

# Preface

Imaging in medicine has been, and will likely remain for the foreseeable future, the primary modality for identification of altered structure due to disease processes. As a noninvasive, safe and relatively inexpensive imaging modality, Ultrasound has been embraced by many medical specialties as the “go to” technology.

The superficial location of the testis and phallus make them ideal for high resolution ultrasound evaluation. Ultrasound has become an essential tool for urologic evaluation. It is also a cost effective option that gives real time information to assist the Urologist in rapidly diagnosing pathology.

With ever changing technology and regulatory requirements, this book was envisaged to provide a compendium of information for the sonographer, Resident or practicing Urologist interested in diagnostic imaging of the male genitalia. The authors have included a good number of figures, schematics and ultrasound images to complement the text. However, expertise in ultrasound requires “Hands On” training for which courses are available which give CME credit that can be applied to Urology Practice Accreditation (see Chap. 7) through the American Urological Association (AUA, [auanet.org](http://auanet.org)) and the American Institute for Ultrasound in Medicine (AIUM, [aium.org](http://aium.org)).

We begin our journey with the history and physical science of ultrasound. I believe a solid foundation in the physical principles of ultrasound is essential to produce optimal ultrasound studies. We then proceed with the basics of imaging and specific applications for scrotal and penile ultrasound. We have included a chapter on Urology practice accreditation recently developed by and instituted by the AIUM. We end with a chapter that provides standard protocols for imaging the male genitalia. I have found that an organized approach to the ultrasound examination provides the framework for both the novice and experience sonographer to assure that the organ of interest is completely examined. In addition, the protocols include the images and measurements often required by accrediting authorities to appropriately describe the organ being interrogated.

Ultrasound has often been referred to as the Urologist’s Stethoscope because much of the genitourinary system is not easily evaluated by physical examination and requires imaging for diagnosis. Although, the male genitalia’s external location lends itself to physical examination, ultrasound identification of pathology often

requires imaging with ultrasound being the primary imaging modality required for diagnosis. Therein lies one of the unique aspects of ultrasound studies performed and interpreted by Urologists. The mandate to examine the patient, coupled with the Urologist's experience in both surgical and medical treatment engenders an unparalleled ability to meld the healer's art with advanced imaging technology. It is my fervent hope that this text might encourage many Urologists to embrace the art and science of ultrasound in their mission to provide excellence in patient care.

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