

Atlas of SPECT-CT

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SPECT is an imaging technique that uses a γ -camera to generate a functional 3-dimensional image of the distribution of a photon-emitting radionuclide within the body, whereas CT uses an external source of x-rays to produce anatomic 3-dimensional images. Therefore, hybrid SPECT/CT provides both functional and anatomic images, and it can also accurately correct SPECT images for attenuation. It precisely localizes and characterizes any functional abnormality seen on CT. High-resolution CT may demonstrate a small (<1 cm) lesion, which is generally beyond the resolution of current γ -cameras. The recent development of ultrafast and high-resolution SPECT/CT cameras with cadmium zinc telluride detectors opened a new revolution for nuclear medicine and molecular imaging because of the possibility of performing multiple-time-point imaging studies, which are vitally important to understanding biologic processes.

Although *Atlas of SPECT/CT* was published 7 years ago, it may be the only atlas-type book on SPECT/CT. It completes a trilogy offering information and guidance on SPECT/CT, and it includes contributions by 50 acknowledged experts who consider and assess the full range of potential SPECT/CT applications in clinical routine.

The book is organized into 13 chapters, with chapters 1 and 2 dealing with clinical importance and technology, respectively. The

following 9 chapters discuss imaging of tumors, bone, brain, heart, parathyroid gland, sentinel nodes, infection, red blood cells, and lung, with good practical cases using high-quality images and teaching points. The last 2 chapters present radiation therapy planning and dosimetry using SPECT/CT. The book is easy to read and includes a user-friendly guide to the optimal use and interpretation of SPECT/CT. The suggested readings or references in each chapter are useful, as is the index.

Atlas of SPECT/CT is designed to serve as a reference text for both nuclear physicians and radiologists. It also provides fundamental support for radiographers and technologists, as well as nuclear medicine and radiology trainees. I highly recommend this book to such individuals, and I express the hope that it will soon be revised with images from newer SPECT/CT systems using cadmium zinc telluride crystals.

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