APPRASING THE VALUE OF LENVATINIB FOR RADIO-IODINE REFRACTORY DIFFERENTIATED THYROID CANCER (RR-DTC): A MULTI-COUNTRY STUDY APPLYING HOLISTIC MULTICRITERIA DECISION ANALYSIS (MCDAA

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BACKGROUND

- Lenvatinib is a tyrosine kinase inhibitor (TKI), indicated for the treatment of patients with progressive, locally advanced or metastatic, differentiated thyroid cancers, refractory to radioactive iodine (RA-DTC). It carries orphan drug status.
- Sorafenib, another TKI, is the only other medical treatment for RR-DTC approved in Europe. In the absence of approved therapies, patients may be forced to waitlist waiting or receive local palliative treatments of metastases.12
- Assessment of new products for reimbursement, particularly orphan products, is challenging as it confronts decisionmakers with competing ethical demands. At the root of these assessments is the identification and measurement of the true value of innovations, which requires a broader perspective than the current cost-effectiveness paradigm to capture all aspects of value.15

OBJECTIVE

- To comprehensively identify the contribution of a broad range of decision criteria to the value of lenvatinib for RR-DTC from the perspective of country-specific panels representing a diversity of stakeholders using pragmatic MCDM.

METHODS

- Study design (Figure): based on an analysis of the overall context in which lenvatinib will be appraised:
  - Comparative cost and effectiveness
  - Expert consensus / CPGs
  - Environmental impact
  - Unmet needs
  - Comparative patient- and society-level outcomes
  - Economic evidence

- Perspectives of Stakeholders – Panelist Weights
- Qualitative Considerations of Contextual Criteria (impacts)

RESULTS

1. Perspectives of Stakeholders – Panelist Weights

   a. Top 3 highest weighted criteria were: "Comparative effectiveness" (all 3 countries), "Disease severity" (France and Italy), "Quality of evidence" (Italy and Spain), "Comparative safety" (France) and "Type of therapeutic benefit" (Spain).

   b. The highest weighted criteria tended to show the least variances in weights, indicating a level of agreement among panelists on the most important criteria.

2. Panelist Scores (judgments on evidence), Insights and Value Contributions

   a. Largest positive contributions to the value of lenvatinib using waitlist waiting as comparator:
      - "Comparative effectiveness" (21–22% of positive contribution) based on 14.7-month improvement in progression-free survival (PFS) and improved overall survival (OS) after adjustment for crossover.20
      - "Disease severity" (19–20%): based on approx. 19-month OS in progressive disease, and symptoms such as airway obstruction.20
      - "Quality of evidence" (19%) based on analysis of clinical program. Panelists commented that the phase III study had a well-defined patient population and provided strong evidence on PFS.19

   b. Largest positive contributions to the value of lenvatinib using sorafenib as comparator:
      - "Disease severity" (18–22%, all countries): as above
      - "Comparative effectiveness" (18%, France and Italy): assessed based on ITT.
      - "Quality of evidence" (18%) based on analysis of clinical program. Panelists commented that the phase III study had a well-defined patient population and provided strong evidence on PFS.20

3. Qualitative Considerations of Contextual Criteria (impacts)

   a. Consideration of contextual criteria impacted lenvatinib’s appeal positively in all 3 countries with country-specific differences:
      - Consideration of "Population priorities and access", mostly focused on the rare disease status of RR-DTC, had a predominantly positive impact in Italy and Spain, but mixed impacts in France.
      - Unlike French panels, most Italian and Spanish panels were confident in the ability of their healthcare systems to use lenvatinib appropriately which had a positive impact on its value.

CONCLUSIONS

- The value of lenvatinib was assessed as consistently positive across diverse therapeutic landscapes; the process identified which criteria were most important to stakeholders and contributed most to the value of lenvatinib in each local context.
- Applying comprehensive and pragmatic MCDM, systematic collection of both quantitative and qualitative inputs, including group discussions and individual comments, allowed a deep exploration of the diverse aspects impacting value the therapeutic landscape of RR-DTC; the evidence available, the values it holds (including the trade-offs that have to be made) and the country-specific context of approvals.
- Such rich content at the criteria level is required to understand where value lies to enhance communication between stakeholders and to fully support reimbursement applications and decisionmaking in local contexts.

REFERENCES


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