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Handbook of Nuclear Medicine and Molecular Imaging for Physicists – three volume set

Ljunberg

REVIEW INFO



Publisher:
Routledge, Taylor and
Francis Group

ISBN:
978-1-138-59335-0

RRP:
£470.00

RAD Magazine price:
£376.00*

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May 17, 2023, please
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current prices.*

REVIEW

Book reviewed by Dr Heather Williams, consultant medical physicist, The Christie NHS Foundation Trust, Manchester.

This is a high quality, three volume set, bound in striking glossy red and black. The formatting is clear and the text printed in dark grey ink, an unusual choice that nevertheless makes the dense pages of text, formulae, grey and white diagrams and photographs an easier read during prolonged study. Edited by professor of medical radiation physics Michael Ljungberg from Lund University, a renowned authority on Monte Carlo modelling, it includes contributions from medical physicists who will be familiar names to many in the UK community.

The content is predominantly written from a European perspective, although a chapter on the IAEA is included to provide some broader international context.

Volume I covers instrumentation and imaging procedures. This wide-ranging volume opens with a brief history of nuclear medicine before moving on to discuss radiation and detector physics, and the details of gamma cameras, PET, CT, MR and hybrid systems, as well as more niche imaging technologies. There are shorter chapters on acquisition protocols for clinical imaging, providing examples of how this knowledge is applied in practice. Volume II covers modelling, dosimetry and radiation protection. This volume provides the reader with a grounding in biostatistics, radiobiology, kinetic analysis and radiation protection, before a detailed and focused discussion of the application of these principles in dosimetry and radiation safety.

Volume III covers radiopharmaceuticals and clinical applications. It begins with an overview of the principles behind radiopharmacy before moving on to the details of radiopharmaceuticals, all aspects of their production, and both clinical and research applications. A chapter on ultrasound is also

review continues ...

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included, which does feel a little out of place, displaced from the main instrumentation discussion in volume I.

The set covers a wide range of relevant material, but at times the structure gives the impression of a compendium of contributions rather than reading as a cohesive textbook split over three volumes. For example, it feels somewhat odd to bracket clinical applications with radiopharmacy when the biodistribution heavily influences image acquisition, reconstruction and processing. However, while the connection between chapters and within volumes is not entirely obvious, each chapter stands on its own merits and provides valuable, in-depth information from subject experts.

Few are likely to be able to stretch to buying a personal copy, but Ljunberg's trilogy would make an excellent addition to any nuclear medicine department library.

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