

# WHAT CAN WE LEARN FROM ONCOLOGISTS? A SURVEY OF MOLECULAR TESTING PATTERNS

Juscilene S Menezes, PhD; Veena E Joy, MS, AEC; and Anagh A Vora, MD. Thermo Fisher Scientific 5781 Van Allen Way, Carlsbad, CA, 92008.

## INTRODUCTION

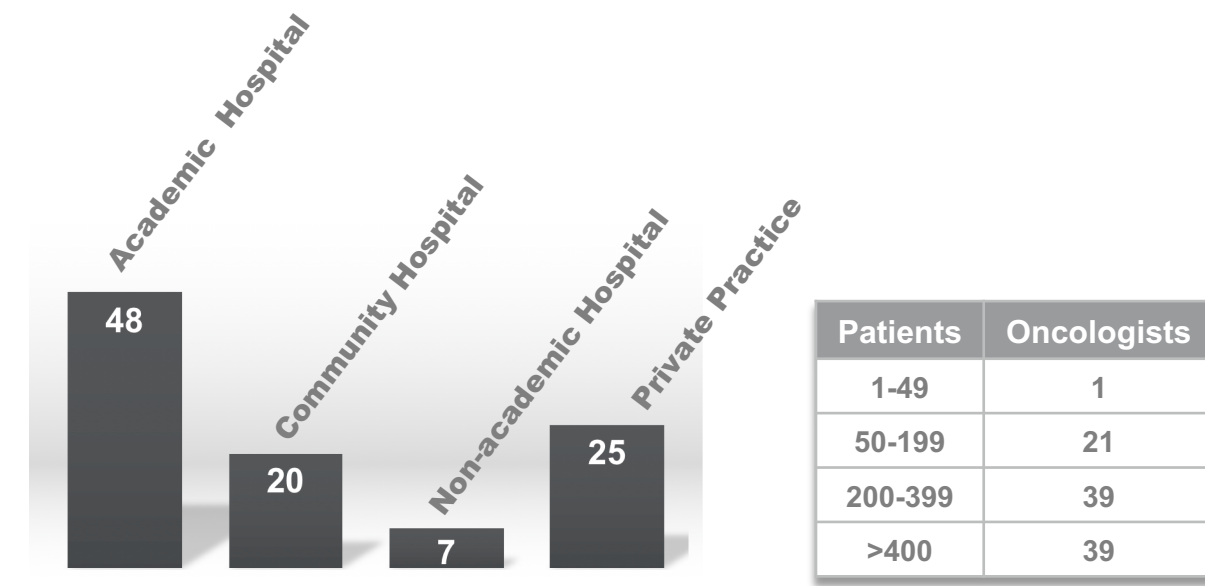
Oncologists are increasingly incorporating NGS testing to guide targeted and immuno-oncology therapies<sup>1</sup>. Most clinical NGS testing is confined to large academic institutions and reference labs, despite the fact that most cancer patients are treated in the community settings. We therefore sought to examine molecular testing selection patterns directly from oncologists in order to better identify perceived gaps in testing and treatment paradigms.

## MATERIALS AND METHODS

A population-based survey of 100 practicing oncologists was conducted across various practice types in the US (80%) and (19%) Europe [1% not specified] in order to assess oncology needs in NGS testing for clinical therapy guidance. Relevant topics regarding NGS testing queried in this survey included: use of local versus commercial labs, turn-around time (TAT), report information, reportable results, and actionable variants.



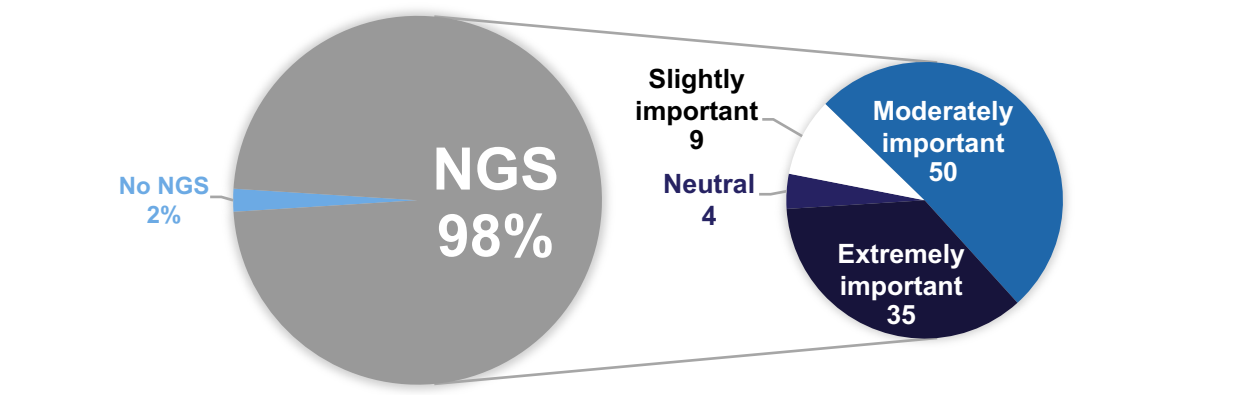
One hundred oncologists completed the survey with an average of 16 (±7) years of post-residency experience, managing an average of 451 (±514) patients. The respondents included a cross section of academic (48%), private practice (25%), community hospital (20%), and non-academic (7%) oncologists.



## RESULTS

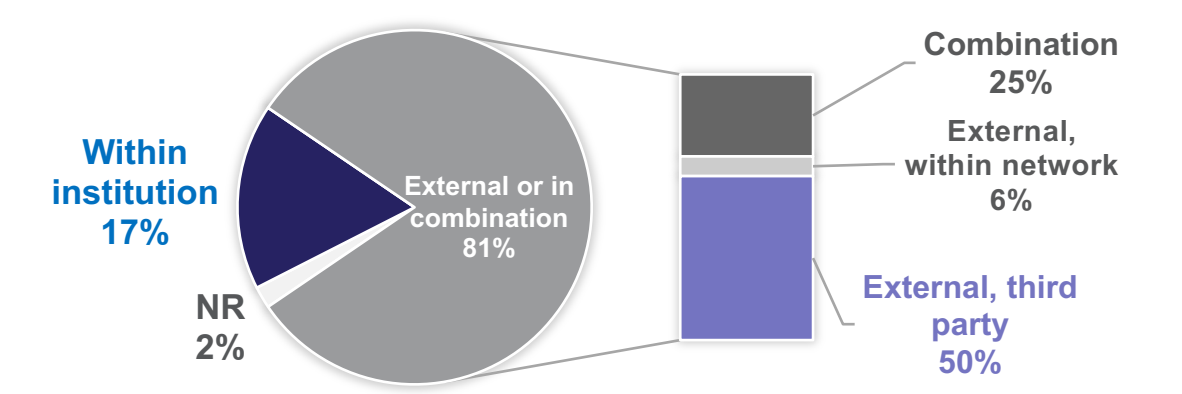
Overall, 98% of the oncologists surveyed used NGS testing and most indicated that the test was either extremely (36%, 35/98) or moderately (51%, 50/98) important to their practice.

### Oncologists Using NGS & its Importance to their Practice



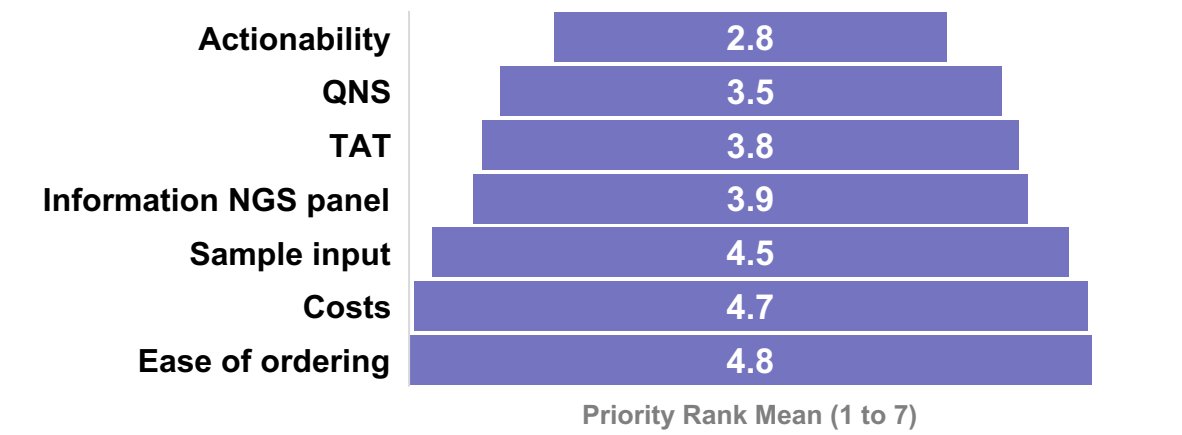
Of the oncologists surveyed, 81% used external NGS testing (exclusively or in combination with in-house testing).

### 81% of the Oncologists Used External NGS Testing

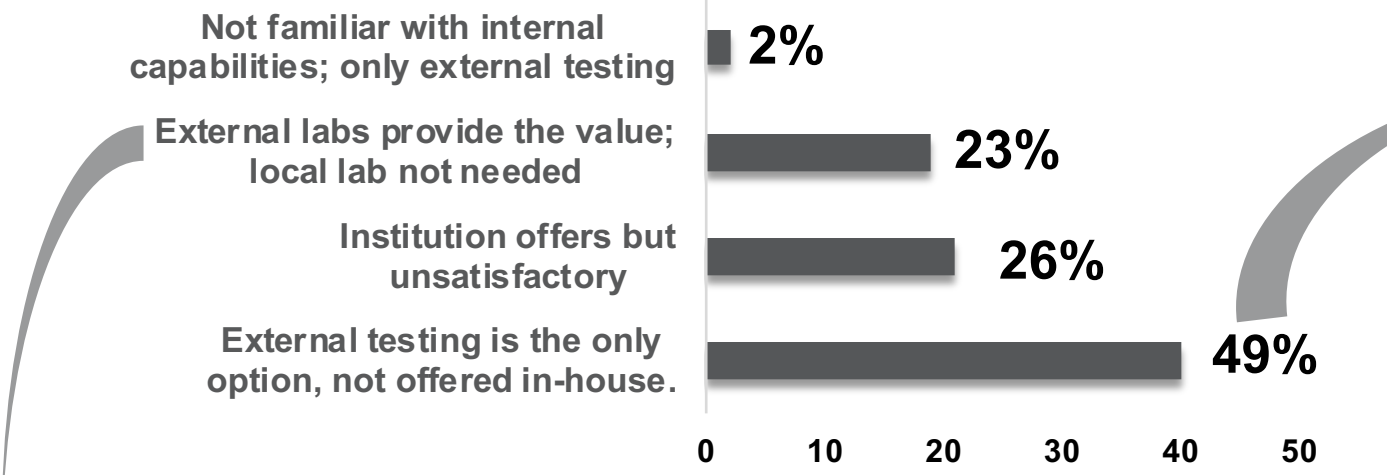


The top three testing requirements ranked by the oncologists using NGS were actionable mutation identification, successful result rate (QNS), and TAT.

### Oncologists' Priorities

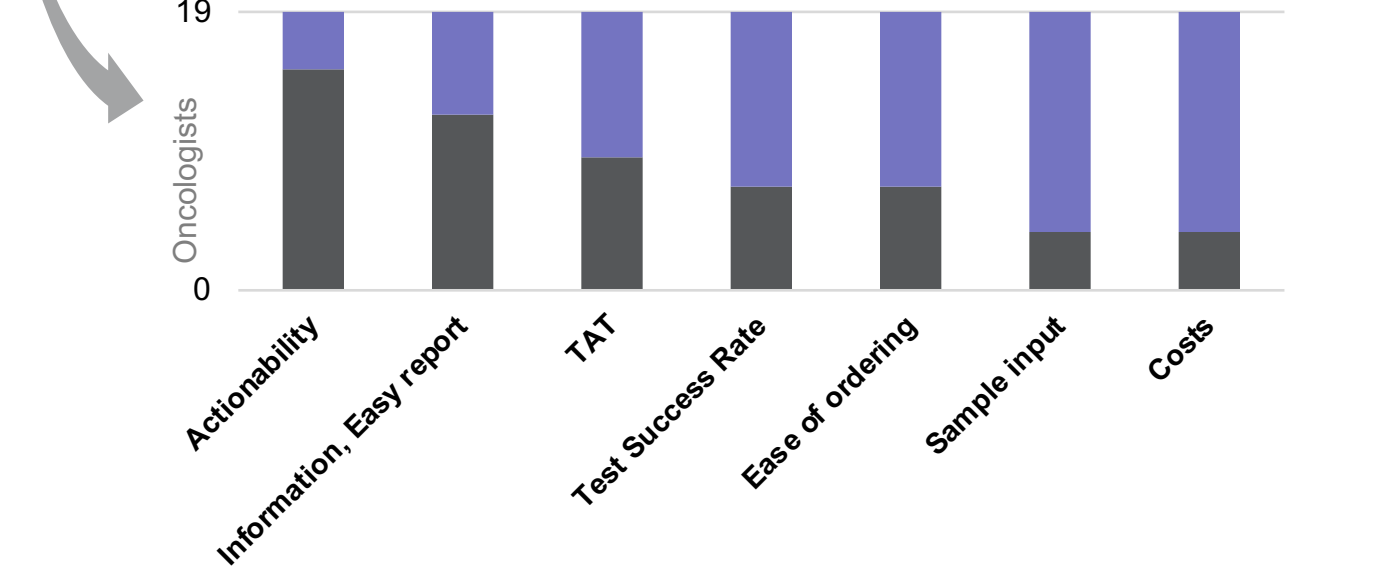


### Reasons Oncologists Send Samples Out

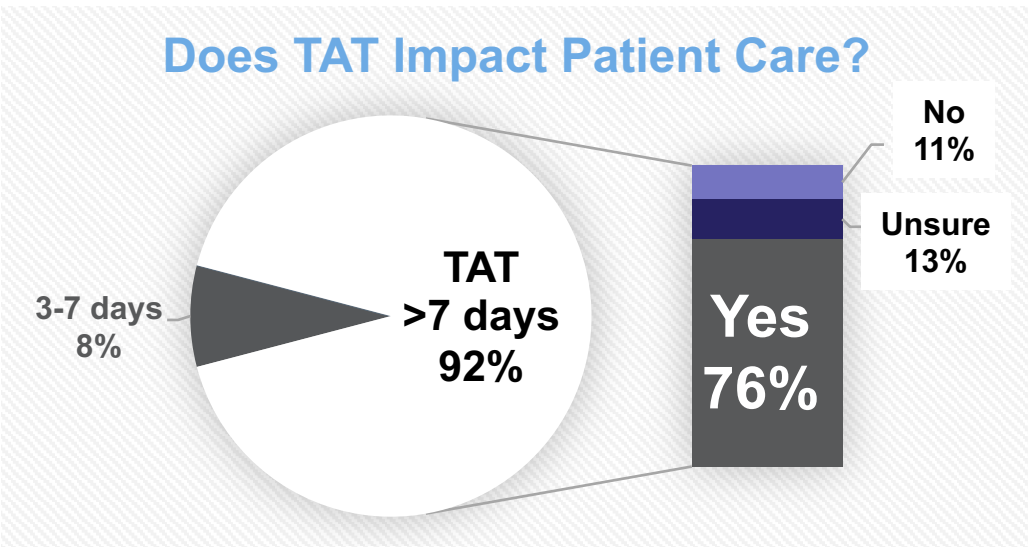


The majority of oncologists are supportive of their local pathologists, though approximately 1/4 (19/82; 23%) of those sending samples to external labs stated that their local pathology labs do not meet critical variables.

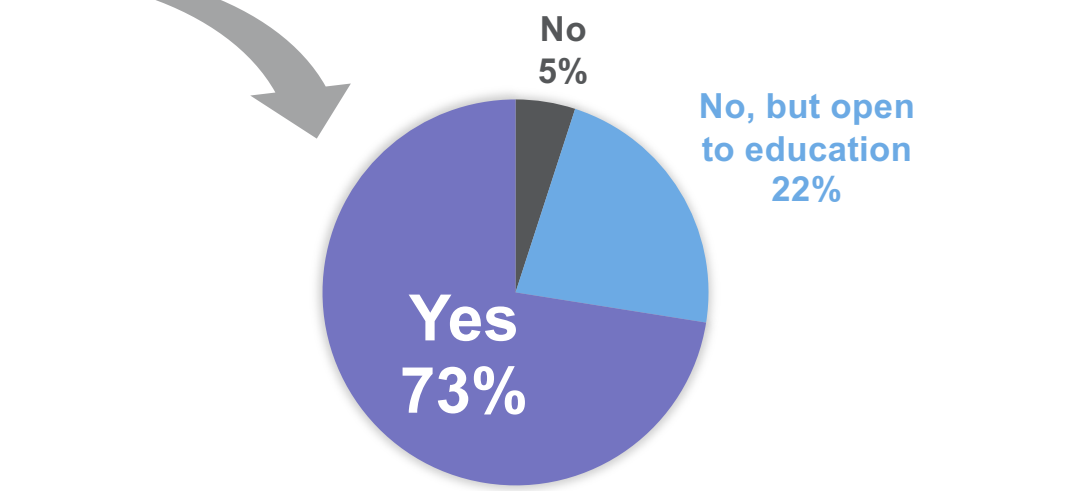
### Reasons Local Lab was Unable to Meet Clinical Needs



Of those sending samples out, approximately 1/4 (21/82; 26%), despite having in-house NGS testing, reported that the local lab was unable to meet their clinical needs (e.g., actionability, interpretable reports, TAT, etc.). Additionally, the majority (76%, 68/90) of those receiving testing results with TAT >7 days (92%, 90/98 of NGS users), indicated that improvement in clinical criteria (i.e., TAT) would directly lead to improved patient care.



### Would Oncologists Switch to In-house Testing, if it was Available and Met Criteria?



Nearly half of the physicians sending samples out (49%) did not have institutional NGS testing. Most of these oncologists (73%) would switch to in-house testing, if it was available and met key clinical criteria.

## CONCLUSIONS

Overall, these survey results highlight crucial oncologists' considerations regarding NGS testing. Clinical alignment is crucial for optimal patient care.

In this study, four out of five oncologists send out their NGS testing, yet most oncologists (72%) would switch to in-house testing, if it was available and met key clinical criteria.

By directly addressing Oncology/Pathology gaps (both real and perceived), local pathology labs can play a pivotal role in improving patient care and increasing the number of cancer patients receiving next generation treatment modalities within their communities.

## REFERENCES

1. Moscow JA, Fojo T, Schilsky RL. The evidence framework for precision cancer medicine. Nat Rev Clin Oncol. 2018 Mar;15(3):183-192.