Lung Cancer Biomarker Testing ECHO

Session 5 Bonus Webinar

Lung Cancer Biomarker Testing Insurance Coverage, Advocacy & Lived Experience

Tuesday, May 19, 2026

4:00 PM - 5:00 PM EDT

Housekeeping & Disclosures

This webinar will be recorded and will be posted to a publicly-facing website.

All lines are muted. Please use the chat feature to ask questions.

Follow up materials will be emailed to all webinar registrants.

Remember: Do NOT share any personal health information (PHI) about any patient.

Questions about Zoom? Type in the chat box to: **Michelle.Chappell@cancer.org**

Today's session will **NOT** serve as a typical ECHO session but instead will function like a traditional interactive webinar.

Have a question? Don't wait to ask! Feel free to enter in the Chat at any time.

Lung Cancer Biomarker Testing ECHO Webinar

LCBT ECHO Program Goal: Learners will gain knowledge and confidence to overcome common barriers to biomarker testing for non-small cell lung cancer (NSCLC) to help improve biomarker testing in their own institutions.

Learning Objectives for today's webinar:

- Participants will understand why biomarker testing is vital to accessing optimal treatment for lung cancer and other conditions.
- Participants will understand what the American Cancer Society Cancer Action Network (ACS CAN) biomarker campaign is doing and how to get involved.
- Participants will learn how gaps in coverage could mean delays in testing and treatment and how organizations can work around a lack of coverage.
- Participants will learn why access matters to a patient, how it plays out in real-life situations and how they can participate as an advocate.

Agenda

Topic: *Lung Cancer Biomarker Testing Insurance Coverage, Advocacy & Lived Experience*

Agenda Item	Moderator/Presenters	Time
Welcome & Housekeeping	Korey Hofmann, MPH	2 mins
Introductions	Timothy Mullett, MD, MBA	5 mins
Introduction to Biomarker Testing for Non-Small Cell Lung Cancer	Melina Marmarelis, MD	10 mins
Biomarker Testing Insurance Coverage Landscape	Hilary Gee Goeckner, MSW	15 mins
How and why does coverage matter from a patient's perspective?	Michael H. Hu, BA	5 mins
How can you make a difference as a patient advocate?	Kristen Kimball, MS, MEM	5 mins
Q & A – Discussion	Timothy Mullett, MD, MBA	10 mins
Feedback Survey & Wrap-up	Korey Hofmann, MPH	2 mins

Lung Cancer Biomarker Testing ECHO Cohort 5

ECHO Webinar Facilitator and Panelists

Subject Matter Experts

Timothy Mullett, MD, MBA, FASCO
FACILITATOR
Medical Director, Markey Cancer Center Network Development
University of Kentucky, Markey Cancer Center

Melina Marmarelis, MD, MSCE
Assistant Professor of Medicine
University of Pennsylvania

Hilary G. Goeckner, MSW
Director, State & Local Campaigns – Access to Care
American Cancer Society Cancer Action Network

Michael H. Hu, BA
Patient Advocate
American Cancer Society Cancer Action Network, ALK Positive

Kristen Kimball, MS, MEM
Patient Advocate
American Cancer Society Cancer Action Network, LUNGevity Foundation, White Ribbon Project

Introductions

Timothy Mullett, MD, MBA, FACS
Medical Director, Markey Cancer Center
Network Development
University of Kentucky

Lung Cancer Biomarker Testing 101

Melina Marmarelis, MD, MSCE
Assistant Professor
University of Pennsylvania

Disclosures

- **Consulting/Honoraria:** Boehringer Ingelheim, Novocure, Astra Zeneca, Janssen, Takeda, Blueprint Pharmaceuticals, Bristol Myers Squibb, Ikena, DSI, ThermoFisher,
- **Research:** Eli Lilly, Trizell, Merck, AstraZeneca, Genentech
- **Stock:** Johnson & Johnson
- **Other:** Novartis (medical writing support), Johnson & Johnson (travel)

Lung Cancer Burden – Estimated New Cases in 2024

Estimated New Cases

Male			Female		
Prostate	299,010	29%	Breast	310,720	32%
Lung & bronchus	116,310	11%	Lung & bronchus	118,270	12%
Colon & rectum	81,540	8%	Colon & rectum	71,270	7%
Urinary bladder	63,070	6%	Uterine corpus	67,880	7%
Melanoma of the skin	59,170	6%	Melanoma of the skin	41,470	4%
Kidney & renal pelvis	52,380	5%	Non-Hodgkin lymphoma	36,030	4%
Non-Hodgkin lymphoma	44,590	4%	Pancreas	31,910	3%
Oral cavity & pharynx	41,510	4%	Thyroid	31,520	3%
Leukemia	36,450	4%	Kidney & renal pelvis	29,230	3%
Pancreas	34,530	3%	Leukemia	26,320	3%
All sites	**1,029,080**		**All sites**	**972,060**	

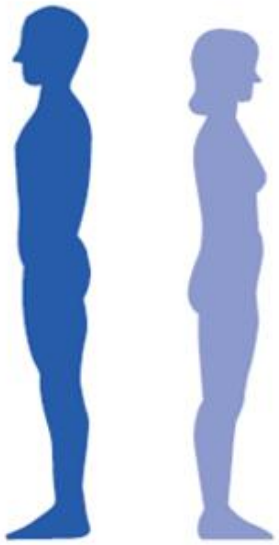
12% of all new lung cancer cases

Cancer Facts & Figures 2024, American Cancer Society

Lung Cancer Burden – Estimated New Deaths in 2024

Estimated Deaths

Male			Female		
Lung & bronchus	65,790	20%	Lung & bronchus	59,280	21%
Prostate	35,250	11%	Breast	42,250	15%
Colon & rectum	28,700	9%	Pancreas	24,480	8%
Pancreas	27,270	8%	Colon & rectum	24,310	8%
Liver & intrahepatic bile duct	19,120	6%	Uterine corpus	13,250	5%
Leukemia	13,640	4%	Ovary	12,740	4%
Esophagus	12,880	4%	Liver & intrahepatic bile duct	10,720	4%
Urinary bladder	12,290	4%	Leukemia	10,030	3%
Non-Hodgkin lymphoma	11,780	4%	Non-Hodgkin lymphoma	8,360	3%
Brain & other nervous system	10,690	3%	Brain & other nervous system	8,070	3%
All sites	322,800		All sites	288,920	



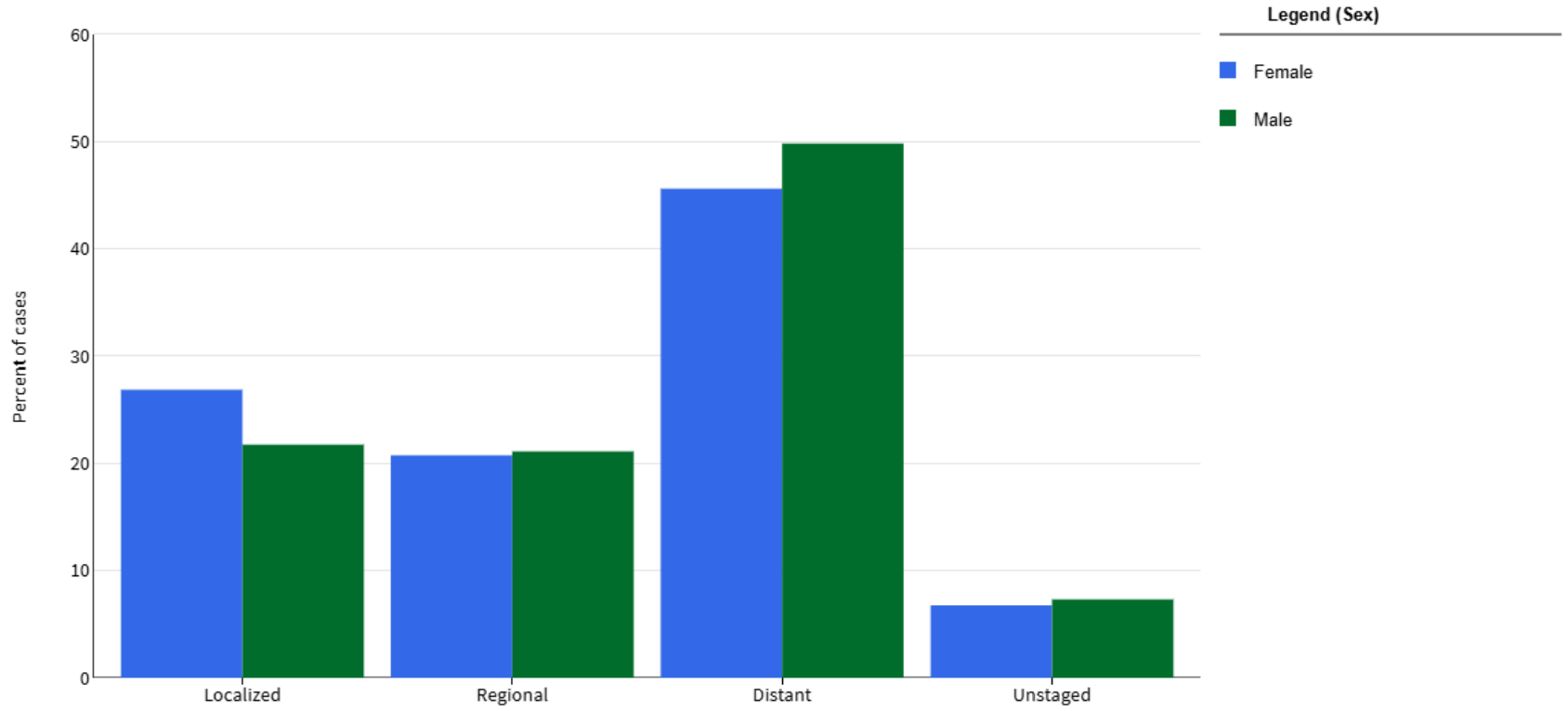
21% of all new lung cancer deaths

Cancer Facts & Figures 2024, American Cancer Society

Lung Cancer Burden At a Glance

Majority of lung cancers diagnosed at distant metastatic disease.

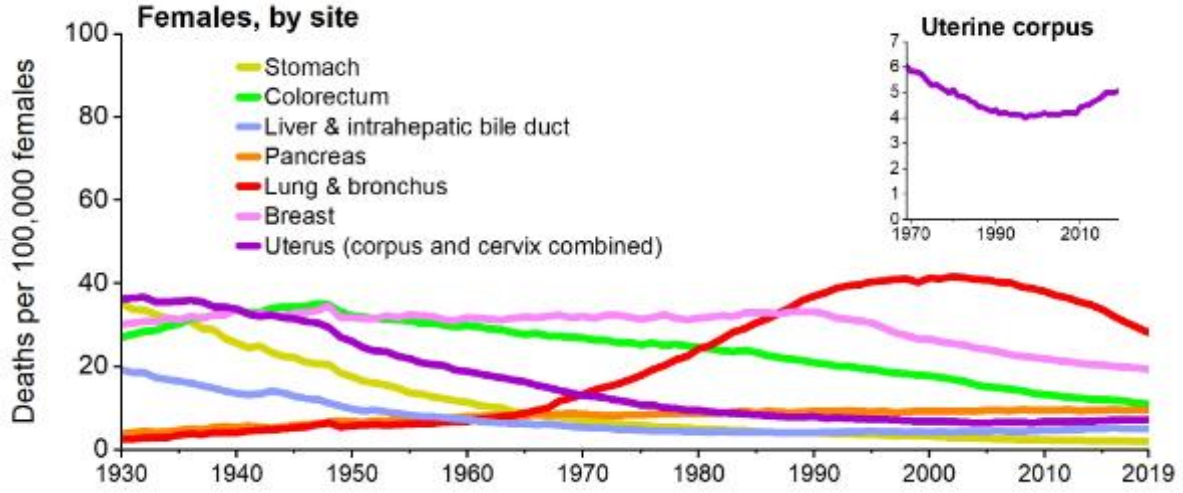
Lung and Bronchus
Stage Distribution of SEER Incidence Cases, 2012-2021
By Sex, All Races / Ethnicities, All Ages

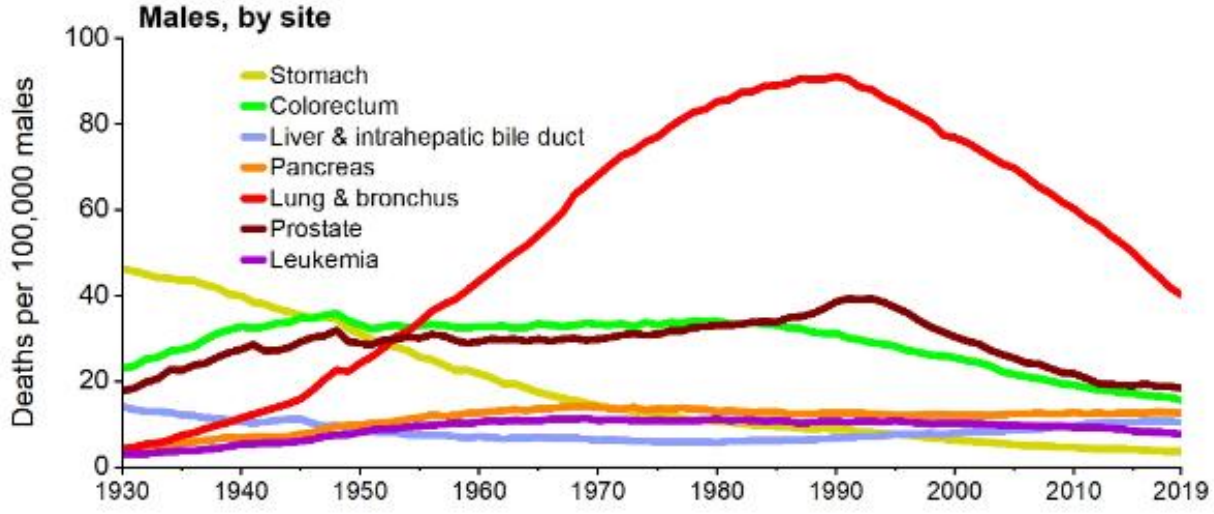


Created by https://seer.cancer.gov/statistics-network/explorer on Wed Oct 30 2024.

Survival from Lung Cancer is Improving

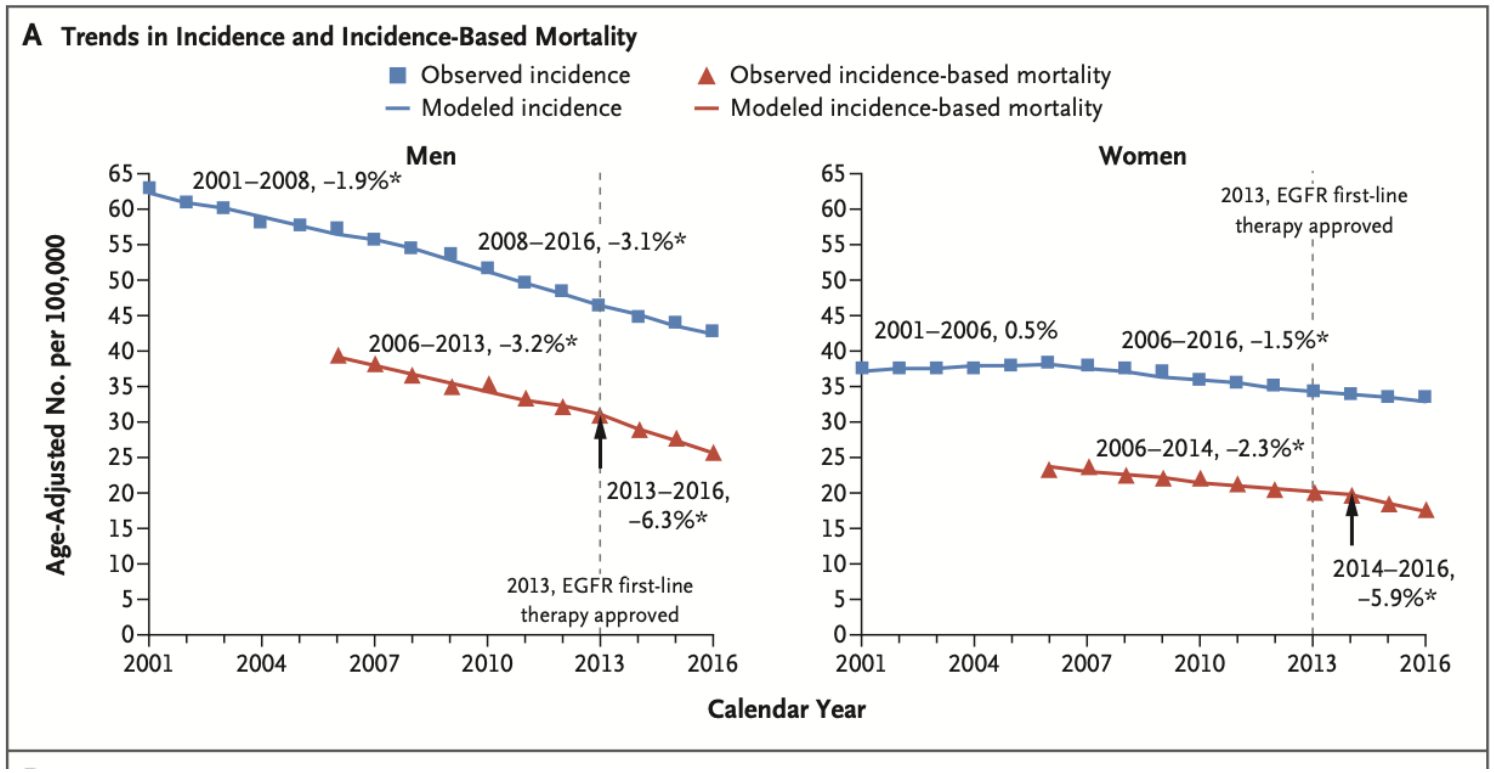
- 5-year survival rates for Stage IV NSCLC have increased from **<5% to >25%**
- There is improved understanding of the biology of disease and new therapies
- Increased focus on precision medicine in lung cancer





Siegel, ACS, 2022

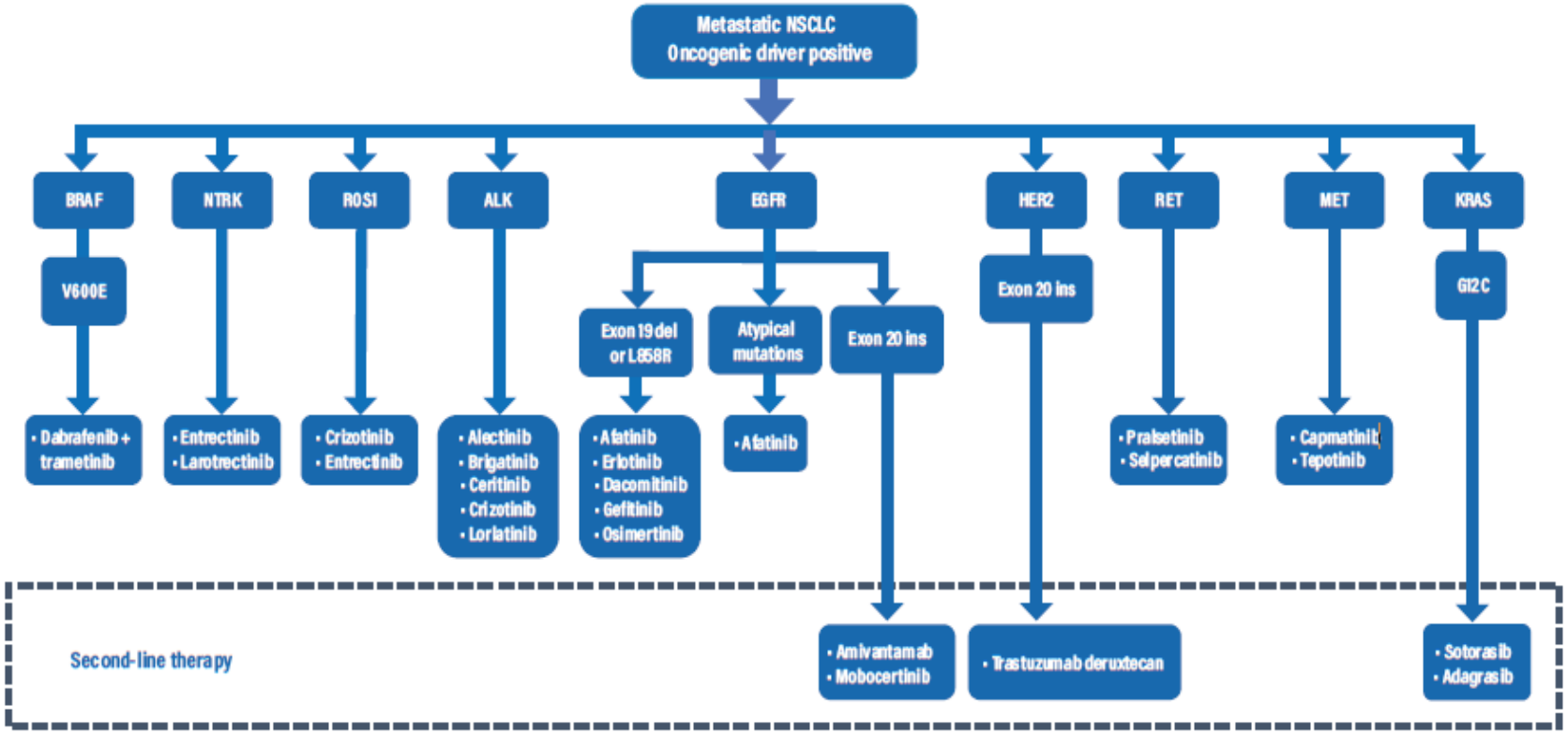
Positive Effect of Advances in Lung Cancer Treatment



- Population-level mortality from NSCLC fell sharply from 2013 to 2016
- Survival after diagnosis improved substantially
- Use of new treatment including targeted therapies explains mortality reduction

Howlander, et al, N Engl J Med 2020; 383:640-649

Targetable NSCLC Alterations and Matched Therapies

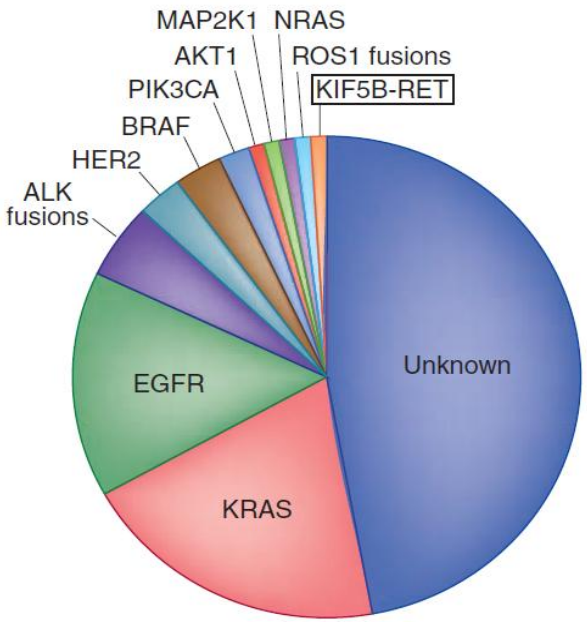


Year	Drug Name	Target/Indication
2023	Repotrectinib	ROS1
2023	Encorafenib + Binimetinib	BRAF V600E Mutations
2023	Fam-Trastuzumab Deruxtecan-nxki	HER2 IHC3+
2024	Zenocutuzumab	NRG1 Fusions
2024	Ensartinib	ALK Rearrangements
2024	Amivantamab	EGFR Exon 19 and Exon 21 Alterations

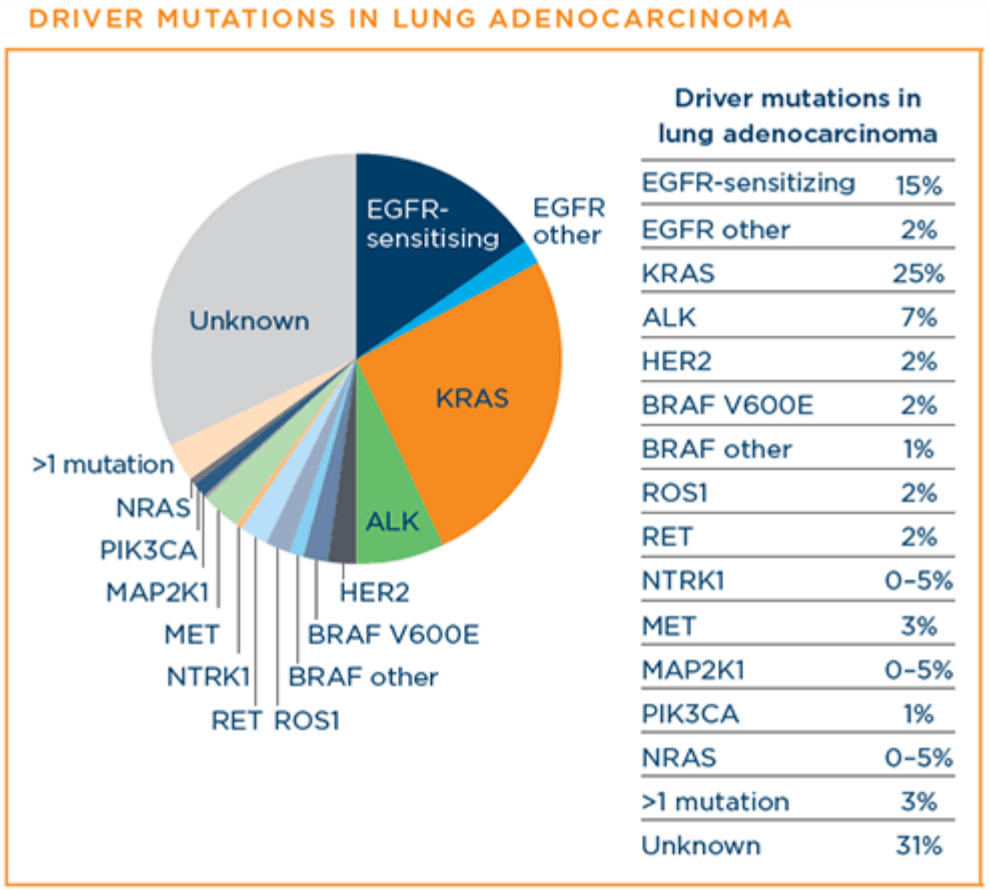
Source: IASLC Atlas for Molecular Testing https://www.iaslc.org/research-education/publications-resources-guidelines/iaslc-atlas-molecular-testing-targeting

There are currently **10 targetable genomic alterations** in NSCLC with FDA-approved matched therapies

Updates in Biomarkers



Pao and Hutchinson 'Chipping away at the lung cancer genome' Nature Medicine. **March 2012**



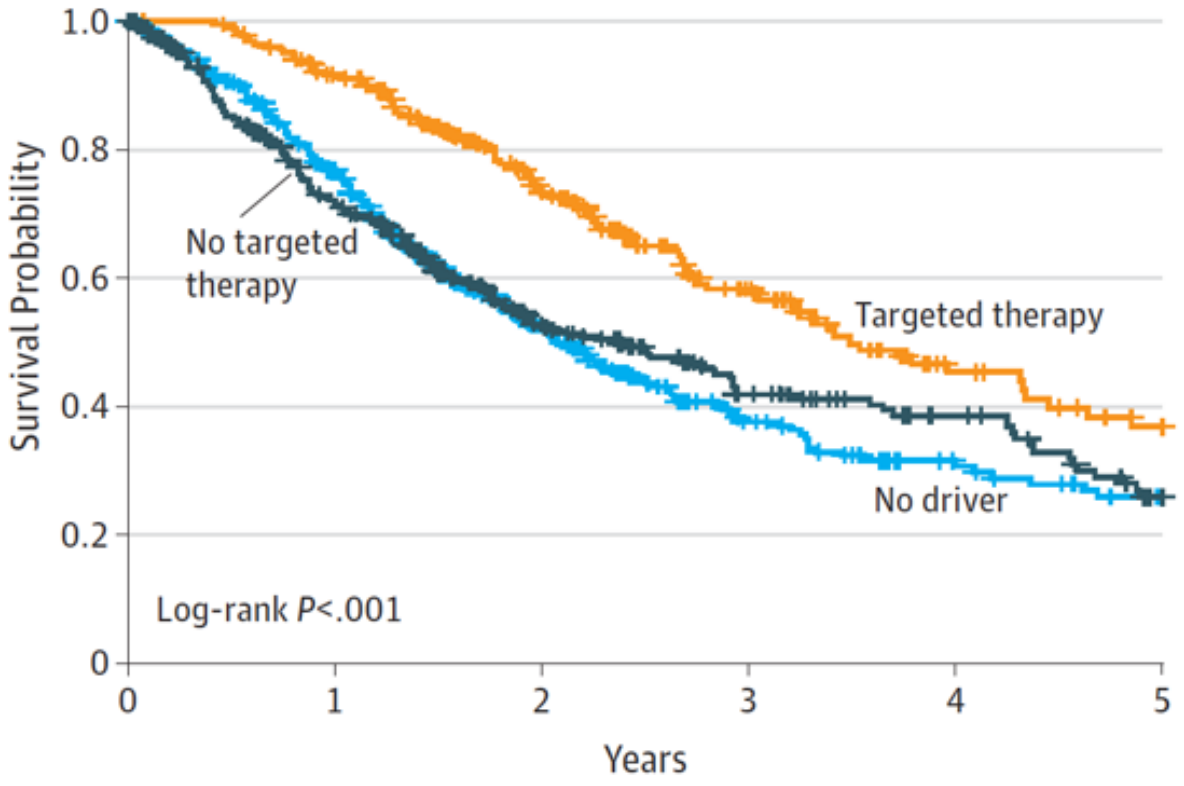
2023: biomarkers with drug targets

Guideline Driven Care for NSCLC

- Prescribing the right treatment option for a patient *requires* comprehensive biomarker testing

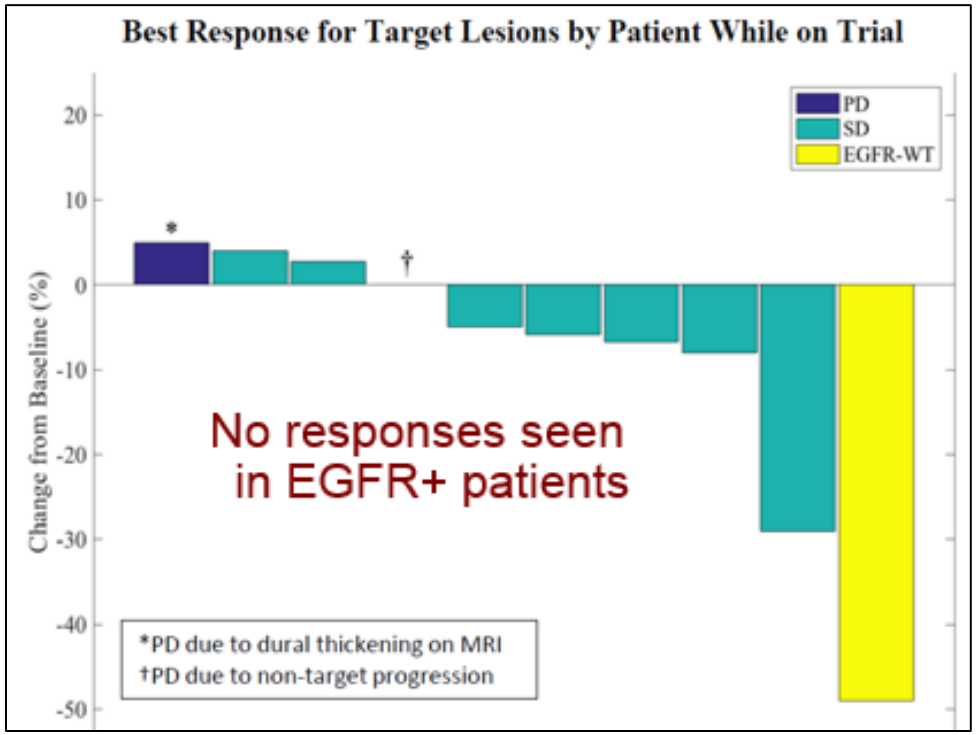
- Personalized treatment of advanced Non-Small Cell Lung Cancer (NSCLC) *is guided by* molecular biomarker assessment

Survival benefit from targeted therapy is forfeited if targeted therapy is never delivered

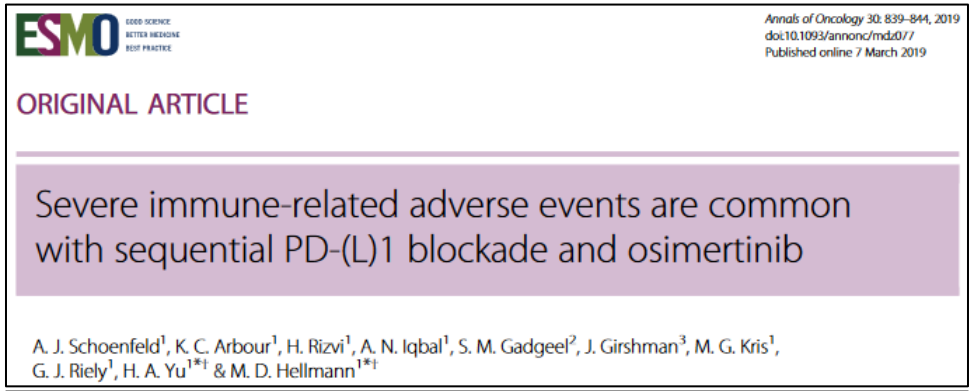


Singal, JAMA, 2019

Immunotherapy is ineffective in some molecular subsets of NSCLC



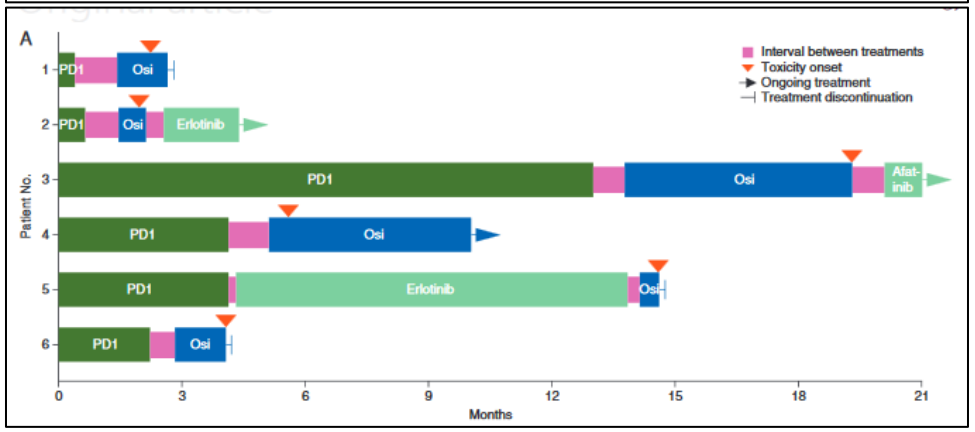
Targeted therapy given after immunotherapy increases toxicity


ESMO
Annals of Oncology 30: 839–844, 2019
doi:10.1093/annonc/mdz077
Published online 7 March 2019

ORIGINAL ARTICLE

Severe immune-related adverse events are common with sequential PD-(L)1 blockade and osimertinib

A. J. Schoenfeld[1], K. C. Arbour[1], H. Rizvi[1], A. N. Iqbal[1], S. M. Gadgeel[2], J. Girshman[3], M. G. Kris[1], G. J. Riely[1], H. A. Yu[1*†] & M. D. Hellmann[1*†]



Lisberg et al, JTO 2018
Schoenfeld et al, Ann Onc, 2019

Current NSCLC Lung Cancer Biomarker Guidelines

NCCN

The National Comprehensive Cancer Network® NCCN has released updated evidence-based guidelines on comprehensive biomarkers in lung cancer[1]

CAP, IASLC, & AMP

Evidence-based consensus guidelines on biomarker testing in NSCLC from **the College of American Pathologists (CAP)**, **International Association for the Study of Lung Cancer (IASLC)**, and the **Association for Molecular Pathologists (AMP)** recommend that all late-stage NSCLC patients with advanced stage lung adenocarcinoma should receive biomarker testing for three mutations (EGFR, ALK, and ROS1)[2] in 2018

ASCO

The American Society of Clinical Oncology (ASCO) released an update in February 2022 to their 2017 guideline on systemic therapy for patients with stage IV NSCLC with driver alterations[3]

Synopsis of Common Recommendations for Lung Cancer Biomarker Testing

Type of Lung Cancer	Stage of Lung Cancer	Common Recommendations
NSCLC Lung **Non-Squamous**	**Stages IB -III**	Testing for alterations in the **EGFR and ALK** genes should be conducted **PDL1** *Clinical trial options may exist for other mutations*
NSCLC Lung **Non-Squamous and Squamous**	**Stage IV**	Comprehensive Biomarker Testing, e.g., **Next-Generation Sequencing (NGS)** is recommended **PD-L1** -is recommended to determine whether a patient will benefit from immunotherapy **alone** in the first line setting
NSCLC Squamous Cell Lung Cancer	**Stages I, II, and III**	Currently, biomarker testing e.g., Next-Generation Sequencing (NGS) is performed **ONLY** for clinical trials **PDL1**
Small Cell Lung Cancer (SCLC)	**All Stages**	Currently, biomarker testing is performed **ONLY** for clinical trials

Resources:

Non-Small Cell Lung Cancer (NSCLC)—NCCN Clinical Practices Guidelines in Oncology. Version 1.2026

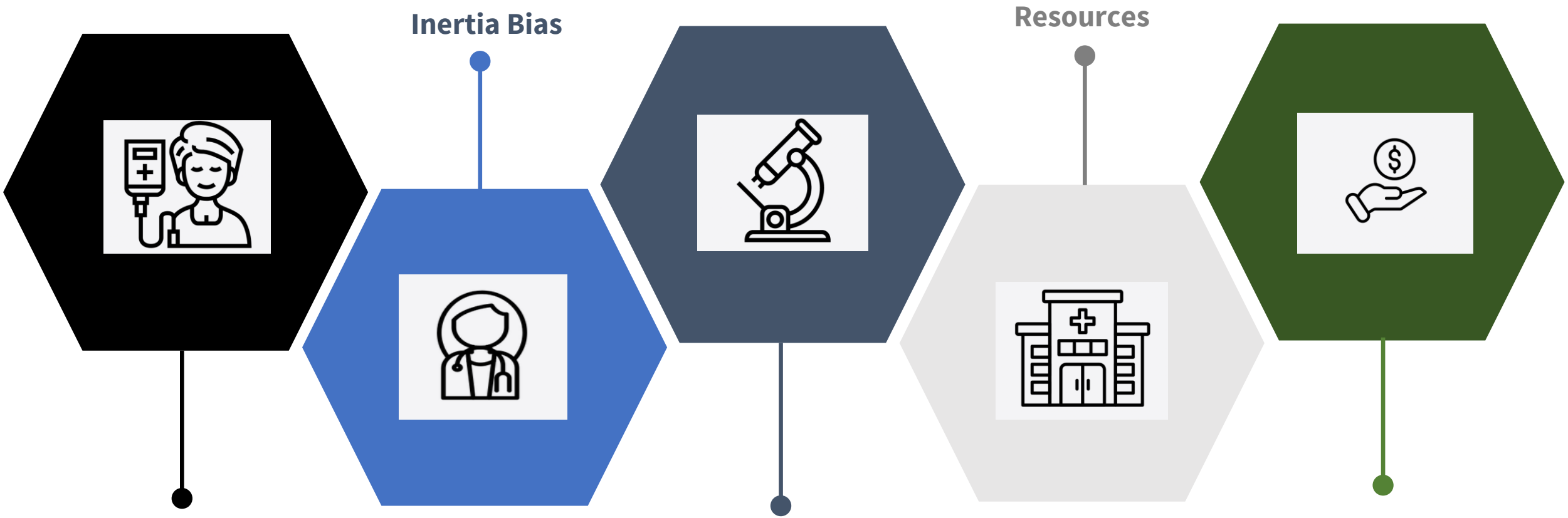
Small Cell Lung Cancer (SCLC)—NCCN Clinical Practice Guidelines to Oncology. Version 1.2026

Further work is needed to resolve the disparities in biomarker testing rates

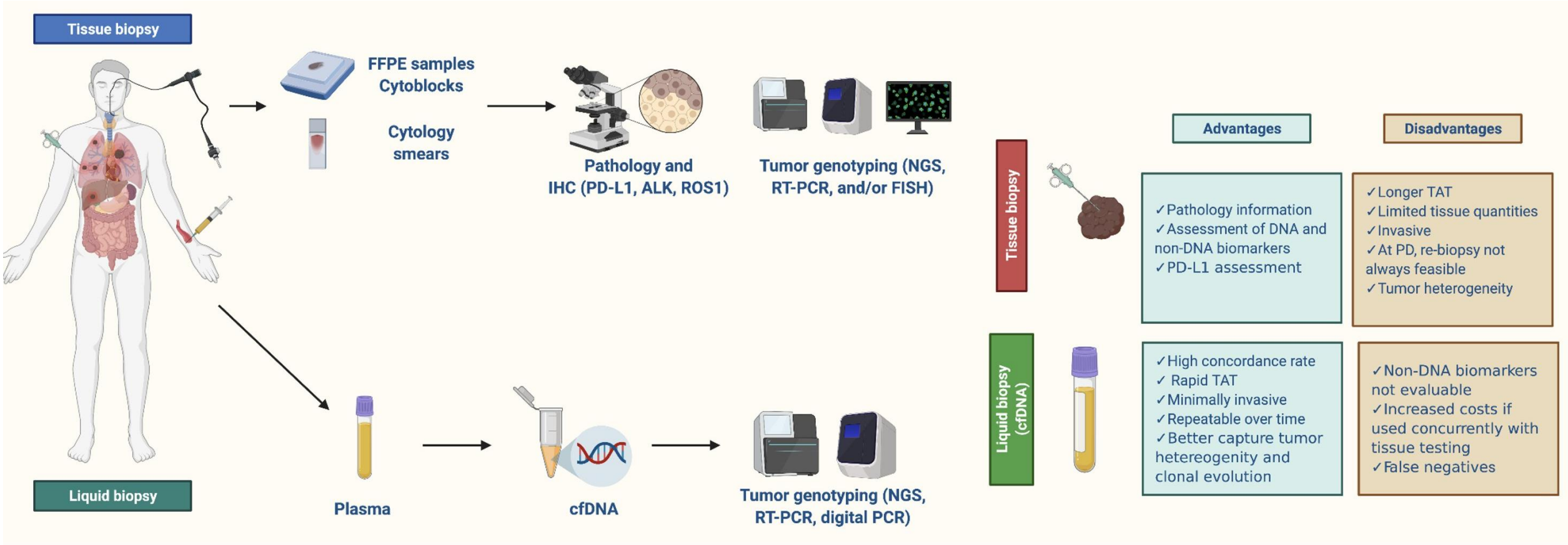
Patients with nonsquamous NSCLC				
	Nonsquamous N=10,333	White N=6705	Black / AA N=922	p-value, White vs Black / AA
Ever tested	8786 (85.0%)	5699 (85.0%)	764 (82.9%)	0.09
Tested prior to 1L therapy		4881 (72.8%)	662 (71.8%)	0.52
Ever NGS tested	5494 (53.2%)	3668 (54.7%)	404 (43.8%)	**<0.0001**
NGS tested prior to 1L therapy		2452 (36.6%)	274 (29.7%)	**<0.0001**

Bruno D, et al. *J Clin Oncol* 2021;39:9005

Barriers to Testing

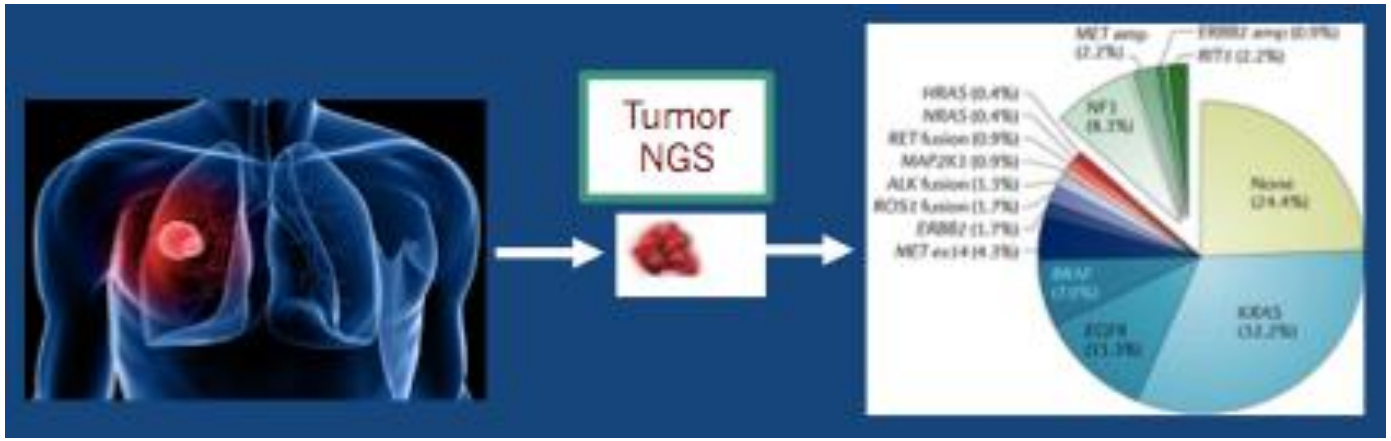


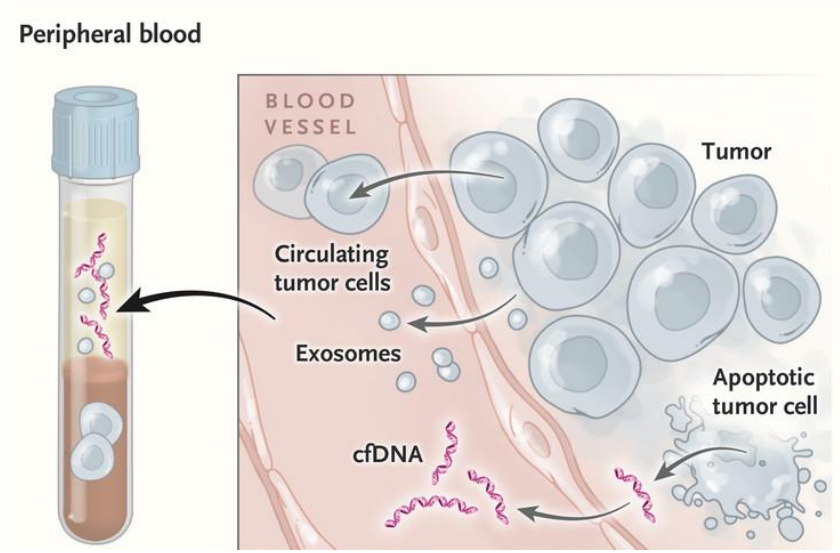
Pathways to Testing: Tissue and/or Liquid Biopsy



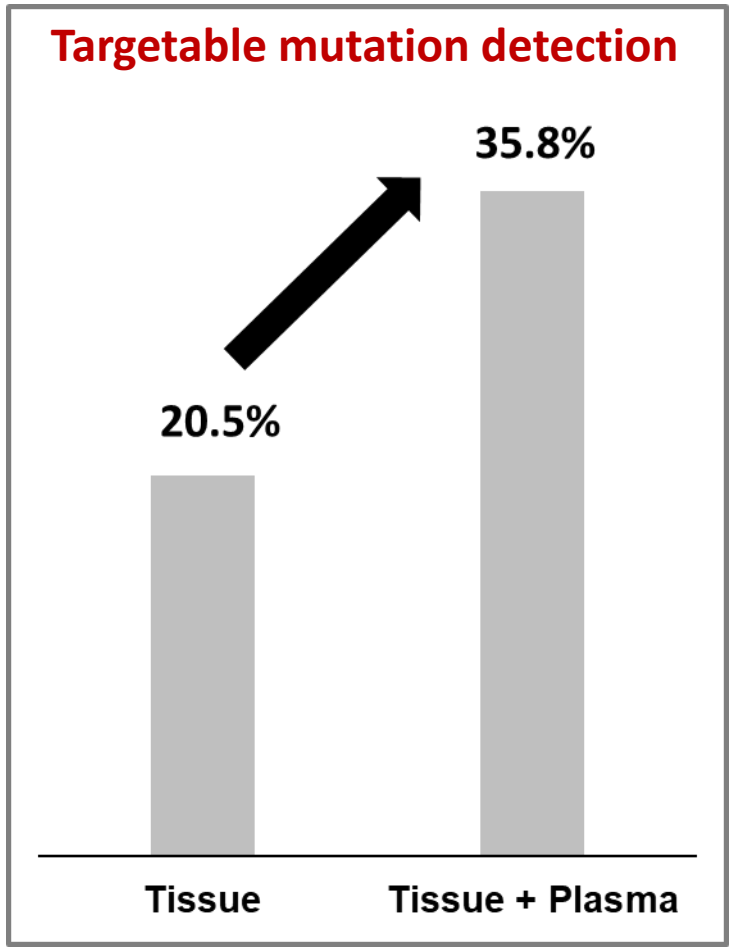
Source: Rolfo et al, J Thorac Oncol 2021; 16:1647

ctDNA/plasma NGS can improve detection of alterations



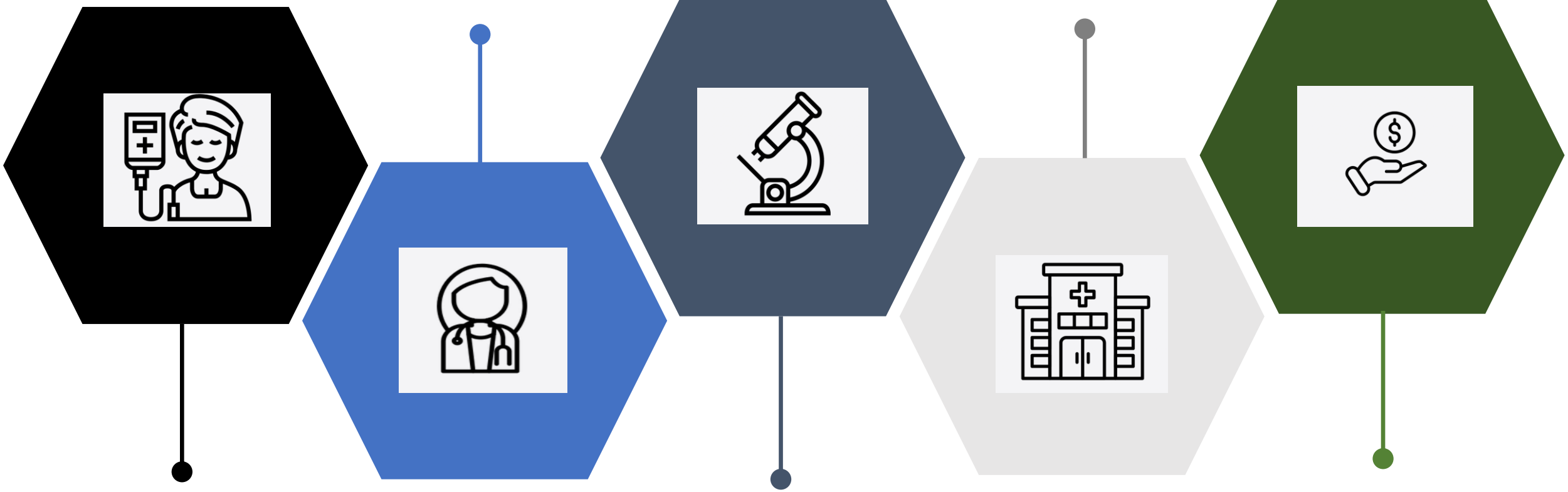


Harness the information from plasma to deliver personalized therapy

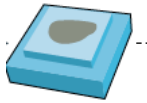


Aggarwal, Carpenter et al., JAMA Oncology, 2018

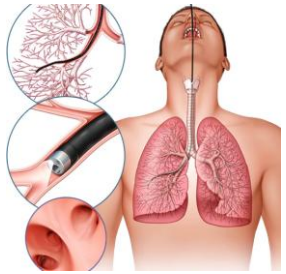
Barriers to Testing



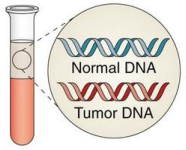
Patient and Tissue Journey



Tissue
NGS



Meet with
Med Onc



Data/Testing Complete
Start Therapy

Possible Dx of
Stage IV NSCLC

Bronchoscopy OR
Diagnostic Bx

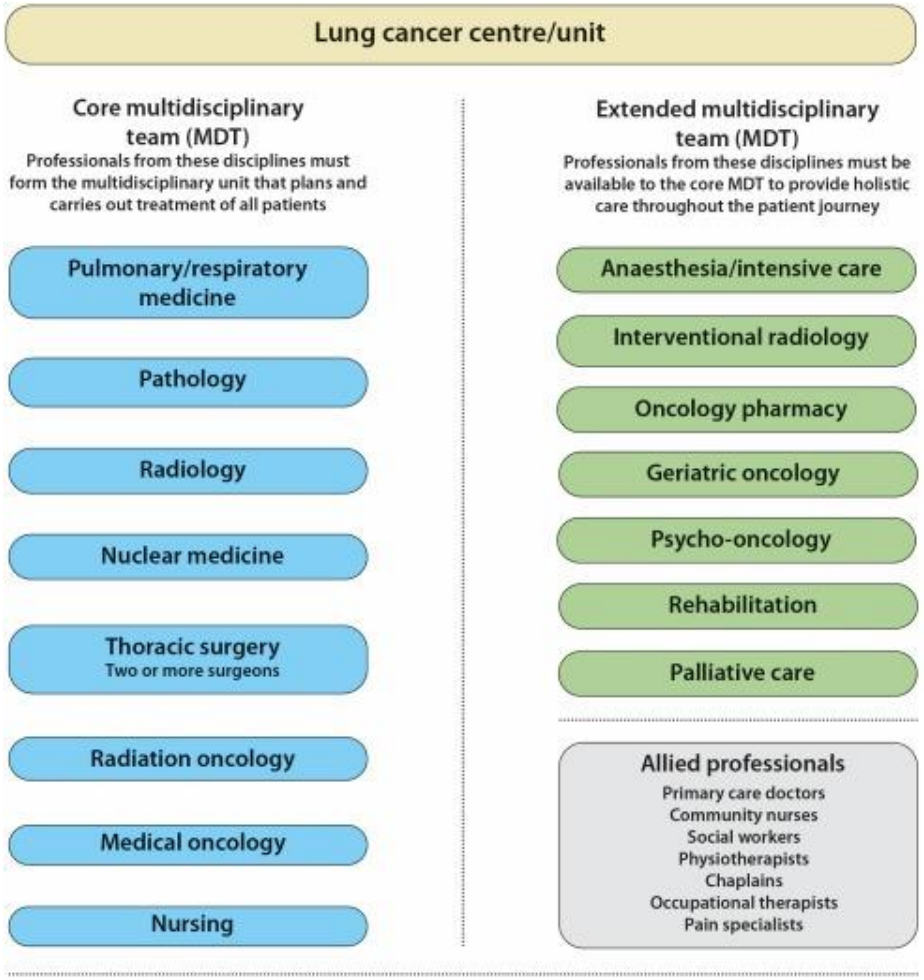
Day 0 | D7 | D14 | D21 | D28 | D35

Challenges with Biomarker testing in NSCLC

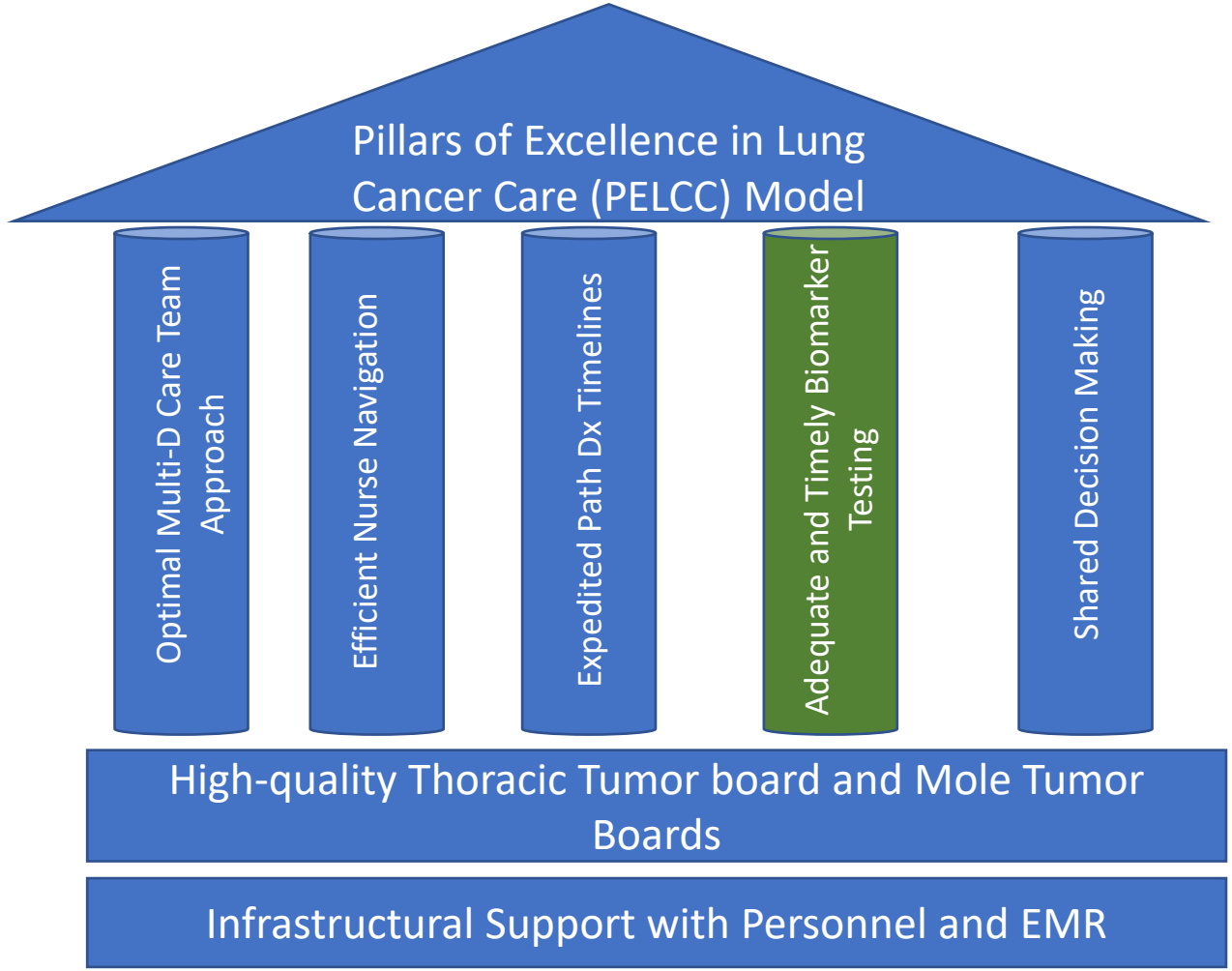
- Insufficient tissue
- Who is ordering the biomarker testing? Proceduralists performing biopsy vs. pathology vs. medical oncology
- What is the turnaround time for the testing?
- Understanding and acting upon the results →Confusing NGS reports
- Need to balance patient's concerns about waiting too long before starting treatment Biomarkers are now essential to guide optimal therapy

Credit: Abdul Rafah Naqash, MD

Multi-D Lung Cancer Care Team



Source: https://www.europeancancer.org/content/lung-cancer-essential-requirements-quality-cancer-care.html



THE IDEAL STATE

Access to High Quality Biomarker Testing for All Eligible Patients with Non-Small Cell Lung Cancer

American Cancer Society | NATIONAL LUNG CANCER ROUNDTABLE | Project ECHO

Hilary Gee Goeckner, MSW
Director, State & Local Campaigns –
Access to Care
American Cancer Society Cancer Action Network

Biomarker Testing Insurance Coverage Landscape

American Cancer Society Cancer Action Network℠

Biomarker Testing and Precision Medicine

What are biomarkers?

Biomarkers - a characteristic that is objectively measured and evaluated as an indicator of normal biological processes, pathogenic processes, or pharmacologic responses to a specific therapeutic intervention. Includes *gene mutations* or *protein expression.*

The right treatment at the right time

- An essential component of precision medicine
- Targeted cancer therapy
- Avoidance of therapies unlikely to provide clinical benefit

Not just about cancer:

- Being explored in a variety of disease areas (e.g., cardiology, rheumatology, neurology, infectious, respiratory, autoimmune diseases)

Who should get tested and why?

The role of clinical guidelines in determining appropriate testing

- Several professional associations have cancer biomarker testing and treatment guidelines
  - National Comprehensive Cancer Network (NCCN) Clinical Practice Guidelines in Oncology, American Society of Clinical Oncology (ASCO), others
- Helps assure that testing and treatment take advantage of the latest knowledge

- Biomarker testing has become the standard of care in certain cancers

Patients who receive biomarker testing and are eligible for and receive targeted cancer therapy have better outcomes.

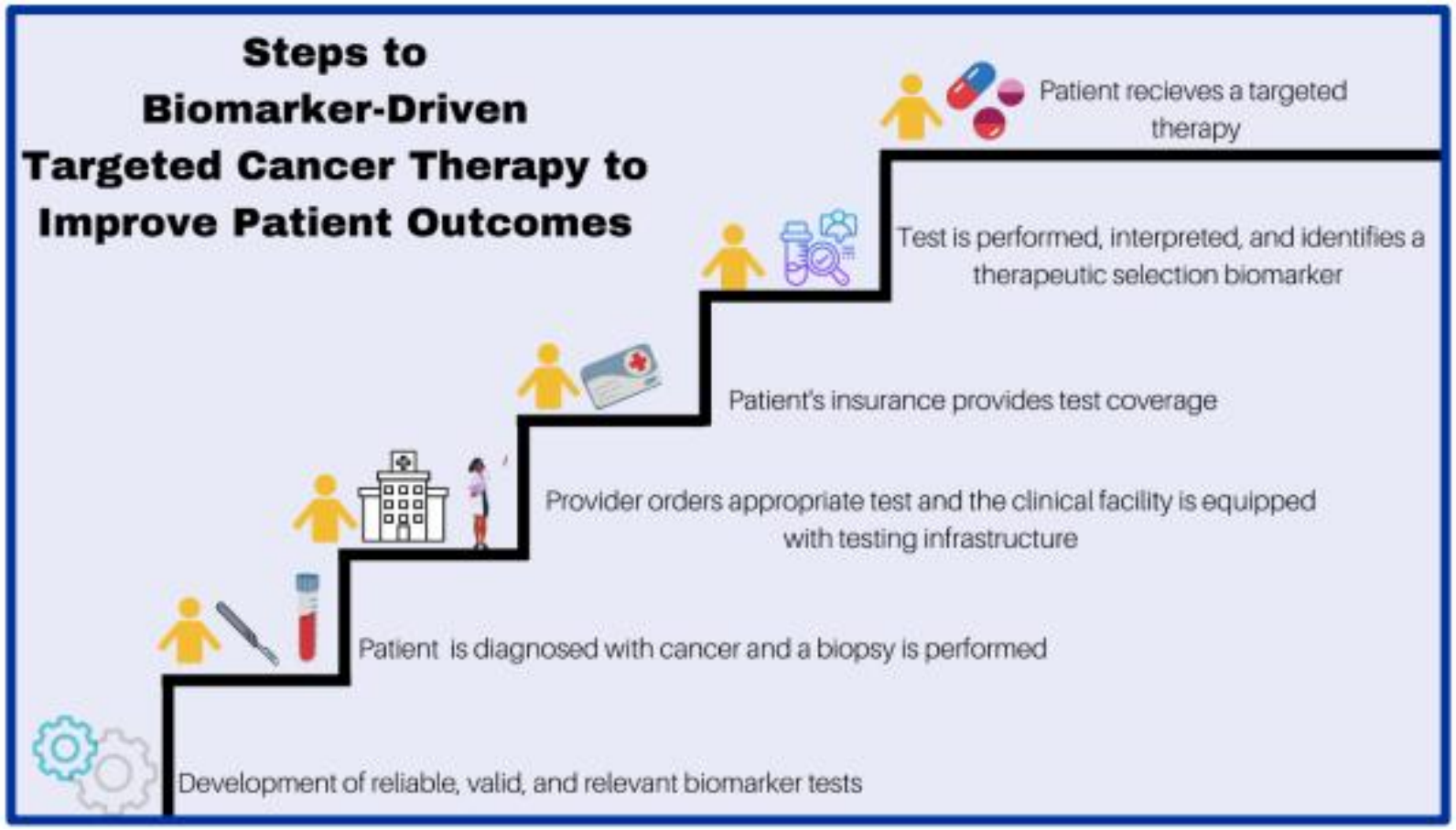
Who is getting tested?

Unequal access to testing

- In metastatic non-small cell lung cancer (NSCLC), **eligible Black patients are less likely to receive biomarker testing** compared to white patients.
- Patients with advanced NSCLC or colorectal cancer who were **Black, older, or Medicaid-insured had lower odds of next-generation sequencing biomarker testing** compared to patients who were white, younger, or commercially insured.
- There are **socioeconomic inequalities** in biomarker testing and targeted therapy utilization across cancer types.
- There **are lower rates of testing in community oncology settings versus academic medical centers**.

These disparities in access and use of guideline-indicated biomarker testing and targeted therapy can potentially widen existing disparities in cancer survival.

Many barriers to optimal use



Improving Access to Biomarker Testing: Advancing Precision Medicine in Cancer Care. ACS CAN. September 2020.

Barriers: Insurance

Coverage of tests differs greatly across payers

- Coverage policies generally more common for single-gene tests and smaller panel tests vs. large panel, NGS

Plans aren't necessarily following the evidence

- A recent paper in *Personalized Medicine* highlights gaps between insurance coverage and clinical practice guidelines.
- Although 91% of plans evaluated reference NCCN treatment guidelines in their biomarker testing policies, **71% are "more restrictive" than these guidelines for biomarker testing in advanced breast, non-small cell lung cancer, melanoma and/or prostate cancer patients.**

Provider and patient experiences highlight gaps

- National survey of oncology providers found **insurance coverage** and **cost concerns** are **top barriers to appropriate use of biomarker testing** for their patients
- October 2023 *Survivor Views* survey on biomarker testing found more patients (49%) are receiving biomarker testing than in 2020 (39%).
    - **Half of patients tested report it allowed them to avoid unnecessary treatments or procedures.**
    - **Three percent were able to enroll in a clinical trial because of their results.**
    - Disparities persist by **income, education, insurance type:** Of those who did not receive biomarker testing, 9% report lack of insurance coverage of needed testing as the reason.

Wong, W., et al. (2022) *Alignment of health plan coverage policies for somatic multigene panel testing with clinical guidelines in select solid tumors.*
ACS CAN. *Understanding Provider Utilization of Cancer Biomarker Testing.* Dec. 2021.
ACS CAN. *Survivor Views.* October 2023.

Legislation to Address Coverage Gaps

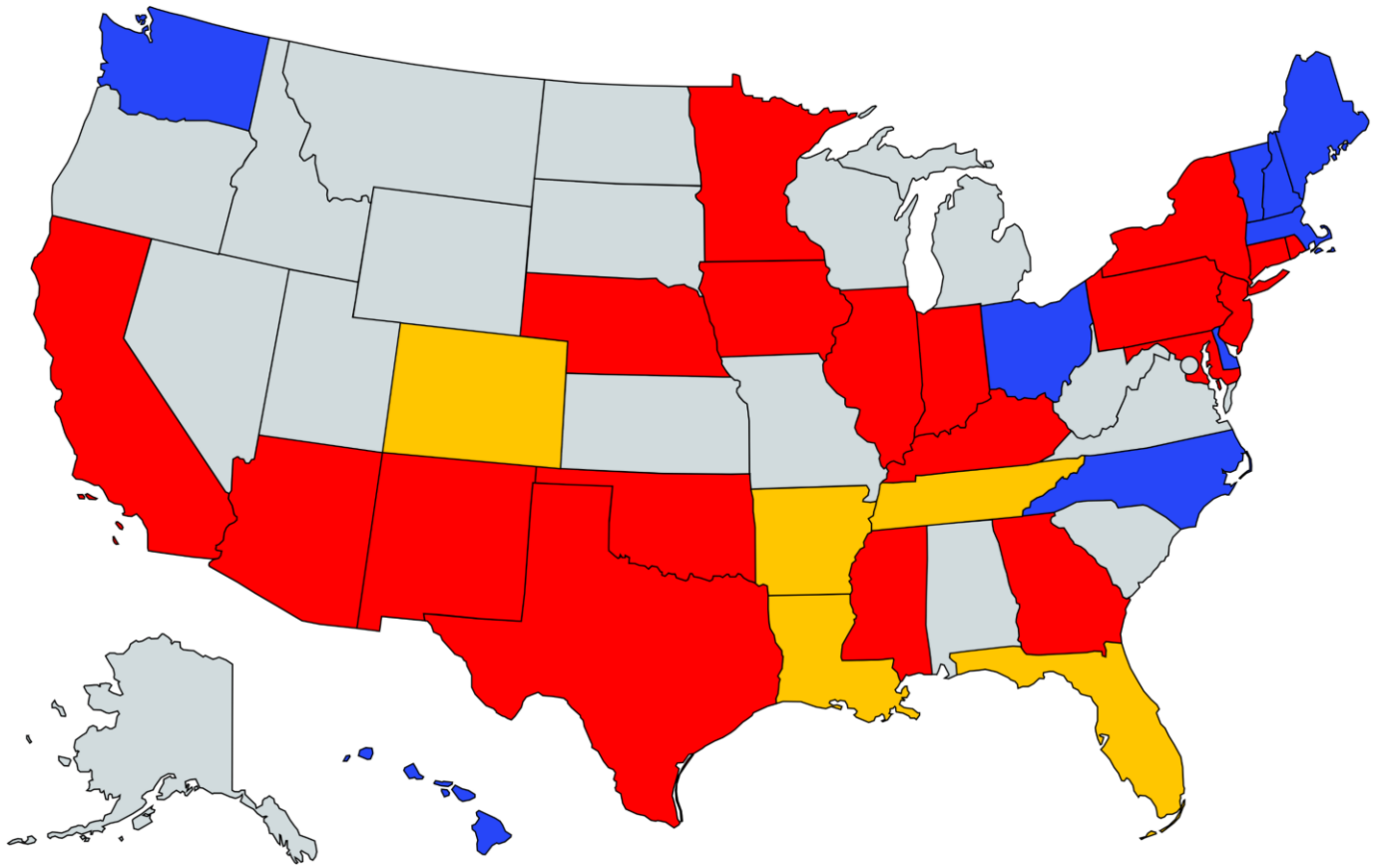
Requires state-regulated insurance plans including Medicaid to cover comprehensive biomarker testing when supported by medical and scientific evidence

Biomarker testing must be covered for ***the purposes of diagnosis, treatment, appropriate management, or ongoing monitoring of an enrollee's disease or condition*** *when use of the test is supported by medical and scientific evidence, including, but not limited to, any one of the following:*

1. *Labeled indications for an* ***FDA-approved or -cleared test****;*
2. ***Indicated tests*** *for an FDA-approved drug;*
3. ***Warnings and precautions*** *on FDA-approved drug labels;*
4. *Centers for Medicare and Medicaid Services (CMS)* ***National Coverage Determinations*** *or any Medicare Administrative Contractor (MAC)* ***Local Coverage Determinations*** *and associated Local Coverage Articles, regardless of jurisdiction; or*
5. *Testing recommendations or considerations from a:*
   a. ***nationally recognized clinical practice guideline****; or*
   b. *consensus statement.*

Disease and stage agnostic

Legislation to Expand Access to Biomarker Testing



	Legislation introduced 2026
	Law passed
	Narrow law passed

Legislation enacted: AZ, AR*, CA, CO*, CT, FL**, GA, IL, IN, IA, KY, LA*, MD, MN, MS, NE^, NJ, NM, NY, OK, PA, RI, TN**, TX

Legislation introduced in 2026: DE, HI, MA, ME, NH, NC, OH, VT, WA

* Private plans only **Public plans only ^Nebraska law applies to a limited list of diseases and conditions

Updated 5/18/2026

American Cancer Society Cancer Action Network℠

Learn more:

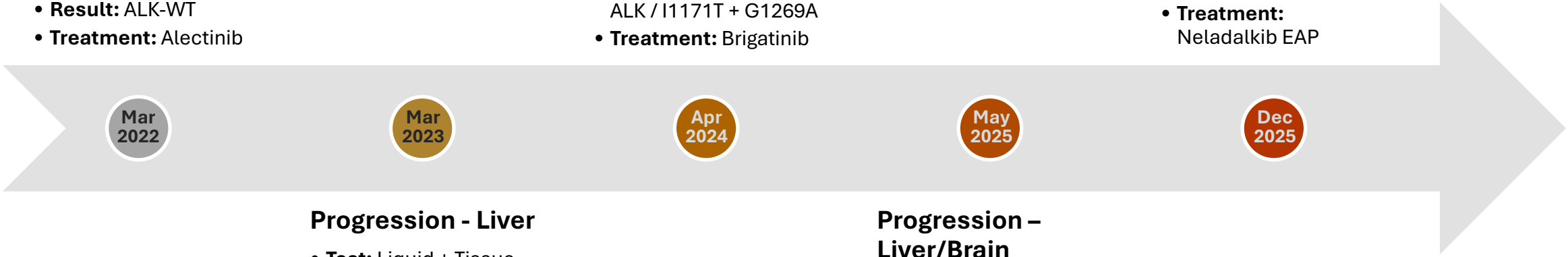
fightcancer.org/biomarkers

Michael H. Hu, BA
Patient Advocate
American Cancer Society Cancer Action Network,
ALK Positive

How and Why Does Coverage Matter?


ALK POSITIVE
ALK POSITIVE
ALK POSITIVE
ALK POSITIVE
ALK POSITIVE
ALK POSITIVE

My Lung Cancer Journey



Mar 2022

Diagnosis

- **Test:** Liquid + Tissue
- **Result:** ALK-WT
- **Treatment:** Alectinib

Mar 2023

Progression - Liver

- **Test:** Liquid + Tissue
- **Result:** ALK / L1196M
- **Treatment:** Lorlatinib

Apr 2024

Progression - Liver

- **Test:** Liquid + Tissue
- **Result:** ALK / I1171T + G1269A
- **Treatment:** Brigatinib

May 2025

Progression – Liver/Brain

- **Test:** Liquid + Tissue
- **Result:** ALK / I1171T + D1203N
- **Treatment:** Chemo + Brigatinib / Chemo + Lorlatinib

Dec 2025

Progression - Liver/Bone/Lung

- **Test:** Liquid + Tissue
- **Result:** ALK / I1171T + D1203N
- **Treatment:** Neladalkib EAP

Coverage Matters

- Biomarker testing IS medically necessary
- It's essential throughout the entire cancer journey
- Testing access should not be a patient burden
- Financial stress is bad for cancer patients mental & physical health
- Coverage concerns should not delay access
- Coverage for parallel tissue and liquid testing needs to be standard
- Patients should be proactively informed of coverage resources available for biomarker testing

Kristen Kimball, MS, MEM
Patient Advocate
American Cancer Society Cancer Action Network,
LUNGevity Foundation, White Ribbon Project

How can you make a difference as a patient advocate?

Hello

About Us

Kris: The “Caregiver”

- Biologist/physiology
- Taught “A&P” at UCONN

Dave: The “patient”

- Engineer, communications software
- Hiker, rower, fixer of anything, highly skilled woodworker…

Our family

- Three adult children

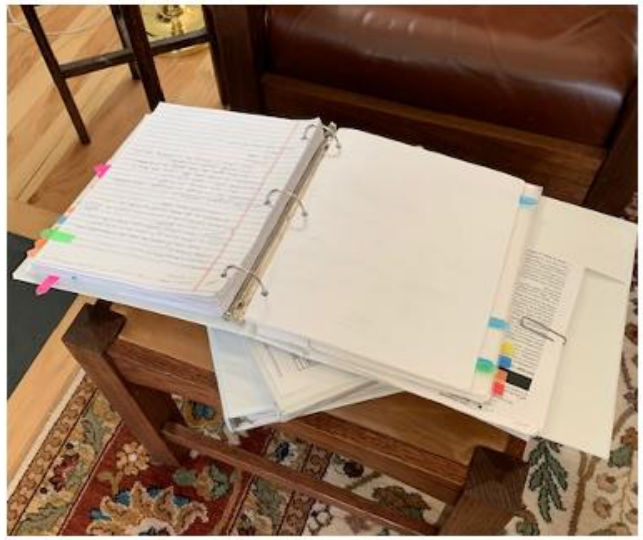
Our story

Healthy, fit 59-year-old rower without known risk factors. Married 35 years, children “launched”, trip!

- Diagnosis (May 2012) ; EGFR+, exon 19 del
  - Began SOC Tarceva (Erlotinib) at Yale
  - First of 8 treatment regimens

Why include the care partner as advocate?

- Shared survivorship trajectory – both **observed** and **experienced**



- We walk a parallel path

We both said “Yes” to Advocacy

Why then?

- A sense of control; sense of purpose; extracting meaning from chaos

Living With Incurable Cancer, Not Wanting To Miss A Moment — Even Needle Biopsy

By David Kimball
January 06, 2017

Share

https://www.wbur.org/news/2017/01/06/cancer-skipping-sedation

Why still?

- Continue Dave’s story by using his experiences to push for needed change.

Thank You!

Open Discussion: Questions & Answers

Please take a few minutes to provide feedback on today's webinar.

A brief survey will pop up in your browser after you leave the webinar.

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Additional thanks to Foundation Medicine

Reminders

Webinar & all ECHO Session Slides, Recordings, & Resources will be made available within one week on the **ACS ECHO Website**.

Check the ACS Project ECHO Superhub here for other upcoming ACS ECHO sessions and the ACS NLCRT website for More Resources on lung Cancer Staging and biomarker testing.

Thank you!