EGFR Mutation Testing for Squamous Cell Lung Carcinoma

To the Editor:

The evidence-based clinical practice guideline on molecular testing for the selection of lung cancer patients for epidermal growth factor receptor (EGFR) and anaplastic lymphoma kinase tyrosine kinase inhibitors by the College of American Pathologists, the International Association for the Study of Lung Cancer, and the Association for Molecular Pathology recommends that patients with lung adenocarcinoma should not be excluded from testing based on clinical characteristics that include ethnicity, smoking history, and sex.1 We totally agree with this recommendation as our experience and findings also show that sex and smoking history are not sensitive or specific enough to exclude individual patients from testing even though in our patients, EGFR mutations were more frequent in women (52.5%) than in men (27.8%) and more frequent in never smokers (54.8%) than in ever smokers (20.7%).2

EGFR mutations are rare in well-characterized, fully excised surgical specimens of squamous cell lung carcinoma lacking any adenocarcinoma component with a reported frequency of less than 5%.1 In the case of limited lung cancer specimens by small biopsies where the possibility of an adenocarcinoma component cannot be completely excluded, the guideline recommends that EGFR mutation testing may be performed in cases showing squamous cell histology with clinical characteristics such as young age and a lack of smoking history.3 From our experience with small biopsy specimens taken during flexible bronchoscopy or transcutaneous needle biopsy in patients with advanced-stage non–small-lung cancer, EGFR mutations were detected with the use of real-time polymerase chain reaction based on Scorpion® and Amplification Refractory Mutation System® technologies in 39.4% of adenocarcinoma from 132 patients whereas only one (9.1%) of 11 squamous cell carcinomas was EGFR-mutation positive. The only EGFR-mutation–positive squamous cell carcinoma was from a never smoker whereas the squamous cell carcinomas from all 10 smokers were EGFR-mutation negative.3

Other expert panels4 recommend that apart from nonsquamous NSCLC, EGFR mutation testing should be performed in squamous cell carcinoma patients with clinical features associated with higher prevalence of EGFR mutations such as a lack of smoking history. Furthermore, adenosquamous carcinomas and solid adenocarcinomas, in which EGFR mutations have been reported, can mimic squamous cell carcinoma in small biopsy specimens.5

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REFERENCES

Spectrum of EGFR Mutation in Lung Adenocarcinoma in Morocco

To the Editor:

We read with great interest the article published by Errihani et al. on the spectrum of epidermal growth factor receptor (EGFR) mutation in Moroccan patients (n = 137) with lung adenocarcinoma (AC), and we would like to congratulate them for their very important study which in our knowledge represent the first study in Morocco and Arab population.

In Morocco, lung cancer represents the first cause of cancer in men2 and the ninth cause of cancer in women.2 AC is the second most common histological subtype after squamous-cell carcinoma according to the Casablanca registry, representing 26% of all lung cancers (24.7% in men and 36.9% in women [most common histology in women]).2

The authors showed that the overall frequency of the EGFR mutation was 21%, which is higher than that in white population (11%–13.7%).3-6 Mutations were mainly detected in the exon 19 (69%), followed by exon 21 (21%) and exon 20 (7%), whereas mutations in the...