

RADIATION DOSE TO PATIENTS FROM RADIO-PHARMACEUTICALS. ICRP Publication 53.

Annals of the ICRP, 1987; 18(1-4): 1-377. Oxford, Pergamon Press, hard-cover, \$105.00.

When someone asks you the radiation dose to a patient from a nuclear medicine procedure, do you go scrambling through package inserts, the various MIRD pamphlets and dose reports, and your reprint files? Do you use the SWAG method for estimating the cumulated activity, \tilde{A} ? Do you have S factors for children? This new ICRP publication is an answer to the prayers of those of us who frequently have to perform internal dose calculations; I expect my copy to be well-worn within a short time.

The first section of ICRP Publication 53 (30 pages) consists of an overview of the absorbed fraction calculational method, some general comments on biokinetic models, a brief discussion of the role of effective dose equivalent in nuclear medicine, and some comments on how to approach the problem of impurities in radiopharmaceutical preparations. Two appendices to this first section provide a referenced discussion of 11 biokinetic models and a description of how to deal with organs for which specific S factors are not available.

The second section (347 pages) contains absorbed dose and effective dose equivalent tables for about 120 radiopharmaceuticals. For each compound, the biokinetic model and biokinetic data (each with references) are described in detail. Modifications used for estimation of dose under abnormal conditions (e.g., intermediate to advanced diffuse parenchymal disease in the calculation to Tc99m sulfur colloid dosimetry) are given for many of the agents. Tables of absorbed dose per unit cumulated activity administered (mGy MBq^{-1}) for various target organs and for ages adult, 15 years, 10 years, 5 years, and 1 year of age are given. These tables also include the effective dose equivalent (mSv MBq^{-1} ; the "five remaining organs" are annotated with asterisks). For those not fully conversant with SI units yet, multiply these values by 3700 to convert to mrad mCi^{-1} and mrem mCi^{-1} , respectively.

I always expect ICRP publications to be thorough, well-prepared, authoritative, and expensive—I wasn't disappointed in any of these expectations. Every medical school library, every nuclear medicine departmental library, and many personal libraries should contain a copy of ICRP Publication 53, despite its high price. It will pay for itself quickly in the time saved from chasing around to multiple sources trying to gather \tilde{A} and S values. Its dose calculations should be immediately and fully accepted by radiation safety committees and investigational review boards for research protocols and for misadministrations and inadvertent administration to pregnant patients. Buy it—you'll like it!

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MAGNETIC RESONANCE ANNUAL 1988.

Herbert Y. Kressel, Ed. Raven Press, New York, 1988, 357 pp, \$69.50

A major strength of this volume is that it has captured new trends in nuclear magnetic resonance imaging at the point where they are well founded but not yet in common use. The thoroughness and clarity of the presentations will be significant in promoting a more widespread application of these newer techniques.

The titles of the chapters in this volume are "High Resolution MR Imaging of the Knee", "MR of the Normal and Ischemic Hip", "Artifacts in Magnetic Resonance Imaging", "Clinical Applications of Gadolinium DTPA in MRI", "CSF Flow Effects during MRI of the Central Nervous System", "Rapid MR Imaging", "Magnetic Resonance Imaging of the Heart", "Clinical Use of the Partial Saturation and Saturation Recovery Sequences", "Temporomandibular Joint Imaging", and "A Rapid-Gated CINE MRI Technique". The authors are authorities on their topics who "practice what they preach". The clinical chapters offer copious advice on appropriate and effective imaging protocols.

The technical chapters present their topics in sufficient detail to satisfy someone hoping to understand and implement a technique and further, they anchor the techniques firmly in clinical utility, allowing the clinician to appreciate the value of the techniques in practice. The thorough lists of references after each chapter compensate for the necessary limits on the length and detail of the articles. While timeliness is a virtue of this book, there are a few hints, such as occasional errors in reference number which suggest haste in the preparation some chapters.

As befits a book to which frequent reference will be made, the paper and printing are very good and the binding has withstood treatment at the hands of this reviewer which has left lesser volumes in tatters.

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Books Received

1. **Low-Level Radioactive Waste Regulation: Science, Politics and Fear.** M.E. Burns. *Lewis Publishers, Inc., Chelsea, 1988, 311 pp, \$39.50*
2. **Nuclear Medicine Applications to Surgery.** E.R. Davies & W.E.G. Thomas, Eds. *Castle House Publications Ltd., Dobbs Ferry, 1988, 326 pp, \$99.50*
3. **Handbooks in Radiology, Vol. 6—Nuclear Medicine.** F.L. Datz. *Year Book Medical Publishers Inc., Chicago, 1988, 331, \$19.95*