

Limitation on Exposure to Ionizing Radiation: Recommendation of the National Council on Radiation Protection Measurements

Bethesda, MD: National Council on Radiation Protection Measurements; 1993, 88 pp., \$25.

This NCRP Report No. 16 replaces Report No. 91, "Recommendations on Limits for Exposure to Ionizing Radiation" and updates the NCRP's recommendation based on data contained in the report on Biological Effects of Ionizing Radiation (BEIR V) from the United Nations Scientific Committee on the Effects of Atomic Radiation and which has been reviewed by the NCRP.

The report is succinct and contains a preface, 19 chapters, an appendix, glossary, references, a description of the NCRP, a listing of documents and reports from the NCRP, and an index.

The technical terminology is kept to a minimum, making the report easy to read. The glossary is especially helpful to those readers without a technical background in radiation protection. The use of International Units instead of the traditional units takes some getting use to, but it is not a significant drawback.

The basic goals of radiation protection, in particular the ALARA concept, are well presented. The concept of effective dose, which has not been widely used in the U.S. until recently, is accurately outlined.

Chapter 3, "Basis for Occupational Dose Limits," nicely places radiation-related exposures in perspective to occupational fatality rates. Chapter 10, "Protection of the Embryo-Fetus," should be of great interest to individuals working in nuclear medicine because it places known fetal risk in perspective to occupational exposures. Chapter 15, "Nonoccupational Dose Limits: Exposure to Individual Members of the Public," will help the technologist answer frequently asked questions from patients and their families regarding the risks of diagnostic or therapeutic radionuclide procedures.

Overall, the report is well-referenced for the reader who is interested in further details and provides important information to all individuals working in nuclear medicine. Every nuclear medicine laboratory should have a copy of this report available for the technologists, scientists and physicians to review periodically, as well as to find answers to specific questions about radiation protection.

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Handbook of Nuclear Medicine, Second Edition

Frederick L. Datz, MD. Chicago: Mosby-Year Book, Inc.; 1993, 281 pp., \$36.95

This soft-bound handbook, written in outline style, emphasizes essential information about the major organ systems imaged and studied in today's standard nuclear medicine laboratory. This newly revised text continues to serve as an important volume to the "Handbooks in Radiology" series. The stated purpose of the book is "to serve as a review of nuclear medicine for residents and fellows and to be a practical reference for practicing physicians." Although the design has been improved, the purpose of this handbook is essentially unchanged from the first edition published in 1988.

The book is divided into eight chapters, each representing an organ system. Each chapter addresses the appropriate anatomy, physiology and radiopharmaceutical background needed to understand the more than thirty procedures covered. Imaging techniques and recommended and minimum radiopharmaceutical doses are nicely presented. Also discussed are normal imaging patterns and quantitative results for each study. Abnormal findings as they relate to common pathological processes are also presented. Clinical indications for each study and differential diagnoses for abnormal findings are listed. Relative sensitivities and specificities of each nuclear procedure are stated and compared with

other current imaging modalities.

The second edition has been revised to include the latest information on SPECT image findings and techniques. Unique applications of SPECT imaging for various organ systems are discussed at length. New diagnostic and therapeutic radiopharmaceuticals, including monoclonal antibodies for infection and tumor detection, are presented for the first time. The recently approved cardiac, renal and cerebral agents are presented in a concise and detailed manner. PET imaging techniques are discussed at the end of the appropriate chapters, which gives one an appreciation of PET's expanding role in nuclear medicine. Updated references and suggested readings have been added at the end of each chapter.

As in the first edition, Dr. Datz has managed to present a considerable amount of information about a complex subject, which appears to be accurate, well-organized and is in a quickly accessible format. However, the beginning student of nuclear medicine is cautioned to first read a more basic textbook on the subject in order to gain a good understanding of the principles of nuclear medicine. This handbook can effectively be used as a quick and handy reference text to supplement basic concepts already mastered.

However, the handbook has some minor problems. Multiple typographical mistakes and mislabeled tables were found. Although the factual information appeared to be accurate, it would have been beneficial to see a more up-to-date discussion of the PIOPED study in the section on pulmonary nuclear medicine.

In general, I found the book to be a concise overview of a changing and complex specialty. Writing and organizing such a manuscript is a tremendous task and therein lies its value. The affordable price and the large volume of facts should make this handbook popular among radiology and nuclear medicine residents, as well as busy radiologists and nuclear medicine physicians.

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