

In the past, the public saw cancer as far less common than other chronic diseases, such as diabetes and hypertension. However, the reality is that lung cancer has been the fourth leading cause of death in China following cardiovascular, cerebrovascular diseases, and chronic obstructive pulmonary diseases. Lung cancer causes more than 600,000 deaths in China every year, and its mortality is similar all over the world. With the popularization of computed tomography (CT) screening for lung cancer in the foreseeable future, its morbidity will be higher, and lung cancer will be on the rise among the younger population. Meanwhile, due to the early detection and treatment of lung cancer, its mortality will continue to decline. Therefore, new methods and strategies for early screening and diagnosis of lung cancer will be the focus of intense debate. Multimodal artificial intelligence algorithms and specific blood biomarkers may be able to overcome the high false-positive rates and subjective fallibility of CT, and thus may facilitate and increase the accuracy of early diagnosis. Blood tests may even replace CT as a new standard method for early screening.

In addition to the revolution in diagnosis, precision medicine has seen a diverse, continued improvement in the field of cancer treatment methods. With automation and visualization entering the mainstream of surgery, robotic surgery, glasses-free 3D display, automatic navigation systems, virtualization in surgery, virtual reality reconstruction, virtual surgery, etc., will become the new status quo. In terms of medication, as we move into the immune checkpoint inhibitor 3.0 era, increasing numbers of immune drugs that target microenvironment regulation, along with cell therapy and tumor-specific vaccines, will become available in practice. Targeted therapy will be mature and increase in efficacy, with a wider variety of inhibitors for newly discovered targets. The previous predominance of chemotherapy and antiangiogenics in the mainstay has been reversed and both will become parts of the cocktail of therapy for cancer. In addition, radiotherapy has entered the age of “radiation bombs”, which minimize damage to the normal tissues by energy release control and various coupling methods to locate the targeted areas. Advances in treatment, with greater efficiency and reduced toxicity, will blur the borders between different therapies. Local therapy, which was previously criticized as being too aggressive for advanced lung cancer, has now been integrated into the approaches to improve survival. For early-stage lung cancer, drug therapy has been shown to increase the cure rate and may even become a mainstay of treatment. Combination therapy will be the norm, producing a considerable number of treatment strategies to boost the treatment efficacy. In the future, the landscape of diagnosis and treatment for lung cancer will develop to be multidimensional, where individualized treatment can be extended from horizontal selection and the vertical time dimension with the help of the precise, real-time surveillance methods.

It is very exciting to see such breakthroughs, as if the day when doctors and patients can discuss lung cancer without heavy hearts is approaching. With the help of AME Publishing Company, the first edition of *Lung Cancer* appeared in 2015. Five years later, our understanding and perspectives of lung cancer have changed dramatically, and it is time to publish the second edition. We believe this series discusses each of the most meaningful developments in the field of lung cancer. We would like to thank all the editors and staff who compiled this book, the experts who wrote the preface, and all our colleagues who contribute to the prevention and treatment of lung cancer with dedication and hard work.

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