

BOOK REVIEWS

SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHY AND OTHER SELECTED COMPUTER TOPICS. New York, Society of Nuclear Medicine, 1980, 244 pp, illustrated, members SNM \$18.00; nonmembers \$27.50

The book is a collection of papers presented at the 10th Annual Symposium, Society of Nuclear Medicine Computer Council, which was held in Miami Beach in January, 1980. As the title suggests, most of the papers deal with the subject of emission computed tomography—both longitudinal and transverse. Also included are a number of papers on a variety of subjects that are computer related.

The subject of longitudinal, single-photon, computed tomography is covered thoroughly in chapters on the seven-pin-hole tomographic system, bilateral and quadrant slant-hole collimator systems, and the Anger tomographic scanner (Pho/Con). These six papers describe the physical performance parameters, and some compare various approaches.

Transverse section imaging is discussed in five chapters that include descriptions of rotating camera systems and a single-slice multidetector system (CLEON). Although an introductory chapter discusses the general principle of convolution backprojection, the others deal with very specific problem areas.

Other computer-related subjects range from quantification of left-to-right cardiac shunts, to a description of a three-dimensional display and iron-59 whole-body retention analysis. Many of these papers are well written and contain valuable information, but appear to be misplaced. For example, I would not have expected to find information on counting losses and Anger camera pile-up rejection in this volume.

Throughout my reading of this book, I was struck by the fact that much of the information had been already published. Although some of the authors made an obvious attempt to include only material not published before, others built on previously published material and added small sections that were new. While it has become distressingly common for investigators to use the same set of slides in many oral presentations on the argument that at least a few members of the audience may not have seen all of them, it is an alarming trend when the same figures and text reappear in publication after publication.

This book provides a quick overview for those who are becoming interested in single-photon computed tomography and contains some interesting detail for those who are working in the field.

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NUCLEAR MEDICINE: HEPATOLIENAL. B. Rothfeld, Ed. Philadelphia, Toronto, J. B. Lippincott Co., 1980, 255 pp, illustrated, \$45.00

This book compiled by Dr. Benjamin Rothfeld has 24 contributors. With the previous experience of both editor and authors, one could predict a favorable outcome. There is some redundancy, as expected in a multiauthored text, but this may aid readers who dwell on a single chapter. The repetition was particularly noticeable in the immunologic discussions on the viral hepatitis antigens and on the technique of imaging. I found the first four chapters on liver anatomy and imaging of greatest clinical value. I even searched for defects rather than plaudits. What does the book say about the difficulty in the diagnosis hepatic hemangioma? There

it was in the index and succinctly answered on page 54, “. . . many hemangiomas have prominent blood pool activity in the late images, contrasted with relatively little early perfusion in dynamic images.” The authors do not hesitate to point out situations where other imaging modes are of equal or greater value, e.g., ultrasound, CT, and contrast angiograms.

Even a good book, however, has its faults. The chapters are uneven in quality. I would like to see more than a paragraph written on splenic trauma, especially in a book that devotes chapters to: (a) radioassay of bile acids, alpha-fetoprotein, and carcinoembryonic antigen; (b) uses of C-14 for clinical studies of albumin and protein synthesis; and (c) clinical radioactive breath tests. My personal experience has not shown that “50% of patients with metastases have the classical ‘tumor stain’ on scintangiography of the liver” (page 84). This comment appears to contrast with the statement that the “arterial supply to metastatic cancers is usually scanty” (page 124). Another author states that “radionuclide scanning, CT, and ultrasonography are relatively inexpensive.” Relative to what?

The book is directed to a wide audience, and I enjoyed reading it. The chapters on parenchymal cell localizing agents (3) and viral hepatitis (9-11) are worth the price of the entire book. Perhaps we are all drowning in a sea of knowledge, but some broader base is required to interpret our data, which includes the useful and unexpected clinical information contained in this book. The text has very few typographical errors and is of excellent quality.

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QUALITY ASSURANCE OF RADIOPHARMACEUTICALS—A GUIDE TO HOSPITAL PRACTICE. (A special issue of *Nuclear Medicine Communications*) M. Frier, S. R. Hesslewood, Eds. London, Chapman and Hall (in association with the British Nuclear Medicine Society), 1980, 57 pp

“The document is intended to give guidance to all persons involved in the preparation and use of radiopharmaceuticals on method used in quality assurance and their application,” quoting the editors in their preface. This little monograph is very handy, but it is insufficient as a general reference book and does not contain cited references. Some of the information provided differs from the traditional practices of radiopharmacy in the U.S. and other countries.

The book discusses, in outline form, the quality-control parameters and the process controls used to assure radiopharmaceutical quality. The general discussion includes six tables, some of which are highly useful, such as Table 5—Chromatography Systems, which lists procedures determining the major radiochemical impurities in the most common radiopharmaceuticals. R_f values of the impurities are listed. The last part of the book is a series of 30 compendium-like monographs for the quality-control testing of common radiopharmaceuticals.

A group of 19 individuals contributed to the compilation, so the procedures probably represent an accurate survey of radiopharmaceutical quality-control practices in Great Britain. I find that the lack of references limits the usefulness and credibility of the methods and standards. For example, the expiration time of sodium pertechnetate is given as 8 hr with storage at 2-4 °C. I am not aware of data or literature reports that validate this recommen-