

1. Record Nr.	UNINA9910139197303321
Autore	Woolson Robert F
Titolo	Statistical methods for the analysis of biomedical data [[electronic resource] /] / Robert F. Woolson, William R. Clarke
Pubbl/distr/stampa	New York, : Wiley-Interscience, c2002
ISBN	1-282-25345-X 9786613814104 1-118-03305-1 1-118-03130-X
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (714 p.)
Collana	Wiley series in probability and statistics
Altri autori (Persone)	ClarkeWilliam R (William Radue)
Disciplina	610.15195 610/.21
Soggetti	Medical statistics Biometry Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographies and index.
Nota di contenuto	Statistical Methods for the Analysis of Biomedical Data; Dedication; Contents; Preface to the 1987 Edition; Preface to the 2002 Edition; Acknowledgments; 1 Introduction; 1.1 Overview of Statistics; 1.2 A Designed Experiment; 1.2.1 Order of Interviewing (Randomization); 1.2.2 Possible Outcomes of the Experiment (Sample Space); 1.3 Scope and Organization of Book; References; 2 Descriptive Statistics; 2.1 Introduction; 2.2 Classification of Variables; 2.3 Representing Data with Notation; 2.4 Central Tendency of a Set of Data; 2.5 Variability in a Set of Data; 2.6 Pictorial Data Representation 2.7 Sample Description with Grouped Data2.8 Tabulation and Graphing of Grouped Data; 2.9 Summary Statistics for Grouped Data; 2.10 Using SAS for Computations; 2.11 Summary; Problems; References; 3 Basic Probability Concepts; 3.1 Introduction; 3.2 Probability; 3.2.1 Probability Defined; 3.2.2 Addition Rule; 3.2.3 Conditional Probability and Multiplication Rule; 3.3 Bayes' Theorem: A Useful Result from Probability Theory; 3.4 Probability Distributions and Random Variables; 3.5 Summary; Problems; References; 4 Further Aspects of Probability;

4.1 Introduction

4.2 Populations, Samples, and Random Samples
4.3 Parameters and Statistics; 4.4 Permutations and Combinations: Factorial Notation; 4.5 Some Discrete Probability Distributions; 4.5.1 Binomial Distribution; 4.5.2 Poisson Distribution; 4.5.3 Hypergeometric Distribution; 4.5.4 Multinomial Distribution; 4.6 Normal Probability Distribution; 4.7 Sampling Distributions: Probability Distributions Generated by Random Sampling; 4.8 The t, χ^2 , and F Probability Distributions; 4.9 Summary; Problems; References; 5 Confidence Intervals and Hypothesis Testing: General Considerations and Applications

5.1 Introduction
5.2 Estimation of Population Characteristics: Point and Interval Estimation; 5.2.1 Confidence Interval for a Population Mean with Variance σ^2 Known; 5.2.2 Confidence Interval for a Population Mean with Variance σ^2 Unknown; 5.2.3 Confidence Interval for the Variance σ^2 of a Normal Population; 5.2.4 Confidence Interval for a Binomial Proportion p; 5.3 Testing Statistical Hypotheses; 5.3.1 Hypothesis Testing for a Population Mean μ Known; 5.3.2 Hypothesis Testing for a Population Mean μ Unknown; 5.3.3 Hypothesis Testing for a Normal Population Variance σ^2

5.3.4 Hypothesis Testing for Binomial Parameter p
5.4 Using SAS for Computations; 5.5 Summary; Problems; References; 6 Comparison of Two Groups: t-Tests and Rank Tests; 6.1 Introduction; 6.2 Use of t-Tests for Group Comparisons; 6.2.1 Paired t-Test for Comparing Means: A Test for Matched Pairs; 6.2.2 Two-Sample t-Test for Comparing Means: A Test for Two Independent Groups; 6.2.3 Cochran-Cox t-Test for Equality of Means: A Modified t-Test for Two Independent Groups; 6.2.4 The F-Test for Equality of Variances: A Test for Two Independent Groups; 6.2.5 Transformation of Data to Equalize Variance

6.3 Use of Rank Tests for Group Comparisons

Sommario/riassunto

The new edition adds a chapter on multiple linear regression in biomedical research, with sections including the multiple linear regressions model and least squares; the ANOVA table, parameter estimates, and confidence intervals; partial f-tests; polynomial regression; and analysis of covariance.* Organized by problem rather than method, so it guides readers to the correct technique for solving the problem at hand.
