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EDITORIAL

# Lung cancer: Progress, current status, and controversies

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Lung cancer is one of the leading causes of cancer-related deaths, and 85% of lung cancer deaths are a result of non-small cell lung cancer (NSCLC). Most patients with NSCLC are diagnosed with advanced inoperable disease making comprehensive systemic chemotherapy as the main treatment method. Angiogenesis is a crucial regulator of the growth, invasion, and metastasis of human malignancies, including lung cancer. The combined use of anti-angiogenesis therapy with chemotherapy can significantly improve progression-free survival (PFS) and overall survival (OS) in patients with lung cancer. In this column, the author has systematically reviewed angiogenesis in tumorigenesis, the possible rationale for synergy between angiogenesis inhibitors and chemotherapy, and the role of anti-angiogenic agents in combination with chemotherapy in NSCLC. This combination has at times been successful, but at other times has failed. Knowledge of the optimal combination of anti-angiogenesis therapy with chemotherapy is lacking, and molecular markers are needed to predict the efficacy of antiangiogenesis therapy.

Stage III NSCLC comprises a heterogeneous group of patients with distinct clinical subsets, but is made up of patients with relatively limited disease. Radiation therapy plays a crucial role in the management of stage III NSCLC, but there are some controversial aspects. In this column, the author has systematically reviewed the current status and controversies and offers perspectives regarding radiation therapy in the management of stage III NSCLC including superior sulcus tumors, the surgically based combined modality approach, and the RT-based combined modality approach.

Small cell lung cancer (SCLC) is a highly malignant lung tumor and approximately 70% of SCLC are extensive stage at diagnosis (ES-SCLC). The current standard chemotherapy regimen remains etoposide combined with platinum (EP). The median survival is as low as 6 months. In this column, Dr. Zhang presents ES-SCLC patients who acquired partial remission (PR) or complete remission (CR) after two cycles of EP as first-line therapy. These patients had longer PFS and OS than those who acquired PR or CR after four or six cycles. The response of ES-SCLC after two cycles of the EP regimen can predict patient prognosis according to this research. However,

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since this was a retrospective study with a small number of patients, these findings need additional confirmation.

Cytokine-induced killer cells (CIK) can kill tumor cells directly by *in vitro* amplification, adjust the host's immune function, and improve the patient's quality of life. The combined use of autologous CIK and gefitinib is rare as a second-line treatment of NSCLC. Doctor Qu performed an exploratory study using a combination of autologous CIK with gefitinib to evaluate efficacy and adverse reactions in patients with NSCLC. He found that autologous CIK in combination with gefitinib is effective as a second-line treatment for advanced NSCLC that can significantly reduce adverse reactions and possibly improve efficacy. Although the findings were not statistically significant with regard to efficacy, further studies are indicated.

Great progress has been made in the treatment of lung cancer. However, controversies remain and promising new approaches require additional study. Hopefully this column will contribute to advances in the treatment and study of lung cancer.

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