1. Record Nr. UNINA9910300324703321 Autore Dolgushin Mikhail Titolo Brain Metastases: Advanced Neuroimaging / / by Mikhail Dolgushin, Valery Kornienko, Igor Pronin Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2018 **ISBN** 3-319-57760-3 Edizione [1st ed. 2018.] 1 online resource (XIII, 469 p. 480 illus., 80 illus. in color.) Descrizione fisica 616.0757 Disciplina Soggetti Neuroradiology Neurosurgery Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Clinical and Prognostic Value of Neuroimaging in Metastatic Brain Tumors -- Clinical Evaluation and Neuroimaging Methods -- MR-Characteristics of Brain Metastases of Different Primary Tumors -- CT-Perfusion in Diagnostic of Brain Metastases -- PET Evidence of Cancer throughout the Body and Brain -- Differential Diagnosis between Primary and Secondary Brain Tumors. Sommario/riassunto This book describes the role of advanced neuroimaging techniques in characterizing the changes in tissue structure in patients with brain metastases. On a large number of newly recognized CT, MRI, and PET characteristics of brain metastases from different primary tumors are highlighted, thereby elucidating the potential differential diagnostic role of CT perfusion imaging, MR spectroscopy, MR diffusion-weighted imaging, MR susceptibility-weighted imaging, and PET with different radiopharmaceuticals. For example, the different manifestations of metastases of melanoma, renal cell carcinoma, and ovarian cancer on MRI and CT perfusion imaging are described, and the role of MR susceptibility-weighted imaging in the differential diagnosis of glioblastoma multiforme and metastatic tumors is clarified. Metastases

of colon cancer have shown a special manifestation on T2 weighted images. The book also presents novel findings regarding pathogenesis and tumor biology and describes qualitative and quantitative changes

in tumor tissue and alterations in brain white matter due to

surrounding tumor growth. Neuroradiologists and others, including neurosurgeons, neurologists, and nuclear medicine physicians, will find that this book offers a fascinating insight into the ways in which newly available data on structural, hemodynamic, and metabolic changes are enriching the neuroimaging of brain metastases.