

The Renal Uptake of Radioactive Mercury ($^{203}\text{HgCl}_2$) is of value primarily to the renal investigator. It summarizes the experience to date with $^{203}\text{HgCl}_2$ in the evaluation of renal function and provides insight into future directions of investigation.

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RADIONUCLIDE STUDIES OF THE GENITOURINARY SYSTEM. I. M. Freeman and M. D. Blaurox, eds. New York, Grune & Stratton, 1975, 220 pp, \$14.50.

The chapters of this book, edited by Leonard M. Freeman and M. Donald Blaurox, were originally published in 1974 in *Seminars in Nuclear Medicine*. The primary value of this well-presented and well-arranged text lies in its overall review of radionuclide procedures used in the study of renal function and abnormalities. The material is presented clearly and concisely without great detail or personal prejudice. This is particularly true for the first part of the book, dealing with radiopharmaceuticals, in vitro, and nonimaging procedures. The second part, "Clinical Applications," describes in fair detail the generally accepted kinetic and static procedures and the choice of radiopharmaceuticals for a variety of clinical indications. Sequential renal imaging, kinetic renography, and the multiagent approach to the investigation of renal pathology are all stressed. Although some of the newer renal-imaging agents and specific renal pathology are not discussed, this drawback is understandable since the articles were originally published early in 1974.

Radionuclide Studies of the Genitourinary System by Freeman and Blaurox is an excellent review and everyday reference for residents in nuclear medicine, the more experienced clinical practitioner, and the referring urologist.

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BREAST CANCER DIAGNOSIS. Gerald S. Johnston and A. Eric Jones, eds. New York, Plenum, 1976, 168 pp, \$18.50.

One cannot tell a book by its cover, and that is certainly true of this one. From the title, one might guess that this book would instruct in how to diagnose breast cancer, but in actuality the book is about the advantages and limitations of nuclear imaging techniques in detecting advanced breast cancer, with illustrative photographs. The conclusions drawn are that bone imaging has a great role to play in the workup and followup of skeletal metastases of breast cancer, with liver and brain scanning having a more limited place in patients with symptoms indicating these organs. Breast and ^{67}Ga scintigraphy are described as being even more limited and in need of technical improvement.

Although a multiauthored text, the style is consistent from chapter to chapter. The first chapter, written by clinicians at the Medical Oncology Branch of the National Cancer Institute, lays out their reasoning for choosing certain procedures in the workup and followup of breast cancer in that institution. The only procedure from nuclear medicine included routinely in their plan is the bone scan, which is recommended preoperatively and at intervals ranging from 3 to 12 months postoperatively. Chapters on liver, brain, breast, skeletal, and ^{67}Ga scintigraphy follow in that order. These consist mainly of brief dissertations, with the indications and value of the various procedures discussed with reference to the published literature. Illustrated cases from the authors' experience show typical pathologic cases and

pitfalls. The book concludes with a chapter on radiologic evaluation, written by members of the Department of Radiology and Nuclear Medicine at the National Institutes of Health, which quite briefly reviews and illustrates the status of mammography and other breast-imaging procedures, as well as the detection of metastases with radiographic techniques.

Breast Cancer Diagnosis should make interesting reading for nuclear physicians and clinicians responsible for the care of patients with breast cancer. However, it is much too brief to qualify as a treatise on the diagnosis of breast cancer. It also lacks much in the way of statistical analysis of the role of various procedures in the diagnosis of breast cancer, i.e., their sensitivity, specificity, accuracy, and predictive value.

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BASIC RADIATION BIOLOGY, 2nd ed. Donald J. Pizzarello and Richard L. Witcofski. Philadelphia, Lea & Febiger, 1975, 143 pp, \$11.75.

Before 1967, when the first edition of this book was published, there were no texts available on radiation biology, and certainly none written for the radiologist, much less the nuclear medicine specialist. Subsequently there appeared a relative spate of books, some with the stated purpose of meeting the needs of the radiology resident. The present volume represents the first appearance of a second edition among these books. Although the authors suggest that the book may be found useful by "college undergraduates, beginning graduate students, medical students, residents in radiology, radiologists, and radiation physicists," one strongly suspects that their affiliations with university radiology departments biased them to write with mainly the radiology resident in mind. Unfortunately, there is still no book that gives the radiologist both the basic and applied aspects of radiation biology in a readily digestible form that will keep him reading in the absence of the threat posed by board examinations. Perhaps it is not possible to write such a book, but may the effort to do so continue!

This book presents a concise and simple introductory treatment of the principal phenomena associated with the interaction of ionizing radiation with molecules and animal cells, tissues, and organs as well as effects on the whole organism. The mathematical and physical approaches to the subject are deliberately avoided in this edition so that the focus is limited to the biologic effects of radiation. In condensing the material into 18 short chapters in 116 pages, the authors have written a book that will primarily attract those who only want an overview of the subject with very little detail. This they have admirably accomplished, although some readers might have found additional figures and illustrations helpful. Two brief appendices cover methods of measuring dose and techniques of exposing cells and animals to external sources of x and gamma radiation. The details in these appendices strike this reviewer as being out of step with the survey approach taken to the subject matter in the text. For example, the rationale and conditions for multilateral, bilateral, and unilateral exposure are given for small, medium, and large animals.

Basic Radiation Biology is clearly written and carefully edited, the print is easy to read, and the index is well done.

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