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Nota di contenuto	Introduction to Markov Decision Problems and Examples -- Finite and Infinite Horizon Markov Decision Problems -- Solution Algorithms: Backward Induction, Value Iteration and Policy Iteration -- Designing Response Adaptive Clinical Trials with Markov Decision Problems.
Sommario/riassunto	Two-armed response-adaptive clinical trials are modelled as Markov decision problems to pursue two overriding objectives: Firstly, to identify the superior treatment at the end of the trial and, secondly, to keep the number of patients receiving the inferior treatment small. Such clinical trial designs are very important, especially for rare diseases. Thomas Ondra presents the main solution techniques for Markov decision problems and provides a detailed description how to obtain optimal allocation sequences. Contents Introduction to Markov Decision Problems and Examples Finite and Infinite Horizon Markov Decision Problems Solution Algorithms: Backward Induction, Value Iteration and Policy Iteration Designing Response Adaptive Clinical Trials with Markov Decision Problems Target Groups Researchers and

students in the fields of mathematics and statistics Professionals in the pharmaceutical industry< The Author Thomas Ondra obtained his Master of Science degree in mathematics at University of Vienna. He is a research assistant and PhD student at the Section for Medical Statistics of Medical University of Vienna. .