Cardiac and Critical Care Ultrasonography

Robert H. Thiele. E-book, 2015, free, 373 pages.

<https://itunes.apple.com/us/book/cardiac-critical-care-ultrasonography/id967517373?mt=11>

Genevieve Lalonde, MD

Received: 14 October 2015 / Accepted: 27 October 2015 / Published online: 18 November 2015
© Canadian Anesthesiologists' Society 2015

Cardiac and Critical Care Ultrasonography is a recently published e-book that addresses the perioperative use of ultrasound within the operating room and critical care settings. Specifically, this comprehensive reference focuses on the contemporary use of transesophageal echocardiography, transthoracic ultrasound, as well as other modes of ultrasound within the modern medical environment.

This 350-page e-book is currently available only in electronic format and is offered for free download on mobile devices through Apple iTunes. Well organized, its 24 chapters are clearly subdivided into logical sections with more than 200 images as well as short videos. Research, observations, and findings are supported by over 400 references, including previously published works and primarily peer-reviewed literature.

The book addresses all the basic topics of perioperative echocardiography, such as the physics of ultrasound, artifacts, image optimization, performance of an echocardiography examination, ventricular function, native and prosthetic valves, diastolic function, masses, congenital heart disease, as well as pericardial and aortic diseases. More specialized subspecialty subjects, such as the use of echocardiography for extracorporeal support and ventricular assist devices in heart failure, are also covered in detail. The book also covers the most important features in heart and lung transplant from an ultrasound perspective. An overview of the newer modes, technologies, and applications used in echocardiography, such as 3D and speckle tracking, is also presented. The last few

chapters are devoted to critical care ultrasonography, which includes thoracic, abdominal, deep venous, and cerebral ultrasound.

This book serves as a solid and comprehensive general reference that is readily available to support physicians who use ultrasound in their practice. This freely available version is accessible to medical students, residents, fellows, and medical staff. The paperless format is also environmentally friendly. This e-book is a practical and useful quick reference resource that can provide trusted information in the operating room or during consults through use of a mobile device.

The format is light, structured, and pleasing to the eye with the text being well spaced and the most important ideas presented in bold font. Figures and tables are presented in a logical consistent manner and with an agreeable design. Navigating through the document is simplified, especially with the use of the help search function associated with the e-book format. Each section has summary key points, which facilitates and prompts further reading, and the overall content is logically presented and easy to digest. Short videos strategically situated within the text promote learning by providing moving visuals to support key concepts.

The content addresses key and relevant aspects of modern ultrasound without any superfluous information to distract the reader. The book also supports key professional competencies and subject material, including content associated with the Advanced PTEeXAM® of the National Board of Echocardiography and guidelines for the American Society of Echocardiography.

Although the book serves as an excellent summary of *must have* ultrasound knowledge, it does have some limitations. First, the content is selected and presented from the sole perspective of one key and notable contributor.

G. Lalonde, MD (✉)
Department of Anesthesia and Perioperative Medicine,
University of Manitoba, Winnipeg, MB, Canada
e-mail: genevieve.lalonde.1@ulaval.ca

Use of multiple contributors would have allowed for alternative perspectives on ultrasound. Second, this e-book is just one of many ultrasound resources. If a physician studies for the Advanced PTEeXAM, alternative reference resources should be consulted in addition to this book. Such alternatives may include accessing multiple websites, attending conferences, and collecting the latest information that may not be captured in a dated print-based book. Finally, although not currently available in this first version of the book, practice questions could prove useful to complement learning and interest.

In summary, *Cardiac and Critical Care Ultrasonography* is presented in a convenient and practical delivery format for a busy operating room environment. Sonographers should keep this important information readily accessible in their electronic device.

Funding sources None.

Conflicts of interest None declared.