OSIMERTINIB A PROMISING TREATMENT FOR EGFR MUTATION-POSITIVE NON-SMALL CELL LUNG CANCER

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BACKGROUND AND IMPORTANCE

A total of 10-40% of NSCLC tumors harbor EGFR-sensitizing mutations. EGFR TKIs inhibit the proliferation of tumor cells via binding to EGFR specifically and show favorable therapeutic effects on advanced EGFR-mutated NSCLC. The presence of the T790M variant reduces the ability of the reversible EGFR-TKIs. Osimertinib is an orally taken third-generation EGFR-TKI which can form an irreversible covalent bond via the cysteine797 residue and T790M or other EGFR mutations. Osimertinib has showed an impressive antitumor activity in treatment-naïve advanced NSCLC harboring EGFR-TKI-sensitizing mutations.

EGFRm - T790M – EGFRm - T790M – EGFRm - T790M – EGFRm - T790M – EGFRm

OBJECTIVES

To evaluate the effectiveness and safety of osimertinib in patients with EGFR mutation positive non-small cell lung cancer

MATERIAL AND METHODS

Observational Retrospective Study → July 2017 – August 2022 → Patients NSCLC, Osimertinib treatment → Age, sex, smoking Stage, performance status, Line of treatment, dose

Overall survival and progression-free survival were analyzed using Kaplan-Meier. Adverse events were also assessed

RESULTS

39 patients
25.6% T790M

65 years

77 % women

23 % brain metastases

9.5% ECOG 0-1

39% past smokers
18 % smokers

Kaplan-Meier

PFS10 months
(95% CI 4.0-16.0)

OS 28 months
(95% CI 14.1-41.8)

1st line 67 %

2nd line 23 %

3rd line 10 %

Previous therapies:

erlotinib (n=3)
gefitinib (n=5)
afatinib (n=5)
chemotherapy (n=4)

18% dose-reduction mainly due to pneumonitis

84.6% AE of any grade

46 % asthenia

40 % cutaneous

31 % diarrhoea

CONCLUSION

This Osimertinib demonstrates a PFS similar to that observed in the second-line AURA-3 trial, although it is lower than the survival outcomes reported in the first-line FLAURA trial. These findings are reasonable when considering our comprehensive dataset, which encompasses both pre-treated and brain metastatic populations. Additionally, Osimertinib exhibits a favorable toxicity profile. Given the limited sample size, further investigations are needed to validate these findings.

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