Case Scenario 1

57-year-old white male presented to personal physician with dyspepsia with reflux.

7/12 EGD: In the gastroesophageal junction we found an exophytic tumor. The tumor occupies approximately half of the circumference. Findings were consistent with adenocarcinoma of the gastroesophageal junction. Multiple biopsies taken. Remainder of exam negative.

7/23 PET Scan: Hypermetabolic gastroesophageal junction mass consistent with patient’s known malignancy. Hypermetabolic right superior mediastinal lymph node suspicious for metastatic disease. No other hypermetabolic adenopathy is identified.

7/29 Upper EUS: Large mass in the GE junction and in the cardia of the stomach, partially obstructing and circumferential. Tumor extended from 36 cm from the incisors to 44 cm. Tumor mass measured up to 16 mm in thickness invading into the muscularis propria. Lesion felt to be at least a T2, but a T3 cannot be ruled out. One malignant appearing lymph node seen in the right upper paratracheal region. Biopsy taken of lymph node.

7/12 Biopsy EGJ: Invasive, moderately differentiated adenocarcinoma arising within high grade dysplasia.

7/29 EUS Biopsy Right Paratracheal LN: Metastatic adenocarcinoma.

8/5 Radiation Oncology Consult: 57-year-old white male recently diagnosed with advanced stage adenocarcinoma of the gastroesophageal junction. Patient was deemed not a surgical candidate due to the extent of his disease and lung issues. Management options were discussed, and although not considered standard care, it was felt reasonable to proceed with definitive chemoradiation to involve both the initial GE Junction site of disease as well as the metastatic site of disease separately within the superior mediastinum.

Radiation: 4500 cGy, 15 MV to GE Junction @ 180 cGy/day x 25 fractions; through separate port, 4500 cGy, 15 MV to superior mediastinal lymph node @ 180 cGy/day x 25 fractions from 8/7 through 9/11.

Chemotherapy: Taxol, Carboplatin & Herceptin concurrent with radiation therapy 8/7 through 9/11.

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| **Case Scenario 1 Worksheet** | | | | | | | |
| **Primary Site:** C16.0 | **Morphology:** 8140/3 | | | | | **Grade:** 2 | |
| **Stage/ Prognostic Factors** | | | | | | | |
| CS Tumor Size | | 080 | | | CS SSF 9 | 988 | |
| CS Extension | | 200 | | | CS SSF 10 | 988 | |
| CS Tumor Size/Ext Eval | | 0 | | | CS SSF 11 | 988 | |
| CS Lymph Nodes | | 450 | | | CS SSF 12 | 988 | |
| CS Lymph Nodes Eval | | 1 | | | CS SSF 13 | 988 | |
| Regional Nodes Positive | | 95 | | | CS SSF 14 | 988 | |
| Regional Nodes Examined | | 95 | | | CS SSF 15 | 988 | |
| CS Mets at Dx | | 00 | | | CS SSF 16 | 988 | |
| CS Mets Eval | | 0 | | | CS SSF 17 | 988 | |
| CS SSF 1 | | 100 | | | CS SSF 18 | 988 | |
| CS SSF 2 | | 988 | | | CS SSF 19 | 988 | |
| CS SSF 3 | | 988 | | | CS SSF 20 | 988 | |
| CS SSF 4 | | 988 | | | CS SSF 21 | 988 | |
| CS SSF 5 | | 988 | | | CS SSF 22 | 988 | |
| CS SSF 6 | | 988 | | | CS SSF 23 | 988 | |
| CS SSF 7 | | 988 | | | CS SSF 24 | 988 | |
| CS SSF 8 | | 988 | | | CS SSF 25 | 982 | |
| Summary Stage 2000 | | 7 Distant | | |  |  | |
| Clinical AJCC TNM Stage | | T2 N1 M0 Grade 2 Stage IIB | | | Pathologic AJCC TNM Stage | T blank N blank M blank Stage blank | |
| **Treatment** | | | | | | | |
| Diagnostic Staging Procedure | | | 02 |  | | |  |
| **Surgery Codes** | | |  | **Radiation Codes** | | |  |
| Surgical Procedure of Primary Site | | | 00 | Radiation Treatment Volume | | | 12 |
| Scope of Regional Lymph Node Surgery | | | 1 | Regional Treatment Modality | | | 25 |
| Surgical Procedure/ Other Site | | | 00 | Regional Dose | | | 04500 |
| **Systemic Therapy Codes** | | |  | Boost Treatment Modality | | | 00 |
| Chemotherapy | | | 03 | Boost Dose | | | 00000 |
| Hormone Therapy | | | 00 | Number of Treatments to Volume | | | 025 |
| Immunotherapy | | | 01 | Reason No Radiation | | | 0 |
| Hematologic Transplant/Endocrine Procedure | | | 00 | Radiation/Surgery Sequence | | | 3 |
| Systemic/Surgery Sequence | | | 3 |  | | |  |

Case Scenario 2

65-year-old male presented with difficulty swallowing and had a swallowing evaluation. Patient was then referred for EGD.

4/21 Upper GI: Nearly 5 cm long area of significant stricture with significant mucosal irregularity in the distal esophagus, highly suspicious of malignancy.

4/22 EGD: Very large near obstructing mass present in the distal esophagus, 5 cm in length, starting between 30-32 cm from the teeth. It was an exophytic mass, not at all contiguous with the mucosa, but more polypoid in appearance, localized on half the wall and not circumferential. Near complete obstruction of the lumen. Stomach also showed some invasion of the tumor on the gastric side of the GE Junction. Biopsies taken of the distal esophageal mass. No other significant findings were appreciated.

4/27 CT Chest/Abdomen/Pelvis: Irregular lobulated thickening of the distal thoracic esophagus, 5 cm long, predominantly involving the mucosa but also involving the esophageal wall into adventitia extended up to the GE Junction and possibly slightly beyond, consistent with esophageal carcinoma. The mass appeared to abut the adjacent pericardium and descending thoracic aorta. No obvious invasion of these structures. No other significant findings.

4/27 PET: Primary esophageal malignancy with small paraesophageal lymph nodes. No regional adenopathy or distant metastasis.

5/17 Fiberoptic Esophagoscopy: Fungating mass extending from 35-40 cm from the incisors. Multiple biopsies taken.

Pathology: 4/22 Biopsy Distal Esophagus: Intramucosal carcinoma in a background of high grade glandular dysplasia. A more significant pathology could not be entirely excluded. *Consult: At least intramucosal adenocarcinoma, deeper invasion cannot be excluded.*

Pathology: 5/17 Fiberoptic Esophageal Biopsy 35-40 cm: Invasive, moderately differentiated adenocarcinoma.

Radiation Consult: 65-year-old white male with locally advanced adenocarcinoma of the distal esophagus. Management options were discussed with patient and it was felt he would best be served by neoadjuvant chemoradiation followed by surgical resection. Patient and family agree.

Radiation: 4500 cGy, 18 MV to thoracic/distal Esophagus @ 180 cGy/day x 25 fractions 5/19 through 6/25

Chemotherapy: 5FU and Cisplatin 5/19 – 6/25

Surgery: 9/13 Laparoscopic Gastric Mobilization and Tubularization for partial esophagectomy

Pathology: 9/13 Resection: Residual invasive, moderately differentiated adenocarcinoma in lower thoracic esophagus. Tumor size 0.6 cm in greatest dimension, extending to but not through the muscularis propria. Lymphvascular invasion absent. Margins negative with closest margin 3.5 cm from tumor. 0/2 level VII lymph nodes. 0/15 perigastric lymph nodes.

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| **Case Scenario 2 Worksheet** | | | | | | | |
| **Primary Site:** C15.5 | **Morphology:** 8140/3 | | | | | **Grade:** 2 | |
| **Stage/ Prognostic Factors** | | | | | | | |
| CS Tumor Size | | 050 | | | CS SSF 9 | 988 | |
| CS Extension | | 400 | | | CS SSF 10 | 988 | |
| CS Tumor Size/Ext Eval | | 5 | | | CS SSF 11 | 988 | |
| CS Lymph Nodes | | 00 | | | CS SSF 12 | 988 | |
| CS Lymph Nodes Eval | | 5 | | | CS SSF 13 | 988 | |
| Regional Nodes Positive | | 00 | | | CS SSF 14 | 988 | |
| Regional Nodes Examined | | 17 | | | CS SSF 15 | 988 | |
| CS Mets at Dx | | 00 | | | CS SSF 16 | 988 | |
| CS Mets Eval | | 0 | | | CS SSF 17 | 988 | |
| CS SSF 1 | | 000 | | | CS SSF 18 | 988 | |
| CS SSF 2 | | 988 | | | CS SSF 19 | 988 | |
| CS SSF 3 | | 988 | | | CS SSF 20 | 988 | |
| CS SSF 4 | | 988 | | | CS SSF 21 | 988 | |
| CS SSF 5 | | 988 | | | CS SSF 22 | 988 | |
| CS SSF 6 | | 988 | | | CS SSF 23 | 988 | |
| CS SSF 7 | | 988 | | | CS SSF 24 | 988 | |
| CS SSF 8 | | 988 | | | CS SSF 25 | 988 | |
| Summary Stage 2000 | | 2 Regional by direct extension only | | |  |  | |
| Clinical AJCC TNM Stage | | T3 N0 M0 Grade 2 Stage IIB | | | Pathologic AJCC TNM Stage | yT2 yN0 M blank Grade 2 Stage yIB | |
| **Treatment** | | | | | | | |
| Diagnostic Staging Procedure | | | 02 |  | | |  |
| **Surgery Codes** | | |  | **Radiation Codes** | | |  |
| Surgical Procedure of Primary Site | | | 30 | Radiation Treatment Volume | | | 12 |
| Scope of Regional Lymph Node Surgery | | | 5 | Regional Treatment Modality | | | 25 |
| Surgical Procedure/ Other Site | | | 0 | Regional Dose | | | 04500 |
| **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 | | | 00 | Radiation/Surgery Sequence | | | 2 |
| Systemic/Surgery Sequence | | | 2 |  | | |  |

# Case Scenario 3

A 63-year-old male presents with a 2 month history of anorexia and a 10 pound weight loss. His past medical history is significant for a 40-packyear smoking history. He consumes 10-15 alcoholic beverages weekly. Five years ago he was diagnosed with H. Pylori confirmed by biopsy at the time of endoscopy to investigate a history of worsening GERD. His physical examination is unremarkable. CBC, electrolytes, and chemistry are normal. His liver function tests have been mildly elevated for years secondary to his alcohol consumption. Chest x-ray and abdominal ultrasound are normal. He is referred to a gastroenterologist for further investigation. On 2/7 an endoscopy is performed and an abnormality is seen in the pylorus of stomach. Biopsy confirms adenocarcinoma, grade 2.

On 2/13 A CT scan of the chest, abdomen and pelvis confirm a lesion in the pylorus measuring 5cm. Lymph nodes along the lesser curvature of the stomach appear enlarged on imaging. There is no evidence of metastases to lung, liver, pancreas or adrenals. CBC and chemistry (renal and liver function are normal).

He is referred for surgical opinion. His ECOG is 1. He is deemed to be a reasonable surgical risk.

On 2/22 the patient proceeds to a distal gastrectomy with lymphadenectomy.

Pathology reveals a grade 3 signet ring cell adenocarcinoma of the pylorus measuring 4 cm in size. There is invasion of the muscularis propria. Of the regional lymph nodes, fifteen perigastric lymph nodes are resected, 8 have metastases. There are no distant nodal metastases.

Post-gastrectomy and lymphadenectomy, the patient received capecitabine and oxaliplatin.

Nine months following completion of treatment he presents with a cough. Chest x-ray confirms a left-sided effusion. On questioning he admits to some progressive dysphagia for liquids and solids. Repeat CT scans of the chest and abdomen confirm metastatic disease to lung, liver and intra-abdominal nodes.

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| **Case Scenario 3 Worksheet** | | | | | | | |
| **Primary Site:** C16.4 | **Morphology:** 8490/3 | | | | | **Grade:** 3 | |
| **Stage/ Prognostic Factors** | | | | | | | |
| CS Tumor Size | | 040 | | | CS SSF 9 | 988 | |
| CS Extension | | 200 | | | CS SSF 10 | 988 | |
| CS Tumor Size/Ext Eval | | 3 | | | CS SSF 11 | 988 | |
| CS Lymph Nodes | | 110 | | | CS SSF 12 | 988 | |
| CS Lymph Nodes Eval | | 3 | | | CS SSF 13 | 988 | |
| Regional Nodes Positive | | 08 | | | CS SSF 14 | 988 | |
| Regional Nodes Examined | | 15 | | | CS SSF 15 | 988 | |
| CS Mets at Dx | | 00 | | | CS SSF 16 | 988 | |
| CS Mets Eval | | 0 | | | CS SSF 17 | 988 | |
| CS SSF 1 | | 999 | | | CS SSF 18 | 988 | |
| CS SSF 2 | | 988 | | | CS SSF 19 | 988 | |
| CS SSF 3 | | 988 | | | CS SSF 20 | 988 | |
| CS SSF 4 | | 988 | | | CS SSF 21 | 988 | |
| CS SSF 5 | | 988 | | | CS SSF 22 | 988 | |
| CS SSF 6 | | 988 | | | CS SSF 23 | 988 | |
| CS SSF 7 | | 988 | | | CS SSF 24 | 988 | |
| CS SSF 8 | | 988 | | | CS SSF 25 | 981 | |
| Summary Stage 2000 | | 3 Regional lymph nodes involved only | | |  |  | |
| Clinical AJCC TNM Stage | | TX NX M0  Stage 99 | | | Pathologic AJCC TNM Stage | T2 N3a M blank  Stage IIIA | |
| **Treatment** | | | | | | | |
| Diagnostic Staging Procedure | | | 02 |  | | |  |
| **Surgery Codes** | | |  | **Radiation Codes** | | |  |
| Surgical Procedure of Primary Site | | | 32 | Radiation Treatment Volume | | | 00 |
| Scope of Regional Lymph Node Surgery | | | 5 | Regional Treatment Modality | | | 00 |
| Surgical Procedure/ Other Site | | | 0 | Regional Dose | | | 00000 |
| **Systemic Therapy Codes** | | |  | Boost Treatment Modality | | | 00 |
| Chemotherapy | | | 03 | Boost Dose | | | 00000 |
| Hormone Therapy | | | 00 | Number of Treatments to Volume | | | 000 |
| Immunotherapy | | | 00 | Reason No Radiation | | | 1 |
| Hematologic Transplant/Endocrine Procedure | | | 00 | Radiation/Surgery Sequence | | | 0 |
| Systemic/Surgery Sequence | | | 3 |  | | |  |