ASSOCIATION OF COMMUNITY
CANCER CENTERS

FOSTERING EXCELLENCE IN CARE AND OUTCOMES IN PATIENTS WITH STAGE III AND IV NSCLC

Quality Improvement Initiative Summary

Introduction

The Association of Community Cancer Centers (ACCC) conducted a national multi-phase effort to provide guidance on key issues related to the optimization of care for patients diagnosed with Stages III and IV non-small cell lung cancer (NSCLC). To achieve this goal, the project explored coordination and communication within the multidisciplinary cancer care team to help them understand existing barriers and create and execute process improvement plans that address these barriers.

Quality Improvement for Advanced NSCLC

An expert ACCC Steering Committee used selection criteria to choose and offer Quality Improvement (QI) QI assistance to six cancer programs across the United States, looking to identify ways to improve care for patients with Stage III and IV NSCLC.

Each site was asked to provide data on 30 or more randomly selected individuals with Stage III or IV NSCLC from their patient population in 2018 or 2019:

1. Median ages ranged from 65–72 years across sites
2. Race distribution (White, Black, Asian) varied across sites
3. Insurance varied between Medicaid, Medicare, or commercial
4. Patients were evenly divided between Stages III and IV

At baseline, molecular testing practices varied across sites. Clinicians requested testing for 49 to 100 percent of patients, depending on the site. When specific tests were evaluated, EGFR, ALK, BRAF, and ROS1 were commonly tested, but NTRK was not. PDL1 was evaluated in 40 to 97 percent of patients, depending on the site.

	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Total
Molecular Testing							
Clinician Requested	49%	100%	97%	51%	72%	63%	70%
Patient Received	43%	100%	93%	51%	60%	63%	67%
Specific Test							
EGFR	43%	80%	90%	37%	60%	47%	58%
ALK	43%	83%	87%	37%	56%	50%	58%
NTRK	34%	13%	77%	0%	4%	0%	21%
BRAF	37%	77%	87%	7%	52%	43%	47%
ROS1	37%	33%	83%	40%	56%	43%	48%
PDL1	43%	97%	77%	40%	72%	53%	61%
Molecular/PDL1 Results							
Positive Results (Inc. PDL1)	46%	33%	87%	23%	76%	63%	53%

(Sites have been de-identified to protect their data)

Intervention and Quality Improvement

ACCC conducted tailored workshops, with guest faculty serving as subject matter experts, presenting educational lectures, and participating in action planning with the multidisciplinary care team. Each cancer program focused on areas that were most relevant to their practice setting and found specific ways to incorporate the latest evidence and clinical practice guidelines.

After the workshops, each site selected one or two aims that would improve care for their patients with advanced NSCLC and identified feasible metrics to collect to track their progress. Baseline data was collected for each aim statement and then at three- and six-month intervals. As a result of the COVID-19 pandemic, some sites received an extension to collect and report these data.

The target objective and solution(s) for each participating site was as follows:

FirstHealth of the Carolinas, Moore Regional Hospital
Pinehurst, NC

1. **Aim:** Improve timeliness of biomarker testing

   Improvements: Enabled pathologists to order biomarker tests in patients with advanced lung cancer by establishing a pathology-driven reflex process
2. **Aim:** Proactively order liquid biopsies when tissue samples were likely insufficient for testing

   Improvements: Enhanced workflow by reviewing biopsy tissue samples, sending samples for PD-L1 testing, and informing clinical team to order a liquid biopsy, which enabled the cancer care team to obtain actionable results quicker and to reduce delays and variation in biomarker test ordering patterns

O'Neal Comprehensive Cancer Center at the University of Alabama
Birmingham, AL

1. **Aim:** Identify signs of possible immune-related adverse events (irAEs)

   Improvements: Formed an immunotherapy toxicity working group to review irAE cases and discuss improvement of management strategies on a monthly basis
2. **Aim:** Educate front-line clinicians about irAEs

   Improvements:
   - Delivered frequent educational presentations
   - Posted an infographic in public places to reinforce key aspects of irAEs
   - Launched an electronic alert to notify clinicians of patient symptoms consistent with irAEs

Saint Francis Cancer Center
Tulsa, OK

1. **Aim:** Improve symptom tracking in patients with NSCLC who are treated with immunotherapy

   Improvements:
   - Developed a patient questionnaire to identify early signs of irAEs
   - Pilot tested clinical utility of a nurse-administered questionnaire
   - Explored ways to identify and manage potential irAEs
2. **Aim:** Streamline referring patients with advanced NSCLC to outpatient palliative care services

   Improvements:
   - Developed a standardized electronic referral process
   - Educated providers about outpatient palliative care services
   - Explained benefits of palliative care referral to patients

Southern Ohio Medical Center
Portsmouth, OH

1. **Aim:** Improve process of tracking and communicating NSCLC biomarker test results

   Improvements:

   - Assigned a nurse navigator to track, enter, and communicate positive biomarker test results
   - Coordinated appointments for patients who have positive test results so targeted therapy may begin as soon as possible

2. **Aim:** Improve care coordination to reduce preventable emergency department (ED) visits

   Improvements:

   - Studied which patients are making ED visits, primary symptom or diagnosis for the visit, an patient risk characteristics
   - Explored ways that care coordination and symptom monitoring may prevent certain ED visits

Sutter Cancer Center
Sacramento, CA

1. **Aim:** Improve access to Phase I clinical trials for patients with advanced NSCLC

   Improvements: Established a partnership with the UC Davis research group to increase patient access to Phase I clinical trials. Clinical trials coordinator presented a list of open studies at UC Davis to Sutter oncologists at monthly meetings, which increased awareness about research opportunities for patients.

2. **Aim:** Improve the smoking cessation referral process for patients with lung cancer

   Improvements: The team developed an electronic referral process to help patients receive smoking cessation services from a clinic in Roseville, CA, which employs NPs who offer telehealth counseling and prescribe smoking cessation therapies

Tennessee Oncology
Nashville, TN

1. **Aim:** Standardize and streamline the process around ordering lung cancer biomarker tests

   Improvements: Built a framework for streamlining the biomarker testing process by developing a process map, identifying three potential laboratory vendors to perform the biomarker testing and, if laboratory vendors were out of network for the patient, the team would pursue patient assistance programs.

Conclusion

As a result of this project, six cancer programs identified ways to improve care for patients with Stage III and IV NSCLC. Each cancer program focused on areas that were most relevant to their practice setting and found specific ways to incorporate the latest evidence and clinical practice guidelines. Process improvements were made to optimize biomarker testing, monitor patients for immune-mediated adverse reactions, and engage members of the cancer care team to increase palliative care and reduce unnecessary ED utilization. Several cancer programs found ways to improve their use of liquid biopsy testing in patients with advanced NSCLC and to reduce delays in testing. While the COVID-19 pandemic caused significant disruptions in care delivery, the participating sites remained committed to implementing changes around biomarker testing, care delivery, and symptom management.

As a result of this project, six cancer programs identified ways to improve care for patients with Stage III and IV NSCLC.

Tailor Findings for Your Institution

Cancer programs that wish to assess alignment with quality measures relating to advanced NSCLC and begin their own QI projects can start with the following questions:

- What proportion of patients with Stage IV NSCLC are receiving biomarker testing?
- Which biomarkers are being tested?
- What biomarker testing methods (e.g., tissue vs. plasma, panel testing, etc.) are being used?
- How long does it take to order and receive biomarker test results from the point of initial diagnosis?
- What proportion of patients with Stage IV NSCLC who have a targetable biomarker are receiving a targeted therapy?
- What treatments are patients with Stage IV NSCLC receiving if they have a targetable biomarker?
- Which patients with Stage III and IV NSCLC are receiving immune checkpoint inhibitors?
- How is care coordinated to identify and manage treatment-related adverse effects and other symptoms?
- What percentage of patients with unresectable Stage III NSCLC are receiving concurrent chemoradiation?
- How is care coordinated around the delivery of concurrent chemoradiation for patients with unresectable Stage III NSCLC?

Once these questions are answered by the cancer care team, small- or large-scale quality improvement work can be conducted at your institution based on the responses.

ACCC will be sharing detailed methods and procedures from each of the six sites that participated in this work, so that it may be replicated based on your unique infrastructure and resources.

To learn more, please visit accc-cancer.org/nsclc-care-delivery.

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Association of Community Cancer Centers

A publication from the ACCC education program, Fostering Excellence in Care and Outcomes in Patients with Stage III and IV NSCLC.

The Association of Community Cancer Centers (ACCC) is the leading education and advocacy organization for the cancer care community. Founded in 1974, ACCC is a powerful network of 28,000 multidisciplinary practitioners from 2,100 hospitals and practices nationwide. As advances in cancer screening and diagnosis, treatment options, and care delivery models continue to evolve—so has ACCC—adapting its resources to meet the changing needs of the entire oncology care team. For more information, visit accc-cancer.org. Follow us on social media; read our blog, ACCCBuzz; tune in to our CANCER BUZZ podcast; and view our CANCER BUZZ TV channel.

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