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Nota di contenuto	Contents; Contributors; Chapter 1: Introduction to Stereotactic Body Radiotherapy; 1.1 History of SBRT; 1.2 Fractionation and Radiobiology; 1.3 Overview of SBRT Systems; 1.4 Respiratory Motion; 1.5 Summary of Major SBRT Indications; 1.5.1 Primary Non-Small Cell Lung Cancer (NSCLC); 1.5.2 Lung Oligometastases; 1.5.3 Liver Metastases; 1.5.4 Primary Liver Tumours; 1.5.5 Pancreas; 1.5.6 Kidney; 1.5.7 Prostate; 1.5.8 Vertebral Metastases; 1.5.9 Primary Spinal Tumors; 1.6 Conclusion; References; Chapter 2: History and the Technological Evolution of Stereotactic Body Radiotherapy; 2.1 Introduction 2.2 Clinical Evolution of SBRT2.3 Devices, Delivery System and Localization: Early Techniques and Technology; 2.4 Radiobiological Rationale and Its Impact on SBRT Techniques; 2.5 Evolution to Treat Other Sites; 2.6 Conclusion; References; Chapter 3: Stereotactic Body Radiation Therapy Systems; 3.1 Introduction; 3.2 System Components

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4.4.2 Simulation, Motion Management and Target Delineation
4.4.3 Dose Heterogeneity and Prescription Normalization; 4.4.4 Practical Considerations; References; Further Reading: Quality Assurance; Further Reading List: Treatment Planning; Chapter 5: Radiobiology of High Dose Fractions; 5.1 Introduction; 5.2 The Basic LQ Model; 5.3 Example of Simple LQ Modelling; 5.3.1 Allowance for "Straightening-Out" of the Dose-Response Curve; 5.3.2 Normal Tissue "Hot-Spots"; 5.4 Other Radiobiological Factors; 5.4.1 Tumour Repopulation; 5.4.2 Problems with Incomplete-Repair Following Large Dose Fractions
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5.4.4 Effect of Cell Cycle Re-Assortment and Re-Oxygenation; 5.4.5 Normal Tissue Volume Effects; 5.4.6 Tumour Volume Effects (and Volume Changes with Time); 5.5 Other Relevant Clinical Factors; 5.5.1 Co-Morbidity from Other Sources; 5.5.2 High-Let and RBE Issues for Hypofractionation; 5.6 Conclusions and Future Implications; References; Chapter 6: Planning and Dosimetry for Stereotactic Body Radiotherapy; 6.1 Introduction; 6.2 Basic Principles of SBRT Planning: Homogeneous Vs. Heterogeneous Planning; 6.3 General Concepts for SRS/SBRT Planning
6.4 Treatment Delivery Time

Sommario/riassunto

This practical guide covers the basic aspects of stereotactic radiotherapy systems and treatment. As an emerging field, stereotactic body radiotherapy (SBRT) offers image-guided radiation that is directed at extremely well-defined tumor targets within the body, delivering very high doses of radiation. Indications for SBRT have expanded extensively in recent years from intracranial treatment to extracranial, leading to the development of a thriving subspecialty within radiation oncology. The expertise on these methods is concentrated across a few centres, mainly in the USA. However, as the technique is increasingly being adopted worldwide, specialists require further training in using it. Stereotactic Body Radiotherapy – A Practical Guide provides a valuable aid for this purpose and is of particular interest to clinical oncologists and their trainees.
