Cancer Drug Can Extend Survival in Patients with Deadly Brain Tumors
BTC
Posted by : pam
Posted on : 2007/2/21 16:05:00

2/20/2007
media contact: Lauren Shaftel , (919) 684-4966
shaft001@mc.duke.edu

DURHAM, N.C. Â— Avastin, a relatively new type of drug that shrinks cancerous tumors by cutting off their blood supply, can slow the growth of the most common and deadly form of brain cancer, a pilot study conducted at Duke University Medical Center has found.

The study marks the first time that Avastin has been tested against brain tumors, the researchers said. The drug, whose chemical name is bevacizumab, currently is used to treat lung and colorectal cancers.

The researchers tested the effectiveness of Avastin in conjunction with a standard chemotherapy agent in patients with recurrent cancerous brain tumors called gliomas. They found that the two drugs together halted tumor growth up to twice as long as comparative therapies. Though gliomas remain incurable in nearly all cases, the combined drug therapy may buy precious time and preserve physical and mental function longer for patients facing this grim diagnosis, the researchers said.

"These results are exciting because of the possible implications for a patient population that currently has the poorest possible prognosis going into treatment, those with malignant brain tumors that have recurred after initial treatment," said James Vredenburgh, M.D., a brain cancer specialist at Duke's Preston Robert Tisch Brain Tumor Center and lead researcher on the study.

The findings will appear in the Feb. 20, 2007, issue of the journal Clinical Cancer Research. The study was funded by the National Institutes of Health, the Preston Robert Tisch Brain Tumor Research Fund, the Bryan Cless Research Fund and Genentech, the maker of Avastin.

Duke currently is participating in a large, multi-institutional study of Avastin to corroborate the results of this initial study, Vredenburgh said.

Kate Carr, president and chief executive officer of Accelerate Brain Cancer Cure, a not-for-profit organization that supports research to hasten a cure for brain cancer, said, "The results of this initial study are very encouraging and we are now excited to learn the findings of the larger study, that, it is hoped, will lead to an approved therapy for patients with brain cancer."

In the pilot study, the researchers found that dual therapy with Avastin and the chemotherapy

drug irinotecan either shrank the tumors or restricted their growth in nearly all cases for up to three months longer than comparative therapies. Three months is a significant advance when dealing with these aggressive tumors, Vredenburgh said; common current treatment normally offers only six to 12 weeks of halted growth before the tumor grows and spreads, ultimately destroying cognitive and physical function and leading to death.

Approximately 18,000 people are diagnosed with gliomas in the United States each year, making them the most common and most deadly malignant tumors of the central nervous system. Gliomas are difficult to treat because they grow quickly and occur behind the blood-brain barrier, a natural protective layer around the brain that prevents materials carried in the bloodstream -- including medicines -- from reaching the brain and spinal cord.

Life expectancy after diagnosis of a stage IV glioma -- the most aggressive kind of the cancer -- is eight to 15 months, Vredenburgh said. Individuals diagnosed with a stage III glioma, which is slightly less aggressive, survive 16 to 24 months on average. When the tumor returns after initial treatment -- which usually includes surgery, chemotherapy and radiation -- the prognosis is even more grim, with an average life expectancy of three to nine months.

"When the tumor recurs after treatment, there are no standard therapies," Vredenburgh said. "This study may lead to options where there previously were none."

Avastin may be effective in treating gliomas because these tumors have a high concentration of vascular endothelial growth factor, a protein that stimulates development of new blood vessels in a process known as angiogenesis. New blood vessels spur a tumor's growth and ability to spread, so researchers are interested in cutting off angiogenesis to slow tumors down. Avastin is an anti-angiogenesis drug that works by choking off the blood supply to these prolific blood vessels.

"What makes these tumors so deadly might actually be what also makes them susceptible to this exciting new therapy," Vredenburgh said.

The 32 patients who participated in this study had been diagnosed with stage III or stage IV recurrent gliomas. Sixty-three percent of the patients saw their tumors shrink by at least 50 percent in the first 12 weeks of the study and 38 percent were progression-free at six months, meaning their tumors had not grown, Vredenburgh said.

"Going forward, we will also explore the efficacy of this treatment in newly diagnosed patients," he said. "Ultimately, our hope is that this will offer a real weapon in what is now a very limited arsenal for treating a very challenging cancer."

Other researchers who participated in the study were Annick Desjardins, James Herndon, Jeannette Dowell, David Reardon, Jennifer Quinn, Jeremy Rich, Sith Sathornsumetee, Sridharan Gururangan, Melissa Wagner, Darell Bigner, Allan Friedman and Henry Friedman.

Read more...
Reuters