Preface

Advances in science and cancer medicine are growing ceaselessly, augmenting the complexity of cancer biology and posing new problems to medical practitioners. However, there are still many tantalizing therapeutic approaches available to improve cancer curability, including lung cancer, which is one of the most frequent causes of cancer mortality. The Lung Cancer Precision Medicine book provides many opportunities for readers to satiate their curiosity for burning issues. Readers will find searched for answers in multiple facets of lung cancer. The distribution of chapters permits a reader to begin the book at any point which is a very novel aspect. The more we know about cancer and the more advanced the anticancer therapies, the more hurdles we face, especially in lung cancer. In recent years many promising targetable genetic alterations have been identified in non-small cell lung cancer (NSCLC), opening the era of oral targeted therapies (1). Nevertheless, single targeted therapy is becoming recognized as insufficient since it immediately leads to cancer signaling pathway compensation in order to escape the anti-cancer therapy effect, leading to further tumor growth and metastases. Despite a wealth of knowledge, the design of most therapeutic strategies requires more understanding of cell type-specific cross-talks of different pathways (2).

The reader will find many intriguing aspects on modern approaches of surgery and radiotherapy as well as cancer biology and other forms of diagnosis and treatment. The TNM Staging classification in NSCLC could be further improved to also include immunological markers. Stromal CD8+ tumor-infiltrating lymphocytes have been shown to be strong determinants of predicting survival (3). What do we do when a patient asks about markers of response to immunotherapy? Cytotoxic CD8+ T cells are of increasing interest in lung cancer and help to predict response to programmed death-1 (PD-1) and PD-ligand 1 (PD-L1) antibodies. What is the usefulness of biomarkers? Mechanistically, PD-L1 is only active when expressed on the cell membrane, either through dynamic IFNγ expression or through constitutive oncogene activation.

The book is outstanding in transmitting the quest for lung cancer curability and incorporates multiple collaborations of internationally renowned investigators, including expert multidisciplinary teams in surgery, radiotherapy, cancer biology, early diagnosis, new diagnostic techniques, biomarkers and novel forms of targeted therapy and immunotherapy. Many innovative aspects can also be found regarding clinical trials, adjuvant therapy studies, statistical analysis and circulating biomarkers.

AME has made a great contribution to the field of lung cancer with its initiative of this book. Throughout the numerous sections, different readers and experts in various fields will find what they expect and more. Importantly, the information retrieved from the book can be useful in the clinical practice or to reinforce self-esteem and confidence in laboratory research. The book has been edited splendidly and its long list of chapters and authors is unique. We congratulate the authors for their dedication and hard work as well as for sharing their findings and experience with the scientific community.

References

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