



EP12.43: Progression-free Survival and Overall Survival after First-Line Osimertinib in Advanced Lung Cancer Patients with Liver Metastasis: A Real World Study

Xin Zheng^{1,2}, Shaoli Li^{1,2}, Fengming (Spring) Kong^{1,2}

¹Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong SAR, China

²Clinical Oncology Medical Center of The University of Hong Kong-Shenzhen Hospital, Shenzhen, Guangdong, 518053, China

Correspondence: Kong0001@hku.hk



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INTRODUCTION

Liver metastasis confers poor prognosis in non-small-cell lung cancer (NSCLC). Despite osimertinib being standard first-line therapy for EGFR-mutant NSCLC, its real-world efficacy and prognostic factors for patients with baseline liver metastasis are poorly defined. This study assessed clinical outcomes and prognostic factors of first-line osimertinib in advanced NSCLC with liver metastasis.

METHODS

Using the Clinical Data Analysis and Reporting System (CDARS) database, this study enrolled 79 advanced NSCLC patients with baseline liver metastasis receiving first-line osimertinib. Eligibility covered 2015-2024, with follow-up ending before March 1, 2026. Baseline data including age, sex, comorbidities (hypertension, diabetes) and other metastatic sites (brain, bone, lymph nodes) were collected. Kaplan-Meier analysis estimated progression-free survival (PFS) and overall survival (OS); group comparisons used the log-rank test. Univariate Cox proportional-hazards models were applied to screen prognostic factors.

DISCUSSION AND CONCLUSION

Actionable Take Away Message

- First-line osimertinib yielded meaningful clinical activity in this high-risk real-world cohort.
- Median OS was 18.9 months, consistent with prior real-world data (18-28 months).
- Advanced age, baseline hypertension, ≥ 2 extrahepatic metastatic sites are associated with inferior survival outcomes.
- Non-cancer-related deaths were notable despite lung cancer being the main fatal cause.

Future Direction for Research

- These results support intensified monitoring or combination strategies for such high-risk liver-metastatic patients.

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Artificial Intelligence (AI) Use Disclaimer

AI-assisted tools were employed for language polishing in this study. All content was reviewed and revised by the authors.

RESULTS

PATIENTS
79

MEDIAN PFS
10.3 months

MEDIAN OS
18.9 months

DEATH EVENTS
78.5%

The median age was 65 years. Of the 79 patients, bone, brain, and lymph node metastases were present in 87.3% (n=69), 34.2% (n=27), and 35.4% (n=28) of patients, respectively. 51.9% of patients had 0–1 extrahepatic metastatic sites (representing those with liver metastasis only or one additional extrahepatic site), while 34.2% and 13.9% had 2 and 3 extrahepatic sites, respectively. The median PFS was 10.3 months (IQR: 4.6–20.6), and the median OS was 18.9 months (IQR: 10.0–28.5). PFS events were observed in 93.7% of patients, and death events occurred in 78.5%. Lung cancer was the leading cause of death (n=50, 83.3%), followed by pneumonia (n=7, 11.7%) and cardiac arrest (n=1, 1.7%). Univariate analysis revealed that age (HR = 1.0, 95% CI: 1.0–1.1, p = 0.030) and baseline hypertension (HR = 1.9, 95% CI: 1.1–3.2, p = 0.027) were identified as significant independent risk factors for shorter PFS. Regarding OS, age (HR = 1.0, 95% CI: 1.0–1.01, p = 0.033) and having more than 2 extrahepatic metastatic sites at baseline (compared to 0–1 sites: HR = 1.7, 95% CI: 1.0–2.8, p = 0.048) were significantly associated with shorter OS. However, no significant associations were observed between PFS or OS and variables such as sex, diabetes, and other metastatic sites.

