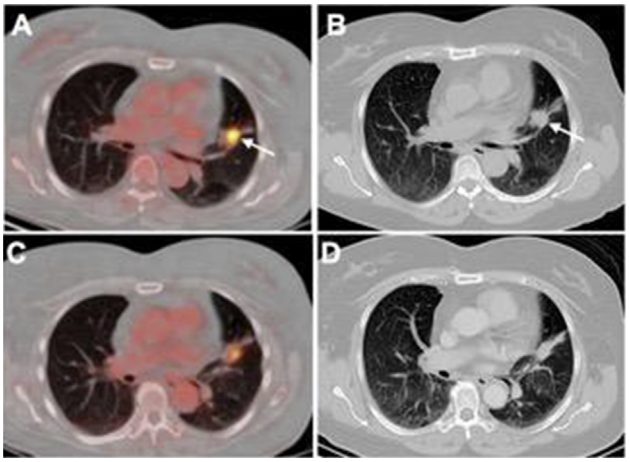

Conclusion: FDG-PET/CT may be used as a predictive tool to identify patients with advantage of neoadjuvant EGFR-TKI treatment in resectable NSCLC.

Keywords: neoadjuvant, Surgery, EGFR-TKI

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External Validation of a Prognostic Model for Squamous-Cell Lung Cancer and Impact of Adjuvant Treatment in >1,300 Patients

Topic: Neoadjuvant and Adjuvant Chemotherapy

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Background: A risk classification model able to powerfully discriminate the prognosis of resected squamous-cell lung cancer (R-SqCLC) patients (pts) was developed (*Pilotto JTO 2015*). Herein, we validate the model in a larger multicenter series of >1,300 R-SqCLC pts (AIRC project 14282).

Methods: R-SqCLC pts in 6 different institutions (01/ 2002 - 12/2012) were considered eligible. Each patient was assigned with a prognostic score to identify the individual risk of recurrence, on the basis of the clinico-pathological data according to the develop model (age, T-descriptor according to TNM 7th edition, nodes, and grading). Kaplan-Meier analysis for disease-free/cancer-specific/overall survival (DFS/ CSS/OS) was performed according to the published 3-class risk model (Low: score 0-2; Intermediate: score 3-4; High: score 5-6). Harrell's C-statistics was adopted for model validation. The effect of adjuvant chemotherapy (ACT) was adjusted with the Propensity Score (PS).

Results: Data from 1,375 pts from 6 institutions were gathered (median age: 68 years; male/female: 86.8%/ 13.2%; T-descriptor 1−2/3−4: 73.3%/26.7%; nodes 0/ >0: 53.4%/46.6%; stages I-II/III-IV: 71.7%/28.3%); 384 pts (34.5%) underwent ACT. With a median follow-up of 55 months (95% CI 51-59), pts at Low-Risk had a significantly longer DFS in comparison with Intermediate- (HR 1.67, 95% CI 1.40-2.01) and High-Risk (HR 2.46, 95% CI 1.90-3.19) pts, as well as for CSS (HR 1.79, 95% CI 1.48-2.17; HR 2.33, 95% CI 1.76-3.07) and OS (HR 2.46, 95% CI 1.80-3.36; HR 4.30, 95% CI 2.92-6.33). C-statistics was 68.3 (95% CI 63.5-73.1), 68.0 (95% CI 63.2-72.9), and 66.0 (95% CI 61.6-71.1), for DFS, CSS and OS, respectively. 60-months DFS for Low-, Intermediate- and High-Risk pts was 51.0%, 33.5% and 25.8%, respectively ($p<0.0001$). 60-months CSS for Low-, Intermediate- and High-Risk pts was 82.7%, 64.7% and 53.3%, respectively ($p<0.0001$). 60-months OS for Low-, Intermediate- and High-Risk pts was 56.7%, 37.9% and 30.9%, respectively ($p<0.0001$). A significant benefit in DFS was found in favor of ACT ($p=0.005$), with no difference in CSS ($p=0.57$), although a trend in OS ($p=0.16$). Overall, no significant differences for ACT were found in DFS, CSS and OS when survival was corrected with PS analysis, although CSS and OS curves visually separate with a trend for ACT in Intermediate- and High-Risk pts.

Conclusion: The prognostic performance of the previously developed model was validated in a larger R-SqCLC pts' series. Considering the overall dismal prognosis of such disease, the efficacy of ACT requires to be clearly established for Intermediate- and High-Risk pts, as well as that should be questioned for Low-Risk pts.

Keywords: validation, ADJUVANT, squamous, Prognosis