Community Oncologists' Perceptions of Molecular Profiling: Insights Into Precision Oncology Integration

HSD53

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INTRODUCTION

- Precision oncology is a rapidly developing therapeutic approach designed to personalize cancer care based on an individual's genetic makeup.
- Advancements in tumor profiling and precision oncology via molecular testing and next-generation sequencing (NGS) are transforming cancer management by identifying actionable biomarkers, allowing for the selection of optimal and/or targeted treatments.
- Several studies have shown the utility of NGS in identifying clinically actionable mutations and improving patient outcomes[1,2], yet many challenges persist that may inhibit routine adoption of NGS into clinical care.
- Understanding clinicians' perceptions surrounding the utility of NGS testing is paramount for successful integration into clinical practice.

OBJECTIVE

- This study aimed to elucidate the perspectives of oncologists regarding the adoption of and barriers to molecular and genetic profiling in cancer patient management.

METHODS

- US-based oncologists convened at a live meeting in May 2023 to review clinical updates.
- Participant characteristics and demographic data were collected via an online survey prior to the meeting. Perceptions/reactions to queries on molecular testing were captured in real-time via an audience response system. Not all participants answered every question.
- Responses were aggregated and data were summarized using descriptive statistics.

RESULTS

- A total of 61 US-based oncologists were included in this analysis (**Table 1**).
- Most respondents (88%) cited lung cancer as the top disease state for which NGS-based testing has been most impactful for guiding 1L treatment decisions, followed by colon/rectal (59%) and breast (47%) cancers, highlighting the sizable influence of molecular testing on the solid tumor treatment landscape (**Figure 1**).
- The most frequently cited barriers to NGS-based testing included a clinically meaningful delay in treatment initiation (65%) and results that may not be actionable (56%; **Figure 2**).
- All respondents reported ordering molecular testing. More than half of respondents (57%) reported rarely or never initiating treatment prior to receiving molecular profiling results, further underscoring the need for timely reporting (**Figure 3**).
- In addition to the aforementioned obstacles, most respondents (68%) reported not having access to in-house NGS testing (**Figure 4**).
- Half of respondents reported that increased education on genomic profiling use led to increased NGS utilization by their practice; most frequently reported strategies that supported increased utilization included increased financial aid and reimbursement support for patients (36%), and adoption of decision support tools (25%; **Figure 5**).

RESULTS

Table 1. Physician Demographics

	N=61
Primary medical specialty (n, %)	
Medical oncology	27 (44)
Hematology oncology	27 (44)
Other[a]	7 (12)
Practice setting (n, %)	
Community	41 (67)
Academic	20 (33)
Number of years in practice	
Average (min–max)	20 (3-40)
Number of patients seen per clinical day	
Average (min–max)	19 (1-45)

[a]Other primary medical specialties included gastroenterology (n=6) and internal medicine/geriatrics (n=1).

Figure 1. Disease states for which NGS-based testing has been most impactful for guiding 1L treatment decisions

Question: In which disease states has NGS-based testing been most impactful for guiding 1L treatment decisions? Please select up to 3. (n=59)

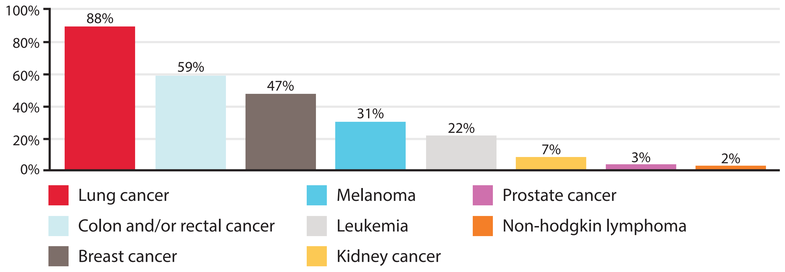


Figure 2. Barriers to NGS-based testing

Question: What are the most significant challenges/barriers that you have faced with NGS-based testing? Please select up to 3. (n=57)

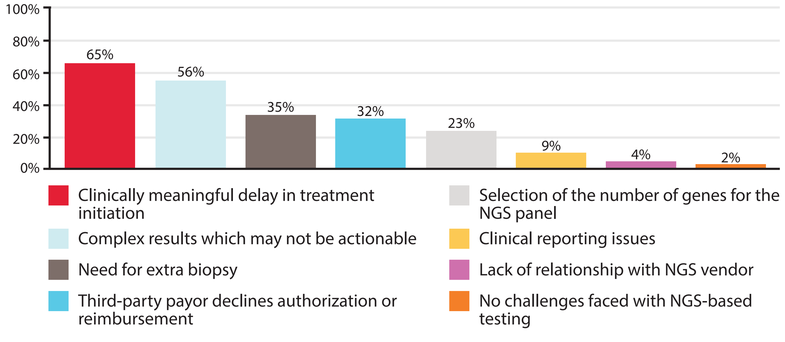


Figure 3. Frequency of treatment initiation prior to molecular testing results

Question: In patients for whom you order molecular testing, how often do you initiate or recommend initiating treatment before receiving results? (n=58)

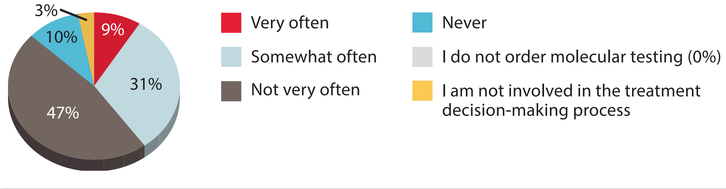
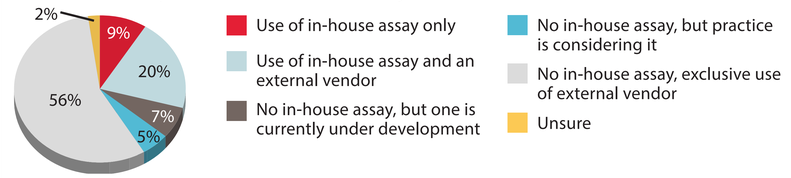


Figure 4. In-house versus outsourced NGS testing utilization

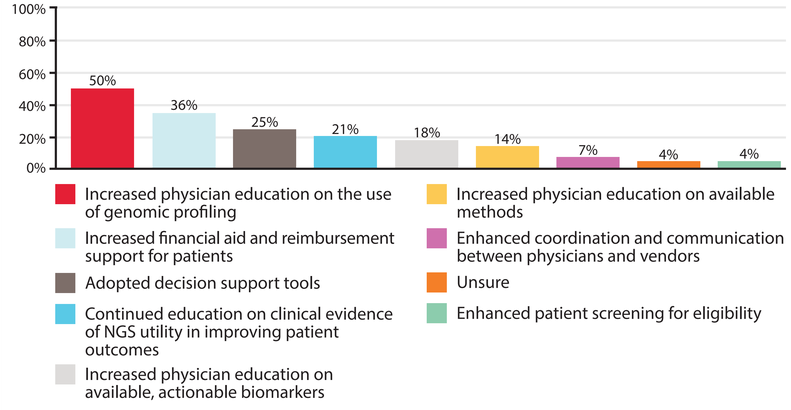
*Question: Does your practice/institution have access to an in-house (i.e., on-site or via an affiliated hospital/institution) NGS assay? (n=55)**



*Percentages do not sum to 100 due to rounding.

Figure 5. Strategies to facilitate NGS utilization

Question: Of the following strategies, which are the top 2 that have supported your practice/institution in increasing appropriate NGS utilization? Please select up to 2. (n=28)



CONCLUSIONS

- Our findings underscore the current utility of molecular profiling in guiding treatment selection for patients with solid tumors such as lung cancer and colon/rectal cancer, and indicate a need for improvements in NGS testing to aid treatment decisions in other cancers such as non-Hodgkin lymphoma, prostate cancer, and kidney cancer.
- Physicians experience challenges getting timely delivery of NGS test results and frequently get reports with no actionable results. These drawbacks may be prohibitive to full integration into clinical practice.
- Solutions to increase testing access, financial support for patients, time to test delivery, and education on genomic profiling will be crucial to integrating precision medicine-based testing into routine clinical care to enhance patient outcomes.

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