1. Record Nr. UNINA9910300099203321 Autore Emura Takeshi **Titolo** Analysis of Survival Data with Dependent Censoring: Copula-Based Approaches / / by Takeshi Emura, Yi-Hau Chen Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2018 Pubbl/distr/stampa **ISBN** 981-10-7164-0 Edizione [1st ed. 2018.] Descrizione fisica 1 online resource (94 pages) Collana JSS Research Series in Statistics, , 2364-0065 Disciplina 519.1 Soggetti **Biometry** Statistics Social sciences - Statistical methods **Biostatistics** Statistical Theory and Methods Statistics in Social Sciences, Humanities, Law, Education, Behavorial Sciences, Public Policy Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Chapter 1: Setting the scene -- Chapter 2: Introduction to survival Nota di contenuto analysis -- Chapter 3: Copula models for dependent censoring --Chapter 4: Gene selection under dependent censoring -- Chapter 5: The joint frailty-copula model for meta-analysis -- Chapter 6:Highdimensional covariates in the joint frailty-copula model -- Chapter 7: Dynamic prediction of time-to-death. Chapter 8: Future developments -- Appendix. Sommario/riassunto This book introduces readers to copula-based statistical methods for analyzing survival data involving dependent censoring. Primarily focusing on likelihood-based methods performed under copula models, it is the first book solely devoted to the problem of dependent censoring. The book demonstrates the advantages of the copula-based methods in the context of medical research, especially with regard to cancer patients' survival data. Needless to say, the statistical methods presented here can also be applied to many other branches of science,

especially in reliability, where survival analysis plays an important role. The book can be used as a textbook for graduate coursework or a short

course aimed at (bio-) statisticians. To deepen readers' understanding of copula-based approaches, the book provides an accessible introduction to basic survival analysis and explains the mathematical foundations of copula-based survival models.