

LETTERS TO THE EDITOR

More than 54 months survival of a patient with lung adenocarcinoma after maintenance therapy with pemetrexed

Dear Editor,

Non-small cell lung cancer (NSCLC) remains the leading cause of cancer-related deaths in males, with 5-year survival rate of patients with locally advanced stage III or metastatic stage IV ranging from 8 to 15% [1]. The use of palliative chemotherapy improves the progression-free (PFS) and overall survival (OS). Among newer cytotoxic agents, there has been significant interest in pemetrexed [2].

A 75-year-old female patient was admitted for persistent cough in 2006. Chest X-ray revealed a solid mass located at the upper pole of the left pulmonary hilum confirmed by computed tomography (CT), which also revealed an extensive pack of lymph nodes at the hilum and upper mediastinum. Additionally, numerous nodular lesions were apparent in both lungs. A whole-body CT revealed an enlarged supraclavicular lymph node on the right side and a pycnotic type lesion at the right pulmonary vertex. Following bronchoscopy and cytology, the patient was diagnosed with non-squamous NSCLC (adenocarcinoma).

Seven cycles of 3-weekly combination chemotherapy with docetaxel (80 mg/m², d1) and gemcitabine (1000 mg/m², d1 and 8) were administered. After the 4th cycle whole-body CT showed decrease of the size of the pulmonary lesions and the lymph nodes. Following completion of the 7th cycle, maintenance chemotherapy with pemetrexed (500 mg/m²) and gemcitabine (1000 mg d1 and 8) every 3 weeks for 11 cycles was administered. After the 4th cycle, chest CT showed complete remission of the lesions in the right middle and left lower lobe. However, 6 months later, CT evaluation of the lungs revealed a nodular pachypleuritic lesion located in the right pulmonary base and some smaller lesions in the right middle pulmonary field. Therefore, on February 2007, chemotherapy was changed to erlotinib (150 mg daily) and pemetrexed (500 mg/m² every 3 weeks). After the 5th cycle, whole-body CT showed complete

remission of the lesions at the right middle lobe. On February 2009, erlotinib was withdrawn due to the appearance of grade 3 dermatological toxicity and drug-induced retinopathy. The patient has already completed 44 cycles of treatment with pemetrexed as monotherapy or in combination with gemcitabine or erlotinib.

Pemetrexed has been approved by the FDA in 2009 as the first drug available for maintenance therapy of advanced or metastatic lung cancer [3]. In this patient pemetrexed has been used as maintenance therapy since May 2006 with more than satisfactory response to pemetrexed as monotherapy (15 months) or combined with gemcitabine or erlotinib (33 months). Pemetrexed has been administered for as long as 48 months and the treatment is still ongoing. The CT scan has not revealed disease relapse, with the patient not developing any side-effects. A remarkable improvement of the OS (the patient is still alive 4.5 years after lung adenocarcinoma was diagnosed) was shown.

References

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