therapy, could have been left out, whereas linear accelerators and computerized treatment planning are underemphasized. An entire chapter on diagnostic x-ray physics and two chapters on nuclear medicine are not germane to the central topic of the book. Organization of the topics is not ideal—for example, both the roentgen and the inverse square law are referred to before they are defined. Fortunately, the book is well indexed, so that the reader can look up the definitions of these terms when first confronted by them. The core material of radiation therapy physics, i.e., the interaction of x-rays with matter, the measurement of x-ray beams, and the principles of radiation treatment planning are well covered in Chapters 3, 4, and 5. Unfortunately, the inclusion of extraneous material and the lack of a modern treatment in the preceding and succeding chapters make the entire section on physics unsatisfactory.

The oncology section contains basic concepts of "the cancer problem" in very refreshing, straight forward terms, and a chapter on the public health aspects of cancer also is superb. Unfortunately, more specific tumor systems are covered quite superficially with no references to classic literature and numerous somewhat older concepts of treatment. Essentially every chapter contains data concerning methods of treatment with orthovoltage equipment and the complications expected thereof. In each case, a final statement indicates that megavoltage equipment is now available and preferable in many cases. Discussion of head and neck cancer is quite general, and in many respects the treatment advocated is unconventional by standards in the U. S. For example, electron beam therapy is not mentioned; prophylactic neck irradiation is apparently not considered standard, even for floor of the mouth lesions; the doses recommended are, in general, 1000–1500 rads less than our "curative" doses. Between the extremely distorted physics and its application to clinical situations, a very interesting discrepancy is the lack of reference to calculating gaps between large fields; on the contrary, arbitrary gaps were implicated.

Rationale for radiotherapy in many diseases, especially in controversial areas, is omitted. For example, the rationale for postoperative treatment in diseases, such as pituitary adenomas, is lacking. In their discussion on carcinoma of the uterus, prognostic factors, i.e., depth of myometrial invasion and differentiation, are not mentioned as indication for radiotherapy. Equally disturbing was the recommendation for 4000 rads for treatment following surgery, which is generally considered an inadequate dose for eradication of microscopic disease. Perhaps, the most disturbing chapter in regard to modern radiotherapy was on prostatic cancer. No emphasis is placed on radiation as a primary treatment for the Stage B and C lesions; on the contrary, hormonal therapy is advocated if the patient is an unsuitable surgical candidate. Also omitted from the chapter is the role of prophylactic breast irradiation for those patients who require estrogen therapy and its importance in the prevention of painful gynecomastia.

Basically, this text is not lengthy enough to adequately address the amount of physics included in addition to covering the entire spectrum of radiation oncology by systems. The physics is entirely too detailed for a "short" text and the oncology is entirely too general to be of significant benefit to a trainee. There are numerous typographical spelling errors throughout the text, which are distracting.

To end on a positive note, there were many "tricks of the trade" mentioned throughout the oncology section, which are rarely seen in textbooks, and we found their inclusion refreshing. Several examples are as follows:

(a) Use of soap and gentian violet antiseptic in the care of moist desquamation, (b) set-up with patient looking directly into the beam when treatment of the orbit is necessary, and (c) use of eye patch to protect an anesthesized eye from damage following beta application treatment.

In summary, for resident training in this country we could not recommend this text in terms of adequate coverage of treatment rationales, general statistics, or treatment techniques. The public health chapter is, however, excellent as is the general discussion of "the cancer problem."

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MATHEMATICS FOR TECHNOLOGISTS IN RADIOLOGY, NUCLEAR MEDICINE AND RADIATION THERAPY. Stefano S. Stefani, Lincoln B. Hubbard. St. Louis, C. V. Mosby Co., 1979, 240 pp, $10.95

The opening paragraphs of this text indicate that it is constructed as a practical handbook for students of radiologic technology. The avowed purpose is to help you find answers to a variety of practical problems by the application of numerical operations, and it is designed as a general overview of relevant mathematics associated with radiology, nuclear medicine, and radiotherapy. It is written at an introductory level and abundantly supplied with examples and exercises. At the conclusion of each chapter, there are a series of problems that can test the knowledge of the reader on topics covered.

The first eight chapters of the text are typical of the material covered in high school or technology school mathematics, and review of this material should be easy for the reader. For the sections on statistics and beginning calculus, simply reading and completing the exercises in the text may not be sufficient, and it is probable that discussion with someone knowledgeable in these topics will be required. Overall, the text should be suitable for individuals desiring to review mathematics, those who occasionally use mathematics, or those individuals who have incomplete training in basic mathematics.

With regard to the authors' aim of providing a clinically useful or relevant book, they have fallen somewhat short of the mark. Common items required for use in diagnostic radiology and nuclear medicine, such as calculation of isotopic decay problems or determination of half-value layers, and similar problems, are not covered. This deficiency makes it less than a practical book for the technologist. Overall, it may be useful for review but as a day-to-day book to turn to for help in the laboratory, it is less than ideal.

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