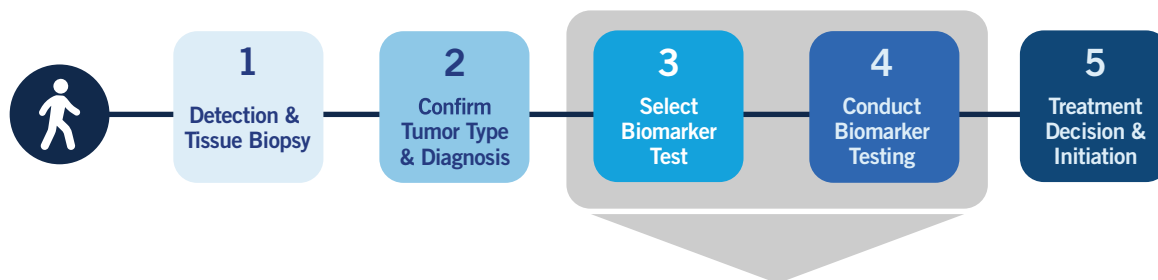


Examining the biomarker testing process: Helping ensure patients receive the most appropriate treatment

Biomarker testing is an important part of your patient's NSCLC journey to treatment¹⁻⁹



3 Select Biomarker Test

What to Test: NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines[®]) recommend testing for all actionable biomarkers in eligible patients with early-stage and metastatic disease¹

ACTIONABLE BIOMARKERS										EMERGING BIOMARKERS
EGFR	ALK	ROS1	BRAF	RET	NTRK 1/2/3	METex14	KRAS	PD-L1	HER2	METamp
●	●	●	●	●	●	●	●	●	●	●

● mNSCLC ● Early-stage NSCLC

4 Conduct Biomarker Test

How to Test: Next-Generation Sequencing (NGS) offers an efficient and comprehensive approach to biomarker testing¹⁰⁻¹²

Cumulative TAT:

**~2
weeks**

NGS Testing

- One broad-panel gene test
- A single broad-panel test can be used to simultaneously assess multiple biomarkers

Cumulative TAT:

**~4.5
weeks^a**

Single-gene Testing

- Sequential testing (e.g. PCR, IHC)
- To assess multiple biomarkers, several tests may be necessary

According to the 2017 CAP/IASLC/AMP guidelines, specimens should be sent to molecular pathology labs within 3 working days and results reported within 10 working days of sample receipt.¹⁰

^aEstimate incorporates both testing time and time for rebiopsy. Based on a study that used a decision tree analytic modeling approach and budget impact analysis assuming a hypothetical health plan covering 1 million members. Model inputs and assumptions may contain uncertainty or have limited generalizability.

Patient Name: _____ Age: _____ Diagnosis: _____

Navigator Name: _____ Practice/Office Name: _____



Illustrative Patient Journey to Treatment Tracker

	Key Events/Questions	Date	Key Considerations	Notes
1 Detection & Tissue Biopsy	Did navigator receive new diagnosis alert? Did navigator initiate contact with the patient/family before the first consultation with the medical oncologist/treating HCP? Was surgery and/or biopsy scheduled? Was surgery and/or biopsy performed?		When was contact initiated? What was discussed?	
2 Confirm Tumor Type & Diagnosis	Were diagnosis and histology confirmed?		Histology? Stage?	
3 Select Biomarker Test	Was comprehensive biomarker testing ordered? Was a liquid biopsy test ordered (as needed)?		Single gene or NGS? Which biomarkers? Upfront or reflex?	
4 Conduct Biomarker Testing	Were the biomarker test results received? Were all actionable biomarkers tested?		How many days from tests ordered to results received? Guideline recommendation is ≤ 14 days.	
5 Treatment Decision & Initiation	Were biomarker results shared and discussed with the MDT/ordering physician? Were test results available upon initial consultation with the medical oncologist? Did navigator educate patient on test results? Did patient receive relevant resources from navigator/HCPs? Was patient started on treatment?		Is the patient a candidate for targeted therapy? Key questions or concerns Resources shared	

Insights & Notes

Issues/Challenges Identified:

Area for Quality Improvement:

Ongoing Monitoring and Follow-up:

ALK = ALK receptor tyrosine kinase; AMP = Association for Molecular Pathology; BRAF = B-Raf proto-oncogene, serine/threonine kinase; CAP = College of American Pathologists; EGFR = epidermal growth factor receptor; FISH = fluorescence in-situ hybridization; HCP = healthcare professional; HER2 = human epidermal growth factor receptor 2; IASLC = International Association for the Study of Lung Cancer; IHC = immunohistochemistry; KRAS = KRAS proto-oncogene GTPase; MDT = multidisciplinary team; MET = MET proto-oncogene receptor tyrosine kinase; NCCN = National Comprehensive Cancer Network; NGS = next-generation sequencing; NSCLC = non-small cell lung cancer; NTRK = neurotrophic receptor tyrosine kinase; PCR = polymerase chain reaction; PD-L1 = programmed cell death ligand 1; RET = ret proto-oncogene; ROS1 = ROS proto-oncogene 1, receptor tyrosine kinase.

1. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Non-Small Cell Lung Cancer V.3.2023. © National Comprehensive Cancer Network, Inc., 2023. All rights reserved. Accessed April 28, 2023. To view the most recent and complete version of the guideline, go online to NCCN.org. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way; 2. LUNGEVITY Foundation. <https://lungevity.org/sites/default/files/request-materials/LUNGEVITY-biomarker-testing-booklet-112817.pdf>. Accessed February 13, 2023; 3. Smeltzer MP, et al. *J Thorac Oncol*. 2020;15:1434-1448; 4. Gregg JP, et al. *Transl Lung Cancer Res*. 2019;8:286-301; 5. Planchard D, et al. *Ann Oncol*. 2018;29(suppl 4):iv192-iv237; 6. Lindeman NI, et al. *J Thorac Oncol*. 2018;13:323-358; 7. Kalemkerian GP, et al. *J Clin Oncol*. 2018;36:911-919; 8. Dietel M, et al. *Thorax*. 2016;71:177-184; 9. Heymann JJ, et al. *Cancer Cytopathol*. 2017;125:896-907; 10. Lindeman NJ, et al. *Arch Pathol Lab Med*. 2018;142(3):321-346; 11. Pennell NA, et al. *Am Soc Clin Oncol Educ Book*. 2019;39:531-542; 12. Dall'Olio FG, et al. *Lung Cancer*. 2020;149:5-9.