

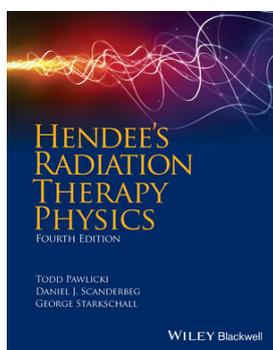
BOOK REVIEWS AND COLLABORATING TOPICS

COLLABORATING TOPICS AND BOOK REVIEWS

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Hendee's Radiation Therapy Physics, Fourth Edition by Todd Pawlicki, Daniel J. Scanderbeg, George Starkschall. 327 pp. WILEY Blackwell, Hoboken, New Jersey, 2016. Price \$149.95 (Hard Cover). ISBN: 978-1-4398-2582-2.



V. DESCRIPTION

Hendee's Radiation Therapy Physics, Fourth Edition, is an up-to-date edition of the well-known text book *Radiation Therapy Physics*. The book presents an overview of the physics involved in radiation therapy, ranging from theoretical principles to current treatment planning and delivery techniques. Specifically, the book presents theory, discusses relevant clinical treatment techniques, and covers the technology used in the fields of external beam therapy, brachytherapy, and stereotactic radiosurgery, as well as quality assurance (QA) and patient safety for these fields.

VI. PURPOSE

The field of radiation therapy has seen tremendous advancements over the past 10 years; therefore, a new edition of *Radiation Therapy Physics* is needed. The book meets the objectives of updating the third edition, which include i) removing outdated materials such as the use of film and conventional simulators, ii) expanding

the chapters on digital imaging and Computed Tomography, and iii) adding new chapters on image-guided radiation therapy (IGRT) and adaptive radiation therapy (ART), proton radiation therapy, radiation therapy informatics, and QA, quality improvements and safety in radiation therapy. In doing so, the authors focus on building upon the 3rd edition's strong foundation in which a wide-array of topics that span all areas of radiation therapy including advanced fields are covered, thereby making the book relevant to the educational needs in radiation therapy.

VII. AUDIENCE

The book is directed at radiation oncology residents as stated by the authors. However, I found the book useful for medical physics students, medical dosimetrists or physicists starting a career in medicine, and clinical physicists who want to use the book as a quick reference guide.

VIII. CONTENTS/FEATURES

The book has 20 chapters that cover the following major sections: basic nuclear physics and radiation interactions with matter; measurements, calibrations, and dosimetry; imaging and treatment planning; computer systems and informatics; brachytherapy; and radiation protection and quality assurance. Furthermore, the book discusses new advancements for various treatment modalities and describes new treatment techniques and technologies, including IMRT, protons, IGRT and ART, and patient safety and quality improvements. The book is concise but comprehensive in scope. Information and data are presented in a balanced way and in an easy-to-read format. Each chapter includes up-to-date references for each subject and

includes problem and answers sets for self-testing, a desirable feature for students. All chapters have numerous illustrations and practical examples.

IX. ASSESSMENT/COMPARISON

With the rapid development and implementation of advanced planning, imaging, and delivery technologies, the book provides a platform to disseminate knowledge on these new areas in addition to conventional radiation therapy. The field of radiation therapy is continuously

evolving in new directions. Our field is seeing additional integration of imaging modalities with radiation therapy, such as Ultrasound, PET and MRI, additional imaging and delivery techniques that track tumors in real time, and a greater interest in Carbon particle therapy. While the book does not cover all these areas, it provides a substantial overview of current treatment techniques and technologies in radiation therapy. *Hendee's Radiation Therapy Physics*, fourth edition, is a valuable educational resource worthy of being added to our radiation therapy text book library.