tion fields of nuclear power installations, it seems unlikely that they will find application in nuclear medicine in the near future for a number of reasons: (A) as a rule measurements in air are quite satisfactory for estimation of radiation safety in nuclear medicine where the quality factor is unity and protection calculations can be made directly in rads; (B) the difference between the absorbed dose index and the estimated maximum absorbed dose to the human torso is likely to be of no great consequence; and (C) nuclear medicine is frequently concerned with situations where a 30-cm diam phantom is not appropriate, as for example in considering the absorbed dose to the fingers in carrying out a certain procedure. Thus there seems to be no pressing reason for changes in the radiation protection aspects of nuclear medicine, at least based on the contents of *ICRU Report #19*.

It may be worth noting that the ICRU reports are coming out in such rapid succession that there is a problem of self-consistency. Reports 18 and 20 use the specific gamma-ray constant which Report 19 abolishes. Report 19 declares the existence of the absorbed dose index and the dose equivalent index, while Report 20 can do no more than take note of their existence without incorporating them into the body of its findings, even though Report 20 is concerned with the subject for which the two new concepts were devised. This problem of course arises because each ICRU report is many years in preparation, and a number of reports are being worked on simultaneously. Nevertheless, these differences in usage between reports does to a certain extent weaken the effectiveness of the ICRU reports in producing that "uniformity in reporting" which is one of their stated purposes.

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PROGRESS IN ATOMIC MEDICINE, Vol. 3 in Recent Advances in Nuclear Medicine. Edited by John H. Lawrence. Grune & Stratton, New York, 1971, 246 pp, $15.

The scope of scientific knowledge included in the specialty known as nuclear medicine expands at an ever increasing annual rate. For this reason, it is of particular value to have volumes produced such as this one which present the state of the art in important areas within the specialty of nuclear medicine. In addition, it is important to periodically review and discuss fundamental concepts of radiobiology and nuclear medicine.

This volume, the third in an excellent series, maintains the high level of excellence found in the first two volumes. The volume includes an excellent table of contents and a highly usable index. There are 20 contributors to the volume, which contains seven chapters ranging in length from 20 to 75 pages. Each chapter has an extensive comprehensive list of references, including many references to current literature.

Chapters 1, 2, and 3 are relatively short chapters concerned with three areas of current interest in the field of nuclear medicine. Chapter 1 discusses the potential use of radioisotopes for the possible diagnosis of cancerous growths at an early stage, for example, when the neoplasm consists of only 10^6 cells. Chapter 2 reviews the long use of radioiodine in the treatment of thyroid disease and presents the latest information in this important area. Chapter 3 presents current knowledge about the role of the cyclotron in the production of short-lived radioisotopes and positron emitters.

Chapter 4 discusses trace elements, their role in biology and medicine, current methods for determination of trace elements, and specific information concerning the trace elements selenium, chromium, and cadmium. This chapter is 75 pages long, almost one-third of the entire volume, and includes 16 pages of references.

In Chapter 5, the concept of the safe tracer dose is reviewed in detail. This is a topic which should be of interest to all individuals involved in the field of nuclear medicine since patient safety and protection must always be of paramount interest.

Chapters 6 and 7 are concerned with the use of high-LET (linear energy transfer) radiation in radiation therapy, including heavy particles, pi mesons, and fast neutrons. In Chapter 6, the physical and radiobiological characteristics of high-LET radiations are considered in detail. In Chapter 7, the application of these high-LET radiations to the treatment of such diseases as acromegaly, Cushing's disease, Nelson's syndrome, and nonfunctioning pituitary adenomas is discussed including specific case histories.

This volume should make a welcome addition to the professional library of those individuals involved in nuclear medicine, either in treatment of patients or research.

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