Question 1: During linac-based stereotactic body RT, which of the following is most reliable as a surrogate of the pancreatic tumor?
   a. Optical markers on a vest
   b. Thoracic spine
   c. Fiducial markers
   d. Stent

Answer: C

Feedback: Optical markers on a vest are used for Cyberknife, not linac-based RT, while the thoracic spine is utilized to initially set up the patient because it does not typically correlate with pancreatic tumor location. Because studies have suggested that stents can migrate and change based on bowel gas, stents are not always reliable for tumor visualization. Fiducial markers have been shown to be more reliable surrogates of tumor location and motion.

References:

Question 2: A modified Appleby procedure involving distal pancreatectomy with en bloc splenectomy and resection of the celiac axis can be safely performed if a patient has what vessels patent to maintain collateral arterial circulation?
   a) Splenic artery and pancreaticoduodenal arcade
   b) Gastroduodenal artery and pancreaticoduodenal arcade
   c) Gastric artery and gastroduodenal artery
   d) Splenic artery and gastroduodenal artery

Answer: B

Feedback: By definition, celiac encasement signifies locally advanced or unresectable pancreas cancer (LAPC). However, following maximal chemotherapy and radiation therapy, it is becoming more evident that well-selected patients with celiac involvement could undergo a curative surgical resection. It is important to stress that for this type of resection to occur (Appleby procedure), the tumor must not involve these arteries. In addition to identifying the GDA on CT, most surgeons will also establish flow through the GDA and the arcade by intraoperative Doppler assessment or clamping of the common hepatic artery (CHA).

References:
eContouring for GI Cancers I
With Dr(s). Schefter and Herman

Question 3:
7) Which of the following represents a standard GTV-PTV expansion for pancreas CRT and SBRT, respectively?
   a) 1.5-2 cm, 2-3 mm
   b) 2.25 cm, 2-3 mm
   c) 1.15 cm, 3-4 mm
   d) 2.25 cm, 3-4 mm

Answer: A

Feedback: Because SBRT involves highly focal irradiation, smaller margins are used to achieve maximal dose to the tumor while minimizing surrounding organs at risk. As a result, locoregional elective nodal regions are not covered within the radiation field with SBRT. Standard CRT typically covers a larger field, including nodal regions.

Reference:

Question 4: Cancers involving the head and uncinate process of the pancreas are:
   a. Most suitable for a Whipple procedure
   b. Located to the right of the superior mesenteric vein (SMV)
   c. Located to the left of the splenic artery
   d. A and B

Answer: D

Feedback: Tumors located to the right of the SMV (head and most uncinate tumors) are usually most suitable for a Whipple procedure, or pancreaticoduodenectomy.

References:

Question 5: Involvement and the degree of involvement of the following vessels influence resectability:
   a. Superior mesenteric vein(SMV), superior mesenteric artery(SMA), celiac axis (CA)
   b. Splenic artery (SA), inferior mesenteric artery (IMA), hepatic vein (HV)
   c. Portal vein (PV), common iliac artery (CIA), gastroduodenal artery (GDA)
   d. IMA, SMV, SMA

Answer: A

Feedback: Each of the other answers include vessels that are not typically relevant for pancreatic cancer (CIA, IMA).

References: