# Pancreas Case Scenario #1

An 85 year old white female presented to her primary care physician with increasing abdominal pain. On 8/19 she had a CT scan of the abdomen and pelvis. This showed a 4.6 cm mass in the head of the pancreas. No abnormalities were seen in lymph nodes or other organs. Pelvis showed no abnormalities. Lab work showed a CA-19-9 of 830. Differential diagnosis includes pancreatitis versus a pancreatic neoplasm.

8/24 Endoscopic Ultrasound: 4 cm mass in the head of the pancreas, dilated pancreatic duct in the body and tail of the pancreas. FNA of pancreatic mass.

8/24 Pathology Report - FNA Pancreatic neck mass: Malignant cells present consistent with adenocarcinoma.

9/1 Medical Oncology Consult: Patient presented with Stage I pancreatic adenocarcinoma. Due to her advanced age and medical comorbidities, she is not considered a surgical candidate. She has been explained the benefits and side effects of Gemzar therapy. She wishes to discuss treatment options with her family and will inform us of her decision tomorrow. Radiation therapy is also being consulted.

9/1 Radiation Therapy Consult: 85 year old female presents with Stage I pancreatic adenocarcinoma after increasing abdominal pain caused her to see her family physician. She has been deemed not a surgical candidate due to her advanced age and other medical comorbidities. Medical Oncology has recommended Gemzar chemotherapy which she is considering. I don’t think she could tolerate combined chemoradiation, therefore, we discussed the option of initiating chemotherapy, then including the possibility of radiation therapy after completion of chemo. I would recommend a short course of 3000 cGy to be completed in 10 fractions.

9/2 Medical Oncology followup: Phone call received from patient, she wishes to proceed with chemotherapy.

9/6 – 12/15 Gemzar

1/16 – 1/29 3000 cGy to pancreas using 15 MV at 300 cGy per day in 10 fractions using IMRT.

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| Case Scenario 1 Worksheet |
| **Primary Site: C25.0** | **Morphology: 8140/3** | **Grade: 9** |
| **Stage/ Prognostic Factors** |
| CS Tumor Size | 046 | CS SSF 9 | 988 |
| CS Extension | 100 | CS SSF 10 | 988 |
| CS Tumor Size/Ext Eval | 0 | CS SSF 11 | 988 |
| CS Lymph Nodes  | 000 | CS SSF 12 | 988 |
| CS Lymph Nodes Eval | 0 | CS SSF 13 | 988 |
| Regional Nodes Positive | 98 | CS SSF 14 | 988 |
| Regional Nodes Examined | 00 | CS SSF 15 | 988 |
| CS Mets at Dx | 00 | CS SSF 16 | 988 |
| CS Mets Eval | 0 | CS SSF 17 | 988 |
| CS SSF 1 | 988 | 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 |  |
| Summary Stage 2000 | 1 |  |  |
| Clinical AJCC TNM Stage | T2 N0 M0 Stage IB | Pathologic AJCC TNM Stage | T\_ N\_ M\_ Stage 99 |
| **Treatment** |
| Diagnostic Staging Procedure | 02 |  |  |
| **Surgery Codes** |  | **Radiation Codes** |  |
| Surgical Procedure of Primary Site | 00 | Radiation Treatment Volume | 15 |
| Scope of Regional Lymph Node Surgery | 00 | Regional Treatment Modality | 31 |
| Surgical Procedure/ Other Site | 0 | Regional Dose | 03000 |
| **Systemic Therapy Codes** |  | Boost Treatment Modality | 00 |
| Chemotherapy | 02 | Boost Dose | 00000 |
| Hormone Therapy | 00 | Number of Treatments to Volume | 10 |
| Immunotherapy | 00 | Reason No Radiation | 0 |
| Hematologic Transplant/Endocrine Procedure | 00 | Radiation/Surgery Sequence | 0 |
| Systemic/Surgery Sequence | 0 |  |  |

# Pancreas Case Scenario #2

A 54 year old white female with a history of bilateral breast cancer 15 years ago. She is positive for BRCA 1 and BRCA 2 mutations. In January she presented to her primary care physician with painless jaundice.

1/30 CT Chest, Abdomen, Pelvis: Prominent soft tissue in the region of the ampulla with associated dilation of the common bile duct. Periampullary mass is not excluded. Further evaluation with magnetic resonance cholangiopancreatography (MRCP) is recommended. Multiple prominent paraaortic, retroperitoneal and mesenteric lymph nodes. Differential considerations include reactive lymphadenopathy versus neoplastic disease.

2/10 CA 19-9 = 210 (H)

2/11 Upper endoscopic ultrasound: Oval hypoechoic lesion identified adjacent to the distal extrahepatic bile duct. The lesion measured 12mm and was causing biliary obstruction. A few malignant appearing lymph nodes visualized in the periduodenal region and the porta hepatis region. Biopsy of the distal extrahepatic bile duct lesion and FNA extrahepatic lymph node.

2/11 Biopsy of distal extrahepatic bile duct lesion & FNA extrahepatic lymph node: Adenocarcinoma, felt to favor pancreatic primary.

2/14 PET: Within the region of the ampulla/pancreas there is a subtle abnormal soft tissue which does demonstrated increased metabolic activity. This remains suspicious for underlying malignancy. Ampullary carcinoma, cholangiocarcinoma, or pancreatic lesion could have this appearance. Mildly enlarged lymph nodes within the upper abdomen involving the gastohepatic ligament, peripancreatic region, porta hepatis and portocaval regions as well as the periaortic region. None of these are significantly hypermatabolic but are indeterminate given their proximity to the above described suspicious abnormality in the ampullary region.

3/11 Standard Whipple Procedure

3/11 Whipple procedure pathology: Invasive ductal adenocarcinoma, poorly differentiated. Tumor measures 2.2cm, located in the head of the pancreas. Perineural invasion present. Lymphvascular invasion present. Tumor extends into the duodenum but without involvement of the celiac axis or the superior mesenteric artery. 10/42 regional lymph nodes positive for metastasis.

4/21 – 8/25 Gemcitabine & Nab-Paclitaxel

10/29 – 12/8 4500 cGy to upper abdomen and lymph nodes using 15 MV at 180cgy per day in 25 fractions followed by 540 cGy tumor bed boost using 15 MV at 18 cGy per day in 3 fractions.

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| Case Scenario 2 Worksheet |
| **Primary Site: C25.0** | **Morphology: 8500/3** | **Grade: 3** |
| **Stage/ Prognostic Factors** |
| CS Tumor Size | 022 | CS SSF 9 | 988 |
| CS Extension | 440 | 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 | 10 | CS SSF 14 | 988 |
| Regional Nodes Examined | 42 | CS SSF 15 | 988 |
| CS Mets at Dx | 000 | CS SSF 16 | 988 |
| CS Mets Eval | 0 | CS SSF 17 | 988 |
| CS SSF 1 | 988 | 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 | 4 |  |  |
| Clinical AJCC TNM Stage | T3 N1 M0 Stage IIB | Pathologic AJCC TNM Stage | T3 N1 M Stage IIB |
| **Treatment** |
| Diagnostic Staging Procedure | 02 |  |  |
| **Surgery Codes** |  | **Radiation Codes** |  |
| Surgical Procedure of Primary Site | 37 | Radiation Treatment Volume | 17 |
| 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 | 25 |
| Chemotherapy | 03 | Boost Dose | 00540 |
| Hormone Therapy | 00 | Number of Treatments to Volume | 028 |
| Immunotherapy | 00 | Reason No Radiation | 0 |
| Hematologic Transplant/Endocrine Procedure | 00 | Radiation/Surgery Sequence | 3 |
| Systemic/Surgery Sequence | 3 |  |  |

# Pancreas Case #3

A 68 year old white female presented with abdominal pain and jaundice. On 5/3 she had a CT of the abdomen and pelvis that showed enlargement of the pancreas at the body and tail measuring 2.3 x 2.5cm, cannot rule out neoplasm. No lymphadenopathy noted. Liver, spleen and adrenals normal.

5/10 CA 19-9: 9286 (markedly elevated)

5/21 CT Abd/Pel: 3.8cm mass involving the pancreatic body and tail. Soft tissue abnormality was also noted involving the celiac axis, common hepatic artery, and splenic artery. The mass also appeared to surround the SMV and splenic vein. No enlarged lymph nodes noted within the peripancreatic region. Tumor abutted and likely involved the gastric antrum and proximal duodenum. Liver, adrenals, and bones were unremarkable. Findings confirmed a high likelihood of a pancreatic malignancy.

5/26 Upper Endoscopic ultrasound: 3.3cm mass in the pancreatic body and tail. Invades splenoportal confluence, hepatic artery, and splenic artery. Perihepatic ascites. Liver unremarkable. No abnormal appearing lymph nodes. FNA of pancreatic mass performed.

5/26 Cytology Report-FNA Pancreas: Positive for malignancy. Adenocarcinoma, favor mucinous adenocarcinoma.

Surgery not recommended due to involvement of the major abdominal vessel.

6/10 CT Chest: Multiple pulmonary nodules consistent with metastasis.

Gemzar beginning 6/22, only receiving 3 doses before discontinuing due to poor tolerance. The patient has been on observation since discontinuing chemotherapy. She did have palliative radiation she received 3000 cGy using 18 MV to pancreas at 300 cGy per day in 10 fractions from 10/27 through 11/9 using IMRT. She expired 12/10.

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| Case Scenario 3 Worksheet |
| **Primary Site: C25.8** | **Morphology: 8480/3** | **Grade: 9** |
| **Stage/ Prognostic Factors** |
| CS Tumor Size | 038 | CS SSF 9 | 988 |
| CS Extension | 600 | CS SSF 10 | 988 |
| CS Tumor Size/Ext Eval | 0 | CS SSF 11 | 988 |
| CS Lymph Nodes  | 000 | CS SSF 12 | 988 |
| CS Lymph Nodes Eval | 0 | CS SSF 13 | 988 |
| Regional Nodes Positive | 98 | CS SSF 14 | 988 |
| Regional Nodes Examined | 00 | CS SSF 15 | 988 |
| CS Mets at Dx | 40 | CS SSF 16 | 988 |
| CS Mets Eval | 0 | CS SSF 17 | 988 |
| CS SSF 1 | 988 | 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 | 7 |  |  |
| Clinical AJCC TNM Stage | T4 N0 M1 Stage IV | Pathologic AJCC TNM Stage | T\_ N\_ M\_ Stage 99 |
| **Treatment** |
| Diagnostic Staging Procedure | 00 |  |  |
| **Surgery Codes** |  | **Radiation Codes** |  |
| Surgical Procedure of Primary Site | 00 | Radiation Treatment Volume | 15 |
| Scope of Regional Lymph Node Surgery | 00 | Regional Treatment Modality | 31 |
| Surgical Procedure/ Other Site | 0 | Regional Dose | 03000 |
| **Systemic Therapy Codes** |  | Boost Treatment Modality | 00 |
| Chemotherapy | 02 | Boost Dose | 00000 |
| Hormone Therapy | 00 | Number of Treatments to Volume | 10 |
| Immunotherapy | 00 | Reason No Radiation | 0 |
| Hematologic Transplant/Endocrine Procedure | 00 | Radiation/Surgery Sequence | 0 |
| Systemic/Surgery Sequence | 0 |  |  |