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TARGETED THERAPY FOR BRAF-MUTANT LUNG CANCER: RESULTS FROM THE EUROPEAN EURAF COHORT STUDY

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Aim: About 2% of lung adenocarcinomas have BRAF mutations. The BRAF inhibitors (BRAFi) vemurafenib (V) and dabrafenib (D) had promising activity in first clinical trials, but only few centers participated, and many patients (pts) were not enrolled. Our aim was to study the clinical course of those pts.

Methods: We conducted a retrospective ulticentre cohort study in Europe of pts with advanced BRAF-mutant lung cancer treated outside of a clinical trial. Data were anonymized and centrally assessed for age, gender, smoking, histology, stage, local molecular diagnostic results, systemic therapies, and survival. Best response was locally assessed by RECIST1.1. This academic study was conducted without industry support.

Results: By December 2014, 35 pts received individual BRAFi therapy in 17 participating centers. Median age at diagnosis was 64 years (range 43-85), 18 (51%) male, 16 (46%) current or former smoker. All 35 (100%) pts had lung adenocarcinoma histology, 29 (83%) had BRAF V600E, 6 (17%) had other BRAF mutations, 1 (3%) also had a concomitant KRAS mutation. 30 (86%) pts had prior chemotherapy, 5 (14%) had frontline BRAFi therapy. BRAFi used were V (28 pts), D (10 pts), and sorafenib (S, 1 pt). 31 (89%) pts received 1 BRAFi (24 V, 7 D) and 4 pts received 2 (V followed by D in 3 pts, S followed by V in 1 pt). Best response by RECIST was available for 36 (92%) of 39 BRAFi therapies: 2 (6%) CR, 17 (47%) PR, 13 (36%) SD, and 4 (11%) PD; overall response rate (ORR) was 53% (95%CI: 35-70%). Among the 6 pts with non-V600E, 1 (17%) achieved a PR. No unexpected toxicities were reported. Further results including updated survival will be presented at the meeting.

Conclusions: These results support BRAF testing in advanced lung adenocarcinoma, and BRAFi therapy in patients with V600E. Further studies are warranted to evaluate combination therapies and potential drug resistance mechanisms.

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