EE563

Launch Price Dynamics of Targeted Therapies in NSCLC: Dissecting the Cost and Value Across Biomarker Segments

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FOCUSED VALUE

BACKGROUND

- Non-Small Cell Lung Cancer (NSCLC) accounts for 85% of all lung cancer cases and is the primary global cause of cancer-related deaths[1]
- NSCLC patients have a poor prognosis, with a 5-year overall survival (OS) rate of 17.4%[2,3,4]
- Targeted therapies have significantly shaped the management of advanced NSCLC, enabling mutation-specific treatment strategies[5]
- However, mutation prevalence varies widely:
  - Rare mutations (ROS1+, RET+): ~1-2%[6]
  - More common mutations (EGFR, KRAS): ~10-15%[7]
- While these therapies are priced similarly, the degree of clinical benefit (e.g., progression-free survival [PFS]) and value (e.g., cost/mPFS) can differ substantially
- There is a need to evaluate whether drug prices align with clinical outcomes, especially as more targeted therapies enter the market

OBJECTIVE

- To investigate the relationship between launch pricing, current pricing and efficacy (median progression-free survival (mPFS)) for targeted therapies approved by the U.S. FDA for first-line treatment (1L) across key NSCLC mutations:
- **ALK+, EGFR (ex19/21 & ex20ins), ROS1+, RET+, METex14+**

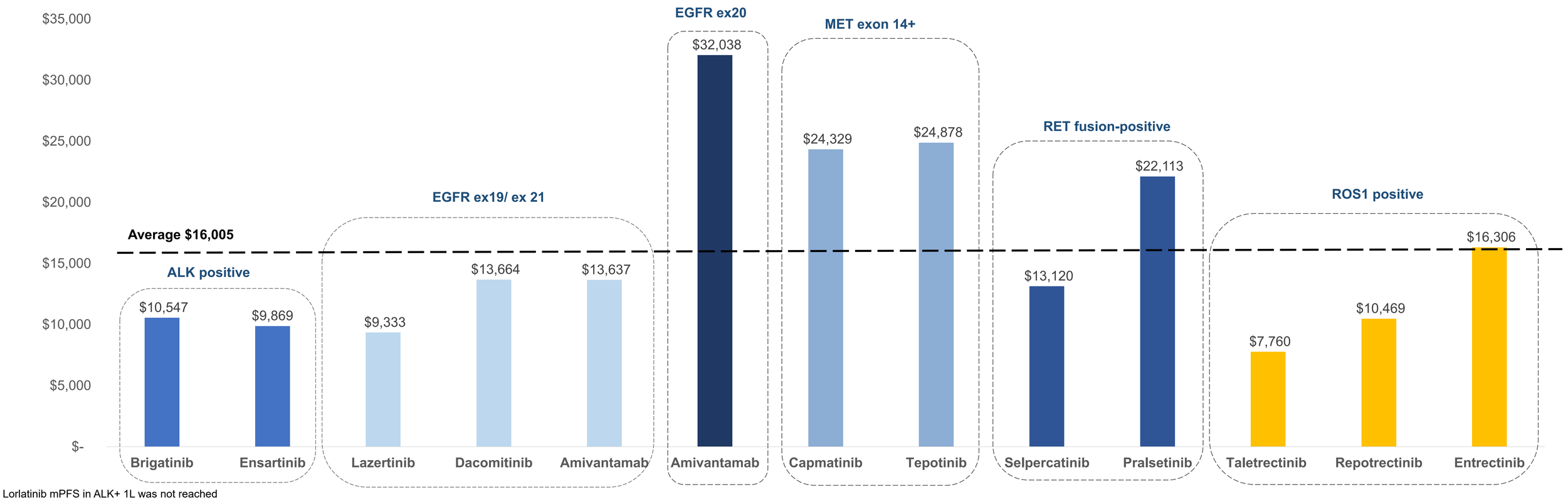
METHODS

- This analysis included 12 1L NSCLC targeted therapies approved by the US FDA between 2017-2025
- Drug pricing data sourced from AnalySource™ First Databank, using Wholesale Acquisition Cost (WAC) in US Dollars (USD)
- Monthly and annual therapy cost at launch and for 2025 were computed based on standard dosing defined in the prescribing information
- Median progression-free survival (mPFS) was sourced from U.S. FDA-approved prescribing information (PI); if not reported in the PI, data were obtained from clinical trial publications
- Annual cost per mPFS month was calculated
- Sensitivity analysis: Adjusted costs using duration of treatment (DoT) to reflect real-world usage

TABLE 1. Clinical and Economic Characteristics of NSCLC Therapies Approved by US FDA (2017-2025)

Generic Name	Mutation	Approval Year	DoT	mPFS	Monthly Cost (Launch)	Monthly Cost (2025)
Brigatinib	ALK +	2020	24.3	**24.0**[8]	$16,182	**$21,094**
Lorlatinib	ALK +	2021	16.7	**NR**	$17,946	**$21,654**
Ensartinib	ALK+	2024	NA	**25.8**[9]	$21,219	**$21,219**
Lazertinib	EGFR ex 19/ ex 21	2024	18.5	**23.7**[10]	$18,433	**$18,433**
Amivantamab	EGFR ex 19/ ex 21	2024	18.5	**23.7**[10]	$25,935	**$26,933**
Dacomitinib	EGFR ex 19/ ex 21	2018	10.8	**14.7**[11]	$12,571	**$16,738**
Amivantamab	EGFR ex 20	2024	9.7	**11.4**[12]	$27,860	**$30,436**
Capmatinib	METex14+	2020	5.1	**12.5**[13]	$19,467	**$25,343**
Tepotinib	METex14+	2021	5.1	**12.6**[14]	$21,170	**$26,122**
Pralsetinib	RET +	2020	8.1	**13.0**[15]	$19,510	**$23,956**
Selpercatinib	RET +	2020	16.7	**22.0**[16]	$20,878	**$24,054**
Repotrectinib	ROS1 +	2023	21.5	**35.7**[17]	$29,200	**$31,147**
Entrectinib	ROS1 +	2019	10.7	**15.7**[18]	$17,033	**$21,334**
Taletrectinib	ROS1 +	2025	NA	**45.6**[19]	$29,488	**$29,488**

FIGURE 1. Annual Cost of Therapy (2025) per mPFS month



Lorlatinib mPFS in ALK+ 1L was not reached

RESULTS

- All first-line therapies evaluated in this analysis were developed for specific mutations in advanced NSCLC, including alterations in ALK, EGFR (ex19/ex21 and ex20ins), METex14, RET, and ROS1
- Across these agents, **median progression-free survival (mPFS) ranged widely (Table 1),** with an average of **21.2 months**, highlighting differences in clinical benefit between mutation types and individual therapies
- The **average monthly cost**, based on Wholesale Acquisition Cost (WAC), was $21,206 at launch and $24,139 in 2025
- Cost per mPFS month ranged from **$7,760 to $32,038,** demonstrating considerable variation in the economic value of first-line therapies **(Figure 1)**
- Within individual mutation categories, notable differences in cost per mPFS month (2025) were observed
- **Taletrectinib (ROS1+)** had the lowest cost per mPFS month ($7,760) across all first-line therapies at 51.5% below the $16,005 average among 1L therapies, associated with the longest mPFS (45.6 months)
- **Other ROS1+ therapies** included repotrectinib ($10,469) and entrectinib ($16,306)
- **METex14+ therapies** averaged $24,604 per mPFS month, with capmatinib and tepotinib showing similar cost per mPFS month
- **EGFR ex19/ex21 inhibitors** averaged $12,211 per mPFS month
- **EGFR ex20ins** therapy amivantamab ($32,038) represented the highest cost per mPFS month in the 1L setting due to its higher dosing versus its EGFRex 19/ex21 dose
- **RET+** therapies ranged from selpercatinib ($13,120) to pralsetinib ($22,113)
- DoT-adjusted analyses reinforced the primary findings

LIMITATIONS

- WAC prices do not account for net prices after rebates
- Excludes additional costs like administration costs for injections and side effect management
- The model did not adjust for differences in trial populations

CONCLUSION

- While targeted therapies are priced similarly, their clinical value, measured by cost per mPFS month, varies widely
- First-line treatments offer good value, supporting early molecular testing and timely intervention
- As new therapies are approved, aligning economic and clinical value will be critical to sustainable oncology care

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ABBREVIATIONS

1L – First-line; 2L – Second-line; DoT – Duration of treatment; mPFS – Median progression-free survival; NA – Not Available; NR – Not Reached; NSCLC – Non-Small Cell Lung Cancer; OS – Overall survival; PFS – Progression-free survival; WAC – Wholesale Acquisition Cost

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