

141P Effect of central nervous system (CNS) metastases in a real-world multicenter cohort study of Spanish ALK-positive non-small cell lung cancer (NSCLC) patients (p)

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Background: CNS is a common site of metastases in patients with ALK-positive NSCLC. CNS metastases are associated with a number of deleterious effects, such as reduction in quality of life. However, the relationship between brain metastases and prognosis remains unclear. We aimed to evaluate the effect of CNS metastases on overall survival (OS) in a multicenter cohort of Spanish ALK-positive NSCLC patients diagnosed between 2008 and 2017.

Methods: We included patients with stage IV at diagnoses, followed up to April 2018; OS (months [m]) was estimated with the Kaplan-Meier method. Survival curves were compared between groups of patients using the log-rank test. Hazard risk (HR) to death was estimated with multivariable Cox model.

Results: Out of 163 patients in the cohort, a total of 116 were evaluated, with a median of follow-up of 29.2 m and 59 deaths reported. Characteristics at diagnosis were a median age of 58 years, 50% female, 58.6% never-smokers, 54.3% with comorbidities, PS by ECOG 0-1 93.1%. CNS metastases (median number of lesions 6) were present in 43.1% of patients and 34% of patients with CNS metastases were treated with local therapy (11.8% local radiotherapy and 76.5% holocraneal radiotherapy). ALK inhibitors as first line and second line treatment were administered to 45.5% and 78.6% of patients, respectively. The median OS was 39 months; OS in patients with CNS metastases at diagnosis was 34.4 m and 39.0 m in those without CNS metastases at diagnosis ($p=.9$). In patients without CNS metastases at baseline ($n=60$), 22 developed CNS, with a median OS greater than in those without CNS metastases during follow-up, although the difference is not significant (45.5 m vs 33.3 m; $p=.9$). There were 81 patients who presented with metastases in more than one organ and 33 patients with metastases in a single organ. The risk of death increased as the number of metastatic organs at diagnoses increased (HR=1.26, $p=.0305$), with worse OS in those presenting with liver metastases at diagnoses (21.1%, OS: 20 m), compared to those without tumor involvement (OS: 45.4 m; $p=.008$).

Conclusions: OS was similar for ALK-positive NSCLC patients with and without CNS metastases at diagnoses. OS was worse as the number of metastatic organs at diagnosis increased, with liver metastases being associated with the highest risk of mortality.

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