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XI: Rare Tumors -- Choroid Plexus Tumors -- Hemangiopericytoma -- Stereotactic Radiosurgery for Hemangioblastomas -- NF2-Related Tumors and Malignant Peripheral Nerve Sheath Tumors -- Germ Cell Tumors -- Pineal Region Tumors -- Glomus Tumors -- Adult Medulloblastoma -- Intracranial Ependyoma -- Central Neurocytoma -- Section XII: Metastatic Brain Disease -- Neurosurgical Management of Single Brain Metastasis -- Multiple Brain Metastasis -- Preoperative Treatment for Brain Metastases -- Postoperative Treatment for Brain Metastasis -- Section XIII: Vascular Conditions of the CNS -- Vascular Malformation -- Trigeminal Neuralgia -- Section XIV: Radiation Associated Complications -- Brain Radionecrosis -- Spinal Cord Tolerance and Risk of Radiation Myelopathy -- Radiation Optic Neuropathy -- Hypopituitarism -- Neurocognitive Changes -- Cranial Nerve Palsies, Vascular Damage, and Brainstem Injury -- Section XV: Radiation Modalities Applied to CNS Tumors -- Advanced Neuroimaging for Brain Tumors -- 3-D Conformal Therapy and Intensity-Modulated Radiation Therapy/Volumetric Modulated ARC Therapy -- Linac-Based Stereotactic Radiosurgery and Hypofractionated Stereotactic Radiotherapy -- Gamma Knife® Stereotactic Radiosurgery and Hypo-Fractionated Stereotactic Radiotherapy -- Spinal Stereotactic Body Radiotherapy -- Proton Beam Therapy (for CNS Tumors) -- MR-LINAC for Brain Tumors -- Brachytherapy -- Novel Systemic Therapies for Brain Metastases.

Sommario/riassunto

This new edition elucidates the radiation therapy protocols and procedures for the management of adult patients presenting with primary benign and malignant central nervous system tumors. With the development of new treatment strategies and rapid advancement of radiation technology, it is crucial for radiation oncologists to maintain and refine their knowledge and skills. Dedicated exclusively to adult CNS radiation oncology, this textbook explores CNS tumors ranging from the common to the esoteric as well as secondary cancers of metastatic origin. The first half of the book is organized anatomically: tumors of the brain, spinal cord, leptomeninges, optic pathway, ocular choroid, and skull base. The second half covers primary CNS lymphoma, rare CNS tumors, metastatic brain disease, vascular conditions of the CNS, radiation-associated complications, and radiation modalities. This new edition is updated throughout and includes several new chapters, including: palliative radiation therapy for leptomeningeal disease, preoperative treatment for brain metastases, advanced neuroimaging for brain tumors, and MR-LINAC for brain tumors. Each chapter provides guidance on treatment field design, target delineation, and normal critical structure tolerance constraints in the context of the disease being treated. Learning objectives, case studies, and Self-Assessment questions and answers are incorporated throughout the book. This is an ideal guide for radiation oncologists, residents, and fellows, and medical students may also find value in the text.