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Nota di contenuto	Part I: Basic Science of Lung Cancer -- Genomic Alterations in Lung Cancer -- Epigenetic Events in Lung Cancer -- Part II: Clinical Investigations -- Interventional Pulmonology -- Pathology of Lung Cancer -- Role of Radiologic Imaging in Lung Cancer -- Place and Role of PET/CT in the Diagnosis and Staging of Lung Cancer -- Surgical Staging of Lung Cancer -- Part III: Basic Treatment Considerations -- Surgery in Lung Cancer -- Radiobiology of the Normal Lung Tissue and Lung Tumors -- Radiotherapy of Lung Cancer: Impact of Time, Dose, and Fractionation -- Medical Physics of Radiation Therapy of Lung Cancer -- Tumor Motion Control -- PET and PET/CT in Treatment Planning -- The Radiation Target in Non-Small Cell Lung Cancer -- The Radiation Target in Small-Cell Lung Cancer -- Radiation Sensitizers -- Radioprotectors and Chemoprotectors in the Management of Lung

Cancer -- Classic Chemotherapy for Lung Cancer -- Targeted Therapy for Lung Cancer -- Immunotherapy for Lung Cancer -- Combined Radiotherapy and Chemotherapy: Theoretical Considerations and Biological Premises -- Mechanisms of Action of Radiotherapy and Immunotherapy in Lung Cancer: Implications for Clinical Practice -- Part IV: Current Treatment Strategies in Early-Stage Non-Small Cell Lung Cancer -- Early Non-small Cell Lung Cancer: The Place of Radical Non-SABR Radiation Therapy -- Never-Ending Story: Surgery Versus SBRT in Early-Stage NSCLC -- Stereotactic Ablative Radiotherapy for Early-Stage Lung Cancer -- Role of Postoperative Radiation Therapy in Non-Small Cell Lung Cancer -- Photodynamic Therapy (PDT) as Treatment Option in Lung Cancer -- The Role of Thermal Ablation in the Treatment of Stage I Non-Small Cell Lung Cancer -- Part V: Current Treatment Strategies in Locally Advanced and Metastatic Non-Small Cell Lung Cancer -- Lung Dose Escalation -- Multimodality Treatment of Stage IIIA/N2 NSCLC - Why Always NO to Surgery -- Multimodality Treatment of Stage IIIA/N2 NSCLC: When YES to Surgery -- Combined Radiation Therapy and Chemotherapy as an Exclusive Treatment Option in Locally Advanced Inoperable Nonsmall Cell Lung Cancer -- Do New Drugs Offer Hope for Maintenance/Consolidation Therapy Given After Concurrent Radiochemotherapy? -- Prophylactic Cranial Irradiation in Locally Advanced Nonsmall Cell Lung Cancer -- Palliative Thoracic Radiotherapy of Non-Small Cell Lung Cancer -- Intraoperative Radiotherapy in Lung Cancer -- Brachytherapy for Lung Cancer -- Oligometastatic Disease – Basic Aspects and Clinical Results -- Part VI: Current Treatment Strategies in Small Cell Lung Cancer -- Radiation Therapy in Limited Disease Small Cell Lung Cancer -- Role of Thoracic Radiation Therapy in Extensive Disease Small Cell Lung Cancer -- Prophylactic Cranial Irradiation in Small Cell Lung Cancer -- Part VII: Treatment in Specific Patient Groups and Other Settings -- Role of Radiation Therapy for Lung Cancer in Elderly -- Lung Cancer Recurrence Treated with Radiation Therapy -- Treatment of Second Lung Cancers -- Radiation Therapy for Metastatic Lung Cancer - Brain Metastasis -- Radiation Therapy for Metastatic Lung Cancer - Bone Metastasis and Metastatic Spinal Cord Compression -- Radiation Therapy for Metastatic Lung Cancer - Liver Metastasis -- Advances in Supportive and Palliative Care for Lung Cancer Patients -- Part VIII: Other Intrathoracic Malignancies -- Thymic Cancer -- Mesothelioma -- Tracheal Tumors -- Pulmonary Carcinoid -- Part IX: Treatment-Related Toxicity -- Hematological Toxicity in Lung Cancer -- Radiation Therapy-Induced Lung and Heart Toxicity -- Spinal Cord Toxicity -- Radiation Induced Esophageal Toxicity -- Brain Toxicity -- Part X: Quality of Life Studies and Prognostic Factors -- Quality of Life Outcomes in Radiotherapy of Lung Cancer -- Importance of Prognostic Factors in Lung Cancer -- Part XI: Technological Advances in Lung Cancer -- Intensity-Modulated Radiation Therapy and Volumetric-Modulated Arc Therapy for Lung Cancer -- Image-Guided Radiotherapy in Lung Cancer with Kilovoltage and Megavoltage Treatment Planning and Delivery -- Heavy Particles in Nonsmall Cell Lung Cancer -- Heavy Particles in Nonsmall Cell Lung Cancer: Carbon Ions -- The Role of Nanotechnology for Diagnostic and Therapy Strategies in Lung Cancer -- Part XII: Clinical Research in Lung Cancer -- Translational Research in Lung Cancer -- Radiation Oncology of Lung Cancer: Why We Fail(ed) in Clinical Research? -- Randomized Clinical Trials: Pitfalls in Design, Analysis, Presentation, and Interpretation.

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#### Sommario/riassunto

This is the third, completely updated edition of a comprehensive book in which many of the world's leading lung cancer specialists discuss the recent advances in the radiation oncology of lung cancer and reflect on

the latest research findings in lung cancer and other intrathoracic malignancies. Lung cancer remains the major cancer killer in both sexes worldwide. It is so despite significant progress in recent decades in both diagnostic and treatment approaches. New biological and technological advances in this field are now faster incorporated in the overall decision-making process and are bringing fast and substantial improvements in both survivals and quality of life of lung cancer patients. Optimized patient-oriented approaches are reality of the third decade of this millennium and thoracic oncologists strive towards nothing but seamlessly delivering it in a continuous battle with lung cancer. The first three sections of the work cover the basic science of lung cancer, clinical investigations, including histology and staging, and a wide range of fundamental treatment considerations. Current treatment strategies for small cell and non-small cell lung cancer as well as other intrathoracic malignancies are then explained and evaluated in detail, with due attention to novel approaches that promise further improvements in outcome. The various types of treatment-related toxicity are discussed, and quality of life studies and prognostic factors are also considered. After evaluating the latest technological and biological advances, including stereotactic radiotherapy, and particle therapy, the book concludes by thorough consideration of specific aspects of clinical research in lung cancer. This concise yet comprehensive book is an invaluable resource for radiation oncologists.

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