Nuclear Medicine Annual 1993. L.M. Freeman, editor. Raven Press, New York, 269 pages, $105.00.

This series, which has existed since 1980, consists of single volumes each containing seven to eight articles relevant to the practice of nuclear medicine. Along with the *Journal of Nuclear Medicine, Seminars in Nuclear Medicine* and the *Yearbook of Nuclear Medicine*, these volumes have been an off-the-shelf resource for practitioners, trainees and academic staff. The editor has been effective in mixing in-depth clinical reviews on commonly used procedures with reports on methods restricted to a few research centers.

Late in 1992, a radiolabeled monoclonal antibody was approved by the FDA for tumor imaging, hence the lead article in this year's *Annual* on radiolabeled antibodies. After a brief overview of the options for this type of antibody and isotope, a very hopeful argument with supporting data is given for the role of immunoscintigraphy in detecting occult recurrent malignancy and its use as a supplement to other modalities in the initial evaluation of a patient.

A short article on functional brain imaging in dementia, written by pioneers in SPECT brain imaging, is brief on technique but specific about application. It includes an excellent section on their experience in imaging Alzheimer's disease. Though concise, this article contains 123 references from recent literature and is crystal clear about functional imaging in dementias of all types.

There are also wonderfully detailed and useful chapters on radionuclide infection imaging, on nuclear medicine in HIV related disease (updated from the 1990 *Annual*), and on radioaerosol imaging. The review of infection imaging is an excellent summary of the work being performed in research facilities today. The HIV paper contains a myriad of data, including a very useful section on "patient exposure to HIV during nuclear medicine procedures." The aerosol paper is encyclopedic on technique and application, and contains many illustrations to document the text. A potentially useful article on myocardial imaging is slightly tarnished by unevenness in the quality of the pictures and figures used to illustrate pitfalls and artifacts. The authors were constrained by having to use cases that had been published previously from other institutions, however, they manage to effectively summarize the known problems in myocardial perfusion imaging.

This year the esoteric review is on imaging the adrenergic nervous system of the heart, and is well written by a leader in that subject. The heart images do not add to this paper, however, anyone with an ounce of curiosity about heart function after transplantation or about resting normal heart function will find some pleasant intellectual stimulation here.

The *Annual* series could be improved by the authors' use of a software program to smooth out differences in style, and by paying more attention to picture quality. One might question the inclusion this year of a clinical research article from the editor's institution, which contains data and conclusions that do not appear to have previously been published in a peer-reviewed journal.

Overall, this series continues to provide a ready and readable source of pertinent data about nuclear medicine, and should be available to technologists, radiopharmacists and physicians who are training in the field. It should also be on the subscription lists of all physicians who practice nuclear medicine.

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Frontiers in Cardiovascular Imaging. B.L. Zaret, L. Kaufman, A.S. Berson, R.A. Dunn. Raven Press, New York, 1993, 362 pages, $82.00.

This book consists of both presentations by members of the Cardiovascular Imaging Workshop sponsored by the NHLBI (held in Maryland, March 1992) and contributions from areas not represented in the workshop. The book consists of 23 chapters, written by representative experts, and arranged into the following four categories: basic biology, pathophysiology and clinical considerations, myocardial imaging, vessel lumen imaging, and vessel wall imaging.

The first three chapters provide a background regarding the basic biological and clinical factors relevant to cardiac imaging. The second section, covering myocardial imaging, describes several methods including ultrafast CT, PET, SPECT, NMR spectroscopy, MRI, ultrasound and cardiomagnetic imaging. The third section, devoted to vessel lumen imaging, describes digital subtraction angiographic methods, ultrafast CT, MR angiography, functional echocardiography and transvenous coronary angiography with synchrotron radiation. The last section, vessel wall imaging, describes methods including ultrasound, ultrafast CT, radionuclides, MRI, fluorescence spectroscopy and Doppler echocardiography. The references are generally current through 1991.

As the editors note in the preface, this volume will indeed be "useful to experts in imaging . . . in a comprehensive treatment of capabilities and recent advances in cardiovascular imaging . . . ." It provides an overview of various research directions, some "complementary," many competing, in the evaluation of cardiovascular disease. As the chapters are written by advocates, albeit knowledgeable ones, of specific modalities, the volume does not provide a clear indication of relative clinical utility or the role of various methods described.

This book is recommended to those nuclear medicine practitioners who devote a considerable portion of their research or clinical practice to cardiac imaging.

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Physics of Radiology. A.B. Wolbarst. Appleton & Lange; Norwalk, Connecticut, 1993, 461 pages, $55.00.

This book is about the science and technology of medical imaging. It is aimed primarily at radiology residents and contains the information needed for the written portion of the American Board of Radiology examination. As the author notes in the preface, this information is all too often memorized in the weeks before the examination and forgotten shortly thereafter.