

BOOK REVIEW

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Clark's Positioning in Radiography Thirteenth Edition

Whitley AS, Jefferson G, Holmes K, Hoadley G, Sloane C, Anderson C.
Clark's Positioning in Radiography 13th edn. CRC Press, London, 2015.

The first edition of Clark's Positioning in Radiography by Katharine 'Kitty' Clark, was published in 1938 and remains a cornerstone medical imaging positioning reference text. It fulfils an important role, disseminating positioning knowledge derived over many years. It is designed to be both a reference text for medical imaging students and qualified medical radiation science practitioners. Noting the immense changes within the profession since the last edition, it was with great interest that I opened the cover of the latest iteration of this quality text.

Clark's Positioning in Radiography 13th Edition authored by Whitley, Jefferson, Holmes, Hoadley, Sloane and Anderson and printed by CRC Press; ISBN 9781444122350 is available as a 592 page hardcover text for a current list price of \$AU127.38. It is also available as a VitalSource eBook which can be downloaded to various platforms for offline review. The text is presented through 14 Chapters mirroring previous editions with numerous (1 531) supporting positioning pictures, radiographic images and schematics.

A foreword primes the reader for engagement with a core medical imaging text. The book is a collaborative effort from multiple eminent UK authors and contributors; the preface highlights improvements to the latest edition including the evaluation of images; adoption of new technology; radiation safety including diagnostic reference levels (DRLs); informatics; bariatric radiography and tomosynthesis.

Both CR and DR techniques are discussed in detail to reflect the currency of the edition. However, there is still some occasional ad hoc reference to film screen imaging throughout the text that is separate to the content on image acquisition and display and the preamble into digital imaging. There is an assumption of knowledge around this as elements of the technology are alluded to or briefly discussed. Given the number of years between the most recent editions (19 and 11 years respectively) and the rapid evolution of digital technology, this will ultimately date the text, which is unfortunate.

Noting that the origin of the text is the United Kingdom (UK), some content including abbreviations, terminologies and reference to relevant legislation and regulations do not correlate with the Australian setting. The inclusion of DRLs after each projection reflects the differences in current practice between countries. However, this does not detract from the overall intent of the text, and given current research into DRLs in Australia, the inclusion of DRLs in this text is important; these differences would be easily identified by the qualified radiographer or senior medical radiation science student if residing outside the UK.

Abbreviations listed are useful to the medical imaging student and are easily accessible. Each chapter starts slightly differently which detracts from continuity; they are not always as clear and easy to follow as the précis suggests. As a reference book for positioning, it is useful if the body part and instructions for imaging are steadfastly consistent throughout to enable fast access to information; additional supporting information can then be located after these points. Some images are quite small, detracting from their value, while others have been used more than once. The pages overall are very busy with multiple subheadings which are large and at times distracting. While the radiographic images throughout the text are well produced, it is disappointing that photographic images are entirely black and white. This detracts from the feel of the text, placing this current edition behind its contemporaries. Cost is most likely the decision behind this, however, it remains a point of issue for the reviewer.

Chapter 1 serves as an introduction to medical imaging and covers terminology, exposure factors, the radiographic image, image quality and radiation protection. The chapter has a subheading *Terminology* which also includes relevant information on the patient journey, preparation for the examination, undertaking the examination, post-examination, aftercare and image evaluation that do not sit well with the section title. Nonetheless, these topics are well covered and provide context for the following content. The content covering actual terminology is comprehensive with well-written definitions and supporting illustrations.

Chapters 2–14 are as per previous editions providing continuity for ongoing users of the text including: *Basic*

principles of radiography and digital technology; Upper limb, Shoulder, Lower limb; Hips, pelvis and sacroiliac joints; Vertebral column; Thorax and upper airway; Skull facial bones and sinuses; Dental radiography; Abdomen and pelvic cavity; Ward radiography; Theatre radiography, Paediatric radiography and Miscellaneous. Each chapter introduces the relevant anatomy and provides pertinent background information, anatomical overview, equipment considerations, positioning, radiation protection and essential imaging characteristics. A comprehensive list of references and further readings support student research and learning for each chapter.

The text contains image evaluation boxes that link and support the usefulness of a 10-point review plan to assess image quality, presented in the opening chapter, and provide assessment of acceptable and repeatable radiographs to support learning. The use of these boxes, however, at times seems ad hoc as they are neither provided for every projection nor in the same position within the text. While being most valuable, this information may have been better placed at the end of each section as summary point. Similarly, *Common faults and remedies* and *Radiological consideration* headings and text are not always present.

Inclusion of material and references to the role of other modalities, for example, dedicated dental cone beam CT, contextualises the role of plain imaging in specific patient presentations and pathologies. However, the deletion of the chapter on mammography is perplexing as this modality is of no lesser importance than newer content. Indeed mammography is of considerable current

significance due to breast screening and the development of new technology, for example, digital breast tomosynthesis (DBT). No rationale is provided for this deletion by the authors. Brief reference is made to this modality in the section on *Soft tissue*, but this is referenced against film screen technology which is obsolete, ignoring the fact that film screen mammography has almost entirely replaced by digital image acquisition. Reference to DBT is also absent from the text. Against a backdrop of well-established international breast screening programmes, this deletion is remiss and may persuade potential readers to source other core texts where this modality is covered.

The 13th edition of Clark's *Positioning in Radiography* essentially retains its pre-eminence and remains a valuable educational resource for both the qualified radiographer and the medical radiation science student as a quality educational as a reference text. Future editions of Clark's *Positioning in Radiography* must decide if it is to become an all-encompassing radiography text or remain an excellent resource for its core aim: radiographic positioning.

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