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Prevalence and Incidence of a Disease
2.11.1 Prevalence2.11.2 Incidence; 2.12 Association Between Disease and Risk Factor. Relative Risk and Odds Ratio; 2.12.1 Relative Risk; 2.12.2 Odds Ratio; 3. SURVIVAL DISTRIBUTIONS; 3.1 Introduction; 3.2 Survival Distribution Functions; 3.3 Hazard Function (Force of Mortality); 3.4 Conditional Probabilities of Death (Failure) and Central Rate; 3.5 Truncated Distributions; 3.6 Expectation and Variance of Future Lifetime; 3.7 Median of Future Lifetime; 3.8 Transformations of Random Variables; 3.9 Location-Scale Families of Distributions; 3.10 Some Survival Distributions
3.11 Some Models of Failure3.11.1 Series System; 3.11.2 Parallel System; 3.12 Probability Integral Transformation; 3.13 Compound Distributions; 3.14 Miscellanea; 3.14.1 Interpolation; 3.14.2 Method of Statistical Differentials; 3.15 Maximum Likelihood Estimation and Likelihood Ratio Tests; 3.15.1 Construction of Likelihood Functions; 3.15.2 Maximum Likelihood Estimation; 3.15.3 Expected Values, Variances and Covariances of the MLE's; 3.15.4 Assessing Goodness of Fit; PART 2. MORTALITY EXPERIENCES AND LIFE TABLES; 4. LIFE TABLES: FUNDAMENTALS AND CONSTRUCTION; 4.1 Introduction
4.2 Life Table: Basic Definition and Notation4.3 Force of Mortality. Mathematical Relationships Among Basic Life Table Functions; 4.4 Central Death Rate; 4.5 Interpolation for Life Table Functions; 4.6 Some Approximate Relationships Between nqx and nmx; 4.6.1 Expected Fraction of the Last n Years of Life; 4.6.2 Special Cases; 4.6.3 Exponential Approximation; 4.7 Some Approximations to x; 4.8 Concepts of Stationary and Stable Populations; 4.8.1 Stationary Population; 4.8.2 Stable Population; 4.9 Construction of an Abridged Life Table from Mortality Experience of a Current Population
4.9.1 Evaluation of nMx

Sommario/riassunto

Survival analysis deals with the distribution of life times, essentially the times from an initiating event such as birth or the start of a job to some terminal event such as death or pension. This book, originally published in 1980, surveys and analyzes methods that use survival measurements and concepts, and helps readers apply the appropriate method for a given situation. Four broad sections cover introductions to data, univariate survival function, multiple-failure data, and advanced topics.