TECHNICAL ADVANCES IN BIOMEDICAL PHYSICS. P. P. Dendy, D. W. Ernst, A. Sengun, Eds. The Netherlands, Martinus Nijhoff, 1984, 418 pp, $57.00

This book is a collection of papers, presented at a NATO Advanced Studies Institute held September 1982 in Istanbul, on topics in diagnostic imaging at both the cellular and organism levels. The cellular imaging work is further developed through the description of damage at the cellular level resulting from ionizing radiation, ultraviolet radiation, and ultrasound. The coverage in both areas is characterized by ample discussion of fundamentals along with overviews of current practice and future possibilities.

The broad scope of these lectures will mean that any given reader will find some areas totally uninteresting, some too basic or out-of-date, and some with interesting points overlooked in the available literature, depending on the reader's areas of expertise. Such items as pyrotechnical generation of aerosols and telediaphonography (an extension of the art of shining a flashlight through your hand) enliven the introductory lectures. Although there are descriptions of new technical advances in each section, the book is basically a broad overview of many diagnostic areas, and several of the chapters are quite extensive and detailed. Such coverage allows the nonexpert reader "to see the big picture" and brush-up on the fundamentals of many diverse subjects. There are discussions of quantitative (imaging) cytology, cytochemistry, microbeam cellular probes, microsurgery, photodermatology, normal skin reactions to radiation therapy, EMF pollution, basic nuclear medicine imaging, x-ray resolution limits, zone plate holography, digital radiography, radiopharmaceutical production, nuclear cardiology, basic ultrasound, basic NMR, and x-ray tube design. The index is invaluable in view of the extent of the subject matter.

Although not all subjects require any rigorous knowledge of mathematical physics, the book is written primarily for physicists. I would recommend it be included in diagnostic radiology and nuclear medicine libraries, and particularly that students seeking an update on areas of current interest in diagnostic radiology, chemistry, and physics read it carefully.

LAWRENCE BEACH
University of Kentucky Med. Ctr.
Lexington, Kentucky

CLINICAL SONOGRAPHY-A PRACTICAL GUIDE. R. C. Sanders. Boston, Little, Brown, & Co., 1984, 395 pp, $26.95

The purpose of this book is to provide a "practical guide" to the sonographer on how to perform and interpret ultrasonic studies. The text is divided into 45 brief chapters and 12 appendices consisting of tables of various obstetrical measurements. Most chapters deal with a specific patient problem, such as jaundice, renal failure, small for dates, lost IUD, etc. In this way virtually all areas of ultrasound are covered, at least superficially. In addition, there are chapters devoted entirely to technical considerations including physics, instrumentation, equipment care and quality control, photography, and artifacts.

Each chapter begins with two lists; one of sonographic abbreviations that will be used in subsequent diagrams and one of key words with definitions. Although the lists are complete and an excellent introduction to the chapter, occasionally a definition is expressed too simply, such as defining dermoid as "form of teratoma that is benign and tends to occur in young women." The remainder of each chapter relates to the clinical problem and covers anatomy, scanning technique, and a brief discussion of various pathologic states that the sonographer may encounter. Of particular value at the end of each chapter is a list of pitfalls, both in technique and in diagnosis as related to similar pathological entities. Many chapters include a list of additional structures for examination to ensure that associated findings will not be overlooked. For example, in renal cell carcinoma, the renal vein and inferior vena cava should be examined for tumor, and a search for periaortic lymph nodes and liver metastases should be performed. Unfortunately, the chapter references are incomplete and few, most of which are textbooks.

Although the chapters are brief, most topics are well covered considering the goal of the book. The sections dealing with obstetrics, gynecology, and neonatal head scanning are particularly good, but the chapters on the breast and testis are incomplete. A-mode echocephalography has been included, although this is probably of historic interest. The text contains a large number of excellent diagrams of anatomy, pathology, and scanning planes. My only significant criticism of the book is that few sonograms are illustrated, but they are generally of good quality.

Overall, this textbook makes an important contribution to the education of sonographers. I recommend that all ultrasound laboratories obtain a copy and that it be read not only by sonographers, but also by radiology residents beginning their ultrasound rotation.

MICHAEL A. SANDLER
Henry Ford Hospital
Detroit, Michigan

BOOKS RECEIVED

Radioimmunoimaging and Radioimmunotherapy. S.W. Burchiel, B. Rhodes, Eds. New York, Elsevier Science Publishing Co., Inc., 1984, 450 pp, $95.00

Evaluation of Occupational and Environmental Exposures to Radon and Radon Daughters in the United States. National Council on Radiation Protection and Measurements, Bethesda, 1984, 204 pp, $15.00

Geriatric Nuclear Medicine. M. Iio, H.N. Wagner, Jr., Eds. Tokyo-New York, Igaku-Shoin Medical Publishers, Inc., 1984, 430 pp, $73.00

Freeman and Johnson's Clinical Radionuclide Imaging, Volumes 1 and 2, Third edition. L. Freeman, Ed. New York, Grune & Stratton, Inc., 1984, 1528 pp, $179.00

Fundamentals of Nuclear Medicine. N.P. Alazraki, F.S. Mishkin, Eds. New York, Society of Nuclear Medicine, 1984, 191 pp, $12.00