

Book review

Open Access

Review of "Brachytherapy Physics, Second Edition" Edited by Bruce R. Thomadsen, Mark J. Rivard and Wayne M. Butler Mohammad-Reza Movahed*

Address: Department of Medicine, Division of Cardiology, University of California, Irvine Medical Center, Orange, California, USA

Email: Mohammad-Reza Movahed* - mmovahed@uci.edu

* Corresponding author

Published: 18 January 2006

Received: 12 December 2005

BioMedical Engineering OnLine 2006, 5:4 doi:10.1186/1475-925X-5-4

Accepted: 18 January 2006

This article is available from: <http://www.biomedical-engineering-online.com/content/5/1/4>

© 2006 Movahed; licensee BioMed Central Ltd.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/2.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Book details

Thomadsen Bruce R, Rivard Mark J, Butler Wayne M: *Brachytherapy Physics* Second edition. Madison, WI, Medical Physics Publishing; 2005. Number of pages: 965, ISBN 1-930524-24-2 (hard cover), Price \$140

This book is intended for radiation and medical physicists, biomechanical engineers, radiation oncologists and clinicians who are involved in the assessment and treatment of patients requiring close-distance radiation, which is defined as "brachytherapy". This book is a very comprehensive description of brachytherapy with emphasis on physics. It is an excellent book for physicists and biomedical engineers on understanding the detailed principles of brachytherapy and equipment, and for radiation oncologists for a detailed description of radiation sources and dosing of cancer patients. It emphasizes the two most commonly used applications for oncological patients with prostate and gynecological malignancies.

It is less suitable for the oncologist who is looking for detailed clinical trials or patient selection and follow-up. It is even less suitable for the cardiologist who uses brachytherapy in patients with stent restenosis. The intravascular brachytherapy chapter describes the details for the treatment of in-stent restenosis but does not mention any clinical trial or indications for this technique in cardiac patients [1]. Furthermore, the cardiac application of this therapy is neglected and the radiofrequency ablation chapter does not even mention the use of this technique for the treatment of arrhythmias [2]. Therefore, this book has limited usefulness for the cardiologist. The Vascular

Brachytherapy book written by Waksman would certainly be more suitable for cardiovascular physicians [3].

Chapters were written by leading scientists with excellent qualifications in the relevant subjects. The book contains 54 chapters divided into six major sections: Fundamentals, Dosimetry, Interstitial Fundamentals, Interstitial Applications, Intercavitary Applications for Gynecological Cancers and Unconventional Delivery Systems. The book contains many excellent diagrams and illustrations accompanied by a CD-ROM version of the book. The important strengths and weaknesses are summarized below:

The Fundamentals includes a comprehensive review of brachytherapy physics and radiobiology. It is a well-written chapter especially for medical physicists or radiation oncologists. For the clinician, the details could be somewhat overwhelming.

The dosimetry and interstitial fundamental sections contain excellent comprehensive explanations of dosing and instrumentation of brachytherapy techniques with diagrams and illustrations.

The other chapters contain details on clinical application of brachytherapy in mostly cancer patients. Depending on the cancers described in this book, the chapters markedly differ. For example, the chapters describing brachytherapy principles and treatment of prostate and gynecological malignancies are very comprehensive and detailed. On the other hand, the chapters explaining this technique in other oncological patients with brain, eyes, head and neck

cancers are relatively smaller and less comprehensive. In general, this book is written from a physicist's point-of-view which is very comprehensive for the principle and technical aspects of brachytherapy. However, the clinical indications and algorithms for the use of this technique and the discussion about the clinical and outcome data are less comprehensive and even lacking in some of the smaller chapters.

The Textbook of Radiation Oncology certainly is more clinically oriented covering multiple treatment plans and biology of the tumors and utilization of specialized techniques [4]. Radiation Therapy Physics [5] is an alternative book for radiation oncologists and biomedical engineers with broader coverage of radiation treatment beyond brachytherapy including imaging in therapy planning, calibration protocols and computer applications.

References

1. Saleem MA, Aronow WS, Ravipati G, Moorthy CR, Singh S, Agarwal N, Monsen CE, Pucillo AL: **Intracoronary brachytherapy for treatment of in-stent restenosis.** *Cardiol Rev* 2005, **13**:139-141.
2. Kugler JD, Danford DA, Deal BJ, Gillette PC, Perry JC, Silka MJ, Van Hare GF, Walsh EP: **Radiofrequency catheter ablation for tachyarrhythmias in children and adolescents. The Pediatric Electrophysiology Society.** *N Engl J Med* 1994, **330**:1481-1487.
3. Waksman R: **Vascular brachytherapy.** 3rd edition. Armonk, NY, Futura; 2002:xxiv, 906 p..
4. Leibel SA, Phillips TL: **Textbook of radiation oncology.** 2nd edition. Philadelphia, Saunders; 2004:xxiv, 1674 p., 71 p. of plates.
5. Hendee WR, Ibbott GS, Hendee EG: **Radiation therapy physics.** 3rd edition. Hoboken, N.J., Wiley-Liss; 2005:xvii, 450 p..

Publish with **BioMed Central** and every scientist can read your work free of charge

"BioMed Central will be the most significant development for disseminating the results of biomedical research in our lifetime."

Sir Paul Nurse, Cancer Research UK

Your research papers will be:

- available free of charge to the entire biomedical community
- peer reviewed and published immediately upon acceptance
- cited in PubMed and archived on PubMed Central
- yours — you keep the copyright

Submit your manuscript here:
http://www.biomedcentral.com/info/publishing_adv.asp



Bruce Thomadsen University of Wisconsin-Madison. Disclaimer. The presenters have no conflicts to declare.Â Brachytherapy Physics, Joint AAPM/ABS Brachytherapy Summer School 2nd Ed, 2005 Chapter 31, Bice. The perfect post plan. Seeds gone wild.Â Mark J. Rivard¹, Wayne M. Butler, Phillip M. Devlin, John K. Hayes Jr., Robert A. Hearn, Eugene P. Lief, Ali S. Meigooni, Gregory S. Merrick, Jeffrey F. Williamson. Brachytherapy 6(2007) 34-37 Recommendations for permanent prostate brachytherapy with ¹³¹Cs:A consensus report from the Cesium Advisory Group. William S. Bice, Bradley R. Prestidge, Steven M. Kurtzman, Sushil Beriwal, Brian J. Moran, Rakesh R. Patel, Mark J. Rivard. Brachytherapy 7(2008) 290-296 HDR Brachytherapy for Prostate, Zoubir Ouhbib. Bruce R Thomadsen. UNVERIFIED PROFILE. Are you Bruce R Thomadsen? Register this Author. Register author.Â Larry A DeWerd Geoffrey S Ibbott Ali S Meigooni Michael G Mitch Mark J Rivard Kurt E Stump Bruce R Thomadsen Jack L M Venselaar. Med Phys 2011 Feb;38(2):782-801. Department of Medical Physics and Accredited Dosimetry Calibration Laboratory, University of Wisconsin, Madison, Wisconsin 53706, USA. View Article. Download full-text PDF.Â Department of Medical Physics, School of Medicine and Public Health, University of Wisconsin, Madison, WI 53706, USA. View Article. Download full-text PDF. Invited Perspectives and Reviews Scott Glaser, United States. Physics Mark J. Rivard, United States. Skin & Eye Christopher A. Barker, United States.Â Brachytherapy is an international and multidisciplinary journal which publishes original articles, reviews of selected subjects, and information on the techniques and clinical applications of brachytherapy in the management of cancer, including laboratory and experimental research relevant to clinical practice. Related disciplines include medical physics, medical oncology, and radiation oncology. Types of articles. Brachytherapy publishes Original Articles, Technical Notes, Reviews, and Point/Counterpoints on controversial issues.