1. Record Nr. UNINA9910300240703321 Intensity-Modulated Radiation Therapy [[electronic resource]]: Clinical Titolo Evidence and Techniques / / edited by Yasumasa Nishimura, Ritsuko Komaki Tokyo:,: Springer Japan:,: Imprint: Springer,, 2015 Pubbl/distr/stampa 4-431-55486-6 **ISBN** Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (470 p.) Disciplina 610 610.153 615842 616994 Soggetti Radiotherapy Oncology Medical physics Radiation Oncology Medical and Radiation Physics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Part 1. Foundations and Techniques -- 1. History of IMRT -- 2. Nota di contenuto PRINCIPLES OF IMRT -- 3. Radiobiology for IMRT -- 4. Treatment Planning of IMRT for Head and Neck Malignancies -- 5. IGRT for IMRT -- 6. Adaptive Radiation Therapy in Intensity-Modulated Radiation Therapy for Head and Neck Cancer. Part 2. Clinical application --Brain Tumor: Glioblastoma ~How should we manage GBM in the era of IMRT?~ -- 8. NASOPHARYNGEAL CANCER -- 9. Oropharyngeal cancer -- 10. Postoperative intensity-modulated radiation therapy for head and neck cancers: A case-based review -- 11. Sequellae of therapy of HN cancer: their prevention and therapy -- 12. NON-SMALL CELL LUNG CANCER -- 13. MESOTHELIOMA -- 14. BREAST CANCER -- 15. Clinical application of IMRT for cervical esophageal cancer -- 16. THORACIC ESOPHAGEAL CANCER -- 17. PANCREATIC CANCER -- 18. Anal canal

cancer -- 19. Early prostate cancer (T1-2N0M0) -- 20. Intensity-

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modulated radiation therapy for locally advanced prostate cancer -- 21. Gynecologic Malignancies -- 22. Pediatric Cancers.

Successful clinical use of intensity-modulated radiation therapy (IMRT) represents a significant advance in radiation oncology. Because IMRT can deliver high-dose radiation to a target with a reduced dose to the surrounding organs, it can improve the local control rate and reduce toxicities associated with radiation therapy. Since IMRT began being used in the mid-1990s, a large volume of clinical evidence of the advantages of IMRT has been collected. However, treatment planning and quality assurance (QA) of IMRT are complicated and difficult for the clinician and the medical physicist. This book, by authors renowned for their expertise in their fields, provides cumulative clinical evidence and appropriate techniques for IMRT for the clinician and the physicist. Part I deals with the foundations and techniques, history, principles, QA, treatment planning, radiobiology and related aspects of IMRT. Part II covers clinical applications with several case studies, describing contouring and dose distribution with clinical results along with descriptions of indications and a review of clinical evidence for each tumor site. The information presented in this book serves as a valuable resource for the practicing clinician and physicist.