

1987 YEAR BOOK OF DIAGNOSTIC RADIOLOGY.

D.G. Bragg, Ed. Chicago, Year Book Medical Publishers, Inc., 1987, 582 pp, \$44.95

The year book is a collection of 356 abstracts of diagnostic radiology articles with brief editorial comments after each abstract. The book is written for practicing diagnostic radiologists, *not* nuclear medicine specialists. (There is a separate Year Book of Nuclear Medicine for nuclear medicine practitioners.) Only three articles mention conventional scintigraphy. Many articles focus on magnetic resonance imaging. The book is organized in seven chapters, each edited by a subspecialty expert who chose the articles. The chapters are neuro-radiology, cardiovascular and interventional radiology, the thorax, the abdomen, the musculoskeletal system, pediatric radiology and radiation physics. The chosen articles are a good sampling of the radiologic literature from mid-1985 through the end of 1986. The personalities and views of the editors enliven the abstracts, which by their nature are dry reading.

The abstracts contain central points of the articles and enough information to let the reader decide whether to go to a journal for the complete article. There are additional references for many of the topics, as well as an index. The illustrations are sparse and reduced in size, i.e., "abstracted" illustrations. The paper, printing and binding are very good.

This \$44.95 book is recommended for diagnostic radiologists who want a quick overview of worthwhile journal articles they may not be familiar with.

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1987 YEAR BOOK OF NUCLEAR MEDICINE.

P.B. Hofer, J.C. Gore, A. Gottschalk, D. Sostman, and B.L. Zaret. Chicago, Year Book Medical Publishers, Inc., 1987, 372 pp, \$44.95

The 1987 *Year Book of Nuclear Medicine* continues the fine tradition set by its predecessors. Abstracts of articles that have appeared in more than 50 international journals have been selected for inclusion in this year's edition of the *Yearbook*.

After an introductory essay by William H. Beierwaltes, MD, on the clinical application of iodine-131 label metaiodobenzylguanidine (MIBG) for imaging pheochromocytomas and other adrenergic tissues, there are 15 sections largely devoted to the clinical applications of nuclear medicine for imaging various body systems and for oncologic and inflammatory conditions, magnetic resonance imaging, physics and instrumentation, radiochemistry and radiopharmacy, and health physics.

Fifty-eight pages are devoted to magnetic resonance, more than any other single section. This section includes material on most of the technical innovations that have occurred in this rapidly changing field and the section editors have added

pertinent comments regarding their experience with some of these new techniques. The next largest section (50 pages) is devoted to the cardiovascular system. Almost 40% of the articles reviewed deal with the clinical applications of thallium-201 myocardial perfusion scintigraphy; a relatively small number of pages are devoted to experimental cardiac studies using PET. The remainder of the volume appears to be appropriately apportioned among the remaining subjects.

In general, the abstracts are well prepared and concise. More space is appropriately devoted to the articles deemed of special importance by the editors. The illustrations have been well chosen and are well reproduced. The editors of the cardiovascular and magnetic resonance sections, however, have failed to include illustrations in these two sections, perhaps so that more abstracts could be included in the available space.

This *Yearbook* should prove valuable as a quick reference to the recent literature to anyone performing clinical nuclear medicine studies and I recommend its inclusion in all nuclear medicine libraries.

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NONINVASIVE IMAGING OF CARDIAC METABOLISM.

E.E. van der Wall, Ed. Dordrecht, Martinus Nijhoff Publishers, 1987, 311 pp, \$105.50

This 14-chapter volume written by an international group of noted investigators is a comprehensive treatise about myocardial metabolism, the agents used, developments and complexities of imaging cardiac metabolites. It is intended to assist cardiologists, nuclear medicine physicians, and radiochemists interested in serious investigations of the metabolic factors of heart disease. While each chapter is an independent discourse of the specific subject matter, there is a cohesive theme throughout about current theories of cardiac metabolism, progress, controversies, and problems. Repetition has been kept to a minimum and it reads in a logical progression beginning with an overview of the entire field of nuclear cardiology and ending with the clinical potentials of magnetic resonance imaging and positron emission tomography. The book is not concerned to any large extent with planar thallium-201 or technetium-99m imaging and does not present radionuclide production, separation chemistry or radiopharmaceutical preparation. With few exceptions, it follows the theme of cardiac metabolism, the advances and difficulties in quantitative assessment of metabolites, preclinical and clinical studies and is very well referenced.

Chapter 1 is an excellent comprehensive introduction to radioagents used in all phases of nuclear cardiology including clinical applications. It covers agents and their rationale for infarct detection, perfusion scintigraphy, cardiac blood pool as well as metabolic agents. The next eight chapters cover the

development, metabolism, pharmacokinetics, clinical rationale and imaging of radiolabeled free fatty acids and their derivatives. Chapter 3 explores the effect of structural changes, unsaturation, chain length and label position on myocardial activity and residence times. Chapter 9 presents particularly interesting treatments of directed iodination using iodometallation reactions and the metabolic effect of fatty acid branching. It is the only chapter which covers synthesis of the labeled fatty acids in any detail and suggests chemical alterations to increase myocardial uptake and retard catabolism producing potential myocardial imaging agents. Several chapters are devoted to cardiac PET which include some technical aspects of positron annihilation imaging, mathematical models and clinical studies. Current usefulness and potential of NMR spectroscopy of various nuclei is explored in two chapters. In the last chapter, the sensitivity of PET and MRI is examined and compared to evaluate the relative abilities of both techniques for in vivo quantitation.

The book is printed on quality paper and the numerous figures and reproductions are well done and clearly explained. Personal copies of the text will be valuable to nuclear cardiologists, nuclear medicine physicians practicing in a research

institution and nuclear medicine scientists interested in understanding and developing metabolic cardiac agents. Due to the importance of metabolic changes signaling cardiac disease, the text should be accessioned by medical libraries for use by cardiologists and their residents.

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Books Received

NCRP Report No. 89: Genetic Effects from Internally Deposited Radionuclides. Bethesda, NCRP Publishers, 1987, 48 pp, \$15.00

NCRP Report No. 93: Ionizing Radiation Exposure of the Population of the U.S. Bethesda, NCRP Publishers, 1987, 87 pp, \$15.00

Prenatal Diagnosis of Congenital Anomalies. R. Romero et al. East Norwalk, Appleton & Lange, 1987, 466 pp, \$79.95