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

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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
**Overall Survival**

Slotman et al. 2007

1-year: 40% → 15%

Takahashi et al. 2017

1-year: 69% → 48%

1-year: 13% → 27%

1-year: 48% → 54%

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**Brain Metastases**

1-year: 48% → 54%

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**NCCN Guidelines Version 2.2017**

Small Cell Lung Cancer

**NCCN Guidelines Version 1.2019**

Small Cell Lung Cancer

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**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).

**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 0.84).
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. (%)
  - Yes: 78%
  - No: 22%
- POST-TAKAHASHI ET AL. (%)
  - Yes: 62%
  - No: 38%

P < 0.001

**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

- **Academic**
  - Pre-Takahashi: 74% Yes, 26% No
  - Post-Takahashi: 43% Yes, 57% No
  - *p* = 0.26

- **Private/Gov't**
  - Pre-Takahashi: 69% Yes, 31% No
  - Post-Takahashi: 56% Yes, 44% No
  - *p* = 0.81

- **Impact of Takahashi et al. on Rate of PCI**
  - *p* < 0.001

- **Aware of Takahashi**
  - 57% Yes, 43% No
  - *p* < 0.001

- **Unaware of Takahashi**
  - 18% Yes, 82% No
Follow-up Nationwide Survey: ASTRO-registered Radiation Oncologists (N=431)

Has Takahashi et al. Impacted Your 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

- ES - No; LS - No: 0
- ES - No; LS - Yes: 50
- ES - Yes; LS - No: 50
- ES - Yes; LS - Yes: 200
- No Opinion: 50

Academia (blue) vs. Private Practice (orange)
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
Interview Requests & Other Questions

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