

monly found in texts on this subject. Rather, the topics covered in most of the 19 chapters are related to the field of radiopharmacy as practiced by members of this specialty.

In this textbook, the standard topics such as basic nuclear physics, chemistry and quality control of radiopharmaceuticals are adequately covered, although technetium chemistry receives a cursory treatment. Much useful physical data, such as decay schemes of commonly used radionuclides and chemical structures of ligands, are readily at hand in these basic chapters.

The chapter on radionuclide generators is especially complete with good discussions on the application of the separation sciences as it relates to generators.

Mechanisms of localization of radiopharmaceuticals are grouped in one chapter, which facilitates the use of this textbook as a reference and teaching guide. A more in-depth coverage of capillary blockade would strengthen this chapter.

Quality control of radiopharmaceuticals is given a thorough and complete presentation with an excellent summary table for quick reference.

Several of the chapters address practical aspects of handling, labeling, packaging and transportation of radiopharmaceuticals. Whereas some material is peculiar to the United Kingdom, there is much useful information not usually found in textbooks of this type.

While the stated audience for this text is "... all those who work with radiopharmaceuticals," I feel that the group that would benefit most from its contents are radiopharmacists and radiopharmaceutical chemists. While the text covers all core topics of a radiopharmacy training program, it will also be of great value to chemists who are involved in preparation of radiopharmaceuticals, but have not benefited from an undergraduate degree in pharmacy.

Ronald J. Callahan
*Massachusetts General Hospital
Harvard Medical School
Boston, Massachusetts*

Merrill C. Johnson
*Mt. Auburn Hospital
Cambridge, Maine*

Imaging of the Thyroid and Parathyroid Glands. Brian Eisenberg, ed., Churchill Livingstone, Chicago, IL, 209 pp, \$59.95.

Thyroid disease, contrary to the statement of Fred Mettler, Jr. in the foreword to this book, does make the headlines more than occasionally, especially if it occurs in the presidential family. For residents, nuclear medicine practitioners, radiologists and endocrinologists who would like to use imaging methodologies to diagnose the "President's" disease, as well as other types of thyroid and parathyroid disease, this book provides a practical, clinically focused survey. The editor's concept of going beyond the nuclear medicine techniques to include expert discussions on ultrasound, MRI and CAT will make it unnecessary to reach much further than the index to answer clinical questions about imaging the thyroid and parathyroid glands. Discussions on laboratory diagnosis of thyroid disease, ^{131}I treatment of thyroid disease, and pediatric thyroid disease make this book more inclusive and more useful as a single source.

The initial chapter on embryology and anatomy prepares the clinician for his imaging pursuit of the thyroid and parathyroid, as they may wander through the neck and mediastinum. The rare malignant transformation of (midline) ectopic tissue is mentioned

in this chapter, although lateral aberrant thyroid tissue is not, perhaps because the author believes modern clinicians are no longer subjected to this misnomer in biopsy reports.

The chapter on radiopharmaceuticals contains practical information on commercial availability of iodine radionuclides as well as the effects of drugs on radioactive uptake.

In the chapter on diagnosis and treatment of hyperthyroidism, relatively high-dose ^{131}I therapy for Graves' disease, which could also be described as close to ablative therapy, but which is described more optimistically as definitive therapy, is endorsed. The best explanation for the increased popularity of such high-dose therapy, which is the disappointment among many therapists with alternative dosage regimens, is not discussed. However, the alternative dosage regimens are well covered. Treatment of autonomously functioning thyroid nodules is described as requiring a higher dose of ^{131}I than that used in Graves' disease because fibrosis in the nodules decreases radiosensitivity. It is more likely that a smaller dose is required in Graves' disease because the gland is subjected to a combined injury due to both a radiobiological and immunological attack. Parenthetically, our current complete inability to evaluate immunological damage of the thyroid in an individual with Graves' disease is one of the stronger arguments for high-dose, definitive ^{131}I therapy.

The seventh, eighth and eleventh chapters are good miniature atlases of thyroid and parathyroid diseases using the newer computed tomography and magnetic resonance techniques. The different world of the pediatric thyroid patient is well covered in the ninth chapter.

In summary, the several authors of this book have written eleven chapters of uniformly high quality, unified by what I believe was the editor's intention of producing a survey that would answer most clinical questions about thyroid and parathyroid imaging.

The Safe Use of Diagnostic Ultrasound. M.F. Docker and F.A. Duck, eds., British Institute of Radiology, London, 1991, 56 pp, £16.00.

This booklet comprises a collection of opinions regarding the biological effects of ultrasound. Chapters detail exposure measurement, tissue susceptibility, thermal effects, and cavitation, as well as practical guidance suggestions. This is a thoughtful compendium on a subject that should be of great interest to those performing diagnostic ultrasound studies, particularly in obstetrical applications. The authors are careful to point out problems with extrapolation from therapeutic and in vitro studies to diagnostic applications. These are problems common to the evaluation of potential bioeffects of low-dose ionizing radiation.

James A. Scott
*Massachusetts General Hospital
Boston, Massachusetts*

Medical Radiation Protection Practice within the EEC. M. Fitzgerald and J.M. Courades, eds., British Institute of Radiology, London, 1991, 56 pp, £13.50.