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Sommario/riassunto   This book presents novel statistics methods and reproducible software that helps to solve challenging problems in biomedicine. Specifically, it consists of a collection of 11 chapters contributed by some of the leading experts in the mathematical and statistical field which address new challenges in very disparate biomedical areas, such as genomics, cancer, circadian biology, microbiome, mental disorders, and more. The mathematical rigor is written in a user-friendly way to serve a general biomedical audience ranging from trainees or students to doctors, as well as scientific researchers, university departments, and PhD students.