Competing central nervous system or systemic progression analysis for patients with EGFR mutation-positive NSCLC receiving afatinib in LUX-Lung 3, 6, and 7

Ya-Chen Yang, Akihiro Tamiya, Angela Märten, Martin Schuler

Introduction

- Central nervous system (CNS) metastases are a known complication of advanced EGFR mutation-positive NSCLC.
- This rises to 
- The efficacy and optimal integration of EGFR TKIs in the treatment concept of brain metastases is less defined; therefore, LUX-Lung trials investigating the Edbb-family blocker afatinib allowed enrollment of patients with asymptomatic brain metastases.

LUX-Lung 3 and 6
- Randomized Phase III studies: first-line afatinib versus platinum-based chemotherapy.

LUX-Lung 7
- Randomized Phase IIb study: first-line afatinib versus gefitinib; common EGFR mutations.

Methods

- Competing risk analyses were performed in patients with stage IIIb/IV EGFR mutation-positive NSCLC who received afatinib 40 mg/d in LUX-Lung 3, 6, or 7.
- Analyses were performed separately for patients with baseline brain metastases and without baseline brain metastases.
- Risk of CNS progression versus non-CNS progression or death was calculated based on the cumulative frequency of the event of interest versus the competing risk event.

Results

 Patients with baseline brain metastases (Figure 3): 48 patients with baseline brain metastases received afatinib in LUX-Lung 3 and 6.
- Median follow-up was 10.3 months.
- Cumulative incidence of CNS progression was 40% lower than that of non-CNS progression (31.3% versus 52.1%).
- Best CNS response in patients with baseline brain metastases classified as target lesion (n = 5): 2 CRs, 1 PR, and 2 SDs.
- PR/CR was achieved by visits 1 – 2.

 Patients without baseline brain metastases (Figure 4): 485 patients without BM.
- Median follow-up was 13.0 months.
- Risk of de novo CNS progression was very low (6.4%) compared with non-CNS progression (78.4%).

Conclusions

- These results add to the existing evidence supporting afatinib use in patients with EGFR mutation-positive NSCLC and CNS metastases.
- Taken together, these results show afatinib delays the onset/progression of brain metastases.

Summary

- Previous findings from the LUX-Lung trials and real-world practice show that afatinib has clinical activity against brain metastases in EGFR mutation-positive NSCLC.
- Cumulative incidence of CNS progression was lower than that of non-CNS progression in patients with baseline brain metastases treated with afatinib.
- Risk of de novo CNS progression in patients with EGFR mutation-positive NSCLC treated with afatinib was very low.

References

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Data were previously presented: Yang J, et al. ELCC 2018; poster #143PD. *Corresponding author email address: syylwu@live.cn

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