NGS FOR INFORMING LUNG CANCER THERAPY IN EUROPE – HOSPITAL IMPACT WITH A LIFECYCLE PERSPECTIVE

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Introduction

Within oncology, next-generation sequencing (NGS) has paved the way for more effective treatment, including personalized medicine.[1] There are, however, large variations in access and reimbursement across Europe.[2]

Objectives

The aim of this study is to understand the European NGS landscape and barriers to access.

Methods

Semi-structured telephone interviews, using a pre-developed questionnaire. Interviews were undertaken with 68 key opinion leaders in four different European Union countries (France, Germany, Italy, and Spain). In each country, interviews were undertaken with three payers, seven clinicians and seven pathologists (N=17 per country). Respondents were identified and selected using screener questionnaires to ensure sufficient experience and knowledge of NGS in oncology, as well as a heterogeneous representation of settings **(Figure 1)**.

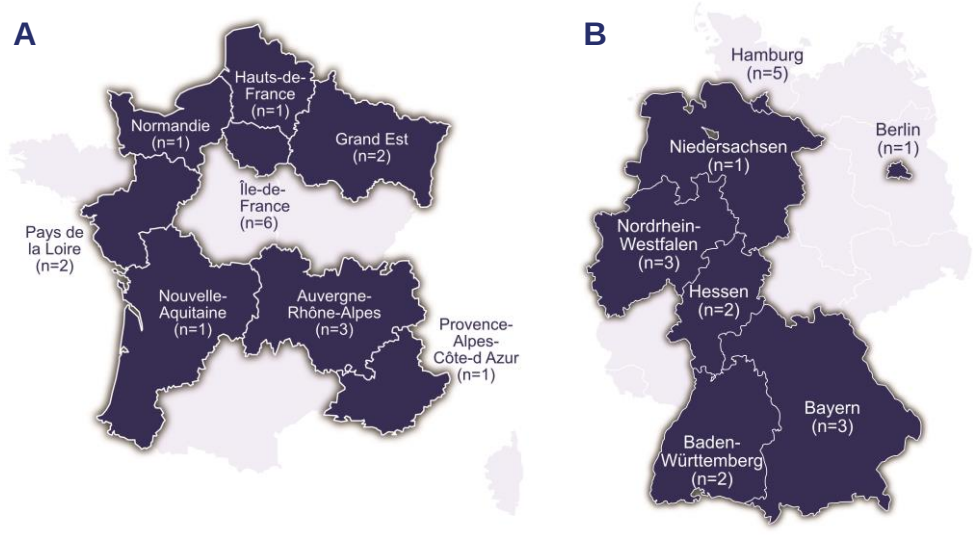

Figure 1 Number of respondents per region in each country. **(A)** France; **(B)** Germany; **(C)** Spain; **(D)** Italy

Results

- Payers, clinicians and pathologists in all countries generally found NGS highly useful, but the benefit depends on the availability of **approved, targeted treatments**.
- Lack of information linking a mutation to available treatments or trials was considered an issue.
- Respondents perceived that NGS has the potential to **improve patient quality of life and reduce resource use through avoiding suboptimal treatment**.
- All of the payer respondents expected the role of NGS to increase, though it may be held back by **lack of reimbursement**.
- Respondents **favoured in-house NGS** over outsourcing in terms of clinical benefit:
  - "Advantages of in-house NGS are turnaround time, results and lean processes"
  - "If you have urgent samples, it's easy to prioritise them".
- Reasons for not having in-house NGS included **costs and logistics**.
- Respondents from all countries agreed that there is an **unmet need for NGS testing** and that not all patients who could benefit from NGS can access it.
- As illustrated in **Figure 2**, a majority of respondents in all countries found that there was a **lack of guidance** regarding appropriate NGS usage, which is a **barrier to uptake**.

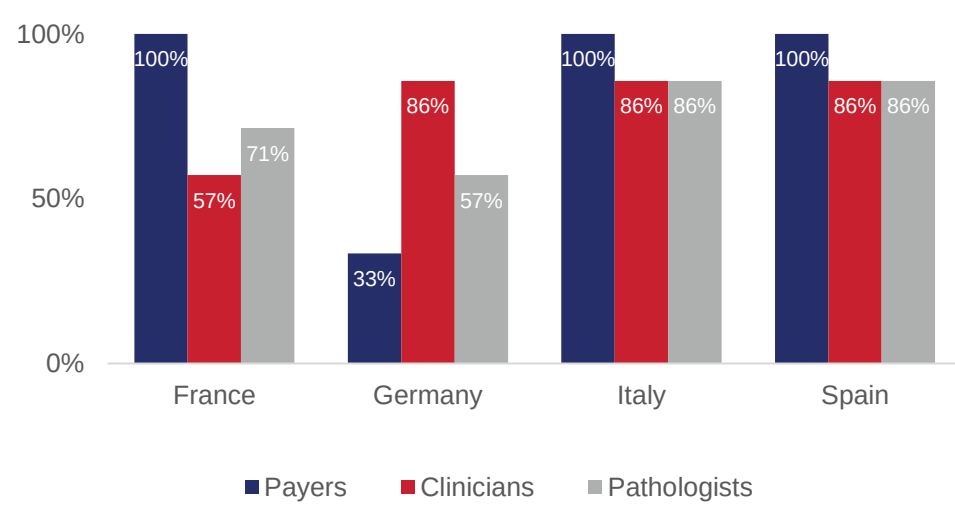

Figure 2 Proportion of respondents who perceive issues with current NGS guidance

Discussion & Conclusion

All repsondents recognized the potential benefits of NGS. Barriers to its uptake were lack of national guidance and clear links between identified mutations and clincial intervention. Respondents wanted a better understanding of when to invest in NGS, requiring more peer-reviewed publications and understand of the cost-beenfit provide by NGS.

References

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