Clinical Fundamentals for Radiation Oncologists


Clinical Fundamentals for Radiation Oncologists, an updated and expanded version of Clinical Fundamentals for Radiation Oncology Residents (2006) based on Dr. Murshed’s preparation for the board examination, is a concise book serving as an excellent source of information for a resident or a practicing radiation oncologist.

This new book summarizes the main body of basic science and clinical knowledge in radiation oncology. It has 18 chapters and is organized into three parts. Part I, consisting of five chapters written by contributing authors, reviews the basic sciences of radiation oncology, including radiation physics, dosimetry and treatment planning, radiation biology, molecular biology, radiation protection, and statistical considerations. Part II is divided into 11 clinical chapters describing disease entities in note format, starting with a brief introduction followed by workup, TNM staging, treatments, outcomes, complications, follow-up, and annotated bibliographies. Part III addresses palliative care and treatment complications.

The basic science section is to the point without omitting important concepts. In the clinical sections, the author provides sufficient, practical, and up-to-date information relevant to patient care. As modern treatment techniques are transitioning to intensity-modulated radiation therapy (IMRT) planning, the author has included conventional three-dimensional treatment techniques along with some up-to-date examples and guidelines for IMRT planning. However, practitioners may want to use specialized texts for more comprehensive treatments of the subject. The annotated bibliographies at the end of the clinical chapters summarize landmark studies related to each chapter and are helpful in providing key information supporting evidence-based practice.

Overall, the book is highly readable, well organized, and succinct. The authors have successfully created a basic framework covering most of the important areas of radiation oncology. A separate chapter on uncommon tumors and the use of radiation for benign conditions, and a more extensive description of brachytherapy techniques, would have improved the book. Although one can easily find more comprehensive or more authoritative books on radiation oncology, this book fills a niche where most of the relevant basic science and clinical information can easily be found in a compact form. It is best suited for radiation oncology residents in training or during the review for board examinations. For the practitioner who has been in practice for some time, this book is also helpful as a supplement to other texts or as a quick reference to information pertinent to clinical practice.

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Consideration of clinical research ethics in radiation oncology is underexplored relative to other areas of oncology. A number of ethical challenges related to informed consent, randomization, conflicts of interest, and scientific validity and social value are shared with other areas of medicine, although their exact inflections are specific to radiation oncology. Residents, trainees, and established radiation oncologists find this an ideal study resource for both board and certification exams, as well as an easily accessible aid during practice.

About the authors. Nicholas Zaorsky, MD is an Assistant Professor in the Department of Radiation Oncology at Penn State Cancer Institute. He is the lead author on the American College of Radiology (ACR) guidelines for external beam radiation therapy for prostate cancer as well as editor of the textbook Prostate Cancer: A Multidisciplinary Approach.
Thus, for radiation and clinical radiation oncology trainees, another reference textbook is necessary to cover the breadth of knowledge required. Part 3 is a concise summary of the management of symptoms of evidence-based medicine, are respected for their grasp of the literature, their adaptability in implementing new technical innovations that enhance patient care, and for their patient management skills. This text helps to promote these quality features of the radiation oncology profession. It is not a text that will gather dust on a bookshelf, but instead will be one that is readily used by its readership. I know that you will find Clinical Fundamentals for Radiation Oncologists very helpful in your practice. James A. Bonner, M.D., Department of Radiation Oncology, Merle M. Salter Professor and Chairman, University of Alabama at Birmingham, Birmingham, Alabama. MPP is pleased to partner with the following corporate sponsors. RELATED PUBLICATIONS.
The aim of this subject is to provide the Oncologist with the knowledge of physics required in clinical practice. An understanding of the principles of planning & carrying out treatment is a necessary prerequisite & will be enhanced by the study of this subject. A familiarity with the physics of electromagnetic radiation and atomic structure will be required. With respect to their implications for accurate dose delivery in clinical radiation therapy, applicability, limitations, advantages & disadvantages of the various devic