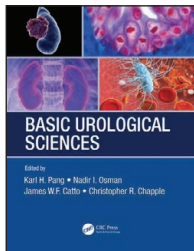

BOOK REVIEW

Basic Urological Sciences – Karl Pang



ISBN: 9780367202187, 336 pages
Publisher: CRC Press
Rating: ★★★ (three stars out of five)

Description: This exciting and fascinating book reviews the building blocks of basic science in urology. It is a collection of multiple subjects in urology that are typically addressed from a clinical perspective, now approached from a basic science perspective.

Purpose: The book aims to fill the gap in current urological literature by addressing clinical and surgical aspects from a scientific standpoint. The authors successfully distill complex basic science terminology relevant to everyday practice in urology, making many of the concepts understandable to all audiences within the urology field.

Audience: The book focuses on trainees in urology. The authors specifically want trainees to not only understand the information in this book, but also apply the specific scaffolding way of thinking to future discoveries with the field of urology.

Features: Section 1 delves into the specific basic mechanisms of cellular biology, molecular biology, genetics, and a primer of cellular mechanisms in pathology. Specifically, the first chapter discusses the building blocks of cellular biology and immunology in basic simple terms that are understandable to all audiences. Then, the book transitions into a primer of the concepts that are relevant to genetics in Chapter 2. Chapter 3 discusses specific molecular/cellular and genetic concepts that are important to understanding oncogenesis and metastasis, such as tumor suppressor genes and hallmarks of cancer. Chapter 4 discusses basic microbiology concepts that are important for understanding everyday practice in urology. Chapter 5 describes the molecular aspects of transplantation and how they may be relevant to addressing renal transplantation. Chapter 6 addresses hemostasis and thrombosis and uses the concept of disseminated intravascular coagulation as a pivot point to discuss systemic response to surgery and shock in Chapter 7. Chapter 7 excellently summarizes the important aspects of understanding shock and how it takes place from a molecular standpoint. Section 2 mainly covers embryology. Chapters 8-12 discuss the molecular intricacies of the development of kidneys, ureters, adrenal gland, bladder, prostate, and male reproductive system. These chapters include an elegant summary of the important molecular aspects of embryology and descriptions of the physiology of each of these organs. Chapter 13 addresses the anatomical and physiological changes that affect pregnancy and the specific urological concepts that are important to understand when addressing pregnant patients. Section 3 addresses multiple aspects of benign pathology. Specifically, Chapter 14 discusses basic science concepts associated with pain along the anatomy of the urinary tract. The book then discusses acute kidney injury and chronic kidney disease in Chapter 15 and addresses both urolithiasis and upper urinary tract obstruction in Chapters 17 and 18. Chapter 19 and 20 discuss lower urinary tract dysfunction. Chapters 21 and 22 discuss penoscrotal pathology and male sexual dysfunction. Section 4 reveals a fascinating discussion about malignant pathology. Chapters 23-27 discuss the pathology mechanisms of renal, urothelial, urethral, prostate, testicular and penile cancer. Section 5 covers therapeutics within urology. Chapters 28-34 and discuss different aspects of pharmacology, antimicrobial and radiotherapy.

Assessment: This book is an excellent primer and introduction to different principles necessary for the understanding of basic urological sciences. Importantly, the book fills a needed gap in the literature for trainees in urology that addresses the molecular and cellular biology of urological sciences.

Score: Weighted Numerical Score: 78 - ***

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