

Executive Summary

The National Lung Cancer Roundtable (NLCRT) held its first national summit on **Optimizing Lung Cancer Biomarkers in Practice** on September 22-23, 2020. As numerous NLCRT member organizations, are embarking on initiatives to increase biomarker testing for eligible patients with non-small cell lung cancer (NSCLC), we believe it is time for a collective mission-oriented approach to bring these organizations together to bridge current gaps in awareness, knowledge of state-of-the-art treatment, and need for comprehensive biomarker testing for lung cancer patients. The goals of the meeting were to share experiences related to comprehensive biomarker testing and to develop strategies that NLCRT member organizations can embrace to optimize the use of lung cancer biomarkers in practice. The summit's call to action was access to high quality comprehensive biomarker testing for all eligible patients with NSCLC: *no patient left behind!*

More than 85 summit participants, representing 75 organizations, contributed a broad range of perspectives. Participants included advocates, clinicians (primary care, oncology, pulmonology, thoracic surgery, radiology, and pathology), researchers, public health professionals, pharmaceutical and diagnostic companies, government agencies and health plans. Organizations in attendance included professional societies, advocacy organizations, cancer centers/academic institutions, government agencies, health plans, and corporate affiliates (pharmaceutical, diagnostic, and private companies).

The NLCRT aims to align on strategies to raise awareness of comprehensive biomarker testing to increase uptake and ensure all eligible NSCLC patients receive the most effective treatment. Initiatives that focus on educating patients and providers to understand and use consistent terminology on comprehensive biomarker testing and thereby reduce patient confusion regarding testing, are paramount. In parallel with efforts to increase patient awareness, we need to launch initiatives to ensure that clinicians have accurate and updated information on comprehensive biomarker testing and are aware of and follow comprehensive biomarker testing guidelines for the appropriate patients. Increased knowledge and capacity related to making informed treatment decisions based on biomarker test results and the ability to communicate relevant risk, tests, and treatment plans across the multidisciplinary team are also needed.

The use of biomarkers to guide lung cancer treatment significantly improves patient outcomes. The summit successfully produced a set of strategies to be adopted by NLCRT member organizations for increasing the awareness of patients, clinicians, and health plans around the evidence-based role of deploying comprehensive biomarker testing in appropriate patients, with the goal of delivering the most effective treatments to lung cancer patients.



Tuesday, September 23, 2020

During the first session on Day 1, participants were introduced to the objectives of the summit and discussed the summit's big goal – defining a vision of the ideal state of comprehensive biomarker testing for all eligible patients with NSCLC. During the *Patient Advocate Experiences* session that followed, two survivor advocates shared their personal stories, highlighting the challenges and barriers, and how they personally benefited from biomarker testing.

Next, participants were brought up to date on the current state of biomarker testing and the importance of collaborative efforts and communication among proceduralists (i.e., pulmonologists, thoracic surgeons and interventional radiologists), pathologists, oncologists, and nurse navigators. Personalized treatment of advanced NSCLC is guided by biomarker testing and treatment advances in targeted therapy have contributed to the sharp decline in lung cancer mortality from 2013 through 2016.

In the final session of the morning, the *Professional Confessional Panel* of five members (representing primary care, proceduralists, oncology, pathology, and health plans) shared perceptions of prevailing patterns of practice that create barriers to comprehensive biomarker testing. The main themes echoed by all five panel members were related to knowledge, performance gaps, including lack of awareness and insufficient training, and the importance of and challenges in information dissemination in the rapidly advancing field of biomarker testing.

During the second session on Day 1, participants explored the current barriers to biomarker testing in clinical practice. Five panelists on the *Deep Dive Panel* gave short presentations on identifying barriers, including knowledge gaps regarding the need for testing and consistent communication, procurement of adequate tissue for sampling, choice of assay, design and turnaround time, accurate interpretation of results, and reimbursement, cost and coverage issues.

The day ended with the *Industry, Health Plan, and Advocacy Panel* whose members discussed the challenges they regard as most important to ensuring that comprehensive biomarker testing for all eligible patients with NSCLC becomes routine, efficient, and high quality, and ways in which their organizations can contribute to a national collective initiative to advance comprehensive biomarker testing and ensure patients receive state-of-the-art care.



Wednesday, September 23, 2020

On the morning of Day 2, participants reconvened to start the process of building a strategic, forward looking framework to overcome existing barriers to optimizing use of biomarkers for all eligible patients with NSCLC.

Based on their new and shared understanding of the barriers to biomarker testing, participants proposed and prioritized strategies for each of the barrier breakout groups. Groups of participants explored steps for moving forward on the following topics in-depth:

- Knowledge Gaps Regarding the Need for Testing & Communication
- Procurement of Adequate Tissue for Sampling
- Choice of Assay & Design and Turnaround Time
- Accurate Interpretation of Results
- Reimbursement, Cost, and Coverage

The goal of each group was to propose and prioritize their top multi-stakeholder strategies to overcome barriers to comprehensive biomarker testing for NSCLC. After in-depth discussions, a multi-disciplinary group of breakout leaders presented the key strategies developed by their groups. These strategies will be collated and synthesized by the summit planning committee for next steps, which will be announced at the upcoming NLCRT annual meeting on December 7-8, 2020

The conference ended at 12:30 pm with closing remarks and a list of next steps to go forward. Achieving the goal of accessible biomarker testing for all eligible NSCLC patients will require a multidisciplinary response and commitment from all stakeholders and organizations.

September 22-23 - Session Presentations	
Session 1: Welcome to the NLCRT Optimizing Lung Cancer Biomarkers in Practice Summit	<ul style="list-style-type: none"> - Welcome Message - Summit Objectives - Big Goal of the Summit - Professional Confessional Panel
Session Two: Exploring the Barriers to Biomarker Testing in Clinical Practice	<ul style="list-style-type: none"> - Barrier Deep Dive Panel #1 - Barrier Deep Dive Panel #2 - Barrier Deep Dive Summary - Industry/Health Plan/Advocacy Panel - Summary and Next Steps



The American Cancer Society established the NLCRT as a national coalition of public, private, and voluntary organizations and invited individuals that stimulates multidisciplinary collaborations that drive actions to reduce lung cancer incidence and mortality in the United States. We do this through coordinated leadership, strategic planning, advocacy, collaboration and action. For additional information about the NLCRT, please see nlcrt.org.

The American Cancer Society National Lung Cancer Roundtable's Lung Cancer Biomarker Summit Planning Committee would like to thank our NLCRT national sponsors Amgen, AstraZeneca, Bristol-Myers Squibb, Genentech, and Lilly Oncology for their support.



Strategies from the Breakout Groups

	Knowledge Gaps Regarding the Need for Testing & Communication
	<ul style="list-style-type: none"> Clearly define comprehensive biomarker testing and harmonize guidance from national guidelines.
	<ul style="list-style-type: none"> Define best practices and standard biomarker performance metrics for comparing practices.
	<ul style="list-style-type: none"> Create a national platform for comprehensive biomarker testing performance feedback.
	<ul style="list-style-type: none"> Develop an assessment for the needs and knowledge gaps around comprehensive biomarker testing.
	<ul style="list-style-type: none"> Develop unified comprehensive biomarker testing messaging for engaged groups and stakeholders, including patients and healthcare providers.
	<ul style="list-style-type: none"> Develop uniform educational and training content around comprehensive biomarker testing.
	<ul style="list-style-type: none"> Utilize the various education and training platforms (i.e., ACS' ECHO clinics) that are offered through NLCRT member organizations to broadly disseminate comprehensive biomarker testing information and training opportunities.
	<ul style="list-style-type: none"> Establish partnerships among NLCRT member organizations and local health communications and marketing vendors to promote peer-to-peer comprehensive biomarker education at the local and regional levels.
	<ul style="list-style-type: none"> Promote the use of nurse navigation services for comprehensive biomarker testing for patient support.
	<ul style="list-style-type: none"> Create professionally endorsed best practice guidance documents for each stakeholder group that harmonize key points and include relevant and specific information related to comprehensive biomarker testing.



Procurement of Adequate Tissue for Sampling

- Disseminate educational programs to proceduralists in partnership with NLCRT member organizations.
- Develop a national biomarker testing message that is easily accessible by all stakeholders.
- Individual proceduralists and institutions should prospectively monitor the percentage of patients whose biopsies yield adequate tissue for testing and review these findings regularly.

Choice of Assay & Design and Turnaround Time

- Develop guidance for pathologists for choosing and sequencing the optimal biomarker tests.
- Incentivize reimbursement of comprehensive genomic profiling and disincentivize single-gene assays.
- Engage organizations to address gaps in recommendations for comprehensive biomarker testing in NSCLC treatment guidelines to facilitate the dissemination of new information to assure rapid adoption of comprehensive biomarker testing.
- Disseminate information to clinicians to assure that a Next Generation Sequencing Panel is ordered for eligible NSCLC patients.
- Improve turnaround times so results are available within two weeks or less from the date of the diagnostic biopsy.
- Work towards a dual comprehensive biomarker testing strategy that allows for both liquid- and tissue-based biopsies at the time of diagnosis.



Strategies from the Breakout Groups (continued)

Accurate Interpretation of Results

- Pathologists should clearly and consistently communicate test results and patient options in the report to those who ordered the tests.
- Prioritize the comprehensive biomarker test results and link them to recommended treatments.
- Work with testing companies and institutions to generate standardized, easy-to-read comprehensive biomarker test reports.
- Use technology and virtual tumor boards to expand access to specialty guidance.

Reimbursement, Cost, and Coverage

- Rework the molecular CPT codes to be organized by content and indication.
- Create new solutions to reduce testing delays around the 14-day in-patient rule.
- Create state-based laws for biomarker testing coverage to increase access for patients.
- Remove prior-authorization delays to speed access to testing and therapy selection.
- Educate clinicians to have cost, reimbursement, and coverage patient conversations.
- Implement a standardized payer framework for evidence review and coverage decisions.

