1111P Real-world Treatment Duration in Patients with Non-small Cell Lung Cancer (NSCLC) With *EGFR* Exon20 Insertion (*EGFRex20ins*) Mutations Receiving Mobocertinib Through the Global Expanded Access Program (EAP)

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Background

- *EGFRex20ins* represent a rare and heterogeneous subset of mutations, accounting for 4%–12% of patients with *EGFR*-mutant NSCLC.[1-5]
- *EGFRex20ins* mutations are associated with a lack of response to first- and second-generation tyrosine kinase inhibitors (TKI) and a poorer prognosis than other *EGFR* mutations.[1,6]
- Mobocertinib is a first-in-class, potent, oral, irreversible TKI that selectively targets in-frame *EGFRex20ins* mutations in NSCLC.[7]
- Mobocertinib was recently approved in the US (September 2021) and the Great Britain (March 2022) for patients with locally advanced or metastatic NSCLC (aNSCLC) with *EGFRex20ins* mutations whose disease has progressed on platinum-based chemotherapy.[8,9]
  - A Phase 1/2 trial (NCT02716116) evaluating treatment outcomes with mobocertinib in platinum-pretreated patients with *EGFRex20ins*+ aNSCLC demonstrated clinically meaningful benefits, with a confirmed Independent Review Committee-assessed objective response rate of 28% (95% confidence interval [CI], 20%–37%).[7]
- A global EAP (Clinicaltrials.gov identifier: NCT04535557) provides access to mobocertinib prior to local approval and commercial availability for patients with *EGFRex20ins*+ aNSCLC who have unmet medical need and are unable to enroll in a clinical study.[10]

Objectives

- To describe the real-world treatment duration (time to treatment discontinuation [TTD]) of mobocertinib in platinum-pretreated patients with *EGFRex20ins*+ aNSCLC enrolled in the EAP.

Methods

Data Source

- This analysis included data collected from patients enrolled in the EAP between June 2020 and May 2022.

Patient Population

- The mobocertinib EAP included adult patients (≥18 years) with:
  - Histologically or cytologically confirmed locally advanced or metastatic NSCLC
  - Documented *EGFR* in-frame exon 20 insertion mutations
  - ≥1 prior line of therapy (LOT) for locally advanced or metastatic disease
  - Eastern Cooperative Oncology Group performance status 0 to 2
- Patients were excluded if they had:
  - Prior small molecule therapy or radiotherapy within ≤14 days of the first mobocertinib dose (≥7 days for reversible *EGFR* TKIs; palliative radiation outside the chest and brain; stereotactic radiosurgery; or stereotactic body radiotherapy)
  - Active brain metastases, current spinal cord compression or leptomeningeal disease
  - Significant, uncontrolled, or active cardiovascular disease.

Methods

- In this analysis, TTD of mobocertinib was assessed in:
  - All platinum-pretreated patients enrolled in the EAP
  - Patients with 1 vs ≥2 previous LOT
  - Patients with ≥2 mobocertinib orders, based on the assumption that drug renewal reflects clinical benefit (response or stable disease) and duration of benefit
  - Patients enrolled in the EAP ≥12 months prior to data cut-off, which confirmed that censoring is not causing bias

Study Measures

- Demographics and treatment history, assessed at initial eligibility screening to receive access to mobocertinib through the EAP
- TTD of mobocertinib:
  - Treatment start/stop dates were estimated from shipped orders of mobocertinib (a standard shipment included a 90-day supply).
  - Treatment discontinuation was physician-reported or assumed based on no re-orders for 120 days after the last shipment.
  - Patients who had not discontinued treatment were censored on the date of data extraction (September 15th for US, May 25th for rest of the world).
  - Probability of continued treatment with mobocertinib at 6 and 12 months

Statistical Analyses

- Demographics and treatment history were summarized using descriptive statistics.
- TTD of mobocertinib and probability of continued treatment with mobocertinib at 6 and 12 months were estimated using Kaplan-Meier analysis

Results

Baseline Characteristics

- Among 982 patients enrolled in the EAP between June 2020 and May 2022, 793 (80.75%) patients had received prior platinum-based chemotherapy.
- In platinum-pretreated patients, median age was 63.0 years, the majority of patients were female (60.28%), and most were from either Europe (44.50%) or Asia-Pacific (39.53%) (**Table 1**).
- Approximately half of patients (49.05%) had ≥2 mobocertinib orders (**Table 1**).

Duration of Treatment in All Platinum-pretreated Patients

- Median TTD of mobocertinib was 4.73 (95% CI: 4.17, 6.05) months (**Figure 1**).
- At 6 and 12 months, probability of continued treatment with mobocertinib was 40% and 30%, respectively (**Figure 1**).

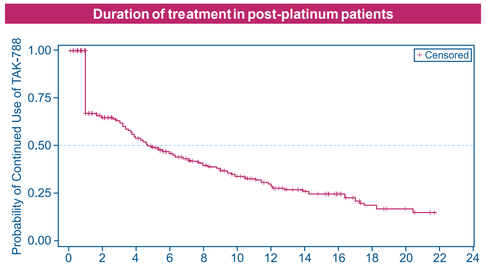
Results

Table 1. Baseline Demographic and Treatment History

	Post-platinum population
Total, N	793
Female[a], n (%)	478 (60.28)
Age, median (IQR)	63.0 (54, 71)
Region, n (%)	
Asia-Pacific	255 (39.53)
Europe	287 (44.50)
Latin America	33 (5.12)
North America	70 (10.85)
Number of mobocertinib orders, n (%)	
1	404 (50.95)
≥2	389 (49.05)
Previous LOT, n (%)	
1	353 (44.51)
≥2	440 (55.49)

[a]Remaining patients were male.
IQR, interquartile range; LOT, line of therapy.

Figure 1. Duration of Treatment in All Platinum-pretreated Patients[1]



Patients	793	**Median TTD (95% CI)**	4.73 (4.17, 6.05) months
Discontinued	452	**Prob of ≥6-month duration**	40%
Censored	341	**Prob of ≥12-month duration**	30%

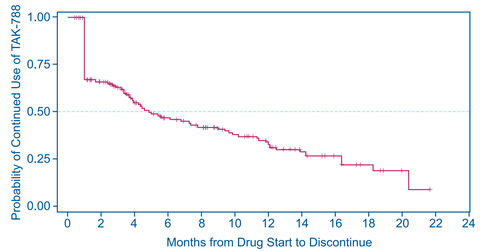
CI, confidence interval; prob, probability; TTD, time-to-treatment discontinuation.
[1] Note: Due to the assumption that patients discontinue one month after their last shipment, all patients with only one shipment are assumed to have discontinued at one month, leading to a large drop at that time. In reality, one shipment could have lasted up to 90 days.

Duration of Treatment in Patients with 1 or ≥2 Previous LOTs

- 353 (44.51%) patients had 1 previous LOT; 440 (55.49%) patients had ≥2 previous LOTs.
- TTD was similar in patients with 1 previous LOT (4.86 months; 95% CI: 3.94, 7.26) and patients with ≥2 previous LOTs (4.73 months; 95% CI: 3.94, 6.18) (**Figure 2**).

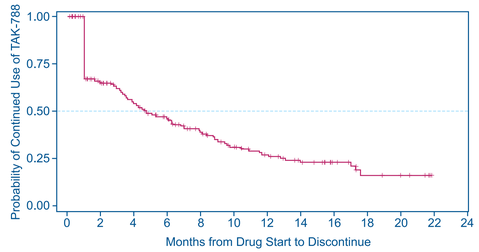
Figure 2. Duration of Treatment in Patients with 1 or ≥2 Previous LOTs

2A. Duration of treatment in patients with 1 previous LOT



Patients	353	**Median TTD (95% CI)**	4.86 (3.94, 7.26) Months
Discontinued	192	**Prob of ≥6-month duration**	47%
Censored	161	**Prob of ≥12-month duration**	33%

2B. Duration of treatment in patients with ≥2 previous LOTs



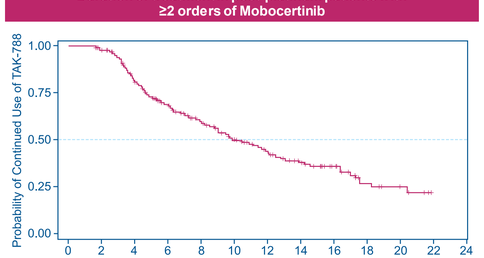
Patients	440	**Median TTD (95% CI)**	4.73 (3.94, 6.18) Months
Discontinued	260	**Prob of ≥6-month duration**	46%
Censored	180	**Prob of ≥12-month duration**	27%

CI, confidence interval; prob, probability; TTD, time-to-treatment discontinuation.

Duration of Treatment in Patients with ≥2 Orders of Mobocertinib

- 389 (49.05%) patients had ≥2 orders of mobocertinib.
- Median TTD in patients with ≥2 orders of mobocertinib was 10.18 (9.00, 11.99) months (**Figure 3**).
- At 6 and 12 months, probability of continued treatment with mobocertinib was 69% and 44%, respectively (**Figure 3**).

Figure 3. Duration of Treatment in Post-platinum Patients with ≥2 Orders of Mobocertinib



Patients	389	**Median TTD (95% CI)**	10.18 (9.00, 11.99) Months
Discontinued	192	**Prob of ≥6-month duration**	69%
Censored	197	**Prob of ≥12-month duration**	44%

Limitations

- This analysis did not include a control group, as all patients enrolled in the EAP received treatment with mobocertinib.
- The efficacy and safety of mobocertinib were not assessed, which limits comparisons with data from clinical studies.

Discussion

- **Platinum-pretreated patients with *EGFRex20ins*+ aNSCLC remained on mobocertinib for a median of 4.7 months in the EAP.**
- **Approximately half of patients had ≥2 orders of mobocertinib and a prolonged median estimated TTD of 10 months, suggesting clinical benefit (i.e., response or stable disease).**
- **These findings suggest that mobocertinib may be effective in a real-world setting among platinum-treated patients with *EGFRex20ins*+ aNSCLC.**

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