

Engaging Patients in Their Biomarker Testing

Andrew Ciupek, PhD
GO₂ Foundation for Lung Cancer
USA



DISCLOSURES

Commercial Interest	Relationship(s)
Novartis	Consultant, Advisory Board
Daiichi Sankyo	Advisory Board
AstraZeneca	Advisory Board
GRAIL, Inc.	Consultant

Gaps In Biomarker Testing Persist

Table 2 Guideline Adherence for Genomic Testing

Variable	n (%)
Total patients	814 (100)
Tested for <i>EGFR/ALK</i>	479 (59)
Tested for all 7 NCCN recommended mutations	63 (8)
Patients aged ≥ 65 y	464 (100)
Tested for <i>EGFR/ALK</i>	272 (59)
Tested for all 7 NCCN recommended mutations	31 (7)

Abbreviations: *ALK* = anaplastic lymphoma kinase; *EGFR* = epidermal growth factor receptor; NCCN = National Comprehensive Cancer Network.

Guitierrez et al. Clinical Lung Cancer 2017

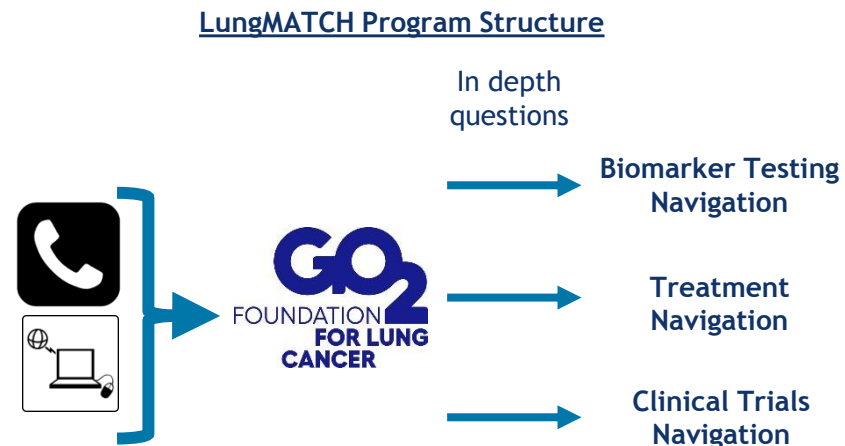
Gene	Patients tested % (n=1,203)	Patients with TA in EGFR, ALK, ROS1, BRAF (n=163)		Patients with TA in in EGFR, ALK without TKI progression (n = 84)		
		On targeted therapy	No targeted therapy	No ICPI	TA prior to ICPI	TA after ICPI
All 4 Genes (T4)	22%					
EGFR	54%	45%	55%	63%	24%	13%
ALK	51%					
ROS1	43%					
BRAF	29%					

Gierman et al. Clinical Lung Cancer 2019

Engaging patients in their own biomarker testing process may be part of a comprehensive strategy to address gaps

Patients Are Seeking Biomarker Navigation Help

- Approximately 15% of GO₂ support calls were primarily for biomarker testing questions in 2020
- Approximately 19% of NSCLC callers had not received testing or did not know



Patient Groups Are Taking Action



What are the barriers for patients trying to engage in the testing process?

What are patients telling us?

“Tim” - Barriers in Care Coordination/Timing



NSCLC adenocarcinoma Stage IV; no testing due to lack of tissue



Initiate Liquid Biopsy Testing Process



Delays: ER Visit, blood collection, testing/report

Doctor prescribes chemo with start date



Chemo Started

“We’ll consider testing results for future salvage options”



Testing Report Complete

Access Barriers: Direct and Indirect



Financial Impact of Testing Itself

- Increasing coverage of approved comprehensive testing panels has greatly increased access
- Coverage of newer technologies not always universal

“Mary” - Cost of procedures required for testing

- Stage IV NSCLC adenocarcinoma with no testing - Started testing process
- Declined to go forward - cost of new biopsy for testing is too much

“Paul” - Patient Understanding and Empowerment Barriers

- NSCLC adenocarcinoma Stage IIIB newly progressed to stage IV
- No testing was discussed



Confusion about stopping maintenance therapy and change in diagnosis

“I don’t want to upset the doctor with all these questions”

Unsure if testing being performed or how the process was going - unable to confirm with doctors office

“I think the doctor is mad at me”

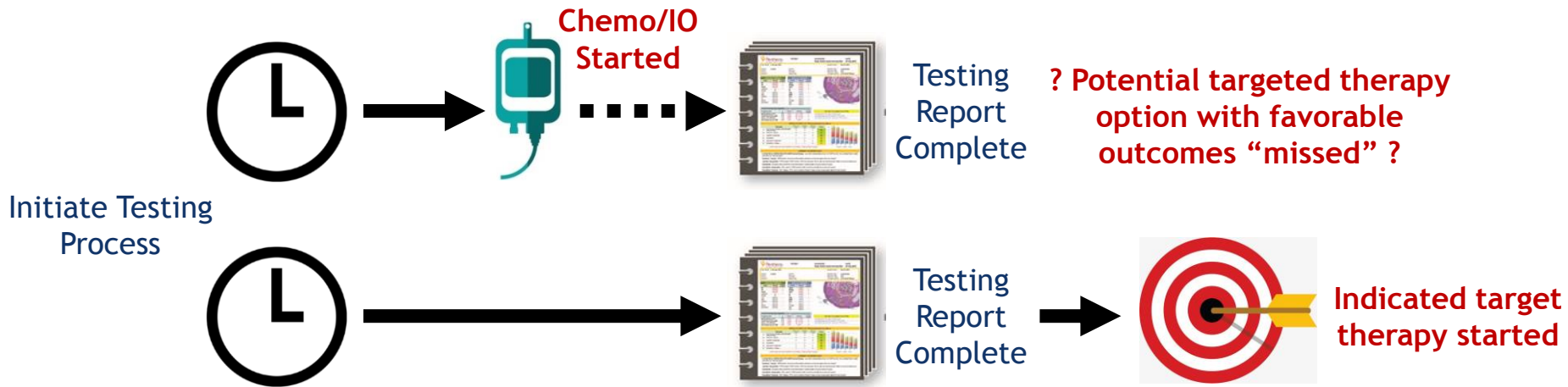
What are some solutions to empower patients to be a partner in the process?

Patient Education

- Patients who understand the “why” of biomarker testing can be active partners in the process
- Everyday clinical discussions and formal educational programs can play a role



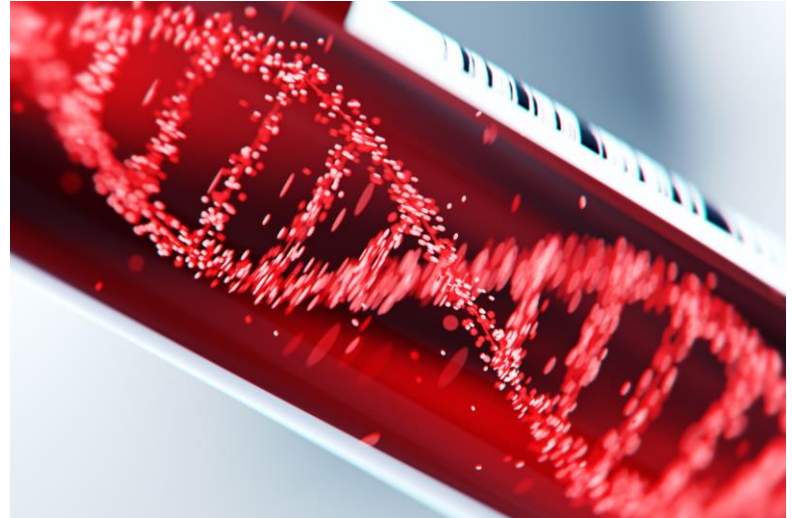
Communication during testing process: Timing



Clear communication about the “how” of biomarker testing and the “need to wait” can help patient understanding

Communication during testing process: Method

- Patient questions regarding testing using liquid biopsy vs. tissue biopsy are common in our support programs
- Clear communication about the uses and selection of a chosen testing method can improve patient understanding



Return Biomarker Testing Results to Patients

Viewpoint

October 24, 2019

Improving Molecular Oncology by Making Results Available to Patients

Geoffrey R. Oxnard, MD¹; Howard (Jack) West, MD²; Jennifer C. King, PhD³

» [Author Affiliations](#)

JAMA Oncol. 2019;5(12):1689-1690. doi:10.1001/jamaoncol.2019.4390

“Patients can then serve as reliable stewards of their critical results, a step that would all but guarantee that patients with driver mutations receive the targeted therapies that are most likely to confer the greatest clinical benefit.”

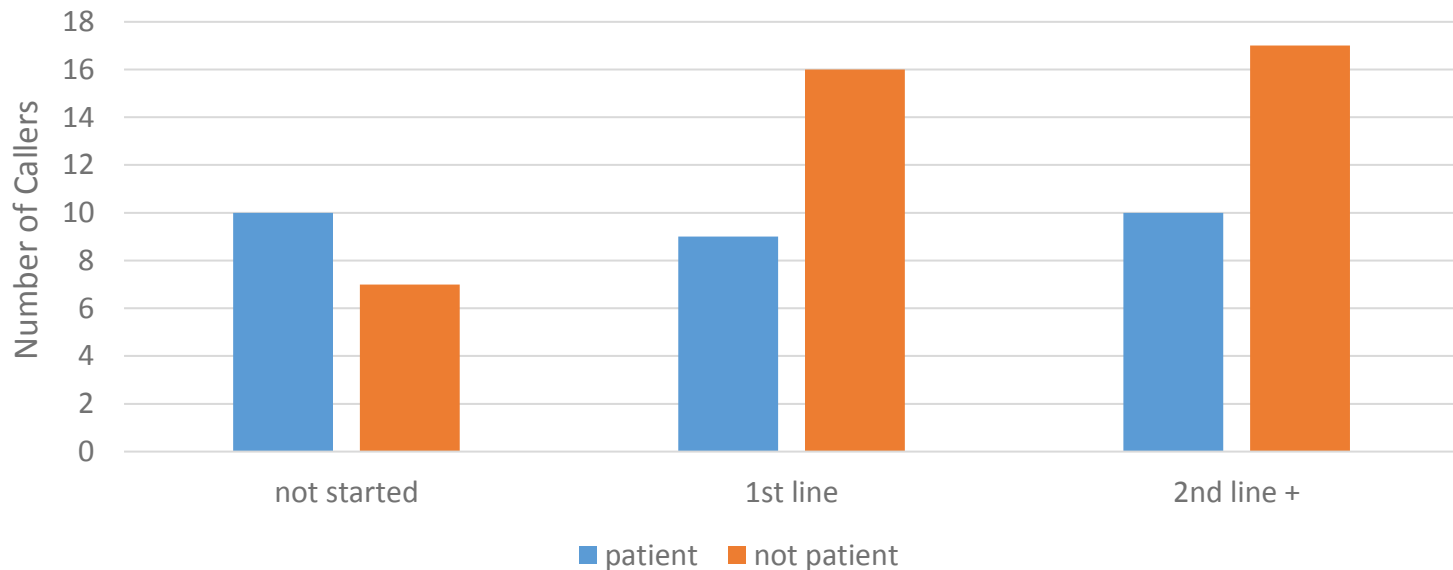
Patient Friendly Communication of Results

A patient summary of testing results could enhance understanding when:

- Provided to both clinician and patient
- Short length; accessible language
- Point to key approved treatment options
- Indicate key negative results

Don't forget the role of the caregiver!

Who was the information seeker in LungMATCH?



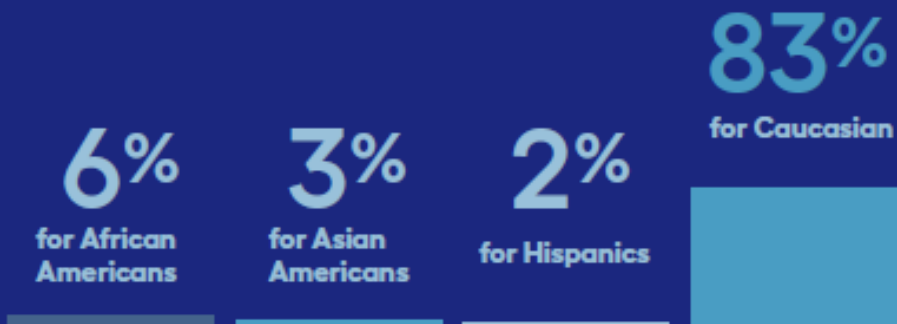
Let the Patient Voice Inform Testing Solutions

- Biomarker testing reports should be developed with patient input
- Patients should be included as advisors on discussions related to biomarker testing efforts
- Support initiatives to develop patient research advocates

Engaging with Diverse Populations

Rates of participation for some racial/ethnic groups are much lower than others.

The percentages for Clinical Trial participation are: ¹



¹<https://acsjournals.onlinelibrary.wiley.com/doi/full/10.1002/cncr.28168>

Take Home Message

Patients empowered to take active part in their own care can be valuable partners in the efforts to close biomarker testing gaps