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Nota di contenuto	Double pulmonary nodules -- Nodular sclerosing Hodgkin’s lymphoma -- Transformation in non-Hodgkin’s lymphoma -- Metabolic phenotypes in different neoplasms -- Marrow involvement in non-Hodgkin’s lymphoma -- Hip pain in lymphoma -- Prostate cancer specific PET agent with rising PSA -- Brain tumor evaluation -- Metabolic phenotypes in slowly growing lung cancers -- Metabolic phenotypes in lung metastasis from colon cancer -- PET and bone scan in non-small cell lung cancer (NSCLC) -- Neuroendocrine cancer of ileum -- Coexisting different PET tumor phenotypes -- COVID vaccination and lung nodules -- COVID vaccination and tumor phenotypes -- Breast and ovarian uptake -- Rising PSA in radical prostatectomy for prostate cancer -- Concurrent lung and brain metastatic cancer -- Tumor phenotypes in metastatic prostate cancer -- Metastatic recurrent melanoma -- Post-prostatectomy for prostate cancer with rising PSA -- Left adrenal mass -- Cutaneous T-cell

lymphoma -- Active myeloma versus Schmorl's node -- Small cell lung cancer -- Synchronous PEComa and lung adenocarcinoma -- Breast cancer after immunochemotherapy -- Squamous cell lung cancer -- Lymphoma and breast cancer -- Prostate cancer -- Neurofibromatosis and cerebellar encephalomalacia -- Mucinous Colonic Adenocarcinoma -- Poorly differentiated gastric cancer with signet-ring cell features -- Granulomatosis disease involving lung, lymph nodes, and multiple bones -- Lung nodules in esophageal cancer -- Squamous cell cancer (SCC) of neck -- Metastatic prostate adenocarcinoma -- Mesothelioma -- Recurrent papillary thyroid carcinoma -- Newly diagnosed prostate adenocarcinoma -- Alveolar rhabdomyosarcoma with a favorable response to chemoradiation -- CNS post-transplant lymphoproliferative disease -- Solitary plasmacytoma -- Parotid oncocytic carcinoma -- Pelvic sarcoma with IVC metastatic thrombus -- Diffuse muscle uptake and vigorous exercise -- Post-excision residual urothelial carcinoma -- Phenotypic pattern of Erdheim-Chester disease (ECD) -- Different metabolic phenotypes in renal clear cell cancer and cervix cancer -- Bladder adenocarcinoma with chemoresistance -- Wax-and-wane metabolic activities of low-grade lymphoma -- Reactive adenopathy in treated classic Hodgkin's lymphoma -- Chemo-refractory diffuse large B cell lymphoma (DLBCL) -- Primary cutaneous DLBCL, leg type (PC-DLBCL LT) -- Primary pulmonary MALT lymphoma -- Concurrent low-grade follicular lymphoma (LG FL) and DLBCL -- Primary bone lymphoma (PBL) -- Lymphomatoid granulomatosis (LYG) variant of DLBCL -- Secondary central nervous system lymphoma (SCNSL) -- Complete discordant PET in pathologically diagnosed low grade lymphoma -- Transplant-related B-cell lymphoma -- Bone lesions in primary breast lymphoma -- Recurrent gastrointestinal stromal tumor (GIST) with necrosis -- Peritoneal mesothelioma -- Cutaneous Kaposi sarcoma -- FDG-avid and non-FDG-avid multiple myeloma (MM) -- Advanced pancreatic cancer with abdominopelvic carcinomatosis -- Advanced breast cancer with extensive bone metastases -- Concurrent lung cancer and endocervix cancer -- Inflammatory breast cancer -- Recurrent high-grade urothelial carcinoma -- Primary thyroid lymphoma (PTL) -- High-grade tonsillar large B-cell lymphoma -- Phenotypic pattern of primary renal DLBCL with double expressor -- Recurrent primary colonic lymphoma (PCL) -- Maxillofacial extra nodal marginal zone malignant B-cell lymphoma -- Primary dural lymphoma with leptomeningeal involvement -- Primary CNS lymphoma (PCNSL) -- Primary gastric lymphoma -- Residual primary prostate lymphoma -- PET SuperScan -- Diffuse idiopathic pulmonary neuroendocrine cell hyperplasia (DIPNECH) -- Metastatic ovarian carcinoma -- Metastatic prostate cancer or neuroendocrine tumor? -- Metastatic thyroid carcinoma -- Primary invasive ductal breast cancer or metastatic neuroendocrine cancer? -- Atypical oligo-metastasis of malignant melanoma -- Dual-time PET CT evaluation of lung nodules -- Phenotypic pattern of combined large cell neuroendocrine cancer and SCC -- Primary pulmonary amyloidosis -- Advanced follicular dentritic cell sarcoma -- Oligometastatic prostate cancer -- Bulky primary mediastinal non-Hodgkin's lymphoma -- Pulmonary sarcoid or recurrent lung adenocarcinoma? -- Oligo- or multiple bone metastases in newly diagnosed prostate cancer -- Reactive lymph nodes and granulomas associated with breast implant rupture -- Metabolic phenotypes of anaplastic thyroid carcinoma and metastases -- Male breast carcinoma -- Advanced HCC featured by IVC/right atrium tumor thrombus -- Phenotypes of lung cancer and pulmonary lymphangitic carcinomatosis.

Sommario/riassunto

This casebook details key information and findings in PET oncology

imaging. PET CT has been increasingly utilized in clinical practice for diagnostic evaluation, initial staging and restaging of malignancies, and plays an important role in optimal patient care. Although F-18 fluorodeoxyglucose (FDG) is still the dominant radioactive tracer in oncology PET imaging services, a handful of new tracers have recently gained the US FDA approval, such as Ga-68 or Cu-64 DOTATATE for carcinoid/neuroendocrine tumors, and F-18 Fluciclovine (AXUMIN) and PSMA for recurrent or metastatic prostate cancers. Clinical interpretation of PET CT oncology scans is often challenging, due to the specific nature of these positron emission radioactive tracers, variable background tracer activities in different organs/tissues with normal variants, complex tumor biology, and wide-ranged treatment responses, especially with emerging and new molecular and immune therapy agents. This book serves as a hands-on casebook on how to interpret oncologic PET CT studies in clinical services with a special emphasis on phenotypic nature of oncologic imaging. Clinical cases are presented in a way that is familiar to physicians from their training in nuclear medicine services. Each case starts with key clinical information or background, followed by well-displayed PET CT images, along with pertinent questions highlighting the key findings and explanation, as well as the importance in diagnosis and clinical implications on separate pages. Clinical and imaging key findings and final impressions are highlighted throughout along with qualitative and quantitative demonstrations of phenotypic nature of modern PET imaging. Written by two nuclear medicine PET specialists with decades of first-hand clinical experience, this is an ideal guide for nuclear medicine attending physicians, diagnostic radiologists, medical and surgical oncologists, and relevant trainees.