Preface

PET-CT: A Case-Based Approach, Second Edition, provides practical clinical examples of studies performed with FDG on a state-of-the-art dedicated PET-CT device. Detailed histories and correlative imaging findings are given in each case to demonstrate the level of detail required for image interpretation and the capabilities of this instrumentation. Impressions are followed by relevant discussion points designed to provide novice as well as experienced readers a brief but concise summary of the advantages and limitations of using this technology in the clinical setting. Images are presented in PET only, CT only, and fused format to highlight the advantages of this hybrid technology in displaying the spectrum of normal and pathological findings in the cases selected.

Chapter 1 explores the fundamentals of PET-CT imaging with FDG, including normal physiology, normal variants, and technical artifacts. Chapters 2–10 discuss a spectrum of clinical applications in oncology, such as common malignancies involving the lung, breast, and colon and less common cancers, such as adrenal and germ cell tumors. Chapter 11 details the use of F-18 NaF in diagnosing prostate, breast, and lung cancers and presents cases in which this method is deployed with nonmalignant findings. Chapters 12 and 13 examine brain tumors and general neurological applications such as epilepsy. Pediatric imaging cases with both benign and malignant findings are discussed in Chapter 14. Cardiac and granulomatous disease applications are described in Chapters 15 and 16. Finally, Chapter 17 highlights images of newer PET-CT tracers.

This book is ideal for nuclear medicine practitioners, radiologists, residents/fellows, and referring clinicians interested in learning more about how this medical imaging technology can be applied in their patient populations.

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