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Nota di contenuto	Part I: Practical Physics and Instrument -- Interaction of radiation with matter -- Practical aspects of QA in LINAC and Brachytherapy -- Radiation Dosimetry -- Radiation Protection Practical Aspects.-Beam Modifying Devices -- Simulators -- Telecobalt -- Gamma knife -- Linear Accelerator -- Tomotherapy -- Electron therapy -- Proton therapy -- Radiation Facility Development -- Intraoperative Radiotherapy -- Part II: Practical Brachytherapy.-Evolution of Brachytherapy -- Basics of brachytherapy and Common Radio nucleotides -- Brachytherapy for Carcinoma Cervix -- Brachytherapy in Head and Neck Cancers -- Brachytherapy in Carcinoma Prostate -- Brachytherapy in Breast Cancer -- Brachytherapy in Soft Tissue Sarcoma -- Surface Mould Brachytherapy -- Part III: Practical Planning Aspects and Plan Evaluation -- Plan evaluation in 3D Conformal Radiotherapy -- Plan Evaluation in IMRT & VMAT -- Plan Evaluation for Tomotherapy -- Plan evaluation in LINAC based SRS and SABR -- Part IV: Practical Radiobiology -- Clinical Significance of cell Survival Curves -- 6 R’s of Radiation therapy -- Radiosensitisers and radio protectors -- Altered Fractionation Radiotherapy -- Clinical Significance of therapeutic Index -- Part V: Clinical Cases -- Carcinoma Cervix -- Carcinoma Breast --

Oral Cancer -- Oropharynx cancer -- Laryngeal cancer -- Parotid Tumor -- Extremity Sarcomas -- Orbital Tumors and Retinoblastoma -- Carcinoma Rectum -- Carcinoma Anal Canal -- Skin Cancers -- Lymphoma -- Carcinoma Lung -- Part VI: Other Relevant Topics -- Critical appraisal of a clinical trial -- Radiation Toxicity mitigation and treatment -- Cancer in India.

Sommario/riassunto

This book addresses the most relevant aspects of radiation oncology in terms of technical integrity, dose parameters, machine and software specifications, as well as regulatory requirements. Radiation oncology is a unique field that combines physics and biology. As a result, it has not only a clinical aspect, but also a physics aspect and biology aspect, all three of which are inter-related and critical to optimal radiation treatment planning. In addition, radiation oncology involves a host of machines/software. One needs to have a firm command of these machines and their specifications to deliver comprehensive treatment. However, this information is not readily available, which poses serious challenges for students learning the planning aspect of radiation therapy. In response, this book compiles these relevant aspects in a single source. Radiation oncology is a dynamic field, and is continuously evolving. However, tracking down the latest findings is both difficult and time-consuming. Consequently, the book also comprehensively covers the most important trials. Offering an essential ready reference work, it represents a value asset for all radiation oncology practitioners, trainees and students.