

Real-world characteristics and treatment patterns of cEGFRm NSCLC patients receiving 2L+ amivantamab plus chemotherapy

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Key Takeaway

Findings from this analysis highlight the adaptability and flexibility of amivantamab plus carboplatin and pemetrexed (ACP) dosing in patients with EGFRm NSCLC treated in the real-world setting

Conclusions

Compared with MARIPOSA-2 trial participants, ACP-treated patients in this study were older and had poorer baseline functional status, with 19% having an ECOG PS ≥2, reflecting the diversity of patients in the real-world setting

The majority of patients were still on 2L ACP (68%) or 3L ACP (76%) treatment at the time of data cutoff

While most patiens received label-recommended starting doses during Week 1 and Week 7, dose modifications of amivantamab, carboplatin, and pemetrexed were commonly observed, highlighting the flexibility in dosing strategies when this treatment is used in routine clinical practice

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Disclosures

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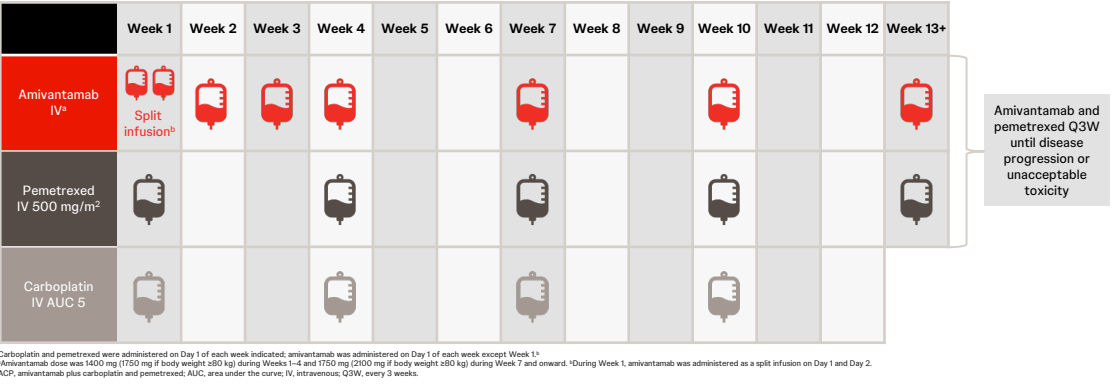
Introduction

- Amivantamab plus carboplatin and pemetrexed (ACP) is approved for the treatment of adults with locally advanced or metastatic non-small cell lung cancer (NSCLC) with epidermal growth factor receptor (EGFR) exon 19 deletions or exon 21 L858R substitution mutations who experienced disease progression on or after EGFR tyrosine kinase inhibitor treatment based on the MARIPOSA-2 study (ClinicalTrials.gov identifier: NCT04988295)¹⁻⁴
 - In MARIPOSA-2, ACP demonstrated clinical benefit versus chemotherapy alone and was the first targeted combination (along with ACP plus lazertinib) to show significantly improved progression-free survival post-osimertinib³
- The recommended dose of intravenous amivantamab, administered in combination with carboplatin and pemetrexed, is based on baseline body weight and includes loading doses given during Weeks 1–4, followed by dosing every 3 weeks during Week 7 and onward¹
- The objective of this study was to describe the real-world demographics, clinical characteristics, and treatment patterns, including dosing patterns and modifications, among patients with common EGFR-mutated (EGFRm) NSCLC treated with ACP after 1 or 2 prior lines of therapy (LOTs)

Methods

- This retrospective, observational, descriptive cohort study used the Flatiron Enhanced Data Mart database to identify patients with common EGFRm NSCLC who received ACP between May 21, 2021, and December 31, 2025
- Eligible patients were ≥18 years of age and had received ACP (Figure 1) after 1 or 2 prior LOTs
- The index date was the start of the LOT with ACP
- Baseline demographics, clinical characteristics, and treatments received before and after ACP were described
- Dose modifications were defined based on the change from previous dose during Weeks 1–4 and during Week 7 and onward
 - The proportion of patients with dose reductions and escalations as well as time to dose reductions and escalations were described
- Medians with interquartile range (IQR) were used to report continuous variables, and counts and proportions were used to report categorical variables

Figure 1: ACP dosing schema



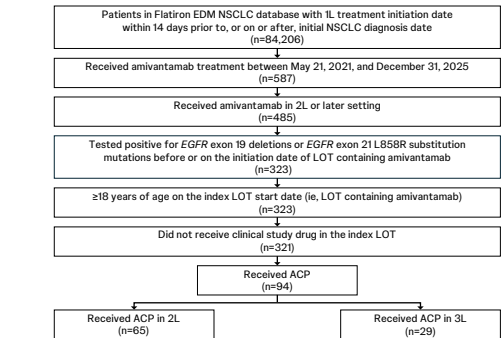
Carboplatin and pemetrexed were administered on Day 1 of each week indicated; amivantamab was administered on Day 1 of each week except Week 1.¹ *Amivantamab dose was 1400 mg if body weight ≥80 kg during Weeks 1–4 and 1750 mg (2000 mg if body weight ≥90 kg) during Week 7 and onward. ¹During Week 1, amivantamab was administered as a split infusion on Day 1 and Day 2. ACP, amivantamab plus carboplatin and pemetrexed; AUC, area under the curve; IV, intravenous; Q3W, every 3 weeks.

Results

Patient characteristics

- Among 84,206 patients in the Flatiron Enhanced Data Mart NSCLC database with a first-line (1L) treatment initiation date within 14 days prior to, or on or after, initial NSCLC diagnosis date, 94 patients received ACP during the analysis period (Figure 2)
 - Of those, 65 (69.1%) received ACP in the second-line (2L) setting and 29 (30.9%) received ACP in the third-line (3L) setting
 - All patients received intravenous amivantamab

Figure 2: Attrition diagram



1L, first-line; 2L, second-line; 3L, third-line; ACP, amivantamab plus carboplatin and pemetrexed; EDM, Enhanced Data Mart; EGFR, epidermal growth factor receptor; LOT, line of therapy; NSCLC, non-small cell lung cancer.

- Overall, median age was 68.5 years (IQR, 62–74), 44.7% of patients reported a history of smoking, 76.6% received treatment at a community oncology practice, and 87.2% had advanced/metastatic disease at diagnosis (Table 1)
- The median duration of follow-up from index ACP treatment to last confirmed structured activity was 6.2 months (IQR, 2.4–10.8)
- Based on *International Classification of Diseases-10* codes, bone metastases were most prevalent (28.7%), followed by brain (17.0%) and liver (7.4%)
- At the start of ACP treatment, 42.6% had an Eastern Cooperative Oncology Group performance status (ECOG PS) of 1, and 19.1% had an ECOG PS of ≥2
- The median time from initial NSCLC diagnosis to ACP treatment initiation was 2.42 years (IQR, 1.48–3.79)
- A total of 57.4% of patients had EGFR exon 19 deletion mutations, and 42.6% had exon 21 L858R mutations

Table 1: Baseline demographic and clinical characteristics

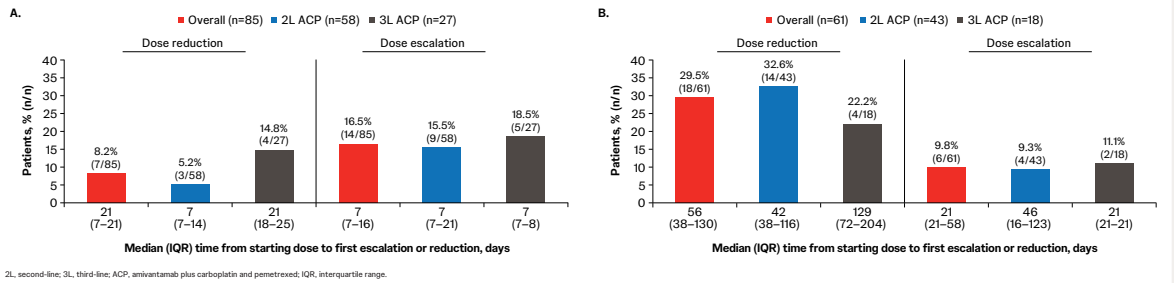
Characteristics	Overall (n=94)	2L ACP (n=65)	3L ACP (n=29)
Median (IQR) duration of follow-up,* months	6.2 (2.4–10.8)	6.4 (3.3–9.9)	5.2 (2.0–12.8)
Median (IQR) age, years	68.5 (62–74)	67 (60–74)	71 (67–73)
Male, n (%)	30 (31.9)	18 (27.7)	12 (41.4)
Race, n (%)			
White	50 (53.2)	37 (56.9)	13 (44.8)
Asian	9 (9.6)	7 (10.8)	2 (6.9)
Black or African American	11 (11.7)	7 (10.8)	4 (13.8)
Other [†]	14 (14.9)	8 (12.3)	6 (20.7)
Unknown	10 (10.6)	6 (9.2)	4 (13.8)
Ethnicity, n (%)			
Hispanic or Latino	7 (7.4)	5 (7.7)	2 (6.9)
Not Hispanic or Latino	67 (71.3)	46 (70.8)	21 (72.4)
Unknown	20 (21.3)	14 (21.5)	6 (20.7)
Index year, n (%)			
2024	39 (41.5)	24 (36.9)	15 (51.7)
2025	55 (58.5)	41 (63.1)	14 (48.3)
Received treatment at a community oncology practice, n (%)	72 (76.6)	51 (78.5)	21 (72.4)
History of smoking, n (%)	42 (44.7)	26 (40.0)	16 (55.2)
Median (IQR) time from initial NSCLC diagnosis to index date, years	2.42 (1.48–3.79)	2.00 (1.31–3.37)	3.55 (1.85–5.60)
Advanced/metastatic disease at diagnosis, n (%)	82 (87.2)	56 (86.2)	26 (89.7)
EGFR mutation, n (%)			
Exon 19 deletion	54 (57.4)	37 (56.9)	17 (58.6)
Exon 21 L858R	40 (42.6)	28 (43.1)	12 (41.4)
Site of metastasis,* n (%)			
Bone	27 (28.7)	20 (30.8)	7 (24.1)
Brain	16 (17.0)	13 (20.0)	3 (10.3)
Liver	7 (7.4)	6 (9.2)	1 (3.4)
ECOG PS at index LOT start date, n (%)			
0	27 (28.7)	22 (33.8)	5 (17.2)
1	40 (42.6)	24 (36.9)	16 (55.2)
2	15 (16.0)	8 (12.3)	7 (24.1)
≥3	3 (3.2)	3 (4.6)	0
Unknown	9 (9.6)	8 (12.3)	1 (3.4)

*From index LOT start date to last confirmed structured activity. [†]Includes American Indian or Alaska Native and Native Hawaiian or Other Pacific Islander. [‡]Patients may have >1 site of metastasis. 2L, second-line; 3L, third-line; ACP, amivantamab plus carboplatin and pemetrexed; ECOG PS, Eastern Cooperative Oncology Group performance status; EGFR, epidermal growth factor receptor; IQR, interquartile range; LOT, line of therapy; NSCLC, non-small cell lung cancer.

References

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Figure 3: Amivantamab dose modifications during (A) Weeks 1–4 or (B) Week 7 and onward



2L, second-line; 3L, third-line; ACP, amivantamab plus carboplatin and pemetrexed; IQR, interquartile range.

Figure 4: Amivantamab (A, B) dose escalations and (C, D) dose reductions during Weeks 1–4

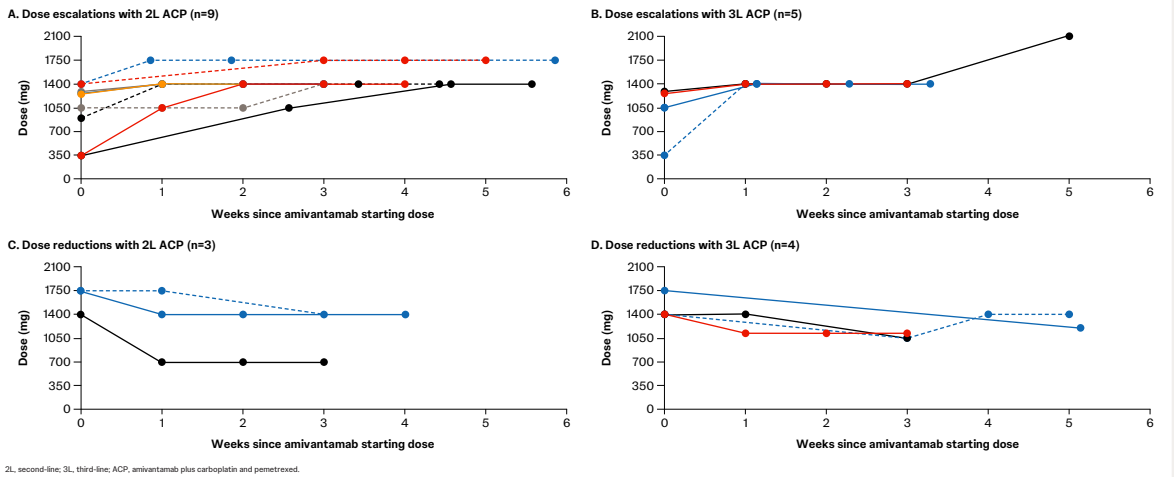
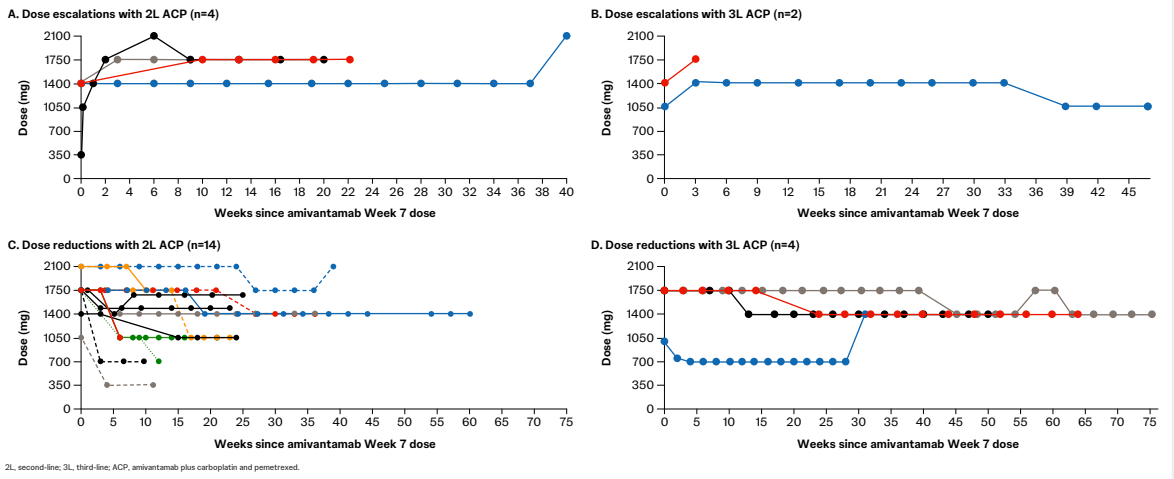


Figure 5: Amivantamab (A, B) dose escalations and (C, D) dose reductions during Week 7 and onward



2L, second-line; 3L, third-line; ACP, amivantamab plus carboplatin and pemetrexed.

