

---

## Atlas of PET/CT Imaging in Oncology

J. Czernin, M. Dahlbom, O. Ratib, and C. Schiepers, eds.

New York, NY: Springer-Verlag, 2004, 315 pages, \$149

## PET–CT: A Case-Based Approach

P.S. Conti and D.K. Cham, eds.

New York, NY: Springer-Verlag, 2005, 304 pages, \$149

PET provides the means to translate biology, biochemistry, and pharmacology as well as laboratory assays into examinations of living subjects. It is a quantitative imaging technique that can measure the tissue concentration of the imaging probe over time. The literature shows that PET is more accurate than anatomic imaging for diagnosing, staging, and restaging cancer and for assessing therapeutic responses. PET/CT presents a picture of human anatomy on which biologic information within the body structures is added. The technique has rapidly gained clinical acceptance because its accuracy is better than that of PET or CT alone. Interpretation requires a clear understanding of the sites of metabolic activity revealed on  $^{18}\text{F}$ -FDG studies in various pathologic states as well as normal and physiologic variations.

*Atlas of PET/CT Imaging in Oncology* provides a thoughtful and well-illustrated educational approach for defining the principles and proper use of PET/CT. The atlas is divided into 2 parts. Part I deals with the clinical and technical principles of PET/CT and the normal patterns and pitfalls of  $^{18}\text{F}$ -FDG PET. Part II contains 13 chapters, covering imaging artifacts, physiologic variants, anatomic masses, cancer of head and neck, solitary pulmonary nodules, lung cancer, gastrointestinal cancer, lymphomas, skin cancer, breast cancer, gynecologic cancer, genitourinary cancer, and benign diseases. The atlas is well bound and well printed, with 647 excellent figures. A special feature is an interactive CD-ROM that displays the original PET and CT images of each case. Users can also display the clinical history, imaging techniques, and diagnostic findings of each case, as well as the corresponding specific teaching point. The atlas is designed to teach radiologists and nuclear physicians about the important aspects of  $^{18}\text{F}$ -FDG PET findings in oncology and the benefits of anatomic imaging. Included are a brief didactic portion and an extensive selection of interesting and challenging cases. The clinical

presentations of various cancers are systematically illustrated from diagnosis to staging, recurrence, and therapeutic response. The atlas will certainly be useful to diagnostic radiologists, nuclear physicians, and oncologists and to their students, residents, and fellows for the better management of cancer patients.

*PET/CT: A Case-Based Approach* demonstrates practical examples of cases imaged with  $^{18}\text{F}$ -FDG on a state-of-the-art, dedicated PET/CT device. The case method of teaching is still valid as new modalities are developed and introduced into medical practice, and clinical cases of various cancers, epilepsy, infection, and cardiac diseases are presented in part II of the book. The final chapter discusses PET/CT applications using  $^{18}\text{F}$ -fluoride, which is useful in delineating normal and abnormal bony lesions. Capabilities and limitations are discussed in the context of specific problems and patients. Correlative 3-dimensional PET and CT sectional images highlight pathologic findings. Detailed histories and imaging findings are given in each case to demonstrate the level of detail needed for proper image interpretation. Insightful discussions and “pearls and pitfalls” are included to assist in a better understanding of pathology, diagnosis, and imaging approaches. There are 472, relatively small, illustrations to demonstrate most types of cancer, with attention paid to specific problems with each type. The book has 2 appendices, one briefly reviewing reimbursement policies and another focusing on instrumentation. This unique book certainly meets the immediate need of diagnostic radiologists, nuclear physicians, oncologists, and their trainees wishing to optimize their interpretation of PET/CT.

**E. Edmund Kim, MD**

*University of Texas M.D. Anderson Cancer Center  
Houston, Texas*