

Preface

Lung cancer is the leading cause of cancer-related deaths worldwide, but its recognition at an early stage and diagnosis with minimally invasive procedures can decrease morbidity and mortality. In fact, within the past decade, enormous strides to detect, sample, and treat lung cancer have been made. After many years of no clear progress in therapy for lung cancer, the last decade has witnessed a large paradigm shift on the treatment and management of patients with non-small cell lung cancer (NSCLC). Most of the changes have occurred in adenocarcinoma with the identification of driver mutations that can be targeted with a specific therapy and introduction of new chemotherapeutic drugs.

Though promising, this progress is not without challenges. As the number of minimally invasive procedures and treatment options is increasing, the sizes of the tissue samples upon which diagnoses are rendered and molecular tests are conducted are decreasing. This shift has resulted in unprecedented significance centered upon small samples, such as fine-needle aspirates (FNAs) and core biopsies, often the only tissue from patients.

These challenges have affected many professionals in the field of pulmonary oncology especially pathologists, who are now required to diagnose and subclassify NSCLC into adenocarcinoma or squamous cell carcinoma and triage specimens for molecular pathology and other ancillary tests on small biopsy material. The subclassification of NSCLC has a direct impact on patient's clinical management. In response to these challenges, many professionals of multidisciplinary groups including pathologists, pulmonologists, oncologists, surgeons, and radiologists have worked together to propose new recommendations and the classification of NSCLC.

This book provides an up-to-date practical yet comprehensive guide to manage the shift in the diagnosis of lung cancer from large resections to small samples, including cytology and core biopsy specimens. Specifically, it outlines various available minimally invasive modalities and presents algorithms to optimize and maximize sample collection and processing beginning at the time of tissue acquisition during the procedure. More importantly, the book provides an overview and practical applications of the multidisciplinary new recommendations for the classification of

small biopsies and cytology proposed by the International Association for the Study of Lung Cancer, American Thoracic Society, and European Respiratory Society (IASLC/ATS/ERS) and molecular triage for pulmonary adenocarcinoma proposed by the College of American Pathologists, International Association for the Study of Lung Cancer, and Association for Molecular Pathology (CAP/IASLC/AMP).

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