Screening for EGFR Mutations in Patients with Head and Neck Cancer Treated with Gefitinib on a Compassionate-Use Program: A Hellenic Cooperative Oncology Group Study.

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Source

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Abstract

Background and Aim. EGFR is commonly expressed in cancers of the head and neck (H and N), and anti-EGFR agents have demonstrated improvements in outcomes (TTP and OS). The aim of this study was to determine EGFR gene status in H and N cancer patients treated with gefitinib and to correlate mutational status with clinico-pathological data and response. Patients and Methods. Patients with histologically confirmed H and N cancer having failed prior treatment for advanced disease entered this compassionate-use-program. Nineteen patients received gefitinib. EGFR expression was assessed by IHC, gene copy number by FISH, and mutation analysis was conducted for EGFR (18-21), KRAS, BRAF (V600E), and HER-2 exon 20. An additional TKI naive cohort of 73 patients was also screened. Results. Mutations were detected in 6/19 patients (3× EGFR, 1× KRAS, and 2× HER2-exon 20). There were no significant differences in TTP or OS for patients with somatic EGFR mutations. No BRAF mutations were detected. Conclusions. The incidence of EGFR mutations in H and N cancer in this study was 5.3%. No statistically relevant correlations between mutation or gene gain and response or survival were observed. Due to the limited number of patients and low incidence of genetic aberrations in the genes analyzed, additional studies are warranted.