

Nuclear Medicine Procedure Manual. W.C. Klingensmith, editor; D. Eshima, J. Goddard, associate editors. Wick Publishing, Englewood, Colorado, 500 pages, 1993, \$175.00.

The 1993 edition of the *Nuclear Medicine Procedure Manual* is a reference guide to the performance of most clinically relevant diagnostic and therapeutic radionuclide procedures. The print edition is reviewed here, but the work also comes in a computer software version that is available in several common PC and Macintosh word processing programs. Both the print and software versions are revised and updated annually. Although the computer version allows easy protocol customization, the printed format would likely provide a more convenient quick reference source.

The print version comes in a loose-leaf, three-ring binder with each section conveniently indicated by thumb tabs and plastic reinforcements on the pages to maintain their integrity. The first section, "General Policies," presents information about examination scheduling, dosage, injection, and patient preparation. There are also discussions of radiation safety, radionuclide handling and spill procedures, and ALARA guidelines. Several sample forms and worksheets that can be used directly or modified to suit institutional needs are included. Universal precautions are reviewed, and there is a brief section explaining the involvement of various regulatory agencies in oversight of nuclear medicine practice. Instrument quality control and radiopharmaceutical preparation also are discussed.

The section "Diagnostic Procedures" represents the bulk of the work. This section contains detailed clinical imaging protocols including indications, patient preparation, radiopharmaceutical dose, imaging time and equipment, and acquisition protocols. Each listing also includes dosimetry information and exhaustive references detailing methodology and interpretation. Common alternative imaging approaches are usually listed together, although a few variants (such as sulfur colloid bleeding detection) are not included. An appendix contains references for such uncommon procedures as arthroscintigraphy and splenic sequestration studies, which are not described in the book. This year's edition shows a sign of the times in relegating hippuran renography to the appendix. A "Therapeutic Procedures" section presents ^{131}I , ^{32}P , and ^{89}Sr protocols. The "Radiopharmacy" section provides general information on common agents, including decay data and commercial sources.

This manual is generally comprehensive and well-written. It compiles in one volume a multitude of information and references about common nuclear medicine procedures. Although the *Procedure Manual* could be used as a departmental protocol, the authors appropriately recommend that no procedure be implemented until it has been reviewed by a supervising physician. The *Procedure Manual* is best used to review and update existing departmental manuals, and to serve as a quick source for references about both acquisition and interpretation of nuclear studies.

This edition contains a number of new content areas, such as $^{99\text{m}}\text{Tc}$ -HMPAO white blood cell imaging and $^{99\text{m}}\text{Tc}$ -sestamibi parathyroid imaging. Routine cimetidine pretreatment of Meckel's studies has been changed from an option to a routine recommendation, although no new data are cited to support this common practice.

It is inevitable that some points of disagreement about these protocols will exist. The authors have anticipated this by presenting several options where appropriate. I found several minor points of disagreement, for instance, the hepatobiliary imaging protocol lists trimethylbromo-iminodiacetic acid as the radiopharmaceutical (better known as mebrofenin), but doesn't mention disofenin. The thyroid imaging and uptake protocols do not describe a gamma camera-based method for those without access to a probe detector. Although pertechnetate uptake measurement is of limited application, it does warrant description. Finally, "Bone Mineral Study" is a confusing name for diphosphonate bone imaging. This seems a more appropriate description for bone density measurement.

In summary, the *Nuclear Medicine Procedure Manual* is an exhaustive review of current protocols which should be valuable to many nuclear medicine technologists and physicians. It provides a convenient and up-to-date source of reference and allows quick comparison of departmental procedures with those suggested by the literature.

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Atlas of Nuclear Medicine Imaging 2nd edition. S. Baum, R.J. Campeau, E.V. Dubovsky, R.A. Goldstein, N. Milne, E. Oates, R. Taillefer, J. Villaneuva-Meyer, N.R. Vincent. Appleton & Lange; Norwalk, Connecticut, 1993, 470 pages, \$175.00.

This is an up-to-date radionuclide atlas incorporating modern agents and modern images. It is composed of eight sections of varying length, including gastrointestinal, cardiac, renal, pulmonary, bone, thyroid/parathyroid, brain and ^{111}In -WBC/ ^{67}Ga imaging.

The sections on renal and thyroid imaging are excellent and include well-chosen images and a commentary that is both practical and pithy. The gastrointestinal imaging chapter, the longest in the book, includes important applications of radionuclides in the GI tract. The cardiology section is well-written, although limited by its reliance on color-coded images. Teboroxime does not come off quite as well as the other agents represented. The bone section is decidedly brief, given the relative importance of skeletal imaging in modern practice. The pulmonary section includes the gamut of V/Q scan appearances. Readers should be forearmed with a clearly-defined approach to lung scan interpretation to maximize the value of the images provided. The brain imaging section, although brief, includes examples of several of the commonly encountered disease processes examined by SPECT imaging.

This book is a valuable reference text of current radionuclide images. It would best be used in conjunction with a standard nuclear medicine text.

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