Nuclear Cardiac Imaging: Terminology and Technical Aspects

E.S. Crawford and S.S. Husain

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Nuclear Cardiac Imaging: Terminology and Technical Aspects, now in its second edition, gives an overview of the basic principles and technical aspects of nuclear cardiac imaging studies for nuclear medicine technologists, cardiology fellows, radiology and nuclear medicine residents, and students.

The book is divided into 5 sections, with multiple chapters in each. Section 1, "Myocardial Perfusion Imaging," has several chapters dedicated to the review of cardiac anatomy, radiopharmaceuticals used in cardiac SPECT, and protocols for exercise and pharmacologic stress testing and includes some detail on acquiring and processing images. Section 2 includes 2 brief chapters, the first discussing imaging of acute chest pain and the second discussing radiopharmaceuticals used in myocardial infarction—avid imaging. Section 2 also provides examples of myocardial infarction scans showing normal and abnormal findings. Section 3 reviews dynamic cardiac imaging, including indications, methods, red blood cell labeling, and resting gated acquisitions, and concludes with an overview of first-pass imaging. There is also a chapter on gated image acquisition and processing of gated blood-pool SPECT. This chapter could have been longer and more detailed but otherwise is

well written. Section 4 discusses cardiac PET. The overall content is good, but the discussion does not include cardiac sarcoidosis, and more detail on insulin loading for patients undergoing ¹⁸F-FDG viability studies would significantly enhance this section. The image displays are excellent and easy to understand. Section 5 is worth the read. The chapter on electrocardiography is well written, and the examples of electrocardiograms are excellent for someone just learning or as a review. The summary of drugs provided in the chapter on the cardiovascular system is a helpful overview for anyone studying for an examination.

New to this second edition are a well-written chapter on radiation exposure from medical diagnostic imaging and a nice chapter on cardiovascular drugs that were not included in the first edition.

Overall, this is an excellent reference book for nuclear medicine students, cardiology fellows, radiology residents, and technologists sitting for the nuclear cardiology technologist or NMTCB examination.

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