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NEW REVIEW -- PARSAI / A Practical Guide to Inversely Optimized Treatment Planning.
Medical Physics Publishing,
Inc., 2024, \$110.00.

[AUTHOR]

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[BIBLIOGRAPHIC DATA]

ISBN: 978-1-951134-20-4, 298 pages, hard cover.

[REVIEWER'S EXPERT OPINION]

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Description

The book serves as a practical guide to Intensity Modulated Radiotherapy (IMRT) and Volumetric Modulated Arc Therapy (VMAT) planning, providing an accessible introduction for those new to the field. It offers an overview of treatment planning for various clinical sites using three major systems: Pinnacle, Eclipse, and RayStation. The focus is on introducing inverse planning principles and addressing practical considerations rather than presenting an exhaustive or theoretical approach. Notably, the book includes a chapter on grid therapy, a topic less commonly found in other textbooks.

Purpose

The purpose of the book is to provide a comprehensive overview for those adopting IMRT for the first time. It aims to outline the technical prerequisites and offer practical recommendations for inverse planning, with a specific emphasis on planning procedures. These are worthy objectives, as they address the needs of beginners entering the field. However, while the book can serve as a helpful starting guideline, it is not an essential resource for learning these concepts, given the abundance of existing materials covering similar topics. Additionally, the book does not explore more in-depth theory or detailed explanations, limiting its utility for those seeking a deeper understanding.

Audience

The book's primary audience is physicists and dosimetrists navigating the phases of first-time IMRT implementation, as well as physics residents and new dosimetrists learning the fundamentals. The authors are well-established experts, with the lead author bringing extensive experience, numerous accolades, and a long history of contributions to medical physics.

Features

This book provides a practical and accessible guide to IMRT and VMAT planning, making it particularly useful for beginners. It emphasizes key planning considerations and includes references to important documents, such as AAPM TG reports, in the first few chapters. While these overviews are helpful, a more in-depth discussion of the referenced topics would enhance the book's value. A notable strength of the book is its inclusion of all three major treatment planning systems (Eclipse, RayStation, and Pinnacle), providing a broad perspective for those working with different tools.

Additionally, the chapter on grid therapy stands out as a unique feature.

While not essential for understanding conventional planning techniques, it is thorough and well-written, adding depth and variety to the content. The book also includes an abundance of planning samples, complete with colored screenshots, showcasing how various treatment sites are planned across the different TPS systems. This feature is particularly valuable for readers unfamiliar with specific sites, offering clear visual examples as a starting point. The figures are high-quality, well-organized, and cover a wide range of the most common treatment sites, further enhancing the book's practical utility. However, the book's depth is a notable shortcoming. While it provides a solid introduction for physics residents and new dosimetrists, it lacks the theoretical detail and advanced insights that professionals or experienced practitioners may seek. Despite this limitation, the book remains a well-structured and visually engaging resource for those at the beginning of their IMRT and VMAT planning journey.

Assessment

In my opinion, the quality of the book is on par with other practical guides in the field. It offers a solid foundation for those just starting out with IMRT and VMAT planning. When compared to other books in the field, such as *Khan's Treatment Planning in Radiation Oncology* 5th Edition, Khan et al. (Wolters Kluwer, 2022), this book stands out for its intended focus on more practical aspects of IMRT and VMAT planning, rather than on the theoretical or dosimetric principles.

Weighted Numerical Score: 76 - 3 Stars