# Lung Case Scenario 1

2/11/16 History: A 20-year-old male with no history of tobacco use presented with a several-months’ history of cough and lower back pain, and an 11.3-kg weight loss. Because of the persistent cough and development of hemoptysis, further imaging studies were obtained.

2/12/16 Imaging: Chest radiograph revealed total opacification of the right lung. Posteroanterior view of the chest demonstrates complete opacification of the right hemithorax.

2/13/16 Treatment: Patient was diagnosed with pneumonia and started on antibiotics.

3/07/16 Patient was seen in office again as antibiotics did not improve symptoms. Infection serologies were ordered, but results were negative.

3/15/16 Imaging: CT of the thorax revealed a 7×7×8- cm mass in the superior right upper lobe, a total collapse of the right lung with post-obstructive atelectasis, and mediastinal lymphadenopathy.

3/21/16 MRI revealed retroperitoneal lymphadenopathy, renal and pancreatic masses, skeletal metastases in the pelvis and vertebral bodies, abdominal carinomatosis, and intraparenchymal brain metastases. Interestingly, both adrenal glands were spared.

3/21/16 Spiral CT image of the thorax, with contrast, revealed a poorly defined 7×7×8-cm superior right upper lobe mass, hilar and mediastinal lymphadenopathy.

3/25/16 Procedure:

* Bronchoscopy with biopsy of the right upper lobe tumor with placement of a right bronchial stent
* Mediastinoscopy with excision of a left upper paratracheal lymph node
* Biopsy of pelvic mass

3/25/16 Pathology:

* Biopsy of tumor-anaplastic small cell carcinoma
* Single lymph node (lymph node station 2L)-metastatic small cell carcinoma
* Biopsy of pelvic mass-metastatic small cell carcinoma
* Epithelial membrane antigen - positive
* Pancytokeratin – positive
* Thyroid transcription factor 1 - positive
* Cytokeratin 8 - positive
* Cytokeratin 7 – positive

3/27/16 Imaging: Testicular ultrasound results were unremarkable.

3/31/16 Treatment: Patient was urgently treated with cisplatin and etoposide. IMRT radiotherapy was also initiated to lung and mediastinal nodes, spine, and pelvis.

Patient improved clinically, but required several hospitalizations throughout chemotherapy. Ultimately, his disease progressed, and he died within 9 months of the initial diagnosis.

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| * **What is the primary site? C34.1** * **What is the histology? 8041/3** | | | | * **What is the grade/differentiation?**   **4-undifferentiated** | | |
| **Stage/ Prognostic Factors** | | | | | | |
| Summary Stage | 7-Distant | | Tumor Size Summary | | 080 | |
| TNM Clin T | cT3 | | TNM Path T | |  | |
| TNM Clin N | cN3 | | TNM Path N | |  | |
| TNM Clin M | pM1b | | TNM Path M | | pM1b | |
| TNM Clin Stage | 4 | | TNM Path Stage | | 4 | |
| TNM Clin Descriptor | 0 | | TNM Path Descriptor | | 0 | |
| TNM Clin Staged By | 20 | | TNM Path Staged By | | 20 | |
| CS SSF 1 | 000 | |  | |  | |
| CS SSF 2 | 998 | | Regional Nodes Positive | | 01 | |
|  |  | | Regional Nodes Examined | | 01 | |
|  |  | | Mets at Dx - Bone | | 1 | |
|  |  | | Mets at Dx - Brain | | 1 | |
|  |  | | Mets at Dx - Liver | | 0 | |
|  |  | | Mets at Dx - Lung | | 0 | |
|  |  | | Mets at Dx - Other | | 2 | |
|  |  | | Mets at Dx – Distant LN | | 1 | |
|  |  | |  | |  | |
| **Treatment** | | | | | | |
| Diagnostic Staging Procedure | | 02 |  | | |  |
| **Surgery Codes** | |  | **Radiation Codes** | | |  |
| Surgical Procedure of Primary Site | | 00 | Radiation Treatment Volume | | | 10 |
| Scope of Regional Lymph Node Surgery | | 1 | Regional Treatment Modality | | | 31 |
| Surgical Procedure/ Other Site | | 0 | Regional Dose | | | 99999 |
| **Systemic Therapy Codes** | |  | Boost Treatment Modality | | | 00 |
| Chemotherapy | | 03 | Boost Dose | | | 00000 |
| Hormone Therapy | | 00 | Number of Treatments to Volume | | | 999 |
| Immunotherapy | | 00 | Reason No Radiation | | | 0 |
| Hematologic Transplant/Endocrine Procedure | | 0 | Radiation/Surgery Sequence | | | 3 |
| Systemic/Surgery Sequence | | 3 |  | | |  |

# Lung Case Scenario 2

10/12/16 History: A 55-year-old man from the Dominican Republic with no prior medical or surgical history presented at our facility after experiencing fever, night sweats and 12-lb weight loss over the past 2 months. Patient had no history of alcohol, tobacco or recreational drug abuse and was also pain in the shoulder and along the inner side of his arm. His physical exam upon admission was negative for any findings, showed normal vital signs and was suggestive of a person in no acute distress.

Imaging:

10/13/16 Chest X-ray showed a round opacity in the right superior sulcus of the right lung.

10/14/16 Chest Spiral CT with IV contrast administration showed a 4cm lobulated right superior sulcus mass. The mass appeared to invade the inferior branches of the brachial plexus (C8). There is no involvement of the vertebral body, spinal canal, subclavian vessels or superior branches of the brachial plexus. No enlarged lymph nodes identified or metastasis identified.

10/15/16 Procedure: Patient had a biopsy of the right upper lobe mass. The pathology showed poorly differentiated primary lung adenocarcinoma.

10/15/16 Immunology results:

* *KRAS* mutation - negative
* epidermal growth factor receptor mutation - negative
* anaplastic lymphoma kinase (ALK) gene – negative

Post-procedure Imaging:

10/17/16 Brain MRI - negative for any disease.

10/19/16 PET/CT:

* *Metabolically active tumor in the superior sulcus of the right lung. The tumor invades into the inferior branch of the brachial plexus.*
* *No additional areas of significant metabolic activity identified.*

Radiation Oncology: The patient finished a complete course of radiation to the right upper lung and brachial plexus, 18MV, 5000 cGy in 25 fractions. The patient concurrently received cisplatin and etoposide.

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| --- | --- | --- | --- | --- | --- | --- |
| * **What is the primary site? C34.1** * **What is the histology? 8140/3** | | | | * **What is the grade/differentiation?**   **3-poorly differentiated** | | |
| **Stage/ Prognostic Factors** | | | | | | |
| Summary Stage | 2 Regional by DE | | Tumor Size Summary | | 040 | |
| TNM Clin T | cT3 | | TNM Path T | |  | |
| TNM Clin N | cN0 | | TNM Path N | |  | |
| TNM Clin M | cM0 | | TNM Path M | |  | |
| TNM Clin Stage | 2B | | TNM Path Stage | | 99 | |
| TNM Clin Descriptor | 0 | | TNM Path Descriptor | | 0 | |
| TNM Clin Staged By | 20 | | TNM Path Staged By | | 00 | |
| CS SSF 1 | 000 | |  | |  | |
| CS SSF 2 | 998 | | Regional Nodes Positive | | 98 | |
|  |  | | Regional Nodes Examined | | 00 | |
|  |  | | Mets at Dx - Bone | | 0 | |
|  |  | | Mets at Dx - Brain | | 0 | |
|  |  | | Mets at Dx - Liver | | 0 | |
|  |  | | Mets at Dx - Lung | | 0 | |
|  |  | | Mets at Dx - Other | | 0 | |
|  |  | | Mets at Dx – Distant LN | | 0 | |
|  |  | |  | |  | |
| **Treatment** | | | | | | |
| Diagnostic Staging Procedure | | 02 |  | | |  |
| **Surgery Codes** | |  | **Radiation Codes** | | |  |
| Surgical Procedure of Primary Site | | 00 | Radiation Treatment Volume | | | 10 |
| Scope of Regional Lymph Node Surgery | | 0 | Regional Treatment Modality | | | 25 |
| Surgical Procedure/ Other Site | | 0 | Regional Dose | | | 05000 |
| **Systemic Therapy Codes** | |  | Boost Treatment Modality | | | 00 |
| Chemotherapy | | 03 | Boost Dose | | | 00000 |
| Hormone Therapy | | 00 | Number of Treatments to Volume | | | 025 |
| Immunotherapy | | 00 | Reason No Radiation | | | 0 |
| Hematologic Transplant/Endocrine Procedure | | 0 | Radiation/Surgery Sequence | | | 0 |
| Systemic/Surgery Sequence | | 0 |  | | |  |