Cost-effectiveness of tepotinib versus docetaxel monotherapy for patients with previously treated advanced non-small cell lung cancer harboring *MET*ex14 skipping in Finland

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CONCLUSION

- **Tepotinib provides a significant clinical improvement measured by LY and QALY gained in a patient population suffering from advanced NSCLC with *MET*ex14 skipping**
- **Tepotinib is a potentially cost-effective treatment option when accounting for current treatment practices and conditional reimbursement system in Finland**

INTRODUCTION

- Tepotinib is an oral, once-daily, highly selective MET inhibitor indicated as monotherapy for the treatment of adult patients with advanced non-small cell lung cancer (NSCLC) harboring alterations leading to *MET*ex14 skipping, who require systemic therapy following prior treatment with immunotherapy and/or platinum-based chemotherapy[1–2]
- In the single-arm Phase II VISION study of patients with NSCLC harboring *MET*ex14 skipping, tepotinib demonstrated robust and durable efficacy, with a manageable safety profile[3–4]
- A single chemotherapy, most often docetaxel monotherapy, is the current standard treatment alternative to tepotinib in the treatment of 2L+ NSCLC with *MET*ex14 skipping in Finland

OBJECTIVES

- To assess the cost-effectiveness of tepotinib versus docetaxel monotherapy, the current standard of care in Finland for previously treated patients with advanced NSCLC harboring *MET*ex14 skipping alterations, from the Finnish healthcare perspective

METHODS

- A three-state partitioned survival model was developed to estimate costs, effects, and an incremental cost-effectiveness ratio (ICER) over a 25-year time horizon in the base case (**Figure 1**, **Table 1**)
- For tepotinib efficacy, safety and utility parameters were derived from the VISION phase II study,[3–4] which was the primary data source together with Finnish expert input and cost literature[5]
- Data from the docetaxel arm of the KN-010 study[6] was used to create a matching-adjusted control arm representing patients who receive docetaxel monotherapy
- Retail price, excluding VAT, was used for tepotinib in the base case, and costs and effects were discounted at a 3% annual discount rate according to Finnish guidelines[7]
- A One-Way Sensitivity Analysis (OWSA) together with other sensitivity analyses were conducted to assess the effect and magnitude of uncertainty

Figure 1. Partitioned survival model diagram

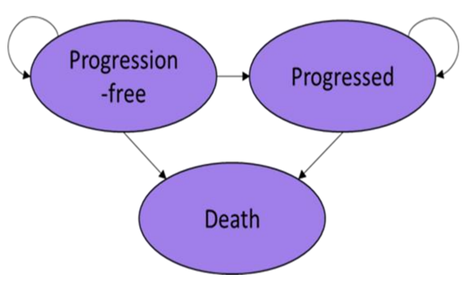


Table 1. Summary of study design

Parameter	Description
Method	Cost Utility Analysis
Population	Adult patients with NSCLC harboring alterations leading to *MET*ex14 skipping, who require systemic therapy following prior treatment with IO and/or platinum-based CT
Intervention	Tepotinib monotherapy
Comparator	Docetaxel monotherapy
Outcomes	LYs, QALYs, ICER (€/QALY)
Time horizon	25 years (base case)
Discounting	3% (costs and effects)
Perspective	Finnish healthcare

RESULTS

- In the base case analysis, tepotinib treatment achieved 2.23 additional life years (3.61 vs 1.38) and 1.24 (2.11 vs 0.87) quality-adjusted life years (QALY) when compared with docetaxel (**Table 2**)
- The ICER of tepotinib at list price was <2 times the gross domestic product per capita per QALY gained, which is typical for targeted cancer treatments accepted in the Finnish conditional reimbursement system[8]
- Sensitivity analyses showed that the relative dose intensity (RDI) of tepotinib, along with parameters relating to subsequent treatment lines, has a significant impact on cost-effectiveness, which needs to be considered when estimating cost-effectiveness in real world (**Figure 2**)
- In addition, possible price reduction would have an impact on true cost-effectiveness of tepotinib, which is to be considered when making a decision on conditional reimbursement (**Figure 3**)

Table 2. Base case results

Treatments	Total		Incremental	
	LYs	QALYs	LYs	QALYs
Tepotinib	**3.61**	**2.11**	**2.23**	**1.25**
Docetaxel	**1.38**	**0.87**		

Figure 2. Tornado diagram of one-way sensitivity analysis

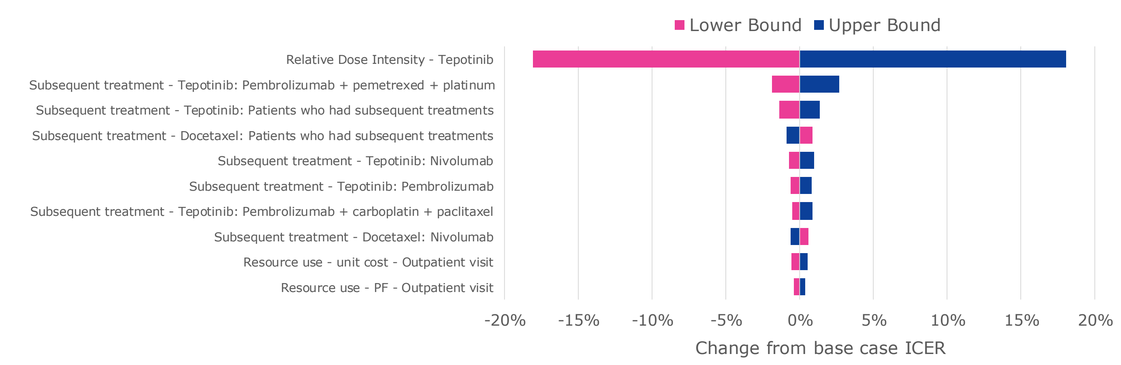
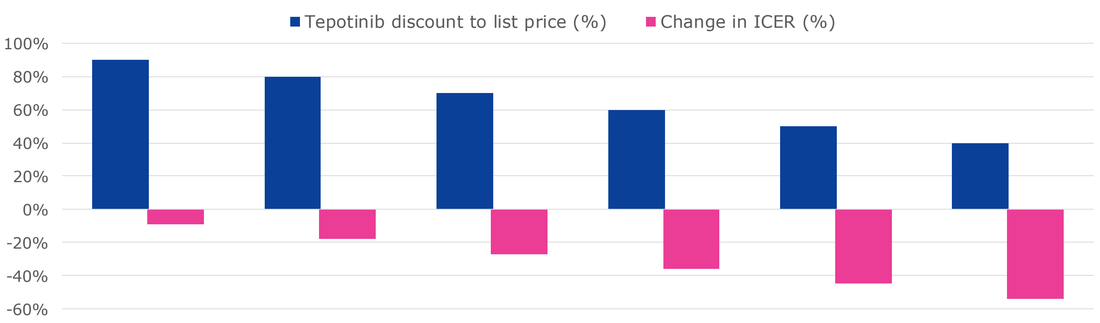


Figure 3. The impact of tepotinib price on ICER



Abbreviations: 2L+, previously treated; CT, chemotherapy; ICER, incremental cost-effectiveness ratio; IO, immunotherapy; LYs, life-years; MET, mesenchymal–epithelial transition factor; *MET*ex14, *MET* exon 14; NSCLC, non-small cell lung cancer; OWSA, One-Way Sensitivity Analysis; PF, progress-free; QALYs, quality-adjusted life years; RDI, relative dose intensity.

References: 1. Bladt F, et al. *Clin Cancer Res.* 2013;19(11):2941; 2. TEPMETKO: Medicine overview. 2022. Available at: https://www.ema.europa.eu/en/documents/product-information/tepmetko-epar-product-information_en.pdf. Accessed November 11, 2024; 3. Paik PK, et al. *N Engl J Med*. 2020;383(10):931–943; 4. Mazieres J, et al. *JAMA Oncol*. 2023;9(9):1260–1266; 5. Mäklin S, et al. Institute of Health and Welfare 2021. Available at: https://www.julkari.fi/handle/10024/142882. Accessed November 11, 2024; 6. Herbst RS, et al. *Lancet* 2016;387(10027):1540–1550; 7. Pharmaceuticals Pricing Board instructions for health economic evaluation. Available at: https://www.hila.fi/content/uploads/2024/06/Instructions_TTS_2024_190624.pdf. Accessed November 11, 2024; 8. Hahl J, et al. *Value in Health.* 22:Suppl. 3S721 (Nov 2019).

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