Hojjat Ahmadzadehfar and Hans-Jürgen Biersack (Eds): Clinical Applications of SPECT-CT

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“Clinical Applications of SPECT-CT” is edited by Hojjat Ahmadzadehfar and Hans-Jürgen Biersack of the University Hospital in Bonn, Germany. The name of Prof. Biersack, who is known worldwide for his academic and scientific achievements, is an editorial guarantee of high quality. His “Clinical Nuclear Medicine”, edited with Leonard M. Freeman for Springer, remains one of the best reference books that has to be present in the library of a nuclear medicine department. “Clinical Applications of SPECT-CT” is a book dedicated to a field in which there are certainly a lower number of publications in comparison with those concerning PET/CT. It therefore helps fill a space still fairly empty, although there is emerging interest in this less diffuse hybrid approach that significantly improves diagnostic accuracy when using gamma emitters.

The book, comprising 304 pages and 112 illustrations, 92 of them in colour, is divided into 14 chapters. The opening chapters describe physics and technological aspects, and also discuss the potential role of SPECT/CT in obtaining accurate individual dosimetry in internal radiotherapy. The remaining chapters present an overview of clinical applications, with the main emphasis on the role of this dual modality imaging technique in oncology: endocrine and neuroendocrine tumours are accurately localized and better characterized by SPECT/CT, as also are bone lesions, sentinel nodes, solitary pulmonary nodules and lung cancers. However, SPECT/CT is not just advantageous in oncology. This hybrid imaging is an appropriate technique for the detection of a wide spectrum of skeletal pathologies, from malignant conditions to trauma, infection and benign diseases. Similarly, the combined use

of scintigraphic and radiological images can significantly improve the diagnostic and prognostic profile of cardiovascular patients. A chapter on an original topic supports the use of radioembolization with yttrium-90 microspheres as a suitable approach to the imaging of liver tumours, using bremsstrahlung. Finally, the last chapter highlights the potential clinical applications of integrated SPECT/CT in neurology, infection and aseptic inflammation imaging, also discussing its role in radiation planning.

The book is centred on the major clinical application of today, i.e. oncology, so perhaps future editions should give more space to non-oncological diseases, especially neurological diseases. In the near future brain SPECT/CT could become a clinical tool in many neuropsychiatric conditions, finding a role in diagnosis, prognosis assessment and risk stratification, evaluation of response to therapy, and differential diagnosis of recurrence.

Each chapter is accompanied by a complete and up to date bibliography, and highlights the advantages and limits of combined SPECT/CT in each indication. It has a wide range of images combined with complete captions and there are many diagrams and tables, which easily make this book suitable for nuclear medicine physicians, radiologists and clinical practitioners, either consultants or residents. Thanks to the simple language used by the authors, it should be a valuable addition to university, hospital and personal libraries. In our opinion the book is very useful and it will promote a better understanding and an improved utilization of this new technique for the benefit of patients.

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