

FRONTIERS OF NUCLEAR MEDICINE (ACKTUELLE NUKLEARMEDIZIN). Horst W, ed., Springer-Verlag, Berlin, Heidelberg, New York, 1971, 306 pp, 180 figures, \$30.50.

This is one of those rare books in the field of nuclear medicine because it contains a comprehensive collection of research reports presented by medical doctors, physicists, chemists, and computer specialists from 11 countries. As indicated by the editor, this group of young second-generation nuclear scientists have dedicated their papers to the memory of George Von Hevesy, the great pioneer of nuclear medicine and the 1943 Nobel Prize winner.

The material presented in this book is extensive. Some results of basic research have been emphasized, such as examination of cell kinetics and studies of the effect of ionizing radiation on the in vivo metabolism of monocarbon fragment precursors. Other papers presented described new methods for data analysis and dosimetry but the largest number discussed new techniques for both kinetic and scintigraphic studies. The most interesting paper, which also won the George Von Hevesy Prize for Nuclear Medicine, described the visualization of radioactivity

in dogs following administration of various ^{11}C carboxylates. Results presented in this paper showed that a large variety of organic compounds labeled with ^{11}C are useful for morphological and functional studies of liver and kidneys, for visualization of brain lesions, as well as for visualization of the kinetics of fatty acid deposition in the human body. As stated by the prize winner (H. S. Winchell), low radiation dose, high-resolution tomographic positron scintigraphy, and potential for isologous labeling of such organic compounds makes ^{11}C an extremely important radioisotope in nuclear medicine.

Although papers have been written in both German and English, the book achieves the editor's purpose of presenting to clinicians as well as to investigators some "results so far-ranging as to push the frontiers of nuclear medicine still further forward."

NGO TRAN

Department of Nuclear Medicine
and Radiobiology
Centre Hospitalier Universitaire
Sherbrooke, Québec, Canada

PROTECTION AGAINST RADIATION FROM BRACHYTHERAPY SERVICES. NCRP Report #40. National Council on Radiation Protection Measurement Publications, Washington, D.C. 1972, 65 pp, \$2.00.

The principles of radiation protection are the same for all types of radiation sources: *distance* (stay as far away from the source as possible), *shielding* (place as much absorbing material between the source and yourself as is necessary and practically feasible), and *time* (complete working with or close to the source in the shortest time possible). These principles are applied to the fullest for all contingencies with regard to brachytherapy sources in this recent NCRP report.

Brachytherapy is a method of radiation therapy in which an encapsulated source is used to deliver gamma or beta radiation at a distance up to a few

centimeters either by surface, intracavitary, or interstitial application. Initially all brachytherapy was carried out with radium or radon sources. In recent years there has been increasing use of artificially produced radionuclides. Among the long-lived gamma-ray emitters ^{60}Co and ^{137}Cs have been used mainly and the radionuclides of shorter half-life include ^{125}I , ^{182}Ta , ^{192}Ir , and ^{198}Au . These sources are used in the form of needles and wires while ^{90}Sr is used in plaques for beta radiation therapy.

The recommendations given in this NCRP report include those for equipment, facilities, safe methods of clinical application, decontamination, and working conditions. They are intended for physicians, radiation and health physicists, radiation protection supervisors, hospital administrators, nurses, source custodians, and radiological technologists and techni-