Erlotinib dose-adjusted for smoking status effective as first treatment for head and neck cancer

January 26 2012

Head and neck cancers respond well to the anti-cancer drug erlotinib when it is administered before surgery and a stronger dose is given to patients who smoke, according to a study presented at the Multidisciplinary Head and Neck Cancer Symposium, sponsored by AHNS, ASCO, ASTRO and SNM.

Erlotinib is an oral anti-cancer drug that can slow a tumor's growth and spread by inhibiting specific growth receptors on the surface of the cancer cells. Early detection of a patient's response to EGFR inhibitors, such as erlotinib, is critical to personalizing head and neck cancer treatments.

In a first of its kind study in patients with head and neck cancer, researchers sought to determine how well tumors unaffected by other therapies respond to erlotinib, when the drug dose was adjusted according to the patient's smoking status. It has been recently shown that smokers metabolize the drug faster than nonsmokers.

Nonsmokers received 150 mg per day and smokers received 300 mg per day for at least 14 days before surgery. A FDG-PET scan and neck CT was performed before treatment and at the end of erlotinib administration. In addition, an early FDG-PET was performed after four to six days of treatment.

The results showed that erlotinib is effective as a first line of therapy when the dose is adjusted per smoking status, even when used for a limited duration. Both smokers and nonsmokers tolerated the dose of erlotinib and neither experienced serious adverse effects. The study also showed that the FDG-PET scan taken early can show changes in the standard uptake value and predict a patient's response to erlotinib.

"We hope our results will motivate clinicians to consider and investigate further the use of erlotinib in patients with head and neck cancer and adjust the dose for smoking status," Mercedes Porosnicu, MD, lead author of the study and an assistant professor of internal medicine at Wake Forest Baptist Medical Center in Winston Salem, N.C., said. "We also hope that our study will help better select the patients expected to respond to erlotinib."

More information: The abstract, "Pilot study to evaluation the effect of erlotinib administered before surgery in operable patients with squamous cell carcinoma of the head and neck (SCCHN)," will be presented as a poster presentation.

Provided by American Society for Radiation Oncology