Erdafitinib or Chemotherapy in Advanced or Metastatic Urothelial Carcinoma

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Abstract

Background: Erdafitinib is a pan-fibroblast growth factor receptor (FGFR) inhibitor approved for the treatment of locally advanced or metastatic urothelial carcinoma in adults with susceptible *FGFR3/2* alterations who have progression after platinum-containing chemotherapy. The effects of erdafitinib in patients with *FGFR*-altered metastatic urothelial carcinoma who have progression during or after treatment with checkpoint inhibitors (anti-programmed cell death protein 1 [PD-1] or anti-programmed death ligand 1 [PD-L1] agents) are unclear.

Methods: We conducted a global phase 3 trial of erdafitinib as compared with chemotherapy in patients with metastatic urothelial carcinoma with susceptible *FGFR3/2* alterations who had progression after one or two previous treatments that included an anti-PD-1 or anti-PD-L1. Patients were randomly assigned in a 1:1 ratio to receive erdafitinib or the investigator's choice of chemotherapy (docetaxel or vinflunine). The primary end point was overall survival.

Results: A total of 266 patients underwent randomization: 136 to the erdafitinib group and 130 to the chemotherapy group. The median follow-up was 15.9 months. The median overall survival was significantly longer with erdafitinib than with chemotherapy (12.1 months vs. 7.8 months; hazard ratio for death, 0.64; 95% confidence interval [CI], 0.47 to 0.88; P = 0.005). The median progression-free survival was also longer with erdafitinib than with chemotherapy (5.6 months vs. 2.7 months; hazard ratio for progression or death, 0.58; 95% CI, 0.44 to 0.78; P<0.001). The incidence of grade 3 or 4 treatment-related adverse events was similar in the two groups (45.9% in the erdafitinib group and 46.4% in the chemotherapy group). Treatment-related adverse events that led to death were less common with erdafitinib than with chemotherapy (in 0.7% vs. 5.4% of patients).

Conclusions: Erdafitinib therapy resulted in significantly longer overall survival than chemotherapy among patients with metastatic urothelial carcinoma and *FGFR* alterations after previous anti-PD-1 or anti-PD-L1 treatment. (Funded by Janssen Research and Development; THOR ClinicalTrials.gov number, NCT03390504.).