

ADVANCES IN
SURGICAL PATHOLOGY
**ENDOMETRIAL
CANCER**

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ADVANCES IN SURGICAL PATHOLOGY

ENDOMETRIAL CANCER

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Series Overview

Expectations for the pathologist practicing today exceed those for pathologists in practice only a few years ago. In addition to the rapid growth of knowledge and new technologies in the field of pathology, recent years have seen the emergence of many trends that significantly impact the traditional practice of pathology including the subspecialized multidisciplinary approach to patient care; personalized therapeutics including targeted molecular therapies; and imaging techniques such as endoscopic microscopy, molecular radiology, and imaging multimodality theranostics that compete with conventional light microscopy. In order to remain a viable member of the patient care team, the pathologist must keep up with growing knowledge in traditional subjects as well as in new areas of expertise such as molecular testing. Additionally, the pathologist is subject to an increasing number of credentialing requirements and, for those now completing training, self-assessment modules for maintenance of certification, which require the pathologist to be examined on the recent advances in pathology in order to sustain their qualifications to practice.

Each volume in the new series *Advances in Surgical Pathology* focuses on a specific subject in pathology that has undergone recent advancement in terms of knowledge, technical procedures, application, and/or integration as part of current trends in pathology and medicine. Each book includes an accompanying Solution site with a fully searchable online version of the text and image bank. This series of books not only updates the pathologist on recently acquired knowledge but also emphasizes the new uses of that knowledge within the context of the changing landscape of pathology practice in the 21st century. Rather than information in a vacuum, the pathologist is educated on how to apply the new knowledge as part of a subspecialized multidisciplinary team and for purposes of personalized patient therapy.

Each volume in the series will be divided into the following sections: (1) Overview—updates the pathologist on the general topic, including epidemiology, bringing the pathologist generally up-to-date on a topic as a basis for the more specialized sections that follow. (2) Histopathology—reviews histopathology and specific recent changes that warrant more description and more illustration, for example, recently described entities and recent revisions in classifications. This will also emphasize histopathology figures to illustrate recently described entities and to demonstrate the basis for classification changes so that the pathologist is able to understand and recognize these changes. (3) Imaging—reviews the impact of imaging techniques on histopathologic diagnosis and on the practice of pathology. An example of the former is the use of increasingly sensitive high-resolution CT scan in the diagnosis of interstitial lung diseases. An example of the latter is the use of multimodality theranostics rather than traditional histopathology for the diagnosis and treatment of lung cancer. Figures linking the radiologic images to the histopathology will be emphasized. (4) Molecular Pathology—a review and update on specific molecular pathology as it applies to specific diseases for the practicing pathologist regarding molecular diagnostics and molecular therapeutics. An example of the former is the identification of a specific fusion gene to diagnose synovial sarcoma. An example of the latter is the identification of specific EGFR mutations in pulmonary adenocarcinoma and its relationship to treatment with EGFR antagonists. (5) For those volumes dealing with cancers (*Lung Cancer, Breast Cancer, Prostate Cancer,*

Colon Cancer, etc.), additional sections will include Preneoplastic and Preinvasive Lesions, which will emphasize histopathologic figures and staging, particularly emphasizing the new staging systems and to illustrate specific problems in staging.

These books will assist the pathologist in daily practice in the modern setting and provide a basis for interacting with other physicians in patient care. They will also provide the timely updates in knowledge that are necessary for daily practice, for current credentialing, and for maintenance of certification. As such, this series is invaluable to pathologists in practice at all levels of experience who need to keep up with advances for their daily performance and their periodic credentialing and to pathologists-in-training who will apply this knowledge to their boards and their future practice. In the latter case, this series will serve as a useful library for pathology training programs.

This book is dedicated to Dr. Fred Silva and Dr. Philip Cagle, my colleagues and friends. I thank them for their mentorship, support, encouragement, and for all the opportunities they gave me. I also want to thank and acknowledge all the contributors for their hard work and commitment.

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Preface

The aim and intent of this book was to “fill a gap” and bridge the need for a focused joint approach to endometrial carcinoma from both the pathology and clinical perspectives.

The goal for the content of this book from all of the contributors was to provide concise, useful, practical, and as current as possible information on endometrial carcinoma to practicing pathologists and gynecologic oncologists; gynecology, oncology, and pathology residents and fellows; and all clinicians in their daily practice.

Anna Sienko, MD

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I

Overview

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- ▶ **CHAPTER 2:** Overview of Endometrial Carcinoma

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Introduction

1

Endometrial carcinoma is the fourth most common female malignancy and accounts for 6% of all gynecologic cancers. Endometrial carcinoma is the most common cancer in women in developed and industrialized countries, with most cases occurring in postmenopausal women at an average age of 61 years. However, the incidence of endometrial carcinoma is increasing in premenopausal women and women less than 40 years of age. Most standard gynecologic pathology textbooks have sections or chapters that include a discussion of the epidemiology and risk factors of endometrial carcinoma, as does this book. However, standard gynecologic pathology books do not usually include an overview of patient treatment and management and the related issues involved, as found in this book (Chapter 2). The approach to histologic diagnosis and classification of endometrial hyperplasia and carcinoma are also discussed in most standard gynecologic textbooks and are discussed in this book in Section 2 (Chapters 3 and 4). However, to my knowledge, no book is currently available specifically dedicated to endometrial carcinoma that encompasses not only the histology, but also the broader view of clinical ramifications based on pathology. This book has unique sections that are not found in other standard gynecologic pathology textbooks such as the section entitled “The Pathologist’s Responsibility” in Chapter 2. Section 3 (Chapters 5 and 6) was written by practicing gynecologic oncologists involved in the daily care of patients with gynecologic malignancies. This book also includes the most current aspects of molecular pathology of endometrial carcinoma (Section 4, Chapters 7 to 9) and is the first book to include the limitations and pitfalls of cytology of endometrial carcinoma (Section 6). Issues and current challenges, including shortcomings and pitfalls in the diagnosis of endometrial carcinoma and classification of histologic cell type based on different sampling techniques, are discussed (Chapter 13). Staging directly impacts on patient treatment and prognosis. The new revised staging for endometrial carcinoma is reviewed in the context of the most pertinent issues and difficulties encountered by the pathologist in assessment of the pathologic staging of the surgical specimens.

This book hopes to convey that communication is crucial between pathologists and gynecologic oncologists and all clinicians involved in patient care. The pathologist plays an integral part in patient management because the pathology diagnosis rendered has major clinical impact—guiding the surgeon and determining the extent of surgical resection, impacting the choice of patient management and whether or not to include adjuvant treatment, and predicting the risk of recurrence and overall patient prognosis.

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