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Book Review: Nuclear Medicine: The Essentials

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In contrast to the discipline of conventional Radiology, to which medical school students, trainees and many practitioners of medicine are heavily exposed, the field of Nuclear Medicine is somewhat specialized and requires special training for optimal understanding of its role in various domains in medicine. Therefore, there is a dire need for a simplified exposure to the specialty which provides some practical knowledge about the field and its unique role in day-to-day practice of medicine. The Essential Series is a collection of Radiology text books that follow such standardized format. This series is designed to provide a practical tool for those who wish to gain a broad base knowledge of various specialties in medical imaging. The content is confined to essentials of the specialty and is understandable by the novice. However, enough details are included for those who teach the specialty and also provide a reference for healthcare providers who are practicing the specialty of imaging. The Essentials are compact in size and allows for residents and other interested groups to grasp practical knowledge about the various procedures that are offered by this specialty. Furthermore, the self-assessment section provides multiple choice questions at the end of each chapter. As such, this additional training is of particular benefit for those who are preparing for image-rich computer-based examination for professional and maintenance certifications.

Currently, the field of Nuclear Medicine is the fastest growing discipline in medical imaging. The recent introduction of novel radiopharmaceuticals for imaging and targeted therapy are revolutionary in nature and therefore educating the trainees and the community at large about their applications in many disciplines is essential at this time. These include innovations in high technology instruments related to digital and time-of-flight cameras, total body PET instruments, PET/CT, PET/MRI and SPECT/CT. This text book provides a concise, yet comprehensive overview of the field of Molecular Imaging that fits the criteria intended for The Essential Series.

Each chapter describes the basics related to physics, instrumentation, quality control, radiochemistry, radiation safety, and other essential information of each procedure.

The table of content includes radiochemistry, instrumentation, physics and radiation safety as introductions to technical bases for performing various procedures. The clinical section deals with assessment of diseases and disorders of various organs and anatomic structures (thyroid, parathyroid and neuroendocrine glands, central nervous system, boney skeleton, lungs, gastrointestinal tract, kidneys, and lymph nodes). Also, chapters are devoted to radio-theranostics, the essentials of pediatric nuclear medicine, quality assurance, and procedures in pregnant and lactating patients. Overall, the book includes 19 chapters.

The chapters are organized in a logical manner and describe in some detail the imaging techniques that are followed by the practitioners of the discipline. Therefore, readers who may not be familiar with the role of nuclear medicine procedures will be able to comprehend the scope of this discipline in clinical settings. No critically important topics are missing in this comprehensive book.

The chapters are authored by highly qualified and expert individuals with longstanding experience in their respective disciplines. Drs. Jadvar and Colletti have substantially contributed by authoring several chapters of this book.

Overall, this book provides a well balanced view about the current applications of conventional nuclear medicine and PET. Therefore, the book is a strong medium for introducing physicians

and scientists to the ongoing activities in the field and their relevance to day-to-day practice of medicine. There are no serious weaknesses to the overall content of the book. Additionally, the figures and tables included in the chapters are of high quality. The majority of the figures in the book are selected from the authors' own clinical files and are of high quality.

In conclusion, the book provides a comprehensive and excellent review of the current practice of the field. Therefore, this book will be of great interest to trainees, technologists, and scientists as well as practitioners of this rapidly evolving specialty. As such, the book is highly recommended for those who wish to refresh their understanding of the field and its various applications in medicine.

Disclosures

No potential conflicts of interest relevant to this article exist.