

**CHRISTENSEN'S INTRODUCTION TO THE PHYSICS OF DIAGNOSTIC RADIOLOGY.**

*T. S. Curry, III, J. E. Dowden, R. C. Murray, Jr. Philadelphia, Lea & Febiger, 1984, \$30.00*

Anybody who has used *Christensen's Introduction to the Physics of Diagnostic Radiology* in the first and second editions does not need to be told that this text has a history of being a well-organized, concise, comprehensive, and well-illustrated teaching tool. This third edition continues the tradition, adding material on digital radiography, ultrasound, and nuclear magnetic resonance. A sad difference is that Christensen is not one of the authors, having suffered a fatal myocardial infarction in December 1980 at the age of 51.

This text has been written for residents in radiology, and as such does a wonderful job of presenting the wide variety of subject matter both theoretical and technical necessary for a competent understanding of the images that radiologists must create and interpret. The field has gotten so technical in the last 10 yr that one wonders how a radiology resident can possibly understand the intricacies of such mathematically complex procedures as Fourier transforms, nuclear spin, and nuclear magnetic resonance imaging. Yet these subjects are as clearly illustrated as I have seen them, and in sufficient detail to explain the origins of images created by modifying  $T_1$  and  $T_2$ . In the preface, the authors say "Technology no longer threatens to overwhelm radiologists and technologists; it has done so." The fact that two of the three authors are physicists reflects this.

The book is indeed a pleasure to own and to use as a teaching tool.

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**INTERVENTIONAL NUCLEAR MEDICINE.**

*R. P. Spencer, Ed. New York, Grune & Stratton, 1984, 619 pp, \$49.00*

One's first impression of this book, with its unimaginative gray cover, is that it represents still another rapid manuscript reproduction of a meeting held at some remote resort. It is, in fact, the result of a national conference convened in Hartford, Connecticut in 1983 and covers a wide range of topics from arterial chemotherapy and measurement of regional myocardial and cerebral blood flow to interventional studies of the gastrointestinal tract. As would be expected from such a broad range of contributors, there is some variation in quality of presentation.

On closer review it becomes apparent that interventional nuclear medicine has come of age, and that this added dimension necessarily developed in nuclear medicine as it has in other diagnostic specialties. The book is comprehensive, and

many of the techniques described are tedious and complex as the 54 contributors will attest. It tends to scuttle the overworked cliché, "noninvasive imaging," and, as one of the authors (Hosain) points out, "Interventional nuclear medicine does not necessarily mean, like interventional diagnostic radiology, a relatively more invasive approach. The interventions may and may not be considered 'invasive.'" One wonders how much progress would have been made in other specialties, e.g., cardiology, gastroenterology, and radiology had interventional techniques not become an integral part of these specialties (had not been used).

There are four major sections: (1) Physical intervention; (2) Physiological intervention; (3) Pharmacological intervention; and (4) Scientific exhibits. The book will not have a widespread clinical audience, for much of the material is of great interest only to the physiologist or to those in a particular specialty. The excellent review of clinical studies of regional cerebral blood flow by two-dimensional  $^{133}\text{Xe}$  clearance falls in this category. Many procedures are described in such explicit detail that one could easily initiate a particular method in future examinations. The report on radionuclide voiding cystography in pediatric patients is a good example. Generally, the supporting background data and references are more than adequate for an in-depth study of any of these newer techniques. The index is adequate and there are few typographical errors.

In summary, this is a valuable addition on an important dimension in nuclear medicine. The spectrum of research is large and too broad to interest everyone, but the book is well-organized and will be used primarily for reference on specific applications as the need arises.

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**PROTECTION IN NUCLEAR MEDICINE AND ULTRASOUND DIAGNOSTIC PROCEDURES IN CHILDREN.**

*National Council on Radiation Protection and Measurements, Bethesda, NCRP Press, 1983, 83 pp, \$10.00*

This NCRP Report #73 deals with the subjects its title indicates. Most of the topical discussions are brief and limited to well-established or accepted principles. Major topics in the nuclear medicine section include benefit-risk considerations, instrumentation, handling techniques, dosimetric considerations, physiological considerations, and radiation doses. Dosimetric and physiological aspects are well-defined and logically presented. Absorbed radiation dose estimates of fetal, pediatric, and adult patients for most of the commonly used radiopharmaceuticals are provided in useful tabular form. Although selection of topics in rapidly changing fields can be

