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Nota di contenuto	pt. I BASIC ASPECTS OF HYBRID IMAGING TECHNOLOGY -- 1.Radiation Sources for Emission Scanning: Positron and Gamma Emission -- 2.PET Scanning: Principles and Instrumentation -- 3.SPECT Scanning: Principles and Technologic Options -- 4.Basics of CT Scanning and Issues Relevant to Hybrid Imaging -- 5.MR Scanning: Principles Relevant to Hybrid Imaging -- 6.Attenuation Correction for Emission Scanning -- 7.Options in Image Reconstruction in Hybrid Imaging -- 8. Image Coregistration and Coregistered Image Rendering -- 9. Quantifying PET and SPECT -- 10.Standardizing PET and SPECT for Quantitative Imaging -- 11.Minimizing Radiation Dose in Hybrid Imaging -- 12.A Primer in Compartment Modeling -- pt. II RADIOPHARMACEUTICALS -- 13.Clinical PET Radiopharmaceuticals Based on 18Fluorine -- 14.Clinical PET Radiopharmaceuticals Prepared from Cyclotron-Produced Positron Emitters Other Than Fluorine 18 -- 15.Clinical PET Radiopharmaceuticals Produced by Generators -- 16. Clinical SPECT Radiopharmaceuticals -- pt. III CLINICAL HYBRID IMAGING OF THE BRAIN -- 17.The Normal Brain Scan: Appearance and Data Analysis -- 18.Cerebrovascular Disease -- 19.Brain Tumors: Astrocytoma, Oligodendroglioma, and Glioblastoma -- 20.Brain Tumors: Other Primary Brain Tumors, Metastases, and Radiation Injury -- 21.Infections of the Central Nervous System -- 22.Epilepsy -- 23. Neurodegenerative Disease: Protocols, Normal Findings, and Pitfalls -- 24.Dementia --

25.Movement Disorders -- 26.Pediatric Hybrid Imaging of the Brain -- pt. IV CLINICAL MULTIMODALITY IMAGING OF THE HEART -- 27. Protocols, Data Analysis, Normal Scans, and Pitfalls in the Heart -- 28. Coronary Artery Disease: Perfusion -- 29.Coronary Artery Disease: Tissue Viability and Perfusion -- 30.Noncoronary Cardiac Disease -- pt. V CLINICAL HYBRID IMAGING IN BODY ONCOLOGY -- Section A PROTOCOLS, NORMAL FINDINGS, ARTIFACTS, AND PITFALLS -- 31. Artifacts in Hybrid Extended Region Scans -- 32.FDG Hybrid Imaging: Protocols, Normal Scans, and Pitfalls -- 33.Basics of Molecular Imaging of Prostate Cancer -- 34.Somatostatin Receptor SPECT and PET Imaging: Protocols, Normal Findings, Artifacts, and Pitfalls -- 35.Bone-Seeking Tracers: [99mTc]Diphosphonate SPECT/CT and [18F]Fluoride PET/CT -- 36.SPECT and PET Imaging of the Thyroid: Protocols, Dosimetry, Normal Findings, Artifacts, and Pitfalls -- 37.Sentinel Node SPECT/CT Imaging for Tumor Staging: Protocols, Normal Findings, Artifacts Pitfalls, and Clinical Applications -- Section B HEAD AND NECK TUMORS -- 38.Head and Neck Cancer -- 39.Tumors with an Unknown Primary (CUP) -- 40.Thyroid Cancer -- Section C TUMORS OF THE THORAX -- 41.Non-Small Cell Lung Cancer -- 42.Small Cell Lung Cancer -- 43.Malignant Pleural Mesothelioma -- 44.Mediastinal Tumors -- Section D TUMORS OF THE GASTROINTESTINAL TRACT -- 45.Esophageal and Gastric Cancers -- 46.Malignant Tumors of the Hepatobiliary Tract and Pancreas -- 47.Gastrointestinal Stromal Tumors -- 48.Neuroendocrine Tumors -- 49.Colorectal and Anal Carcinoma -- Section E BREAST CANCER AND GENITOURINARY TUMORS -- 50.Carcinoma of the Breast -- 51.Renal Tumors and Bladder Cancer -- 52.Tumors of the Female Genital Tract -- 53.Testicular Cancer -- 54.Prostate Cancer -- Section F TUMORS OF BONE, JOINTS, MUSCLES, SKIN, AND CONNECTIVE TISSUE -- 55. Malignant Bone Tumors -- 56.Bone Metastases -- 57.Benign Bone Tumors -- 58.Soft Tissue Sarcomas -- 59.Melanoma -- Section G TUMORS OF THE LYMPHATIC AND HEMOPOIETIC SYSTEMS -- 60. Malignant Lymphoma -- 61.Multiple Myeloma -- Section H RADIATION THERAPY -- 62.Radiation Oncology: Staging, Follow-Up, and Planning -- 63.Physiologic Basis of Inflammation Imaging -- 64.Soft Tissue Inflammation Including Vessels and Grafts -- 65.Musculoskeletal Infections -- 66.Infections in Patients with Orthopedic Implants -- 67. Rheumatologic Disease -- 68.Trauma -- 69.Parathyroid and Benign Thyroid Disease -- 70.Pulmonary Thromboembolism -- pt. VII CLINICAL HYBRID IMAGING IN PEDIATRIC PATIENTS -- 71.Special Considerations in Pediatric Patients -- 72.Pediatric Whole-Body Oncology -- 73.Pediatric Inflammation and Other Nonneoplastic Diseases.

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### Sommario/riassunto

This brand new book discusses the most relevant technique or combination thereof for each disease and provides guidance on which modality to use -It is a disease oriented reference meant for interpreting integrated imaging studies. While it focuses on PET-CT and SPECT-CT, it also integrates PET-MR where applicable. Features: Allows clinical hybrid imaging users to compare modalities and decide whether to use PET/CT, PET/MR or SPECT/CT to solve a clinical question. Focus on clinical applications sans technological & radiopharmaceutical details. Inclusion of emerging field of PET/MR. New PART III on workflow and normal scans with various clinical tracers. Only book that incorporates PET/MR in a systematic way.

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