Bevacizumab Approved in Lung Cancer Regimen

BY ELIZABETH MECHCATIE
Senior Writer

The Food and Drug Administration last month gave physicians a new tool in the battle against lung cancer, approving the antiangiogenesis agent bevacizumab in combination with chemotherapy as an initial treatment of unresectable non–small cell lung cancer.

"While this is not a silver bullet or panacea, this is an incremental benefit and represents a significant advance in treatment," said Dr. W. Michael Alberts, chief medical officer at the H. Lee Moffitt Cancer Center, Tampa, and past president of the American College of Chest Physicians.

The FDA okayed the combination of bevacizumab, a recombinant monoclonal antibody that inhibits angiogenesis, and carboplatin and paclitaxel as initial systemic treatment of unresectable, locally advanced, recurrent or metastatic nonsquamous non–small cell lung cancer. About 75% of the 174,000 new cases of lung cancers expected to be diagnosed this year are non–small cell lung cancer (NSCLC), according to the FDA.

The FDA approval was based on a study of more than 800 patients and demonstrated that adding bevacizumab to the standard chemotherapy regimen increased mean survival by about 2 months, according to the FDA. Bevacizumab, marketed as Avastin by Genentech, is a therapeutic antibody that binds to and inhibits human vascular endothelial growth factor (VEGF), thought to play a role in angiogenesis and maintenance of blood vessels in tumors, according to Genentech.

The randomized, controlled, multicenter trial enrolled 878 patients with unresectable, locally advanced, recurrent or metastatic nonsquamous NSCLC who had not been treated with chemotherapy previously. Median patient age was 63 years. All of the patients were treated with carboplatin and paclitaxel; about of them half also received bevacizumab, administered in an intravenous infusion every 3 weeks.

The median overall survival for patients receiving bevacizumab was 12.3 months, compared with 10.3 months in those who did not receive bevacizumab. One-year survival was 51% in those on bevacizumab and chemotherapy, compared with 44% in those on chemotherapy alone, said Genentech.

'While this is not a silver bullet or panacea, this is an incremental benefit and represents a significant advance in treatment.'

This was a median increase, so survival in some patients was more than 2 months, said Dr. Alberts. Some patients in the trial were from his institution, but Dr. Alberts said he has no financial ties to Genentech. The trial was conducted by a network of investigators led by the Eastern Cooperative Oncology Groups and sponsored by the National Cancer Institute, said the company.

Neutropenia, fatigue, hypertension, infection, and hemorrhage were the most common severe adverse events in bevacizumab-treated patients. Of those in the bevacizumab arm, 2.3% had pulmonary hemorrhage requiring medical intervention, compared with 0.5% in those on chemotherapy alone. Pulmonary hemorrhage was fatal in seven patients in the bevacizumab arm and one in the chemotherapy-only arm.

Genentech warned that patients with the squamous cell carcinoma type of NSCLC have a greater risk of experiencing life-threatening or fatal pulmonary hemorrhage. Thus, patients with NSCLC of mixed histology were excluded from the pivotal trial if the predominant cell type was squamous. Genentech plans to launch a program in January to cap the cost of bevacizumab therapy at $55,000 a year for eligible patients for any FDA-approved use of bevacizumab. The drug is also approved as a first-line treatment, in combination with intravenous 5-FU–based chemotherapy, for metastatic colorectal cancer.

Another targeted treatment, erlotinib (Tarceva), is also approved for lung cancer. The agent is indicated for treating patients with locally advanced NSCLC who have failed at least one previous chemotherapy regimen. Erlotinib targets the human epidermal growth factor receptor (HER1) pathway, a factor "critical to cell growth" in NSCLCs as well as pancreatic cancers, according to its manufacturer, Genentech. ■

Pages 42a—42f