Real-world, multicenter retrospective study (NCT04178980) in patients with EGFRm+ NSCLC (uncommon mutations)

EGFR TKIs appear to be the 1st-line treatment of choice in everyday clinical practice with better outcomes than chemotherapy

Afatinib was the most commonly used EGFR TKI (53.7%), and appeared to lead to better outcomes than other EGFR TKIs

Key findings and conclusions

Methods

Introduction

Frequency of EGFR mutations in lung cancer according to recent large studies is shown below (illustrative examples)

- Up to 25% of EGFRm+ tumors harbor compound mutations
- Increased use of sensitive sequencing-based detection methods and liquid biopsy will increase the frequency of uncommon mutations detected in real-world clinical practice

EGFRm+ NSCLC, EGFR mutation-positive non-small cell lung cancer

*Includes one patient treated with gefitinib/erlotinib; **Includes next generation sequencing; ARMS, amplification refractory mutation system; PCR, polymerase chain reaction

- EGFRm+ NSCLC with uncommon mutations
- Lack of standardization in the use of osimertinib in patients with EGFR T790M
- Osimertinib is approved in this setting but highly heterogeneous

Secondary objectives

ECOG PS; Eastern Cooperative Oncology Group performance status

- Sample size too small on TKI sensitivity

Other

T790M: 20.0%
Major uncommon: 49.1%

\[ \frac{20.0\%}{49.1\%} \]

- ORRs of patients receiving any EGFR TKI varied according to EGFR TKI type and mutation category

Index therapy

Scan the QR code for an electronic copy of the poster, supplementary content and references

*Results from patients treated with osimertinib not shown due to small sample size; \[ \frac{1.2\%}{1.4\%} \]

Other

- TTF and OS varied according to EGFR TKI type and mutation category

- Pathology reports varied in quality, often lacking detail on specific mutations, e.g. 21% of exon 18 and 72% of exon 20

Erlotinib

Erlotinib approved in this setting

- The vast majority of patients received 1st-line TKI, while second-line TKI was received in 25%

- Median time from diagnosis to initiation of index therapy

- Of patients received osimertinib, index therapy

- Of patients received 

- In patients treated with 1st-line chemotherapy (n=20), median TTF, DTR and ORR was 6.6 months, 4.0 months and 41.2%, respectively

ECOG PS at start of 1st-line treatment

ECOG PS remained stable with EGFR TKI treatment, so many patients were able to receive 2nd-line treatment

Mutations were detected using PCR more than sequencing, and predominantly based on tissue biopsy: uncommon mutations may therefore be under-detected in real-world practice

- Compounds

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

-Compound

- Compound

- Compound

- Compound

-Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

-Compound

- Compound

- Compound

- Compound

-Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound

- Compound