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NUCLEAR MEDICINE—FACTORS INFLUENCING THE CHOICE AND USE OF RADIONUCLIDES IN DIAGNOSIS AND THERAPY

NCRP Report No. 70. National Council on Radiation Protection and Measurements, Bethesda, MD, 1982, 180 pp, \$12.00.

This 171-page softcover report is divided into three sections, the first of which contains six chapters with numerous subsections addressing the title of this publication. These six chapters comprise 60% of the printed text; the remaining 40% is devoted to the other two sections, namely two appendices, references, and a 20-page report describing in detail the NCRP, its membership, publications, ongoing actions, and affiliations. There is also an index.

Although the NCRP attempts to define those individuals who would best benefit from this report, it suggests every individual who may have even the remotest influence in the decision-making process in clinical nuclear medicine as the audience. This report does not intend to guide the reader in physical plant development or implementation of safeguards for the protection of employees or patients from associated hazards, nor does it attempt to define protocols for clinical procedures.

The bulk of this report is laden with formulas and advanced radiation and health physics. As such, it could best be used as a reference source in a graduate school radiation and health physics course. It can hardly be used as a general reference source for the everyday clinical practice of nuclear medicine.

The type of decision-making suggested by this report would be of no use to the clinical staff nuclear medicine technologist and of little interest to a majority of clinical "decision makers" operating today's nuclear medicine facilities.

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CHEMISTRY FOR NUCLEAR MEDICINE

Mervyn W. Billingham and Alan R. Fritzberg, Yearbook Medical Publishers Inc., Chicago, 1981, 328 pp, \$24.95.

This book was written to meet student needs perceived when the authors taught chemistry and radiopharmacy courses to nuclear medicine technologists, pharmacists, and medical physics graduate students. It is intended to relate general chemistry, biochemistry, physiological chemistry and nuclear medicine to those who do not have broad chemistry backgrounds. Its outline follows the chemistry section of the Canadian Nuclear Medicine Technology Syllabus with the omission of a quality control unit.

The topics of the 20 chapters include inorganic, organic, and biochemistry, separation methods, volumetric analysis, photometry, fluorescence, phosphorescence, chemiluminescence and thermoluminescence, instrumentation (centrifuges, pH meters, balances, and microscopes), and laboratory safety.

Problems or questions are supplied at the end of each chapter with answers in the back of the book.

Although the chemistry chapters seem basic, I would hesitate using the book for beginning chemistry students without supplemental teaching and resources. I also noted some inconsistencies, errors, and omissions. The "mole" concept is not defined when discussing properties of gases and solutions. Oxidation states and balanced chemical equations are used extensively in Chapter 2 but are not explained until Chapter 5. The first chemical equation in the book is incorrectly balanced and there are mathematical errors in the chapter on acids and bases.

I felt the nuclear medicine application of particular chemistry aspects was well integrated and practical. Although short, most of the chapter on photometry has little application to nuclear medicine.

In general this book is a presentation of basic concepts and descriptions not available in any other single nuclear medicine text.

In particular I recommend the inorganic, organic, and biochemistry sections for nuclear medicine technology and nuclear pharmacy students who have previously taken chemistry, and the rest of the book as a supplement for other teaching resources in the nuclear medicine technology curriculum. Increased cross-referencing and glossary definitions would make this a more useable reference.

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BASIC MEDICAL TECHNIQUES AND PATIENT CARE FOR RADIOLOGIC TECHNOLOGISTS

L.S. Torres and C. Morrill, Philadelphia, J.B. Lippincott Co., second ed, 1983, 185 pp, \$19.25.

This edition of a classic textbook presents the subject matter in a clear, educationally sound, and very professional manner. In addition to the format, which is essentially unchanged from the first edition, the entire tone of the text stresses professional responsibility and the concept of "patient-centered care" during diagnostic procedures.

Each chapter is preceded by a stated goal, the specific objectives, and a glossary pertinent to the content of that chapter. These specific glossaries are an excellent feature and are supported by a cumulative index that includes each term and the page number where the definition is located. At the end of each chapter or "module" there is a pre/post test. A series of suggested correct responses are located at the end of the final chapter of text. The responses are comprehensive and located to facilitate use of the tests without encouraging answer browsing.

The bibliography is appropriate for a text of this size, quite comprehensive, and includes references from 1963 through 1980. The bibliography also includes relevant journal articles specifying volume and page numbers. It is important to note that the authors have not limited themselves to technical literature, and this has added significantly to the usefulness of the bibliography and the text as a whole.

Because the contents are directed specifically towards radiographers, very little of the information in the chapters relating to "Assisting with Drug Administration" and "Contrast Agents" is consistent with current practice standards in nuclear medicine technology. This does not, however, diminish the usefulness of the text to staff technologists and students in any of the three specialty areas of radiologic technology. Many institutions are going the route of "medical imaging divisions" in lieu of separate departments for CT, ultrasound, NMR,

radionuclide imaging, radiography, treatment planning, and even medical photography. This trend towards consolidation of services will require specialists from each modality to care for patients undergoing other procedures and to be familiar with all of the patient care techniques and limitations included in this text as well as other special patient care considerations.

In conclusion, I think that several copies of this text should be available in every school library so that NMT students will have ready access to them; that NMT instructors utilize the content for lectures and assignments; and that it be classified as a "recommended reference" for all NMT students, primarily as an introduction to patient care in the clinical NMT practicum portion of the curriculum.

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