Case Study #1

Case for Discussion

- A 64-year-old man with a history of tobacco use was diagnosed with stage IV lung adenocarcinoma (lymph node, bone, adrenal lung lesions), KRAS G12V mutant, PD-L1 TPS 90%.
- He responds to first-line pembrolizumab, but after 20 months, he develops an enlarging adrenal gland metastasis
- How should this be managed?
  - Add carboplatin/pemetrexed to pembrolizumab
  - Switch from pembrolizumab to carboplatin/pemetrexed
  - Continue pembrolizumab and treat with local therapy (radiation?, surgery?)

Case Study #2

- A 56 year old female never-smoker presents with a cough and is found to have bilateral lung nodules, mediastinal adenopathy, bone lesions and several sub-centimeter brain lesions
- Biopsy of a mediastinal lymph node shows adenocarcinoma, PD-L1 80%
- Molecular testing detects an EGFR L858R mutation
- She is treated with first-line osimertinib with an excellent clinical and radiographic response
- 18 months after starting osimertinib she develops disease progression in the primary lung mass, lymph nodes, and several bone metastases
- ctDNA analysis shows the EGFR L858R mutation and high-level MET amplification

What would you treat this patient with next?

A) Pembrolizumab

B) Carboplatin/pemetrexed/pembrolizumab

C) Carboplatin/paclitaxel/bevacizumab/atezolizumab

D) Carboplatin/pemetrexed/osimertinib

E) Osimertinib/capmatinib

Case Study #3

- A 45 year old man with a 5 pack-year smoking history developed a cough and was found to have a lung mass and enlarged ipsilateral hilar, mediastinal and supraclavicular lymph nodes
- He undergoes a biopsy of the supraclavicular lymph node which demonstrates adenocarcinoma
- PD-L1 5%, EML4-ALK rearrangement is detected
- PET-CT and brain MRI show no evidence of distant disease
- He undergoes concurrent chemoradiation with 2 cycles of cisplatin/pemetrexed for stage 3 NSCLC
- Repeat chest CT after completion of chemoradiation shows shrinkage of all sites of disease

What would you do next?

A) Observation

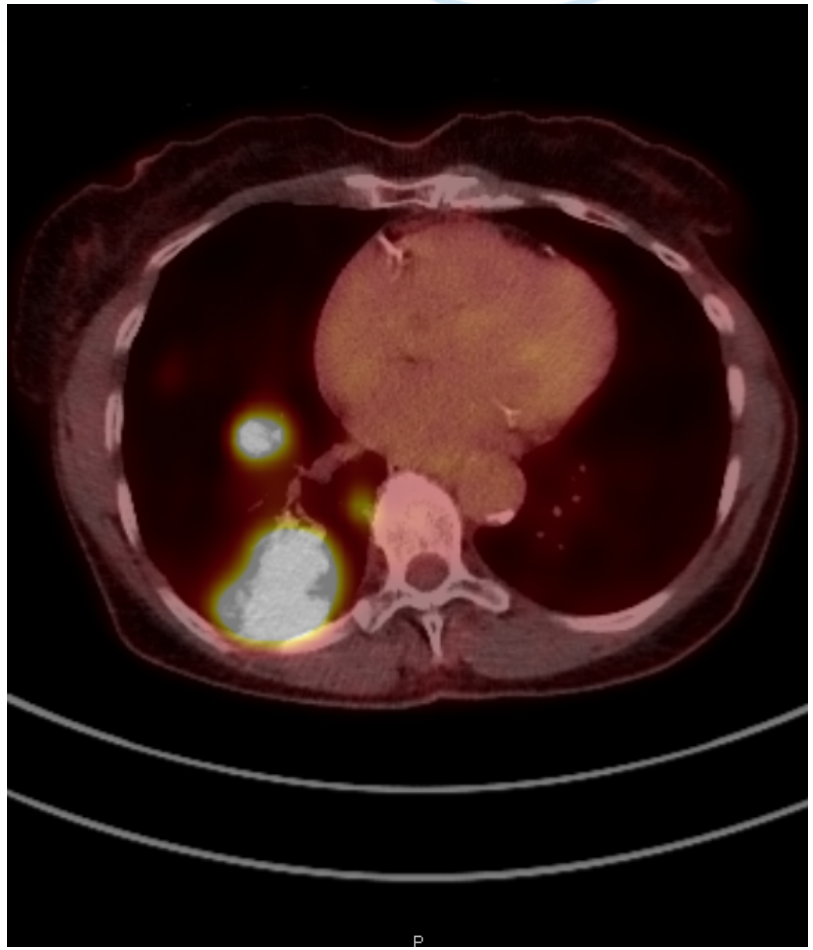
B) Durvalumab

C) Alectinib

D) 2 additional cycles of cisplatin/pemetrexed

Case Study #4

- 83-year-old black female (40 PY tobacco history) presented in spring 2020 with weight loss over several months, worsening SOB on exertion, abdominal discomfort
- Physical exam reveals shotty neck adenopathy, right axillary LAD
- PET scan shows 6.2 cm RLL mass, additional tumor nodules in RLL, extensive regional nodal involvement in right hilar, mediastinal, and axillary LNs
- Brain MRI is negative
- Biopsy of LN reveals small cell carcinoma, positive for synaptophysin, Ki-67 is 90%



- **How would you treat this patient?**

- **What regimen do you use?**

A. Carbo/etoposide
B. Carbo/etoposide/atezolizumab
C. Carbo/etoposide/durvalumab
D. Cis/etoposide/durvalumab

- All are correct

PRIMARY THERAPY FOR EXTENSIVE-STAGE SCLC:

Four cycles of therapy are recommended, but some patients may receive up to 6 cycles based on

Preferred Regimens

- Carboplatin AUC 5 day 1 and etoposide 100 mg/m² days 1, 2, 3 and atezolizumab 1,200 mg day 1 e maintenance atezolizumab 1,200 mg day 1, every 21 days (category 1 for all)[b,5]
- Carboplatin AUC 5 day 1 and etoposide 100 mg/m² days 1, 2, 3 and atezolizumab 1,200 mg day 1 e maintenance atezolizumab 1,680 mg day 1, every 28 days[b]
- Carboplatin AUC 5–6 day 1 and etoposide 80–100 mg/m² days 1, 2, 3 and durvalumab 1,500 mg da maintenance durvalumab 1,500 mg day 1 every 28 days (category 1 for all)[b,6]
- Cisplatin 75–80 mg/m² day 1 and etoposide 80–100 mg/m² days 1, 2, 3 and durvalumab 1,500 mg d maintenance durvalumab 1,500 mg day 1 every 28 days (category 1 for all)[b,6]

Other Recommended Regimens

- Carboplatin AUC 5–6 day 1 and etoposide 100 mg/m² days 1, 2, 3[7]
- Cisplatin 75 mg/m² day 1 and etoposide 100 mg/m² days 1, 2, 3[8]
- Cisplatin 80 mg/m² day 1 and etoposide 80 mg/m² days 1, 2, 3[9]
- Cisplatin 25 mg/m² days 1, 2, 3 and etoposide 100 mg/m² days 1, 2, 3[10]

Useful In Certain Circumstances

- Carboplatin AUC 5 day 1 and irinotecan 50 mg/m² days 1, 8, 15[11]
- Cisplatin 60 mg/m² day 1 and irinotecan 60 mg/m² days 1, 8, 15[12]
- Cisplatin 30 mg/m² days 1, 8 and irinotecan 65 mg/m² days 1, 8[13]

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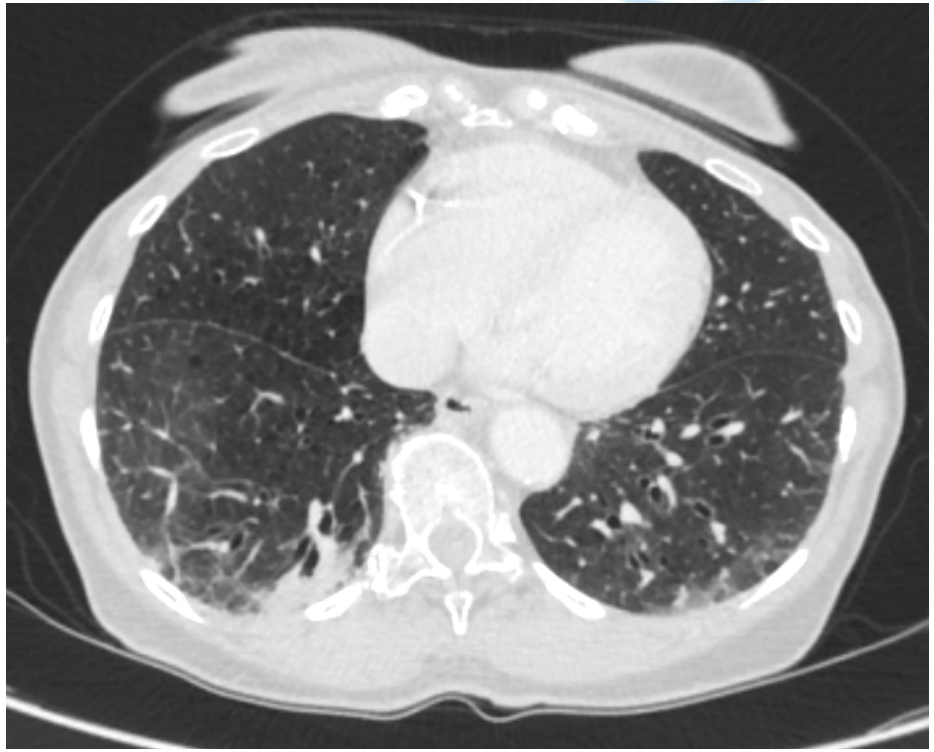
NCCN. Small cell lung cancer (V2.2022). https://www.nccn.org/professionals/physician_gls/pdf/sclc.pdf.

- Patient has excellent response to 4 cycles of carboplatin, etoposide, and atezolizumab and continues maintenance on monthly atezolizumab
- Atezolizumab tolerated well, except immunotherapy-induced lichenoid rash controlled with steroid topical cream
- Patient is on cycle 9 of maintenance atezolizumab

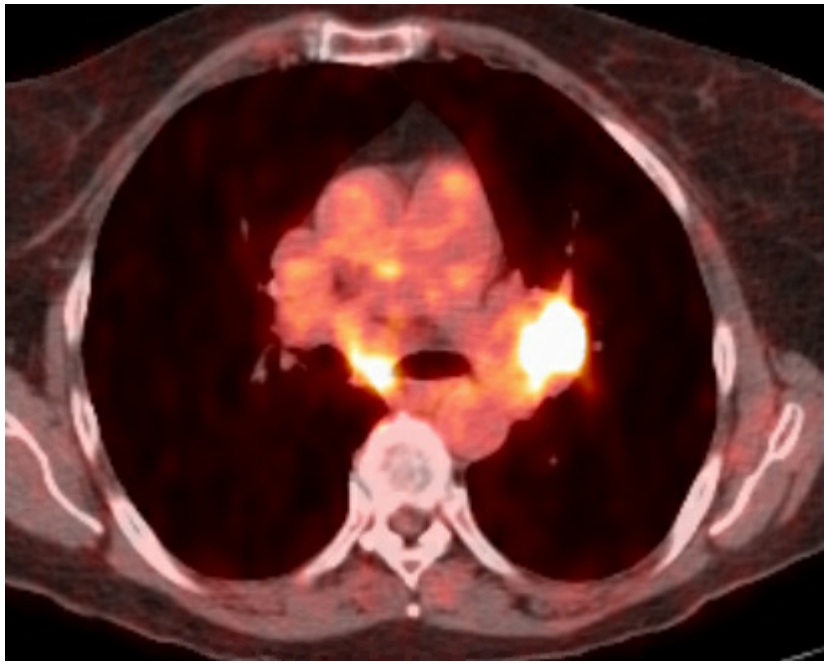


- **How long do you continue maintenance immunotherapy?**

Case Study #5

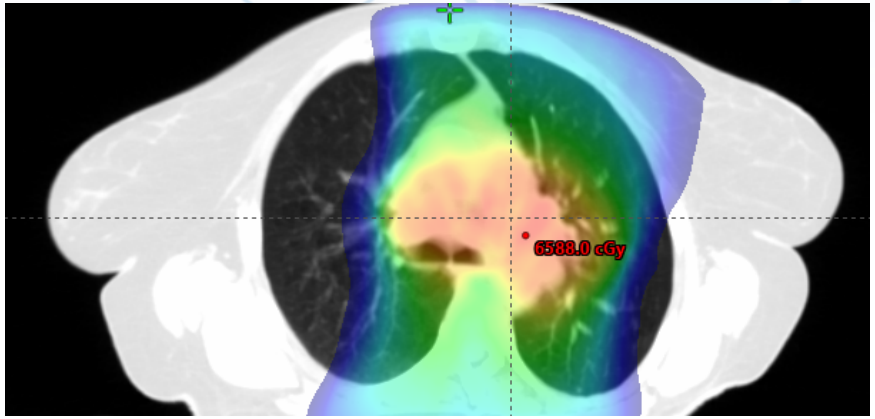
Case discussion

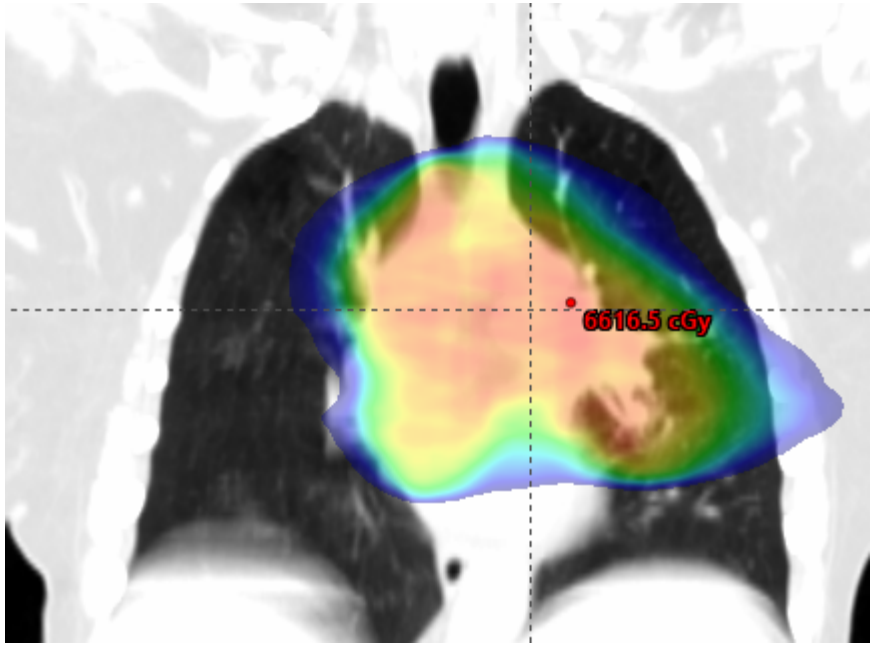
- 72F with L lingular NSCLC (adeno), at least stage IIIB (cT2aN3M0).
- After presenting with wheezing and hemoptysis:
  - CT chest: 3.5 cm L lingular mass severely narrowing LUL bronchus and lingular bronchi to near-complete obliteration, multistation mediastinal LN
  - PET-CT: hypermetabolism in L hilar, AP window, R paratracheal, subcarinal
  - EBUS: extrinsic compression of LUL bronchus, endobronchial involvement. Path positive for adenocarcinoma in endobronchial LUL bronchus, L hilar mass, and stations 4R/4L/7, negative in 11R.
  - Tumor profiling PD-L1 >50%, Oncomine KRAS G12D
  - MRI brain: negative

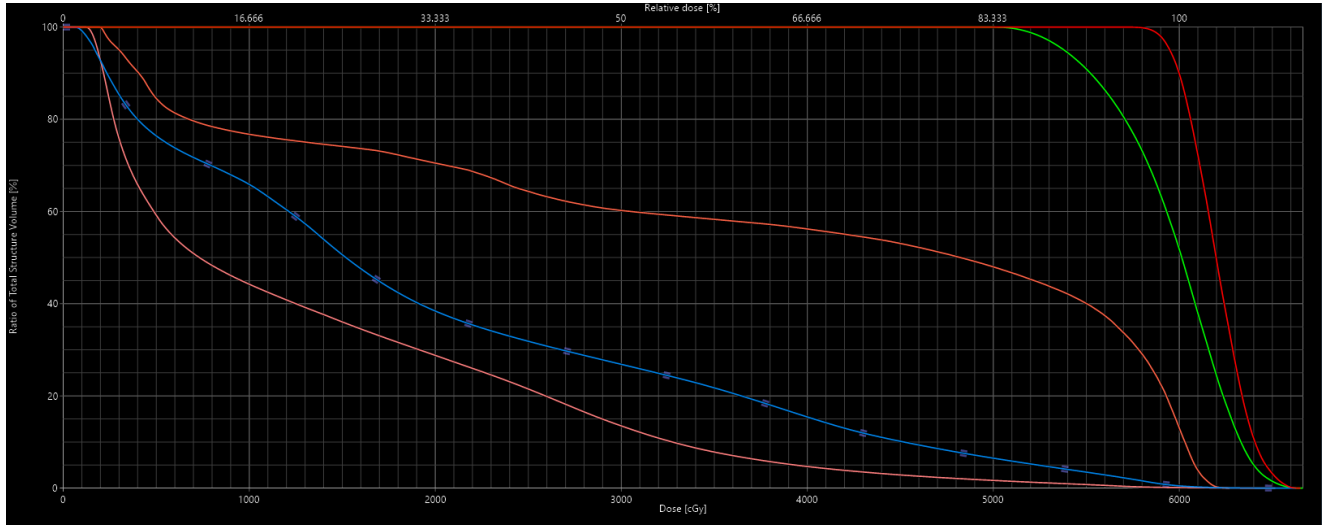


Case discussion

- Definitive chemo-RT to 60 Gy in 30 fractions with concurrent carbo/taxol (completed 12/2019).
- Lung mean 19.9 Gy, lung V20 38.4%, lung V5 76.4%
- Compromised target coverage (similar to 54 Gy)







Case discussion

- Struggled with pneumonitis/pneumonias for several months afterwards (treated with long prednisone taper and antibiotics)
- Never received consolidative durvalumab
- Developed widely metastatic recurrence in 10/2020
- Pembrolizumab 11/2020 to 8/2021 until POD
- Cisplatin/pemetrexed 9/2021 to 1/2022 until POD
- On supportive care since 2/2022

Case discussion

- How long would you wait for post-chemo-RT pneumonitis to resolve before starting consolidative ICI? How severe must the pneumonitis be before holding ICI?
- What would be your preferred approach for a patient with such a large RT field and high PD-L1?
  - Proceed with standard PACIFIC regimen (concurrent chemo-RT then ICI)
  - Proceed with standard PACIFIC regimen modified to decrease RT margins?
  - Induction ICI alone then concurrent chemo-RT if no progression?
  - Induction ICI+chemo then concurrent chemo-RT if no progression?
  - Definitive RT+ICI without concurrent chemo?
  - Palliative ICI+chemo without plans for definitive RT?