

Cognitive impact of Lorlatinib in advanced ALK positive (ALK+) Non-Small Cell Lung Cancer (NSCLC) patients

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Background

- Lorlatinib has notable benefit in ALK + NSCLC, with a consistent % of pts being long-term responder.
- Patients could develop cognitive adverse events (AEs) [1] with largely unknown consequences.
- Aim of our analysis is to evaluate neuropsychological impact of Lorlatinib over time.

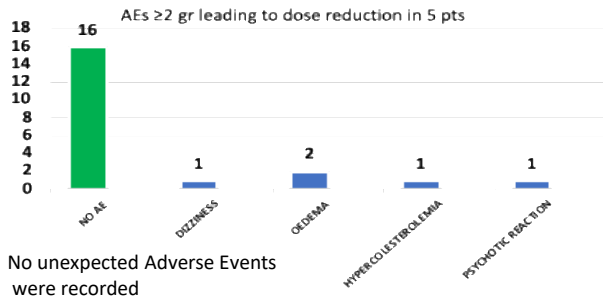
Materials and methods

Consecutive ALK+ or ROS1+ NSCLC patients, treated with Lorlatinib were included. Cognitive domains including learning (L); short and long-term memory (STM; LTM); executive functions (EF); reasoning (R); attention (ATT) and constructional abilities (CA) were evaluated at baseline, at median times of 9 and 25 months of therapy.

Patients Characteristics

Total	N/% 21 (100)
Male/Female	15 (71)/6 (29)
Median Age, year, range	64 (25-84)
Never/Ex Light Smokers	100%
ALK/ROS-1	19(91) /2 (9)
ECOG PS: 0/1/2	14(66)/6(29)/1 (5)
Therapy line, median	2 (2-4)
Brain metastases	
Yes	10 (48)
No	11 (52)
Prior Brain RT	
WBRT/SBRT	1 (10)/ 2 (20)
no RT	7 (70)

Safety



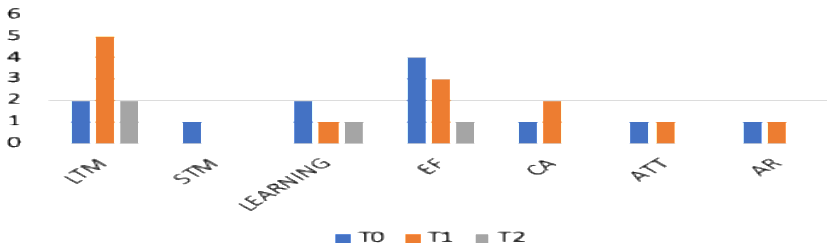
Neurocognitive changes across treatment

TO* assessment



4 OUT OF THE 5 PTS WITH DEFICIT HAD BMS AND 2 HAD PRIOR BRAIN RT (1 WBRT, 1 SBRT)

FOLLOW-UP assessments



Conclusions

- Our analysis suggested that additional factors (BMs, RT) could affect cognitive functions in pts treated with Lorlatinib.
- Prospective studies with pre-specified time-point cognitive evaluations in large cohort of pts are needed.

Reference

1. Bauer TM, Felip E, Solomon BJ, et al. Clinical management of adverse events associated with lorlatinib. *Oncologist*. 2019;24(8):1103–1110.



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