

CARDIOVASCULAR NUCLEAR MEDICINE.

K.P. Lyons, Ed. CT, Appleton and Lange, 1988, 334 pp, \$75.00

This multiauthored (mainly from Southern California) book is "intended for the practitioner of cardiovascular nuclear medicine". It is a comprehensive, if succinct, guide to the practical application of nuclear medicine to cardiac diagnosis. The various chapters, typically written by those easily recognizable as experts, cover in detail the usual topics including gated cardiac scintigraphy and myocardial perfusion imaging. Clearly important or controversial topics are broken down into greater detail including discussions of both right and left chamber evaluation, and both planar and single photon emission computed tomography thallium imaging. Included are discussions of radiopharmaceuticals, instrumentation, peripheral perfusion imaging, and positron emission tomography imaging.

I found the book both interesting and useful. The individual chapters, which seem fairly evenly written, are reviews of "state of the art" imaging with extensive references to the literature. Each is not long but provides adequate information so that a relatively quick reading will "bring one up to speed". The discussions of "Short-Lived Generator Produced Radiopharmaceuticals" and "Pediatric Cardiovascular Nuclear Medicine" are nice additions. Some chapters provided clinical imaging protocols for specific examinations that are useful either to a beginner or to one who would like a comparison to existing methods.

The book is not without fault, however, as the reproduction of some illustrations especially in the chapters on left ventricle scintigraphy, planar thallium, and pyrophosphate imaging are not well done and seem indistinct.

This book would seem especially useful to those initially learning about the field such as radiology or nuclear medicine residents and as a resource in both departmental and hospital libraries especially as a quick reference. Although interesting, it probably is not really intended for those active in cardiovascular nuclear medicine and who are "up on the literature".

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MAGNETIC RESONANCE IMAGING: BASIC PRINCIPLES.

S. W. Young, New York, Raven Press, 2nd Edition, 1988, 282 pp, \$39.00

This book is an all-encompassing review of the basic physics and clinical applications of magnetic resonance imaging (MRI). In addition, its ten chapters include discussions of MRI hardware, hazards, site planning, gray scale in MRI: "What does it mean", as well as, the economics of MRI. A glossary, complete bibliography, appendix of pulse sequences, and an atlas of MRI anatomy are also included in this basic, but complete, work. The author states that the book is in-

tended for a "broad spectrum of health care professionals"; however, it appears to be geared primarily for the novice MRI physician, who has some familiarity with MRI. The discussion, in Chapter 3, of the physical basis of MRI is well written, with many excellent analogies, but most physicists and some physicians will find it somewhat lacking in detail regarding certain key aspects of MRI physics, particularly in the discussion of the relationship of angular momentum and charge to the nuclear magnetic moment and in the discussion of free induction decay.

An entire chapter is devoted to the mechanisms that contribute to gray scale in MRI, from both a imaging (pulse sequence) and fundamental biochemical perspective, and it provides a welcome addition to a complete discussion of nuclear magnetic resonance (NMR) imaging. The wide range of clinical applications of MRI are discussed in very brief order in Chapter 6. Chapter 6 entitled "Clinical Applications of MRI" is perhaps misnamed, as it presents a wide range of topics such as motion and flow, and artifacts in MRI. Clinical applications of MRI and image interpretation are provided through review of the more than 100 clinical examples presented in this book. The clinical applications of MRI are explained primarily through the use of extensive figure captions for each case study. Finally, newer aspects of MRI are discussed in the "New Horizons" chapter, including NMR spectroscopy, chemical shift imaging, and "fuzzy-cluster analysis." This work presents a good basic discussion of virtually every aspect of MRI and will serve as a good introduction to MR imaging, particularly for the radiology/nuclear medicine resident and the medical physics student.

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PRINCIPLES OF RADIOPHARMACOLOGY.

H. Deckart, P. H. Cox. Kluwer Academic Boston Publishers Group/Martinus Nijhoff Publishers, 1988 262 pp, \$67.00

"Principles of Radiopharmacology" is a collection of invited review articles based on a series of lectures presented at the First and Second Training Courses in Radiopharmacy and Radiopharmacology that were organized by both European societies of nuclear medicine. Published in 1987, the preface states "Recent developments in radiopharmacy and radiopharmacology have been very complex; they cannot be overlooked . . ."; unfortunately, this text fails in almost all of its chapters to describe adequately and clearly the developments and "provide access to recent research" to the reader.

The book consists of 22 chapters covering the fundamentals of radioactivity, isotope production, generators, technetium and indium radiopharmaceuticals, protein labeling, stable isotopes, radiopharmacy, and radiopharmacology. Only three of the chapters (Chapter 8: "Technetium-99m Radiopharmaceuticals: Their Chemical Potential and Limitations," and Chapter 13: "Principles, Problems and Trend in Radiopharmacology," both authored by Bernd Johannsen, and Chapter 16: