GTSC Trials Network

- Why?
  - Decreased funding / role in cooperative groups
  - Death of ACOSOG
  - Historically, no meaningful input from professional societies (STS, AATS)
    - until recently – **AATS TSOG**

    Gaps: limited number of centers, trials

GTSC Trials Network

Remaining unmet need:

Mechanism for prospective, multi-institutional, practical, real-world clinical trials in Thoracic Surgery

- Studies relevant to surgeons
- Minimize barriers to get trials up and running, accrue, and complete
- Broad participation, community effort

GTSC Trials Network

COVID delay in moving things forward

- Website live
- Contract template done for data transfer agreements
- Ground rules set
- Ready to go!!
  - Sign up member surgeons/institutions (Karly, Amy)
  - Bring studies online

GTSC Trials Network

Ground rules:

- PI in charge of protocol, data, QC, leading publication
- Concepts reviewed and approved by steering group
- GTSC (thru Mayo) will look after Data transfer agreements, central IRB function, contracts, website maintenance

GTSC Trials Network

What do we need for this to be successful?

- Need you (members) – sign up and participate!
- Need simple, straightforward, surgical trials asking important questions for what we do every day
  - Examples: 1) Abx vs not with Heimlich (Shen)
    2) Blood patch for air leaks (Seder)

RUSH

Excellence is just the beginning.

Rush University

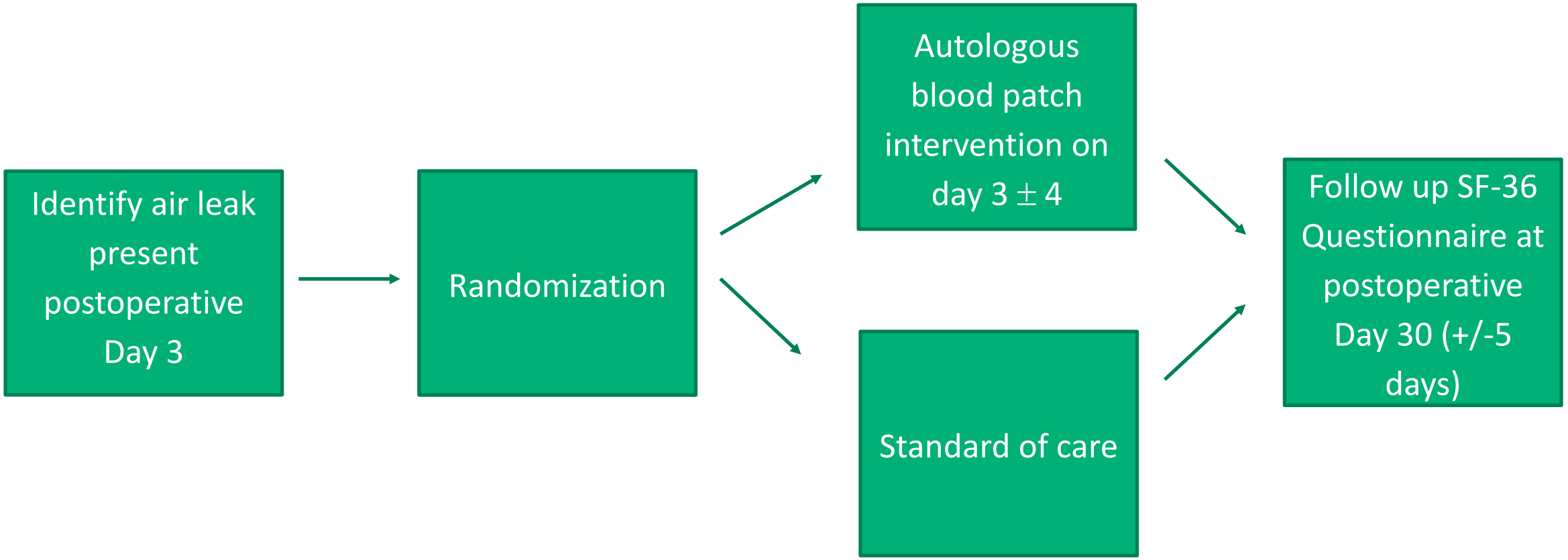
Autologous Blood Patch Intervention Trial

Study Principal Investigator: Christopher Seder, MD

Protocol Introduction

Title:	Prolonged Air Leak Autologous Blood Patch Intervention Trial
Study Description:	A postoperative autologous blood patch intervention trial for patients who underwent lung resection for cancer to examine its effectiveness in preventing a prolonged air leak.
Objective:	To determine the safety and efficacy of autologous blood patch as a means to reduce the rate of prolonged air leak after lung cancer resection.
Study Population:	Patients to undergo elective wedge resection, segmentectomy, lobectomy, or bilobectomy for suspected non-small cell lung cancer (NSCLC) with an air leak on postoperative Day 3.
Number of Participants:	120 Subjects
Subject Participation Duration:	30 Days
Study Duration:	Estimated 24 Months

Study Schema



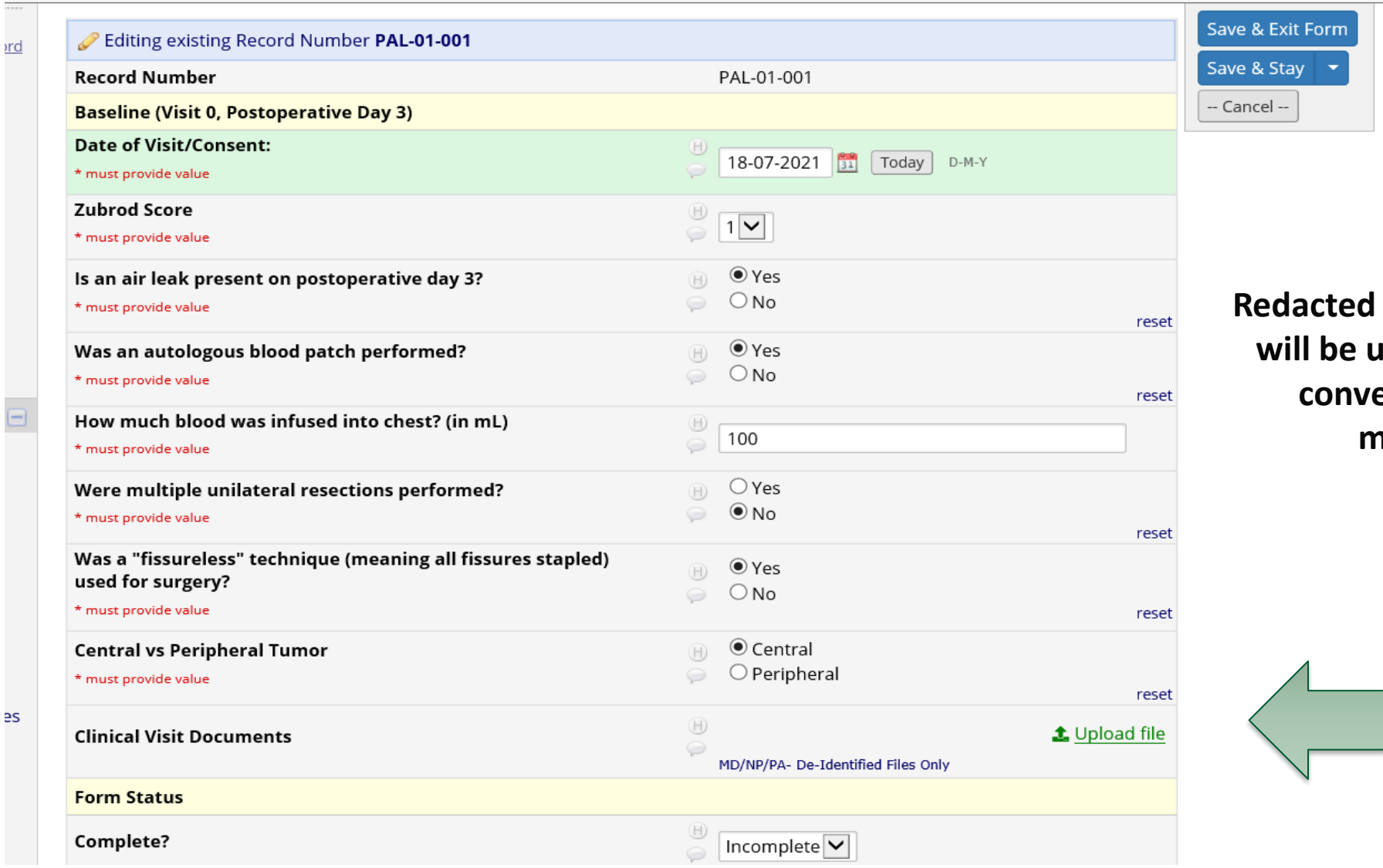
Data Collected in Electronic Database (REDCap)

- Gender
- Age
- Body Mass Index (BMI)
- Race
- Smoking history and status
- Procedure performed
- Lobe(s) being operated on
- Video Assisted Thoracoscopic Surgery (VATS), Robotic, or Open Operation
- Number of wedge resections in the operation
- Zubrod score (0-5)
- Chronic obstructive pulmonary disease
- Forced expiratory volume in 1 second (FEV1) percent predicted
- Diffusion capacity (DLCO) percent predicted
- Prior cardiothoracic surgery
- Coronary artery disease or congestive heart failure
- Diabetes mellitus
- Chronic renal failure
- Interstitial lung disease
- Preoperative chemotherapy
- Preoperative radiation
- Steroid use
- Clinical and Pathologic TNM stage (AJCC 8th Edition)
- Tumor size per Pathologic Report
- Intraoperative adjunct maneuvers to minimize air leak (buttress, gel, etc)
- Grade of air leak

Outcome Measures:

- Prolonged Air Leak >5 days
- Hospital Length of Stay
- Discharge with Chest tube
- Readmission within 30 days
- In hospital mortality
- 30-day mortality

Example of REDCap Database



Redacted source documents will be uploaded here for convenient, remote monitoring.

Enrollment

- **9 subjects enrolled as of 3/6/2023**

Activated collaboration sites:

- Rush University Medical Center
- University of Ottawa Health System
- Cooper Health System
- NorthShore Health System

Site activation pending:

- Loyola University
- University Of Chicago Medical
- Harvard Medical
- Lahey
- Vanderbilt
- Mayo Health System
- Bay State Health System
- University of Virginia Health System

PAL ABP Trial Contact Information

Christopher Seder, MD	Principal Investigator
Sebastien Gilbert, MD	Co-Principal Investigator
Abigail Goerge	Research Study Project Manager
Study Related Contact Information:	Email: abigail_k_goerge@rush.edu christopher_w_seder@rush.edu Office: 312-563-7267 Address: Abby Goerge Rush University Medical Center 1725 West Harrison Street Suite 774 Professional Office Building Chicago, Illinois 60612

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Commission on Cancer

Leveraging the Force of Accreditation

UK HealthCare
MARKEY CANCER CENTER

NCI Cancer Center
A Cancer Center Designated by the National Cancer Institute

100 years
Commission on Cancer | 1922–2022

Timothy Wm. Mullett, MD, MBA, FACS
Professor, Thoracic Surgery
University of Kentucky
Chair, Commission on Cancer

American College of Surgeons
Inspiring Quality:
Highest Standards, Better Outcomes
100+ years

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Commission on Cancer®
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To be the collaborative authority in cancer staging, standards, and quality

Set standards
Monitor quality
Accredit sites

Collect vital statistics
Support quality improvement
Create new knowledge
Develop operative standards
Develop staging standards

Commission on Cancer®

NATIONAL CANCER DATABASE

NAPBC®
NATIONAL ACCREDITATION PROGRAM FOR BREAST CENTERS

AJCC
American Joint Committee on Cancer

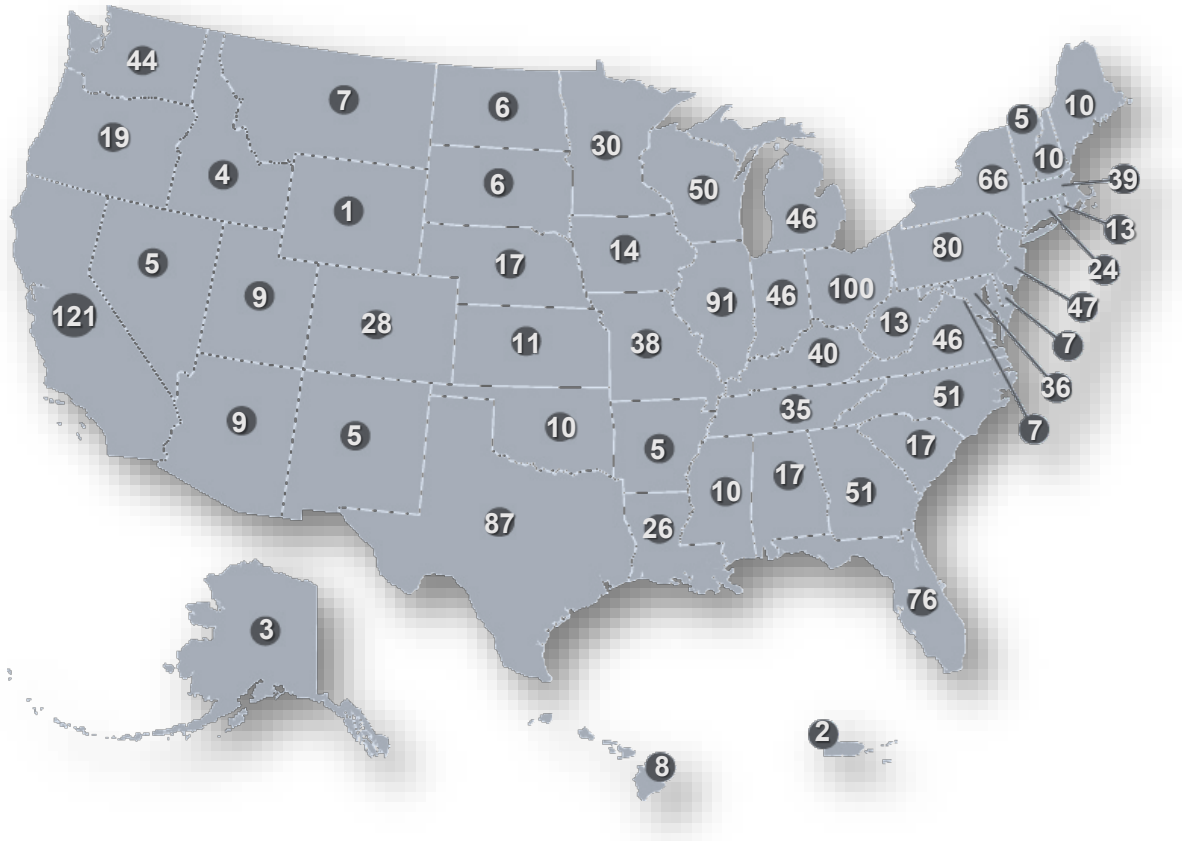
Commission on Cancer®
NATIONAL ACCREDITATION PROGRAM FOR RECTAL CANCER

CLINICAL RESEARCH PROGRAM

AMERICAN COLLEGE OF SURGEONS
Inspiring Quality: Highest Standards, Better Outcomes
100+ years

Approximately 1500 CoC-accredited Cancer Programs

- **26% of U.S. Hospitals**
- **72% of all cancer cases in the U.S.**



100 Years of Commission on Cancer

Commission on Cancer® | A QUALITY PROGRAM of the AMERICAN COLLEGE OF SURGEONS

Founding Principle

"…Reduce the suffering and mortality from cancer by an organized **application of the knowledge that is already available**…" 1931 ACS Bulletin

Current Principle

Driving knowledge into practice remains as **relevant today** as it was in 1931

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American College of Surgeons: 100+ Years of Quality Improvement

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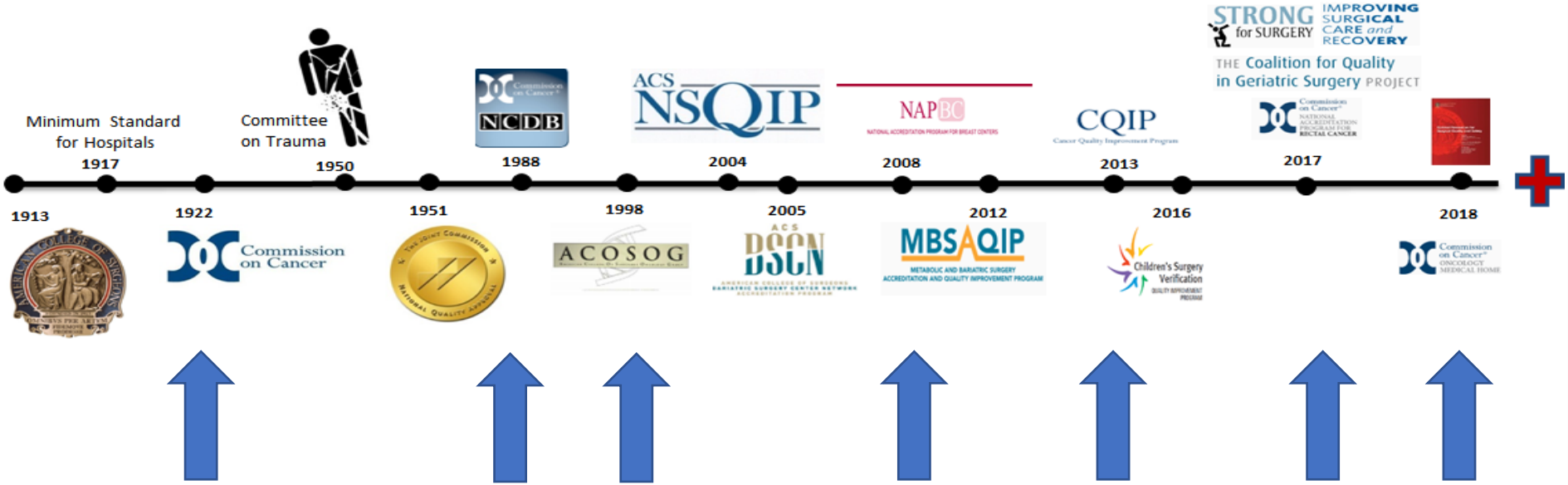
100 years



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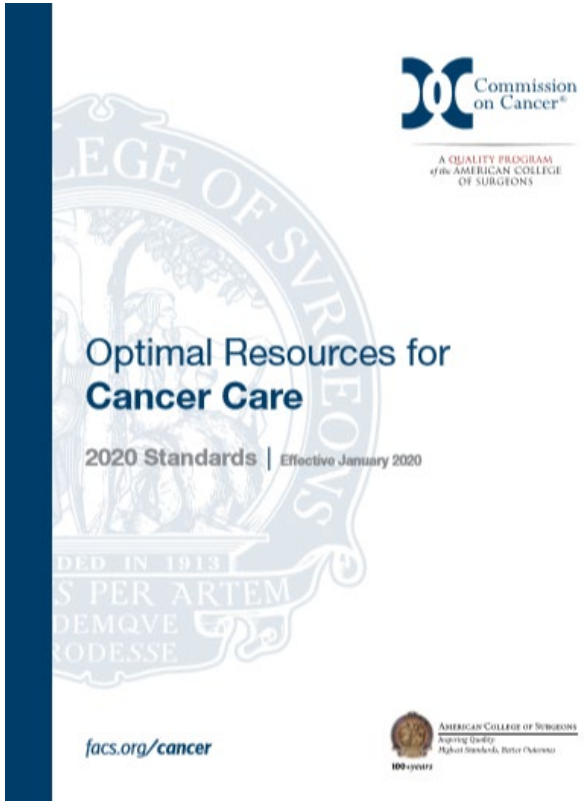

Value of CoC Accreditation

Strengths

- Largest and best cancer accreditation program – 1,500 programs
- Effective mechanism for impacting cancer care
- Directly impacted patient navigation, palliative care, survivorship & synoptic path reports through standards
- Ongoing standards revisions are based on evidence & best practices

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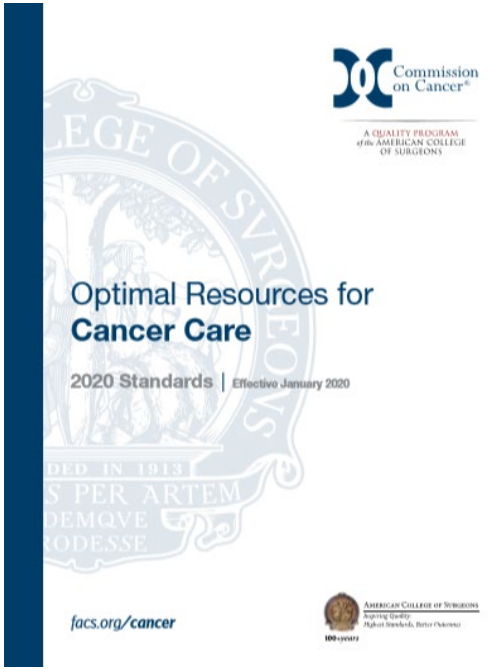
Value of CoC Accreditation

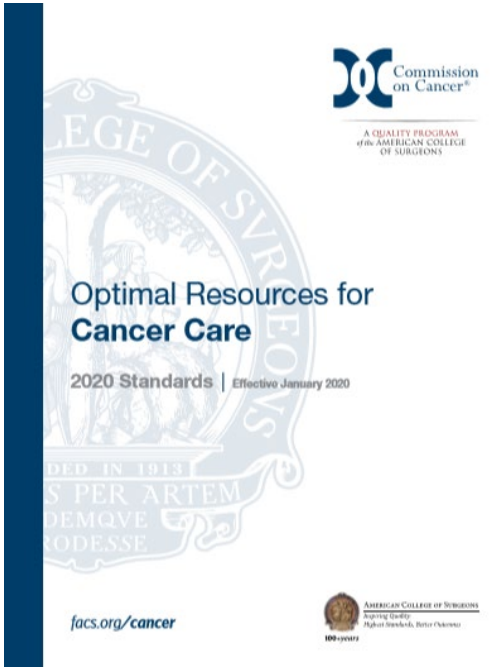
- **Tangible** benefits of CoC Accreditation
  - Organization & infrastructure of cancer program
  - Data to assess patterns of care and outcomes

- **Intangible** benefits of CoC Accreditation
  - Leadership development
  - Team building
  - Programmatic development



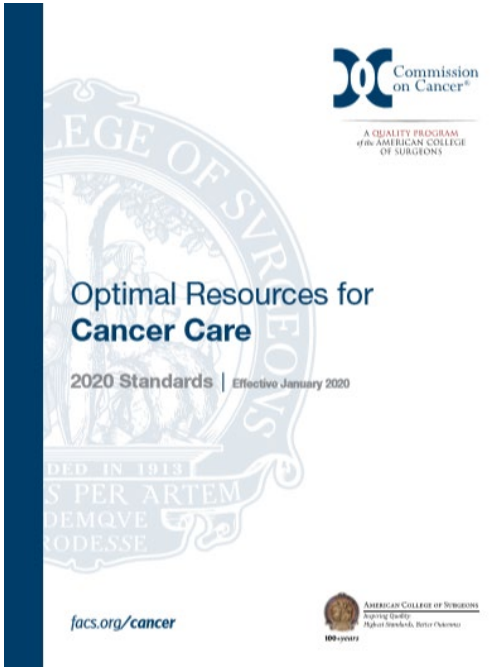
Value of CoC Accreditation

- Hospital and benchmark data on cancer outcomes
- Participation in cancer standards development
- Recognition as accredited cancer program
- Coordinated compliance with state required cancer registries and data collection



Value of CoC Accreditation

- Adherence to CoC standards is associated with better patient outcomes in diverse settings
- Evidence demonstrates that tumor boards enhance the multidisciplinary management of cancer patients
- Tumor boards are an effective infrastructure for educating clinicians on emerging evidence from clinical trials



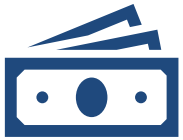
CoC Standards

Address the full continuum of cancer—from prevention to survivorship and end-of-life care—while addressing both survival and quality of life

S1.1 – Administrative Commitment

- **Letter of authority** from CEO or equivalent once each cycle in which the Cancer committee authority is established and documented

- Includes but is not limited to:
  - High-level **description** of the cancer program
  - Initiatives to ensure **quality and safety**
  - **Leadership's involvement** in the cancer committee
  - **Financial investment** in the cancer program



NCI Designated Cancer Center

Research Opportunity

Standard 4.8: Survivorship Program

Focus:

Development of a survivorship program to ensure that the breadth of a cancer survivor's needs are being met.

Standard requirements:

- Designate leader of survivorship program
- Identify team & services/programs offered to address needs of cancer survivors
- Annually evaluate 3 services impacting cancer survivors

Phase-in for 2021

Survivorship

NCI Designated Cancer Center

Research Opportunity

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- SCP & treatment summaries
- Screening for recurrence & new cancers
- Education & seminars
- Rehabilitation services
- Nutrition services
- Psychological support & psychiatric services
- Support groups and services
- Formalized referrals to experts in cardiology, pulmonary services, sexual dysfunction, fertility counseling
- Financial support services
- Physical activity programs

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Prevalence and Types of Survivorship Services After Adult Cancer in the United States: A Landscape Study

David R. Freyer DO MS, Kimberly Miller PhD MPH, and Julia Stal BA
USC Norris Comprehensive Cancer Center

A research proposal in partnership with the
American College of Surgeons Commission on Cancer

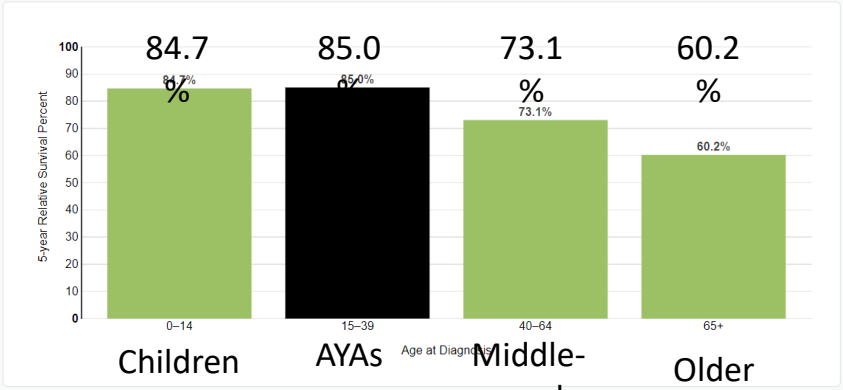
November 15, 2022 - Updated

5-Year Relative Survival

68.1%

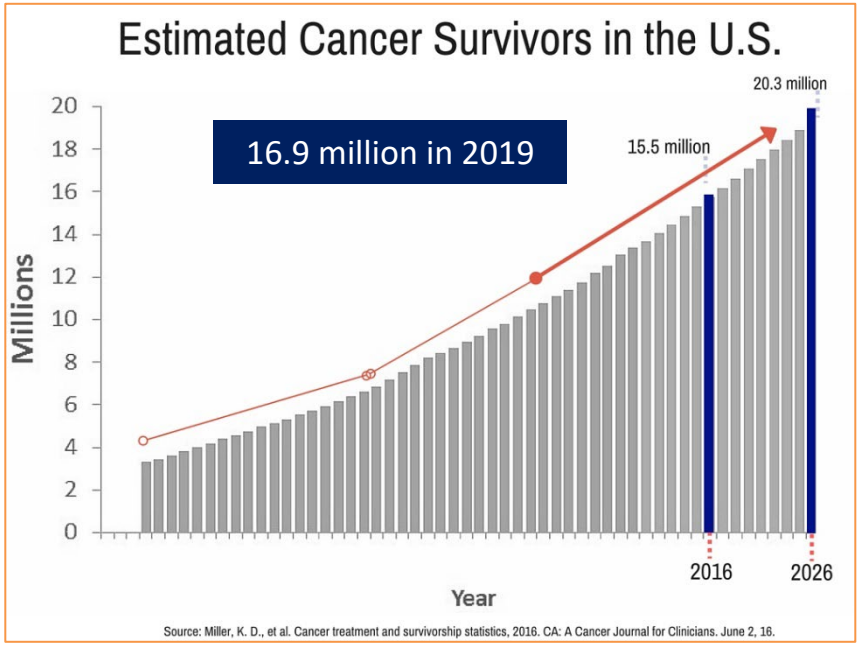
Based on data from SEER 17 2012–2018. Gray figures represent those who have died from cancer of any site. Green figures represent those who have survived 5 years or more.

How Does Cancer Survival Among AYAs Compare to Cancer Survival at Other Ages?



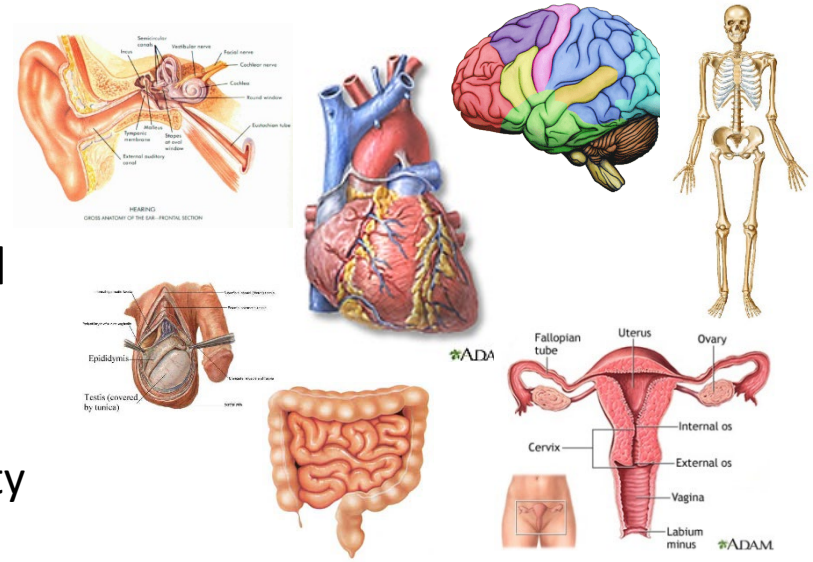
SEER 18 2011–2017

https://seer.cancer.gov/statfacts/html/all.html



American Cancer Society, 2016

Adverse Outcomes



- Toxic, multimodal treatment regimens used
- Frequently result in late effects
  - Physical discomfort and impaired function
  - Psychosocial impacts, including financial toxicity
  - Lower quality of life
- Individualized survivorship care can identify, manage, prevent late effects
- **Survivorship care recommended for all cancer survivors**

National Cancer Database

- National, clinical cancer registry system
- Over **42 million** cancer cases diagnosed beginning in 1985
- **Continuous quality improvement** for the evaluation, management, and surveillance of cancer patients
- NCDB captures over 250 data points
  - All cancer types
  - Includes patient characteristics, cancer staging and tumor histological characteristics, type of first course treatment administered and outcomes information

Utilizing the NCDB and its Value

Ann Surg Oncol (2019) 26:1604–1612
https://doi.org/10.1245/s10434-019-07213-1

Annals of
SURGICAL ONCOLOGY
OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY

ORIGINAL ARTICLE – HEALTH SERVICES RESEARCH AND GLOBAL ONCOLOGY

Incident Cases Captured in the National Cancer Database Compared with Those in U.S. Population Based Central Cancer Registries in 2012–2014

Katherine Mallin, PhD[1], Amanda Browner, MS[1], Bryan Palis, MA[1], Greer Gay, PhD[1], Ryan McCabe, PhD[1], Leticia Nogueira, PhD[2], Robin Yabroff, PhD[2], Lawrence Shulman, MD, FACP, FASCO[3], Matthew Facktor, MD, FACS[4], David P. Winchester, MD, FACS[5], and Heidi Nelson, MD, FACS[5]

Utilizing the NCDB and its Value

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TABLE 1 Case coverage for National Cancer Data Base (NCDB) by cancer site and sex in 2012–2014

Primary site	USCS count	NCDB count	Case coverage	NCDB male count	USCS male count	Case coverage male	NCDB female count	USCS female count	Case coverage female
All cancer sites combined[a]	4,769,679	3,456,127	72.5	1,631,927	2,394,773	68.1	1,824,200	2,374,906	76.8
Male and female breast	706,521	568,498	80.5						
Female breast	700,254	562,876	80.4				562,876	700,254	80.4
Lung and bronchus	649,944	421,478	64.9	218,406	342,271	63.8	203,072	307,673	66.0
Prostate	540,980	315,183	58.3	315,183	540,980	58.3			
Colon excluding rectum	296,070	210,284	71.0	103,127	147,284	70.0	107,157	148,786	72.0

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Utilizing the NCDB and its Value

National Cancer Database and reporting tools allows cancer programs to:

Evaluate and compare the cancer care delivered to patients diagnosed and/or treated at your facility with other CoC-accredited facilities at the state, regional, and national level

Identify areas for quality improvement to ensure that patients receive the right treatment at the right time

Compare quality-related performance measures with aggregated CoC-accredited programs, including accountability, quality improvement, and surveillance measures

Run benchmark reports to drive quality improvement and quality assurance activities

Track and analyze data on all types of cancer to:

- Explore trends in rectal cancer care
- Review regional and state benchmarks for NAPRC-accredited facilities
- Serve as the basis for quality improvement

Access participant user files for use by investigators to advance the quality of care delivered to cancer patients

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Utilizing the NCDB and its Value

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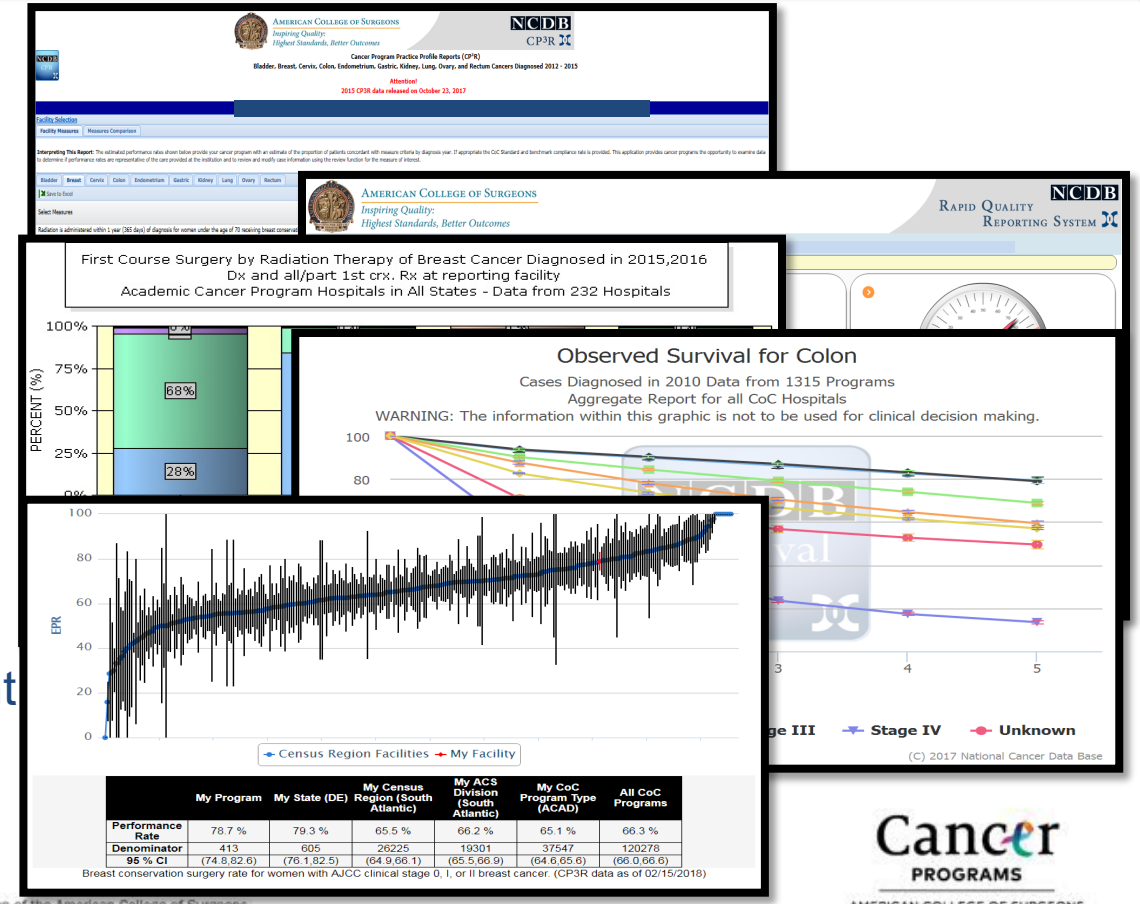
NCDB Tools

- Participant User Files
- NCDB Data Completeness Reports
- Cancer Program Practice Profile Reports (CP³R)
- Rapid Quality Reporting System (RQRS)
- Hospital Comparison Benchmark Reports
- Survival Reports
- Cancer Quality Improvement Program (CQIP) Report



	My Program	My State (DE)	My Census Region (South Atlantic)	My ACS Division (South Atlantic)	My CoC Program Type (ACAD)	All CoC Programs
Performance Rate	78.7 %	79.3 %	65.5 %	66.2 %	65.1 %	66.3 %
Denominator	413	605	26225	19301	37547	120278
95 % CI	(74.8,82.6)	(76.1,82.5)	(64.9,66.1)	(65.5,66.9)	(64.6,65.6)	(66.0,66.6)

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Utilizing the NCDB and its Value

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Participant User Files

- De-identified, comprehensive data set from 2004
- Site Specific (colon, breast, prostate)
- Patient care research
- Clinician-investigators at CoC-accredited center centers
- 1,000 files distributed annually
- 1,000 papers published
- “Always open” application process

NCI Designated Cancer Center

Research Pilot Data

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Standard 7.3: Quality Improvement Initiative

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Focus:

One in-depth study

Highlights **CLP** as **physician quality champion of cancer committee**

- CLP and Quality Improvement Coordinator work together to lead project

Requirements expect utilization of **recognized PI methods** (i.e. DMAIC, PDSA)

Expanded options for **topics** to study

- Can do a QI initiative based on the results from the annual reviews in other standards

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National to Local QI Impact

Commission on Cancer®

NAPBC® NATIONAL ACCREDITATION PROGRAM FOR BREAST CENTERS

Return to Screening- 2021

749 Accredited Programs Enrolled

814 PDSA Projects Initiated

70,000/mo Potential Additional Screenings A Month

Just ASK- 2022

776 Accredited Programs Enrolled

2,000 PDSA Projects Initiated

Over 700,000 patients potentially impacted

Cancer PROGRAMS AMERICAN COLLEGE OF SURGEONS

JustASK Preliminary Data – ASCO Abstract

Enrollment and 12-month follow up	Enrollment (n=776)	12-month follow up (n=703)
	Always or Usually (%)	Always or Usually (%)
Ask patient about smoking	696 (90%)	690 (98%)
Advise patients about smoking	553 (71%)	588 (84%)
Assist patients in quitting smoking	323 (42%)	424 (60%)
Provide self-help information	209 (27%)	395 (56%)
Refer patients to Quitline	219 (28%)	367 (52%)
Refer patients to tobacco treatment specialist affiliated with your program	204 (26%)	289 (41%)
Provide individual counseling in person	141 (18%)	190 (27%)
Prescribe FDA approved cessation medications	136 (18%)	179 (25%)

What led to the success?

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Commission on Cancer®

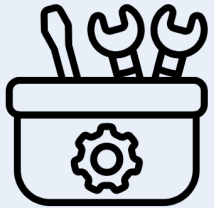
NAPBC
NATIONAL ACCREDITATION PROGRAM FOR BREAST CENTERS

Existing Infrastructure

- Cancer Committees
- Standards and quality measures
- Cancer Programs Organization

Coordination & Education

- Webinars
- Coaching
- Communication



Tools

- Protocol and methodology

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Opportunities

- Continue to offer pilot and/or national projects each year
  - Stay tuned!
- Attend the ACS Cancer Programs Spring meeting March 1-4
- Join the CoC QIC or CQMI Committee
  - As announced in the October 13 newsletter
  - Reach out to acscancerprograms@facs.org

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- Objectives as Chair of Commission on Cancer
  - Impact Quality of Rural Cancer Care
  - Develop Strategic Network Design for today
  - Find areas of mutual benefit to CoC and NCI
    - Improve collaboration

Parallel Paths

NCI's mission is to lead, conduct, and support cancer research across the nation to advance scientific knowledge and help all people live longer, healthier lives.

The mission of the Commission on Cancer (CoC) is a consortium of professional organizations (including the NCI) dedicated to improving survival and quality of life for **cancer** patients through standard-setting, prevention, research, education, and the monitoring of comprehensive quality care.

We don’t need dramatic Change

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Perhaps we can SHIFT…

Move slightly to align our goals and expectations

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A structured opportunity

- 71 NCI-Designated Cancer Centers
  - 7 Basic Laboratory Cancer Centers
  - 13 Cancer Centers
  - 51 Comprehensive Cancer Centers

- Surrounded by nearly 1500 CoC Programs
  - Each with a similar structure
  - Each with common standards to achieve

Potential Shift…

- CoC Programs could establish an expectation of therapeutic NCTN clinical trial accrual
- NCI Centers could seek CoC programs in their catchment area for common goals to impact their community
    - Deliver research projects relevant to the catchment area
    - Population Engagement
    - Address Disparities
    - Extend Reach of Research
- Programs and patients receive benefit

Conclusion

- NCI represents the Gold Standard in Cancer Research
- CoC represents the Gold Standard in Clinical Cancer Care, Standards of Care and Quality Improvement
- Tools like Dissemination and Implementation Science can foster faster adoption of advances
- We can do more working in collaboration, utilizing the structure of each powerful entity, to move research faster and achieve better clinical outcomes for more of our population

THANK YOU

Tim Mullett
Markey Cancer Center, University of Kentucky
859-229-7665
timothy.mullett@uky.edu

Update on CoC Quality Measures, Standards, Lymph Node Counts for Lung Cancer

Linda Martin, MD, MPH

Associate Professor with Tenure, Thoracic Surgery

Chief, Division of Thoracic Surgery

University of Virginia School of Medicine

@LindaMThoracic

University of Virginia Health System | UVA Cancer Center
An NCI-Designated Cancer Center

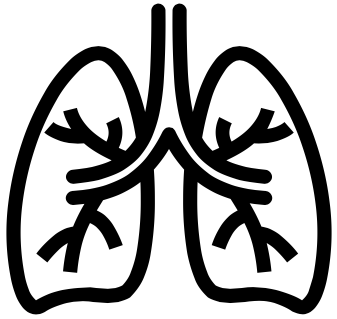
“People never improve unless they look to some standard or example higher or better than themselves.”
Tyron Edwards, American theologian
1809-1894

Cancer Surgery *Standards* Program (CSSP)

- The ACS launched the CSSP in June 2020, recognizing growing evidence that adherence to specific operative techniques leads to:

Longer survival

Better surgical outcomes



Improved quality of life

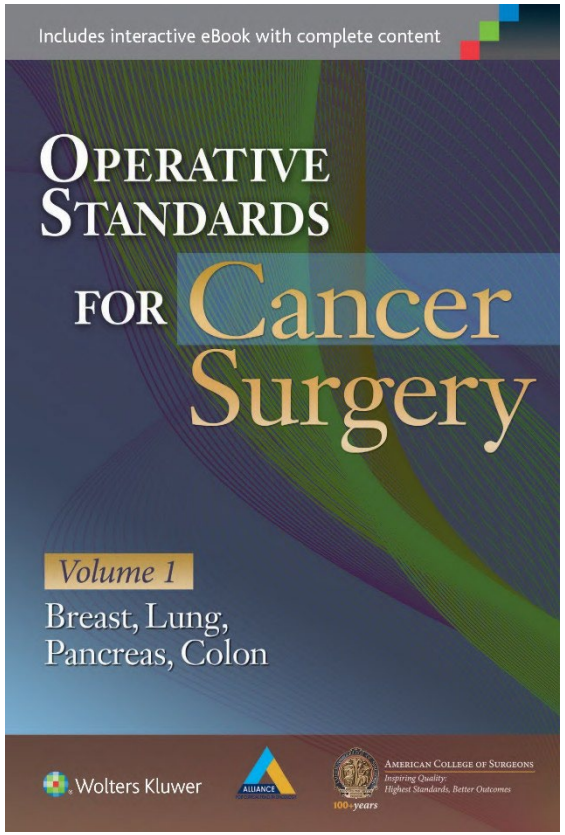
- Shift from standards based in facilities/equipment to **outcomes-based standards**

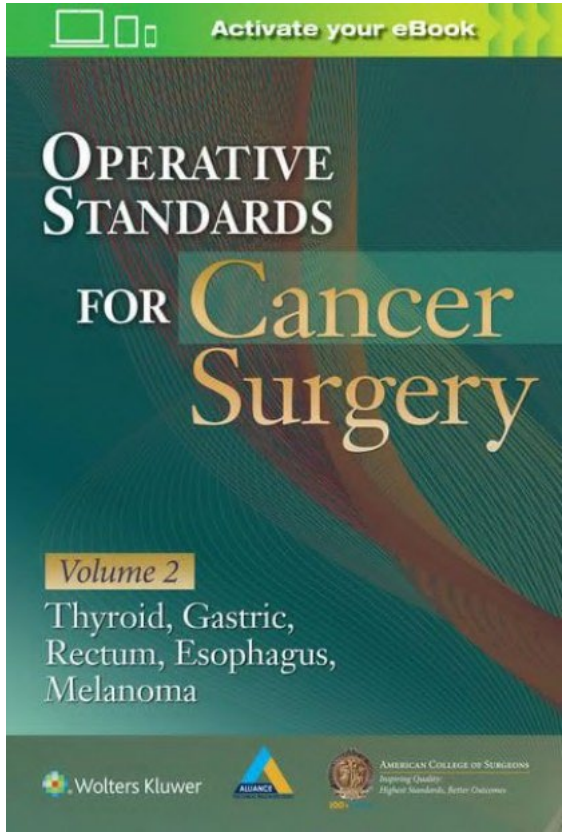
Cancer Surgery Standards Program (CSSP)

- Mission: To **improve the quality of care** for persons with cancer

- Goals:
  - **Set evidence-based standards** for the technical conduct of oncologic surgery
  - **Educate surgeons** on the key technical aspects of oncologic procedures
  - **Create tools** which support implementation and adherence to the standards
    - Synoptic operative report templates

Cancer Surgery Standards Program (CSSP)



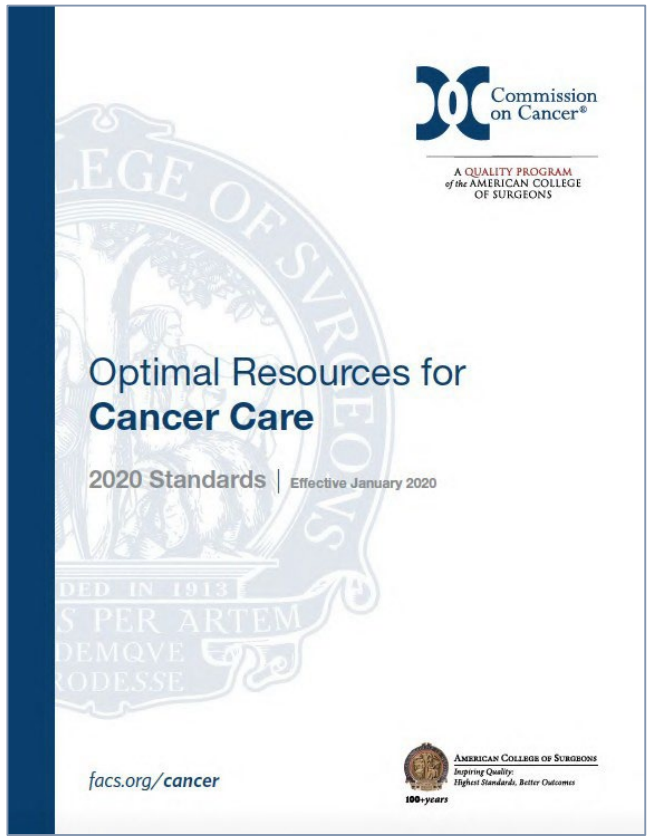


facs.org/cssp

Cancer Surgery Standards PROGRAM

American College of Surgeons
Inspiring Quality: Highest Standards, Better Outcomes
100+years

The CoC Operative Standards (2020)

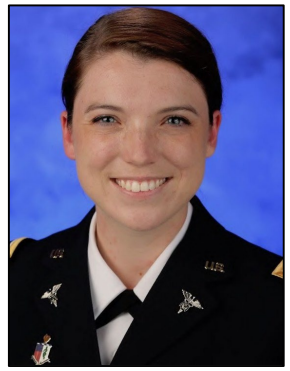


Standard	Disease Site	Procedure	Documentation
5.3	Breast	Sentinel node biopsy	Operative report
5.4	Breast	Axillary dissection	Operative report
5.5	Melanoma	Wide local excision	Operative report
5.6	Colon	Colectomy (any)	Operative report
5.7	Rectum	Mid/low resection (TME)	Pathology report (CAP)
5.8	**Lung**	**Lung resection (any)**	**Pathology report (CAP)**

Multidisciplinary Panel

Michael Archer, DO
SUNY Upstate
Thoracic Surgery

Kimberly Absher, MD
UK Markey Cancer Center
Pathology



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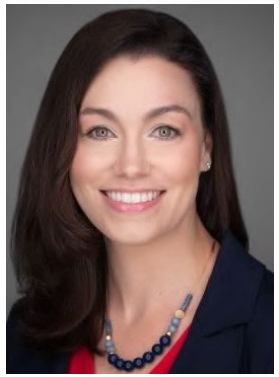
Brooke Army Medical Center
General Surgery Resident



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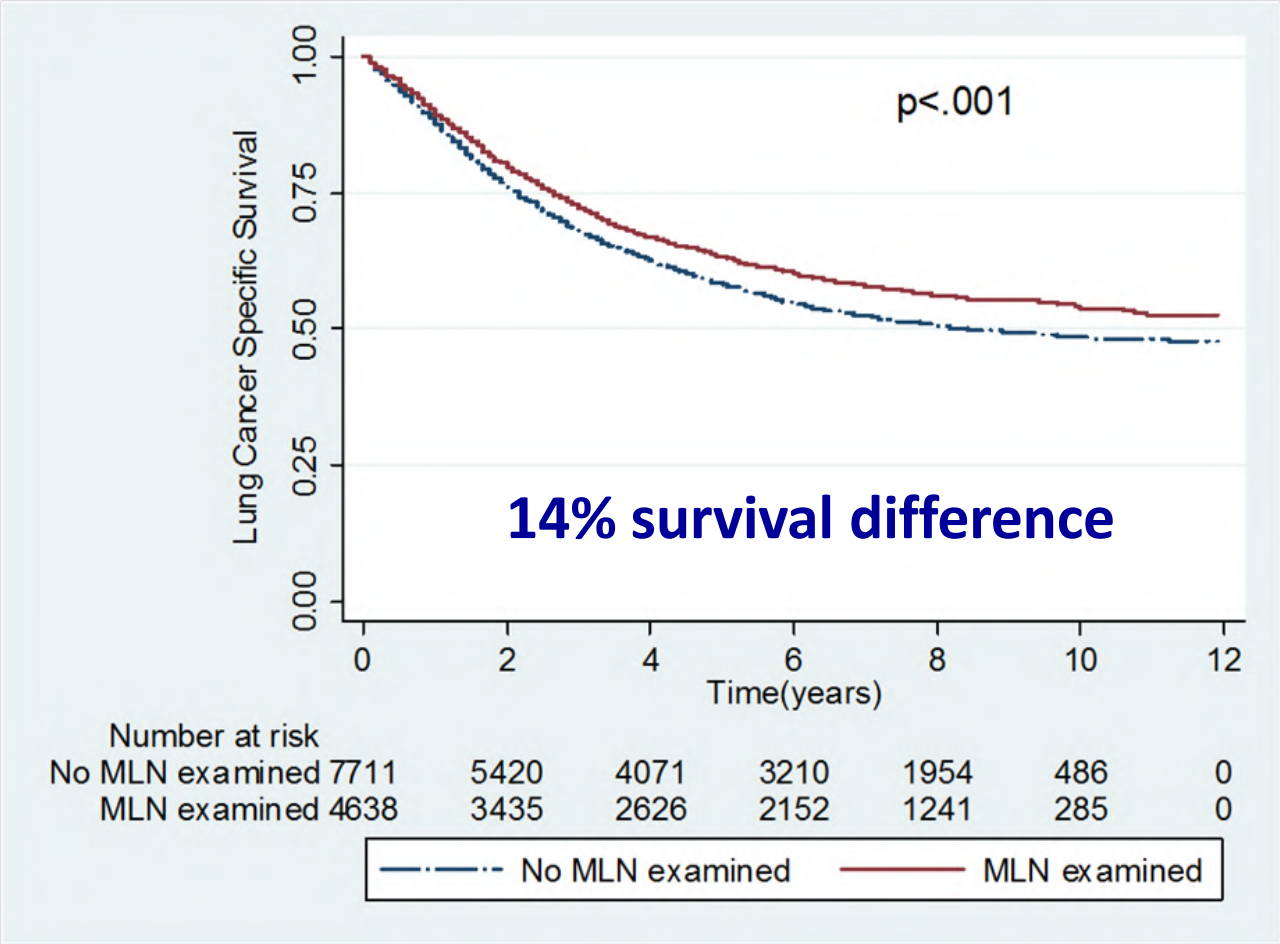
Examining Mediastinal Lymph Nodes Improves Survival



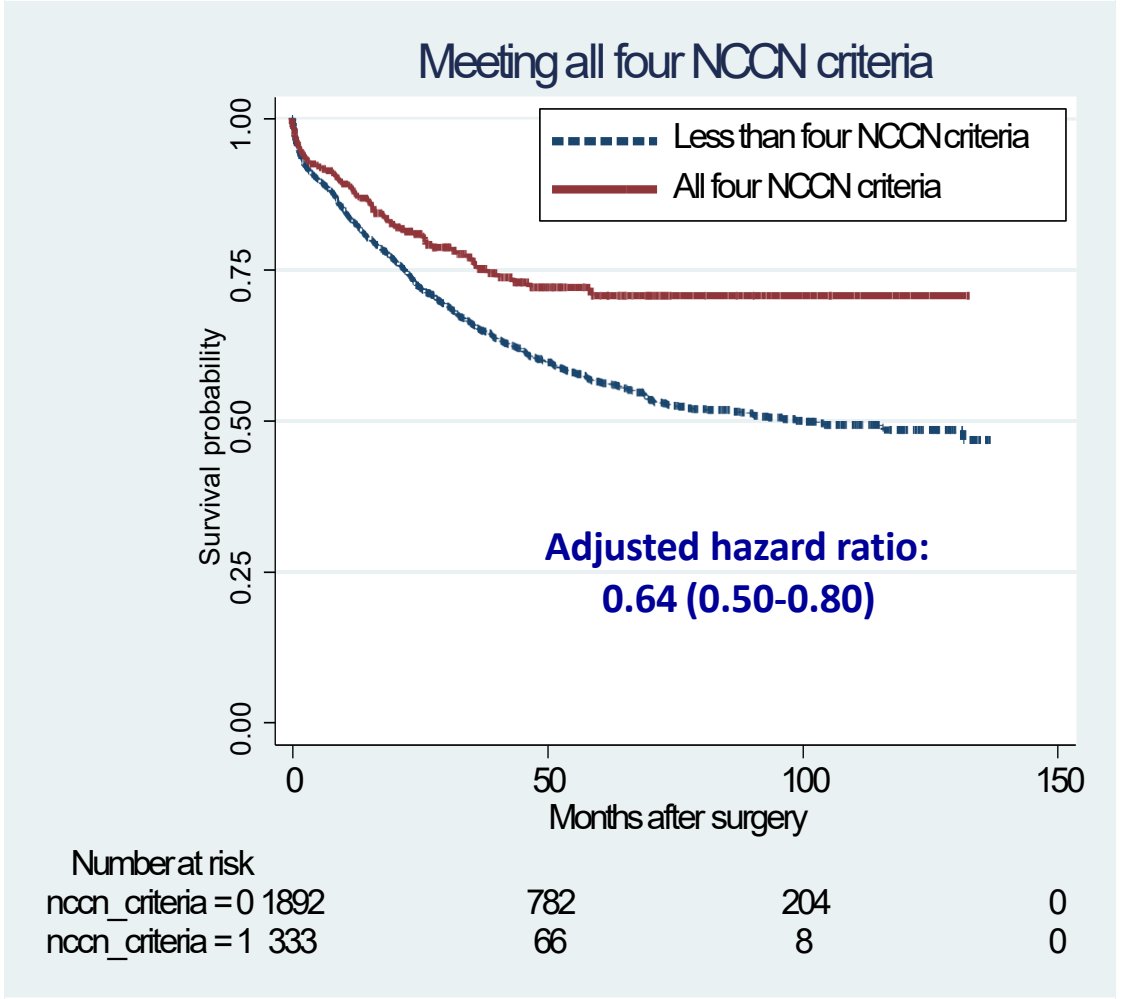
Osarogiagbon et al. 2012

Examining Mediastinal Lymph Nodes Improves Survival

Following NCCN guidelines improves survival

NCCN Guidelines:

1. Anatomic resection
2. Negative margins
3. Examination of hilar/ intrapulmonary LNs
4. Examination of ≥3 mediastinal LNs



Osarogiagbon et al. 2017

Pulmonary Resection Critical Elements: Lymph node staging

- Mediastinal staging prior to treatment (radiographic or invasive)
- Invasive mediastinal staging for central tumors, clinical N1 disease and tumors >3cm
- Confirmation of imaging findings at thoracic exploration
- **Mediastinal staging at the time of lung resection**

<u>Any curative intent lung resection, including:</u>

Non-small cell lung cancer
Small cell lung cancer
Carcinoid tumor

Nelson et al. 2015

Standard 5.8: Pulmonary Nodal Staging

1 hilar lymph node

1 + 3 RULE

3 mediastinal lymph nodes
(3 distinct stations)

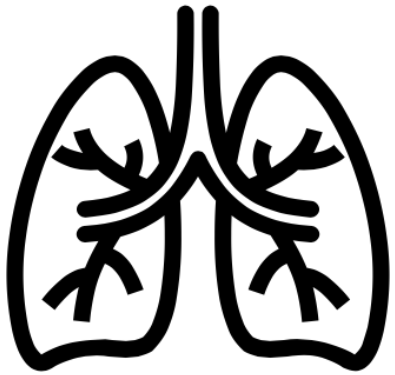
Standard 5.8: Lung Resection

Technique

Pulmonary Resection: Lymph Node Stations

LEFT

9L
8L
7
6
5
(4L & 2L if accessible)



RIGHT

9R
8R
7
10R
4R
2R

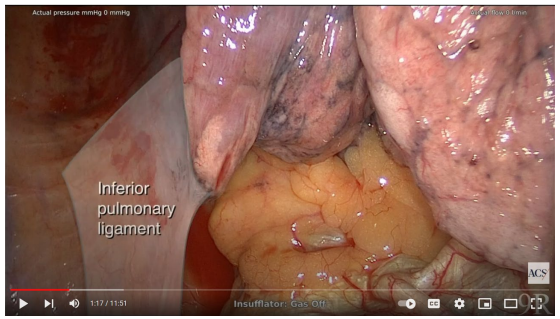
Mediastinal stations:

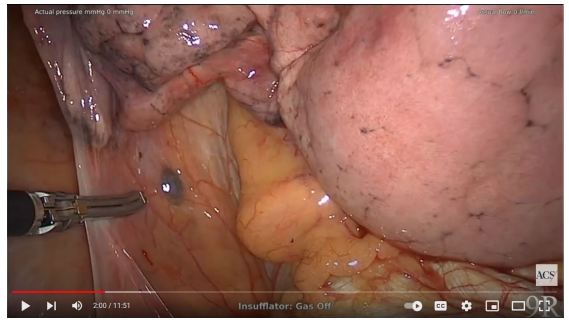
Single digit (2-9)

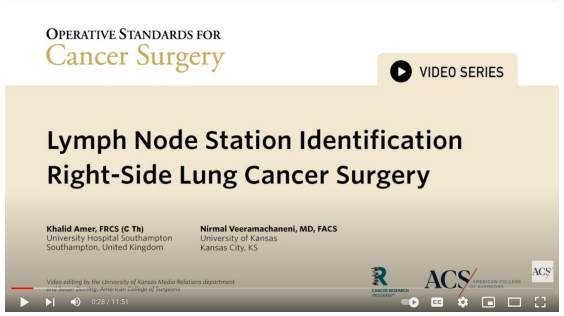
Hilar stations:

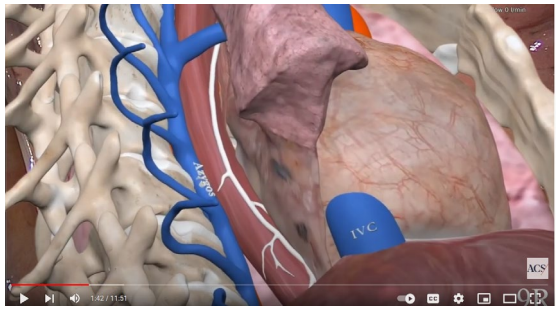
Double digit (10+)

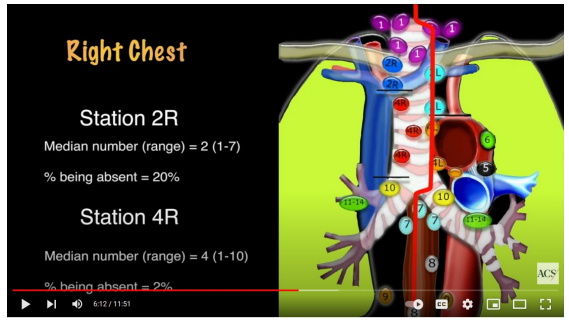
Operative Standards in Cancer Surgery: Lymph Node Station Identification Right-Side Lung - YouTube







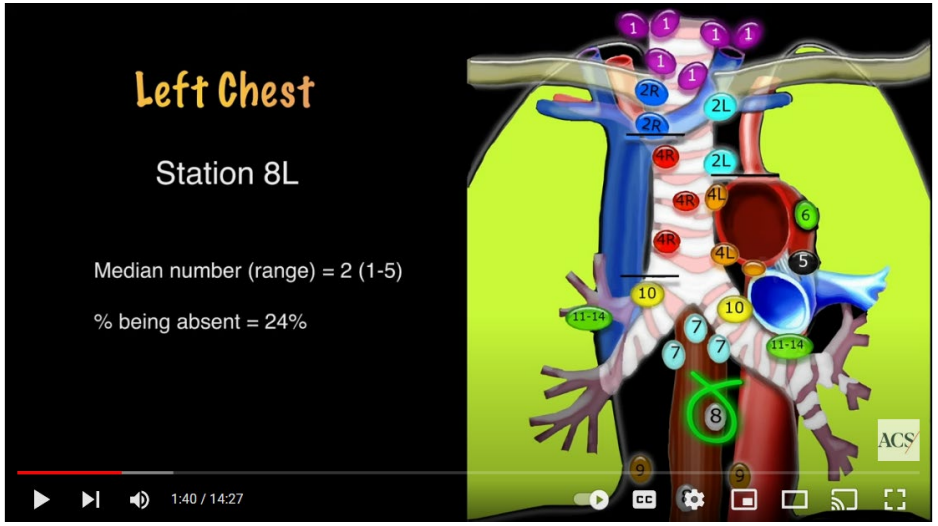




American College of Surgeons You Tube Channel
Released May 4, 2022

Produced by
Mr. Khalid Amer and
Dr Nirmal Veeramachaneni

Operative Standards in Cancer Surgery: Lymph Node Station Identification Left-Sided Lung - YouTube



American College of Surgeons You Tube Channel
Released October 2022

Produced by
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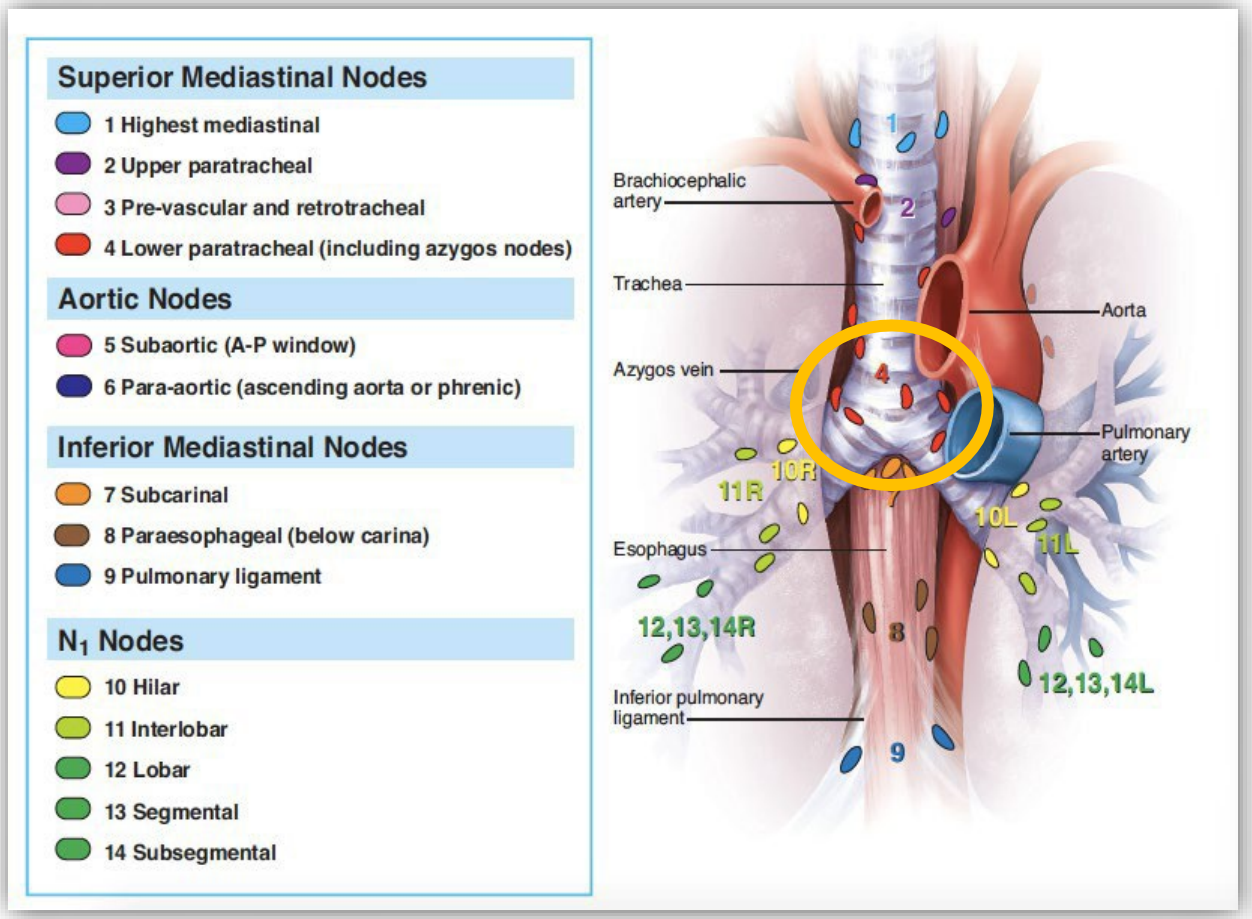
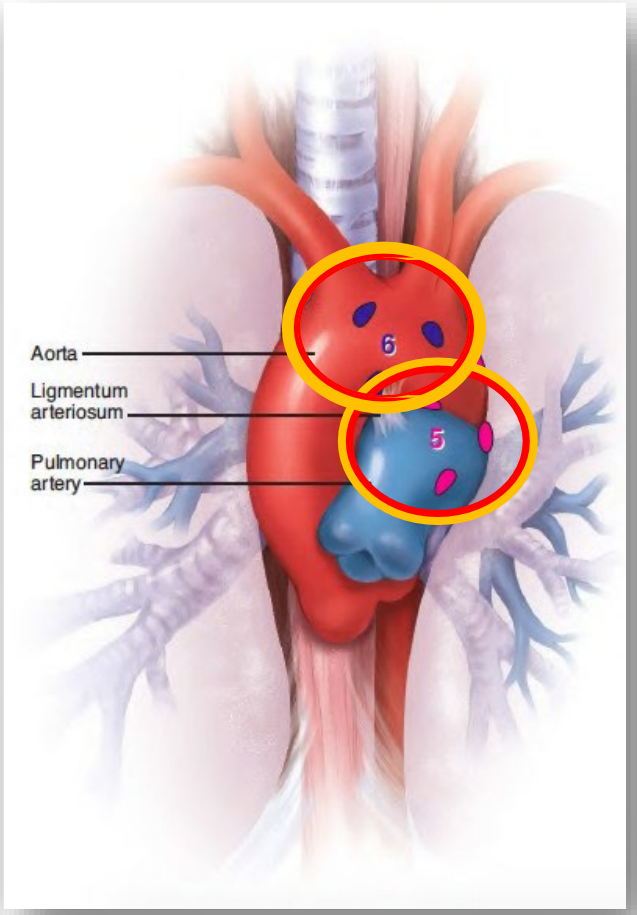
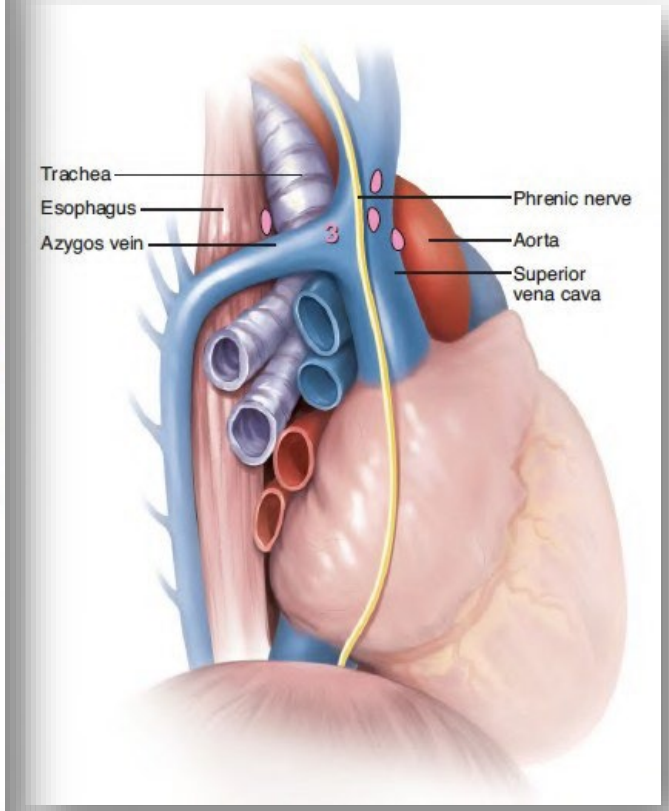
Dr Nirmal Veeramachaneni

Lymph Node Stations







Nelson et al. 2015

Standard 5.8: Pulmonary Nodal Staging

1 hilar lymph node

1 + 3 RULE

3 mediastinal lymph nodes
(3 distinct stations)

Note: IASLC is THREE N1 and THREE N2

Standard 5.8: Lung Resection

Documentation, Implementation Timeline & Compliance

CoC Compliance Measures: Standard 5.8

1) The hilum and mediastinum should be **thoroughly staged at the time of lung resection,** even in patients undergoing non-anatomic parenchyma sparing resection (i.e. a wedge resection)

2) The surgical pathology report must contain lymph nodes from at least **one hilar station** and **at least three distinct mediastinal stations**

3) The nodal stations examined by the pathologist must be documented in curative pulmonary resection pathology reports **in synoptic format**

Example of a CAP Lung Resection Synoptic Report

CAP Approved **Thorax • Lung • Resection • 4.1.0.1**

Surgical Pathology Cancer Case Summary

Protocol posting date: February 2020

LUNG: Resection

Select a single response unless otherwise indicated.

Synchronous Tumors (required if morphologically distinct unrelated multiple primary tumors are present)
___ Present#
Specify total number of primary tumors identified: ___
Specify nodal station(s) examined: _____
___ Cannot be determined

 # Morphologically distinct tumors that are considered to represent separate primary lung cancers should have separate synoptic reports

Procedure (select all that apply)
___ Wedge resection
___ Segmentectomy
___ Lobectomy
___ Completion lobectomy
___ Sleeve lobectomy
___ Bilobectomy
___ Pneumonectomy
___ Major airway resection (specify): _____
___ Other (specify): _____
___ Not specified

(…and other sections)

Lymph Node Examination (required only if lymph nodes present in the specimen)

Number of Lymph Nodes Involved: ____
___ Number cannot be determined (explain): _____
Specify nodal station(s) involved (applicable only if node(s) involved): _____

Number of Lymph Nodes Examined: ____
___ Number cannot be determined (explain): _____
Specify nodal station(s) examined: _____

+ Extranodal Extension (Note J)
+ ___ Not identified
+ ___ Present
+ ___ Cannot be determined

Treatment Effect (Note I)
___ No known presurgical therapy
___ Greater than 10% residual viable tumor
___ Less than or equal to 10% residual viable tumor
___ Cannot be determined

Number of Lymph Nodes Involved: ____
___ Number cannot be determined (explain): _____
Specify nodal station(s) involved (applicable only if node(s) involved): _____

Number of Lymph Nodes Examined: ____
___ Number cannot be determined (explain): _____
Specify nodal station(s) examined: _____

How will compliance be assessed?

- A site visit reviewer will review the **standardized synoptic pathology reports** for curative intent pulmonary resections

- By 2023, sites will be expected to have **80% compliance**

Timeline to Achieve Compliance: Standard 5.8

Compliance and Site Reviews →

Site Visits review 2021 pathology reports for **70% compliance**

Site Visits review 2021 & 2022 pathology reports for **80% compliance**

Site Visits review 2021, 2022, and 2023 pathology reports for **80% compliance**

Communicate requirements & engage clinicians in implementation plans

Measure compliance with synoptic pathology reports and assure high reliability at **70% compliance**

← **Steps to Achieve Compliance**

Compliance levels for 5.7 & 5.8

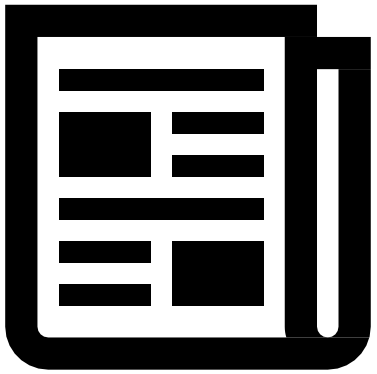
Visit Year	Standard	Materials Assessed	Requirement
2022	5.7	7 rectal pathology reports from 2021	70% compliance
	5.8	7 lung pathology reports from 2021	70% compliance
2023	5.7	7 rectal pathology reports from 2021-2022	80% compliance
	5.8	7 lung pathology reports from 2021-2022	80% compliance
2024	5.7	7 rectal pathology reports from 2021-2023	80% compliance
	5.8	7 lung pathology reports from 2021-2023	80% compliance
2025	5.7	7 rectal pathology reports from 2022-2024	80% compliance
	5.8	7 lung pathology reports from 2022-2024	80% compliance

LINDA'S TIPS AND TRICKS

- It does NOT count if you document that you LOOKED but didn't FIND

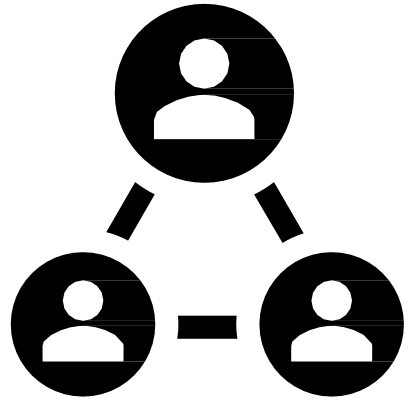
  - ***TALK TO YOUR PATHOLOGISTS***
  - ***REVIEW IN TUMOR BOARD***
  - ***AUDIT EVERY 3-4 MONTHS***

How Can Programs Optimize Compliance?



Ensure institution is utilizing **standardized CAP reports** for all lung cancer procedures

Document performance of lymph node sampling during pulmonary resection & label stations **clearly** in operative note



Encourage communication amongst surgeons, pathologists, & registrars

Pre-labeled Specimen Collection Kits and Checklists Improve Communication

Overall performance of mediastinal lymph node examination

Median number of MLN examined:

1 → 6

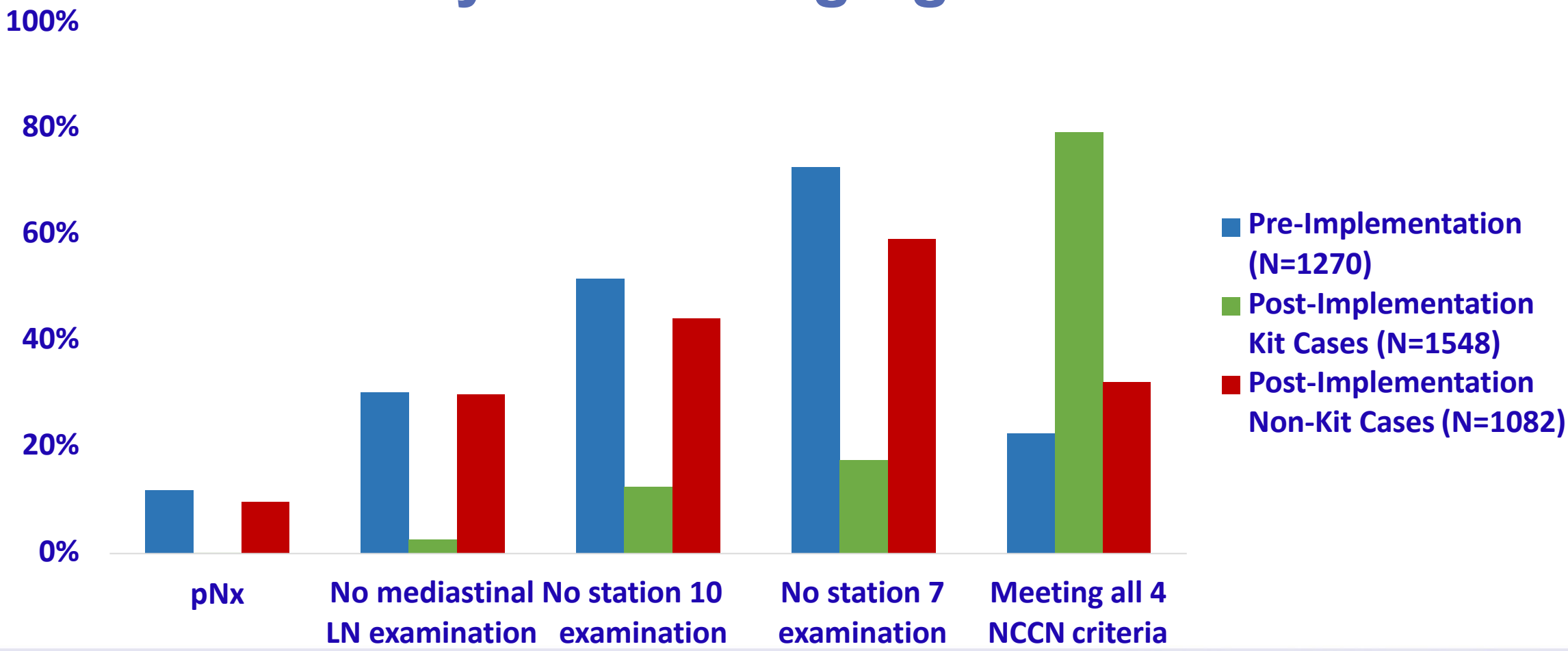
Concordance in surgeons' and pathologists' reporting

39% → 80%

Osarogiagbon et al, 2012

Osarogiagbon et al, 2015

Standardized Collection Kits Improve Compliance With Pulmonary Nodal Staging



Courtesy of Dr. Osarogiagbon

Commission on Cancer Operative Standards 2020

Standard 5.8: Pulmonary Resection

Summary

Operation

For any primary pulmonary resection performed with curative intent
(including non-anatomic parenchymal-sparing resections)

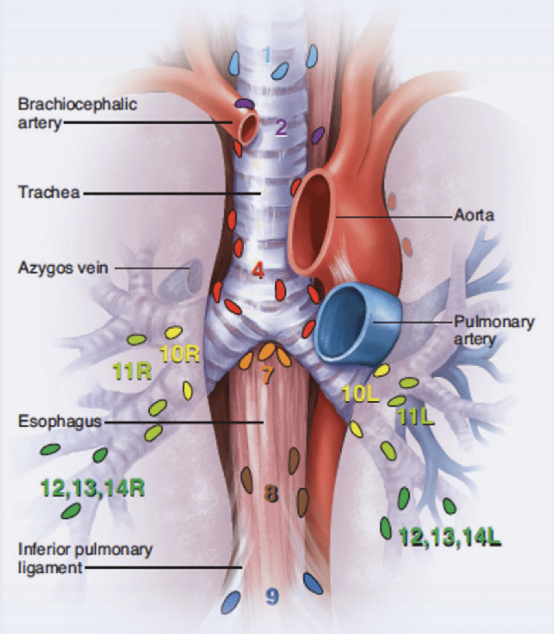
Resect nodal stations from:

Mediastinum
(Stations 2-9)
≥3 distinct stations

Hilum
(Stations 10-14)
≥1 station

Pathology Documentation

Synoptic report documents lymph nodes from:



≥ 1 hilar station

≥ 3 mediastinal stations

with names and/or numbers of stations

When?

2021:
Implementation

2023
80% Compliance

facs.org/**cssp**

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AMERICAN COLLEGE OF SURGEONS

American College of Surgeons
Inspiring Quality: Highest Standards, Better Outcomes
100+years

References

1. Darling GE, Allen MS, Decker PA, et al. Randomized trial of mediastinal lymph node sampling versus complete lymphadenectomy during pulmonary resection in the patient with N0 or N1 (less than hilar) non-small cell carcinoma: Results of the American College of Surgery Oncology Group Z0030 Trial. J Thorac Cardiovasc Surg. 2011;141(3):662-670.
2. De Leyn P, Dooms C, Kuzdzal J et al. Revised ESTS guidelines for preoperative mediastinal lymph node staging for non small- cell lung cancer. Eur J Cardiothorac Surg. 2014;45(5): 787-98.
3. National Comprehensive Cancer Network. NCCN clinical practice guidelines: Non-small cell lung cancer. Version 6.2019. August 12, 2019.
4. Nelson H, Hunt KK, Veeramachaneni N, et al. Operative Standards for Cancer Surgery, Volume I. Chicago, IL: Wolters Kluwer; 2015.
5. Osarogiagbon RU, Miller LE, Ramirez RA, et al. Use of a surgical specimen-collection kit to improve mediastinal lymph-node examination of resectable lung cancer. J Thorac Oncol. 2012 Aug;7(8):1276-82.
6. Osarogiagbon RU, Ray MA, Faris NR, et al. Prognostic value of National Comprehensive Care Network Lung cancer resection quality criteria. Ann Thorac Surg. 2017;103: 1557-65.
7. Osarogiagbon RU, Sareen S, Eke R et al. Audit of lymphadenectomy in lung cancer resections using a specimen collection kit and checklist. Ann Thorac Surg. 2015;99(2): 421-427.
8. Osarogiagbon RU, Yu X. Nonexamination of lymph nodes and survival after resection of non-small cell lung cancer. Ann Thorac Surg. 2013;96:1178-89.

“People never improve unless they look to some standard or example higher or better than themselves.”
Tyron Edwards, American theologian
1809-1894

Useful Resources

https://www.facs.org/-/media/files/quality-programs/cancer/cssp/58_visual_abstract.ashx

Right-Side Cancer Lung Resection (Graphic Imagery) | Surgical Videos | ACS – YouTube
Left-Side Cancer Lung Resection (Graphic Imagery) | Surgical Videos | ACS - YouTube

https://youtu.be/obswNxohVek

https://surgonctoday.libsyn.com/commission-on-cancer-standard-58-best-practices-to-meet-to-standard-for-nodal-assessment-during-a-curative-operation-for-lung-cancer

https://www.facs.org/-/media/files/quality-programs/cancer/cssp/webinar_standard_5_8_pulmonary_resection.ashx

https://www.facs.org/-/media/files/quality-programs/cancer/cssp/best_practices_57_58_webinar.ashx
2022 Site Visit Preparation for CoC Standards 5.7 & 5.8 (facs.org)

CoC Operative Standard 5.8

Geisinger

Matthew A Facktor MD FACS
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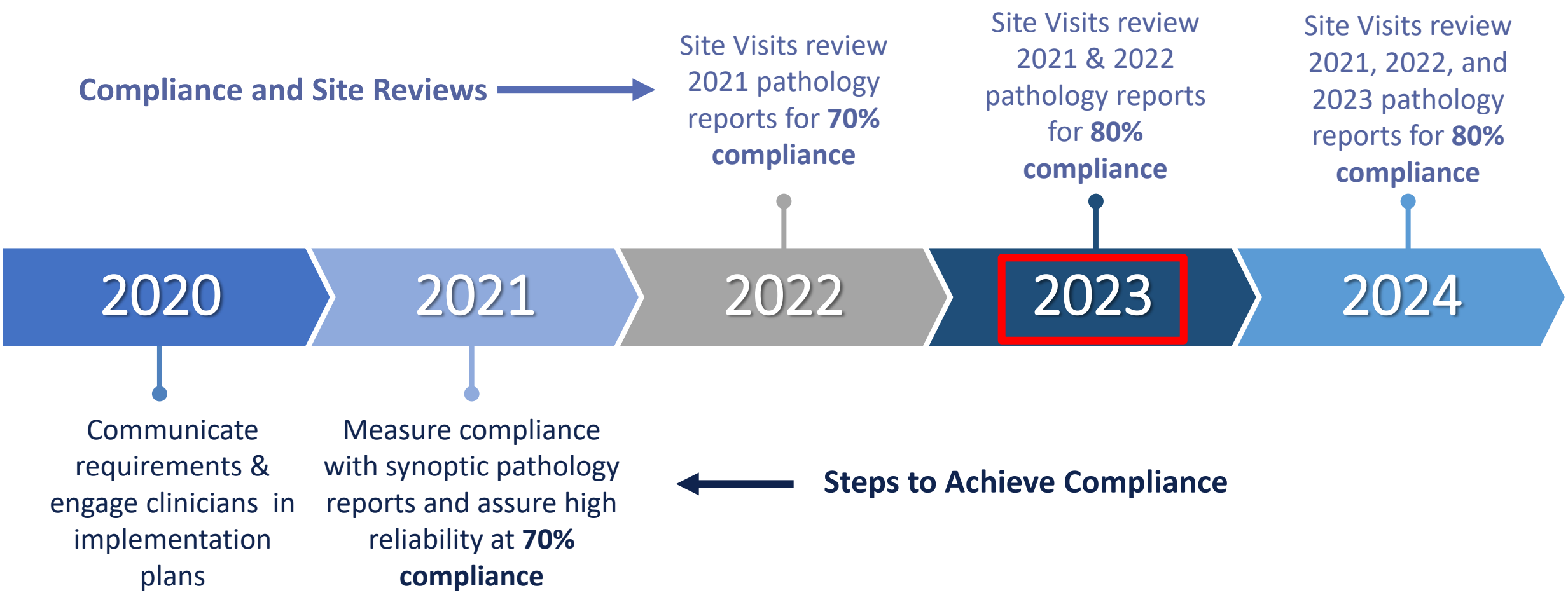
Implementation Timeline for Standards 5.7 & 5.8



CoC Compliance Measures: Standard 5.8

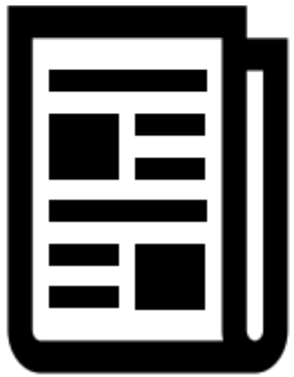
1) The hilum and mediastinum should be **thoroughly staged at the time of lung resection,** even in patients undergoing non-anatomic parenchyma sparing resection (i.e. a wedge resection)

2) The surgical pathology report must contain lymph nodes from at least **one hilar station** and **at least three distinct mediastinal stations**

3) The nodal stations examined by the pathologist must be documented in curative pulmonary resection pathology reports **in synoptic format**

How Can Programs Optimize Compliance?

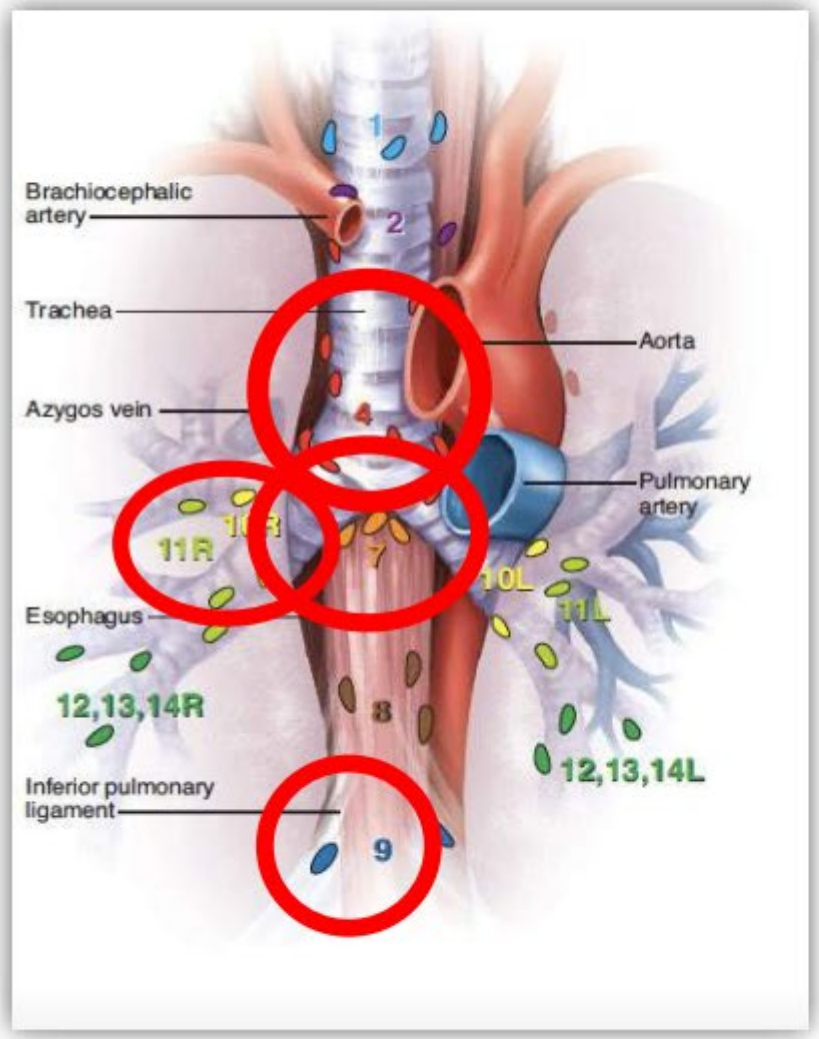
Label nodal stations **clearly and separately** during performance of pulmonary resection



Ensure institution is utilizing **standardized CAP reports** for all lung cancer procedures

Encourage communication amongst surgeons, pathologists, & registrars

Lymph Node Stations



Station 4R

Station 7

Station 9R

Station 11R

Four separate specimens sent to pathology, clearly labeled.

Nelson et al. 2015

Pre-labeled Specimen Collection Kits & Checklists Improve Communication

Commission on Cancer®
A QUALITY PROGRAM of the AMERICAN COLLEGE OF SURGEONS

Overall performance of mediastinal lymph node examination

Median number of MLN examined:

1 → 6

Concordance in surgeons' and pathologists' reporting

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Osarogiagbon et al, 2012

Osarogiagbon et al, 2015

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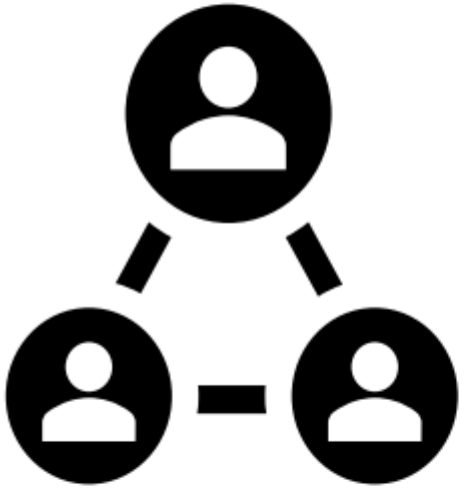
Nodes from Mediastinoscopy (prior)

- Nodes from mediastinoscopy can be utilized to meet requirements of Standard 5.8 if:
  - Documented in the same pathology report as the curative resection

- However endobronchial ultrasound (EBUS) needle biopsies of lymph nodes do not count towards Standard 5.8

How Can Programs Optimize Compliance?



We encourage every institution to determine their own pathway to ensure the following:

- Adequate nodal sampling during surgery
- Proper pathologic evaluation
- Correct documentation of which nodal basins were resected and examined
- Correct data capture by registrars.

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What is Synoptic Reporting?

facs.org/cssp

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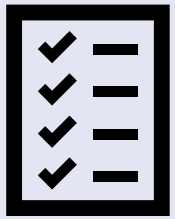
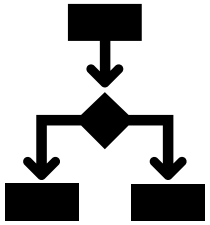
Synoptic Reporting



Standardized data elements organized as a **structured checklist or template**



Each data element's value is "filled in" using a **pre-specified format** to ensure interoperability of information

- The information being sought is standardized
- The options for each variable are constrained to a pre-defined set of responses

Synoptic reports allow information to be easily **collected, stored, and retrieved**

Narrative Reporting vs. Synoptic Reporting

Narrative reporting…

- May be constructed using pre-determined data fields and pre-determined responses
- Constructed by dictation, free text, smarttext, etc.
- May use standardized terminology
- Presented in a **prose** format
- Prone to **omission** of necessary data and **inconsistencies** in language and formatting
- May allow for discrete data capture

Synoptic reporting…

- **Always** constructed using pre-determined data fields and pre-determined responses
- Typically created using a **tool**
- **Always** uses standardized terminology
- Presented in **checklist** format
- **Always** allows for discrete data capture
  - Information is formatted so it can be collected, stored, and is easily retrievable for data repositories and analysis
  - Can automatically populate data from the EHR

A note may (ideally?) be a combination of the two!

Hieken et al., Technical Standards for Cancer Surgery: Improving Patient Care through Synoptic Operative Reporting. *Ann Surg Oncol* 2022.
Hieken et al., ASO Author Reflections: Surgeons Adding Value – Are Synoptic Operative Reports a Step Forward in Cancer Care? *Ann Surg Oncol 2022.*

Synoptic vs. Narrative Reports

Outcome or Subgroup	# Studies	N	Statistical Method	Effect Estimate – Synoptic v. Narrative	
Efficiency					
Time to complete (min)	6	891	Mean Difference (95% CI)	−0.86 m [-1.17, −0.55]	★
Time to verified report in EMR (hours)	1	336	Mean Difference	−373.53 h	
Quality					
Accuracy	1	208	Mean Difference (95% CI)	40.60% [38.54, 42.66]	
Reduction Critical Error (% of op notes)	1	110	Mean Difference	32.13%	★
Reduction Error Rate (% of op notes)	1	110	Mean Difference	75.26%	★
Validity	1	208	Mean Difference (95% CI)	3.40% [2.02, 4.78]	
Cost ($/note)	2	72	Mean Difference	-$8.27	

Stogryn et al., Am J Surg 2019. 218(3): 624-30.

What is the value of Synoptic Operative Reporting?

- Improve accuracy of documentation
- Improve efficiency of data entry and data abstraction
- Reinforce education (can emphasize the critical elements of oncologic operations)
- Reduce variability in care
- Improve quality of cancer care

American College of Surgeons

Protocol for Cancer Surgery Documentation: Lung Cancer

Name: ACS.CSSP.protocol.lung.2022.v1

What this Protocol Includes and Covers

- A synoptic operative report for lung cancer surgery
  - Section 1: EMR Autopopulated Information
  - Section 2: Cancer-Specific Information *(required)*
  - Section 3: Additional Procedure Details
- The synoptic operative report summary template
- Knowledge Platform with explanatory notes

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Quality Measures 2023 and Beyond

Dan Boffa

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Disclosures

- Iovance

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Best Care through Best Practices

Quality Assurance and Data Committee (QADC)

Best Care through Best Practices

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NCDB

Bryan Palis
NCDB

Quality Measure

A high-priority best practice in cancer care

- performance tracked by the CoC
- shared with member institutions

Quality Measure

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- performance **tracked** by the CoC
- shared with member institutions

A high-pr ncer care

- per CoC
- sha tions

A high-pr ncer care

- per CoC

- sha tions

“Tracked”

- Compliance rate calculated for each CoC hospital
- Summary statistics generated

A high-

cer care

- pe

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Commission on Cancer Standard

- Something CoC asks hospitals to do, that impacts CoC accreditation status

Commission on Cancer Standard

- Something CoC asks hospitals to do, that impacts CoC accreditation status

- A subset of measures (around 6-9) are a part of a standard (7.1)

Commission on Cancer Standard

- Something CoC asks hospitals to do, that impacts CoC accreditation stat
- A su

Low Compliance with ***a subset*** of the quality measures will impact accreditation status

Some Measures are Standards

- Surgery not first course of treatment for stage III lung cancer

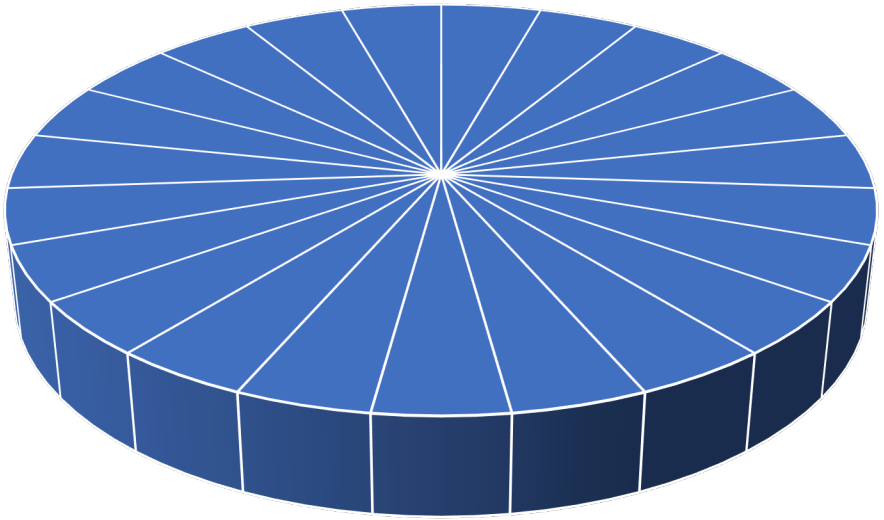
Some Standards not Measures

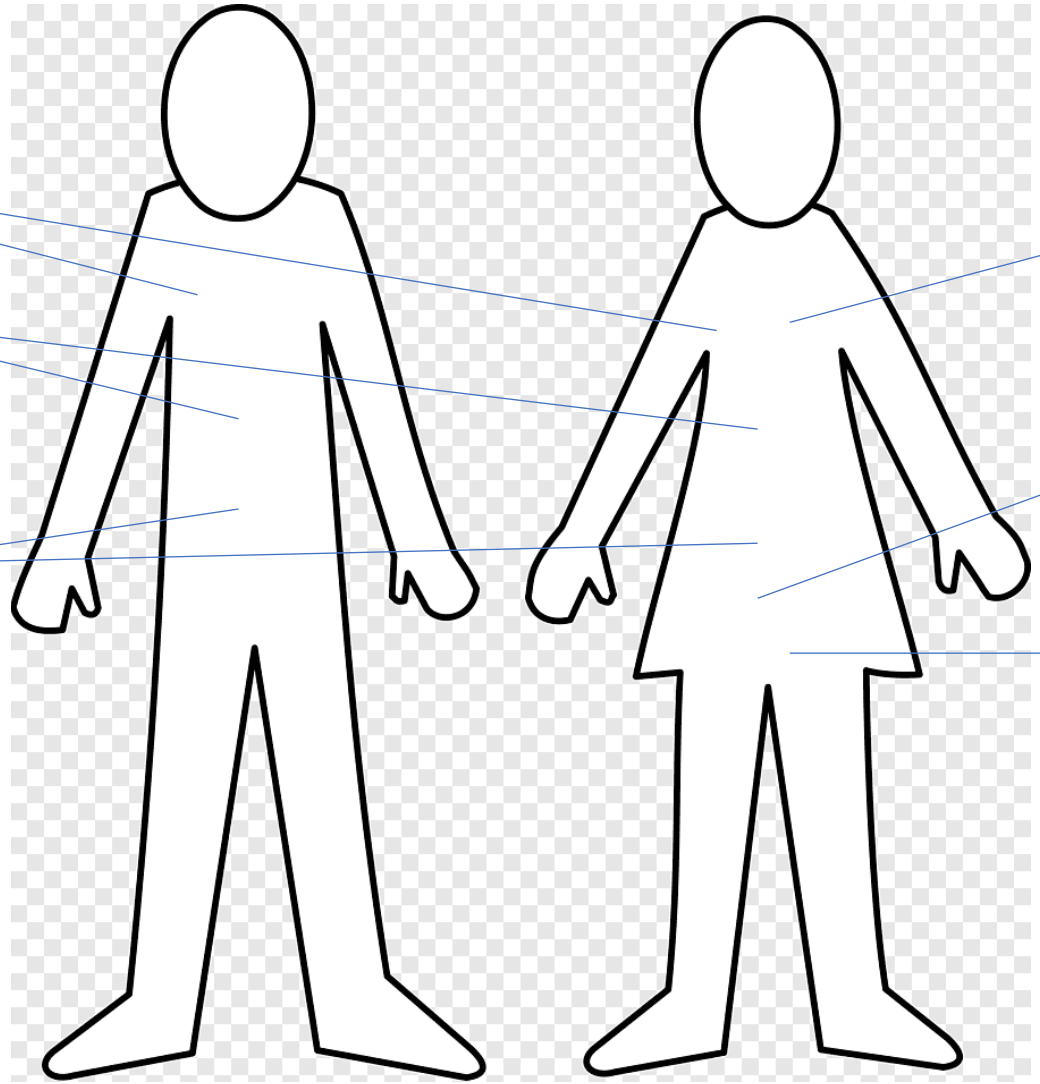
- 5.8 = 3 mediastinal nodes and one hilar node for all resections

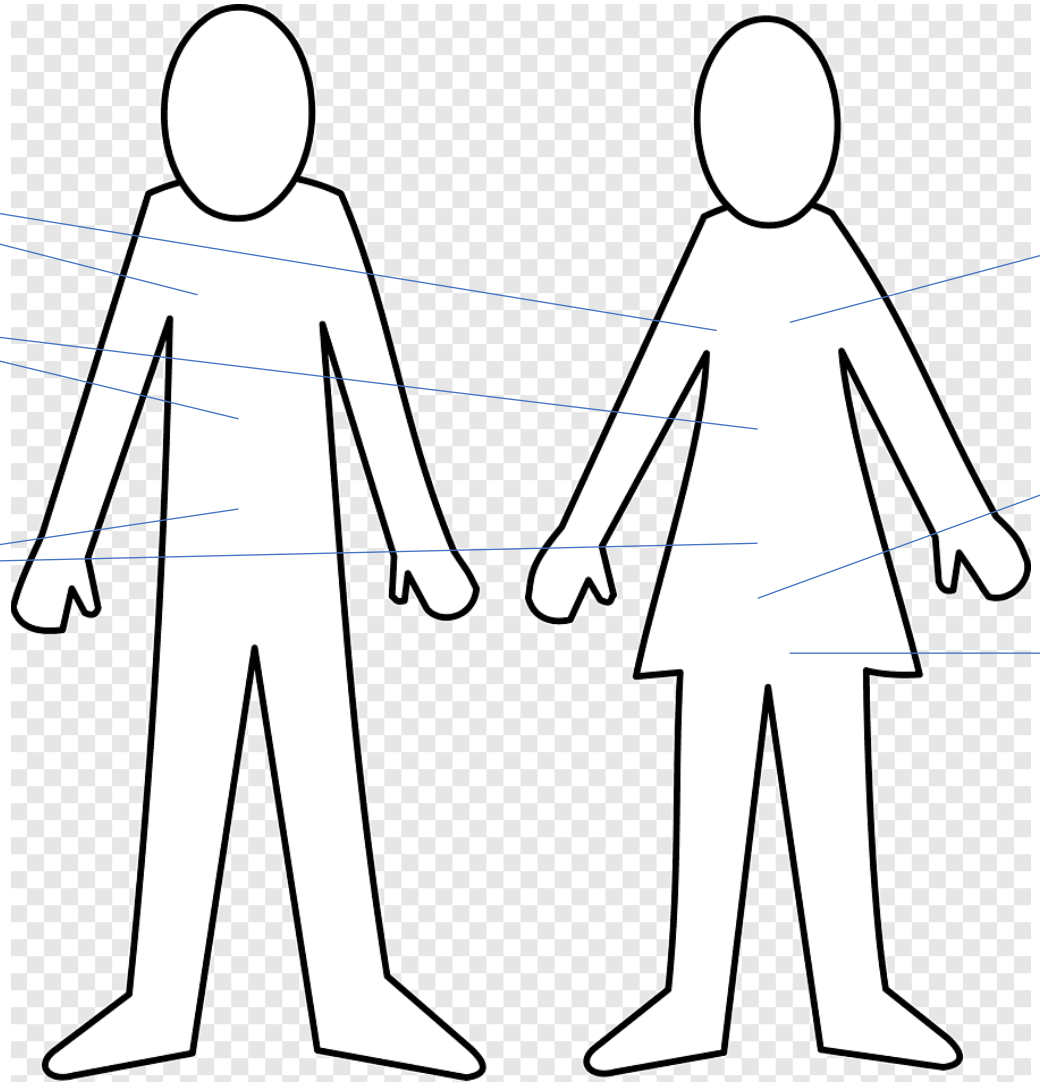
Quality Measure Portfolio past→ future

- Renovation
- 23 measures → 30 *optimized* measures

23 CoC Measures




Lung x 3
Gastric x 1
Colorectal x 3
Breast x 6
Bladder x 3
Gyne x 7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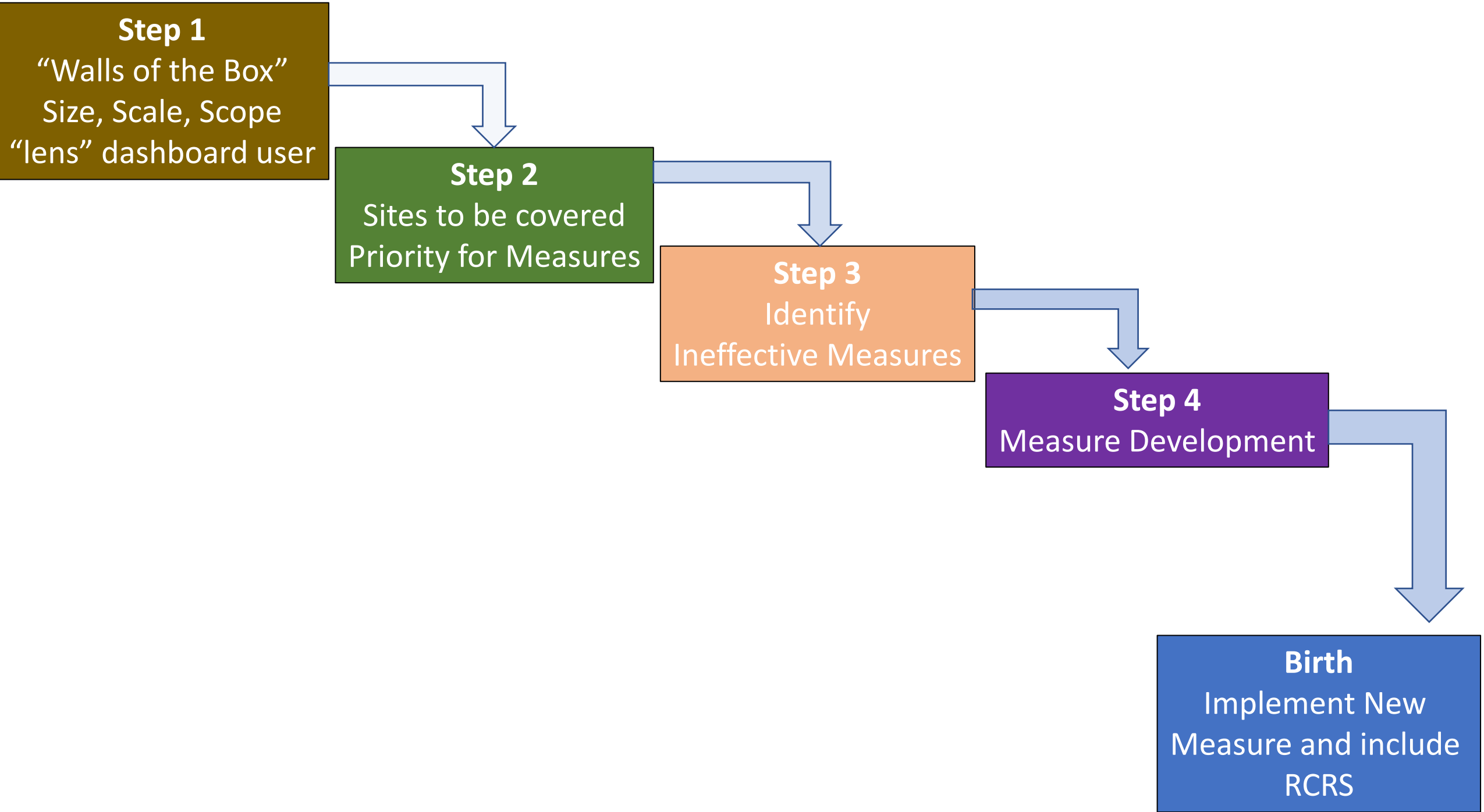

Step 1
“Walls of the Box”
Size, Scale, Scope
“lens” dashboard user
Step 2
Sites to be covered
Priority for Measures
Step 3
Identify
Ineffective Measures
Step 4
Measure Development
Birth
Implement New
Measure and include
RCRS

Sites Covered “Disease-team” approach

- Breast
- Thoracic
- Genitourinary
- Gyne-Onc
- GI
- Colorectal
- Hepatopancreaticobiliary
- Head and Neck
- Melanoma/Sarcoma/mixed tissue
- Neuro-onc

Henry Park
Radiation Oncology

Tim Mullet
Surgery

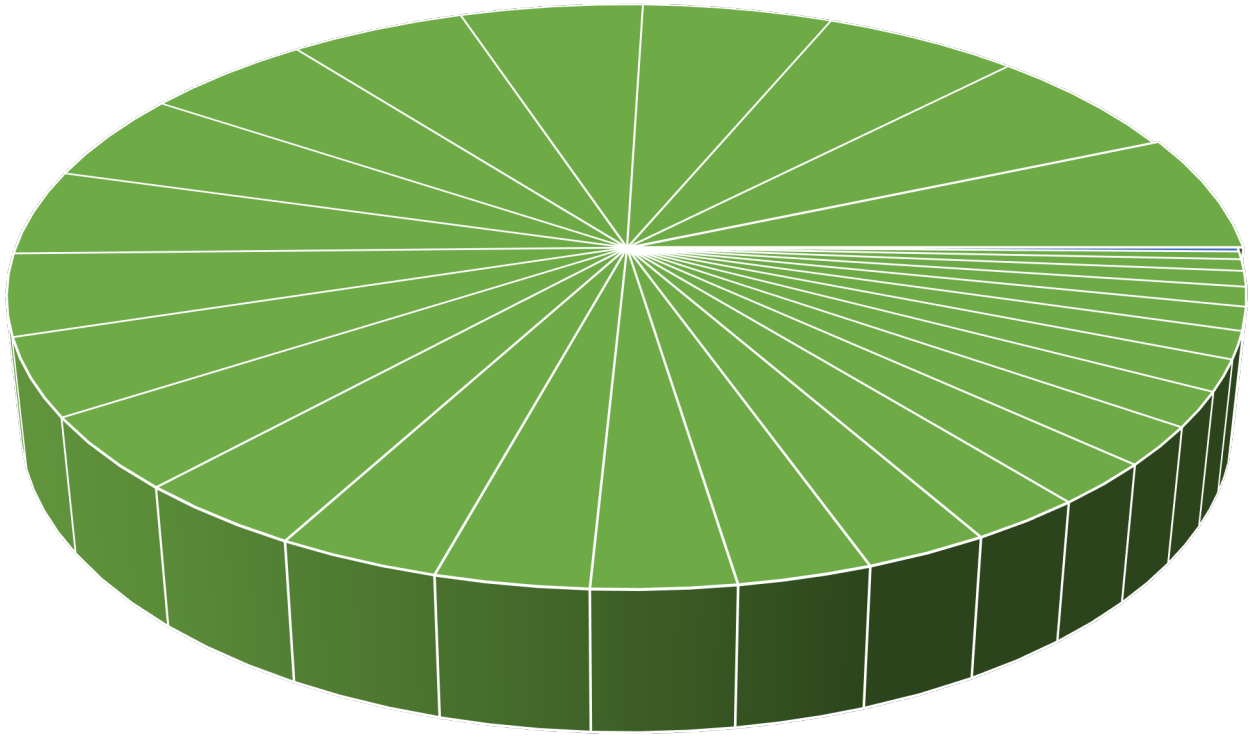
David Cooke
Surgery

Linda Martin
Surgery

Collin Blakely
Medical Oncology

- 10 disease teams
- Propose 3 feasible measures

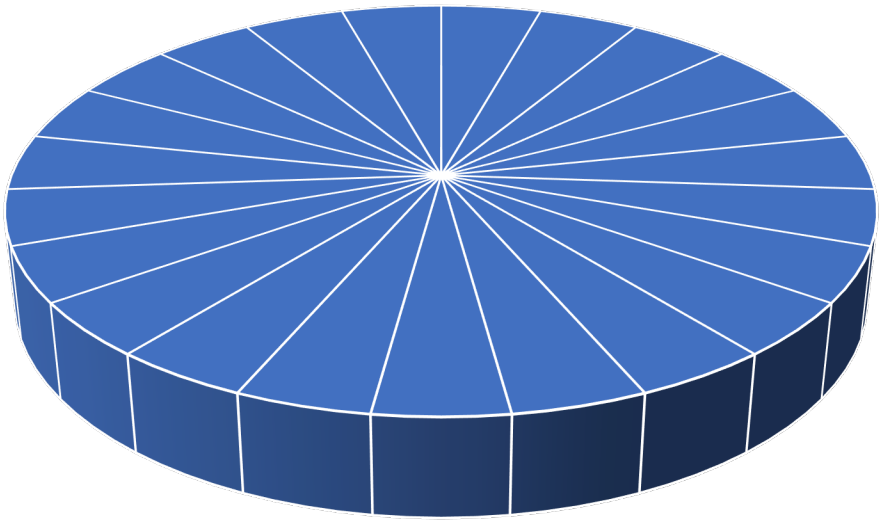
30 ***Optimized*** CoC Measures



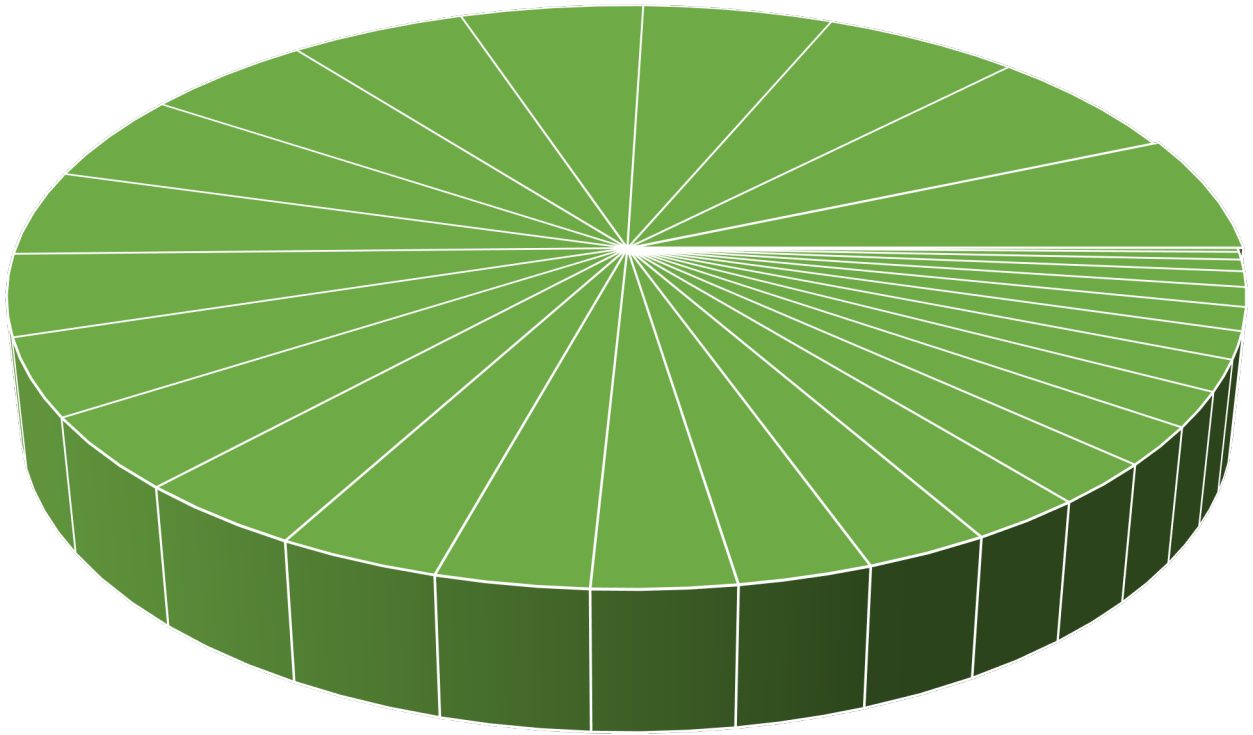
Priority Checklist

Importance	Impact	Feasibility
☐ Dashboard	☐ Case Count	☐ Coverage
☐ Disease Team Leader	☐ Survival	☐ Variable Availability
☐ Patient (PRO)	☐ Disparity	☐ CTR Effort
☐ C suite	☐ Compliance	☐ Tied to Standard
	☐ Multiple Processes	☐ Durably Relevant

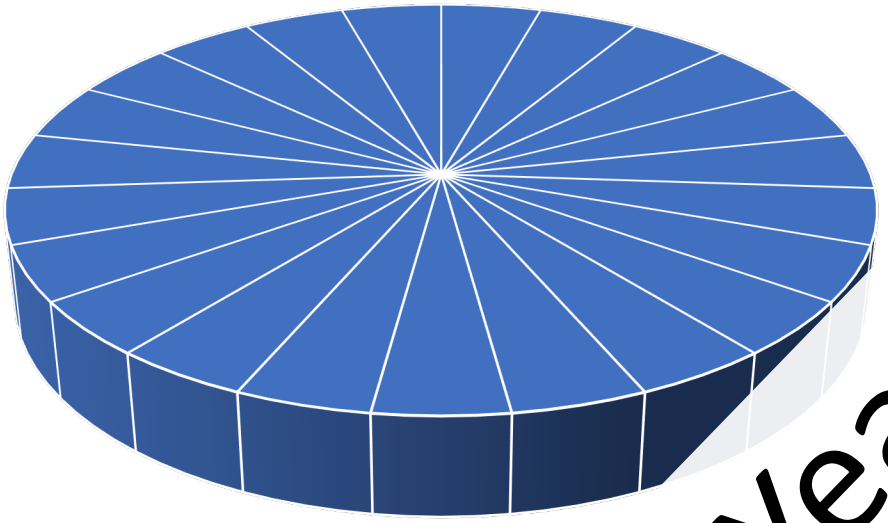
23 CoC Measures 2020



30 ***Optimized*** CoC Measures

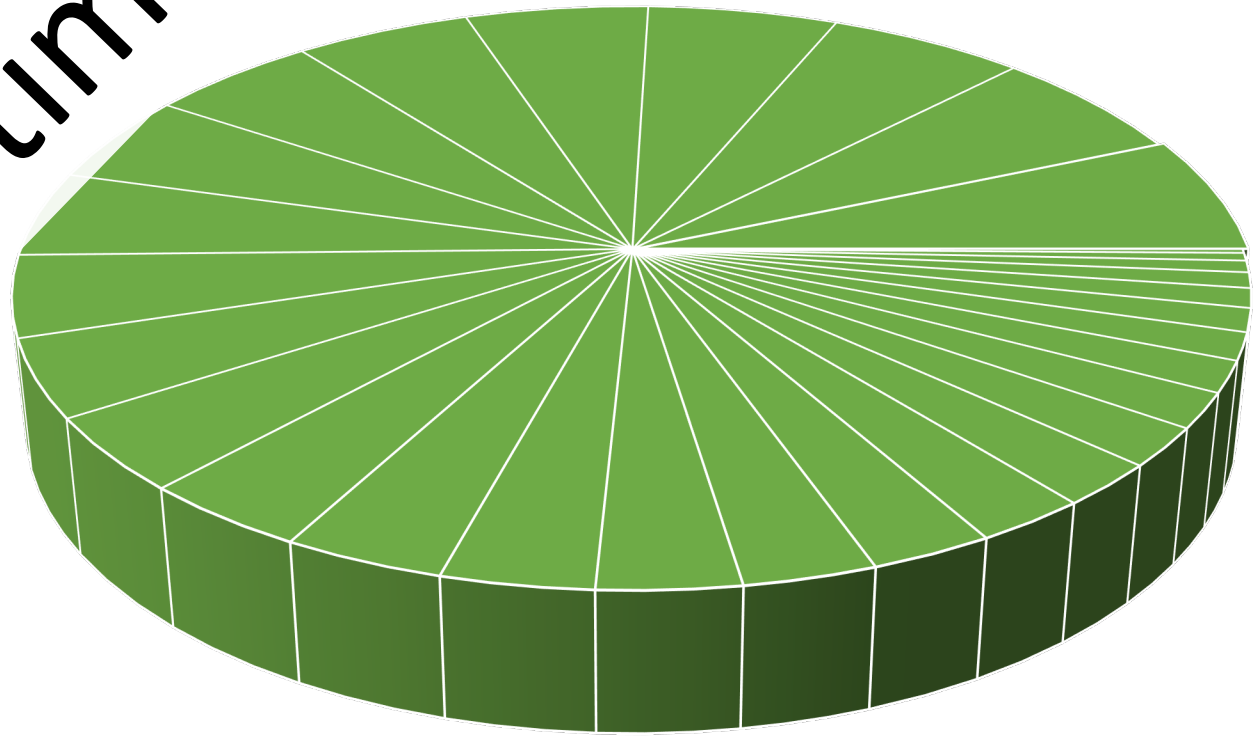


23 CoC Measures 2020



Year at a time

30 ***Optimized*** CoC Measures



Old Lung Cancer Measures

- Surgery not first treatment for clinical stage III
- Adjuvant chemo for node positive
- At least 10 lymph nodes removed

Old Lung Cancer Measures

- Surgery not first treatment for clinical stage III
- Adjuvant chemo for node positive
- At least 10 lymph nodes removed

Not Optimal

Quality measures strategy

2023

Revised Lung Cancer Measure

Revised Lung Measure

Systemic therapy (chemotherapy, immunotherapy or targeted therapy) is administered or recommended* within 4 months preoperatively or **4 months** postoperatively for surgically resected cases with pathologic

T2 >4cm or T ≥3, or N ≥1 NSCLC.

Lung Ca: Adjuvant chemo

DX 2020 Performance Rate

- 71.07%

Measure Eligible Cases

- 6,961

Hospital N

- 951/1,023

Numerator compliant cases by facility

Quality measures

2024 *and beyond*

How to MOVE THE NEEDLE?

Stakeholder Engagement

- **Major Clinical Organizations**
  - STS
  - ASCO
  - ASTRO
  - IASLC
- Cancer Registries
- Hospitals
- Patients

Taco Bell Effect

- Same ingredients
- Countless combinations

Taco Bell Effect

TACO BELL

Taco Bell Effect

- Same ingredients
- Countless combinations

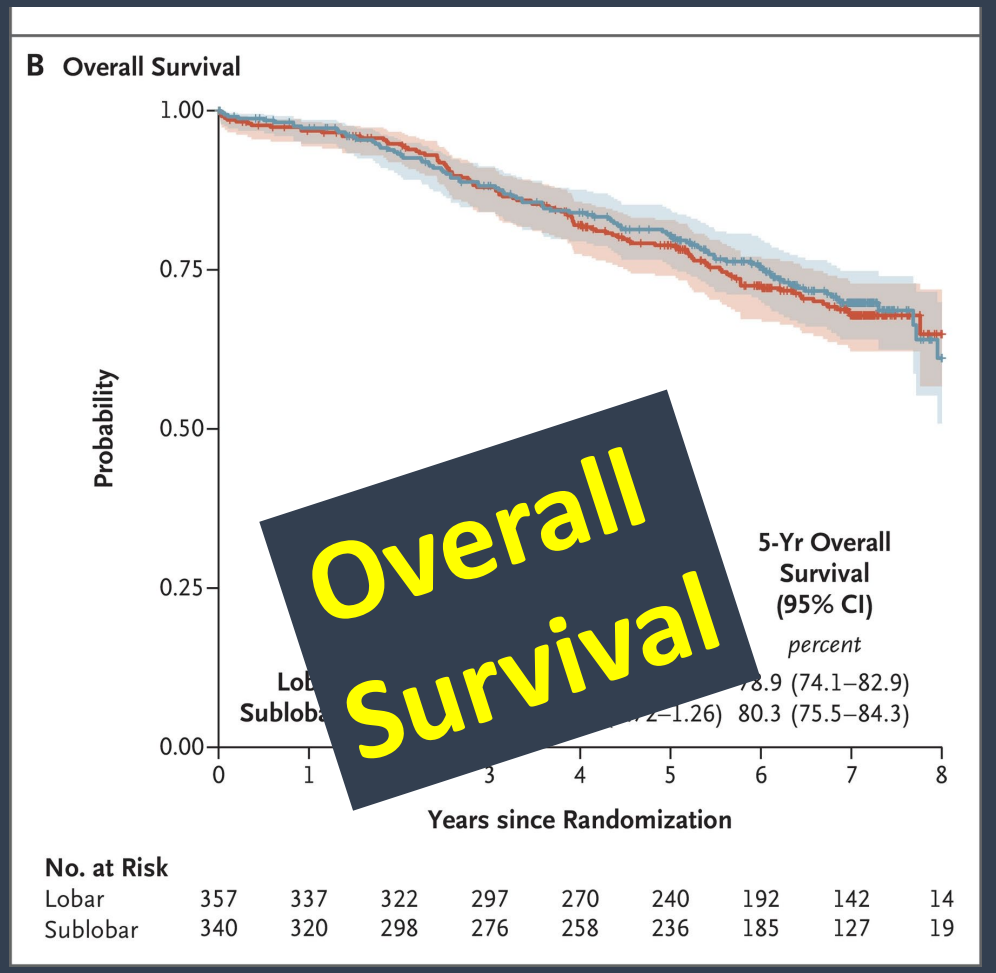
NCDB must continue to evolve

Taco Bell Effect

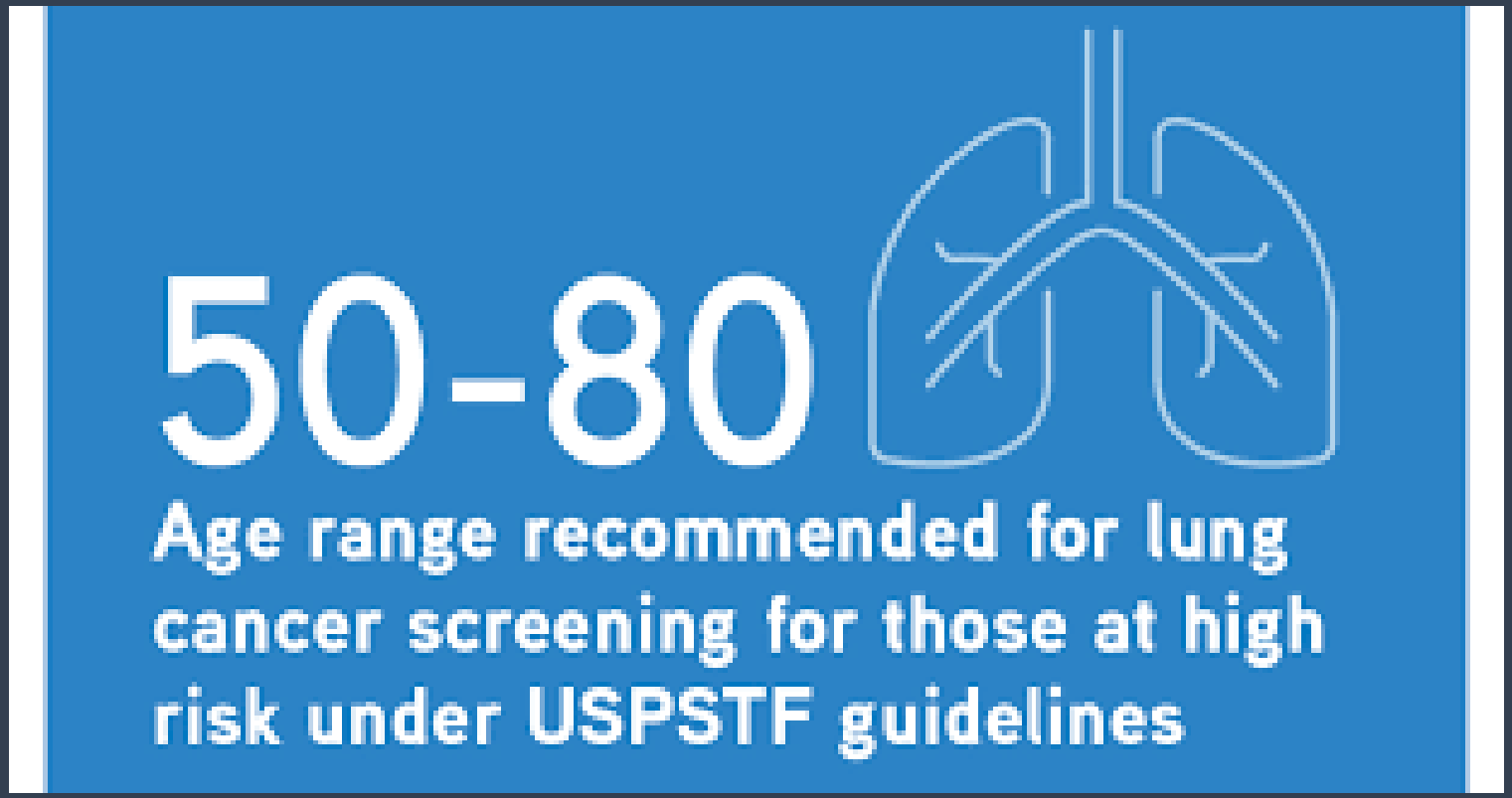
NCDB must continue to evolve

e.g. PFTS, Performance Status, Smoking

Performance Based on Outcomes



Screen Detected?



ACS Cancer Programs Research

Test Assumptions

- Are measures impactful
- Best measures
- Data items worth it

Thank You

Key Papers of 2022-2023

Linda W Martin, MD, MPH
University of Virginia
Shanda Blackmon, MD, MPH
Mayo Clinic

March 9, 2023

Disclosures – Linda Martin

Commercial Interest	**Relationship(s)**
Astra Zeneca	Advisory Board for Adaura Trial dissemination
On Target Laboratories	Steering Committee for ELUCIDATE trial
Genentech	Speakers Bureau
Ethicon	Speakers Bureau

DISCLOSURE FOR SHANDA BLACKMON, MD, MPH

Relevant Financial Relationships

Astra Zeneca

Medtronic

Scanlan

Off Label Usage

None

Methodology

- Crowd Sourcing:
  - Elliot Servais
  - Mark Ferguson
  - Jeff Yang
  - Shanda Blackmon
  - Mayo eso tumor board team
- CTSNET JANS – top articles
- Review of Journal sites for top papers, PlumX metrics: NEJM, Lancet, JCO, JTO, JTCVS, Annals of Surgery, JAMA Surgery
- Annals of Thoracic Surgery sent me top cited, read papers
- Twitter

Last year – 2022

- **Lung Cancer Papers**
  - JCOG 0802 segment v lobe
  - Do all segmentectomies yield the same outcome?
  - NADIM update
  - PACIFIC update
  - ASCO Rapid Recommendations – Adjuvant Therapy 2022
  - RVLob (VATS v Robot) trial
  - RCT on level of suction after lobectomy
  - CTC's for Lung Cancer Screening
- **Esophageal Cancer Papers**
  - NeoAEGIS: CROSS v FLOT/MAGIC
  - Checkmate study Advanced SCCA
- **Mesothelioma Papers**
  - SMART trial
- **Recommended Podcasts**

Overview – 2023

- **Lung Cancer Papers**
  - **(NOT including JCOG 0802, CALGB 140503, CM816, IMPOWER 010)**
  - Single-cell spatial landscapes of the tumor microenvironment
  - PORTal trial
  - QOL after RATS vs VATS lobectomy
  - Salvage Resection after CRT
  - Parenchymal Changes after COVID19 infection
  - ELUCIDATE trial
  - ADAURA update
  - PEARLS Keynote-091
- **Lung Cancer Screening Papers**
  - Sublobar resection is comparable to lobectomy for screen detected cancers
  - Lung Cancer Screening and Stage Shift
- **Esophageal Cancer Papers**
  - CROSS update
  - CM577
  - ARTDECO
  - Targeted therapy
  - RAMIE Worldwide
  - 2 vs 3 field node dissection
  - Ex vivo node dissection
  - # of nodes: NEOCRTEC5010
  - Disparities and refusal of trimodality care
- **Benign Esophagus Papers**
  - SAGES guidelines
- **Professional Topics**
  - RVU's and Block Time Allocation
  - Second Victim Syndrome

Lung Cancer Papers

Single Cell Spatial Landscapes of the Tumor Microenvironment

Article

Single-cell spatial landscapes of the lung tumour immune microenvironment

Nature | Vol 614 | 16 February 2023

https://doi.org/10.1038/s41586-022-05672-3

Received: 24 March 2022

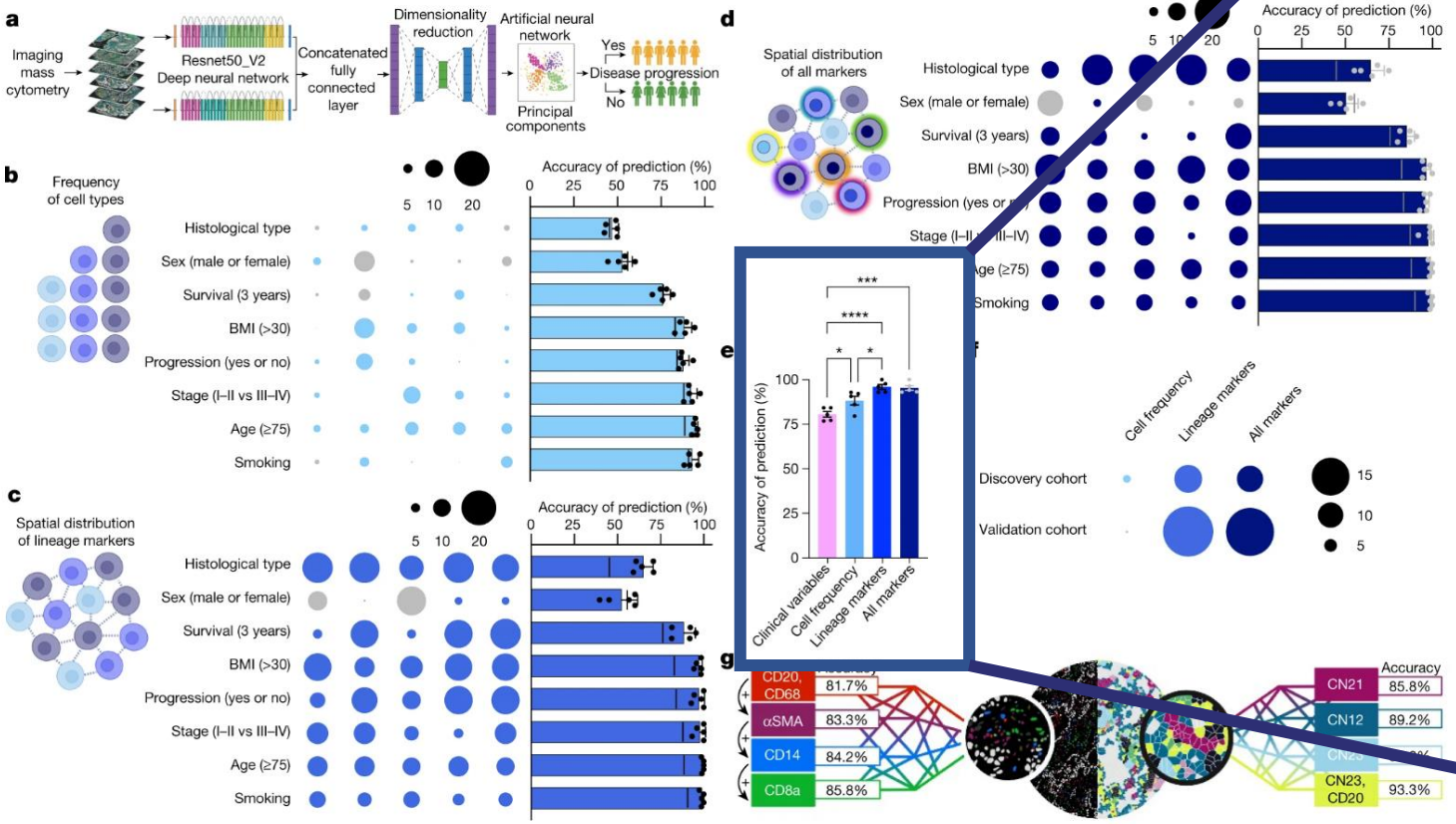
Accepted: 20 December 2022

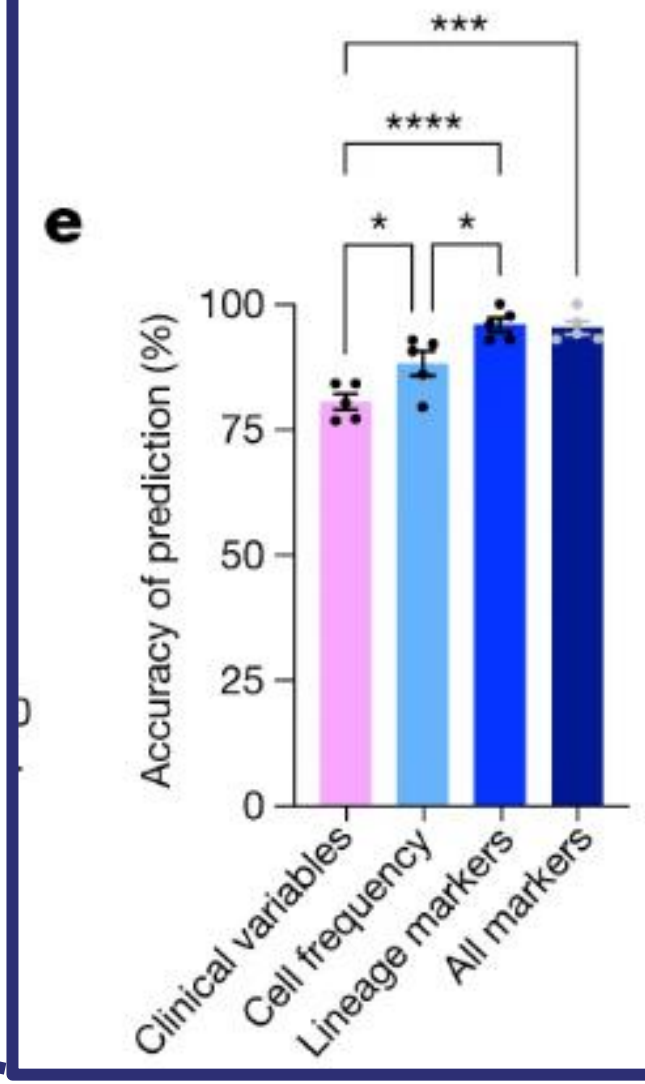
Published online: 1 February 2023

Open access

Mark Sorin[1,2,13], Morteza Rezanejad[3,4,13], Elham Karimi[1,13], Benoit Fiset[1], Lysanne Desharnais[1,2], Lucas J. M. Perus[1,5], Simon Milette[1,5], Miranda W. Yu[1,5], Sarah M. Maritan[1,6], Samuel Doré[1,2], Émilie Pichette[7], William Enlow[8], Andréanne Gagné[8], Yuhong Wei[1], Michele Orain[8], Venkata S. K. Manem[8,9], Roni Rayes[1], Peter M. Siegel[1,6,10], Sophie Camilleri-Broët[11], Pierre Olivier Fiset[11], Patrice Desmeules[8], Jonathan D. Spicer[1,6,12], Daniela F. Quail[1,5,6]✉, Philippe Joubert[8]✉ & Logan A. Walsh[1,2]✉

Including spacial resolution improved accuracy to 95.9% to predict progression from 1 mm3 of tissue





PORTAL trial

ANNALS OF SURGERY

March 2023

ORIGINAL ARTICLE

OPEN

Pulmonary Open, Robotic, and Thoracoscopic Lobectomy (PORTaL) Study

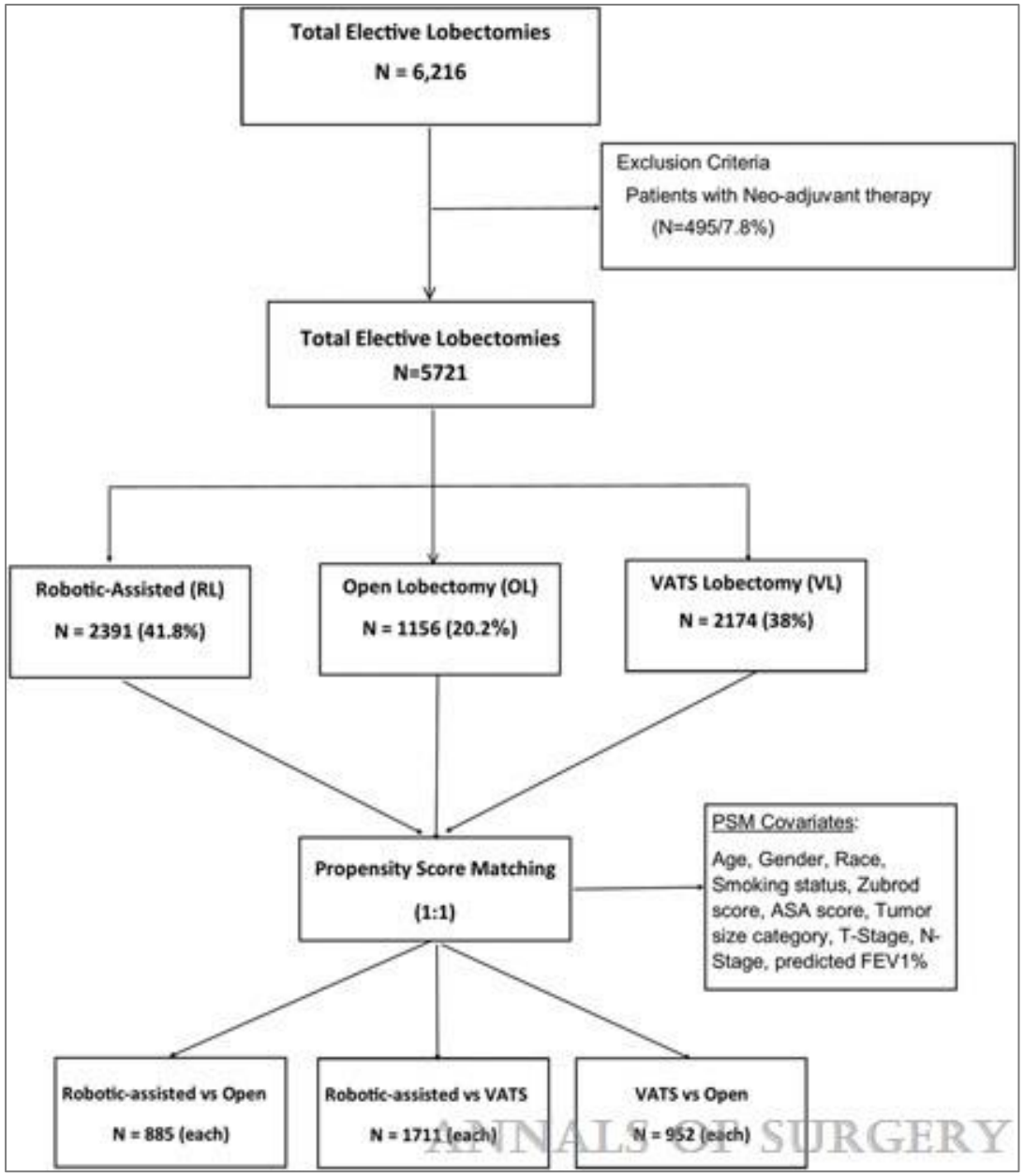
An Analysis of 5721 Cases

Michael S. Kent, MD,✉ Matthew G. Hartwig, MD,† Eric Vallières, MD,‡ Abbas E. Abbas, MD,§ Robert J. Cerfolio, MD,‖ Mark R. Dylewski, MD,¶ Thomas Fabian, MD,# Luis J. Herrera, MD,** Kimble G. Jett, MD,†† Richard S. Lazzaro, MD,‡‡ Bryan Meyers, MD,§§ Brian A. Mitzman, MD,‖‖ Rishindra M. Reddy, MD,¶¶ Michael F. Reed, MD,## David C. Rice, MD, MB,*** Patrick Ross, MD,††† Inderpal S. Sarkaria, MD,‡‡‡ Lana Y. Schumacher, MD, MS,§§§ William B. Tisol, MD,‖‖‖ Dennis A. Wigle, MD,¶¶¶ and Michael Zervos, MD‖*

21 centers
5721 patients
All stages
Induction therapy excluded
Centers had to have at least 50 lobes, could be expert in one or all 3 approaches
2013-2019

PORTal Trial

Flowchart for propensity-matched analysis.



Well matched on all Cx except tumor size was a little bigger in open cohort; stage was balanced, however

PORTal Trial

TABLE 1. Propensity-Matched Pairwise Comparisons of Postoperative Details Before Patient Discharge Outcomes for RL, VATS, and OL Cases

	RL versus OL			VATS versus OL			RL versus VATS		
Variable	**RL (n = 885)**	**OL (n = 885)**	***P*-value**	**VATS (n = 952)**	**OL (n = 952)**	***P*-value**	**RL (n = 1711)**	**VATS (n = 1711)**	***P*-value**
Complications, n (%)	237 (26.8)	315 (35.6)	<0.0001	266 (27.9)	339 (35.6)	0.001	463 (27.1)	511 (29.9)	0.07
Pulmonary	156 (17.6)	198 (22.4)	0.01	170 (17.9)	214 (22.5)	0.01	304 (17.8)	333 (19.5)	0.20
Cardiac	83 (9.4)	125 (14.1)	0.002	102 (10.7)	141 (14.8)	0.03	169 (9.9)	187 (10.9)	0.32
Gastrointestinal	8 (0.9)	6 (0.7)	0.59	11 (1.2)	8 (0.8)	0.35	13 (0.8)	20 (1.2)	0.22
Neurological	12 (1.4)	17 (1.9)	0.34	15 (1.6)	18 (1.9)	0.72	24 (1.4)	25 (1.5)	0.88
Wound	1 (0.1)	2 (0.2)	0.56	2 (0.2)	3 (0.3)	1.00	5 (0.3)	4 (0.2)	0.74
Genitourinary	31 (3.5)	15 (1.7)	0.02	33 (3.5)	17 (1.8)	0.01	66 (3.9)	77 (4.5)	0.35
Unexpected return to operating room[a], n (%)	25 (2.9)	27 (4.9)	0.15	37 (4.3)	31 (5.3)	0.32	50 (3.0)	66 (4.2)	0.14
Postoperative blood transfusion, n (%)	13 (1.5)	67 (7.6)	<0.0001	24 (2.5)	77 (8.1)	<0.0001	22 (1.3)	42 (2.5)	0.01
Chest tube duration[a], d (±SD)	3.8 ± 5.2	5.2 ± 5.2	<0.0001	4.3 ± 4.7	5.3 ± 5.3	<0.0001	4.0 ± 5.5	4.4 ± 5.1	<0.0001
Length of hospital stay, Mean d (±SD)	4.2 ± 4.9	6.1 ± 4.9	<0.0001	5.1 ± 4.4	6.1 ± 6.4	<0.0001	4.1 ± 4.4	5.2 ± 4.6	<0.0001
Median d	3	5		4	5		3	4	
Prolonged length of hospital stay (>7 d), d (±SD)	77 (8.7)	157 (18.2)	<0.0001	151 (15.9)	169 (18.2)	0.29	150 (8.8)	275 (16.1)	<0.0001
In-hospital mortality, n (%) [b,c]	3 (0.3)	7 (0.8)	0.21	4 (0.4)	7 (0.7)	0.37	8 (0.5)	7 (0.4)	0.80

OL indicates open lobectomy; RL, robotic-assisted lobectomy; VATS, video-assisted thoracoscopic lobectomy.

PORTal Trial

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OL indicates open lobectomy; RL, robotic-assisted lobectomy; VATS, video-assisted thoracoscopic lobectomy.

PORTal Trial

Results:

A total of 2391 RL, 2174 VATS, and 1156 OL cases were included. After propensity-score matching there were 885 pairs of RL vs OL, 1,711 pairs of RL vs VATS, and 952 pairs of VATS vs OL. Operative time for RL was shorter than VATS ($P < 0.0001$) and OL ($P = 0.0004$). Compared to OL, RL and VATS had less overall postoperative complications, shorter hospital stay (LOS), and lower transfusion rates (all $P<0.02$). Compared to VATS, RL had lower conversion rate ($P<0.0001$), shorter hospital stay ($P<0.0001$) and a lower postoperative transfusion rate ($P =0.01$). RL and VATS cohorts had comparable postoperative complication rates. In-hospital mortality was comparable between all groups.

RL: 8 minutes shorter vs open, 20 min shorter vs vats

Conclusions:

RL and VATS approaches were associated with favorable perioperative outcomes compared to OL. Robotic-assisted lobectomy was also associated with a reduced length of stay and decreased conversion rate when compared to VATS.

QOL after VATS vs. RATS lobectomy

TOP CITED GTS PAPER for Annals of Thoracic Surgery 2022

May 2022
Ann Thorac Surg
2022;113:1591-7

Higher Long-term Quality of Life Metrics After Video-Assisted Thoracoscopic Surgery Lobectomy Compared With Robotic-Assisted Lobectomy

Aaron M. Williams, MD, Lili Zhao, PhD, Tyler R. Grenda, MD, Ranganath G. Kathawate, BS, Ben E. Biesterveld, MD, Umar F. Bhatti, MD, Philip W. Carrott, MD, Kiran H. Lagisetty, MD, Andrew C. Chang, MD, William Lynch, MD, Jules Lin, MD, and Rishindra M. Reddy, MD

Department of Surgery, University of Michigan, Ann Arbor, Michigan; Section of Thoracic Surgery, University of Michigan, Ann Arbor, Michigan; Department of Surgery, Thomas Jefferson University, Philadelphia, Pennsylvania; and University of Virginia, Thoracic Surgery, Charlottesville, Virginia

219 patients
2 different QOL surveys
Fear of Recurrence Scores

Results

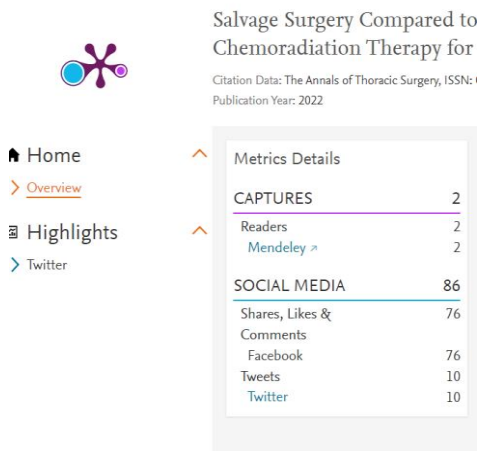
The study included 219 patients (139 VATS and 80 RATS). RATS patients had longer ($P < .05$) operative times and a higher incidence ($P < .05$) of postoperative myocardial infarction compared to VATS patients. VATS patients reported higher ($P < .05$) QLQ-C30 summary scores postoperatively and at 12 months, including higher ($P < .05$) Social Functioning and Cognitive scores, and less ($P < .05$) appetite loss. VATS patients reported decreased ($P < .05$) QLQ-LC13 symptom summary scores at 6 months postoperatively, including decreased ($P < .05$) dyspnea, neuropathy, and pain compared with RATS patients. VATS patients also reported lower ($P < .05$) FoR summary scores at 6 months postoperatively.

Conclusions

VATS patients report improvement in select quality of life and FoR measures after lobectomy. Further study comparing these 2 approaches is required.

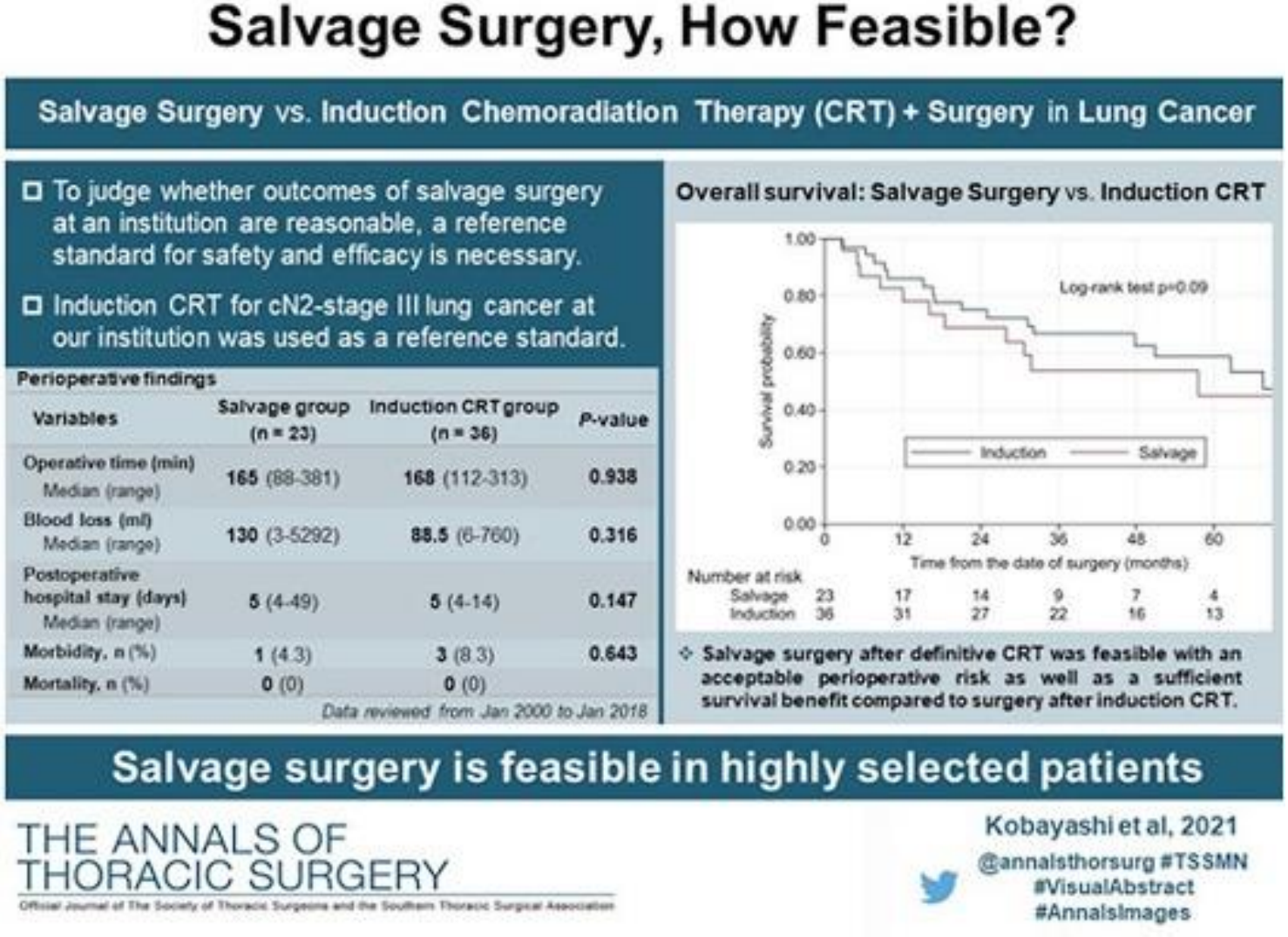
Salvage Surgery Compared to Surgery After Induction Chemoradiation Therapy for Advanced Lung Cancer

Salvage Surgery Compared to Surgery After Induction Chemoradiation Therapy for Advanced Lung Cancer



Top PlumX paper in Thoracic for Annals of Thoracic Surgery 2022-2023

December 2022
Ann Thorac Surg
2022;114:2087-92



Salvage Surgery Compared to Surgery After Induction Chemoradiation Therapy for Advanced Lung Cancer

- 2000-2018
- 23 salvage resection after CRT for locally advanced compared to
- 36 planned resection after induction CRT for stage 3a
- DOES NOT INCLUDE IMMUNOTHERAPY

TABLE Patient Demographics and Perioperative Findings

Variables	Salvage Group (n = 23)	Induction CRT Group (n = 36)	*P* Value
Age, y	64 (20-78)	64 (38-74)	.844
Sex			.265
Male	14 (60.9)	27 (75.0)	
Female	9 (39.1)	9 (25.0)	
Smoking history			.510
Never	6 (26.0)	6 (16.7)	
ECOG PS			.361
0	19 (82.6)	25 (69.4)	
1	4 (17.4)	11 (30.6)	
Radiation dose, Gy	60 (26-72)	42.5 (40-45)	<.001
Time to surgery, d	1238 (84-5100)	41 (16-127)	<.001
Surgical procedures			<.001
Pneumonectomy	7 (30.4)	0 (0)	
Bilobectomy	1 (4.3)	2 (5.6)	
Lobectomy	13 (56.6)	34 (94.4)	
Segmentectomy	2 (8.7)	0 (0)	
Operative time, min	165 (88-381)	168 (112-313)	.938
Blood loss, mL	130 (3-5292)	88.5 (6-760)	.316
Postoperative hospital stay, d	5 (4-49)	5 (4-14)	.147
Extent of resection			.390
R0	22 (95.7)	36 (100)	
R1	0 (0)	0 (0)	
R2	1 (4.3)	0 (0)	
Morbidity	1 (4.3)	3 (8.3)	.643

Values are median (range) or n (%). ECOG PS, Eastern Cooperative Oncology Group Performance Status.

Pulmonary Parenchymal Changes in COVID-19 Survivors

July 2022
Ann Thorac Surg 2022;
114:301-10

Top viewed paper in Thoracic for Annals of Thoracic Surgery 2022-2023; 4500 views

Pulmonary Parenchymal Changes in COVID-19 Survivors

Check for updates

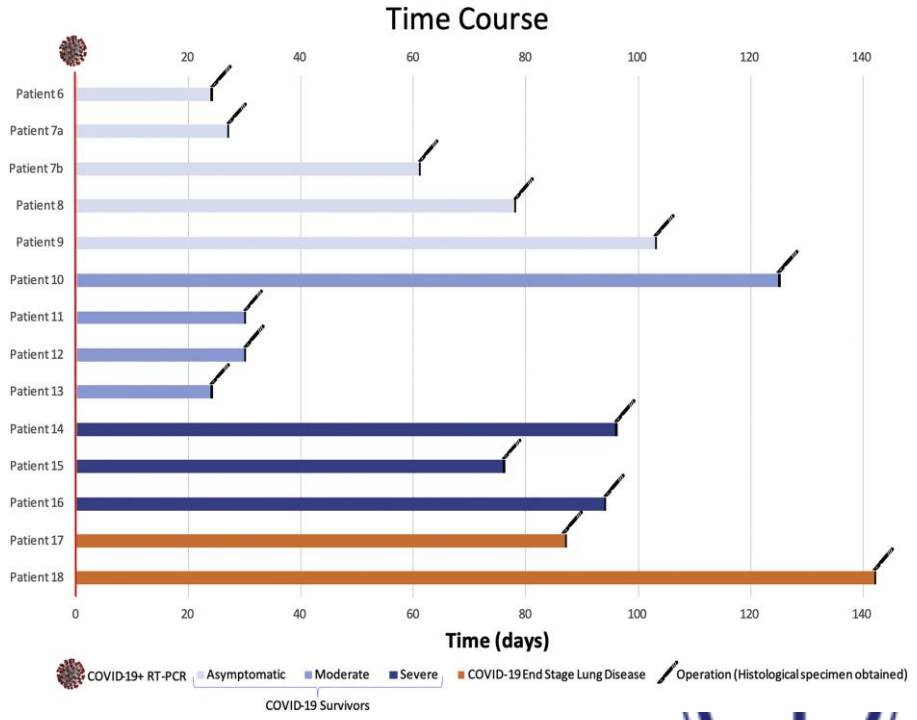
Ashley Diaz, BS, Daniel Bujnowski, BS, Phillip McMullen, MD, PhD, Maria Lysandrou, BA, Vijayalakshmi Ananthanarayanan, MD, Aliya N. Husain, MBBS, Richard Freeman, MD, MBA, Wickii T. Vigneswaran, MD, MBA, Mark K. Ferguson, MD, Jessica S. Donington, MD, Maria Lucia L. Madariaga, MD, and Zaid M. Abdelsattar, MD, MS

Pritzker School of Medicine, University of Chicago, Chicago, Illinois; Stritch School of Medicine, Loyola University Chicago, Maywood, Illinois; Department of Pathology, University of Chicago Medicine, Chicago, Illinois; Department of Pathology, Loyola University Medical Center, Maywood, Illinois; Department of Thoracic and Cardiovascular Surgery, Loyola University Medical Center, Maywood, Illinois; and Section of Thoracic Surgery, Department of Surgery, University of Chicago Medicine, Chicago, Illinois

11 Covid-19 survivors compared to normal controls, and 3 End stage covid patients (decort/bullectomy, explanted lungs for transplant, and deceased patient)

RESULTS Elective lung resection was performed in 11 COVID-19 survivors with asymptomatic (n = 4), moderate (n = 4), and severe (n = 3) COVID-19 infections at a median 68.5 days (range 24-142 days) after the COVID-19 diagnosis. The most common operation was lobectomy (75%). Histopathologic examination identified no differences between the lung parenchyma of COVID-19 survivors and controls across all compartments examined. Conversely, patients in the end-stage COVID-19 group showed fibrotic diffuse alveolar damage with intra-alveolar macrophages, organizing pneumonia, and focal interstitial emphysema.

CONCLUSIONS In this study to examine the lung parenchyma of COVID-19 survivors, we did not find distinct postacute histopathologic changes to suggest permanent pulmonary damage. These results are reassuring for COVID-19 survivors who recover and become asymptomatic.



Top CTSNET JANS Thoracic Item (January 2023)

CTSNET JANS

Finally, the results of this exciting lung cancer study cracked the top ten. The newly approved drug, pafolacianine, binds to lung cancer cells to make them glow under infrared light. Surgical removal of lung tumors before they spread remains one of the most effective ways to treat the disease, so the availability of the drug has major implications for lung cancer patient outcomes.

Forbes

FORBES > INNOVATION > HEALTHCARE

FDA Approves Drug Which Makes Lung Cancer Glow

Victoria Forster Contributor ⓘ

Cancer research scientist and childhood cancer survivor.

Follow

0 Dec 29, 2022, 09:52am EST

AATS 2022: Pafolacianine for Intraoperative Molecular Imaging of Cancer in the Lung – The ELUCIDATE Randomized Clinical Trial

Accepted to JTCVS Feb 13, 2023

Update on ADAURA

Adjuvant Osimertinib for Resected EGFR-Mutated Stage IB-IIIA Non–Small-Cell Lung Cancer: Updated Results From the Phase III Randomized ADAURA Trial

Roy S. Herbst, MD, PhD[1]; Yi-Long Wu, MD[2]; Thomas John, PhD[3]; Christian Grohe, MD[4]; Margarita Majem, MD, PhD[5]; Jie Wang, MD, PhD[6]; Terufumi Kato, MD[7]; Jonathan W. Goldman, MD[8]; Konstantin Laktionov, PhD[9]; Sang-We Kim, MD, PhD[10]; Chong-Jen Yu, MD, PhD[11,12]; Huu Vinh Vu, MD, PhD[13]; Shun Lu, MD[14]; Kye Young Lee, MD, PhD[15]; Guzel Mukhametshina, MD[16]; Charuwan Akewanlop, MD[17]; Filippo de Marinis, MD[18]; Laura Bonanno, MD[19]; Manuel Domine, MD, PhD[20]; Frances A. Shepherd, MD[21]; Damien Urban, MBBS[22,23]; Xiangning Huang, PhD[24]; Ana Bolanos, MD[25]; Marta Stachowiak, MPharm[26]; and Masahiro Tsuboi, MD, PhD[27]

JCO Jan 2023

682 stage 1B-IIIA NSCLC with EGFR exon 19 deletions randomized to osimertinib x 3 years +/- chemo, vs chemo or BSC.

RESULTS

At data cutoff (April 11, 2022), in stage II-IIIA disease, median follow-up was 44.2 months (osimertinib) and 19.6 months (placebo); the DFS HR was 0.23 (95% CI, 0.18 to 0.30); 4-year DFS rate was 70% (osimertinib) and 29% (placebo). In the overall population, DFS HR was 0.27 (95% CI, 0.21 to 0.34); 4-year DFS rate was 73% (osimertinib) and 38% (placebo). Fewer patients treated with osimertinib had local/regional and distant recurrence versus placebo. CNS DFS HR in stage II-IIIA was 0.24 (95% CI, 0.14 to 0.42). The long-term safety profile of osimertinib was consistent with the primary analysis.

CONCLUSION

These updated data demonstrate prolonged DFS benefit over placebo, reduced risk of local and distant recurrence, improved CNS DFS, and a consistent safety profile, supporting the efficacy of adjuvant osimertinib in resected EGFR-mutated NSCLC.

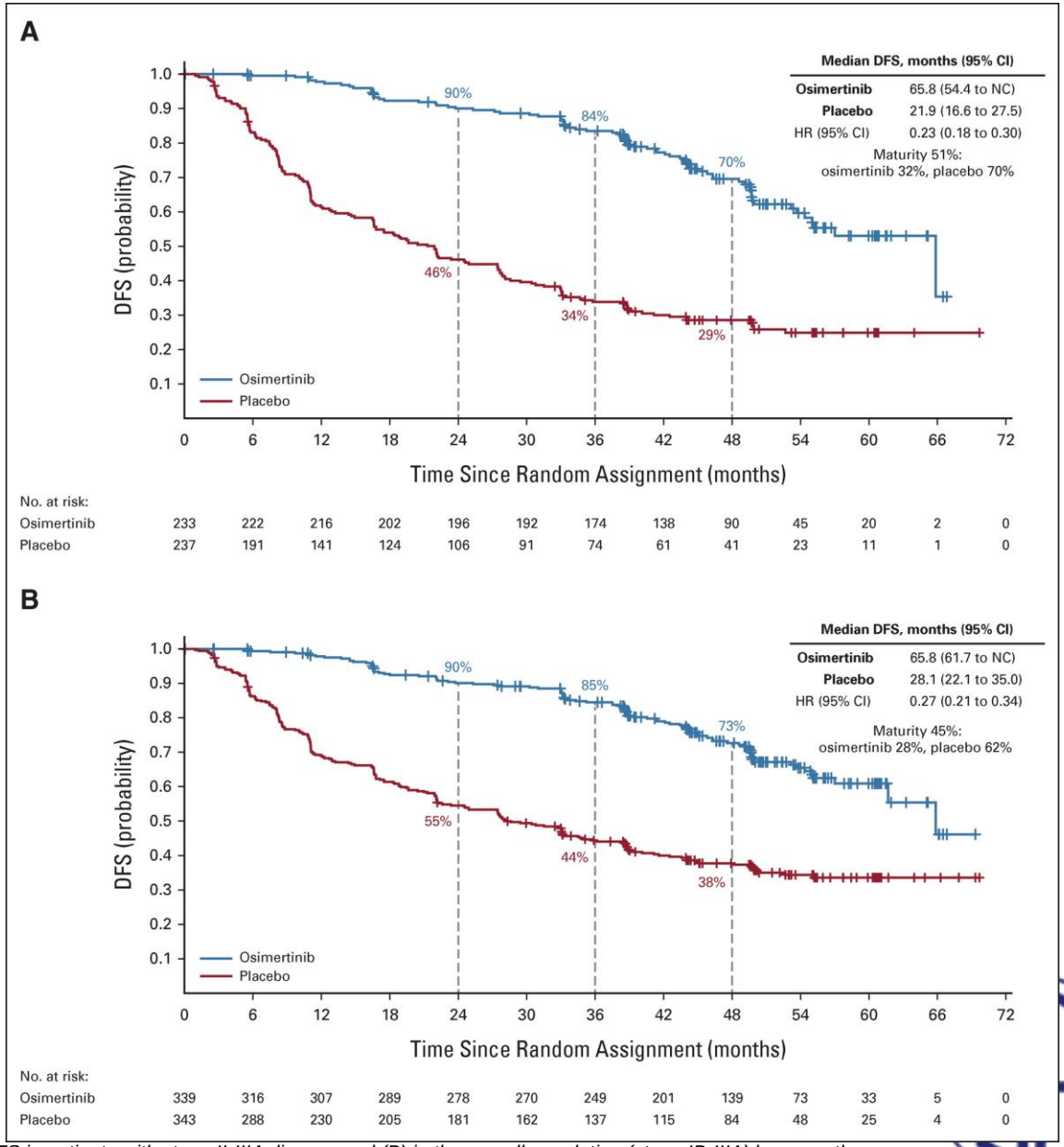


FIG 1. DFS per investigator assessment. Kaplan-Meier estimates of duration of (A) DFS in patients with stage II-IIIA disease and (B) in the overall population (stage IB-IIIA) by seventh edition staging per the protocol (full analysis set). Tick marks indicate censored data. An HR < 1 favors osimertinib. DFS, disease-free survival; HR, hazard ratio; NC, not calculated.

Adaura update

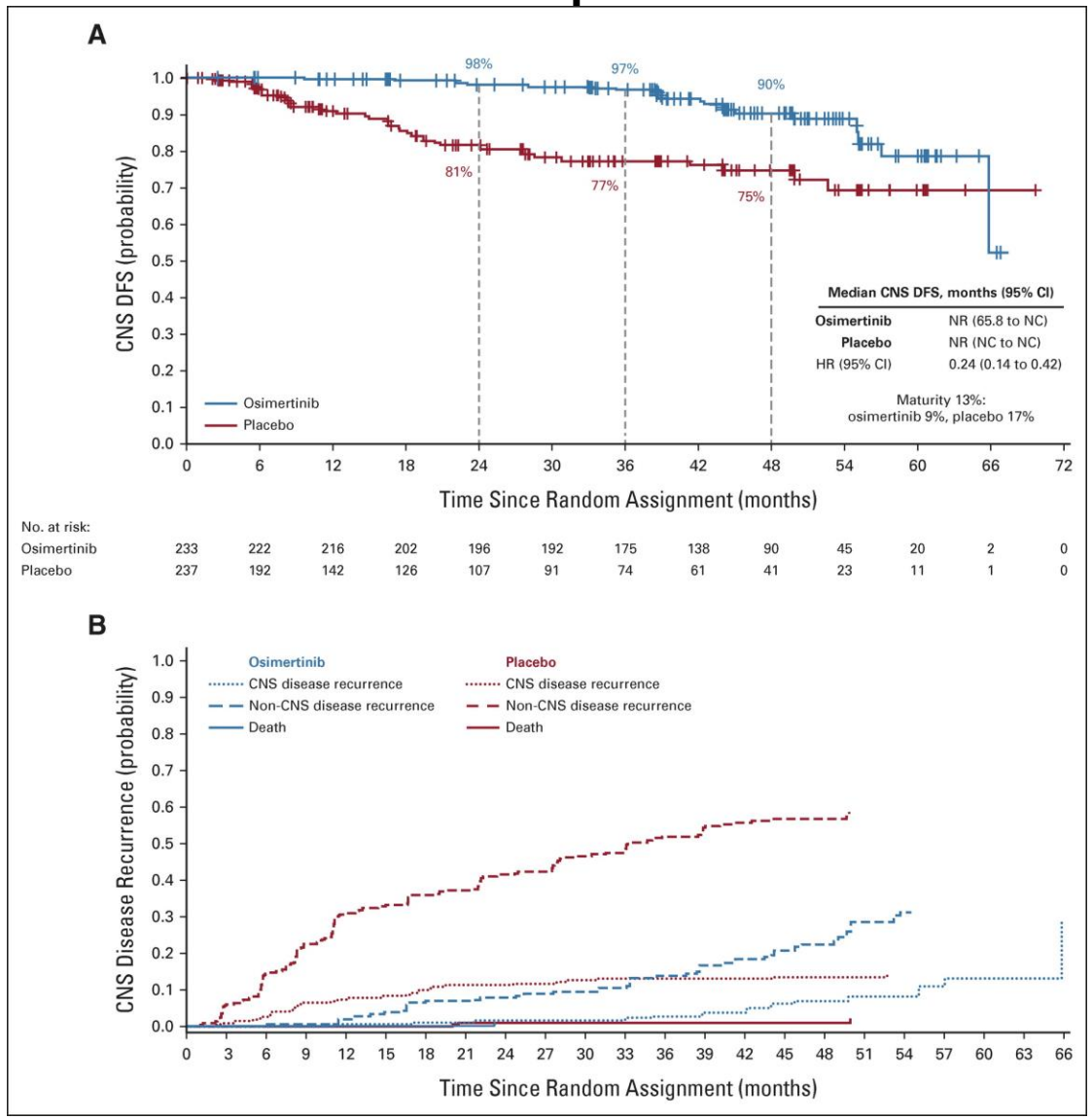


FIG 3. CNS analyses (full analysis set; stage II-IIIA). Kaplan-Meier estimates of duration of (A) CNS DFS per investigator assessment in patients with stage II-IIIA disease. Tick marks indicate censored data. An HR < 1 favors osimertinib. (B) Conditional probability of observing CNS and non-CNS recurrence. The graph shows the estimated probability of observing CNS recurrence event, conditional on the patient not experiencing a competing risk event (non-CNS recurrence and death by any cause) by time t. Cumulative incidence was calculated using a Fine and Gray model. CNS disease recurrence includes patients who have disease recurrence in the CNS alone or in the CNS in addition to other anatomies at the same overall visit. Non-CNS recurrence includes disease recurrence outside the CNS only. Death was defined as death occurring without confirmed CNS or non-CNS recurrence. DFS, disease-free survival; HR, hazard ratio; NC, not calculated; NR, not reached.

PEARLS Trial – Keynote-091

Lancet Onc Oct 2022

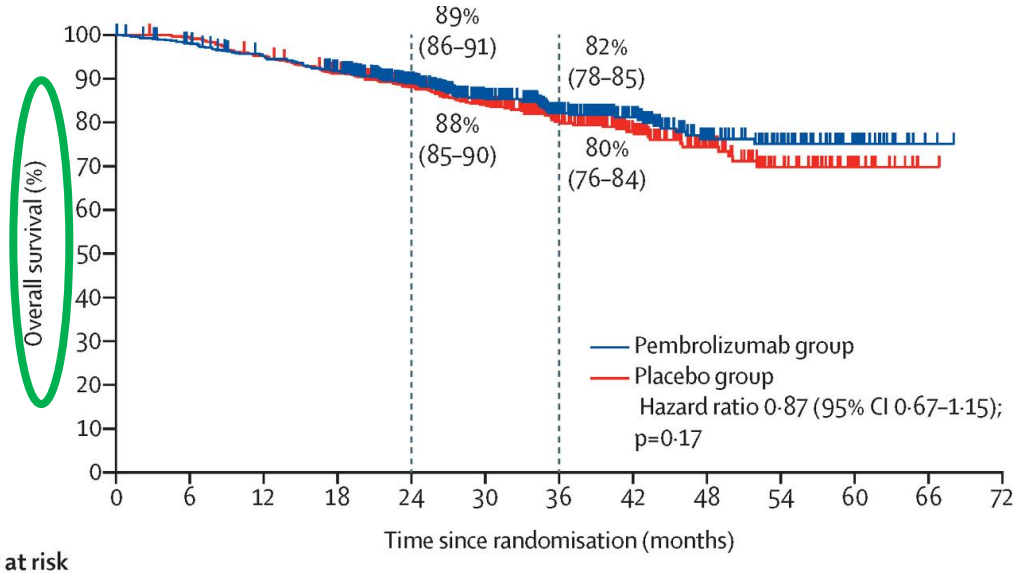
Pembrolizumab versus placebo as adjuvant therapy for completely resected stage IB–IIIA non-small-cell lung cancer (PEARLS/KEYNOTE-091): an interim analysis of a randomised, triple-blind, phase 3 trial

Mary O'Brien, Luis Paz-Ares*, Sandrine Marreaud, Urania Dafni, Kersti Oselin, Libor Havel, Emilio Esteban, Dolores Isla, Alex Martinez-Marti, Martin Faehling, Masahiro Tsuboi, Jong-Seok Lee, Kazuhiko Nakagawa, Jing Yang, Ayman Samkari, Steven M Keller, Murielle Mauer, Nitish Jha, Rolf Stahel, Benjamin Besse†, Solange Peters†, on behalf of the EORTC-1416-LCG/ETOP 8-15 – PEARLS/KEYNOTE-091 Investigators‡*

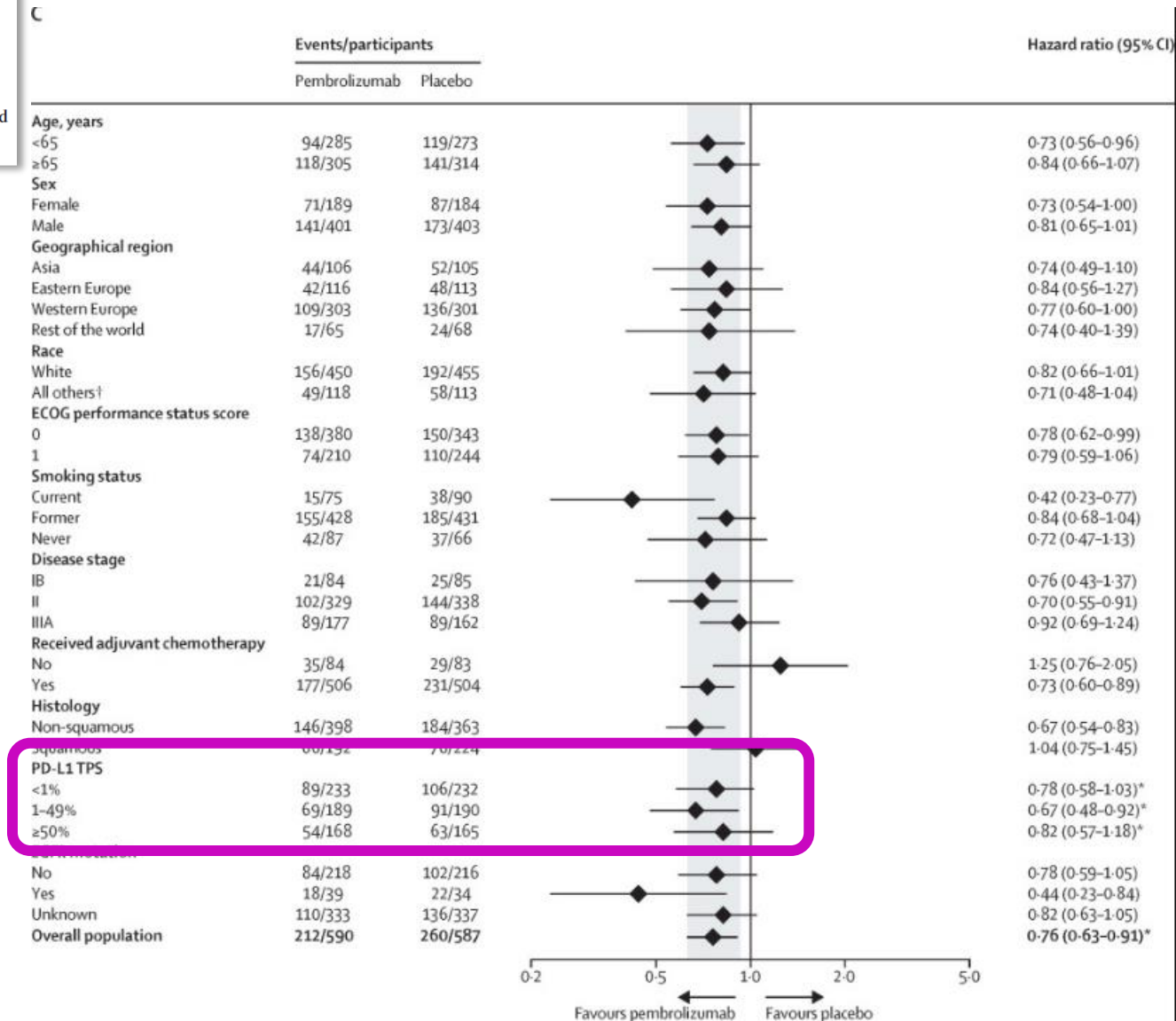
Lancet Oncol 2022; 23: 1274–86
Published Online September 12, 2022

Summary

Background Pembrolizumab is a standard-of-care for advanced non-small-cell lung cancer (NSCLC). We assessed pembrolizumab as adjuvant therapy for completely resected stage IB–IIIA NSCLC.



Number at risk (number censored)													
Pembrolizumab	590 (0)	572 (7)	548 (14)	520 (22)	419 (109)	318 (194)	226 (276)	143 (357)	83 (410)	52 (440)	23 (469)	2 (490)	0 (492)
Placebo	587 (0)	582 (2)	556 (3)	524 (12)	420 (99)	309 (193)	213 (277)	135 (350)	78 (402)	44 (432)	16 (460)	1 (475)	0 (476)



Based on results of PEARLS, after adjuvant chemo median DFS was 58.7 months in the pembrolizumab arm (95% CI: 39.2, not reached) and 34.9 months in the placebo arm (95% CI: 28.6, not reached) (**hazard ratio=0.73**; 95% CI: 0.60, 0.89])

FDA approves pembrolizumab as adjuvant treatment for non-small cell lung cancer

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FDA U.S. FOOD & DRUG ADMINISTRATION

On January 26, 2023, the Food and Drug Administration (FDA) approved pembrolizumab (Keytruda, Merck) for adjuvant treatment following resection and platinum-based chemotherapy for stage IB (T2a ≥4 cm), II, or IIIA non-small cell lung cancer (NSCLC).

Content current as of:
01/26/2023

Lung Cancer Screening Papers

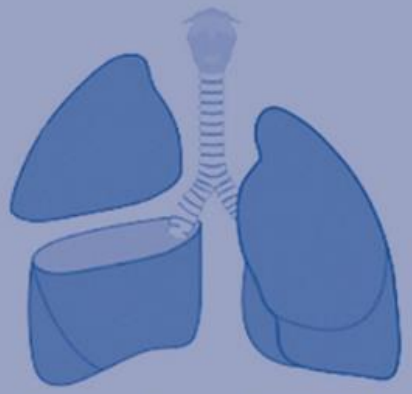
Sublobar resection for screen detected cancers

Sublobar resection is comparable to lobectomy for screen-detected lung cancer

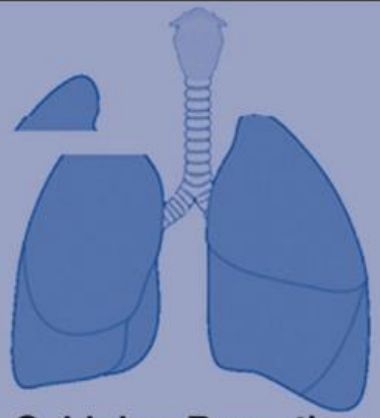
Mohamed K. Kamel, MD,[a] Benjamin Lee, MD,[b] Sebron W. Harrison, MD,[b] Jeffrey L. Port, MD,[b] Nasser K. Altorki, MD,[b] and Brendon M. Stiles, MD[c]

JTCVS June 2022

Top 10 Plumx Paper for 2022-2023



Lobectomy (n = 821)



Sublobar Resection (n = 166)

Sublobar resection is comparable to lobectomy for screen detected lung cancer

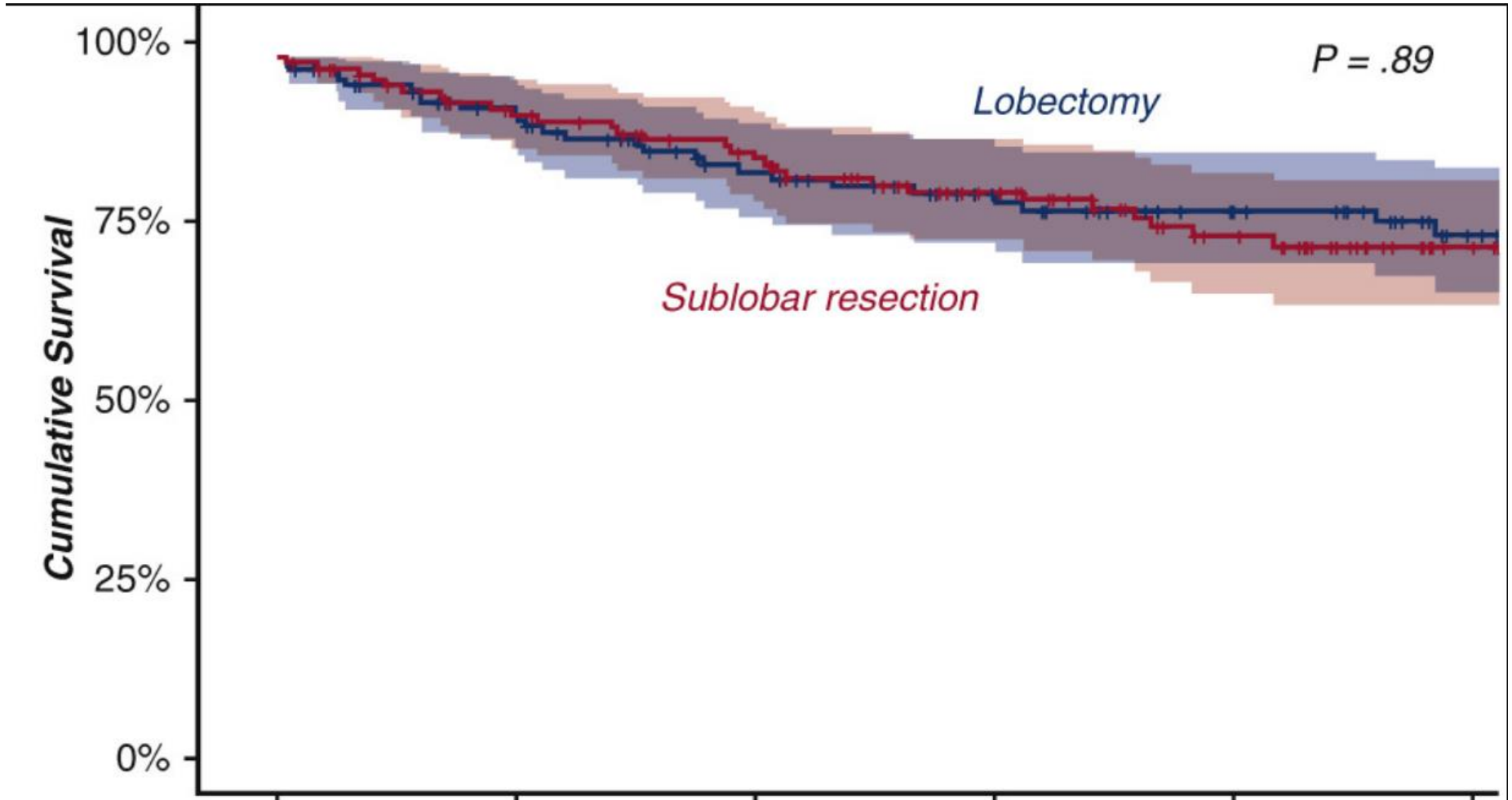
Major pulmonary morbidity	90-d Mortality	5-yr CSS	5-yr CSS, PS matched groups
21%	1%	83%	75%
16%	0%	83%	73%
P = .22	*P* = .20	*P* = .96	*P* = .89

Analysis of the National Lung Screening Trial Data

Study Implications

- Sublobar resection appears to be oncologically comparable to lobectomy for screen detected lung cancers.
- Although, pending results of randomized surgical trials may better guide surgical resection strategies in the future, SLR seems to have a clear place in the treatment of screen detected lung cancer.

CSS: Cancer Specific Survival
PS: Propensity Score



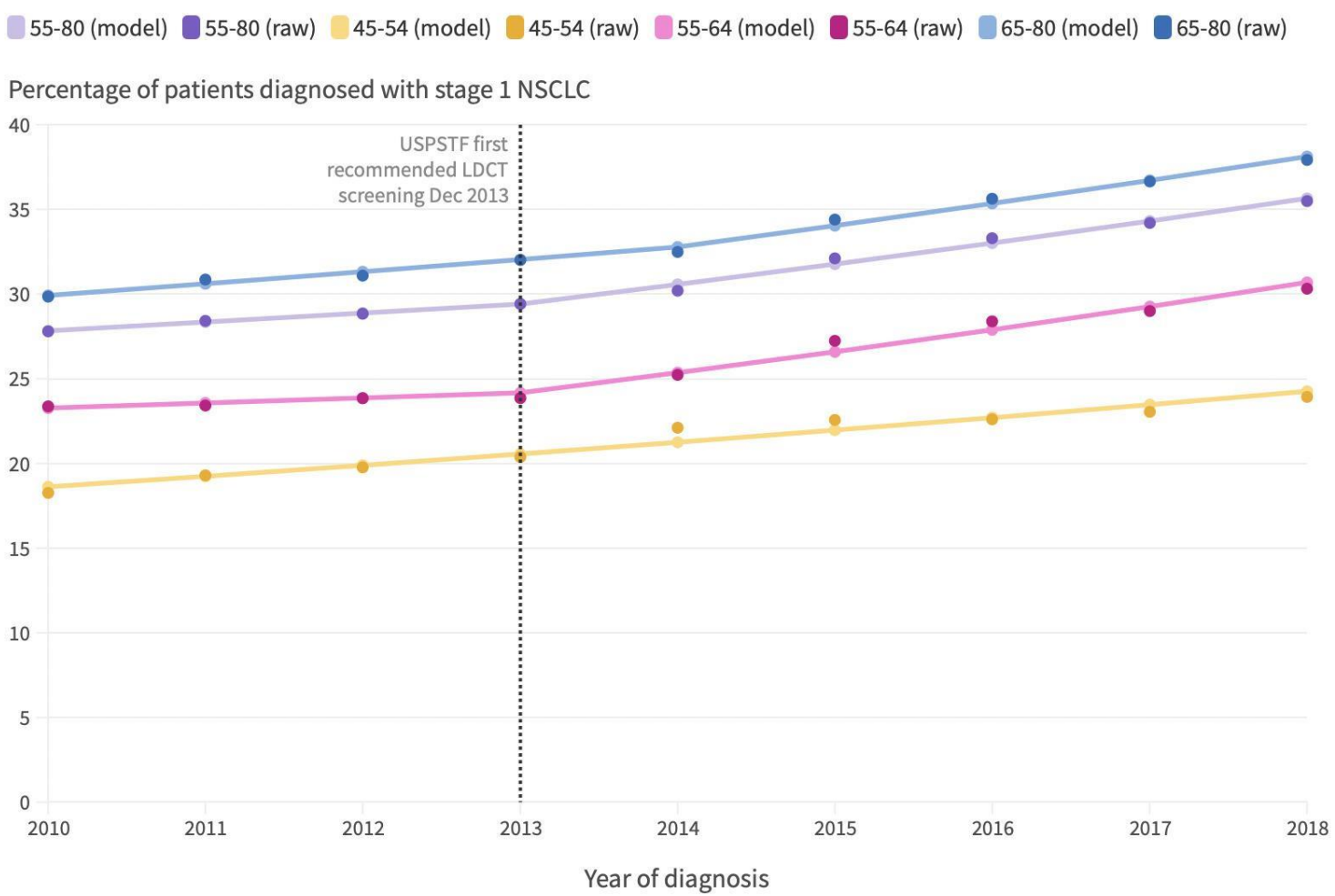
Pts at risk	0-yr	1-yr	2-yr	3-yr	4-yr	5-yr
Lobectomy	127	108	85	68	55	37
SLR	127	108	94	72	53	31

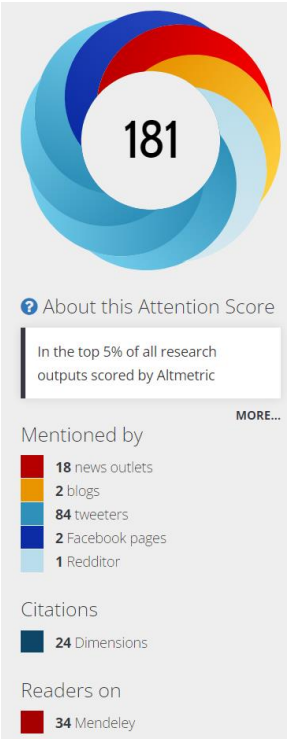
Stage Shifts due to Lung Cancer Screening

Association of computed tomography screening with lung cancer stage shift and survival in the United States: quasi-experimental study

Alexandra L Potter,[1] Allison L Rosenstein,[1] Mathew V Kiang,[2] Shivani A Shah,[1] Henning A Gaissert,[1] David C Chang,[3,4] Florian J Fintelmann,[5] Chi-Fu Jeffrey Yang[1,6]

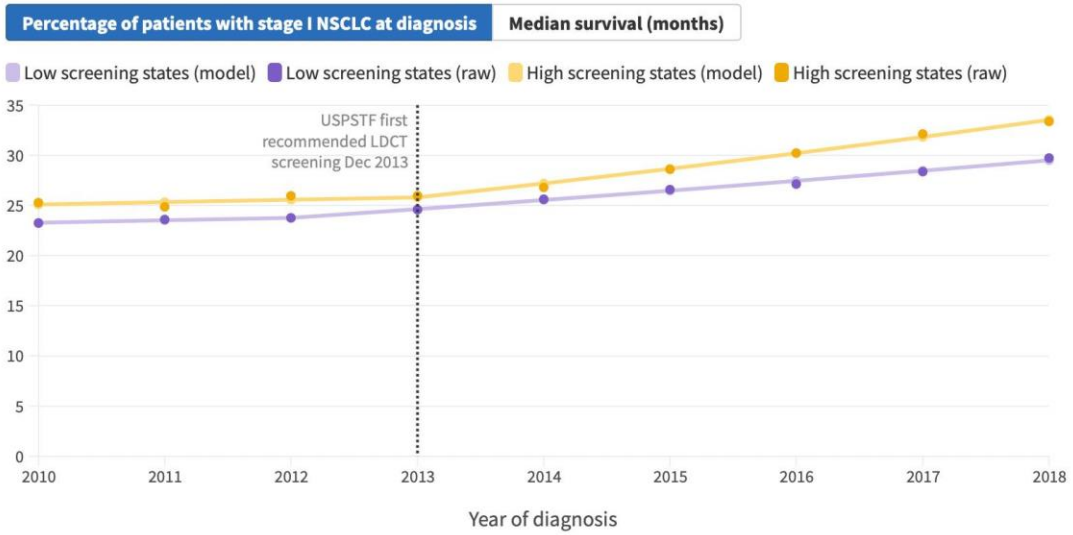
BMJ Feb 2022

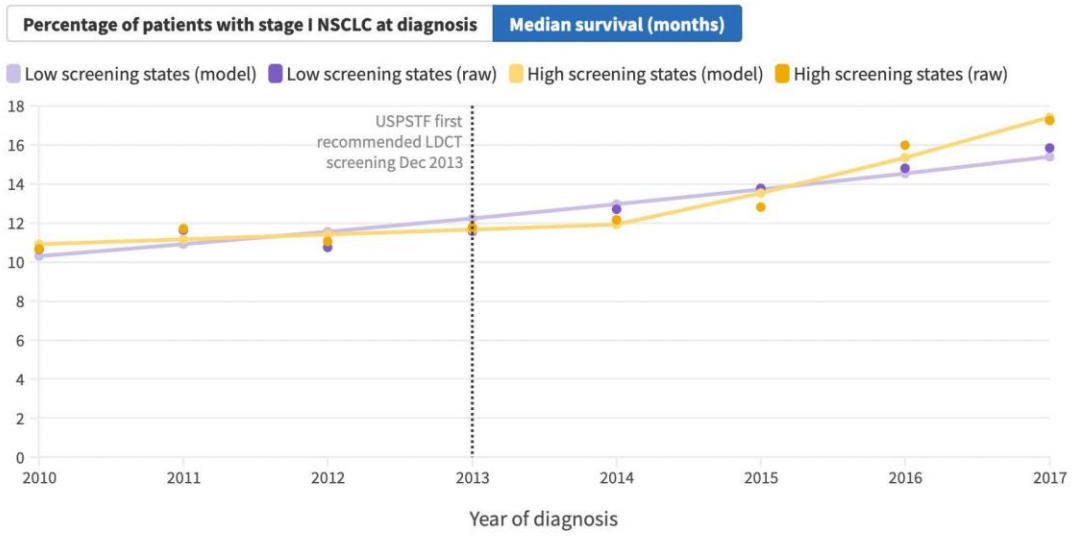


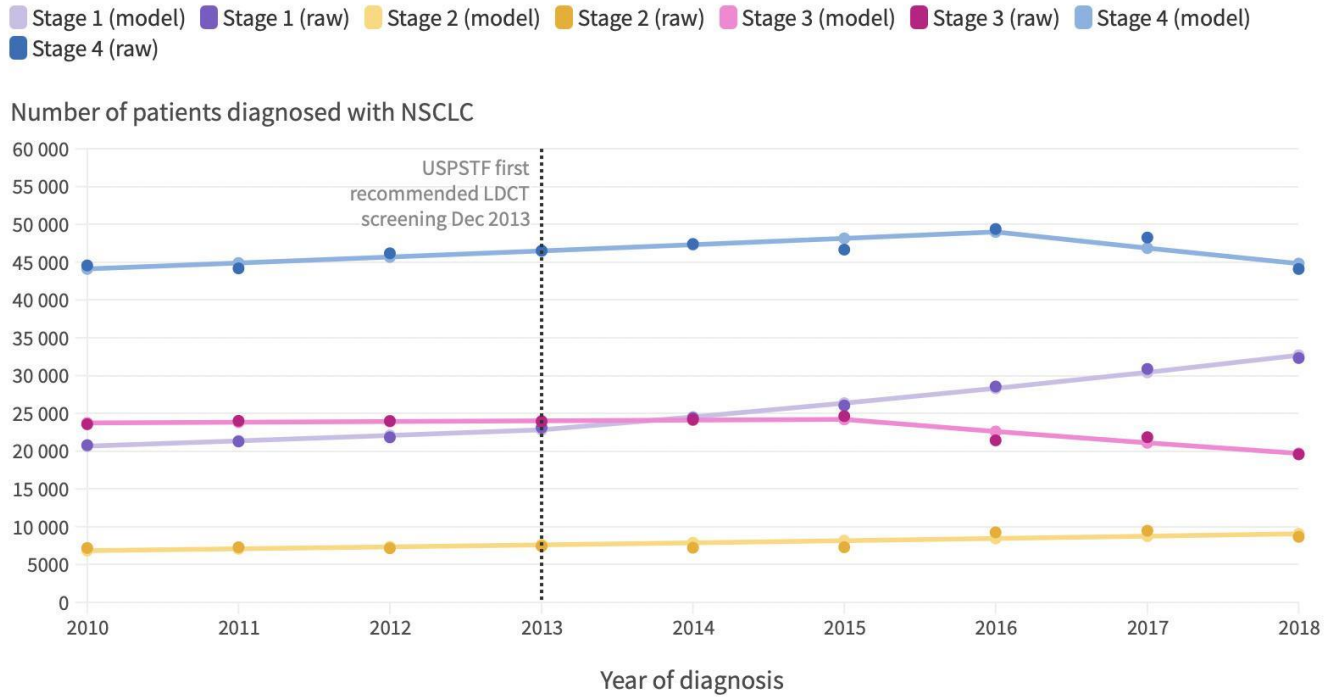


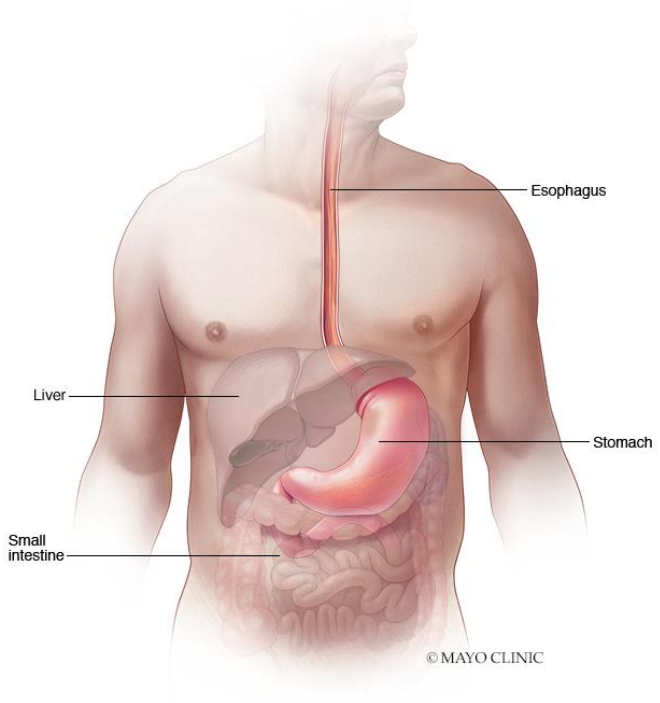
Association of computed tomography screening with lung cancer stage shift and survival in the United States: quasi-experimental study

Alexandra L Potter,[1] Allison L Rosenstein,[1] Mathew V Kiang,[2] Shivani A Shah,[1] Henning A Gaissert,[1] David C Chang,[3,4] Florian J Fintelmann,[5] Chi-Fu Jeffrey Yang[1,6]









Key Esophageal Papers

Prepared in cooperation with: Mayo Clinic Thoracic Surgery Esophagogastric Tumor Board Members: Christopher Hallemeier, MD, Travis Grotz, MD, Harry Yoon, MD, Henry Pitot, MD, Zhahoui Jin, MD, PhD, Krishan Jethwa, MD, MC Thoracic Surgery Division, Shanda Blackmon, MD, MPH

Educational Objectives & Outline

- Discuss standards of care
  - Surgical candidate: Chemo+RT (CRT) → esophagectomy
  - Adjuvant Therapy
- Discuss recent updates & areas of active research
  - XRT
  - Omission of RT
  - Systemic therapy intensification
  - Surgical Trials (nodes & approaches)
  - Misc

Esophageal/GEJ Cancer Outline

- Standards of care
  - *Surgical candidate: nCRT → esophagectomy*
  - Adjuvant Therapy

Neoadj CRT: Dutch CROSS Trial

From: 2004-2008
366 pts
operable eso ca
- 84% PS=0
- 75% ACA
- 82% distal/GEJ
- 81% cT3
- 64% cN1

R

Esophagectomy
n=188

nCRT
n=178
41.4 Gy/23 fx RT
Weekly carboplatin (AUC 2) + paclitaxel (50 mg/m^2)

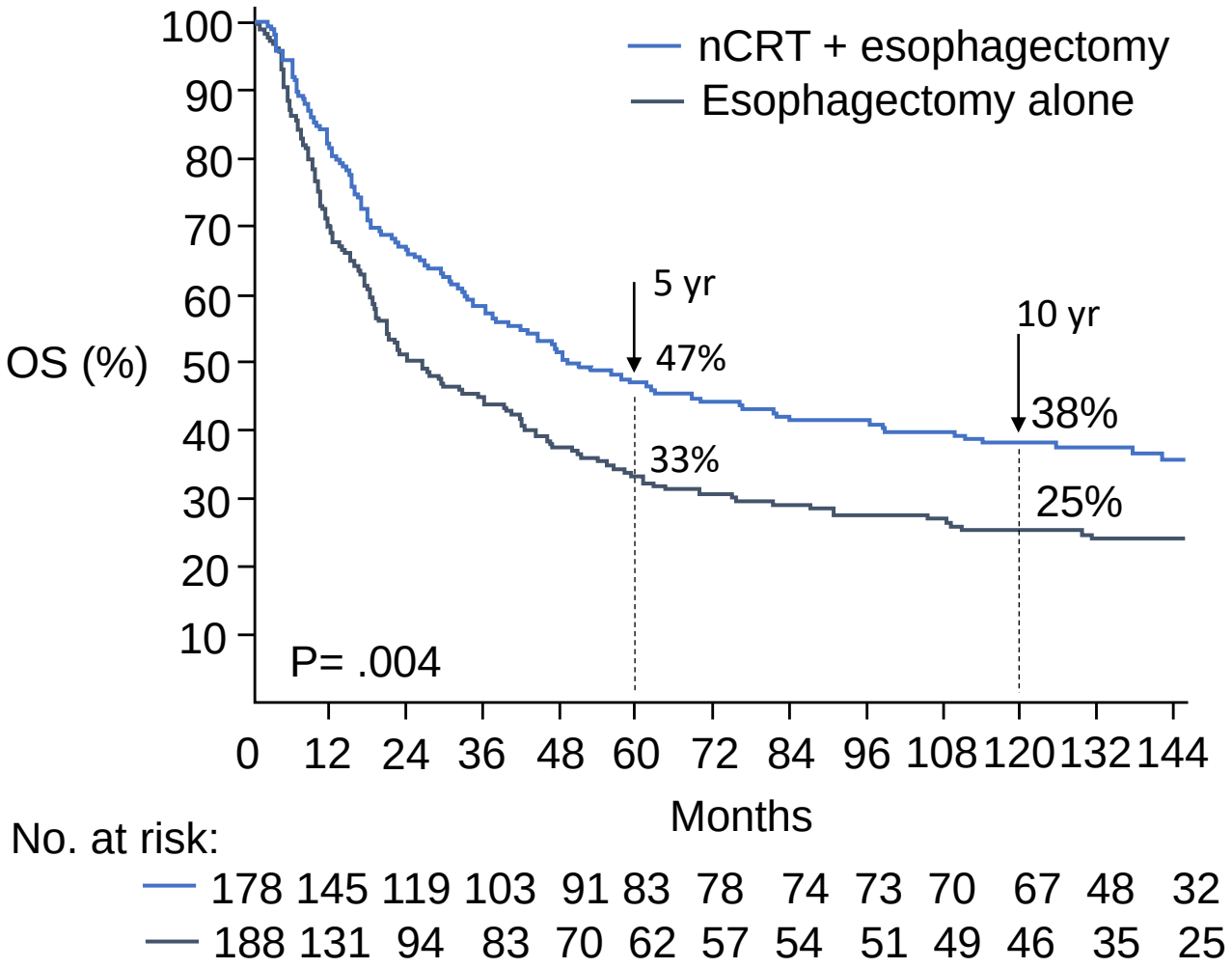
Esophagectomy

Only RCT for E & EGJ w 10 yr data

Recreated from: Van Hagen P et al: N Engl J Med 366(22):2074, 2012
Shapiro J et al: Lancet Oncol 16:1090, 2015
Eyck BM et al: J Clin Oncol 2022

CROSS Trial: SURVIVAL

-10 year outcomes published in JTO
-14% improvement in 5 yr OS
-13% improvement in 10 yr OS
-Landmark analysis suggested a stable effect on OS up to 10 yr f/u



Redrawn from: Eyck BM et al: J Clin Oncol 2022;39:1995-2004

CROSS Trial: Operative Outcomes

Outcome	E (%)	nCRT + E (%)	P
R0 resection	*69*	*92*	*<0.001*
N+	*75*	*31*	*<0.001*
pCR	NA	29*	
In-hospital mortality	4	4	NS

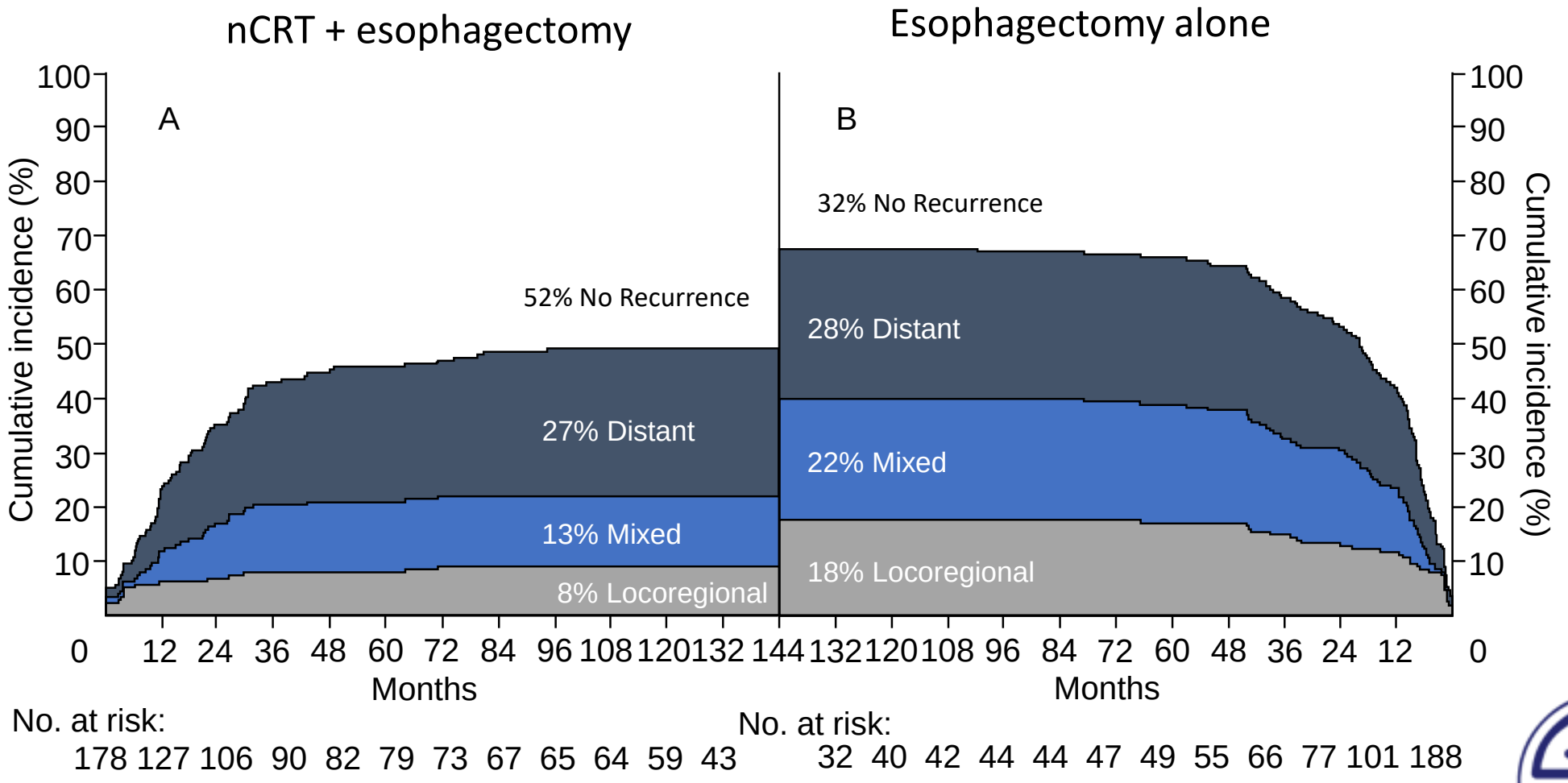
*pCR rate: SCC 49%, ACA 23%, P=0.008

Redrawn from: Van Hagen P et al: N Engl J Med 366(22):2074, 2012

CROSS Trial

Impact of CRT on Recurrence

20% difference in recurrence



Redrawn from: Eyck BM et al: J Clin Oncol 2022;39:1995-2004

Neoadj CRT vs Esophagectomy Alone

Study	Pts (no.)	AC/SCC (%)	Tx	pCR (%)	OS (%)
Walsh et al	113	100 / 0	E		*3y: 6*
			40 Gy/15 fx + cis/5FU → E	25	*3y: 32*
CALGB 9781	56	75 / 25	E		*5y: 16*
			50.4 Gy/28 fx + cis/5FU → E	40	*5y: 39*
CROSS	366	75 / 23	E		*5y: 33*
			41.4 Gy/23 fx + carbo/taxol → E	29	*5y: 47*
NEOCRTEC5010	451	0 / 100	E		*3y: 59*
			40 Gy/20 fx + cis/vinorelbine → E	43	*3y: 69*

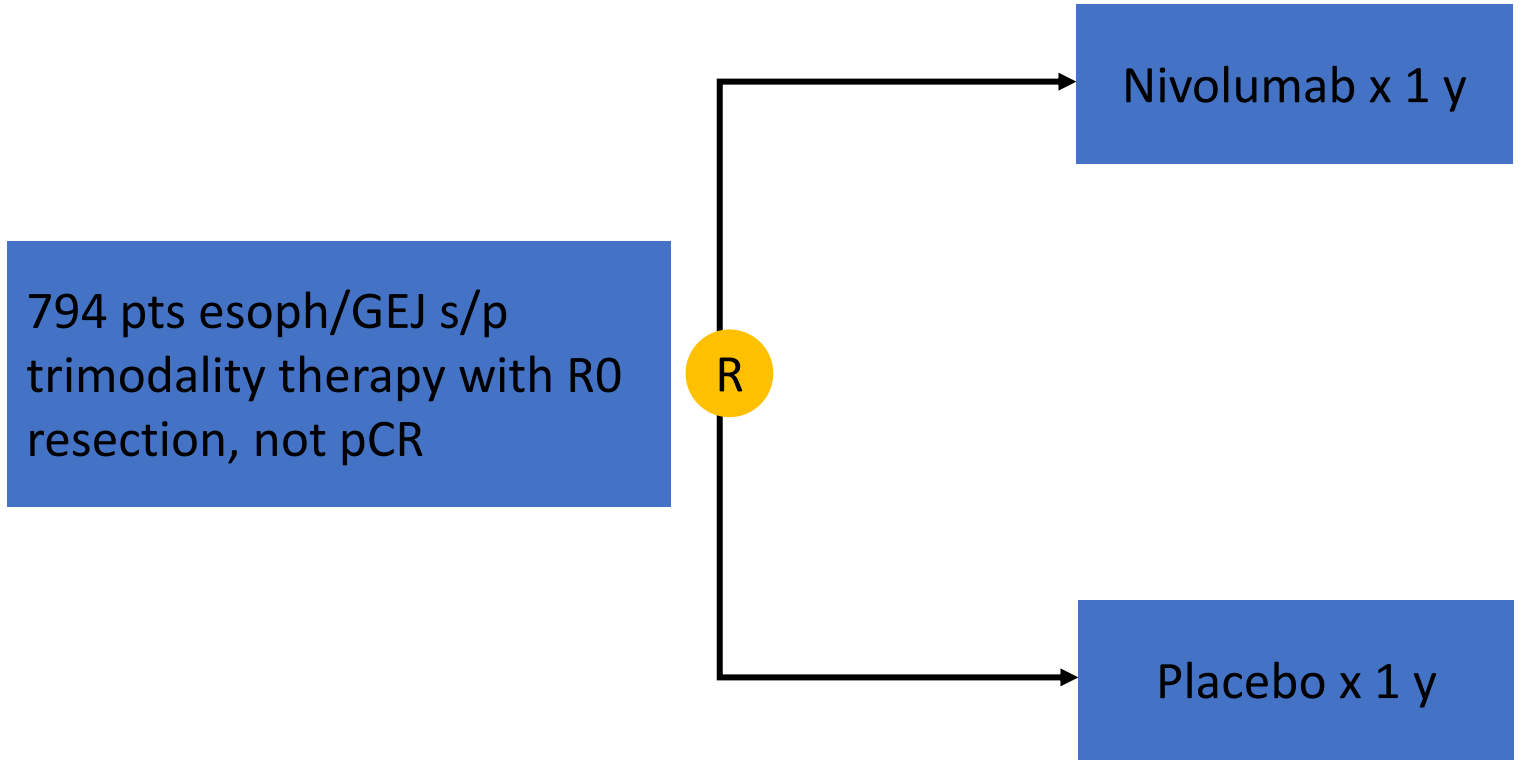
All demonstrate benefit of CRT > E

Redrawn from: Walsh et al: N Engl J Med 335:462, 1996; Tepper J et al: J Clin Oncol 26:1086, 2008; Shapiro J et al: Lancet Oncol 16:1090, 2015; Yang H et al: J Clin Oncol 36:2796, 2018

Esophageal/GEJ Cancer Outline

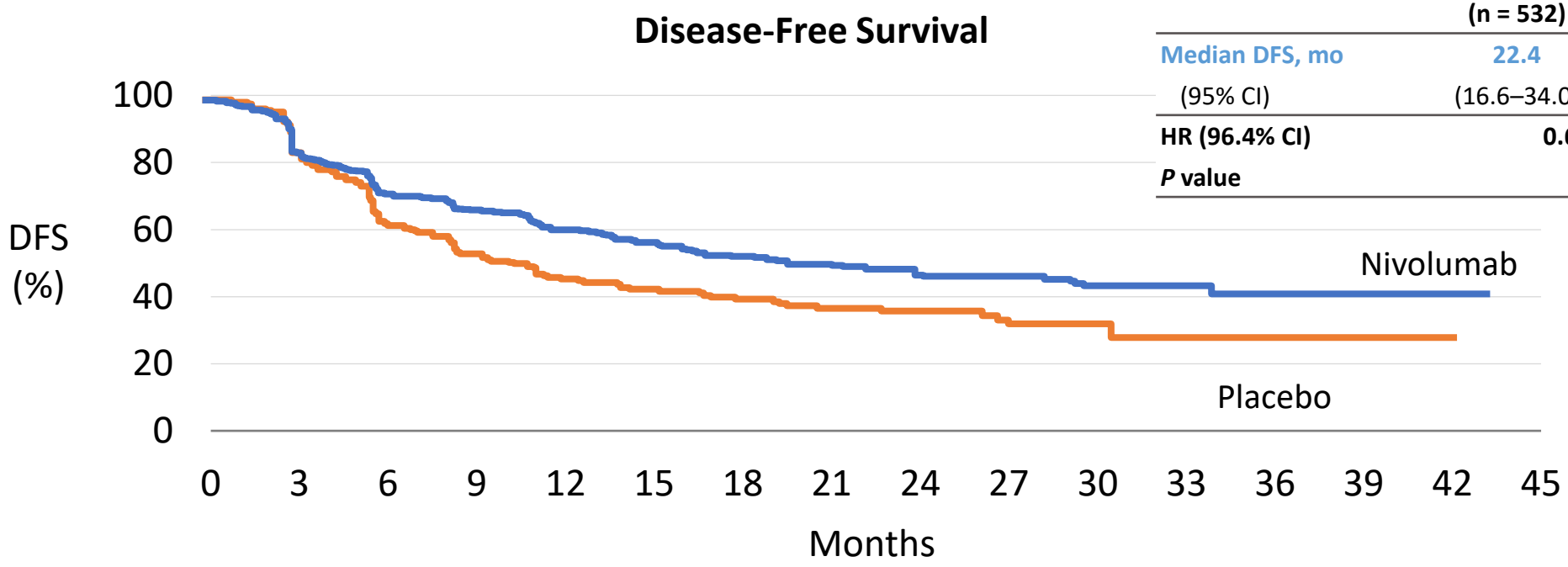
- Standards of care
  - Surgical candidate: nCRT → esophagectomy
  - *Adjuvant Therapy*

Adjuvant IO: CheckMate 577



Redrawn from: Kelly RJ et al. N Engl J Med 384(13):1191, 2022

CheckMate 577



	Nivolumab (n = 532)	Placebo (n = 262)
Median DFS, mo	22.4	11.0
(95% CI)	(16.6–34.0)	(8.3–14.3)
HR (96.4% CI)	**0.69 (0.56–0.86)**	
***P* value**	**< 0.001**	

At risk																
Nivolumab	532	430	364	306	249	212	181	147	92	68	41	22	8	4	3	0
Placebo	262	214	163	126	96	80	65	53	38	28	17	12	5	2	1	0

Conclusion: doubling the median DFS from 11 → 22

Redrawn from: Kelly RJ et al. N Engl J Med 384(13):1191, 2022

Summary of Current SOC of Eso/GEJ Ca

- For Surgical candidates:
  - 41.4-50.4 Gy + carboplatin/paclitaxel or FOLFOX → esophagectomy
- Non-surgical candidates:
  - 50-50.4 Gy + carboplatin/paclitaxel or FOLFOX
- Palliative EBRT of primary tumor:
  - 20-30 Gy ± carboplatin/paclitaxel or FOLFOX
- Adjuvant Therapy:
  - Nivolumab therapy for patients with residual disease

Esophageal/GEJ Cancer

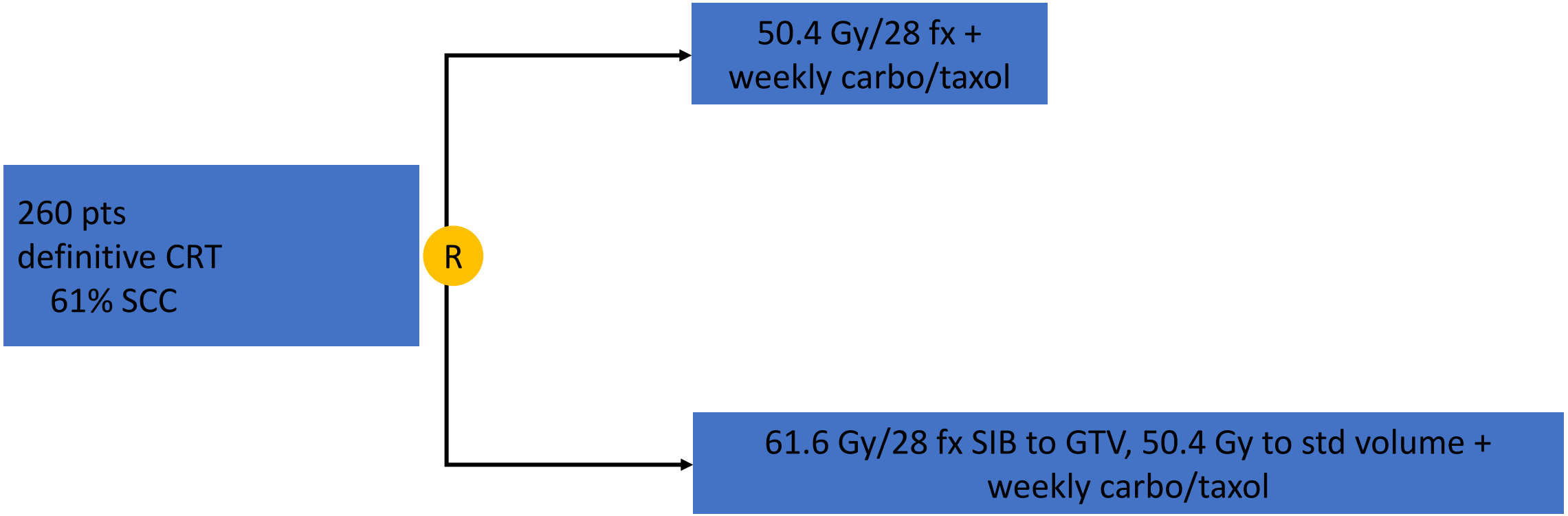
- Updates and areas of active research
  - *XRT - dose*
  - Omission of RT
  - Systemic therapy intensification
  - Surgical Trials (nodes & approaches)
  - Misc

RT Dose escalation: recent trials

Trial	Pts (no.)	SCC (%)	Chemo	RT	G4-5 AE (%)	LPFS 3y (%)	OS 3y (%)
ARTDECO Netherlands	260	61	Carbo/taxol	50.4 Gy/28 fx	17	70	42
				61.6 Gy/28 fx	24	73	39
CONCORDE France	217	88	FOLFOX	50 Gy/25 fx	5	2y: 43%	Med: 25m
				66 Gy/33 fx	11	2y: 44%	Med: 24m
Zhejiang China	319	100	Cis/docetax	50 Gy/25 fx	20	50	53
				60 Gy/30 fx	28	48	53
Peking China	167	100	Carbo/taxol	50.4 Gy/28 fx	8	37	38
				59.4 Gy/33 fx	14	61	44

Hulshof MCCM et al. J Clin Oncol. 2022; 39:2816-2824
Crehange G et al. ASTRO 2021
Xu Y et al. Clin Cancer Res 2022;28:1792-9
You J et al. IJROBP 2022 in press

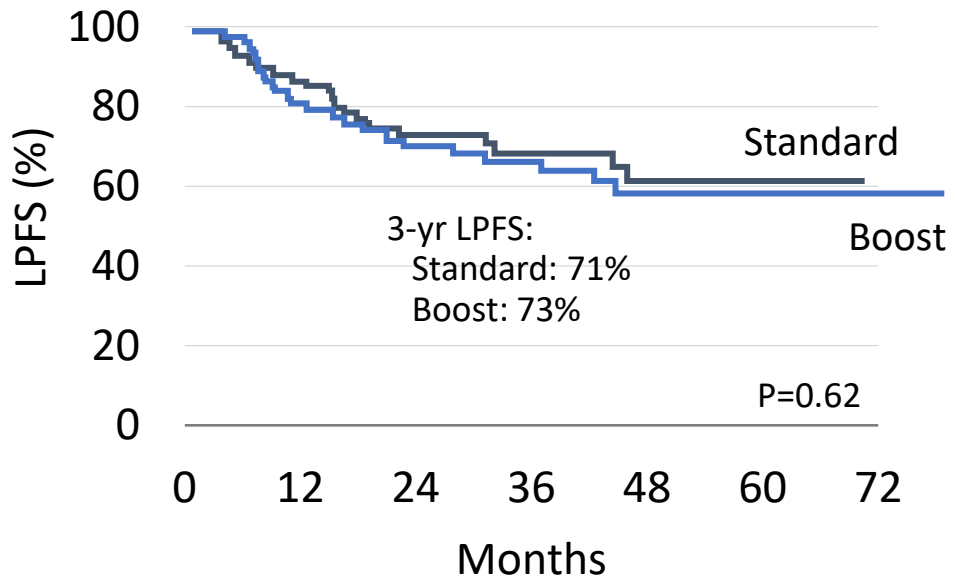
RT Dose: ARTDECO trial (Netherlands)



Redrawn from: Hulshof MCCM et al. J Clin Oncol. 2022; 39:2816-2824

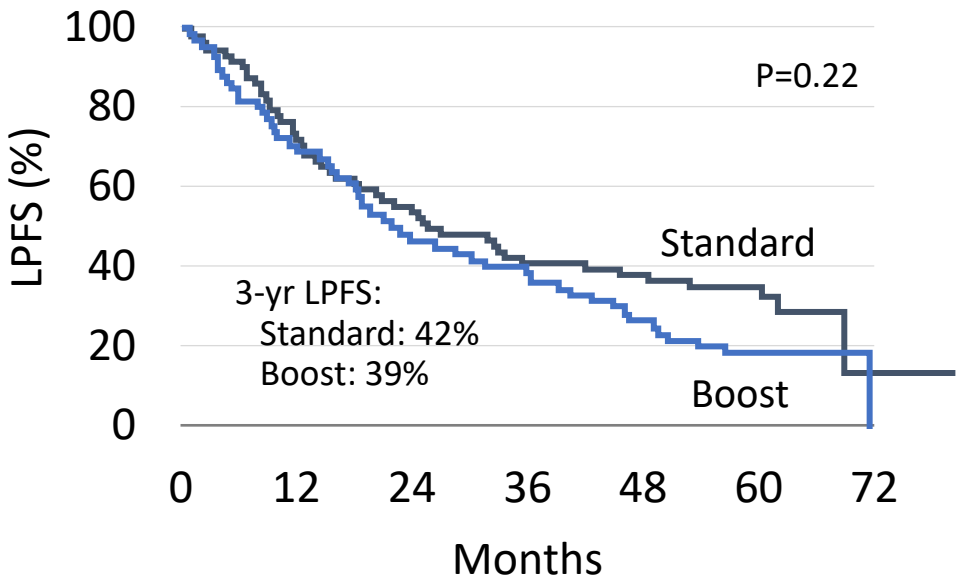
ARTDECO Trial

Local Progression-Free Survival



At risk							
Standard	130	79	54	38	22	13	1
Boost	130	85	49	34	21	8	0

Overall Survival



At risk							
Standard	130	91	66	43	27	16	1
Boost	130	89	53	38	23	8	0

Conclusion: Standard dose is 50.4 Gy (no benefit of dose escalation)

Redrawn from: Hulshof MCCM et al. J Clin Oncol. 2022; 39:2816-2824

RT Dose: Summary

- 5 RCTs: no benefit of RT dose escalation to 60+ Gy
- Standard dose = 50 Gy
- NCCN v5.2022 revision:
  - *removed* bullet stating higher doses may be appropriate for tumors of cervical esophagus and/or surgery not planned, dose escalation not beneficial

Esophageal/GEJ Cancer

- Updates and areas of active research
  - XRT - dose
  - Omission of RT
  - Systemic therapy intensification
  - Surgical Trials (nodes & approaches)
  - Misc

Neoadj C vs CRT: Randomized trials

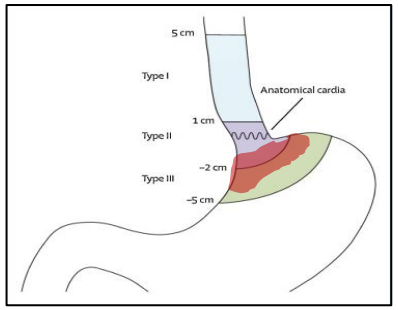
Study	Pts (no.)	Tx	R0 (%)	pCR (%)	LN+ (%)	3y OS (%)
		>20 nodes				
Stahl et al	119	5FU/cis	70	2	64	28
		5FU/cis → 30 Gy/15 fx + cis/etop	72	16	38	47
Burmeister et al	75	5FU/cis	89	0	--	49
		35 Gy/15 fx + 5FU/cis	100	13	--	52
Klevebro et al	181	5FU/cis	74	9	62	49
		40 Gy/20 fx + 5FU/cis	87	28	35	47
Neo-AEGIS	355	ECF/FLOT	82	5	55	57
		41.4 Gy/23 fx + carbo/taxol	95	16	40	56

P<0.05

P=0.07

Stahl et al: J Clin Oncol 27:851, 2009
Burmeister BH et al: Eur J Cancer 47:354, 2011
Klevebro F et al: Ann Oncol 27(4):661, 2016
Reynolds JV et al: *J Clin Oncol* 39, no. 15_suppl (May 20, 2022) 4004-4004

Neo-AEGIS: Phase 3 RCT CROSS vs FLOT NCT01726452 (Reported ASCO 2021)



Locally advanced
eso ca E/EGJ
ACA
n=377

R

CROSS:
Carbo/Taxol
+
41Gy

FLOT (27) (Fluouracil, Leucovorin, Oxaliplatin, Docetaxel)
MAGIC (157) (ECF/ECX)

-less pCR, RO due to no XRT
-3 year survival 56% & 57%
-Non-inferiority of periop chemo vs. CROSS
-Useful for GEJ when not sure if Siewert 2 vs 3

DOI:10.1200/JCO.2021.39.15_suppl.4004 *Journal of Clinical Oncology* 39, no. 15_suppl (May 20, 2021) 4004-4004.

https://ascopubs.org/doi/abs/10.1200/JCO.2021.39.15_suppl.4004

Neo-AEGIS: Phase 3 RCT CROSS vs FLOT NCT01726452 (Reported ASCO 2021)

	Arm A (Magic/FLOT)	Arm B CROSS
R0 (negative margins)	82%	95%
ypN0	44.5%	60.1%
Tumor regression grade 1 & 2	12.1%	41.7%
Pathologic complete response	5%	16%
Neutropenia (Gr 3/4)	14.1%	2.8%
Neutropenic sepsis	2.7%	0.6%
Postoperative in-hospital deaths	3%	3%
Postoperative Pneumonia/ARDS	20%/0.6%	16%/4.3%
Anastomotic Leak	12%	11.7%
Clavien-Dindo > III<V	23.6%	22%

(Abstract Only)

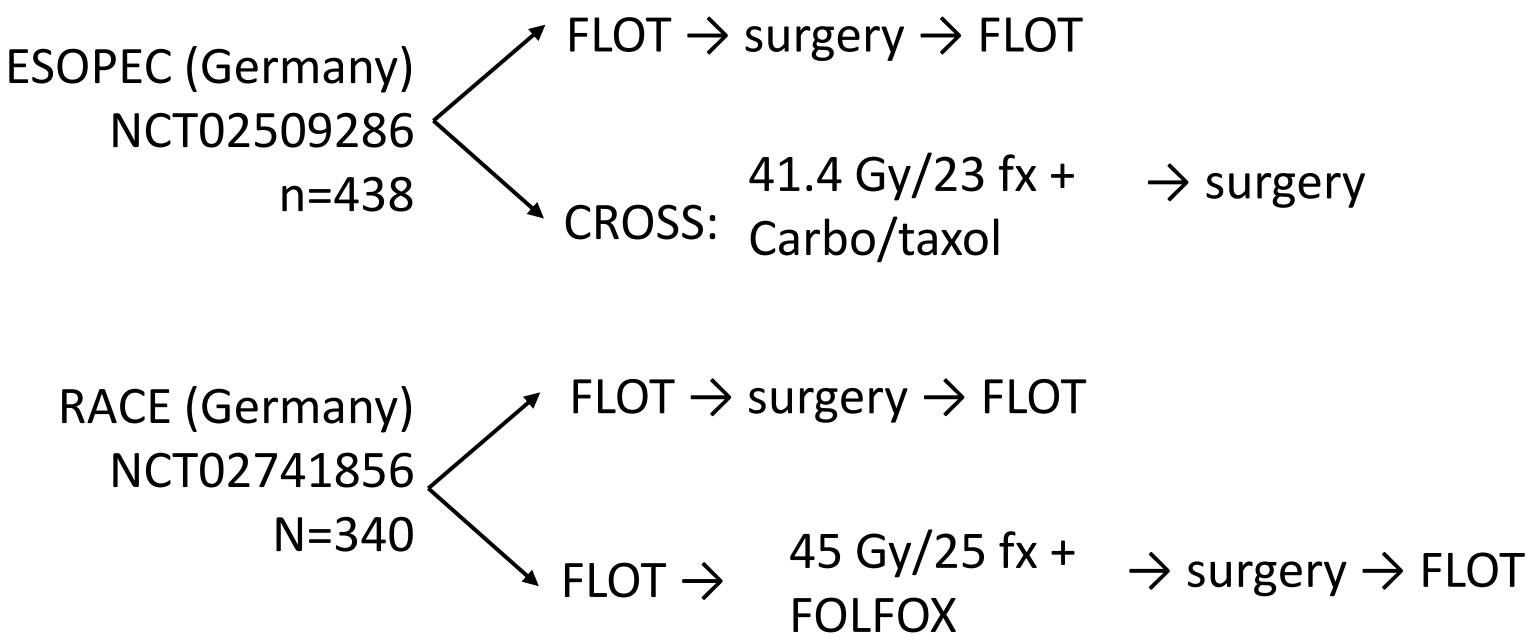
- Potential benefit of avoiding radiation
  - Easier on patient
  - More aggressive systemically
  - Removes concern about anastomosis in radiation field
  - Esophagitis non-issue?

DOI:10.1200/JCO.2021.39.15_suppl.4004 *Journal of Clinical Oncology* 39, no. 15_suppl (May 20, 2021) 4004-4004.

https://ascopubs.org/doi/abs/10.1200/JCO.2021.39.15_suppl.4004

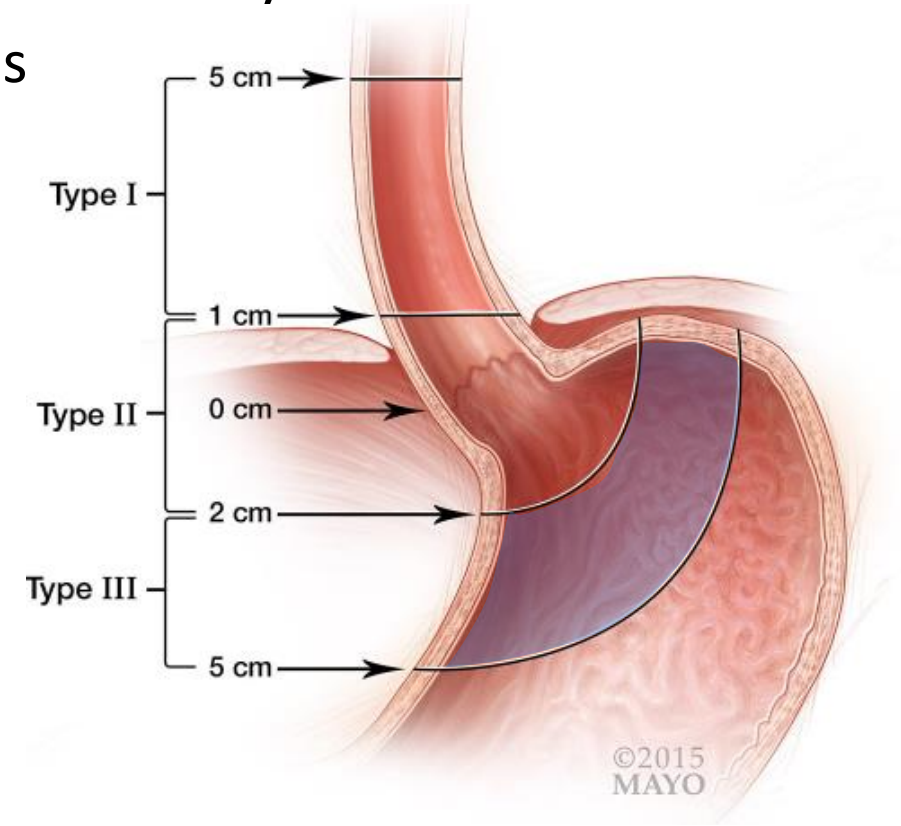
Neoadj CRT vs chemo for GEJ ACA

2 Ongoing Phase 3 RCTs



Omission of RT: Summary

- nCRT preferred for esophagus/GEJ (Siewert I-II)
- nFLOT preferred for ACA of GEJ (Siewert III) or stomach
  - Consider CRT in select circumstances
    - Esophageal involvement
    - Threatened margins
    - Bulky/extensive LN dz
    - No response to FLOT



Siewert classification for GEJ cancer

Esophageal/GEJ Cancer

- Updates and areas of active research
  - XRT - dose
  - Omission of RT
  - Systemic therapy intensification
  - Surgical Trials (nodes & approaches)
  - Misc

Systemic therapy intensification

- Rationale: Pattern of recurrence after trimodality therapy (CROSS)
  - ***33% hematogenous/peritoneal***
  - 15% local-regional
- Difficult to give further chemo after esophagectomy
- Systemic therapy is standard of care for metastatic dz, 1st line
  - Targeted therapy (trastuzumab)
  - Immunotherapy (IO)
- **Hypothesis:** addition to CRT +- esophagectomy may improve outcomes

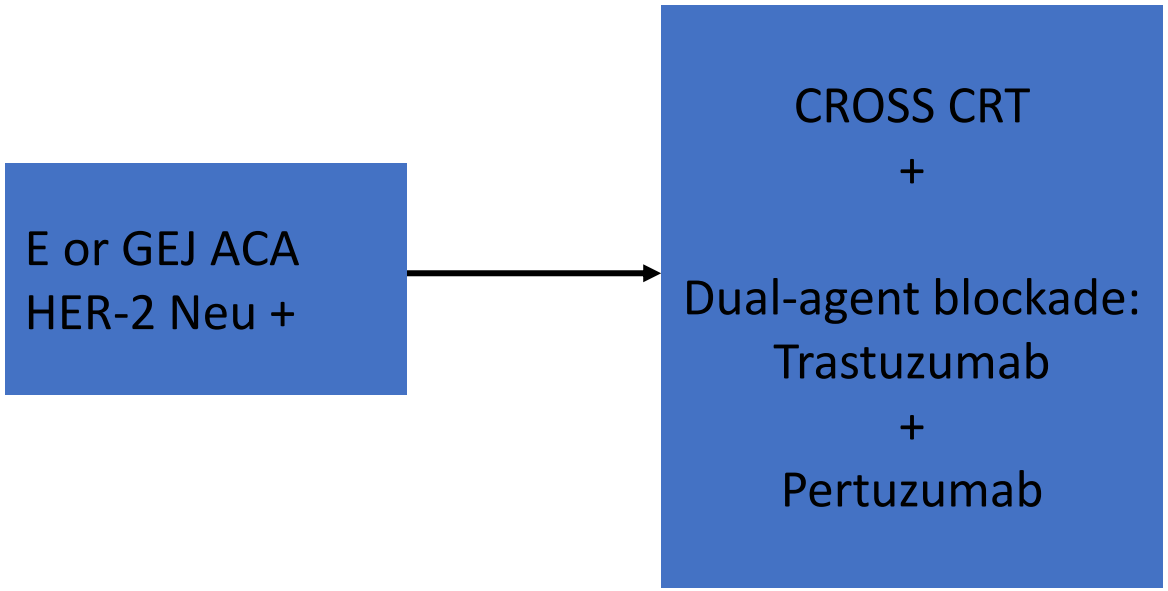
4 trials of Targeted therapy + CRT

Trial	Pts (no.)	CRT	LF 2y (%)	OS 2y (%)
SCOPE1 UK	258	50 Gy/25 fx + Cis/cape	45	*56*
		Same + cetuximab	55	*41*
RTOG 0436 US	328	50.4 Gy/28 fx + Cis/paclitaxel	49	44
		Same + cetuximab	47	45
SAKK 75/08 Europe	300	45 Gy/25 fx + cis/docetax → S	29	63
		Same + cetuximab	21	71
RTOG 1010 US	197	50.4 Gy + carbo/taxol → S	pCR: 29	52
		Same + trastuzumab	pCR: 27	52

- *No benefit to cetuximab or trastuzumab added to CRT*

Crosby T et al: Lancet Oncol 14:627, 2013
Suntharalingam M et al: JAMA Oncol 3(11):1520, 2017
Ruhstaller T et al. Ann Oncol 2018; 29(6):1386-93:
Safran HP et al. Lancet Oncol 2022; 23: 259–69

TRAP Study (Phase II non-randomized trial)



pCR 34%
PM Analysis comparison:
Increased OS vs standard CROSS

Conclusion: prelim superiority of CROSS + dual agent HER2 Neu blockade has yet to be validated in a phase III trial

IO for E/GEJ: PERI-OP

3 Ongoing Phase 3 RCTs

ECOG EA2174
Esoph/GEJ ACA
n=278

- 50.4 Gy/28 fx + carbo/taxol → surgery
- 50.4 Gy/28 fx + carbo/taxol + nivo → surgery

KEYNOTE-585
NCT03221426
GEJ/gastric ACA
N=1000

- FLOT → surgery → FLOT
- FLOT + pembro → surgery → FLOT + pembro

VESTIGE (EORTC)
NCT03443856
GEJ/gastric ACA
s/p neoadj, resection
(R1 or N+)
N=1000

- FLOT → surgery → FLOT
- FLOT → surgery → FLOT + pembro

IO for E/GEJ: definitive CRT

3 Ongoing Phase 3 RCTs

KEYNOTE-975
NCT04210115
Esoph/GEJ
n=600

- 50 Gy/25 fx + FOLFOX
- 50 Gy/25 fx + FOLFOX + pembro

China
NCT03957590
Esoph SCC
n=316

- 50.4 Gy/28 fx + cis/taxol
- 50.4 Gy/28 fx + cis/taxol + tislelizumab

SKYSCRAPER-07
NCT04543617
Esoph SCC s/p dCRT
n=750

- Atezolizumab + tiragolumab
- Atezolizumab + placebo
- Placebo

Systemic Therapy Intensification

- No benefit of adding cetuximab or trastuzumab to CRT
- Adjuvant nivo after trimodality, R0 resection, ypT+N+ (NCCN)
- Ongoing trials assessing addition of IO to CRT

Esophageal/GEJ Cancer

- Updates and areas of active research
  - XRT - dose
  - Omission of RT
  - Systemic therapy intensification
  - Surgical Trials (nodes & approaches)
  - Misc

Surgical Technique Trials: Robotic Esophagectomy

- 2-stage RAMIE Ivor Lewis or 3-stage McKewn
- 874 participants
- 20 centers
- 60% complication rate
- 3% mortality rate (30 day)
- Yield = 28 nodes per case
- 94% complete resection
- Anastomotic leak rate as high as 33% (RAMIE hand-sewn)

Feike Kingma B et al. Multicenter International registry: UGIRA Study GroupAnn Surg 2022;276:e386-e392

Surgical Technique Trials: 3-field vs 2-field

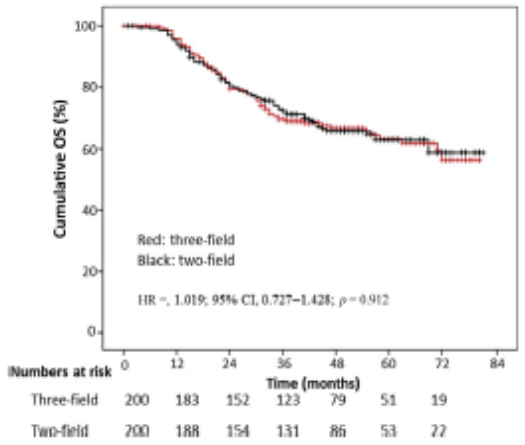


Figure 2. OS according to assigned treatment. CI, confidence interval; HR, hazard ratio; OS, overall survival.

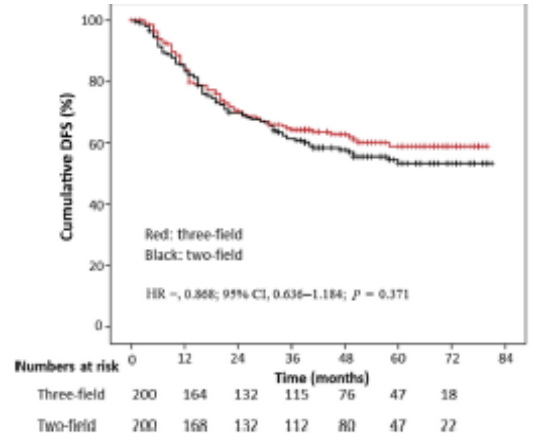


Figure 4. DFS according to assigned treatment. CI, confidence interval; DFS, disease-free survival; HR, hazard ratio.

Esophagectomy With 3-Field Versus 2-Field Lymphadenectomy for Middle & Lower Thoracic Esophageal Cancer: Long-Term Outcomes of a RCT

3/2013 – 11/2016
n=400
Mid/lower EC

R

2-field LAD

3-field LAD

OS + DFS comparable

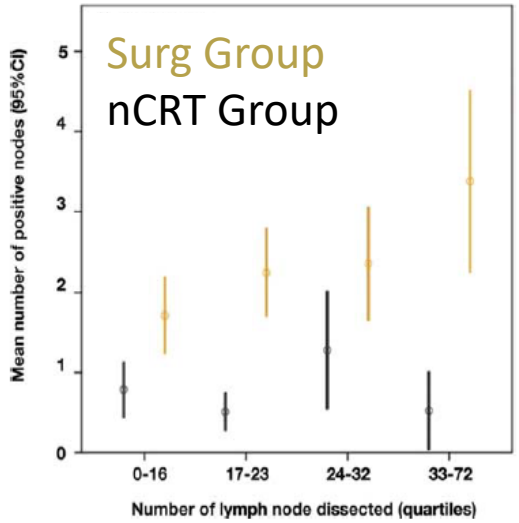
5-year OS was 63% in the three-field arm + 63% in the two-field arm
5-year DFS was 59% in the three-field arm + 53% in the two-field arm
Only advanced tumor stage (pathologic TNM stages III–IV) was identified as the risk factor associated with reduced OS (HR ¼ 3.330, 95% CI: 2.140–5.183, p < 0.001)

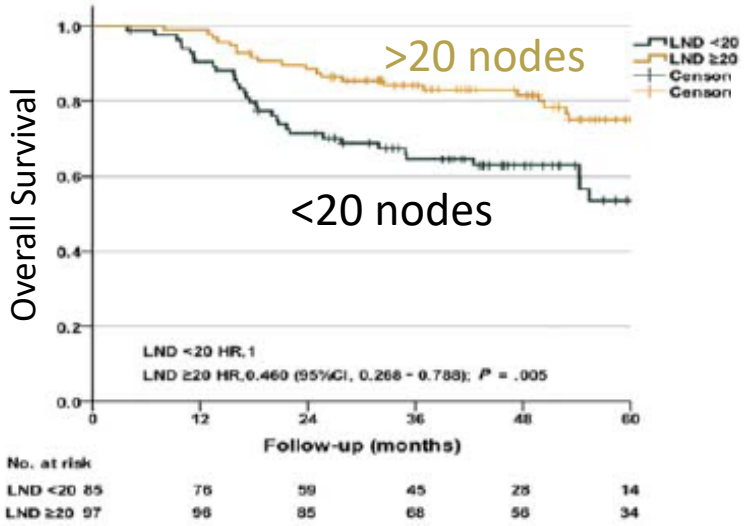
Li & H Chen et al. Journal of Thoracic Oncology Vol. 16 No. 2: 310–7

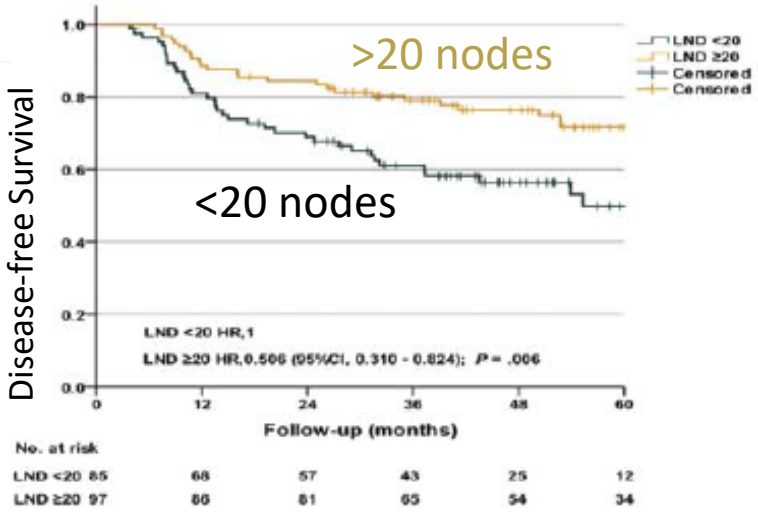
Surgical Technique Trials: LN Dissection

Impact of Lymph Node Dissection on Survival After Neoadjuvant Chemoradiotherapy for Locally Advanced Esophageal Squamous Cell Carcinoma

Results of NEOCRTEC5010, a Randomized Multicenter Study







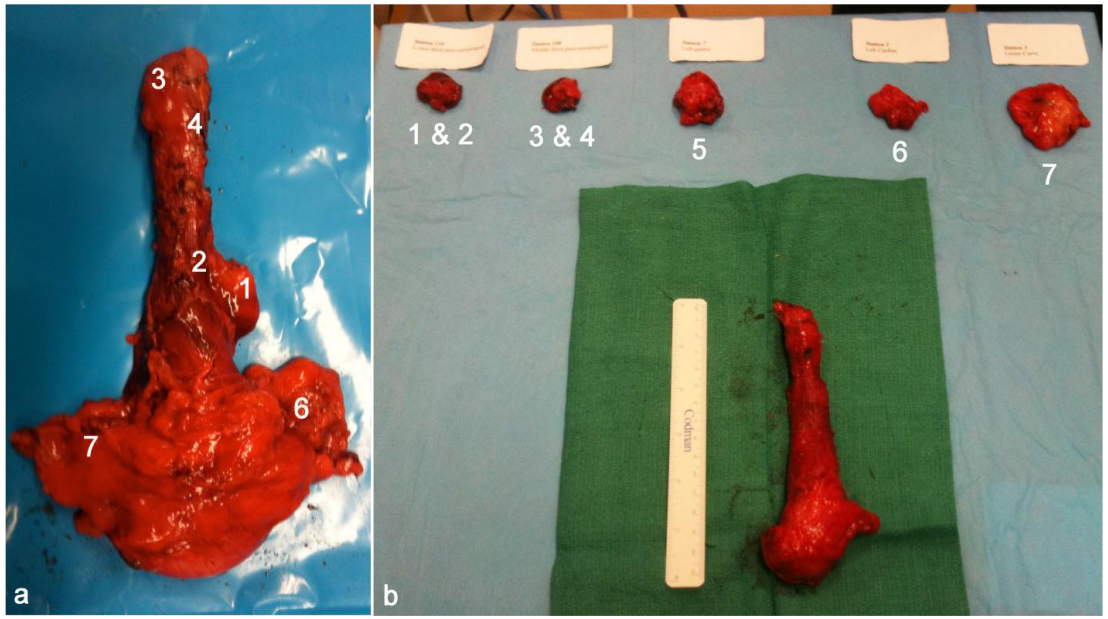
- Higher # of LND is assoc w improved survival & local disease control, without increasing the risk of surgery after nCRT
- Systemic lymphadenectomy should still be considered an integrated part of surgical resection even after nCRT for locally advanced ESCC
- Cut-off = 20

X Guo & W Fang et al Ann Surg 2023;277:259-266

Surgical Technique Trials: LN Dissection

***Ex vivo* dissection increases lymph node yield in esophagogastric cancer**

Adam Cichowitz, Paul Burton, Wendy Brown, Andrew Smith, Kalai Shaw, Ron Slamowicz & Peter D. Nottle
Department of General Surgery, Alfred Hospital, Melbourne, Victoria, Australia



Background: Retrieval and analysis of an adequate number of lymph nodes is critical for accurate staging of oesophageal and gastric cancer. Higher total node counts reported by pathologists are associated with improved survival. A prospective study was undertaken to understand the factors contributing to variability in lymph node counts after oesophagogastric cancer resections and to determine whether a novel strategy of *ex vivo* dissection of resected specimens into nodal stations improves node counts reported by pathologists.
Methods: The study involved 88 patients with potentially curable oesophagogastric cancer undergoing radical resection. Lymph node counts were obtained from pathology reports and analysed in relation to multiple variables including the introduction of *ex vivo* dissection of nodal stations in theatre.
Results: Higher lymph node counts were obtained with *ex vivo* dissection of nodal stations (median 19 versus 8, $P < 0.01$). Node counts also varied significantly with the reporting pathologist (median range 4 to 48, $P = 0.02$) which was independent of the level of experience of the pathologist ($P = 0.67$). Node counts were not affected by patient age ($P = 0.26$), gender ($P = 0.50$), operative approach ($P = 0.50$) or neoadjuvant therapy ($P = 0.83$).
Conclusions: Specimen handling is a significant factor in determining lymph node yield following radical oesophageal and gastric cancer resections. *Ex vivo* dissection of resected specimens into nodal stations improves node counts without alterations to surgical techniques. *Ex vivo* dissection should be considered routine.

ANZ J Surg 85 (2015) 80–84

X Guo & W Fang et al Ann Surg 2023;277:259-266

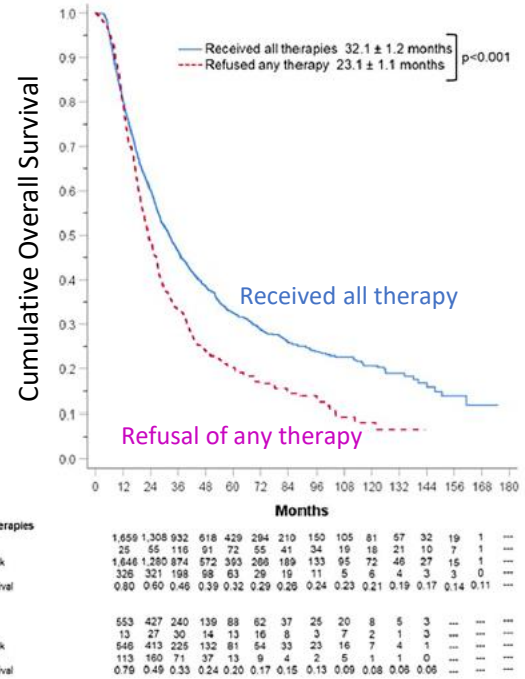
Esophageal/GEJ Cancer

- Updates and areas of active research
  - XRT - dose
  - Omission of RT
  - Systemic therapy intensification
  - Surgical Trials (nodes & approaches)
  - Misc

MISC Trials for Esophageal Cancer: Health Disparities

Effect of Health Disparities on Refusal of Trimodality Therapy in Localized Esophageal Adenocarcinoma: A Propensity Score Matched Analysis of the National Cancer Database

- 633 (4.8%) patients refused at least one component of recommended treatment (chemotherapy, radiation, and esophagectomy)
  - most commonly refusal of surgery (N = 554, 4.2%)
- Patients who refused Tx had significantly worse survival than those who adhered to treatment (median 23.1 ± 1.1 vs. 32.1 ± 1.2 months; P < .001)
- Sociodemographic disparities & center volume were among factors predictive of therapy refusal in patients with localized esophageal adenocarcinoma
- While understanding potential reasons for treatment refusal is critical, this data suggests that socioeconomic variables may drive patient decisions



NCDB (2004-2017)

EAC cT3-4N0 or cTany N1-3 lower esophagus

n= 13 091 patients

→ MVA →

MV predictors of refusal:

older age, female gender, black race, no insurance, low income (below poverty), mid-esophageal tumors,
& treatment at low-vol centers (<20 c/yr/institution)

Salti I, et.al. The American Surgeon 2022, Vol. 0(0) 1–10 sagepub.com/journals-permissions DOI: 10.1177/00031348221117040 journals.sagepub.com/home/asu

Conclusion

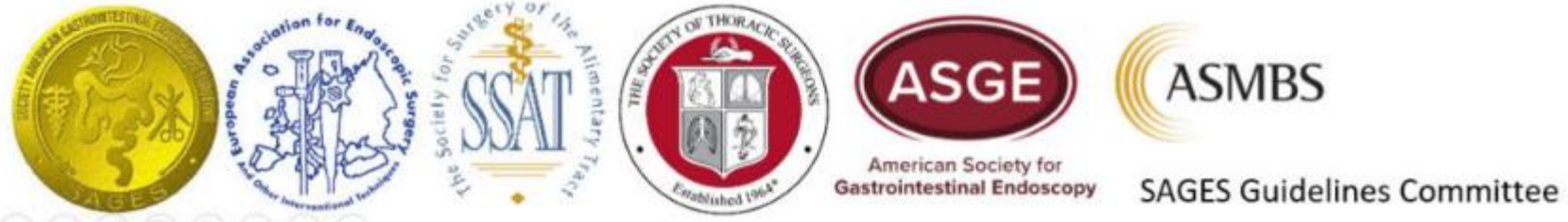
- Standards of care
  - Surgical candidate: CRT → esophagectomy
  - Non-surgical candidate: Definitive CRT
  - Metastatic: RT ± chemo provides effective palliative treatment of primary tumor
- Updates and areas of active research
  - XRT: higher dose not better; protons play a role
  - Omission of RT: nCRT for Siewert I/ FLOT for Siewert III
  - Systemic therapy intensification: adj Nivo if resid dz
  - Surgical Trials (nodes & approaches): >20 nodes
  - Misc

Benign Esophagus Papers

SAGES guidelines

SAGES HOME ABOUT MEETINGS JOIN SAGES! PATIENTS PUBLICATIONS EDUCATION OPPORTUNITIES SEARCH STORE L

MULTI-SOCIETY CONSENSUS CONFERENCE AND GUIDELINE ON THE TREATMENT OF GASTROESOPHAGEAL REFLUX DISEASE (GERD)



AUTHORS:

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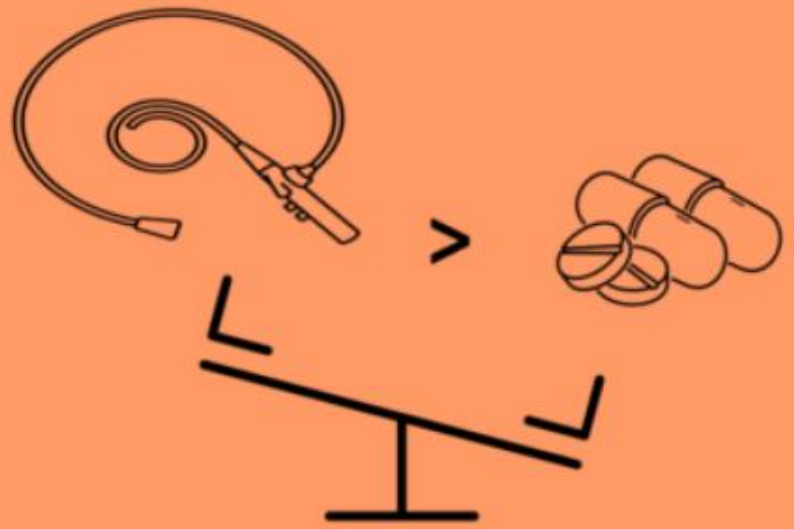
April 2022 (?) Surgical Endoscopy

Endoscopic, surgical, or medical treatment for adults with GERD?

Multi-Society Consensus Conference and Guideline

OPERATIVE

Either Magnetic Sphincter Augmentation (MSA) or Nissen fundoplication

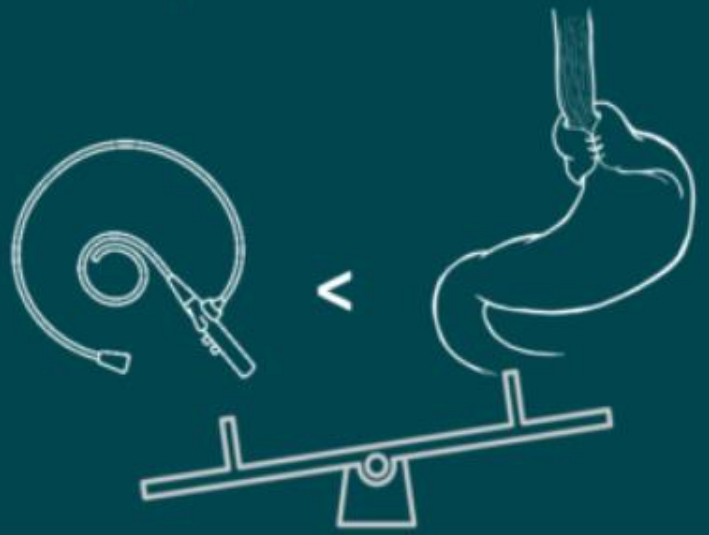


NON-OPERATIVE MANAGEMENT

Transoral Incisionless Fundoplication (TIF) 2.0 & Stretta may be superior to Proton Pump Inhibitors

ENDOSCOPY

Endoscopic treatments may be inferior to Nissen



SAGES Guidelines Committee

Slater BJ., et al.
Surgical Endoscopy 2022
Visual Abstract by Rodríguez-Luna MR

Preoperative evaluation of adults with GERD

Multi-Society Consensus Conference and Guideline

Typical symptoms

Endoscopy

Los Angeles Grade C or D esophagitis

No more testing required

pH monitoring

EXTRA-ESOPHAGEAL

symptoms and pts with equivocal initial testing need more diligent workup

Research Recommendations:

- ✓ Standardization of terminology
- ✓ Written documentation of endoscopic findings
  - ✓ Photo documentation
- ✓ Newer technologies
  - ✓ High resolution esophageal manometry
  - ✓ Endo-FLIP

SAGES Guidelines Committee

Slater BJ, et al.
Surgical Endoscopy 2022
Visual Abstract by Collings, AT

Partial vs. complete fundoplication for adults with GERD

Multi-Society Consensus Conference and Guideline

Partial > **Complete**

In adult patients with GERD

± esophageal dysmotility

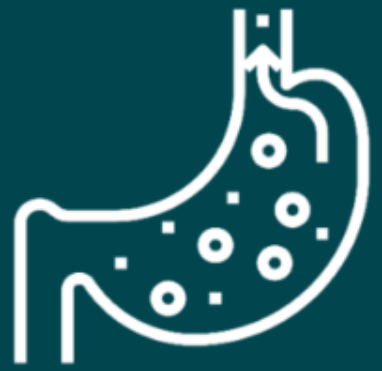
Benefits of Partial over Complete

Fewer
Hiatal Hernia Recurrence

Fewer
Postop dysphagia

Fewer
Gas, bloat, inability to vomit >1 year

Downfalls of Partial over Complete



More objective reflux >1 year

More subjective reflux >1 year

SAGES Guidelines Committee

Slater BJ, et al.
Surgical Endoscopy 2022
Visual Abstract by Hong JS

Management of adults with obesity (BMI > 35) and medically refractory GERD

Multi-Society Consensus Conference and Guideline

Either Lap Nissen Fundoplication (LNF) or Roux-en-Y bypass for GERD control

Conditional Recommendation

Sleeve Gastrectomy should not be used for GERD control

Expert Opinion

After failed fundoplication, either Redo LNF or Roux-en-Y bypass can benefit the patient

Shared MD and Pt decision making

Conditional Recommendation

ASGE

American Society for Gastrointestinal Endoscopy

ASMBS

SAGES Guidelines Committee

Slater BJ, et al.
Surgical Endoscopy 2022
Visual Abstract by Daly SC & Walsh DS

Note- SAGES Paraesophageal Hernia guidelines are from 2013,
hoping updated guidelines are forthcoming

Surgical Professional Issues

Annals of Surgery Open
Feb 2023

Original Study

ANNALS OF SURGERY OPEN
OPEN

Alignment of RVU Targets With Operating Room Block Time

Saieesh A. Rao, MD,* Nikita G. Deshpande, MD,† Douglas W. Richardson, MBA,‡ Jon Brickman, MS,‡ Mitchell C. Posner, MD,‡ Jeffrey B. Matthews, MD,‡ and Kiran K. Turaga, MD, MPH‡

Background: Surgeon productivity is measured in relative value units (RVUs). The feasibility of attaining RVU productivity targets requires surgeons to have enough allocated block time to generate RVUs. However, it is unknown how much block time is required for surgeons to attain specific RVU targets. We aimed to estimate the effect of surgeon and practice environment characteristics (SPECs) on block time needed to attain fixed RVU targets.

8 hr blocks, 60 min turnover, 48 weeks/year

TABLE 1.

Median Annual RVU Benchmarks by Specialty, With Predicted Annual Operating Room Block Requirement and Consequent Weekly Mean Block Allocation

Specialty	wRVU Median (2015)	Mean Annual Block Requirement (SD)	Mean Weekly Block Requirement
Cardiac	10395	132.6 (5.0)	2.76
General	7345	126.4 (4.6)	2.63
Gynecology	7140	125.0 (4.1)	2.60
Neurosurgery	10,066	140.0 (5.0)	2.92
Orthopedics	6999	116.9 (3.4)	2.43
ENT	7555	166.0 (6.3)	3.46
Plastics	7946	133.1 (5.0)	2.77
Thoracic	6614	101.1 (3.7)	2.11
Urology	8240	146.6 (4.1)	3.05
Vascular	8990	154.6 (4.8)	3.22

RVU benchmarks detailed here are those provided by AAMC for academic practices in the year 2015. The benchmark for orthopedics is that of general orthopedics in the AAMC survey, and that of gynecology is that for gynecologic oncology since general gynecology is not listed. It is noted that the RVU benchmarks are inclusive of RVUs earned both within and outside of the operating room setting, whereas the model estimates of block requirement assume that the benchmark is entirely earned from surgical cases; hence the above estimates for specific RVU benchmarks are necessarily illustrative. Practice environment conditions for the above estimates include eight-hour blocks, 60-minute turnovers, unspecified case complexity, and a scheduling cluster size of 10 cases at a time. Weekly block requirement is calculated by dividing the annual block requirement by 48, which assumes a 52-week year not including 4 weeks of paid time-off.

Conclusions: Block time required to attain RVU targets varies widely with SPECs; intraspecialty variation exceeds interspecialty variation. The feasibility of attaining RVU targets requires alignment between targets and allocated operating time with consideration for surgical specialty and other practice conditions.

RVU Targets and Block Time

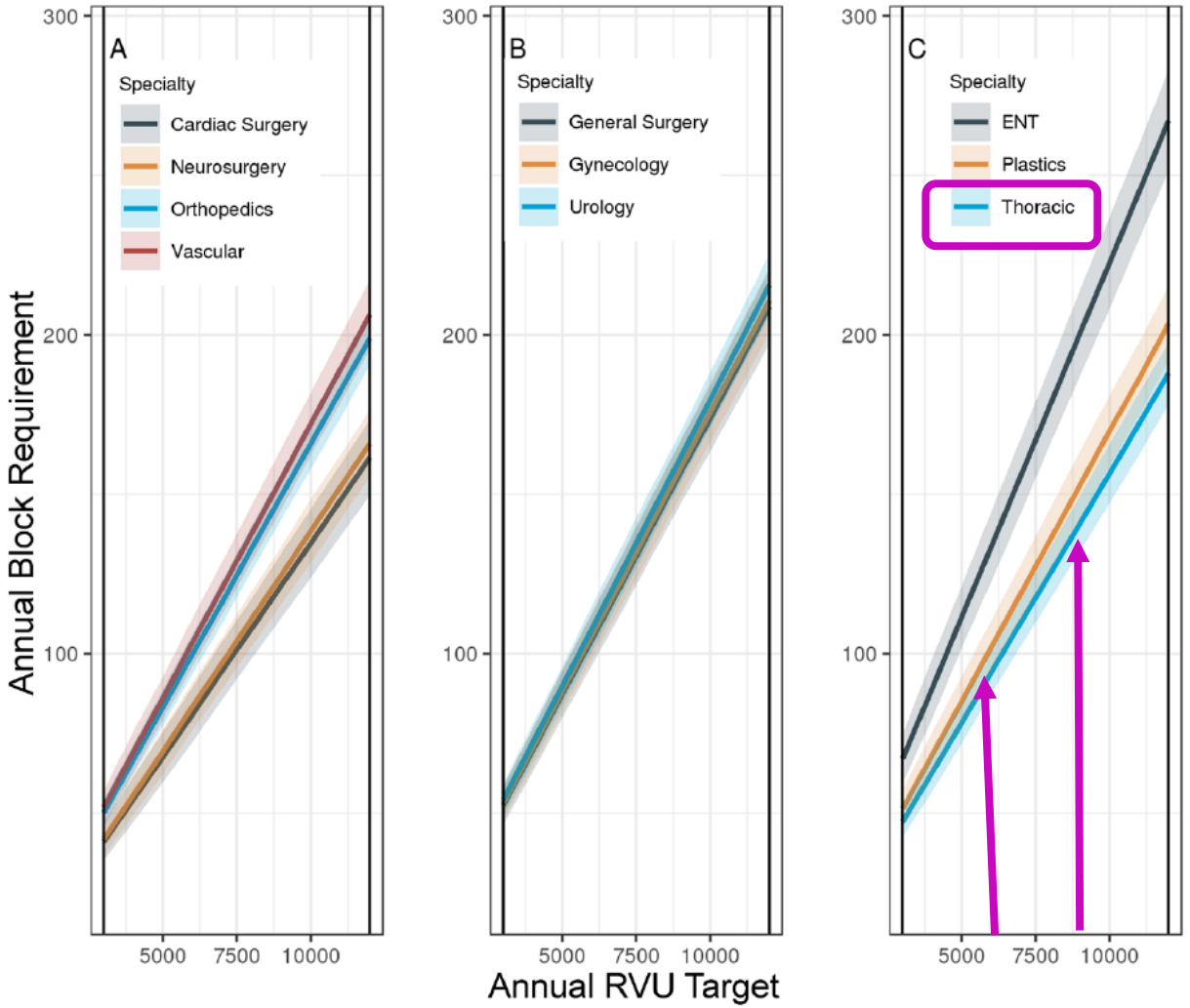


FIGURE 2. Mean number of annual blocks required to attain RVU production targets across surgical specialties. Shaded areas depict ranges capturing 95% of simulated surgeons' observed block requirements (mean ±2 SD). Panels are constructed to demonstrate differences in block requirements across specialties, or lack thereof. General Surgery and Gynecology overlap in (B). Practice environment conditions include 8-hour blocks, 60-minute turnovers, unspecified case complexity, and a scheduling cluster size of 10 cases at a time. For reference, median wRVU benchmarks in academic practices are included in Table 1.

- Turnover Time. The time between skin closure and first incision across consecutive cases was included to account for nonsurgical activities that take place in the OR, such as cleaning, patient positioning, and anesthetic induction and emergence. Turnover time ranged from 0 to 90 minutes in 10-minute increments.

Important assumptions:

8 hr blocks, 60 min turnover,
48 weeks/year

50th percentile Thoracic RVU,
in 2015, was 6614

60 min?
mine is
120-180!!!!!

Second Victim Syndrome

EXPERT REVIEW

Cardiothoracic surgeons as second victims: We, too, are at risk

Michael Maddaus, MD

JTCVS 2023
ahead of print

CENTRAL MESSAGE

Surgeons suffer psychologically after a major adverse event with 19% developing acute traumatic stress of clinical concern. Positive psychological coping skills and peer support are vital to recovery.

TABLE 1. Examples of do's for peer support outreach

Provide an empathetic, reassuring, and nonjudgmental ear
Discuss how talking to a peer can be helpful
Use "I" statements
Maintain eye contact
Be aware of your body language
Allow silent pauses; this provides an opportunity for the peer to speak
Express empathy; for example, "I am sorry this happened to you"
If you find conversation is too difficult for the peer, focus on the informational tools you can provide and review where and how they can find help when/if they are ready
Express your appreciation to the peer for sharing
Reflect what you have heard and summarize
Review coping strategies
Identify additional sources of support and how to access them
Provide copies of the coping strategies tool and resources tool

Reproduced from reference 20 with permission from Elsevier.[21]

TABLE 2. Examples of do not's for peer support outreach

Avoid trying to "fix" the situation
Do not assume that your experience or reactions are the same
Avoid being judgmental or critical
Insist on sharing
Feel the urge to fill the silence, wait for the peer to decide what they want to say
Critique the care provided by the peer
Provide psychotherapy
Insist on a discussion if the peer is uncomfortable
Discuss another peer support outreach situation you have been involved in

Reproduced from reference 20 with permission from Elsevier.[21]

EXPERT REVIEW

Cardiothoracic surgeons as second victims: We, too, are at risk

Michael Maddaus, MD

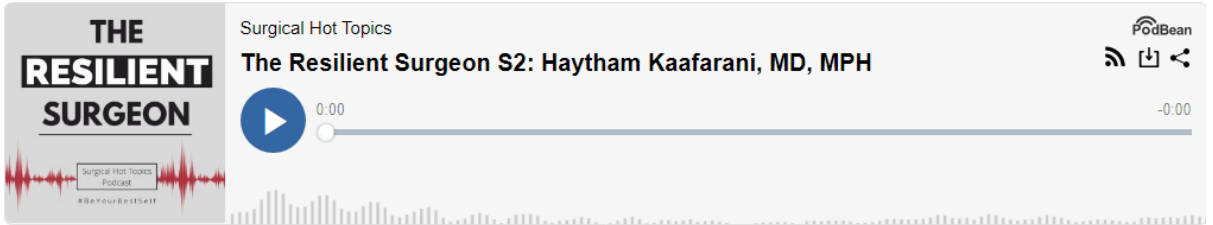
CONCLUSIONS

It is time to break the chains of our past that have marginalized our humanity in the face of significant life adversities, including major AEs. By shifting the view of our divisions or departments from structures where individual surgeons are housed to carry out their careers to places of community that embrace our humanity with all its challenges, while simultaneously demanding excellence, we will foster and support what we all want: A sense of belonging and being valued and the best care and outcomes for patients and their families.

STS PODCAST – ***MUST LISTEN!***

#142: The Resilient Surgeon S2: Haytham Kaafarani, MD, MPH

December 16, 2022



Other Surgery “Stuff”

Will email links to this and all papers

List top ATS papers for 2022-2023

Top Viewed

2. Surgical perspective on neoadjuvant immunotherapy in non-small cell lung cancer –Jay Lee
3. Rescue blanket as a provisional seal for penetrating chest wounds in a new ex vivo porcine model - Thomas Schachner
4. Incidence, Management, and Outcomes of Patients with COVID-19 and Pneumothorax - Travis Geraci
5. Outcomes of Extracorporeal Membrane Oxygenation in Patients with Severe Acute Respiratory Distress Syndrome Caused by COVID-19 versus Influenza - Emily Shih
6. The presence of metastatic thoracic duct lymph nodes in Western esophageal cancer patients – Ingmar Defize

Top Cited

1. Outcomes of Extracorporeal Membrane Oxygenation in Patients with Severe Acute Respiratory Distress Syndrome Caused by COVID-19 versus Influenza – Emily Shih
2. Neoadjuvant PD-1 inhibitors and chemotherapy for Locally Advanced NSCLC: A retrospective study – Qingquan Luo
3. Surgical perspective on neoadjuvant immunotherapy in non-small cell lung cancer –Jay Lee
4. Adjuvant chemotherapy for high-risk pathological stage I non-small cell lung cancer – Yasuhiro Tsutani
5. Combined EBUS-IFB and EBUS-TBNA vs EBUS-TBNA alone for intrathoracic adenopathy: A Meta-analysis – Abhinav Agrawal

Other Surgical "stuff" – Recommended Reading (will not review today)

- Quitting smoking improves outcomes at time of lung cancer diagnosis
- Subset analysis of Adaura
- Pneumothorax in covid 19
- PACIFIC-6
- Sybil: A Validated Deep Learning Model to Predict Future Lung Cancer Risk From a Single Low-Dose Chest Computed Tomography
- Screening for Lung Cancer in Never Smokers: IASLC
- Barrett's Esophagus, a review: JAMA Network
- Risk of Eso Cancer after Bariatric Surgery
- Robotic Credentialing Consensus
- Intraoperative Re-dosing of Antibiotics
- Sex-based role misidentification and burnout

Will send a dropbox link to all papers

Other Surgical “stuff” – Recommended Reading (continued)

- Outcomes for endoscopic submucosal dissection of pathologically staged T1b esophageal cancer: a multicenter study
- Sarcopenia Determined by Skeletal Muscle Index Predicts Overall Survival, Disease-free Survival, and Postoperative Complications in Resectable Esophageal Cancer

Will send a dropbox link to all papers

Podcast Recommendations

Lung Cancer Update Podcast

IASLC

Lung Cancer Considered
IASLC

STS podcasts:

Resilient Surgeon
Same Surgeon, Different Light
Beyond the Abstract
Webinar series

Gastrointestinal Cancer Update Podcast

A Spotify Original
Parcast
dare to lead
with Brené Brown

Behind the Knife

to go

CTSNet To Go
CTSNet

Session Wrap up - Discussion

Trials available by Disease, Stage:

NSCLC:

- Stage IA –
  - SWOG in development: Neo and Adjuvant IO for 1-4 cm tumors
  - Deep learning/spatial analysis to predict recurrence
  - TSOG 102 registry GGO study
- Stage IA, IB INOPERABLE or MARGINAL:
  - NRG/SWOG trials of SBRT +/- IO
  - NRG 2025
- Stage IB-IIIA (occult N2):
  - ALCHEMIST – ACCIO, Alk rearranged
  - TSOG 101 (Isbell) – periop ctDNA stage 2a-3b
  - Chemo/IO vs SBRT/IO then resect - Altorki
- Stage IIIA/B (cN2):
  - CHIO 3/AFT46
- ~~NASSIST Pancoast trial – SWOG~~ ☹
- Stage IV:
  - Including surgery for oligometastatic disease NRG LU002
  - TSOG 104 malignant effusion study

Small Cell:

- AFT61: Limited stage/operable- adjuvant atezo after surgery and chemo

- **Esophageal cancer**:
  - ECOG 2174 - completed
- **Mesothelioma:**
  - Alliance Trial approved for sarcomatoid, mixed, operable
  - DREAM3R for inoperable (ECOG)
  - LUNG006 – NRG trial P/D, adjuvant platinum, then dose-painting IMRT or nothing
- **Pulmonary Metastases:**
  - COG/SWOG: <50 year olds, sarcoma mets, vats vs open resection
  - TSOG 103 colorectal mets (closing)

The Holes… The Challenges 2023

- Lung Screening – only trials are at VA/military facilities
- Stage IA, IB
- Thymoma
- Operable Esophageal trial

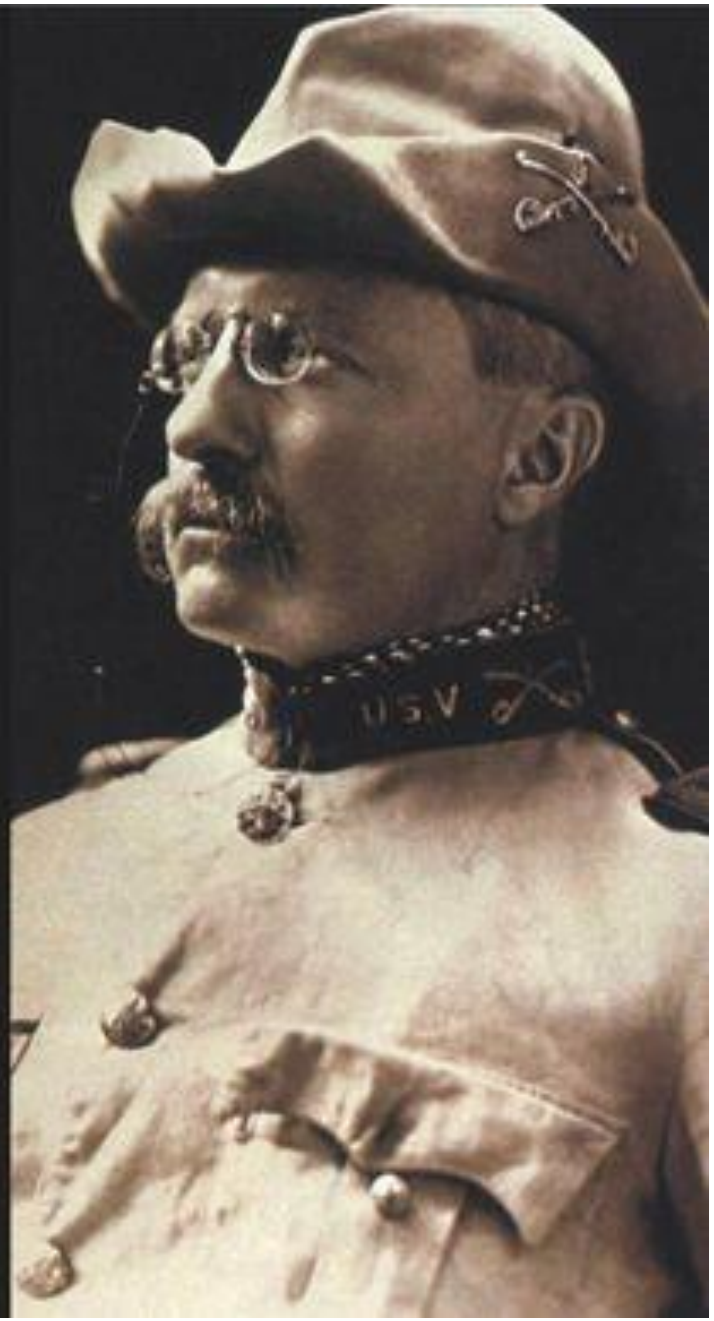
The answer is 17 years, what is the question: understanding time lags in translational research

J R Soc Med 2011: ***104:*** *510–520. DOI 10.1258/jrsm.2011.110180*

THE MAN IN THE ARENA

"IT IS NOT THE CRITIC WHO COUNTS; NOT THE MAN WHO POINTS OUT HOW THE STRONG MAN STUMBLES, OR WHERE THE DOER OF DEEDS COULD HAVE DONE THEM BETTER. THE CREDIT BELONGS TO THE MAN WHO IS ACTUALLY IN THE ARENA, WHOSE FACE IS MARRED BY DUST AND SWEAT AND BLOOD; WHO STRIVES VALIANTLY; WHO ERRS, WHO COMES SHORT AGAIN AND AGAIN, BECAUSE THERE IS NO EFFORT WITHOUT ERROR AND SHORTCOMING; BUT WHO DOES ACTUALLY STRIVE TO DO THE DEEDS; WHO KNOWS GREAT ENTHUSIASMS, THE GREAT DEVOTIONS; WHO SPENDS HIMSELF IN A WORTHY CAUSE; WHO AT THE BEST KNOWS IN THE END THE TRIUMPH OF HIGH ACHIEVEMENT, AND WHO AT THE WORST, IF HE FAILS, AT LEAST FAILS WHILE DARING GREATLY, SO THAT HIS PLACE SHALL NEVER BE WITH THOSE COLD AND TIMID SOULS WHO NEITHER KNOW VICTORY NOR DEFEAT."

Theodore Roosevelt



Contacts

- Alliance – Thoracic Surgery group:
  - Linda Martin, MD, MPH, U of Virginia – chair
  - Jeff Yang, MD, MGH – vice chair
- SWOG – Thoracic Surgery group:
  - Wayne Hofstetter, MD – MDACC
- ECOG-ACRIN – Thoracic Surgery group:
  - Onkar Khullar, MD – Emory
  - Erin Gillaspie, MD - Vanderbilt
- NRG – Thoracic Surgery group:
  - Jessica Donington, MD –University of Chicago
- NCIC – Thoracic Surgery group:
  - Gail Darling, MD – University of Toronto
- TSOG – Thoracic Surgery Oncology Group
  - Maria Singh singhm1@mskcc.org
  - David Jones
- Thoracic Trials Network
  - Link available on GTSC website
- ThORN
  - Rob Meguid, MD, David Odell, MD