

The era of post-gefitinib in NSCLC

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Non-small cell lung cancer(NSCLC) is the leading cause of cancer-related death in the world. Patients most commonly present with advanced metastatic disease that, if untreated, has a median survival of 4-5 months, and 1-year survival of less than 10%. Most NSCLC patients are treated with palliative systemic chemotherapy because of its frequent presentation as advanced disease. These systemic chemotherapy lead to a response in 30-40% of patients, a median survival of 8-10 months and a 1-year survival of 30-40%. Gefitinib belongs to the small-molecular class of epidermal growth factor receptor(EGFR) tyrosine-kinase inhibitors. Although the ISEL trial result was negative overall, preplanned subgroup analyses showed a significant overall survival benefit for gefitinib. And so we analyzed retrospectively data from 205 patients with advanced metastatic or recurrent NSCLC treated with gefitinib in Samsung Medical Center in Korea between 2002 and 2003. The median survival time calculated from the date of gefitinib administration was 5.53 months with 1-year survival rate of 28.9%. The median survival time calculated from the first diagnosis of advanced/metastatic or recurrent disease was 20.4months. Sex, adenocarcinoma histology, smoking history, skin rash developed after the administration of gefitinib, performance status were statistically significant favorable predictors to gefitinib treatment. This retrospective analysis suggests that gefitinib was of great benefit for patients with never smoker, adenocarcinoma histology and skin rash developed after the administration of gefitinib. These findings are required to be validated in further prospective clinical studies which should include the molecular predictors. Because the recent discovery of somatic activating mutations in the EGFR tyrosine kinase domain has brought new hope of improved ability to predict response to gefitinib.

Prognostic role of EGFR expression in breast cancer patients who received neoadjuvant docetaxel and doxorubicin chemotherapy

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Background : EGFR is reported to be associated with a poor clinical outcome in breast cancer, but its prognostic value remains still controversial. The purpose of this study was to evaluate the predictive and prognostic value of EGFR expression in breast cancer patients who received neoadjuvant chemotherapy. **Methods :** A total of 100 breast cancer patients who clinically staged II and III were evaluated. The patients received neoadjuvant docetaxel and doxorubicin chemotherapy followed by surgery. To assess the role of EGFR, we examined the conventional clinicopathologic factors including the seven different biological factors (ER, PR, p53, c-erbB2, bcl-2, Ki-67 and EGFR) by immunohistochemistry and evaluated their association with clinical outcomes. **Results :** Overall clinical response rate was 70.0% and pCR were achieved in 6 patients (6.0%). EGFR were positive in 8 (8.3%) of 96 cases and inversely correlated with ER expression (p=0.066). Among the seven immunohistochemical markers, none of the markers showed significant association with clinical response rate. There was no significant difference in the response rate according to EGFR status (71.6% vs 75.0%, p=0.837). Response to neoadjuvant chemotherapy was not associated with disease free survival (DFS) or overall survival (OS). Positive ER, low level of Ki-67 and negative EGFR status were associated with prolonged DFS in univariate analysis. Patients with EGFR expression had a significantly shorter DFS (median 9.8 months in EGFR (+) vs. 34.9 months in EGFR (-), p<0.001) and OS (median 34.1 months in EGFR (+) vs. not reached in EGFR (-), p=0.004). In multivariate analysis, only EGFR expression was an independent prognostic factor for DFS and OS (HR= 20.919, p=0.001; HR= 45.393, p=0.016, respectively). Even though EGFR expression was correlated with negative ER status, EGFR expression was more strongly associated with DFS and OS, independently from ER status. **Conclusion :** EGFR expression was an independent prognostic factor for DFS and OS unrelated with ER status. However, EGFR expression was not a predictive factor for response to neoadjuvant chemotherapy in stage II and III breast cancer.