Therapeutic Nuclear Medicine

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Although the excellent and rapid advances in the diagnostic aspects of nuclear medicine have perhaps made us lose sight of steady progress in the therapeutic use of radiopharmaceuticals, there has recently been an exponential resurgence of interest in radiotherapeutic procedures. The use of internally administered radionuclides as a component of cancer therapy has been an important but relatively minor component of cancer care over the past 20 years. Recent advances in molecular biology have led to a better understanding of cancer and other disease states, and parallel research has shown promise for biologic vehicles such as monoclonal antibodies, specific proteins and peptides, and a variety of other intelligently designed molecules to serve as specific carriers for highly localized delivery of cell-killing radiation into tumors.

This book, well organized into 12 chapters, is the first comprehensive updated book on therapeutic nuclear medicine. In Chapter 1, 158 world-renowned experts on the topic discuss the basic principles of radionuclide treatment, explore in detail the available treatments, explain the regulatory requirements, and examine likely future developments. In Chapters 2 through 10, the full range of clinical applications is reviewed, including thyroid cancer, hematologic malignancies, brain tumors, liver cancer, bone and joint disease, and neuroendocrine tumors. Chapter 11 deals with radiation biology and dosimetry, and the final chapter, 12, covers radiation planning and perspectives on radionuclide treatment. The figures are clear and of superb quality, and the tables are useful for demonstrating the most salient points. The biography contains seminal literature about the topic.

Therapeutic nuclear medicine finally seems destined to find its rightful place in personalized therapy, as there are several existing and potential radionuclides for use as unsealed sources in targeted cancer therapy and other therapeutic applications. Theranostic radiopharmaceuticals have the power to drive advances in personalized medicine that will better target diagnosis and therapy. The major issues continue to be the availability and cost of the best theranostic agents.

The text of *Therapeutic Nuclear Medicine* is well written, and the information is sufficient and clearly stated. This book should be the ideal reference for trainees and practitioners in the fields of not only nuclear medicine but also oncology, family medicine, and internal medicine.

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