

## Portal Design In Radiation Therapy 2nd Ed

Monte Carlo Techniques in Radiation Therapy Practical Radiotherapy Encyclopedia of Radiation Oncology A Cancer Source Book for Nurses Radiation Therapy in Pediatric Oncology The Modern Technology of Radiation Oncology Image-Guided IMRT Strategies for Radiation Therapy Treatment Planning Setting Up a Radiotherapy Programme Hendee's Radiation Therapy Physics Beam's Eye View Imaging in Radiation Oncology Law and Ethics in Diagnostic Imaging and Therapeutic Radiology Radiation Therapy Essentials Intensity-Modulated Radiation Therapy Practical Radiotherapy Planning Fourth Edition Radiation Therapy Planning The Physics of Radiation Therapy Linear Accelerators for Radiation Therapy Clinical Radiation Oncology Mosby's Radiation Therapy Study Guide and Exam Review - E-Book The Physics and Technology of Radiation Therapy CT Anatomy for Radiotherapy Scintillation Dosimetry Oncology Nursing Principles and Practice of Radiation Therapy - E-Book An Introduction to Radiation Protection in Medicine Portal Design in Radiation Therapy Radiation Oncology Physics Khan's The Physics of Radiation Therapy Technical Basis of Radiation Therapy Radiotherapy for Head and Neck Cancers: Indications and Techniques The Physics of Three Dimensional Radiation Therapy Radiation Therapy Techniques and Treatment Planning for Breast Cancer The Physics of Conformal Radiotherapy Women's Gynecologic Health Clinical 3D Dosimetry in Modern Radiation Therapy Portal Design in Radiation Therapy Washington & Leaver's Principles and Practice of Radiation Therapy E-Book Radiation Therapy Study Guide Handbook of Radiotherapy Physics

### Monte Carlo Techniques in Radiation Therapy

Women's Gynecologic Health, Third Edition is a trusted, comprehensive, and evidence-based text that presents women's gynecologic health from a woman-centered and holistic viewpoint. Encompassing both health promotion and management of gynecologic conditions, it provides clinicians and students with a strong foundation in gynecologic care and the knowledge necessary to apply it in clinical practice. With an emphasis on the importance of respecting the normalcy of female physiology, it is an essential reference for all women's healthcare providers. The Third Edition includes four new chapters on prenatal and postpartum care, including anatomy and physiologic adaptations of normal pregnancy, diagnosis of pregnancy and overview of prenatal care, common complications of pregnancy, and postpartum care.

### Practical Radiotherapy

Dr. Khan's classic textbook on radiation oncology physics is now in its thoroughly revised and updated Fourth Edition. It provides the entire radiation therapy team—radiation oncologists, medical physicists, dosimetrists, and radiation therapists—with a thorough understanding of the physics and practical clinical applications of advanced radiation therapy

technologies, including 3D-CRT, stereotactic radiotherapy, HDR, IMRT, IGRT, and proton beam therapy. These technologies are discussed along with the physical concepts underlying treatment planning, treatment delivery, and dosimetry. This Fourth Edition includes brand-new chapters on image-guided radiation therapy (IGRT) and proton beam therapy. Other chapters have been revised to incorporate the most recent developments in the field. This edition also features more than 100 full-color illustrations throughout. A companion Website will offer the fully searchable text and an image bank.

### **Encyclopedia of Radiation Oncology**

This book addresses the day-to-day treatment planning issues that radiation oncologists are likely to encounter during the treatment of breast cancer patients and provides numerous practical “tips” that will assist in navigation of the treatment planning process, from delineation of the tumor boundaries to discrimination of adjacent normal tissues and critical structures at risk of radiation injury. Differences in target delineation and treatment planning according to technique are emphasized, with coverage of conventional radiation therapy and advanced techniques including cardiac-sparing approaches, e.g., using active breathing control, intensity-modulated radiation therapy, proton beam therapy, and electron beam therapy post mastectomy. Individual chapters also focus on radiation setup and verification techniques and radiation treatment planning systems. The book, which is part of the Springer series Practical Guides in Radiation Oncology, is designed for hands-on use by radiation oncology residents/fellows in training and practicing radiation oncologists.

### **A Cancer Source Book for Nurses**

This edition is intended for nurses in every practice setting who are involved with providing care to individuals with cancer, those at risk for cancer, and survivors of cancer. The book covers the most common cancers and strategies for nursing care and is an excellent resource for nursing students, nurses who find themselves providing care to individuals with cancer but may not consider themselves oncology nurse specialists, and other health professionals who have an interest in oncology care. Nursing faculty find this text helpful when developing oncology content for undergraduate courses.

### **Radiation Therapy in Pediatric Oncology**

This first dedicated overview for beam’s eye view (BEV) covers instrumentation, methods, and clinical use of this exciting technology, which enables real-time anatomical imaging. It highlights how the information collected (e.g., the shape and size of the beam aperture and intensity of the beam) is used in the clinic for treatment verification, adaptive radiotherapy, and in-treatment interventions. The chapters cover detector construction and components, common imaging procedures, and state of the art applications. The reader will also be presented with emerging innovations, including target

modifications, real-time tracking, reconstructing delivered dose, and in vivo portal dosimetry. Ross I. Berbeco, PhD, is a board-certified medical physicist and Associate Professor of Radiation Oncology at the Dana-Farber Cancer Institute, Brigham and Women's Hospital and Harvard Medical School.

### **The Modern Technology of Radiation Oncology**

Thoroughly updated to include all of the latest technology and treatment regimens, *Radiotherapy for Head and Neck Cancers: Indications and Techniques, 5th Edition* remains the reference of choice for radiation oncologists. Timely updates include an increased use of full-color images and significantly more digital content, bringing you fully up to date with state-of-the-art radiation therapy for head and neck cancer. The first section covers general principles, practical aspects of external beam therapy, patient care guidelines, and more, including a new chapter on general principles of target and normal tissue contouring; the second section discusses site-specific indications and techniques. Numerous illustrated case examples make this resource an excellent day-to-day reference for both residents and practitioners.

### **Image-Guided IMRT**

This publication is aimed at students and teachers involved in teaching programmes in field of medical radiation physics, and it covers the basic medical physics knowledge required in the form of a syllabus for modern radiation oncology. The information will be useful to those preparing for professional certification exams in radiation oncology, medical physics, dosimetry or radiotherapy technology.

### **Strategies for Radiation Therapy Treatment Planning**

Get a meaningful foundation in radiation therapy with the only text that's actually written by radiation therapists themselves! With its problem-based approach, *Washington & Leaver's: Principles and Practice of Radiation Therapy, 5th Edition* helps you truly understand cancer management, improve your clinical techniques, and apply complex concepts to treatment planning and delivery. Plus, with its new full-color design and up-to-date content that spans chemotherapy techniques, radiation safety, post-image manipulation techniques, and more; this fifth edition gives you all the tools you need to succeed in both coursework and beyond. Comprehensive coverage of radiation therapy includes a clear introduction and overview plus complete information on physics, simulation, and treatment planning. Chapter objectives, key terms, outlines and summaries in each chapter help you organize information and ensure you understand what is most important. End-of-chapter questions and questions to ponder provide opportunity for review and greater challenge. Bolded and defined key terms are highlighted at first mention in the text and included in an expanded glossary. Spotlight boxes

highlight concepts and offer the most important information as it appears in the chapters. NEW! Full color design enhances imagery throughout the book as well as augments overall learning. NEW! Updated chemotherapy section includes additional cancer biology terms and principles to provide the essential information needed for clinical success. NEW! Updated coverage of post-image manipulation techniques includes new material on Cone beam utilization, MR imaging, image guided therapy, and kV imaging. NEW! Revised section on radiation safety and misadministration of treatment beams addresses the most up-to-date practice requirements. NEW! The latest ASRT Practice Standards and AHA Patient Care Partnership content ensure you are up to date on the latest best practices in the field overall.

### **Setting Up a Radiotherapy Programme**

Portal Design in Radiation Therapy, 2nd Edition contains over 120 explicit diagrams illustrating the anatomy and lymphatics included in typical treatment portals. In addition, CT and MR anatomy are included, as well as tissue tolerance charts. Descriptions of surrounding anatomy, routes of spread, technical aspects of portal design and typical doses employed for each tumor site are provided.

### **Hendee's Radiation Therapy Physics**

Scintillation Dosimetry delivers a comprehensive introduction to plastic scintillation dosimetry, covering everything from basic radiation dosimetry concepts to plastic scintillating fiber optics. Comprised of chapters authored by leading experts in the medical physics community, the book: Discusses a broad range of technical implementations, from point source dosimetry scaling to 3D-volumetric and 4D-scintillation dosimetry Addresses a wide scope of clinical applications, from machine quality assurance to small-field and in vivo dosimetry Examines related optical techniques, such as optically stimulated luminescence (OSL) or Čerenkov luminescence Thus, Scintillation Dosimetry provides an authoritative reference for detailed, state-of-the-art information on plastic scintillation dosimetry and its use in the field of radiation dosimetry.

### **Beam's Eye View Imaging in Radiation Oncology**

This book is a comprehensive review and study aid for radiation therapists. Organized in a question-and-answer format, it present clinical features and principles of treatment. Topics include radiation therapy physics, radiobiology, treatment and simulation equipment, principles of patient care, clinical components of cancer care, and cancers of the brain, head and neck region, and respiratory, digestive, urinary, and male and female reproductive systems. It offers over 500 multiple-choice questions with detailed answers and rationales. Radiation Therapy Study Guide is a valuable resource for radiation therapists preparing for certification examinations as well as for practicing therapists in need of a review.

## **Law and Ethics in Diagnostic Imaging and Therapeutic Radiology**

This new book reviews the legal, ethical, risk management and safety issues facing today's radiological science professional. It discusses theories and their day-to-day application, guiding good decision making. Case studies and scenarios clearly illustrate concepts. Sample forms at the end of the text help readers prepare and draft forms, charts, procedures, and policies. Covers a full range of issues - decision making, malpractice, patients' rights, civil liability, record keeping, communication, education, and much more. Clarifies the importance of risk management and the need for developing a quality safety program to protect the patient, the practitioner, and the facility. Considers the practical applications of the Code of Ethics. Answers key questions about employment law. Presents specific plans for setting up education and evaluation programs. Includes sample forms for assessing competency. Provides an overview of the legal system and how it affects imaging and therapy. Offers two complete chapters that explain what and how to document. Includes sample forms for documentation and consent. Readers can simply review and adapt to their own health care settings. Features contributions by professionals with special expertise in law, risk management and education.

## **Radiation Therapy Essentials**

From background physics and biological models to the latest imaging and treatment modalities, the Handbook of Radiotherapy Physics: Theory and Practice covers all theoretical and practical aspects of radiotherapy physics. In this comprehensive reference, each part focuses on a major area of radiotherapy, beginning with an introduction by the editors and then subdividing into self-contained chapters. The first three parts present the fundamentals of the underlying physics, radiobiology, and technology involved. The ensuing sections discuss the support requirements of external beam radiotherapy, such as dose measurements, properties of clinical beams, patient dose computation, treatment planning, and quality assurance, followed by a part that explores exciting new advances that include developments in photon and particle therapy. Subsequent sections examine brachytherapy using sealed and unsealed sources and provide the framework of radiation protection, including an appendix that describes the detailed application of UK legislation. The final part contains handy tables of both physical constants and attenuation data. To achieve safe and effective radiotherapy, there needs to be a close understanding among various disciplines. With contributions from renowned specialists, the Handbook of Radiotherapy Physics: Theory and Practice provides essential theoretical and practical knowledge for medical physicists, researchers, radiation oncologists, and radiation technologists.

## **Intensity-Modulated Radiation Therapy**

Clinical conformal radiotherapy is the holy grail of radiation treatment and is now becoming a reality through the combined

efforts of physical scientists and engineers, who have improved the physical basis of radiotherapy, and the interest and concern of imaginative radiotherapists and radiographers. Intensity-Modulated Radiation Therapy describes in detail the physics germane to the development of a particular form of clinical conformal radiotherapy called intensity modulated radiation therapy (IMRT). IMRT has become a topic of tremendous importance in recent years and is now being seriously investigated for its potential to improve the outcome of radiation therapy. The book collates the state-of-the-art literature together with the author's personal research experience and that of colleagues in the field to produce a text suitable for new research workers, Ph.D. students, and practicing radiation physicists that require a thorough introduction to IMRT. Fully illustrated, indexed, and referenced, the book has been prepared in a form suitable for supporting a teaching course.

### **Practical Radiotherapy Planning Fourth Edition**

Introducing the 2nd edition of our highly respected radiation therapy textbook. It covers the field of radiation physics with a perfect mix of depth, insight, and humor. The 2nd edition has been guided by the 2018 ASTRO core curriculum for radiation oncology residents. Novice physicists will find the book useful when studying for board exams, with helpful chapter summaries, appendices, and extra end-of-chapter problems and questions. It features new material on digital x-ray imaging, neutron survey meters, flattening-filter free and x-band linacs, biological dose indices, electronic brachytherapy, OSLD, Cerenkov radiation, FMEA, total body irradiation, and more. Also included: Updated graphics in full color for increased understanding. Appendices on board certifications in radiation therapy for ABR, AART, and Medical Dosimetrist Certification Board. Dosimetry Data. A full index

### **Radiation Therapy Planning**

An introduction to the physical principles and equipment involved in the production, use and attenuation of radiation, and the laws governing the administration of ionising radiations. Written by a distinguished team of radiography teachers, the book is designed specifically for the needs of the radiographer in training. The clear text is well-illustrated throughout with half-tones and line drawings.

### **The Physics of Radiation Therapy**

Portal Design in Radiation Therapy, 3rd edition contains over 120 images and illustrations of anatomy and lymphatics typically included within treatment portals. Current tissue tolerance charts for organs at risk are included. CT and MR images along with descriptions of surrounding anatomy, routes of spread, technical aspects of portal design and typical doses employed for each tumor site are provided.

## **Linear Accelerators for Radiation Therapy**

A valuable resource for all oncology practice settings that focuses on nursing diagnoses for specific cancers and oncologic emergencies, with the emphasis on the nursing interventions and supportive rationales for each problem.

## **Clinical Radiation Oncology**

This publication provides guidance for designing and implementing radiotherapy programmes, taking into account clinical, medical physics, radiation protection and safety aspects. It reflects current requirements for radiotherapy infrastructure in settings with limited resources. It will be of use to professionals involved in the development, implementation and management of radiotherapy programmes

## **Mosby's Radiation Therapy Study Guide and Exam Review - E-Book**

Radiation Therapy Essentials is intended as a refresher for those preparing for board certification or recertification in the field of radiation oncology. Outline format brings key points to the forefront. Examples and diagrams are provided for easy recognition and clarification of the topic. Over 200 practice questions and answers are included.

## **The Physics and Technology of Radiation Therapy**

The Physics of Three Dimensional Radiation Therapy presents a broad study of the use of three-dimensional techniques in radiation therapy. These techniques are used to specify the target volume precisely and deliver radiation with precision to minimize damage to surrounding healthy tissue. The book discusses multimodality computed tomography, complex treatment planning software, advanced collimation techniques, proton radiotherapy, megavoltage imaging, and stereotactic radiosurgery. A review of the literature, numerous questions, and many illustrations make this book suitable for teaching a course. The themes covered in this book are developed and expanded in Webb's The Physics of Conformal Radiotherapy and the two may be used together or in successive semesters for teaching purposes.

## **CT Anatomy for Radiotherapy**

Linear Accelerators for Radiation Therapy, Second Edition focuses on the fundamentals of accelerator systems, explaining the underlying physics and the different features of these systems. This edition includes expanded sections on the treatment head, on x-ray production via multileaf and dynamic collimation for the production of wedged and other i

## **Scintillation Dosimetry**

The diagnosis of cancer in a child is a devastating finding not only to the parents but often to the child. Even though the situation is relatively easy to accept among adults, it is difficult to accept among children because of their general helpless state. The advances that have been made in the management of a child with cancer in the last 20 years have been dramatic in character. These have occurred not only by virtue of the contributions from early diagnosis and more precise staging but also from the contributions made by surgery, radiation therapy, and the more widespread utilization of chemotherapy regimens. This volume by J. Robert Cassady sets forth the position of radiation oncology in the management of the child with cancer. Radiation therapy remains an important and significant part of the treatment of this group of diseases. The book presents the basic knowledge with regards to pediatric oncology and how it relates to radiation therapy. It gives a timely overview on the topic and is essential for all radiation oncologists involved in the management of children with cancer. Hamburg/Philadelphia, June 1994 H. -P. HEILMANN LUTHER W. BRADY Preface This book provides a thorough review of the role that radiation therapy currently plays in the management of most childhood tumors. Extensively augmented with figures and tables where appropriate, it also provides a concise review of current diagnostic and therapeutic approaches for major childhood malignancies. Extensive and up-to-date reference lists are an added benefit.

## **Oncology Nursing**

Planning is a critical stage of radiotherapy. Careful consideration of the complex variables involved and critical assessment of the techniques available are fundamental to good and effective practice. First published in 1985, Practical Radiotherapy Planning has, over three editions, established itself as the popular choice for the trainee radiation oncologist and radiographer, providing the 'nuts and bolts' of planning in a practical and accessible manner. This fourth edition encompasses a wealth of new material, reflecting the radical change in the practice of radiotherapy in recent years. The information contained within the introductory chapters has been expanded and brought up to date, and a new chapter on patient management has been added. CT stimulators, MLC shieldings and dose profiles, principles of IMRT, and use of MRI, PET and ultrasound are all included, amongst other new developments in this field. The aim of the book remains unchanged. Complexity of treatment planning has increased greatly, but the fourth edition continues to emphasise underlying principles of treatment that can be applied for conventional, conformal and novel treatments, taking into account advances in imaging and treatment delivery.

## **Principles and Practice of Radiation Therapy - E-Book**

## **An Introduction to Radiation Protection in Medicine**

Combining facets of health physics with medicine, An Introduction to Radiation Protection in Medicine covers the background of the subject and the medical situations where radiation is the tool to diagnose or treat human disease. Encouraging newcomers to the field to properly and efficiently function in a versatile and evolving work setting, it familiarizes them with the particular problems faced during the application of ionizing radiation in medicine. The text builds a fundamental knowledge base before providing practical descriptions of radiation safety in medicine. It covers basic issues related to radiation protection, including the physical science behind radiation protection and the radiobiological basis of radiation protection. The text also presents operational and managerial tools for organizing radiation safety in a medical workplace. Subsequent chapters form the core of the book, focusing on the practice of radiation protection in different medical disciplines. They explore a range of individual uses of ionizing radiation in various branches of medicine, including radiology, nuclear medicine, external beam radiotherapy, and brachytherapy. With contributions from experienced practicing physicists, this book provides essential information about dealing with radiation safety in the rapidly shifting and diverse environment of medicine.

## **Portal Design in Radiation Therapy**

Details technology associated with radiation oncology, emphasizing design of all equipment allied with radiation treatment. Describes procedures required to implement equipment in clinical service, covering needs assessment, purchase, acceptance, and commissioning, and explains quality assurance issues. Also addresses less common and evolving technologies. For medical physicists and radiation oncologists, as well as radiation therapists, dosimetrists, and engineering technologists. Includes b&w medical images and photos of equipment.

## **Radiation Oncology Physics**

This comprehensive encyclopedia, comprising a wide range of entries written by leading experts, provides detailed information on radiation oncology, including the most recent developments in the field. It will be of particular value for basic and clinical scientists in academia, practice, and industry and will also be of benefit to those in related fields, students, teachers, and interested laypersons.

## **Khan's The Physics of Radiation Therapy**

Radiation oncology for physicians and residents needing a multidisciplinary, treatment-focused resource; this updated

edition provides the latest knowledge in this consistently growing field. You will broaden your understanding of the basic biology of disease processes, and access updated treatment algorithms, information on techniques, and state-of-the-art modalities.

## **Technical Basis of Radiation Therapy**

Strategies for Radiation Therapy Treatment Planning provides radiation oncologists, physicists, and dosimetrists with a step-by-step guide to implementing external beam treatment plans that meet clinical requirements for each major disease site. As a companion book to the Handbook of Treatment Planning in Radiation Oncology Second Edition, this book focuses on the technical aspects of treatment planning and the major challenges in creating highly conformal dose distributions, referenced to as treatment plans, for external beam radiotherapy. To overcome challenges associated with each step, leading experts at the Cleveland Clinic have consolidated their knowledge and experience of treatment planning techniques, potential pitfalls, and other difficulties to develop quality plans across the gamut of clinical scenarios in radiation therapy. The book begins with an overview of external beam treatment planning principles, inverse planning and advanced planning tools, and descriptions of all components in simulation and verification. Following these introductory chapters are disease-site examples, including central nervous system, head and neck, breast, thoracic, gastrointestinal, genitourinary, gynecologic, lymphoma, and soft tissue sarcoma. The book concludes with expert guidance on planning for pediatric cancers and how to tailor palliative plans. Essential for all radiation therapy team members, including trainees, this book is for those who wish to learn or improve their treatment planning skills and understand the different treatment planning processes, plan evaluation, and patient setup. **KEY FEATURES:** Provides basic principles of treatment planning Contains step-by-step, illustrated descriptions of the treatment planning process Discusses the pros and cons of advanced treatment planning tools, such as auto-planning, knowledge-based planning, and multi-criteria based planning Describes each primary treatment site from simulation, patient immobilization, and creation of various treatment plans to plan evaluations Includes instructive sample plans to highlight best practices

## **Radiotherapy for Head and Neck Cancers: Indications and Techniques**

The Physics of Conformal Radiotherapy: Advances in Technology provides a thorough overview of conformal radiotherapy and biological modeling, focusing on the underlying physics and methodology of three-dimensional techniques in radiation therapy. This carefully written, authoritative account evaluates three-dimensional treatment planning, optimization, photon multileaf collimation, proton therapy, transit dosimetry, intensity-modulation techniques, and biological modeling. It is an invaluable teaching guide and reference for all medical physicists and radiation oncologists/therapists that use conformal radiotherapy.

## **The Physics of Three Dimensional Radiation Therapy**

This completely updated and revised new edition of Radiation Therapy Physics contains comprehensive, balanced coverage of the fundamental radiation physics principles and its clinical applications. Since publication of the ground-breaking first edition in the 1970s, high-energy x-ray and electron beams have increasingly become the preferred approach to the radiation treatment of many cancers. Obviously, too, the use of computers has become pervasive in radiation therapy. Imaging techniques and computers are now used routinely in treatment planning, and sophisticated methods are available for overlaying anatomical images with computer generated multidimensional treatment plans. Treatment procedures such as conformal and intensity-modulated radiation therapy, high dose-rate brachytherapy, and image-guided and image-guided and adaptive radiation therapy have become standard operating procedures in radiation therapy clinics around the world. Calibration protocols have been extensively revised, and quality assurance in radiation therapy has become a subject in itself. These procedures, and others that represent state-of-the-art radiation therapy including quality engineering, are discussed at length in this new edition. The 4th edition has an increased number of chapters (20 compared to 16) and includes new topics of interest to the practicing radiation oncologist and medical physicist:- The chapter on diagnostic imaging has been expanded to include molecular imaging.- A new chapter has been added on proton radiotherapy.- A new chapter has been added on radiation oncology informatics.- A new chapter has been added on quality and safety engineering. - A new chapter on dynamic delivery techniques, explaining the standard (e.g., IMRT) and new treatment techniques (e.g., VMAT). - The treatment planning and brachytherapy chapters omit a detailed explanation of historical techniques that no one uses clinically any longer, in favor of including a new focus on modern computer-based techniques in wide-spread clinical use. - The Problem sections in each chapter have been expanded to include designated 'easy' question designed to give a broad understanding of a topic, and 'hard' questions that would be designed to help the student understand the details of a topic.

## **Radiation Therapy Techniques and Treatment Planning for Breast Cancer**

This well-received book, now in its fifth edition, is unique in providing a detailed examination of the technological basis of radiation therapy. Another unique feature is that the chapters are jointly written by North American and European authors. This considerably broadens the book's contents and increases its applicability in daily practice throughout the world. The book is divided into two sections. The first section covers basic concepts in treatment planning and explains the various approaches to radiation therapy, such as intensity-modulated radiation therapy, tomotherapy, stereotactic radiotherapy, and high and low dose rate brachytherapy. The second discusses in depth the practical clinical applications of the different radiation therapy techniques in a wide range of cancer sites. All chapters have been written by leaders in the field. This book will serve to instruct and acquaint teachers, students, and practitioners with the basic technological factors and

approaches in radiation therapy.

## **The Physics of Conformal Radiotherapy**

The only radiation therapy text written by radiation therapists, *Principles and Practice of Radiation Therapy, 4th Edition* helps you understand cancer management and improve clinical techniques for delivering doses of radiation. A problem-based approach makes it easy to apply principles to treatment planning and delivery. New to this edition are updates on current equipment, procedures, and treatment planning. Written by radiation therapy experts Charles Washington and Dennis Leaver, this comprehensive text will be useful throughout your radiation therapy courses and beyond.

Comprehensive coverage of radiation therapy includes a clear introduction and overview plus complete information on physics, simulation, and treatment planning. Spotlights and shaded boxes identify the most important concepts. End-of-chapter questions provide a useful review. Chapter objectives, key terms, outlines, and summaries make it easier to prioritize, understand, and retain key information. Key terms are bolded and defined at first mention in the text, and included in the glossary for easy reference. UPDATED chemotherapy section, expansion of What Causes Cancer, and inclusions of additional cancer biology terms and principles provide the essential information needed for clinical success. UPDATED coverage of post-image manipulation techniques includes new material on Cone beam utilization, MR imaging, image guided therapy, and kV imaging. NEW section on radiation safety and misadministration of treatment beams addresses the most up-to-date practice requirements. Content updates also include new ASRT Practice Standards and AHA Patient Care Partnership Standards, keeping you current with practice requirements. UPDATED full-color insert is expanded to 32 pages, and displays images from newer modalities.

## **Women's Gynecologic Health**

Expand your understanding of the physics and practical clinical applications of advanced radiation therapy technologies with Khan's *The Physics of Radiation Therapy, 5th edition*, the book that set the standard in the field. This classic full-color text helps the entire radiation therapy team—radiation oncologists, medical physicists, dosimetrists, and radiation therapists—develop a thorough understanding of 3D conformal radiotherapy (3D-CRT), stereotactic radiosurgery (SRS), high dose-rate remote afterloaders (HDR), intensity modulated radiation therapy (IMRT), image-guided radiation therapy (IGRT), Volumetric Modulated Arc Therapy (VMAT), and proton beam therapy, as well as the physical concepts underlying treatment planning, treatment delivery, and dosimetry. In preparing this new Fifth Edition, Dr. Kahn and new co-author Dr. John Gibbons made chapter-by-chapter revisions in the light of the latest developments in the field, adding new discussions, a new chapter, and new color illustrations throughout. Now even more precise and relevant, this edition is ideal as a reference book for practitioners, a textbook for students, and a constant companion for those preparing for their board

exams. Features Stay on top of the latest advances in the field with new sections and/or discussions of Image Guided Radiation Therapy (IGRT), Volumetric Modulated Arc Therapy (VMAT), and the Failure Mode Event Analysis (FMEA) approach to quality assurance. Deepen your knowledge of Stereotactic Body Radiotherapy (SBRT) through a completely new chapter that covers SBRT in greater detail. Expand your visual understanding with new full color illustrations that reflect current practice and depict new procedures. Access the authoritative information you need fast through the new companion website which features fully searchable text and an image bank for greater convenience in studying and teaching. This is the tablet version which does not include access to the supplemental content mentioned in the text.

### **Clinical 3D Dosimetry in Modern Radiation Therapy**

Reinforce your understanding of radiation therapy and prepare for the Registry exam! Mosby's Radiation Therapy Study Guide and Exam Review is both a study companion for Principles and Practice of Radiation Therapy, by Charles Washington and Dennis Leaver, and a superior review for the certification exam offered by the American Registry for Radiologic Technology (ARRT). An easy-to-read format simplifies study by presenting information in concise bullets and tables. Over 1,000 review questions are included. Written by radiation therapy expert Leia Levy, with contributions by other radiation therapy educators and clinicians, this study tool provides everything you need to prepare for the ARRT Radiation Therapy Certification Exam. This title includes additional digital media when purchased in print format. For this digital book edition, media content is not included. Over 1000 multiple-choice questions in Registry format are provided in the text, allowing you to both study and simulate the actual exam experience. Focus questions and key information in tables make it easy to find and remember information for the exam. Review exercises reinforce learning with a variety of question formats to fit different learning styles. Questions are organized by ARRT content categories and are available in study mode with immediate feedback after each question, or in exam mode, which simulates the test-taking experience in a timed environment with ARRT exam-style questions.

### **Portal Design in Radiation Therapy**

Modern cancer treatment relies on Monte Carlo simulations to help radiotherapists and clinical physicists better understand and compute radiation dose from imaging devices as well as exploit four-dimensional imaging data. With Monte Carlo-based treatment planning tools now available from commercial vendors, a complete transition to Monte Carlo-base

### **Washington & Leaver's Principles and Practice of Radiation Therapy E-Book**

Intensity-modulated radiation therapy (IMRT), one of the most important developments in radiation oncology in the past 25

years, involves technology to deliver radiation to tumors in the right location, quantity and time. Unavoidable irradiation of surrounding normal tissues is distributed so as to preserve their function. The achievements and future directions in the field are grouped in the three sections of the book, each suitable for supporting a teaching course. Part 1 contains topical reviews of the basic principles of IMRT, part 2 describes advanced techniques such as image-guided and biologically based approaches, and part 3 focuses on investigation of IMRT to improve outcome at various cancer sites.

### **Radiation Therapy Study Guide**

This book provides a first comprehensive summary of the basic principles, instrumentation, methods, and clinical applications of three-dimensional dosimetry in modern radiation therapy treatment. The presentation reflects the major growth in the field as a result of the widespread use of more sophisticated radiotherapy approaches such as intensity-modulated radiation therapy and proton therapy, which require new 3D dosimetric techniques to determine very accurately the dose distribution. It is intended as an essential guide for those involved in the design and implementation of new treatment technology and its application in advanced radiation therapy, and will enable these readers to select the most suitable equipment and methods for their application. Chapters include numerical data, examples, and case studies.

### **Handbook of Radiotherapy Physics**

Publisher's Note: Products purchased from Third Party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitlements included with the product. A Doody's Core Title for 2011! All new expanded edition provides step-by-step guidelines on performing the technical aspects of radiation therapy Important new coverage includes treatment preparation, 3-D treatment planning, dosimetry, new technologies, documentation, and quality assurance. In addition, you'll find added treatment planning guidelines by body region, and an expanded art program including many new 4-color illustrations.

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