TARGETED THERAPIES

Bevacizumab and chemotherapy in NSCLC

The combination of bevacizumab with chemotherapy has demonstrated clinical benefit for patients with advanced non-small-cell lung cancer (NSCLC), according to a large, international, randomized, phase III clinical trial. “No large trials to date have assessed safety and efficacy of bevacizumab in combination with cisplatin and gemcitabine,” the researchers state. This study confirmed significant improvements in progression-free survival, response rate and duration when bevacizumab was added to cisplatin-based chemotherapy.

Increased VEGF expression is common in NSCLC and is associated with adverse clinical outcomes; therefore, addition of bevacizumab to standard chemotherapy regimens may be beneficial. Indeed, when combined with carboplatin and paclitaxel-based chemotherapy, bevacizumab was found to improve survival rates in patients with advanced NSCLC.

Reck and colleagues randomly assigned 1,043 patients with advanced NSCLC to receive cisplatin (80 mg/m²) and gemcitabine (1,250 mg/m²) for up to six cycles in combination with low-dose (7.5 mg/kg) or high-dose (15 mg/kg) bevacizumab or placebo every 3 weeks until disease progression or unacceptable toxicity.

Combining bevacizumab with chemotherapy considerably improved clinical outcome. Progression-free survival was significantly prolonged in the low-dose and high-dose bevacizumab groups compared with the placebo arm. Furthermore, the objective response rates were significantly higher in the bevacizumab arms (>30%) compared with the placebo arm (20%). Severe adverse events were similar for each arm.

“The positive results of the AVAiL and E4599 trials provide further evidence that bevacizumab can be effectively combined

with different chemotherapy regimens,” state the researchers.

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Original article Reck, M. *et al.* Phase III trial of cisplatin plus gemcitabine with either placebo or bevacizumab as first-line therapy for nonsquamous non-small-cell lung cancer: AVAiL. *J. Clin. Oncol.* 27, 1227–1234 (2009).