Preface

Lung cancer continues to contribute to the growing burden of non-communicable disease, not just in North America but around the world. With an ever-growing world population and the accumulation of genetic mutations in that population, the need for clinicians to embrace multimodality treatment is more acute than ever. The era of "personalized therapy" for all types of cancer has arrived, particularly for lung cancer, where time and time again we see some patients having positive responses to combinatory treatments, only to see others fail to respond to the same combinations. Treatment options for lung cancer are expanding rapidly thanks to advances in immunotherapy, radiation, chemotherapy, and other types of intervention. Even more unprecedented is the paradigm shift occurring in the context of radiation therapy. Radiation, long seen as solely as a means of local tumor control, is now, in combination with immunotherapy, showing promise for improving systemic control. The ability of radiation to turn a cancer into an *in situ* vaccine, acting against itself, enhances the potential of radiation as a powerful tool for treating systemic disease.

With the rapid pace of these innovations comes the need to bridge the knowledge gap, to inform the community of the countless clinicians, research scientists, and industries devoted to meeting the demands of lung cancer treatment. This textbook undoubtedly helps to bridge that gap. Written by experts from Europe, Asia, and North America, it is a crucial resource that our community needs to meet the present and future challenges of lung cancer treatment.

This textbook, while focusing on the role of radiation therapy in lung cancer management, provides chapters focusing on a broad variety of issues ranging from the relevance of proton therapy for the management of thoracic malignancies to the influence of stereotactic ablative radiotherapy and brachytherapy for the treatment of lung cancer. Its innovation extends further to chapters that outline new combinatorial advances in radiation therapy, such as combinations with immunotherapy, surgery, and chemotherapy. The work described in this book also has major translational implications with regard to the effects of sequencing and timing of radiation treatment in combination with other forms of therapy. Answers to these sorts of crucial questions are being sought by many radiation oncology clinicians today.

Lung cancer is a global threat. The GLOBOCAN global cancer statistics, last published in 2012, show that lung cancer is the most common type of cancer all over the world, with approximately 1.8 million new cases diagnosed each year, a number that continues to grow, with up to 58% of lung cancers occurring in middle- and low-income countries. Lung cancer is still the most common cancer in men worldwide and the most common cause of death from cancer worldwide. With the ever-increasing threat of pulmonary environmental pollutants comes the pressing need to disseminate knowledge on the importance of radiation therapy in the treatment of lung cancer, and we hope that our readers find that knowledge within these pages.

We are grateful to AME Publishers for the opportunity to publish this work, and for their incredible efforts in bringing this book to fruition. We hope that its readers will gain valuable knowledge on how far this field has come and can help to generate additional ideas for the future for further enhancing the effectiveness of radiation in the fight against lung cancer.

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