BOOK REVIEWS

NUCLEAR MEDICINE IN UROLOGY AND NEPHROLOGY. P. H. O'Reilly, R. A. Shields, and H. J. Testa, eds. London-Boston, Butterworths, 201 pp. $39.95.

It was truly gratifying for me to have the opportunity to review this primer on the use of radionuclides in urology and nephrology. The authors obviously have had extensive experience in the area; and it is particularly appropriate that a book on the use of radioisotopes and kidney disease has a urologist as its senior author, since this is an area with great potential for meaningful application.

The volume is divided into three basic parts: techniques, clinical applications, and basic principles. The descriptions of the various techniques applicable to urology are clearly and concisely written. The clinical applications also state the case quite lucidly, although there is perhaps a somewhat uneven emphasis on space-occupying disease as compared with other subjects, such as obstructive uropathy, urinary tract trauma, pediatric problems, etc. In addition to discussing the clinical applications and techniques, the authors provide detailed descriptions of their methodology. In an area where there is a great tendency for methodology to vary greatly from center to center, this is a most useful and informative approach. The clinical applications are not quite as detailed as one would desire for practice in the field, however, the overall approach is certainly adequate for use by urologists, residents in radiology and nuclear medicine, and practitioners in allied fields. This book would be a very reasonable beginning to obtain a broad view of the application of radionuclides in urology and nephrology necessary to begin to use these procedures.

The basic principles section is wisely left at the end of the book, presumably because the authors have assumed that the majority of those using it will be clinicians who may or may not want to delve into basic physics principles. Nevertheless, this section is quite concise and clearly written and explains processes, such as convolution and deconvolution, so well that one with literally no mathematical background would begin to understand the concepts of the procedures.

Overall this book sets out to introduce to the practicing urologist, pediatrician, or nephrologist the advantages of the use of nuclear medicine testing in their respective disciplines. The stage is set very well and all the material necessary is provided to introduce the physician to these areas.

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INSTRUMENTATION AND MONITORING METHODS OF RADIATION PROTECTION. NCRP Report #57. National Council on Radiation Protection and Measurements, Washington, D.C., 1978. $5.00.

The National Council on Radiation Protection and Measurements is a nonprofit corporation chartered by Congress in 1964 to, in part, collect, analyze, develop, and disseminate information and recommendations about radiation protection and radiation measurements, qualities and units concerned with such protection. Those reading their report series find a wealth of information concerning various topics in radiation protection clearly and concisely presented. This report is no exception. It was written to replace earlier NCRP Report #10 and covers survey and monitoring procedures. It is useful to institutions, such as industrial plants, scientific laboratories, universities, and hospitals or clinics dealing with x-ray machines, sealed or unsealed radioactive materials, low energy accelerators, and low-power nuclear reactors. Therefore, it contains much information beyond the scope of the average nuclear medicine department.

The book is divided into five main sections: Fundamentals of Survey Monitoring Procedures, Area Survey Methods, Personnel Monitoring Methods, Instrumentation, and Radiation Accident Monitoring. The section on Area Survey Methods lays out in step-wise fashion the phases to be considered in setting up a survey program, such as investigation, inspection, measurement and evaluation, and recommendations. Clearly designated are the "shoulds" and the "shalls" of monitoring based on regulatory guidelines. The book discusses when monitoring is required, the type of monitoring that shall be carried out, whether it is the measurement of a radiation field or the measurement of surface contamination, the instrument performance characteristics, and survey evaluation.

Also of interest to nuclear medicine personnel are the sections on external exposure determination and internal exposure monitoring. The latter describes methods to detect internal contamination and the advantages, sensitivities, and accuracies of each. In addition, the chapter details the type of personnel exposure records that should be maintained. In this regard, it may surprise some readers that the NCRP recommends retaining personnel data files for at least 30 years.

The next chapter discusses instrumentation for the measurement of radiation fields and contamination levels. This section is extremely practical as the limitations of each system are clearly presented. This information is difficult to find in textbooks and yet critical to understanding the implementation of a monitoring program.

The final chapter on radiation accidents is very brief, but again offers a step-wise approach to monitoring in an emergency setting. Because nuclear medicine personnel are often regarded as the local "experts" in nuclear medicine safety, they might well be called on for advice in the event of some local accident. Such a quick reference could be very valuable.

In nuclear medicine, monitoring has often been performed by rote to satisfy regulatory requirements, without ample knowledge of the process or procedures involved. For this reason, reading this clear presentation on various aspects of monitoring could be of value to the nuclear medicine physician, physicist, pharmacist, and technologist. This small book rightfully deserves its place on their bookshelves.

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1979 YEARBOOK OF NUCLEAR MEDICINE. James L. Quinn, III, ed. Stewart M. Spies, Assoc. ed. Yearbook Medical Publishers, 1979, 374 pp. $27.95.

Again, as in previous years, the Yearbook of Nuclear Medicine

The National Council on Radiation Protection and Measurements (NCRP) in the United States has introduced new limiting criteria and provided extensive data for the design of structural shield- ing for medical X-ray imaging facilities. Kerma replaces the traditional exposure as the shielding design parameter. The Council also completed its shielding report for megavoltage X- and gamma-ray radiotherapy installations. In other areas, the National Research Councilâ€™s Committee on the Biological Effects of Ionizing Radia- tion published the BEIR VI and BEIR VII Reports, respectively dealing with indo See more of National Council on Radiation Protection and Measurements - NCRP on Facebook. Log In. or. Create New Account. See more of National Council on Radiation Protection and Measurements - NCRP on Facebook. Log In. Forgot account?Â Congratulations to NCRP Council Member Igor Shuryak, MD, PhD for being recognized as the @RRS_RadRes 2020 Michael Fry Award Winner! https://www.radres.org/page/2020Awards. National Council on Radiation Protection and Measurements - NCRP. September 23 Â·. REGISTRATION IS OPEN for the Virtual Symposium on the Study of One Million Radiation Workers & Veterans on November 6, 2020, 8:30AM-3:00PM Eastern. Radiation protection design guidelines for 0.1 â€” 100 MeV particle accelerator facilities. Report #53 (1977). Review of NCRP radiation dose limit for embryo and foetus in occupationally exposed women. Report #57 (1978). Instrumentation and monitoring methods for radiation.Â Report #57 (1978). Instrumentation and monitoring methods for radiation protection. Report #58 (1978). A handbook of radioactivity measurements procedures. Radiation Protection and Measurements. (NCRP) during its 2009 annual meeting in. March.Â sure of the population of the United States. National Council on Radiation Protection. and Measurements report no. 93. Bethesda, Md: National Council on Radiation Protec-. tion and Measurements, 1987. 3. Mettler FA Jr, Bhargavan M, Faulkner KÂ Methods: An ATOM humanoid model was laid on the operating table and simulated a patient. The scattered radiation dose received by the radiologist, anesthetist and radiology technician was evaluated. The scintillation detector was adopted. 1). Principles, methods, and instrumentation for carrying out radiation and contamination surveys were developed early in the atomic energy program and have been discussed in reports of the National Council on Radiation Protection and Measurement (Refs. 2-9), the International Atomic Energy Agency (Refs. 10-14), and the International Commission on Radiological Protection (Refs. 15-17). Other publications (Refs. 17- 34) contain addi tional information for use in establishing radiation survey programs and selecting methods and equipment for their implementation. "Lines. 0 indicate substanti