


Collecting Cancer Data: Pancreas

2014-2015 NAACCR Webinar Series
June 4, 2015




Q&A

- Please submit all questions concerning webinar content through the Q&A panel.

Reminder:

- If you have participants watching this webinar at your site, please collect their names and emails.
- We will be distributing a Q&A document in about one week. This document will fully answer questions asked during the webinar and will contain any corrections that we may discover after the webinar.



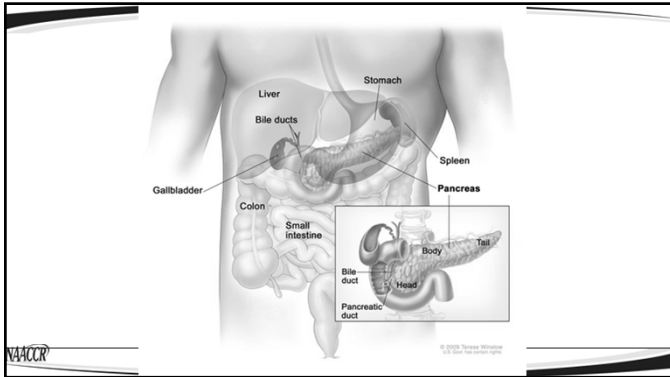
FABULOUS PRIZES

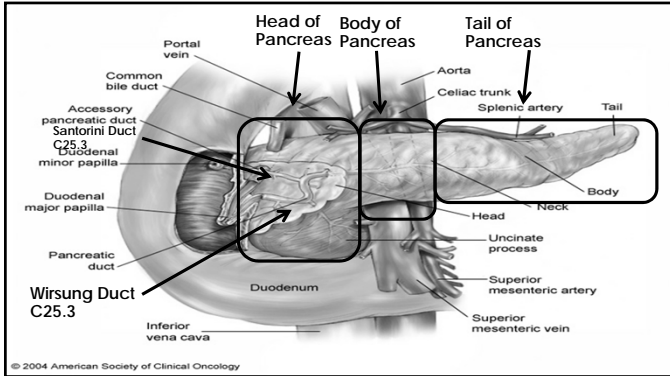






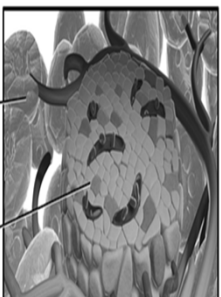




EXOCRINE FUNCTION OF THE PANCREAS

- The pancreas is primarily composed of acinar cells
- Acinar cells secrete a digestive enzymes into the duodenum via the pancreatic duct to help digest food.



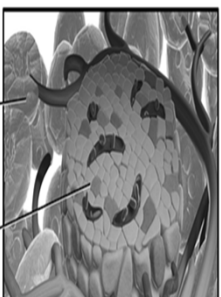
Pancreatic acini (with exocrine cells)

Pancreatic islet (with endocrine cells)

Blausen.com staff. "Blausen gallery 2014". Wikiversity Journal of Medicine. DOI:10.15347/wjvm/2014.010. ISSN 20018762. -

ENDOCRINE FUNCTION OF THE PANCREAS

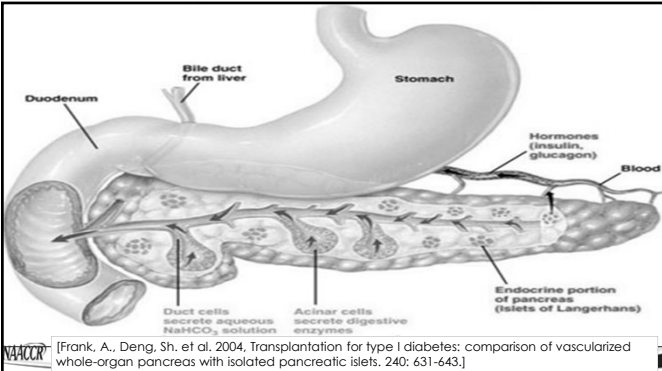
- Islets of Langerhans are composed of two major cell types
- Alpha cells secrete the hormone glucagon
- Beta cells secrete insulin



Pancreatic acini (with exocrine cells)

Pancreatic islet (with endocrine cells)

Blausen.com staff. "Blausen gallery 2014". Wikiversity Journal of Medicine. DOI:10.15347/wjvm/2014.010. ISSN 20018762. -



Stomach

Bile duct from liver

Duodenum

Hormones (insulin, glucagon)

Blood

Duct cells secrete aqueous NaHCO_3 solution

Acinar cells secrete digestive enzymes

Endocrine portion of pancreas (islets of Langerhans)

NAACCR [Frank, A., Deng, Sh, et al. 2004. Transplantation for type I diabetes: comparison of vascularized whole-organ pancreas with isolated pancreatic islets. 240: 631-643.]

REGIONAL LYMPH NODES

- Head of the pancreas
- Common bile duct
- Common hepatic artery
- Portal vein
- Posterior and anterior pancreaticoduodenal arcades
- Superior mesenteric vein
- Right lateral wall of the superior mesenteric artery

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REGIONAL LYMPH NODES

- Body and tail of the pancreas
- Common hepatic artery
- Celiac axis
- Splenic artery
- Splenic hilum

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DISTANT METASTASIS

- Liver
- Peritoneal Cavity
- Lungs

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EXOCRINE HISTOLOGIES

- Ductal adenocarcinoma (90% of all cases)
- Acinar cell carcinoma
- Papillary mucinous carcinoma
- Signet-ring cell carcinoma
- Adenosquamous carcinoma
- Undifferentiated (anaplastic) carcinoma
- Undifferentiated carcinoma with osteoclast-like giant cells
- Mixed ductal-endocrine carcinoma

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EXOCRINE HISTOLOGIES

- Serous cystadenocarcinoma
- Mucinous cystadenocarcinoma
- Papillary-mucinous carcinoma
- Acinar cell cystadenocarcinoma
- Pancreatoblastoma
- Solid pseudopapillary carcinoma

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EXOCRINE HISTOLOGIES

- Pancreatic intraepithelial neoplasia (PanIn III or PAIN III)
- PanIn III is the equivalent of carcinoma in situ and should be reported as Tis
- Per rule H22 in the MP/H rules, code PanIn III as glandular intraepithelial neoplasia grade III (8148/2)

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ENDOCRINE HISTOLOGIES

- Pancreatic endocrine tumor, functional
 - Insulin-secreting (insulinoma)
 - Glucagon-secreting (glucagonoma)
 - Somatostatin-secreting (somatostatinoma)
- Pancreatic endocrine tumor, non-secretory
- Mixed ductal-endocrine carcinoma
- Mixed acinar-endocrine carcinoma

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CHANGES EFFECTIVE 1/1/2014

- New preferred term 8150/3 Pancreatic endocrine tumor, malignant (C25...)
- Move former preferred term to synonym 8150/3 Islet cell carcinoma (C25...)
- New related term 8150/3 Pancreatic endocrine tumor, nonfunctioning (C25...)
- New preferred term 8154/3 Mixed pancreatic endocrine and exocrine tumor, malignant (C25...)
- New related term 8154/3 Mixed endocrine and exocrine adenocarcinoma (C25...)
- New synonym for related term 8154/3 Mixed islet cell and exocrine adenocarcinoma (C25...)
- New related term 8154/3 Mixed acinar-endocrine-ductal carcinoma

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NEW CODES AND WHAT TO DO WITH THEM IN 2015

- New term and code 8163/3:
 - Pancreatobiliary-type carcinoma (C24.1) DO NOT use new code.
 - Use this code in 2015: 8255/3
- New synonym 8163/3:
 - Adenocarcinoma, pancreatobiliary-type (C24.1) DO NOT use new code.
 - Use this code in 2015: 8255/3

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NEUROENDOCRINE VS. CARCINOID

- Neuroendocrine is an "umbrella" or "NOS" term that includes carcinoids.
- For all sites, remember that all carcinoids are neuroendocrine.
- Not all neuroendocrine are carcinoids.

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MIXED ENDOCRINE/EXOCRINE CARCINOMA

- If a single tumor includes both an endocrine carcinoma (islet cell carcinoma (8150/3)) and an exocrine carcinoma (acinar carcinoma(8550/3)), code to mixed islet cell and exocrine adenocarcinoma (8154/3)
- See Table 2 in the Other chapter of the MP/H manual

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CARBOHYDRATE ANTIGEN 19-9 (CA 19-9)

- Can be used to differentiate malignancy and inflammatory processes of the pancreas
- CA 19-9 levels may identify tumor progression or recurrence following definitive therapy
 - Presence of a normal CA 19-9 does not preclude recurrence

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MITOTIC COUNT

- High mitotic activity, a high degree of pleomorphism, and tumor necrosis have all been shown to correlate strongly with malignant potential.
- A low mitotic index is of little prognostic value, and many malignant tumors show little to no mitotic activity.

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SERUM CHROMOGRANIN A (CGA)

- Serum Chromogranin A (CgA) has been shown to be a useful marker for neuroendocrine tumors.

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hENT1

- Human Equilibrative nucleoside transporter 1 (hENT1) has been studied as a predictor for response to gemcitabine.


BRCA

- BRCA mutations, especially BRCA2, convey an increased risk of developing pancreatic adenocarcinoma.


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**AND NOW A BRIEF PAUSE
FOR...
AN EPI MOMENT**


(insert your favorite theme song here)




**EPIDEMIOLOGY: PANCREATIC
CANCERS**




- Analyzed alone; tobacco-associated
- Ductal adenocarcinoma (exocrine versus endocrine-islet cell) ≈90%
 - 75% in head of pancreas
- Asymptomatic until late stage; 65-75 years
 - Weight loss, pain, and/or jaundice
 - No screening—no markers, biopsy impractical, imaging costly/high false+
- 1-year Survival ≈28%; 15year Survival ≈5%
 - Surgery 5-10% of cases, late stage



ETIOLOGY/RISK FACTORS




- KRAS mutation ≈85%
- 2+ family (6x), BRCA2 (3.5x)
- Chronic pancreatitis, smoking (2x), obesity (2x)
- Diabetes (50%); glucose intolerance 80%
 - Diabetes dx often temporally close (reverse causation)
- Occupational chemical exposures



INCIDENCE, MORTALITY, TRENDS

- Incidence 10th
 - 13.8 per 100,000 men; ↑ 0.8% annually
 - 10.8 women; ↑ 1.0% annually
 - 16.7 black men; stable
 - 14.1 black women; ↑ 0.7% annually
- Mortality 4th:
 - 12.5 per 100,000 men; ↑ 0.3% annually
 - 9.6 women; ↑ 0.4% annually
 - 15.3 black men; stable
 - 12.4 black women; stable
- I/M Ratio >1.0



World Map of Pancreatic Cancer

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CINA RESEARCH

Geographic association of agriculture and pancreatic cancer

- Pesticide exposure; comparing agricultural to non-agricultural regions; cadmium increased risk (also occupational exposures)

Solar UV-B exposure and cancer incidence/mortality

- Weak; inverse relationship observed (Vitamin D)

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Questions?

QUIZ 1


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STAGING: PANCREAS



BLANKS vs X'S

- Blanks
 - The criteria for the stage classification (clinical or pathologic) has not been met or it is unknown if it has been met
 - No information in the medical record
 - Patient not eligible for pathologic staging
- X's
 - T cannot be assessed
 - N cannot be assessed
 - Does not apply to M, if patient was examined it can be assigned
 - Criteria met for this stage classification so each category is valid value or X




EXAMPLE 1-X

- A patient with colon cancer had a segmental resection done at your facility. Pathology showed tumor invading into the muscularis propria. No lymph nodes were identified in the specimen submitted to pathology.

Data Items as Coded in Current NAACCR Layout				
	T	N	M	Stage Group
Clin			0	99
Path	2	X		99

surgical resection meeting the criteria for pathologic staging. The surgeon did not resect any nodes, so they were not assessed.



EXAMPLE 2-BLANK

- A patient with a cT2a prostate cancer was treated with radiation (no prostatectomy).

Data Items as Coded in Current NAACCR Layout				
	T	N	M	Stage Group
Clin	2a	0	0	I
Path				99

Rules for classification not met

AJCC Cancer Stage

EXOCRINE & ENDOCRINE PANCREAS: CHAPTER 24

AJCC CANCER STAGE: PANCREAS

- ICD-O-3 Topography Codes
 - C25.0 Head of pancreas
 - C25.1 Body of pancreas
 - C25.2 Tail of pancreas
 - C25.3 Pancreatic duct
 - C25.4 Islets of Langerhans (endocrine pancreas)
 - C25.7 Other specified parts of pancreas
 - C25.8 Overlapping lesion of pancreas
 - C25.9 Pancreas NOS
- ICD-O-3 Histology Code Ranges
 - 8000-8576, 8940-8950, 8971, 8980-8981

AJCC CANCER STAGE: PANCREAS CLASSIFICATION

- Clinical staging
 - Evidence prior to treatment
 - Imaging
 - Localized resectable (Stage I or II)
 - Locally advanced (Stage III)
 - Metastatic (Stage IV)
 - Laparoscopy

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AJCC CANCER STAGE: PANCREAS CLASSIFICATION

- Pathologic staging
 - Partial or complete resection of pancreas
 - Including tumor and regional lymph nodes
 - Evaluation of margins
 - Superior mesenteric artery margin

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AJCC CANCER STAGE: PANCREAS

- T Category
 - TX: Primary tumor cannot be assessed
 - T0: No evidence of primary tumor
 - Tis: Carcinoma in situ

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AJCC CANCER STAGE: PANCREAS

- T Category
 - T1: Limited to pancreas, 2 cm or less in greatest dimension
 - T2: Limited to pancreas, more than 2 cm in greatest dimension
 - T3: Extends beyond the pancreas without involvement of celiac axis or superior mesenteric artery
 - T4: Involves celiac axis or superior mesenteric artery (unresectable primary tumor)

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AJCC CANCER STAGE: PANCREAS

- N Category:
 - NX: Regional lymph nodes cannot be assessed
 - N0: No regional lymph node metastasis
 - N1: Regional lymph node metastasis

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AJCC CANCER STAGE: PANCREAS

- M Category
 - M0: No distant metastasis
 - M1: Distant metastasis
 - Positive peritoneal cytology
 - Seeding of peritoneum

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AJCC CANCER STAGE: PANCREAS

Group	T	N	M
Stage 0	Tis	N0	M0
Stage IA	T1	N0	M0
Stage IB	T2	N0	M0
Stage IIA	T3	N0	M0
Stage IIB	T1	N1	M0
	T2	N1	M0
	T3	N1	M0
Stage III	T4	Any N	M0
Stage IV	Any T	Any N	M1

POP QUIZ


- Abdominal ultrasound: Diffusely heterogeneous liver with multiple hypoechoic nodules throughout both liver lobes, suggestive of metastasis. Bile duct within normal limits. Prominent peri-pancreatic nodes, 1.1 cm, with lymphadenopathy. Pancreatic mass not identified.
- Liver biopsy: Adenocarcinoma of pancreatic origin.

POP QUIZ

- What is the AJCC clinical stage?
 - cT0 cN1 pM0 Stage IV
- What is the AJCC pathologic stage?
 - cT0 cN1 pM0 Stage IV


Summary Stage 2000
<http://seer.cancer.gov/tools/ssm/>

**PANCREAS: HEAD, BODY, AND TAIL
 C25.0-C25.4**




SUMMARY STAGE 2000: PANCREAS

- 0 In situ
 - Noninvasive; intraepithelial
- 1 Localized only
 - Confined to pancreas
 - Localized NOS



SUMMARY STAGE 2000: PANCREAS

- 2 Regional by direct extension only
 - Extension to:
 - All sites
 - Ampulla of Vater
 - Blood vessel(s) (major): Hepatic artery, portal vein, superior mesenteric artery/vein
 - Duodenum
 - Extrahepatic bile duct(s)
 - Peripancreatic tissue NOS



SUMMARY STAGE 2000: PANCREAS

- 2 Regional by direct extension only
- Extension to:
 - Head of pancreas
 - Adjacent stomach
 - Blood vessel(s) (major): Gastroduodenal artery, pancreaticoduodenal artery
 - Body of stomach
 - Stomach NOS
 - Transverse colon including hepatic flexure

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SUMMARY STAGE 2000: PANCREAS

- 2 Regional by direct extension only
- Extension to:
 - Body and/or tail of pancreas
 - Blood vessel(s) (major): Aortic artery, celiac artery, splenic artery/vein
 - Spleen
 - Splenic flexure
 - Stomach
 - Fixation to adjacent structures NOS

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SUMMARY STAGE 2000: PANCREAS

- 3 Regional lymph node(s) involved only
- Celiac **for head only**
- Hepatic
- Infrapyloric (subpyloric) **for head only**
- Lateral aortic (lumbar)
- Pancreaticosplenic (pancreaticolienal) **for body and tail only**

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SUMMARY STAGE 2000: PANCREAS

- 3 Regional lymph node(s) involved only
- Peripancreatic, NOS:
 - Anterior, NOS:
 - Anterior pancreaticoduodenal
 - Anterior proximal mesenteric
 - Pyloric
 - Inferior to the head and body of pancreas
 - Posterior, NOS:
 - Pericholedochal (common bile duct)
 - Posterior pancreaticoduodenal
 - Posterior proximal mesentery
 - Superior to the head and body of pancreas

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SUMMARY STAGE 2000: PANCREAS

- 3 Regional lymph node(s) involved only
- Retroperitoneal
- Splenic (lienal) **for body and tail only**:
 - Gastroepiploic (gastro-omental), left
 - Splenic hilum **for body and tail only**
 - Suprapancreatic **for body and tail only**
- Superior mesenteric
- Regional lymph node(s), NOS

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SUMMARY STAGE 2000: PANCREAS

- 4 Regional by BOTH direct extension AND regional lymph node(s) involved
 - Codes 2 + 3
- 5 Regional NOS

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SUMMARY STAGE 2000: PANCREAS

- 7 Distant site(s)/lymph node(s) involved
 - Distant lymph nodes
 - Extension to:
 - All sites:
 - Gallbladder
 - Liver including porta hepatis
 - Mesenteric fat
 - Mesentery
 - Mesocolon
 - Peritoneum

SUMMARY STAGE 2000: PANCREAS

- 7 Distant site(s)/lymph node(s) involved
 - Extension to:
 - Head of pancreas:
 - Adrenal
 - Adrenal (suprarenal) gland
 - Colon (other than transverse colon including hepatic flexure)
 - Ileum
 - Jejunum
 - Kidney
 - Omentum
 - Retroperitoneum
 - Spleen
 - Ureter

SUMMARY STAGE 2000: PANCREAS

- 7 Distant site(s)/lymph node(s) involved
 - Extension to:
 - Body and/or tail of pancreas:
 - Adrenal (suprarenal) gland
 - Adrenal, left
 - Adrenal, right
 - Colon (other than splenic flexure)
 - Diaphragm
 - Ileum
 - Jejunum

SUMMARY STAGE 2000: PANCREAS

- 7 Distant site(s)/lymph node(s) involved
 - Extension to:
 - Body and/or tail of pancreas:
 - Kidney
 - Kidney, left
 - Kidney, right
 - Retroperitoneal soft tissue (retroperitoneal space)
 - Ureter, left
 - Ureter, right

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SUMMARY STAGE 2000: PANCREAS

- 7 Distant site(s)/lymph node(s) involved
 - Further contiguous extension
 - Metastasis
- 9 Unknown if extension or metastasis

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POP QUIZ

- Ultrasound: 6 cm mass of tail of pancreas invades spleen with adenopathy of splenic nodes, most likely malignant. No liver metastasis.
- Biopsy of pancreatic tail mass: Adenocarcinoma

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POP QUIZ

- What is the Summary Stage 2000?
 - a. 0 In situ
 - b. 1 Localized only
 - c. 2 Regional by direct extension only
 - d. 3 Regional lymph node(s) involved only
 - e. 4 Regional by BOTH direct extension AND regional lymph node(s) involved
 - f. 5 Regional NOS
 - g. 7 Distant site(s)/lymph node(s) involved
 - h. 9 Unknown if extension or metastasis

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Summary Stage 2000
<http://seer.cancer.gov/tools/ssm/>

**PANCREAS: OTHER & UNSPECIFIED
 C25.7-C25.9**

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SUMMARY STAGE 2000: PANCREAS OTHER

- 0 In situ
 - Noninvasive; intraepithelial
- 1 Localized only
 - Invasive tumor confined to pancreas
 - Localized NOS

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SUMMARY STAGE 2000: PANCREAS OTHER

- 2 Regional by direct extension only
 - Adjacent large vessel(s)
 - Ampulla of Vater
 - Colon
 - Duodenum
 - Extrahepatic bile duct(s)
 - Peripancreatic tissue
 - Spleen
 - Stomach

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SUMMARY STAGE 2000: PANCREAS OTHER

- 3 Regional lymph node(s) involved only
 - Celiac
 - Hepatic
 - Infrapyloric (subpyloric)
 - Lateral aortic (lumbar)
 - Pancreaticosplenic (pancreaticolienal)

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SUMMARY STAGE 2000: PANCREAS OTHER

- 3 Regional lymph node(s) involved only
- Peripancreatic, NOS:
 - Anterior, NOS:
 - Anterior pancreaticoduodenal
 - Anterior proximal mesenteric
 - Pyloric
 - Inferior to the head and body of pancreas
 - Posterior, NOS:
 - Pericholedochal (common bile duct)
 - Posterior pancreaticoduodenal
 - Posterior proximal mesentery
 - Superior to the head and body of pancreas

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SUMMARY STAGE 2000: PANCREAS OTHER

- 3 Regional lymph node(s) involved only
 - Retroperitoneal
 - Splenic (lienal) NOS:
 - Gastroepiploic (gastro-omental), left
 - Splenic hilum
 - Suprapancreatic
 - Superior mesenteric
 - Regional lymph node(s), NOS

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SUMMARY STAGE 2000: PANCREAS OTHER

- 4 Regional by BOTH direct extension AND regional lymph node(s) involved
 - Codes 2 + 3
- 5 Regional NOS

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SUMMARY STAGE 2000: PANCREAS OTHER

- 7 Distant site(s)/lymph node(s) involved
 - Distant lymph nodes
 - Further contiguous extension
 - Metastasis
- 9 Unknown if extension or metastasis

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POP QUIZ

- Abdominal ultrasound: Diffusely heterogeneous liver with multiple hypoechoic nodules throughout both liver lobes, suggestive of metastasis. Bile duct within normal limits. Prominent peri-pancreatic nodes, 1.1 cm, with lymphadenopathy. Pancreatic mass not identified.
- Liver biopsy: Adenocarcinoma of pancreatic origin.

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POP QUIZ

- What is the Summary Stage 2000?
 - 0 In situ
 - 1 Localized only
 - 2 Regional by direct extension only
 - 3 Regional lymph node(s) involved only
 - 4 Regional by BOTH direct extension AND regional lymph node(s) involved
 - 5 Regional NOS
 - 7 Distant site(s)/lymph node(s) involved
 - 9 Unknown if extension or metastasis

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Pancreas

COLLABORATIVE STAGE DATA COLLECTION SYSTEM (CS) V0205

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CS SCHEMAS

- PancreasBodyTail
 - C25.1-C25.2
- PancreasHead
 - C25.0
- PancreasOther
 - C25.3-C25.4
 - C25.7-C25.9

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CS EXTENSION: PANCREAS

- Primary tumor location
 - Body of pancreas: Between left edge of superior mesenteric-portal vein and left edge of aorta
 - Tail of pancreas: To left of left edge of aorta
 - Head of pancreas: To right of superior mesenteric-portal vein confluence
 - Islets of Langerhans: Throughout pancreas
 - Code to sub-site of pancreas in which tumor arises if known

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CS EXTENSION: PANCREAS

- Code 000
 - In situ, intraepithelial, noninvasive
 - Pancreatic intraepithelial neoplasia III (PanINIII)
- Codes 100-300
 - Confined to pancreas
 - T category based on CS Tumor Size value
- Codes 400-595
 - Extends beyond pancreas without involvement of celiac axis or superior mesenteric artery
- Codes 600-810
 - Involves celiac axis or superior mesenteric artery

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CS LYMPH NODES: PANCREAS

- Code 000
 - No regional lymph node involvement
- Codes 100-800
 - Regional nodes involved
 - Pancreatic tumor sub-site a determinant in regional or distant nodes

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CS METS AT DX: PANCREAS

- Code 00
 - No distant metastasis
- Codes 05-60
 - Distant metastasis
 - Pancreatic tumor sub-site a determinant in regional or distant nodes

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POP QUIZ

- Abdominal ultrasound: Diffusely heterogeneous liver with multiple hypoechoic nodules throughout both liver lobes, suggestive of metastasis. Bile duct within normal limits. Prominent peri-pancreatic nodes, 1.1 cm, with lymphadenopathy. Pancreatic mass not identified.
- Liver biopsy: Adenocarcinoma of pancreatic origin.

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POP QUIZ

- What is the code for CS Tumor Size?
 - a. 000: No mass/tumor found
 - b. 110
 - c. 992: Described as "less than 2 cm," or "greater than 1 cm," or "between 1 cm and 2 cm"
 - d. 999: Unknown; size not stated
- What is the code for CS Extension?
 - a. 300: Localized NOS
 - b. 800: Further contiguous extension
 - c. 950: No evidence of primary tumor
 - d. 999: Unknown; extension not stated

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POP QUIZ

- What is the code for CS Lymph Nodes?
 - a. 000: No regional node involvement
 - b. 100: Regional lymph nodes
 - c. 800: Lymph nodes NOS
 - d. 999: Unknown
- What is the code for CS Mets at DX?
 - a. 00: No distant metastasis
 - b. 10: Distant lymph node(s)
 - c. 40: Distant metastasis except distant lymph node(s)
 - d. 50: (10) + (40)

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Quiz 2

QUESTIONS?

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TREATMENT

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TREATMENT

- Poor survival rate with any stage of pancreatic exocrine cancer
- Clinical trials
 - Appropriate treatment alternatives for patients with any stage of disease

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TREATMENT

- Surgical resection is only potentially curative technique
- More than 80% of patients present with disease that cannot be cured with resection
- Median survival of resected patients ranges from 15-19 months
- 5 year actuarial survival rate is about 20%

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CLASSIFICATION FOR RESECTION

- Based on the high probability of obtaining negative resection margins (R0)
 - Resectable
 - Borderline resectable
 - Unresectable

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CRITERIA FOR RESECTION

- No peritoneal or hepatic metastasis
- No abutment, distortion, thrombus, or venous encasement of the portal or superior mesenteric vein
- Must have a clear fat plane around the celiac axis, hepatic artery, and superior mesenteric vein

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WORK-UP

- Pancreatic protocol CT
- Pancreas protocol MRI
- Endoscopic ultrasound (EUS)
- Endoscopic retrograde cholangiopancreatography (ERCP)
- Biopsy
 - CT guided
 - EUS guided (preferred)

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SURGERY

- Pancreatoduodenectomy (Whipple procedure)
- Removal of:
 - Distal half of the stomach (antrectomy)
 - Gall bladder and its cystic duct (cholecystectomy)
 - Common bile duct (choledochectomy)
 - Head of the pancreas
 - Duodenum
 - Proximal jejunum
 - Regional lymph nodes

<http://www.aafp.org/atp/2006/0201/p485.html>

SURGERY

- Distal pancreatectomy
- Removal of the body and tail of the pancreas and spleen
- Total pancreatectomy
 - Similar to a Whipple, but the entire pancreas is removed
 - Patient will be required to take supplemental enzymes and insulin

SURGERY CODES

- 35: Local or partial pancreatectomy and duodenectomy
- 36: WITHOUT distal/partial gastrectomy
- 37: WITH partial gastrectomy (Whipple)
- 40: Total pancreatectomy
- 60: Total pancreatectomy and subtotal gastrectomy or duodenectomy

CHEMOTHERAPY/RADIATION

- Adjuvant Therapy
 - Chemotherapy
 - Chemoradiation
 - IMRT
- Neoadjuvant Therapy
 - Performed on patients that are borderline surgical candidates
 - Chemoradiation

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CHEMOTHERAPY/RADIATION

- Primary Treatment
 - Intent is palliative and improved survival
- Chemotherapy
 - 5fu and Gemcitabine
 - Clinical trials
- Chemoradiation
- Radiation
 - IMRT

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Quiz 3 and Case Scenarios

QUESTIONS?

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COMING UP...

- Survivorship Care Plans
 - 7/9/15
- Collecting Cancer Data: Central Nervous System
 - 8/6/15
- Coding Pitfalls
 - 9/3/15



AND THE WINNERS ARE.....




CE CERTIFICATE QUIZ/SURVEY

- Phrase
Glucagon
- Link
 - <http://www.surveygizmo.com/s3/2167889/Pancreas>

