

## **nm/BOOK REVIEWS**

**USE AND INTERPRETATION OF THE LUNG SCAN.**  
By Fred S. Mishkin and Richard E. Brashear, Charles C Thomas, Springfield, Ill, 1971, 121 pp, 67 illustrations, \$12.25.

A rapidly developing, clinically valuable diagnostic procedure such as the lung scan requires review of principles and collection of experience. The authors have produced a succinct clinically oriented monograph primarily based on their own experience. The volume is well referenced and indexed. It is organized in five chapters covering anatomy and physiology, technology, bronchial and parenchymal diseases, pulmonary vascular disease, and a miscellany of pleural and chest wall disorders.

The book approaches lung scans from a sound physiological-pathophysiological basis integrating scan findings in a meaningful fashion. The clinical material is extensive, covering the gamut of variations, abnormalities, and artifacts that may be encountered in practice. The book is easily readable. The illustrations are of good quality although the arrangement of several is poor.

The benefit of uniformity of format and continuity of thought resulting from presentation of the authors' own materials is appreciably offset by the limitations and biases of their experience. The technology section is weakest, ranging from probably needless descriptions of imaging devices, through

**NUKLEARMEDIZIN, SZINTIGRAPHISCHE DIAGNOSTIK.** By Ulrich Feine and Karl zum Winkel. Georg Thieme Verlag, Stuttgart, 1969, 432 pp, DM 120.

According to the authors, the aim of this comprehensive publication is to present the clinical importance which scintigraphy has acquired today. In the reviewer's opinion the authors have reached their goal in the utmost convincing fashion and thus have surpassed previous publications on this subject.

The first section describes the physical principles of radioactive decay, gamma-ray emission and detection. Although they truly form the base for all in vivo tracer procedures, it appears doubtful whether

the authors recipe for producing the scanning agent they use, to totally erroneous advocacy of minification as a means of "creating" data. Also their technique of having patients exhale 10 mCi of radioxenon into an ordinary room is poor health physics and is to be deplored. The intravenous technique of administering radioxenon to study ventilation, relying only on gas trapping in the washout phase to demonstrate defects, is considered suboptimal in many centers. The authors' technique which omits rebreathing limits the quantity of radioxenon in hypoperfused regions and results in images of very low photon density. A few of their illustrations utilizing this procedure are not totally convincing. The authors discuss and reference the techniques of inhalation of radioxenon and radioactive particles but present no clinical material with these techniques. Also the subtlety of symptoms and the frequently minor physical findings of pulmonary embolism could be emphasized.

In general, the book achieves the authors' goal of presenting to the clinician caring for the patient and the clinician interpreting scans the basic information necessary for the intelligent use of this procedure.

MELVIN H. FARMELANT

St. Vincent Hospital, Worcester, Massachusetts  
and the Boston University  
School of Medicine, Boston, Massachusetts

such a chapter can any longer serve a useful purpose in a book dealing with a highly specialized topic. The discussion of collimator properties and scintigraphic systems, such as scanners and scintillation cameras, that follows is essential for the appreciation of the advantages and the limitations inherent in each system. Without this knowledge useless clinical trials may be attempted or some of the resulting clinical data may be misinterpreted.

The best scintigraphic instruments are ineffective without a radiopharmaceutical that localizes differentially within the organ of interest for an adequate length of time; it must be labeled with a radionuclide emitting a gamma ray of energy suitable for

high-efficiency detection and collimation. Therefore the following chapter describes the chemical, biophysical, and pharmacological properties of radiopharmaceuticals presently available for scintigraphy. This complex subject is presented in a precise and well-organized form. However, the subsequent short chapter on radiation dosimetry will be of little value for most readers, and the table on absorbed doses given in the back of the book seems to contain some inconsistencies.

The main sections of the book, 279 pages, are devoted to the clinical usefulness of scintigraphy for diagnosing abnormalities of the central nervous system, saliva glands, thyroid and parathyroid, heart and large vessels, the lungs, liver, spleen, stomach, pancreas, kidneys, lymph system, placenta, skeleton, bone marrow and some body cavities as well as for tumor detection. These sections are all well written and generously documented by more than 300 illus-

trations. The great variety of clinical examples presented and the high precision of the scintigrams shown result from the imaginative and skillful application of scintigraphy by the authors.

The publisher should be commended for the superior quality of the reproduction of the scintigrams, including some in color, together with the relevant radiographs. Because these illustrations speak for themselves, the book is highly recommended to all concerned with scintigraphy even with a minimum knowledge of German. Unfortunately an English translation is not planned at present because of the high publication costs and the necessary delay which may result in a translation out of date.

**GERALD J. HINE**  
Veterans Administration Central Office  
Washington, D.C.