; 3.3.5 Box-and-Whisker Plots; 3.3.6 Bar Charts and Pie Charts; 3.4 Exercises; 3.5 Additional Reading; 4. Summary Statistics; 4.1 Measures of Central Tendency; 4.1.1 The Arithmetic Mean; 4.1.2 The Median; 4.1.3 The Mode; 4.1.4 The Geometric Mean; 4.1.5 The Harmonic Mean; 4.1.6 Which Measure Should You Use?; 4.2 Measures of Dispersion; 4.2.1 Range; 4.2.2 Mean Absolute Deviation; 4.2.3 Population Variance and Standard Deviation; 4.2.4 Sample Variance and Standard Deviation
4.2.5 Calculating the Variance and Standard Deviation from Group Data4.3 Coefficient of Variation (CV) and Coefficient of Dispersion (CD); 4.4 Exercises; 4.5 Additional Reading; 5. Basic Probability; 5.1 What is Probability?; 5.2 Elementary Sets as Events and Their Complements; 5.3 Independent and Disjoint Events; 5.4 Probability Rules; 5.5 Permutations and Combinations; 5.6 Probability Distributions; 5.7 The Binomial Distribution; 5.8 The Monty Hall Problem; 5.9 A Quality Assurance Problem; 5.10 Exercises; 5.11 Additional Reading; 6. The Normal Distribution
6.1 The Importance of the Normal Distribution in Statistics6.2 Properties of Normal Distributions; 6.3 Tabulating Areas under the Standard Normal Distribution; 6.4 Exercises; 6.5 Additional Reading; 7. Sampling Distributions for Means; 7.1 Population Distributions and the Distribution of Sample Averages from the Population; 7.2 The Central Limit Theorem; 7.3 Standard Error of the Mean; 7.4 Z Distribution Obtained When Standard Deviation Is Known; 7.5 Student's t Distribution Obtained When Standard Deviation Is Unknown; 7.6 Assumptions Required for t Distribution; 7.7 Exercises
7.8 Additional Reading

Sommario/riassunto

Accessible to medicine- and/or public policy-related audiences, as well as most statisticians.Emphasis on outliers is discussed by way of detection and treatment.Resampling statistics software is incorporated throughout.Motivating applications are presented in light of honest theory.Plentiful exercises are sprinkled throughout.