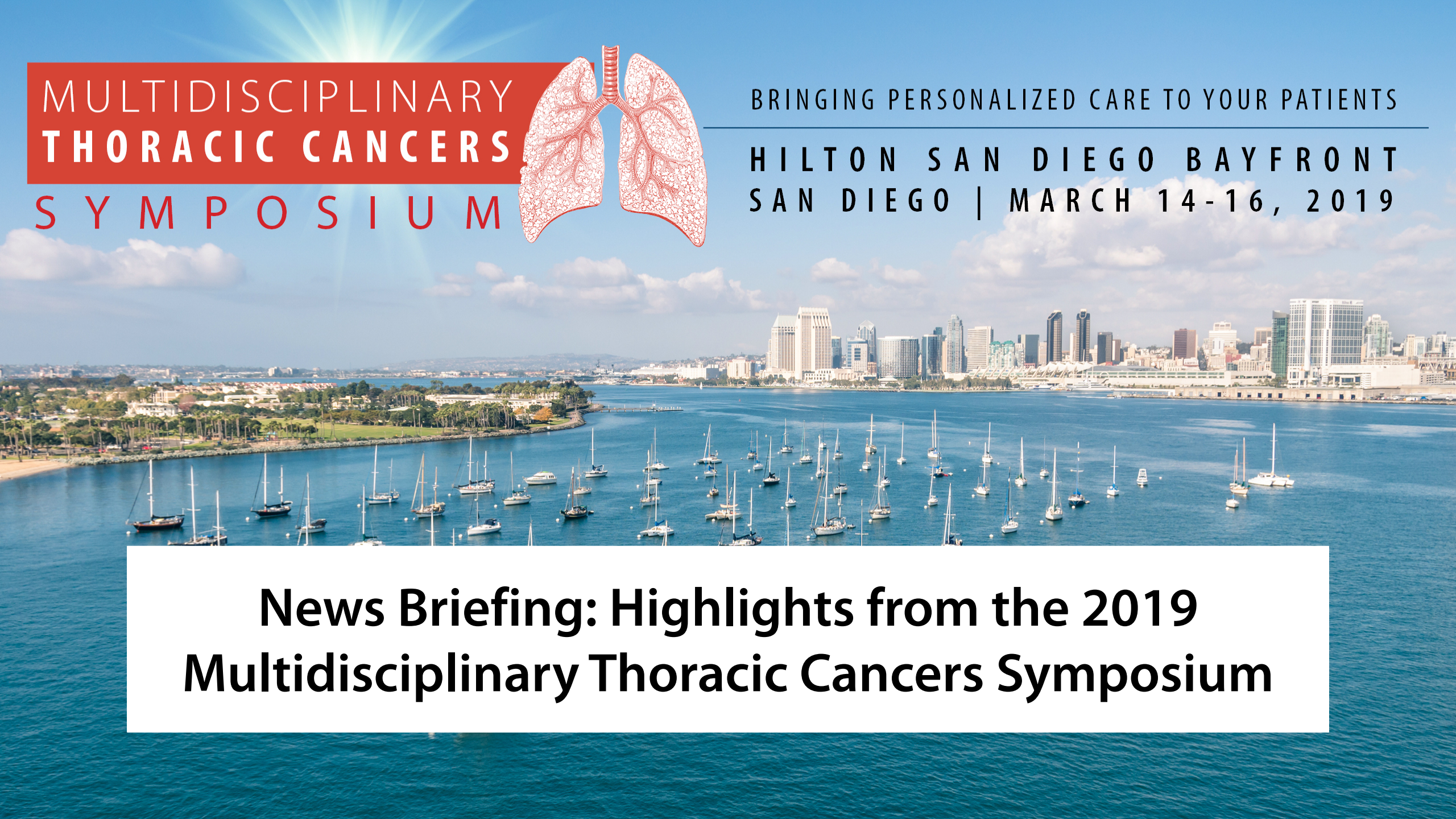



# News Briefing: Highlights from the 2019 Multidisciplinary Thoracic Cancers Symposium

# About the Symposium

March 14-16, Hilton San Diego Bayfront, www.thoracicsymposium.org

Co-sponsored by: American Society for Radiation Oncology (ASTRO)
American Society of Clinical Oncology (ASCO)
The Society of Thoracic Surgeons (STS)

Email press@astro.org with questions or interview requests.

# Embargo Policy

Embargoes for the three studies in this briefing are now lifted.

All other studies to be presented at the symposium are embargoed until 8:00 a.m. Pacific time (11:00 a.m. Eastern time) on Thursday, March 14, 2019. Abstracts will be posted online at that time.

# News Briefing: Highlights from the 2019 Multidisciplinary Thoracic Cancers Symposium

Moderator: Charles B. Simone, II, MD, New York Proton Center

Improved Overall Survival with Local Consolidative Therapy in Oligometastatic Non-Small Cell Lung Cancer: Results from a Cohort of 194 Patients with Synchronous Disease (Abstract 1)

*Erin Corsini, MD, University of Texas MD Anderson Cancer Center*

The Impact of Structured, Prospective Exposure to the NCCN Guidelines when Making Treatment Decisions: Improved Metrics of Guideline-Concordant Care for Patients with Non-Small Cell Lung Cancer (Abstract 5)

*Susan Wu, MD, University of California, San Francisco*

The Impact of the Stage III Randomized Trial by Takahashi et al. on the Use of Prophylactic Cranial Irradiation (PCI) in Patients with Extensive-Stage Small-Cell Lung Cancer (ES-SCLC) (Abstract 3)

*Olsi Gjyshi, MD, PhD, University of Texas MD Anderson Cancer Center*

# Improved Overall Survival with Local Consolidative Therapy in Oligometastatic Non-Small Cell Lung Cancer:

## Results from a Cohort of 194 Patients with Synchronous Disease

Kyle G. Mitchell[1], Ahsan Farooqi[2], Ethan B. Ludmir[2], Erin M. Corsini[1], Ara A. Vaporciyan[1], Stephen G. Swisher[1], John V. Heymach[3], Jianjun Zhang[3], Daniel R. Gomez[2], and Mara B. Antonoff[1]

*[1]Department of Thoracic and Cardiovascular Surgery, The University of Texas MD Anderson Cancer Center*
*[2]Division of Radiation Oncology, The University of Texas MD Anderson Cancer Center*
*[3]Department of Thoracic Head and Neck Medical Oncology, The University of Texas MD Anderson Cancer Center*

# Disclosure for Dr. Corsini

- Employer: The University of Texas MD Anderson Cancer Center
- I have nothing to disclose.

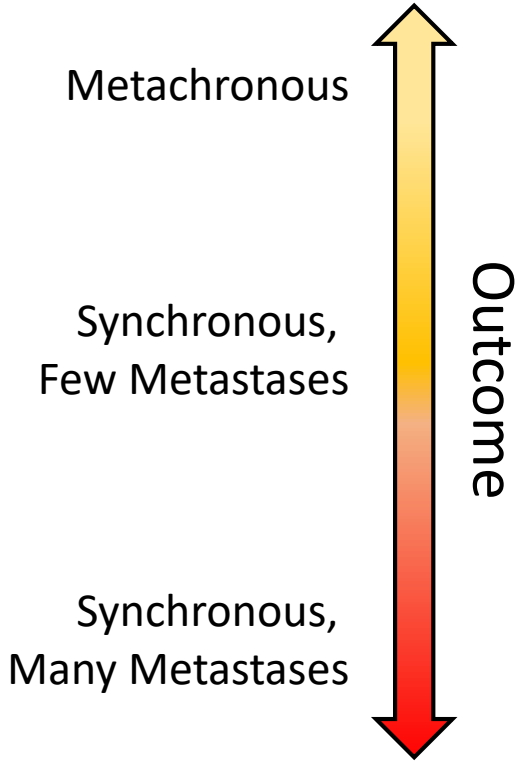
# Oligometastatic NSCLC

Advanced NSCLC

- Frequently present at diagnosis
- Associated with dismal prognosis

Oligometastatic state: limited disease burden[1]

- Distinct tumor biology[2,3]
- Spectrum of associated outcomes




[1]*Hellman J Clin Oncol 1995;* [2]*Wong Cancer 2016;* [3]*Lussier PLoS One 2011; Figure: Gomez 2016*

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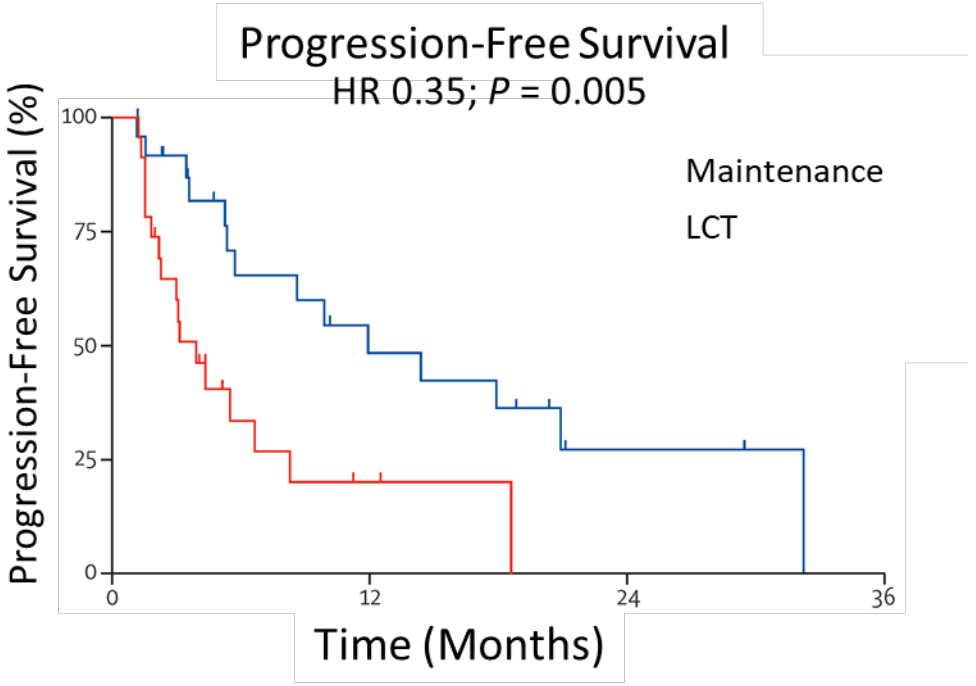


[1]Hellman J Clin Oncol 1995; [2]Wong Cancer 2016; [3]Lussier PLoS One 2011; Figure: Gomez 2016

# Objectives and Hypothesis

**Objectives:** In synchronous oligometastatic (≤ 3 sites) NSCLC

- Characterize survival outcomes associated with LCT
- Define subgroups deriving greatest therapeutic benefit

**Hypothesis:** Local consolidative therapy → improved overall survival

# Clinicopathologic Characteristics (N=194)

| Variable | N (%) or Median (IQR) |
|---|---|
| **Age** (years) | 62 (57-69) |
| **Sex** (M) | 111 (57%) |
| **Histology** | |
| Adenocarcinoma | 149 (77%) |
| Squamous | 34 (18%) |
| NSCLC NOS | 11 (6%) |
| **Thoracic Stage** | |
| I | 37 (19%) |
| II | 42 (22%) |
| III | 115 (59%) |

| Variable | N (%) or Median (IQR) |
|---|---|
| **# of Metastatic Sites** | |
| 1 | 57 (29%) |
| 2 | 103 (53%) |
| 3 | 34 (18%) |
| **Location of Metastases** | |
| Brain | 86 (44%) |
| Bone | 51 (26%) |
| Adrenal | 36 (19%) |
| Liver | 7 (4%) |

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**Comprehensive LCT to all sites (cLCT):**
121 (62%)

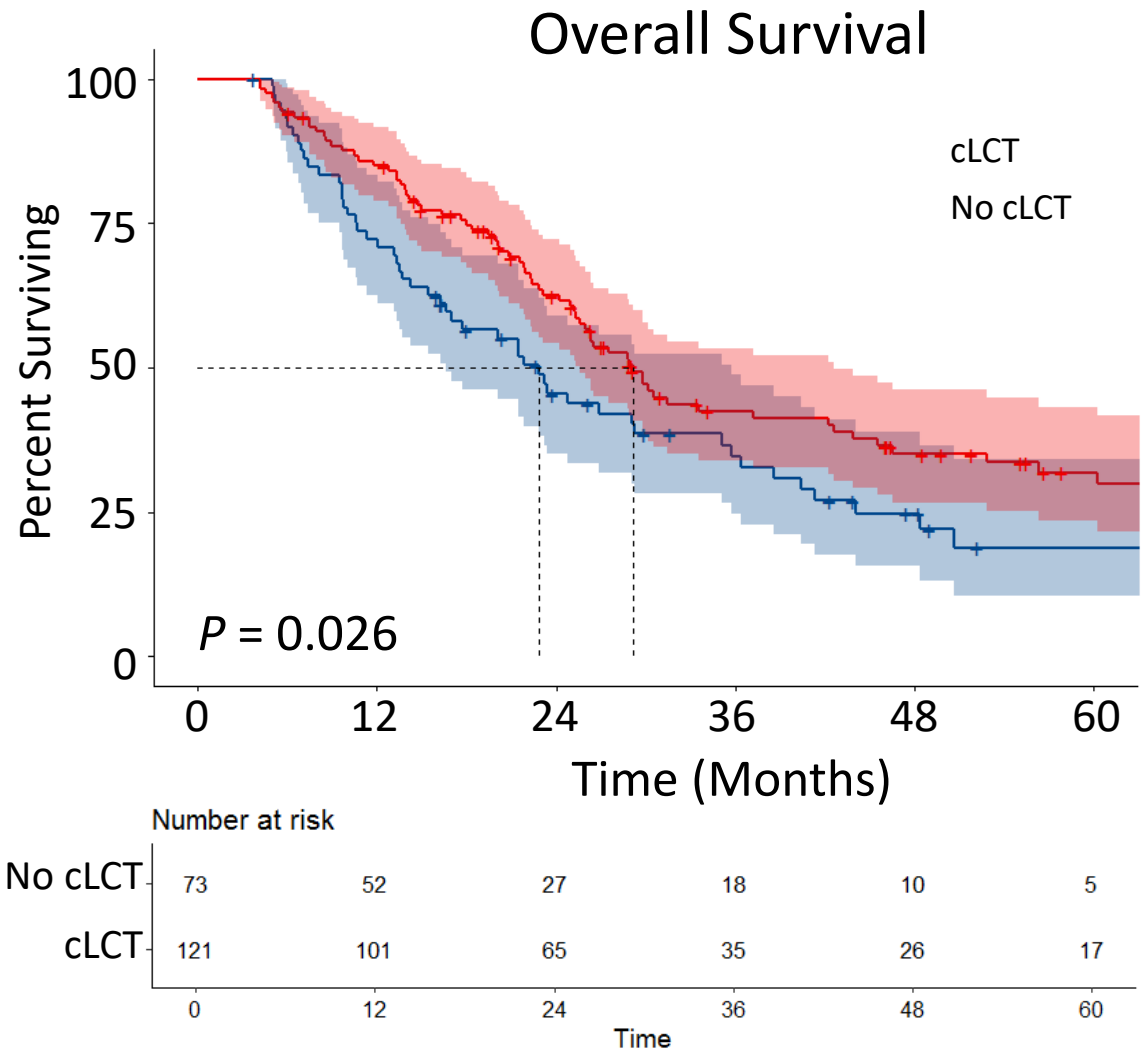
**Subcomprehensive or No LCT to metastases (no LCT):**
73 (38%)

# Survival Outcomes (N=194)

| Group | N | MST | 95% CI |
|---|---|---|---|
| Comprehensive LCT | 121 | 29 months | 25-42 months |
| No cLCT | 73 | 23 months | 16-35 months |

| Group | N | 1yOS | 3yOS | 5yOS |
|---|---|---|---|---|
| Comprehensive LCT | 121 | 85% | 43% | 32% |
| No cLCT | 73 | 72% | 35% | 19% |

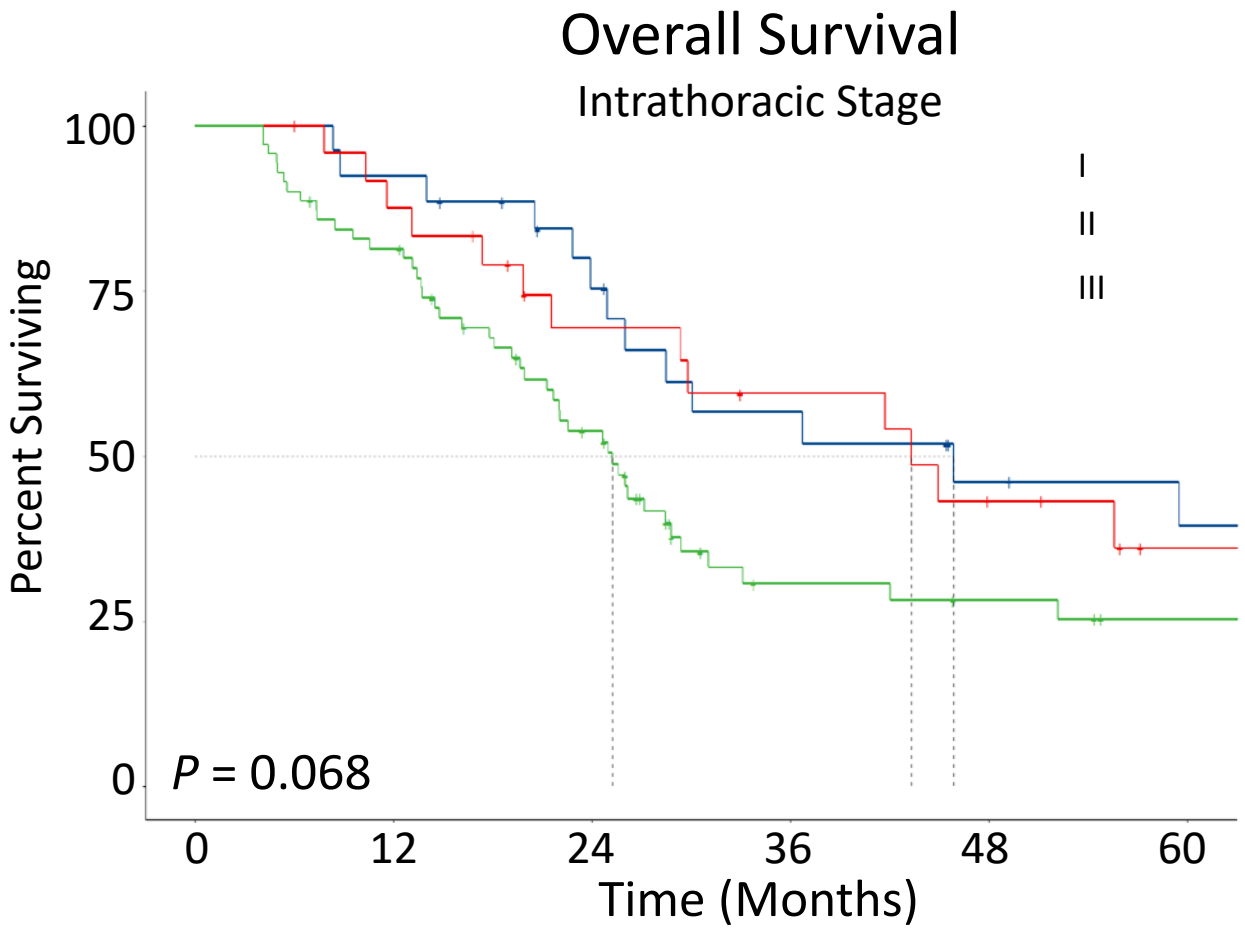
Median follow-up duration 52 months (IQR 48-66)



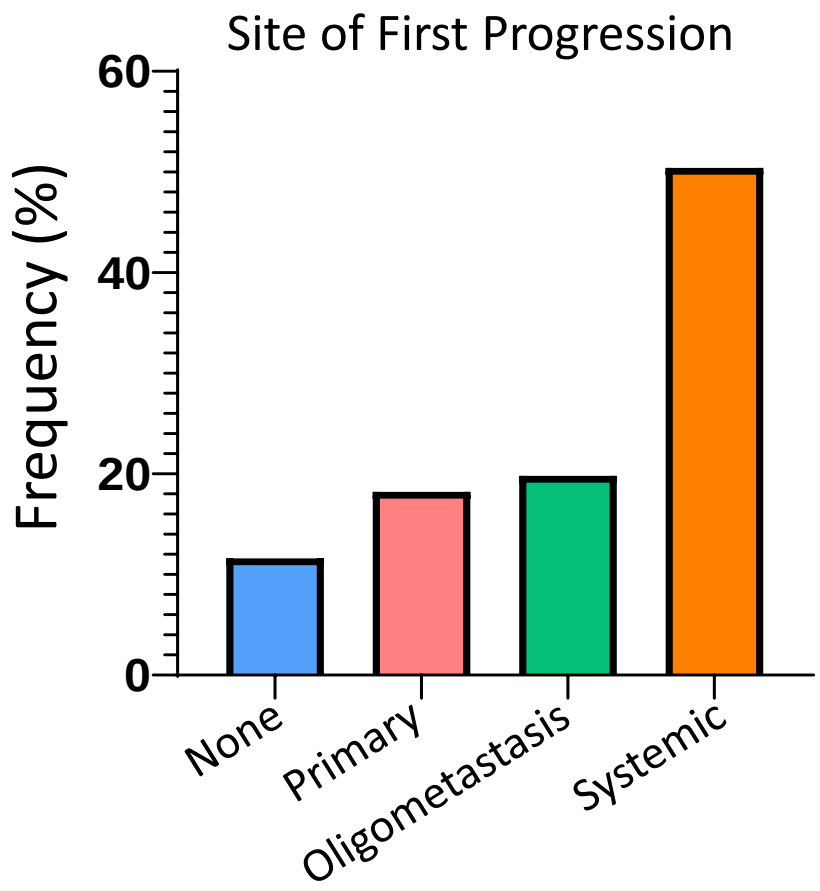
# Survival Outcomes Among Patients Undergoing cLCT (N=121)

Associated with poorer survival:

- Squamous histology
- Higher intrathoracic stage
- Bone metastases



# Patterns of Treatment Failure (cLCT, N=121)



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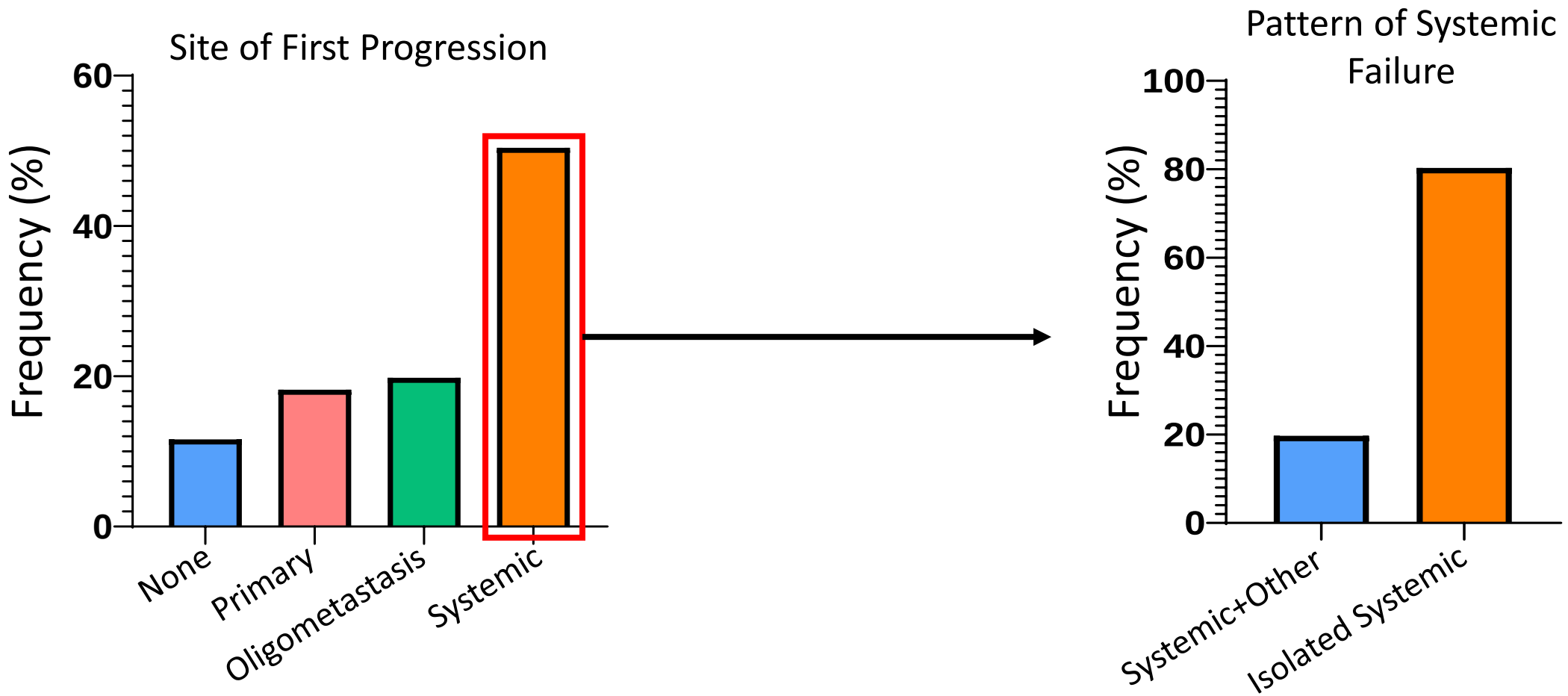


# Conclusions

- Local consolidative therapy to all sites of disease associated with improved overall survival
  - 3-year OS: 43%
  - 5-year OS: 32%
- Best outcomes: Adenocarcinoma, thoracic stage I/II, no bone metastases
- Further work needed to characterize in context of contemporary systemic therapies

# The Impact of Structured, Prospective Exposure to the NCCN Guidelines when Making Treatment Decisions: Improved Metrics of Guideline-Concordant Care for Patients with Non-Small Cell Lung Cancer

Susan Wu[1], Ann A. Lazar[1], Matthew A. Gubens[1], Collin M. Blakely[1], Alexander R. Gottschalk[1], Adam A. Garsa[2], David M. Jablons[1], Thierry M. Jahan[1], Victoria E.H. Wang[1], Taylor L. Dunbar[1], Rosa Paz[1], Linsey Curran[1], William Guthrie[3], Jeffrey Belkora[1], and Sue S. Yom[1]

[1]*University of California, San Francisco*
[2]*University of Southern California*
[3]*Patients with Power, San Francisco*

# Disclosure for Dr. Wu

- Employer: University California, San Francisco

# Background

- For patients newly diagnosed with cancer, discussions regarding treatment modalities and side effects are complex
- NCCN guidelines are readily available to physicians
- For patients, clear guidelines are not easily accessible
- Decision support tools improve patient knowledge and satisfaction
- These tools may help patients better understand the nuances of various treatment options, and become more active participants in the decision making process

# Purpose

- To assess the feasibility and impact of an evidence-based decision aid for patients with non-small cell lung cancer

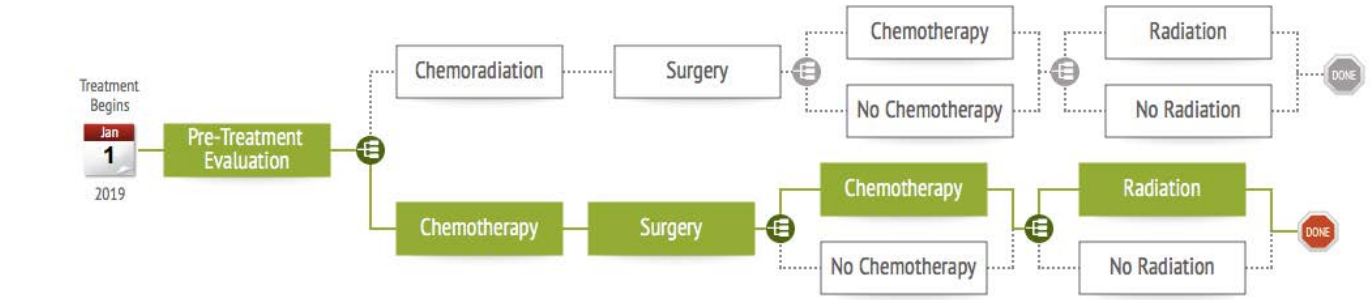
# Primary Objective

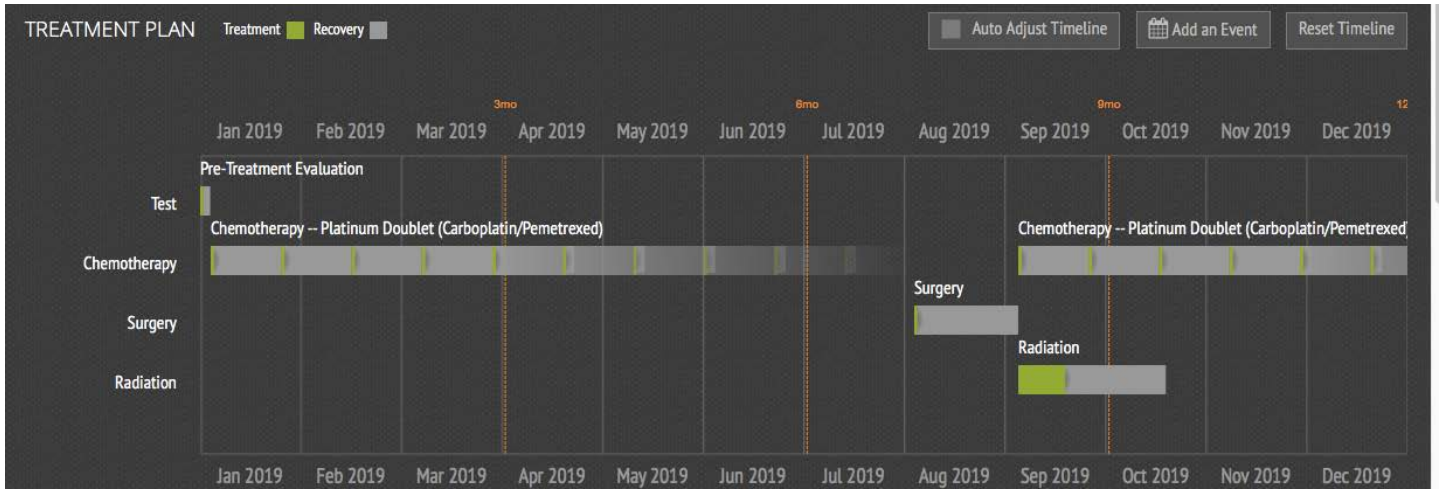
Does structured exposure to NCCN guidelines impact any of the following six practice patterns?

1. Smoking cessation counseling reinforced with a specific plan
2. Stage IB, IIA, IIB: use of adjuvant chemotherapy after surgery
3. Stage III undergoing surgery, and
4. Stage III not undergoing surgery: pathological staging of the mediastinum prior to initiating treatment
5. Stage III not undergoing surgery: concurrent chemoradiation given up front
6. Stage IV: molecular testing for EGFR and ALK mutations prior to initiation of systemic therapy

# Methods: Tool development

Phase I: Development of the web-based tool



# Methods: Implementation

- Patients were introduced to the tool by a trained coordinator at the time of initial consultation with one of five thoracic oncologists
- If requested by the patient, the trained coordinator facilitated discussion between the patient and oncologist based on the treatment options
- Patients consented to have their use of the tool (based on number of log-ins) recorded for one year following consultation

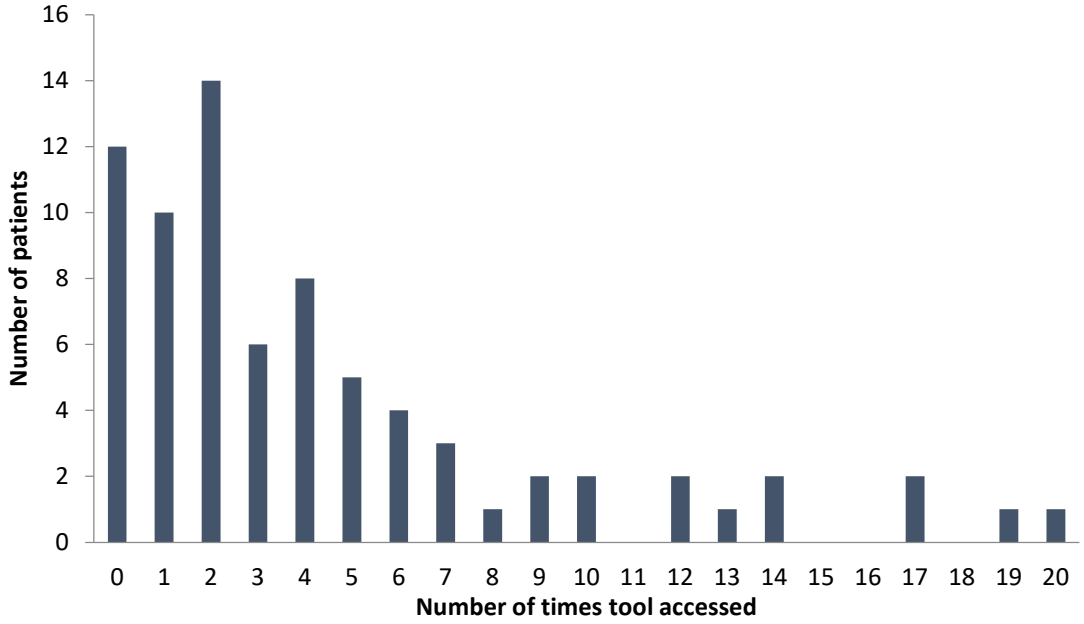
# Results: Patient Characteristics

- 76 patients enrolled
- Compared to a retrospective cohort of 159 patients

| Characteristic | Prospective Cohort | Comparison Cohort |
|---|---|---|
| Median age at study (range) | 68 (47-88) | 68 (41-88) |
| Female | 32 (42%) | 67 (42%) |
| History of tobacco use | 57 (75%) | 115 (72%) |
| Histology | | |
| Adenocarcinoma | 59 (78%) | 107 (67%) |
| Squamous cell carcinoma | 14 (18%) | 28 (18%) |
| Adenosquamous | 2 (3%) | 7 (4%) |
| Other (large cell, NOS) | 0 (0%) | 16 (10%) |
| Not biopsied | 3 (4%) | 1 (1%) |
| AJCC stage group | | |
| IA | 20 (26%) | 20 (13%) |
| IB | 8 (11%) | 16 (10%) |
| IIA | 5 (7%) | 2 (1%) |
| IIB | 3 (4%) | 8 (5%) |
| IIIA | 9 (12%) | 33 (21%) |
| IIIB | 8 (11%) | 14 (9%) |
| IV | 23 (30%) | 66 (42%) |

# Results: Patient Use

- 66 patients (84%) accessed the tool following consultation
- The tool was accessed a median of 3 times following consultation (range 0-20)



# Results: Significant Findings

| Among patients exposed to the evidence-based guidelines: | | |
|---|---|---|
| Increase in smoking cessation counseling/intervention | 80% vs. 40% | $p < 0.001$ |
| Decrease in adjuvant chemotherapy for patients with stage IB/IIA/IIB disease | 0% (0/8) vs. 50% (6/12) | $p = 0.02$ |
| *Driven primarily by patients with stage IB disease, resected with negative margins* | 0% (0/6) vs. 100% (4/4) | $p = 0.04$ |
| Increase in molecular testing prior to initiation of systemic therapy in patients with Stage IV disease | 96% vs. 68% | $p = 0.01$ |

# Results

- No difference in the rate of pathologic mediastinal staging in patients with stage III disease undergoing surgery ($p = 0.70$) or non-operative management ($p = 0.55$)
- No difference in up-front use of chemoradiation in stage III patients with non-operative disease ($p = 0.55$)

# Conclusions

- Structured exposure to the NCCN guidelines improved guideline concordance with regard to smoking cessation and testing for molecular markers in patients with metastatic disease
- Educational tools may empower patients to be more active partners in decision-making, and in some cases meaningfully impact patient care

# Acknowledgments

Principal Investigator: Sue S. Yom

Statistician: Ann Lazar

Radiation Oncology: Alexander Gottschalk, Adam Garsa, Sue Yom

Thoracic Surgery: David Jablons

Thoracic Oncology: Matthew Gubens, Collin Blakely, Thierry Jahan, Victoria Wang

UCSF Institute for Health Policy: Jeffrey Belkora

Taylor Dunbar, Rosa Paz, Linsey Curran, William Guthrie

# The Impact of the Stage III Randomized Trial by Takahashi *et al.* on the Use of Prophylactic Cranial Irradiation (PCI) in Patients with Extensive-Stage Small-Cell Lung Cancer (ES-SCLC)

Olsi Gjyshi, Ethan B. Ludmir, Todd A. Pezzi, David Boyce-Fappiano, Timur Mitin, and Steven H. Lin

*The University of Texas MD Anderson Cancer Center*

# Disclosure for Dr. Gjyshi

- Employer: The University of Texas MD Anderson Cancer Center
- I have nothing to disclose.

# Background

- Small cell lung cancer (SCLC) is a highly aggressive tumor
- The mainstay of treatment is chemotherapy +/- radiation to the chest
  - Limited stage (LS-SCLC) vs. extensive stage (ES-SCLC)
- Despite recent advancements in cancer medicine, SCLC continues to have poor outcomes
- Brain metastases are very common in SCLC, particulary in those with extensive stage disease
- Prophylactic Cranial Irradiation (PCI) as a practice

## Slotman *et al.* 2007

### Brain Metastases

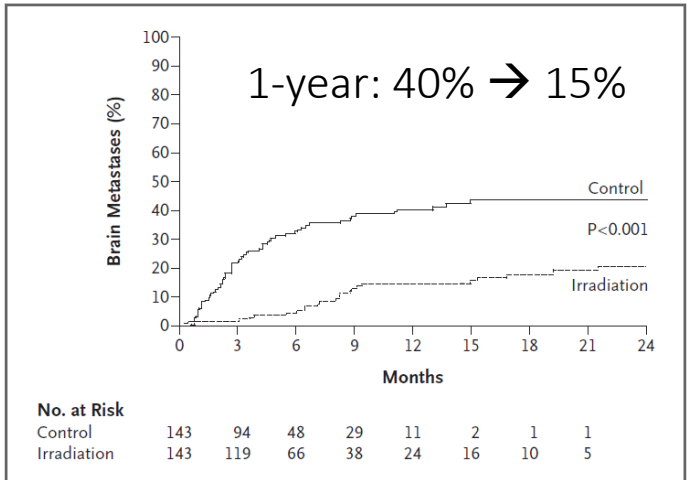



**Figure 1. Cumulative Incidence of Symptomatic Brain Metastases.**

The difference in the cumulative incidence of brain metastases between the irradiation group and the control group was significant (P<0.001, by Gray's method).

### Overall Survival

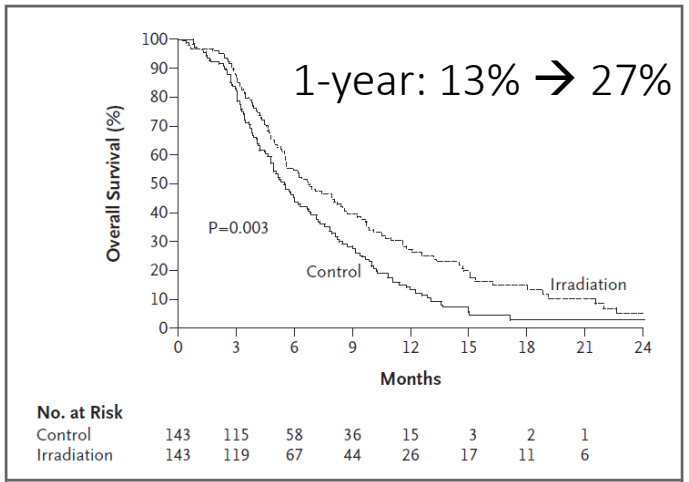
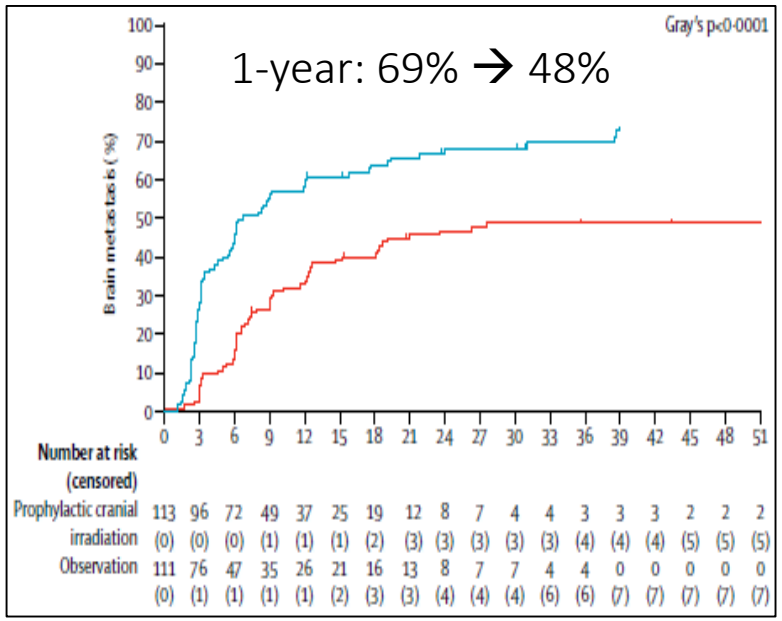
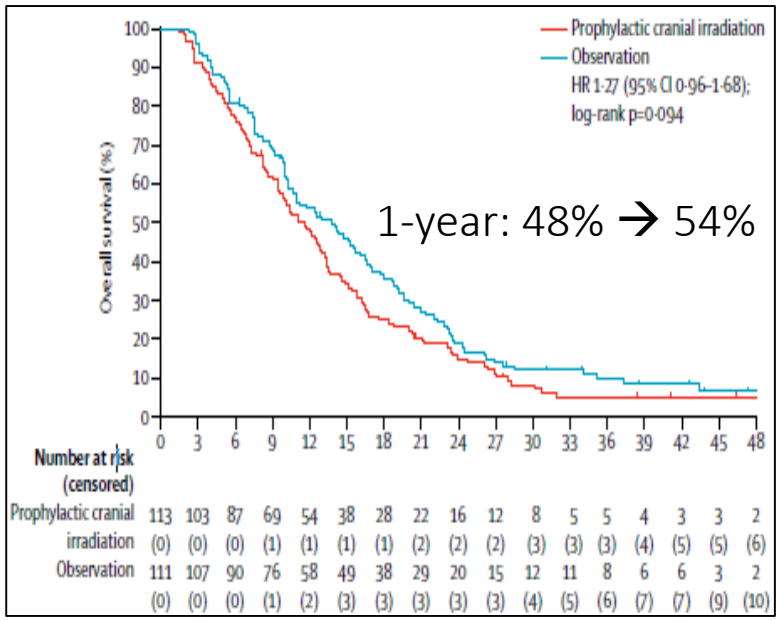


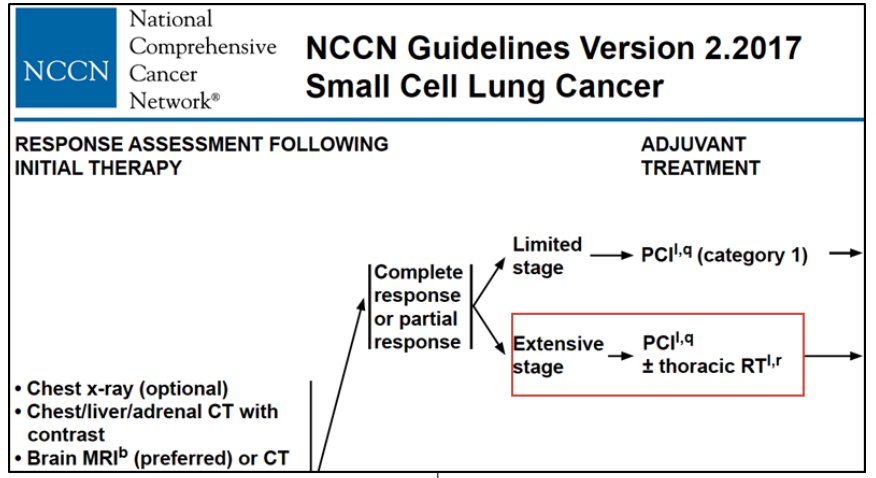

**Figure 3. Overall Survival.**

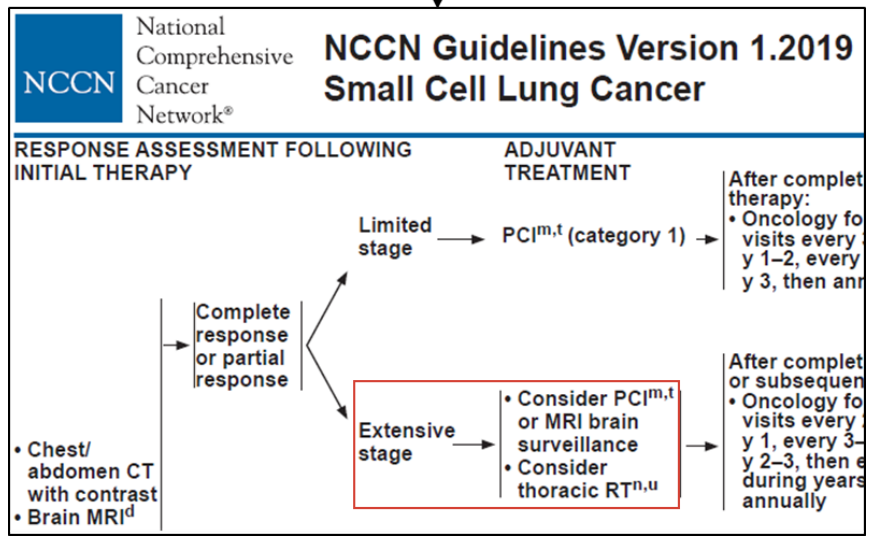
Patients in the irradiation group had a longer median overall survival (6.7 months) than did those in the control group (5.4 months) (P=0.003; hazard ratio, 0.68; 95% CI, 0.52 to 0.88).

## Takahashi *et al.* 2017

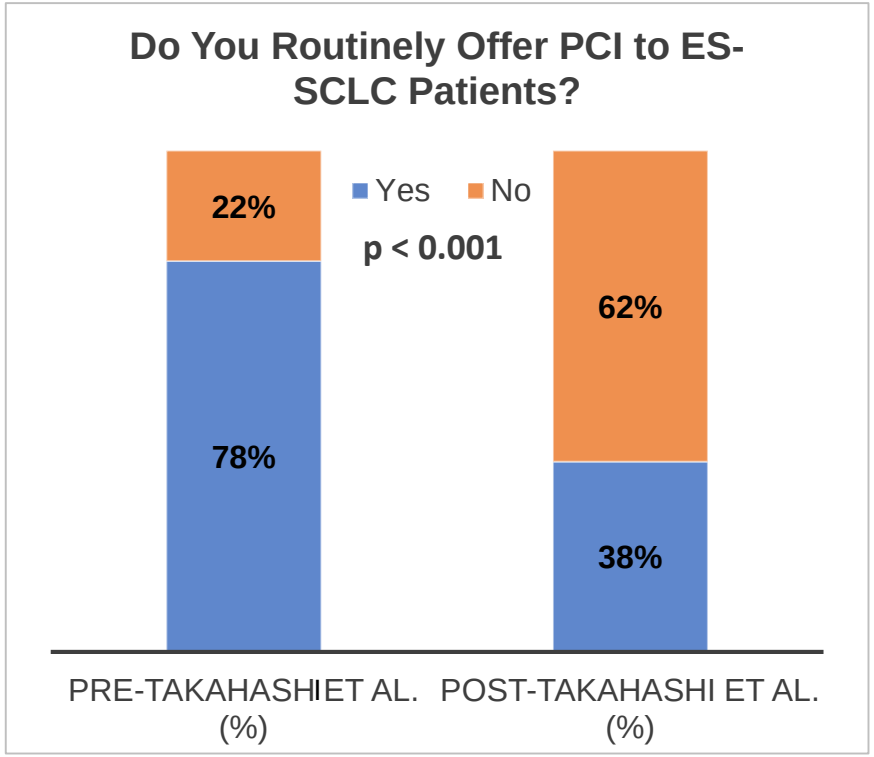


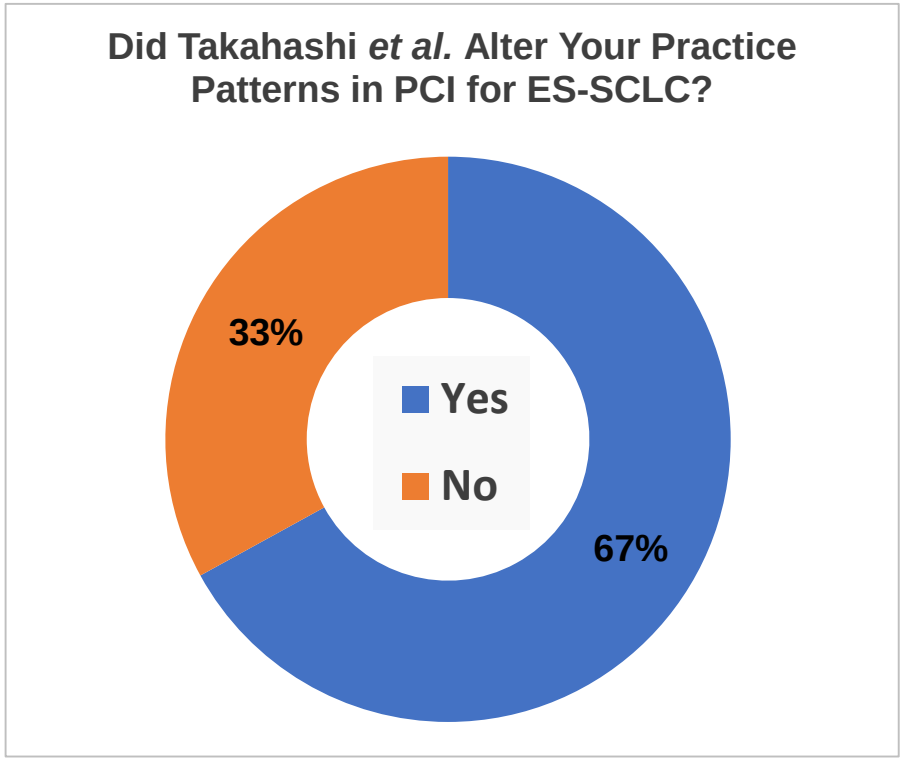



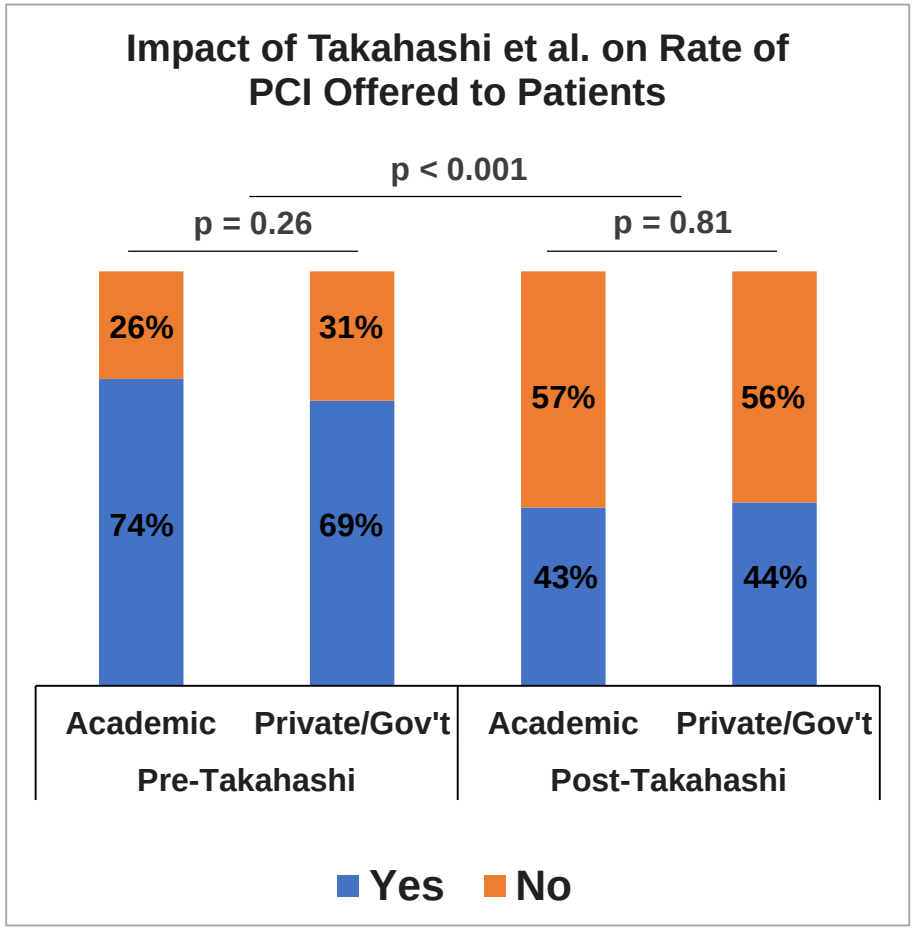



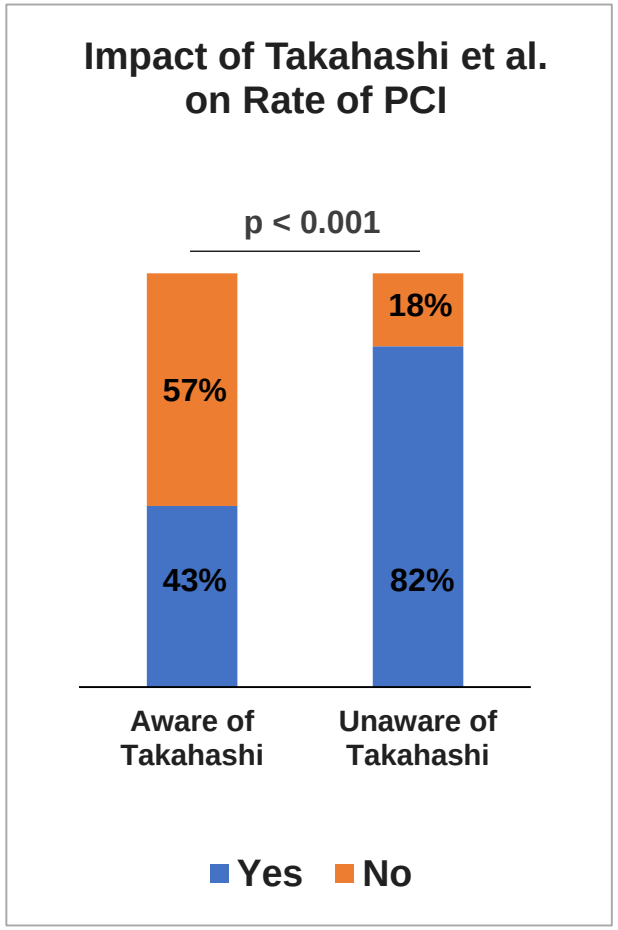
# Survey: Thoracic Radiation Oncologists from US Academic Institutions (N=49)

# Follow-up Nationwide Survey: ASTRO-registered Radiation Oncologists (N=431)



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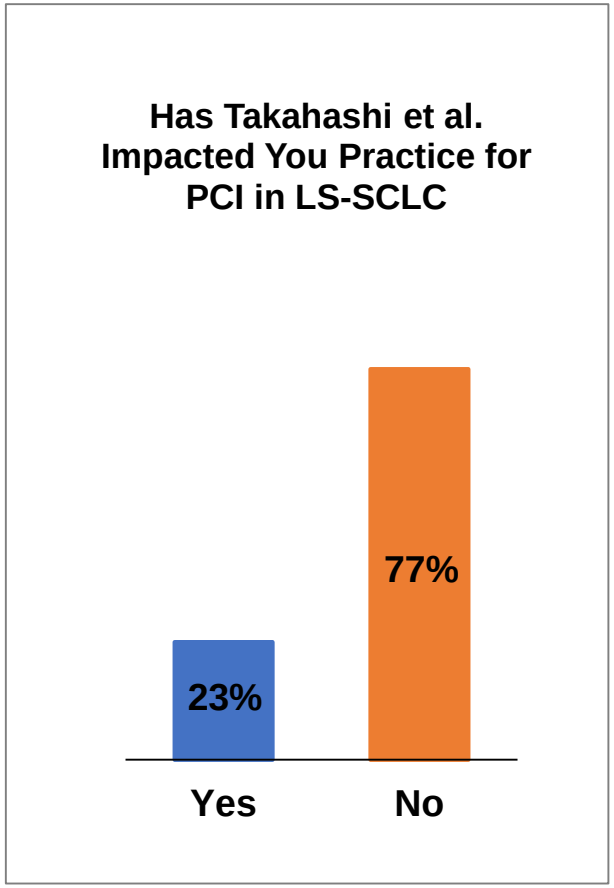


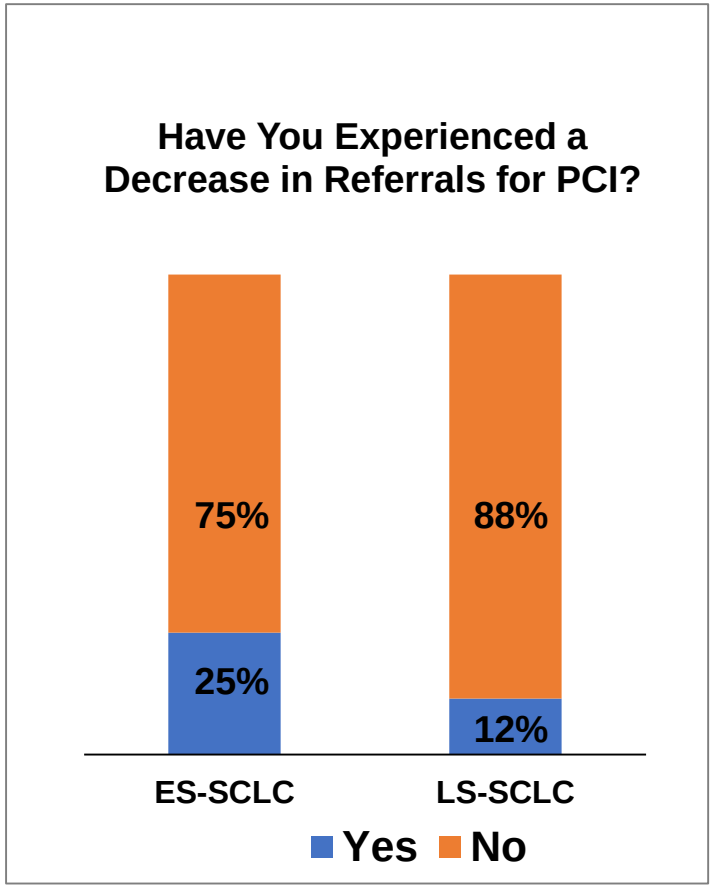

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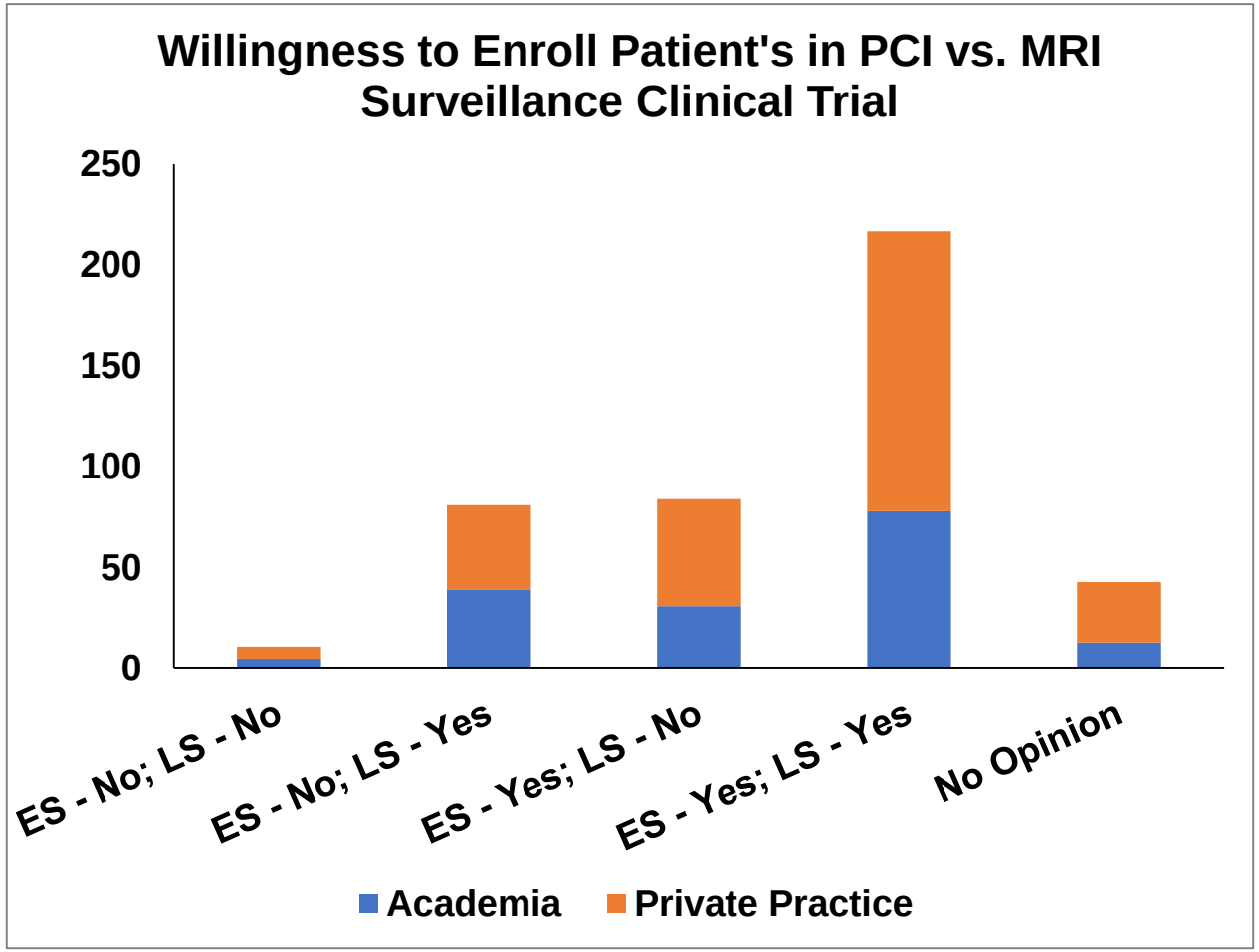

# Conclusion/Summary

- The practice of PCI in patients with ES-SCLC is rapidly evolving
- Close MRI surveillance and PCI are both acceptable options, with MRI Surveillance becoming more predominant since the publication of Takahashi et al., 2017
- Careful consideration should be given to future studies/trials that are planning on investigating the role of PCI in this patient population
- Increasing awareness about the current body of literature on the topic is important for physicians and patients in making an educated decision

# Expert Perspective

Dr. Charles B. Simone, II
Chief Medical Officer, New York Proton Center

# Q & A

Please use the “Question” tab in GoToWebinar to submit your questions.

# Interview Requests & Other Questions

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Slides and a recording of this briefing will be available online:
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