GEFITINIB EFFICACY IN ADENOCARCINOMA

EGFR inhibitors are efficacious as second-line or third-line treatment for advanced non-small-cell lung cancer (NSCLC). Treatment with these inhibitors is particularly favorable in women, individuals who have never smoked, patients with pulmonary adenocarcinomas and those of Asian origin. Moreover, EGFR mutational analysis demonstrated that these populations of patients also had an increased incidence of somatic EGFR mutations. Mok and colleagues hypothesized that first-line therapy with the EGFR inhibitor gefitinib would be at least as efficacious as carboplatin–paclitaxel chemotherapy in former smokers and light smokers from East Asia with lung adenocarcinoma.

In this open-label, phase III study, patients were randomly assigned to 250 mg per day gefitinib or a carboplatin–paclitaxel combination. Progression-free survival (PFS) at 12 months was 24.9% with gefitinib and only 6.7% with chemotherapy.

The primary objective of the study was met: in fact, gefitinib was clearly superior to carboplatin–paclitaxel as first-line treatment for pulmonary adenocarcinoma. Moreover, in a subgroup of 261 patients with *EGFR* mutations, PFS was significantly longer in those treated with gefitinib. Conversely, in the 176 patients without *EGFR* mutations, PFS was significantly longer in those treated with carboplatin–paclitaxel than in gefitinib-treated patients.

In patients receiving gefitinib, the most common adverse effects were acneiform rash and diarrhea, whereas in those receiving the chemotherapy regimen, neurotoxic effects, neutropenia and alopecia were observed. “Our findings suggest that, whenever possible, *EGFR*-mutation status should be determined before initial treatment of pulmonary adenocarcinoma”, comment the researchers.

Lisa Hutchinson

Original article Mok, T. S. *et al.* Gefitinib or carboplatin–paclitaxel in pulmonary adenocarcinoma. *N. Engl. J. Med.* 361, 947–957 (2009).