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

March 14-16, Hilton San Diego Bayfront, [www.thoracicsymposium.org](http://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](mailto: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. Mitchell¹, Ahsan Farooqi², Ethan B. Ludmir², Erin M. Corsini¹, Ara A. Vaporciyan¹, Stephen G. Swisher¹, John V. Heymach³, Jianjun Zhang³, Daniel R. Gomez², and Mara B. Antonoff¹

¹Department of Thoracic and Cardiovascular Surgery, The University of Texas MD Anderson Cancer Center
²Division of Radiation Oncology, The University of Texas MD Anderson Cancer Center
³Department 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
• Distinct tumor biology
• Spectrum of associated outcomes

\(^1\)Hellman J Clin Oncol 1995; \(^2\)Wong Cancer 2016; \(^3\)Lussier PLoS One 2011; Figure: Gomez 2016
Oligometastatic NSCLC

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- Distinct tumor biology\(^2,3\)
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\(^{1}\text{Hellman J Clin Oncol 1995; }^{2}\text{Wong Cancer 2016; }^{3}\text{Lussier PLoS One 2011; Figure: Gomez 2016}\)
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)

<table>
<thead>
<tr>
<th>Variable</th>
<th>N (%) or Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>62 (57-69)</td>
</tr>
<tr>
<td>Sex (M)</td>
<td>111 (57%)</td>
</tr>
<tr>
<td><strong>Histology</strong></td>
<td></td>
</tr>
<tr>
<td>Adenocarcinoma</td>
<td>149 (77%)</td>
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<td><strong>Thoracic Stage</strong></td>
<td></td>
</tr>
<tr>
<td>I</td>
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<td>III</td>
<td>115 (59%)</td>
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<thead>
<tr>
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<td># of Metastatic Sites</td>
<td></td>
</tr>
<tr>
<td>1</td>
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</tr>
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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)

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<tr>
<th>Group</th>
<th>N</th>
<th>MST</th>
<th>95% CI</th>
</tr>
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<tr>
<td>Comprehensive LCT</td>
<td>121</td>
<td>29 months</td>
<td>25-42 months</td>
</tr>
<tr>
<td>No cLCT</td>
<td>73</td>
<td>23 months</td>
<td>16-35 months</td>
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Median follow-up duration 52 months (IQR 48-66)

<table>
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<tr>
<th>Group</th>
<th>N</th>
<th>1yOS</th>
<th>3yOS</th>
<th>5yOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive LCT</td>
<td>121</td>
<td>85%</td>
<td>43%</td>
<td>32%</td>
</tr>
<tr>
<td>No cLCT</td>
<td>73</td>
<td>72%</td>
<td>35%</td>
<td>19%</td>
</tr>
</tbody>
</table>

P = 0.026
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)

Site of First Progression

- None
- Primary
- Oligometastasis
- Systemic

Frequency (%)
Patterns of Treatment Failure (cLCT, N=121)

Site of First Progression

Frequency (%)

Pattern of Systemic Failure

Frequency (%)
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 Wu¹, Ann A. Lazar¹, Matthew A. Gubens¹, Collin M. Blakely¹, Alexander R. Gottschalk¹, Adam A. Garza², David M. Jablons¹, Thierry M. Jahan¹, Victoria E.H. Wang¹, Taylor L. Dunbar¹, Rosa Paz¹, Linsey Curran¹, William Guthrie³, Jeffrey Belkora¹, and Sue S. Yom¹

¹University of California, San Francisco
²University of Southern California
³Patients 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

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

<table>
<thead>
<tr>
<th>Change in Practice</th>
<th>Pre-Implementation</th>
<th>Post-Implementation</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in smoking cessation counseling/intervention</td>
<td>80% vs. 40%</td>
<td></td>
<td>p &lt; 0.001</td>
</tr>
<tr>
<td>Decrease in adjuvant chemotherapy for patients with stage IB/IIA/IIB disease</td>
<td>0% (0/8) vs. 50% (6/12)</td>
<td></td>
<td>p = 0.02</td>
</tr>
<tr>
<td><strong>Driven primarily by patients with stage IB disease, resected with negative margins</strong></td>
<td>0% (0/6) vs. 100% (4/4)</td>
<td></td>
<td>p = 0.04</td>
</tr>
<tr>
<td>Increase in molecular testing prior to initiation of systemic therapy in patients with Stage IV disease</td>
<td>96% vs. 68%</td>
<td></td>
<td>p = 0.01</td>
</tr>
</tbody>
</table>
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, particularly in those with extensive stage disease
• Prophylactic Cranial Irradiation (PCI) as a practice
Slotman et al. 2007

1-year: 40% → 15%

Takahashi et al. 2017

1-year: 69% → 48%

Overall Survival

1-year: 13% → 27%

1-year: 48% → 54%
Survey: Thoracic Radiation Oncologists from US Academic Institutions (N=49)

Are You Aware of the Takahashi et al. Trial?

- Yes: 100%
- No: 0%

Do You Routinely Offer PCI to ES-SCLC Patients?

- Pre-Takahashi et al. (%): 22% Yes, 78% No (p < 0.001)
- Post-Takahashi et al. (%): 62% Yes, 38% No

Did Takahashi et al. Alter Your Practice Patterns in PCI for ES-SCLC?

- Yes: 33%
- No: 67%
Follow-up Nationwide Survey: ASTRO-registered Radiation Oncologists (N=431)

Impact of Takahashi et al. on Rate of PCI Offered to Patients

- Pre-Takahashi:
  - Academic: 26% Yes, 74% No
  - Private/Gov't: 31% Yes, 69% No
  - Impact: p < 0.001

- Post-Takahashi:
  - Academic: 57% Yes, 43% No
  - Private/Gov't: 56% Yes, 44% No
  - Impact: p = 0.26 for Academic, p = 0.81 for Private/Gov't

Impact of Takahashi et al. on Rate of PCI

- Awareness:
  - Aware: 57% Yes, 43% No
  - Impact: p < 0.001

  - Unaware: 18% Yes, 82% No

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

Has Takahashi et al. Impacted You Practice for PCI in LS-SCLC

- Yes: 23%
- No: 77%

Have You Experienced a Decrease in Referrals for PCI?

- ES-SCLC:
  - Yes: 25%
  - No: 75%

- LS-SCLC:
  - Yes: 12%
  - No: 88%
Follow-up Nationwide Survey: ASTRO-registered Radiation Oncologists (N=431)

Willingness to Enroll Patient's in PCI vs. MRI Surveillance Clinical Trial
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

press@astro.org
703-286-1600

Slides and a recording of this briefing will be available online:
www.astro.org/thoracicpress