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Nota di contenuto	PART I BASICS: Tracers for Neurology -- Tracer-Kinetic Modeling -- Quantification in Brain SPECT: Noninvasive Cerebral Blood Flow Measurements -- Artificial Intelligence in the Analysis of PET scans of the Human Brain -- MRI/PET Imaging of the Brain -- The Default Network of the Brain -- Analysis of Brain Connectivity using PET, SPECT, and MRI -- PART II DEMENTIA: Neuroimaging Findings in Dementia -- Abeta Imaging -- Imaging of Tau Pathology -- Nicotinic Acetylcholine Receptors -- Neuroimaging Findings in Mild Cognitive Impairment -- Impact of the IWG/Dubois Criteria for AD in Imaging Studies -- Perfusion SPECT in the Diagnosis of AD -- Nuclear Imaging in Frontotemporal Dementia -- Parkinson Dementia: PET Finding -- SPECT/PET Findings in Lewy Body Dementia -- Vascular Dementia -- Value of MIBG in the Differential Diagnosis of Neurodegenerative Disorders -- PART III CEREBROVASCULAR DISORDERS: Perfusion Imaging in Healthy Human Ageing -- Carotid Plaque Imaging with SPECT/CT and PET/CT -- PET in Brain Arteriovenous Malformations and Cerebral Proliferative Angiopathy -- PET Reveals Pathophysiology in Ischemic Stroke -- PART IV MOVEMENT DISORDERS: Parkinson's Disease -- Computer-Aided Diagnosis of Parkinson Disease, Based on SPECT Scans of the Dopamine Transporter -- PET and SPECT Imaging in Parkinsonian Syndromes -- Amyotrophic Lateral Sclerosis -- PET in Huntington Disease -- PET and SPECT Imaging in Dystonia -- PET and

SPECT Imaging in Hyperkinetic Movement Disorders -- Clinical Applications of FP-CIT SPECT -- PART V INFLAMMATORY DISORDERS: PET Imaging of Microglia Activation in Neuropsychiatric Disorders -- PET Imaging in Multiple Sclerosis -- PET and SPECT Imaging of Neurotoxicity -- PET and SPECT in Hepatic and Uremic Encephalopathy -- PART VI EPILEPSY: PET in Epilepsy -- Neuroimaging of Epilepsy -- SISCOM: Subtraction Ictal SPECT Coregistered to MRI -- PART VII TUMORS OF THE NERVOUS SYSTEM: Gliomas -- Neuro-SPECT of Brain Tumors -- Methionine-PET to Distinguish Tumor Recurrence from Radionecrosis -- Brain Metastases of Neuroendocrine Tumors -- PART VIII OTHER SUBJECTS: Anesthesia and PET of the Brain -- Altered States of Consciousness: Coma, Sleep and Hypnosis -- Modulation of CNS Functions by Deep Brain Stimulation: Insights Provided by Molecular Imaging -- Imaging in Pediatric Neurology.

Sommario/riassunto

This book provides a comprehensive overview of the use of PET and SPECT in not only classic neurodegenerative disorders but also cerebrovascular disorders, brain tumors, epilepsy, head trauma, coma, sleeping disorders, and inflammatory and infectious diseases of the CNS. The new edition has been revised and updated to reflect recent advances and includes additional chapters, for example on the use of artificial intelligence and machine learning in imaging data analysis, the study of brain connectivity using PET and SPECT images, and the role of PET imaging in modulation of brain functioning by deep brain stimulation. The authors are renowned experts whose dedication to the investigation of neurological disorders through nuclear medicine technology has achieved international recognition. Most chapters are written jointly by a clinical neurologist and a nuclear medicine specialist to ensure a multidisciplinary approach. This state of the art compendium will be invaluable for neurologists and radiologists/nuclear medicine specialists and will also be informative for interested general practitioners and geriatricians. Companion volumes on PET and SPECT in psychiatry and in neurobiological systems complete a trilogy.
