



Getting Tissue for Molecular Testing: An NSCLC Strategic Initiative

Background

- Collaborators
 - Temple University School of Medicine
 - Fox Chase Cancer Center
 - Association of Community Cancer Centers (ACCC)
 - MCM Education
- Commercial supporter: Pfizer

Overview of CME/QI Initiative

Getting Tissue for Molecular Testing: An NSCLC Strategic Initiative

Gather and Review Baseline Data, Conduct Focus Group

- Determine % of molecular testing in NSCLC patients
- Utilize available registries
- Conduct focus groups and surveys within the center to identify key barriers
- Determine key strategies for improvement

Interdisciplinary Workshop #1

- Review data and current process for molecular testing
- Identify barriers and strategies to overcome them
 - Plan for improvement

Activities Tailored Specifically for:

Radiologists,
Pulmonologists,
Surgeons

Medical
Oncologists

Pathologists

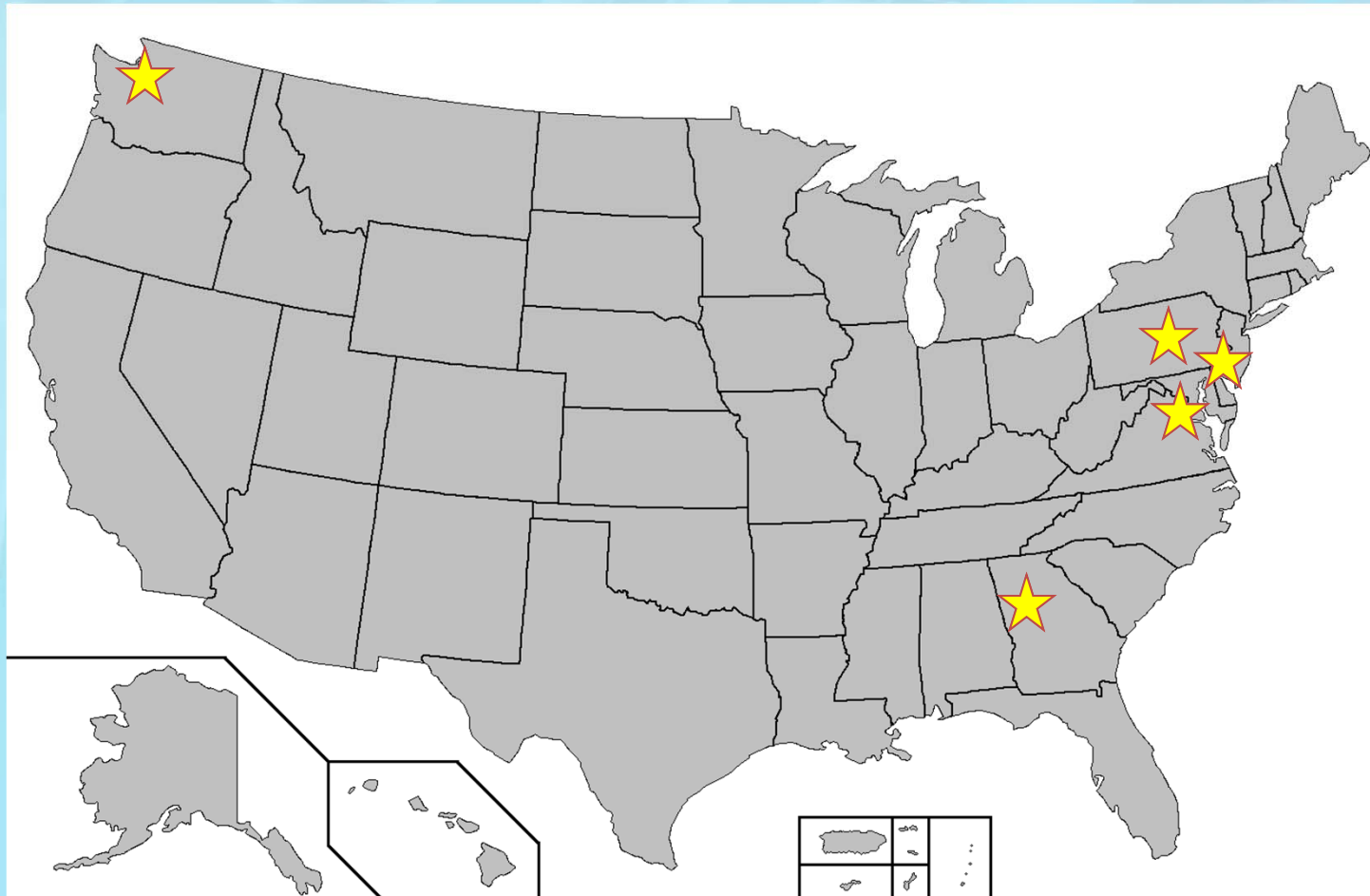
Interdisciplinary Tumor Board

- Case discussions around NSCLC patients (2-3 cases)
- Discuss the application of molecular testing results

Interdisciplinary Workshop #2

- Review processes for molecular testing
- Share outcomes/results
- Discuss future strategies for continuing improvement

Recruit 5 Cancer Centers



- ✓ PA
- ✓ PA
- ✓ MD
- ✓ GA
- ✓ WA

All cancer centers are members of the Association of Community Cancer Centers

Baseline Data & Focus Group

Baseline Data:

- Each cancer center obtained baseline data (12 months) from their cancer registry, electronic health record, and pathology database.

Focus Group:

- Each center identified a clinical champion and primary administrative point of contact.
- We spent time discussing their baseline data and their clinical processes and workflows around molecular testing in lung cancer.
- We identified potential opportunities for QI.

Baseline Data

Cancer Center	# of NSCLC patients treated/yr	# of medical oncologists	# of pathologists	# of radiologists
1	151/yr	17	8	6
2	129/yr	4	8	6
3	79/yr	12	5	7
4	54/yr	3	5	8
5	52/yr	5	2	4

Baseline Data

Cancer Center	# of stage IV adenocarcinoma patients treated/yr	% of stage IV adenocarcinoma that received molecular testing	Lung biopsies mostly performed by
1	68	65%	Radiology
2	84	84%	Radiology
3	19	53%	Radiology
4	37	76%	Pulmonary
5	8	62%	Radiology

Applying the PDSA Cycle

Workshop #1:

- Introduce staff to the PDSA (Plan, Do, Study, Act) framework and work through an example as a team.
- Discuss potential QI opportunities identified during the focus group.
 - Explore and plan QI projects focused on improving communication, workflow changes, clinical documentation, and more.
 - Discuss the feasibility of each project.
 - Identify the key people who will be involved.
 - Establish when and how they will evaluate their progress.

Tailored Mini Workshops

Focused education and discussions for each of these audiences:

- Clinicians performing lung biopsies:
 - Radiologists, pulmonologists, surgeons
- Clinicians interpreting the biopsies:
 - Pathologists
- Clinicians making treatment decisions:
 - Medical oncologists

Timeline

Cancer Center	Obtained Baseline Data	Focus Group	Workshop #1	Mini Workshops x 3
1	April 2013	April 2013	Jan 2014	April-May 2014
2	April 2013	May 2013	Oct 2013	Jan-March 2014
3	June 2013	June 2013	Jan 2014	Feb – March 2014
4	June 2013	June 2013	Dec 2013	April – May 2014
5	June 2013	June 2013	Nov 2013	Feb – April 2014

Improvement Plan A

- Improve communication between clinicians performing the biopsy (radiologists, pulmonologists, and surgeons) and pathologists who are interpreting the biopsy:
 - **Background:** Much of the time, pathologists are processing samples without having much clinical background information about the patient.
 - **Change:** Clinicians performing the biopsy will inform pathologists about the need for molecular testing by providing more clinical background about the patient. This will get communicated on the pathology requisition form.
 - **Rationale:** This information will allow the pathologists to process the tissue in a way that maximizes the preservation of tissue for molecular testing.

Improvement Plan B

- Change and standardize the biopsy process to ensure that enough tissue is obtained for molecular testing:
 - **Background:** Some of the time, the biopsy samples are inadequate for molecular testing.
 - **Change:** Clinicians performing the biopsy will increase how many samples they obtain and improve the quality of those samples by using additional biopsy techniques as needed. The center will facilitate ongoing communication and feedback to ensure that a standard operating process is implemented for lung biopsies.
 - **Rationale:** This increases the likelihood that adequate tissue is obtained during biopsy for molecular testing.

Improvement Plan C

- Develop and implement a “reflexive” molecular testing process for NSCLC to minimize delays in treatment.
 - **Background:** Currently, molecular testing is ordered manually by the medical oncologist after he/she has seen the pathology report. This delays treatment options for patients who may benefit from molecularly targeted therapies.
 - **Change:** When the pathologist receives a NSCLC biopsy sample, he/she will automatically order molecular testing on that sample.
 - **Rationale:** This will minimize delays in obtaining clinically actionable data so that the medical oncologists can develop appropriate treatment plans for the patients.

Improvement Plan D

- Add a new data management process so that molecular test results are more easily accessible to medical oncologists.
 - **Background:** Currently, molecular test results appear under the “lab results” tab. Since there are frequently numerous lab results for a patient, medical oncologists have difficulty finding the molecular test results in a timely manner.
 - **Change:** When the molecular test results arrive to the pathology department, a data clerk will enter it into the EHR and file it under a “molecular test” tab.
 - **Rationale:** This will increase the efficiency of how medical oncologists retrieve and review molecular test results.

Summary

- Many clinicians in the community are not in the regular habit of planning, developing, and implementing QI strategies.
- We are helping some centers develop a culture of continuous QI by using the PDSA cycle:
 - Evaluate their own performance data
 - Reflect on ways to improve
 - Then Plan, Do, Study, and Act