

1. Record Nr.	UNINA9910349444503321
Autore	Cleophas Ton J
Titolo	Efficacy Analysis in Clinical Trials an Update : Efficacy Analysis in an Era of Machine Learning / / by Ton J. Cleophas, Aeilko H. Zwinderman
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-19918-5
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XI, 304 p. 295 illus., 44 illus. in color.)
Disciplina	006.31 615.50724
Soggetti	Medicine Statistics Biometry Biomedicine, general Statistics for Life Sciences, Medicine, Health Sciences Biostatistics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- Traditional and Machine-Learning Methods for Efficacy Analysis -- Optimal-Scaling for Efficacy Analysis -- Ratio-Statistic for Efficacy Analysis -- Ratio-Statistic for Efficacy Analysis -- Complex-Samples for Efficacy Analysis -- Bayesian-Networks for Efficacy Analysis -- Evolutionary-Operations for Efficacy Analysis -- Automatic-Newton-Modeling for Efficacy Analysis -- High-Risk-Bins for Efficacy Analysis -- Balanced-Iterative-Reducing-Hierarchy for Efficacy Analysis -- Cluster-Analysis for Efficacy Analysis -- Multidimensional-Scaling for Efficacy Analysis -- Binary Decision-Trees for Efficacy Analysis -- Continuous Decision-Trees for Efficacy Analysis -- Automatic-Data-Mining for Efficacy Analysis -- Support-Vector-Machines for Efficacy Analysis -- Neural-Networks for Efficacy Analysis -- Ensembled-Accuracies for Efficacy Analysis -- Ensembled-Correlations for Efficacy Analysis -- Gamma-Distributions for Efficacy Analysis -- Validation with Big Data, a Big Issue -- Index.
Sommario/riassunto	Machine learning and big data is hot. It is, however, virtually unused in

clinical trials. This is so, because randomization is applied to even out multiple variables. Modern medical computer files often involve hundreds of variables like genes and other laboratory values, and computationally intensive methods are required. This is the first publication of clinical trials that have been systematically analyzed with machine learning. In addition, all of the machine learning analyses were tested against traditional analyses. Step by step statistics for self-assessments are included. The authors conclude, that machine learning is often more informative, and provides better sensitivities of testing than traditional analytic methods do.
