Self-Assessment Module
2017 ASTRO Annual Meeting
Practical Management, Emerging Evidence and Technologic Advances in SCLC

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Question 1:
Which of the following would be an appropriate maximum (0.03 cc's) spinal cord dose constraint for a patient undergoing twice-daily (1.5 Gy) thoracic irradiation?

a) 50 Gy
b) 45 Gy
c) 41 Gy
d) 15 Gy

Answer:
c) 41 Gy

Feedback:
The NCCN Guidelines are as follows: *When administering accelerated RT schedules more conservative constraints should be used. When using accelerated scheduled, the spinal cord constraints from the CALBG 30610/RTOG 0538 protocol should be used as a guide (i.e., maximum spinal cord dose should be limited to 41 Gy).*

Reference:
Small Lung Cancer Guidelines, NCCN Guidelines V.2.2017

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Question 2:

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What is the median survival time for a patient with limited stage Small Cell Lung Cancer (SCLC), based on the CONVERT study?

a) 10-15 months
b) 25-30 months
c) 40-50 months
d) 60-70 months

Answer:
b) 25-30 months

Feedback:

The median survival time in the CONVERT study was higher than that reported in any previous randomized limited stage small cell lung cancer study. The median survival in the once daily group (treated to 66 Gy) was 25 months as compared to 30 months in the twice-daily group. These were not found to be statistically different at the time of the initial presentation of results.

Reference:

Concurrent once-daily versus twice-daily chemoradiotherapy in patients with limited-stage small-cell lung cancer (CONVERT): an open-label, phase 3, randomised, superiority trial.

Faivre-Finn C. et al.

Lancet Oncol 2017 Jun 19

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Question 3:

Which of the following would be an appropriate RT dose and fractionation for thoracic radiation therapy in the radical chemoradiation treatment of Limited Stage SCLC?

a) 60 Gy delivered in 1.5 Gy twice daily fractions
b) 45 Gy delivered in 1.8 Gy once daily fractions
c) 50 Gy delivered in 2 Gy once daily fractions
d) 45 Gy delivered in 1.5 Gy twice-daily fractions

Answer:

d) 45 Gy delivered in 1.5 Gy twice-daily fractions

Feedback:

Of the all of the RT dose and fractionation schemes listed, 45 Gy in 1.5 Gy twice daily fractions is the most appropriate treatment. The NCCN recommends treatment with either 45 Gy/1.5 Gy BID fractions or 60-70 Gy once daily fractions.

Reference:

Small Lung Cancer Guidelines, NCCN Guidelines V.2.2017

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Question 4:

Which of the following statements regarding Extensive Stage SCLC is correct?

a) In the Japanese study on PCI, most patients in the control arm did not receive brain RT for brain metastases
b) In the Japanese study, no benefit of PCI on the incidence of brain metastases was seen
c) Both the EORTC study and the Japanese study on PCI showed a benefit of PCI on overall survival
d) In the EORTC study on PCI, brain imaging after chemotherapy was not mandatory

Answer:

d) In the EORTC study on PCI, brain imaging after chemotherapy was not mandatory

Feedback:

In the Japanese study on PCI, most patients in the control arm did not receive brain radiotherapy for brain metastases. PCI did not reduce the incidence of brain metastases in this study. Only the EORTC study showed a benefit of PCI on overall survival.

Reference:

Prophlactic cranial irradiation in extensive small-cell lung cancer.
Slotman, BJ et al.
N Engl J Med 2007 Aug 16:357(7):664-72.

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Question 5:

A 65 year old ES-SCLC patient with a near-CR after chemotherapy (negative brain MRI and residual disease in the chest) should receive:

a) Thoracic radiotherapy followed by RT to all sites of metastatic disease
b) Thoracic radiotherapy to a dose of 30 Gy in 10 fractions
c) Stereotactic radiotherapy to residual tumor
d) High-dose thoracic radiotherapy combined with additional chemotherapy

Answer:

b) Thoracic radiotherapy to a dose of 30 Gy in 10 fractions.

Feedback:

RTOG 0937 terminated early for futility as neither stereotactic radiotherapy to residual tumor nor RT to all sites of metastatic disease have been shown to be beneficial. High-dose thoracic radiotherapy combined with additional chemotherapy has yet to be evaluated in the clinical trial context.

Reference:

Use of thoracic radiotherapy for extensive stage small-cell lung cancer: a phase 3 randomised controlled trial.
Slotman BJ et al.
Lancet. 2015 Jan 3:385(9962):36-42.

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