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TARGETED THERAPIES

Hope for antiangiogenic therapy in advanced gastric cancer

A new phase II trial has shown that the tyrosine kinase inhibitor (TKI) apatinib prolongs survival in patients with metastatic gastric cancer who have chemotherapy-refractory disease. Apatinib is an inhibitor of the VEGF receptor (VEGFR), with particular selectivity for VEFGR-2, which is the primary mediator of angiogenesis.

Patients with metastatic gastric cancer who do not respond to chemotherapy or who have disease progression with second-line chemotherapy have no available treatment options. Furthermore, in Asia in particular, the number of patients with advanced-stage gastric cancer who are offered second-line chemotherapy is increasing. "Accordingly, there is an urgent need for patients who fail to respond to second-line chemotherapy because no standard treatment choice is currently available," explains lead investigator Jin Li.

Apatinib is one of several antiangiogenic agents being explored clinically in advanced-stage gastric cancer. In the current study, 144 patients (18–70 years of age) were enrolled across 22 sites in China. Patients received either placebo, once-daily (850 mg) apatinib or twice-daily (425 mg per dose) apatinib.

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The intervention almost doubled the overall survival of patients compared with those taking placebo (4.83 months for the once-daily arm and 4.27 months for the twice-daily arm versus 2.5 months, all $P<0.001$). Progression-free survival was also extended with apatinib. In total, nine patients in the apatinib arms achieved a partial response, and adverse events were tolerable and manageable—the most common of which were hand–foot syndrome (17% of patients) and hypertension (19% of patients).

"Our phase I and II trials have demonstrated that apatinib has antitumour activity in patients with advanced-stage gastric cancer," summarized Li. "Our phase III trial has also achieved statistical and clinical survival benefits. Further details of our results will be presented at the 16th Chinese Society for Clinical Oncology meeting in September 2013 in Xiamen, China."

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Original article Li, J. *et al.* Apatinib for chemotherapy-refractory advanced metastatic gastric cancer: results from a randomized, placebo-controlled, parallel-arm, phase II trial. *J. Clin. Oncol.* doi:10.1200/JCO.2013.48.8585