SURGERY: PANCREATIC CANCER

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SURGICAL INTERVENTION FOR CANCER TREATMENT

- Primary Therapy
- Debulking
  - Full extent of cancer is not removed
  - Adjuvant therapy
- Palliative
  - pain and symptom management
- Disease management
  - Staging
  - Restoration

OTHER SURGICAL MODALITIES

- **Cryosurgery**
  This surgery technique uses extremely cold temperatures to kill cancer cells. Cryosurgery is used most often with skin cancer and cervical cancer.
- **Laser surgery**
  This technique uses beams of light energy instead of instruments to remove very small cancers, to shrink or destroy tumors, or to activate drugs to kill cancer cells.

- **Electrosurgery**
  This technique uses electrical current to kill cancer cells.

- **Microscopically controlled surgery (Mohs Surgery)**
  This surgery is useful when cancer affects delicate parts of the body, such as the eye. Layers of skin are removed and examined microscopically until cancerous cells cannot be detected.

SURGERY IN CANCER

- Primary Therapy
- 90% of breast cancer patients
- >95% of colorectal cancer patients
- <50% in metastatic disease

SURGERY IN CANCER

- **Debulking**

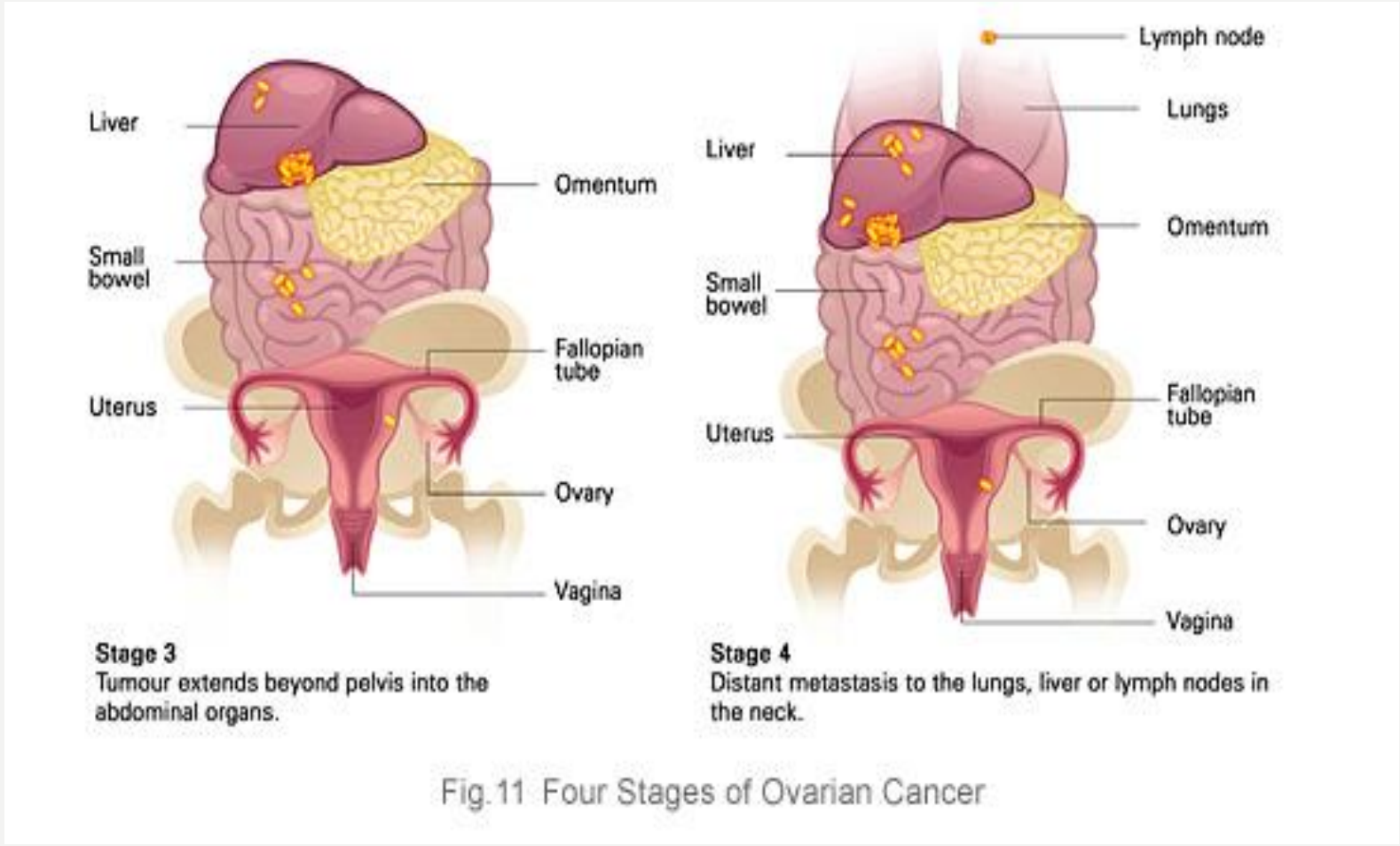
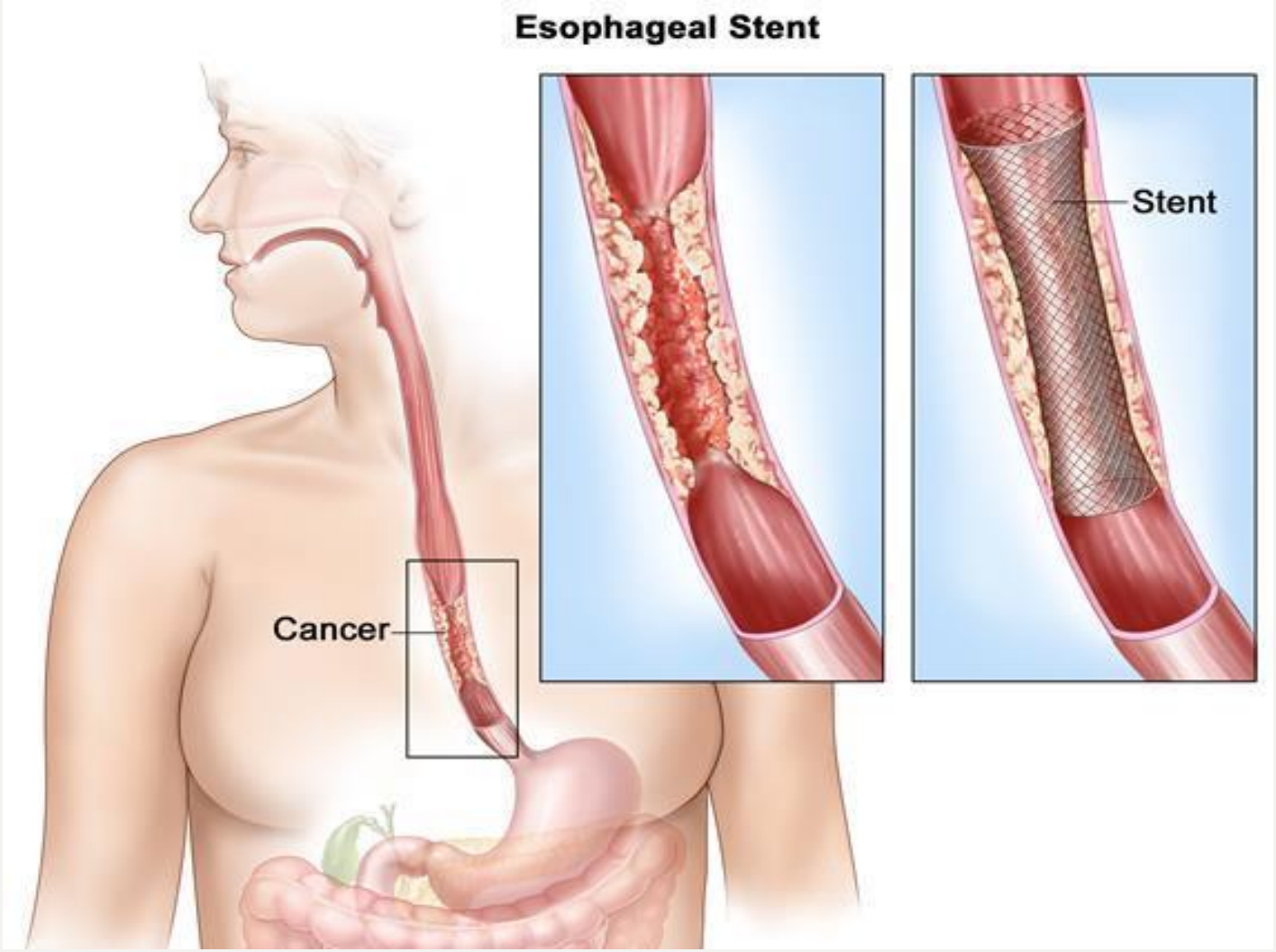


Fig.11 Four Stages of Ovarian Cancer

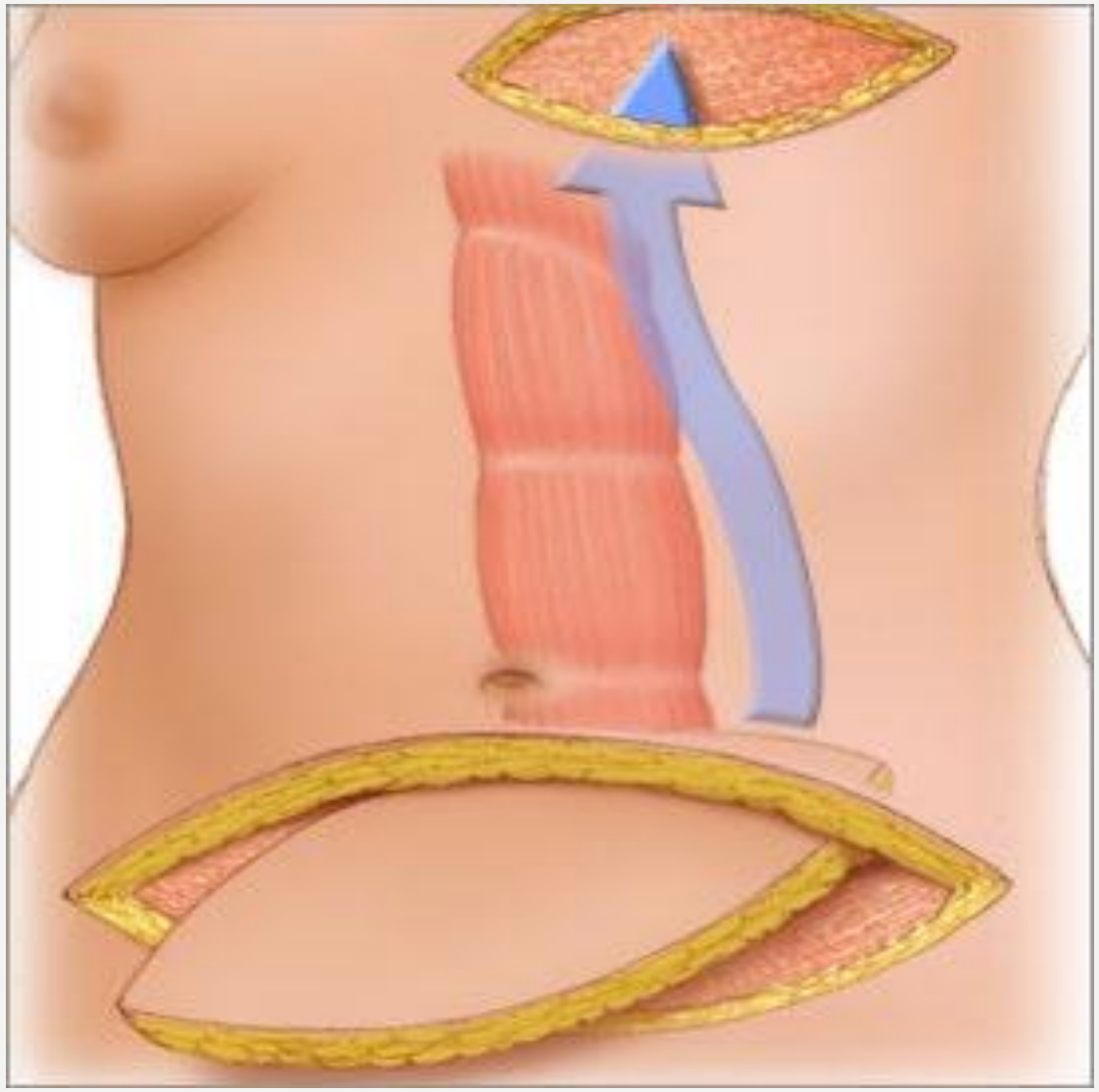
SURGERY IN CANCER

- **Palliative**

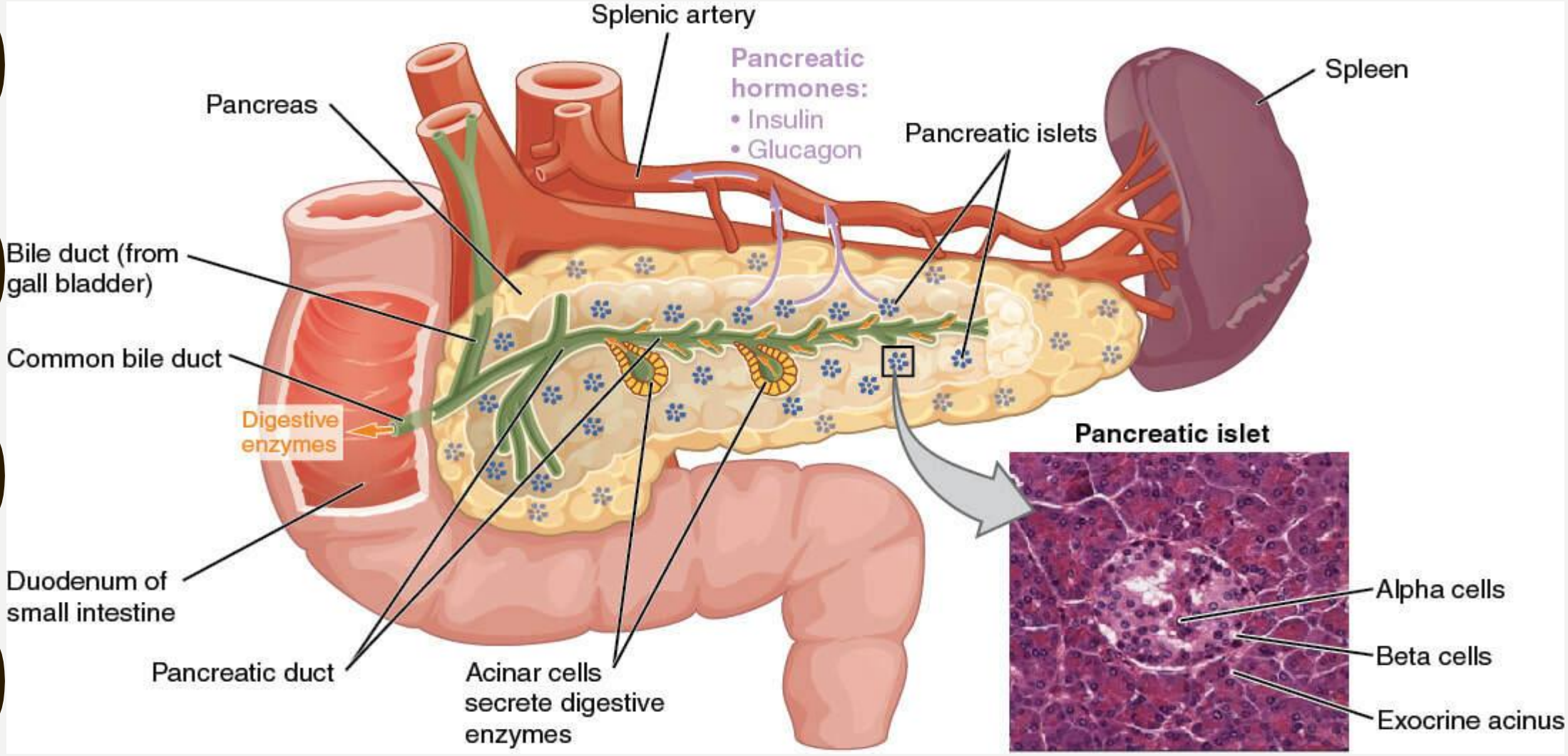


SURGERY IN CANCER

- **Disease management**
- **Restoration**



PANCREATIC CANCER



CASE STUDY: PANCREATIC CANCER

- **Risk Factors**
  - **Smoking**
  - **Obesity**
  - **Western Diet**
  - **Heavy alcohol use**
  - **H. Pylori**
  - **HBV, HCV**
  - **DM**
  - **Hereditary**
    - **Blood type**
    - **CF**

- 57K expected in 2020
- 3.2% all new cancers
- 47K expected deaths
- 7.8% deaths
- 5 year survival rate: 10%

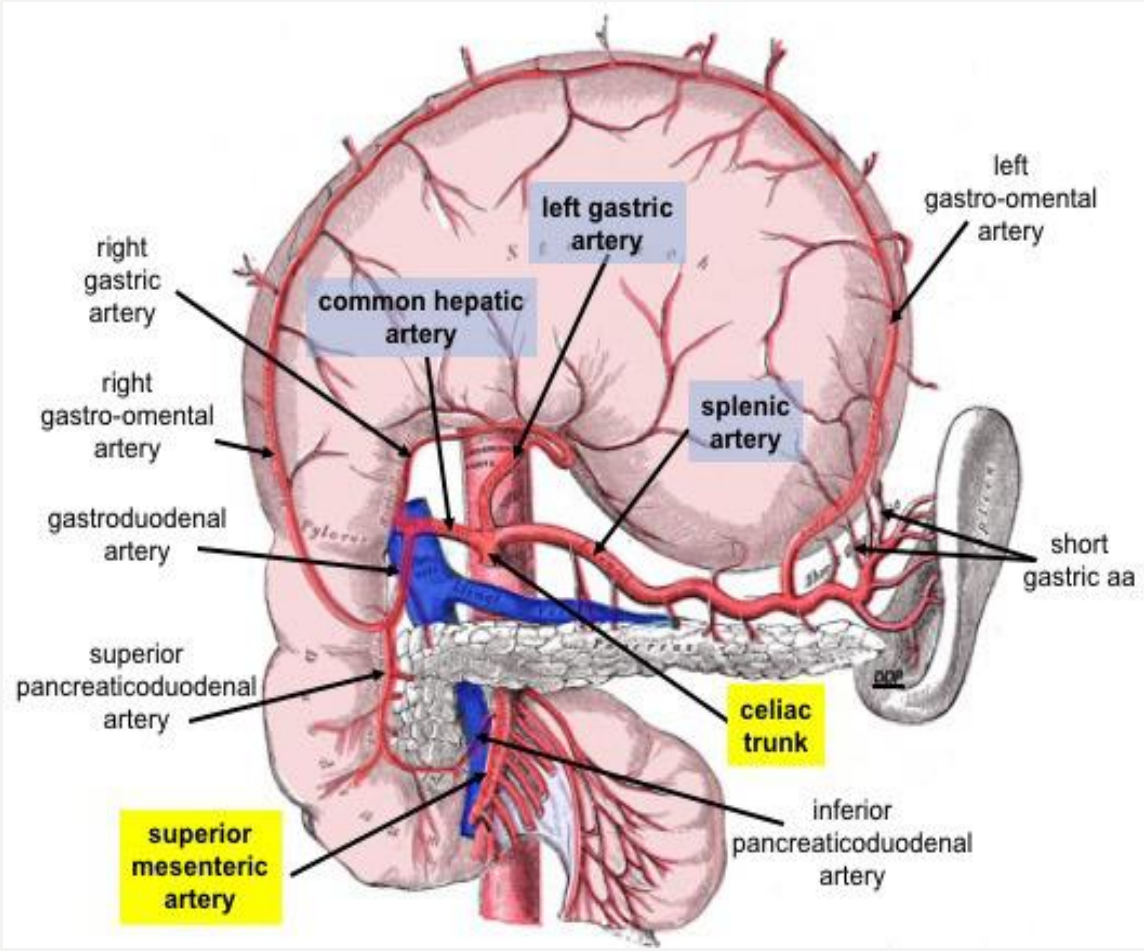
- https://seer.cancer.gov/statfacts/html/pancreas.html

STAGING PANCREATIC CANCER

- **Resectable:** Pancreas only, without extension to arteries or veins10-15% at diagnosis
- **Borderline Resectable**: Potentially resectable after chemotherapy and/or radiation
- **Locally Advanced**: Grown into area nearby arteries, veins or organs: not resectable 35-40% at diagnosis
- **Metastatic**: 45-55% at diagnosis

WHAT IS UNRESECTABLE?

- Contact with the superior meseteric artery (celiac) or vein
- Metastatic



MAKING TUMORS RESECTABLE

- **Neoadjuvant Therapy**
  - Aggressive: FOLFIRINOX, FOLFOX, gemcitabine plus nabpaclitaxel
  - Less aggressive (PS ≥2): gemcitabine +/- nabpaclitaxel

- NEOLAP* Trial (2019): 63% of initially unresectable, locally advanced cancers were able to proceed to complete resections.
- Gemcitabine/nabpaclitaxel +/- FOLFIRINOX: no difference

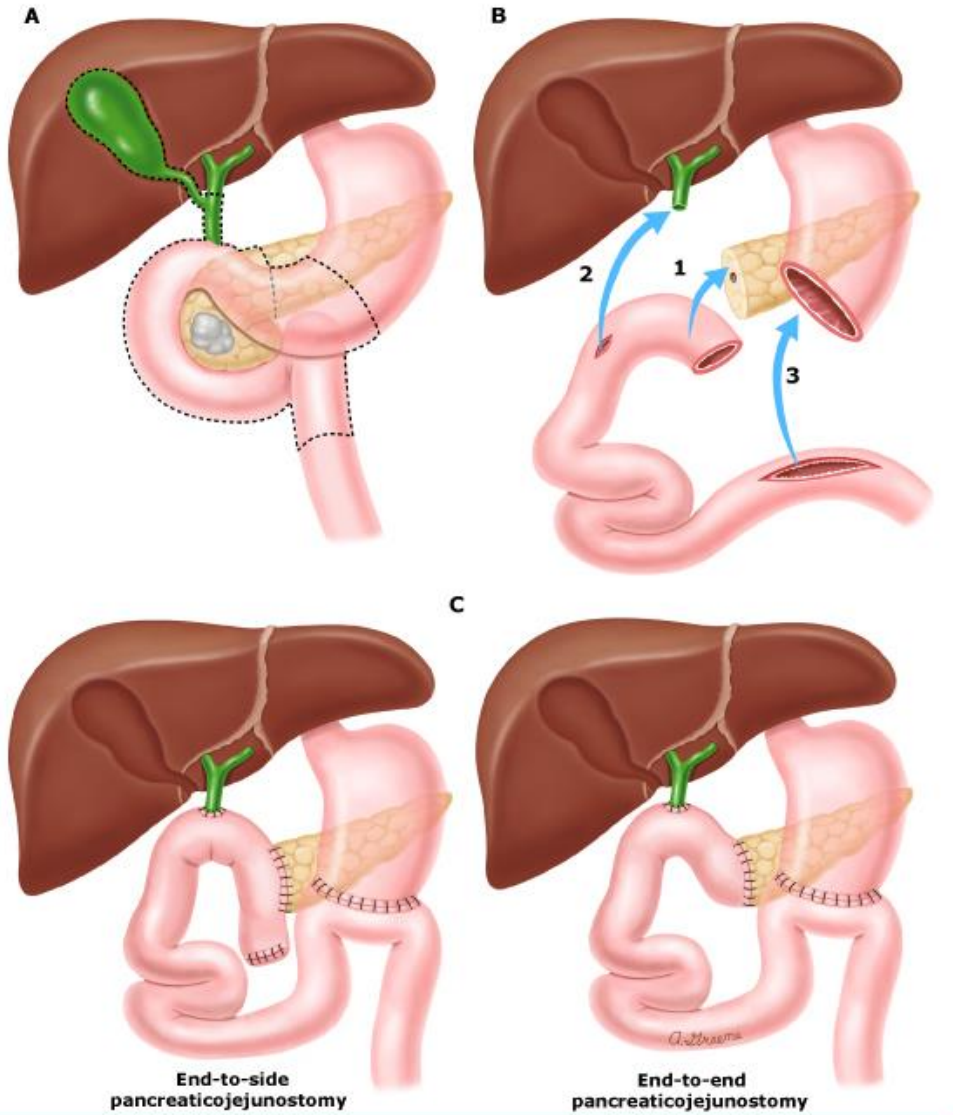
***Neoadjuvant Chemotherapy in Locally Advanced Pancreatic Cancer**

WHO’S THIS??

SURGERY FOR HEAD OF THE PANCREAS TUMORS

- **Conventional (Whipple)**
  - Removal of pancreatic head, duodenum, 15 cm jejunum, common bile duct, gall bladder and partial gastrectomy
- **Pylorus-preserving**
  - Preserves gastric antrum, pylorus, 3-6 cm of duodenum

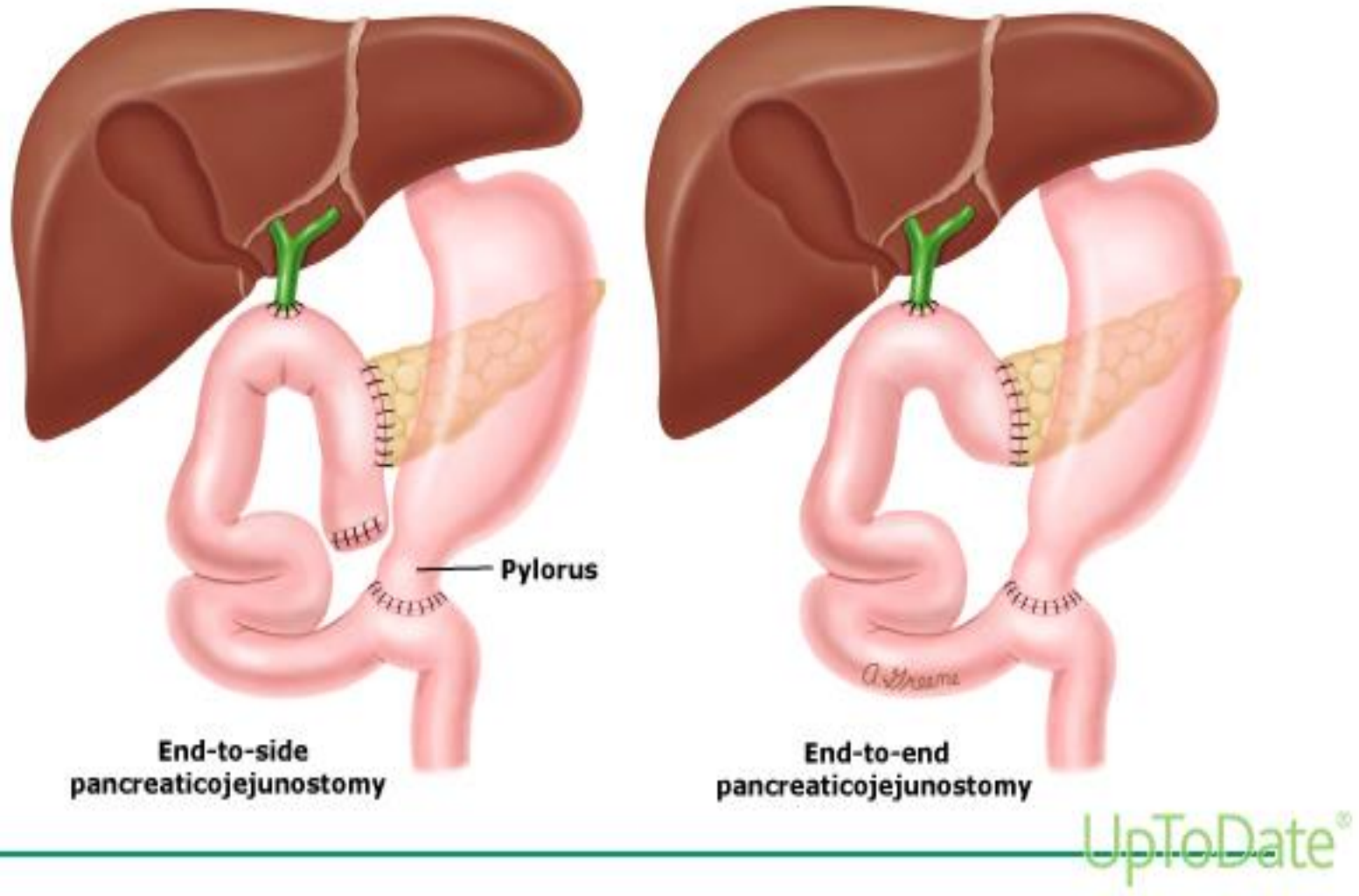
Conventional pancreaticoduodenectomy (Whipple procedure; Polya)



Polya refers to the style with which the gastrojejunostomy is constructed.

UpToDate®

Pylorus-preserving pancreaticoduodenectomy



SURGERY FOR BODY OR TAIL OF PANCREAS

- Early diagnosis is rare
- Locally advanced or metastatic at presentation
- If feasible
  - Distal subtotal pancreatectomy and splenectomy
  - Total pancreatectomy

CASE STUDY: WHIPPLE

- AB is a 75 year old male admitted after a 3 week history of jaundice, pruritus, pale stools and dark urine, vomiting after meals, anorexia
- Hx + alcohol abuse
- Stable angina and hypertension
- 53 kg, 170 cm which is an 18% weight loss in less than 6 months
- Labs: albumin 2.5; total bilirubin 206; direct bilirubin 173; GGT 356; alk phos 127
- Abdominal CT showed head of pancreas carcinoma with obstructive jaundice

SYMPTOM CLUSTER

- "the simultaneous presence of two or more symptoms, which may or may not share etiology and are more strongly related to one another than other symptoms" Burrell et al. (2018)
- Unresectable, locally advanced PC: Fatigue and anorexia
- Undergoing chemoradiation: Anxiety, depression, somatization, pain and fatigue
- Lung, advanced GI cancers, PC: Fatigue, pain and depression

CASE STUDY: SURGERY

- AB underwent a Whipple Procedure
- Post Op: NG drainage, sips of water
- 2 days later allowed a diabetic fluid diet.. Held due to abdominal distention and vomiting
- Insulin sliding scale initiated
- 4 days later tolerating 1/3 of the diet, due to continued nausea and vomiting
- Once the fluid diet is tolerated, advance to full diabetic diet
- Continued to recover and discharged home: diabetic diet and insulin continued, multivitamins, folate and B12
- Pancreatic enzymes did not require supplementation

POSTOPERATIVE SYMPTOM CLUSTERS

- Pain–gastrointestinal
  - Nausea, back pain, abdominal pain/cramping, poor appetite, constipation, trouble digesting food
- Mood
  - Anxiety, depression
- Digestive problems
  - Loss of bowel control, trouble digesting food
- Fatigue–nutritional problems
  - Weight loss, change in taste, dry mouth, fatigue
- Jaundice
  - Nausea, jaundice

POSTOPERATIVE CARE

- **Immediate Post Op**:
- Site
- -color, integrity, drainage
- Hemorrhage
- Abscess
- Obstruction
- Electrolyte imbalance/
- Dehydration
- GI symptoms: N/V/D/Bloating

- **Assessment and Patient Teaching**:
- Skin care
- Psychological support
- Nutrition
- S/S Dumping Syndrome
  - 30-60 minutes

NURSING CONSIDERATIONS IN SURGERY

- Delayed gastric emptying
- Pancreatic Fistula
- Malabsorption
- Onset of Diabetes Mellitus (50%)
- Vitamin and Mineral deficiencies
  - Calcium, zinc, iron, B12, A, D, E, K

POSTOPERATIVE SCENARIO: AB

- Follow up reveals continued DM, decreased N/V and increased weight
- Maintain low fat, diabetic diet focusing on small meals throughout the day
- Further monitoring for pancreatic cancer and possible chemotherapy and/or radiation

REFERENCES

- American Cancer Society (ACS). (2020). Cancer Facts & Figures. Retrieved June 24, 2020 from https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2020/cancer-facts-and-figures-2020.pdf
- Burrell,, SA et al. Symptom Clusters in Patients With Pancreatic Cancer Undergoing Surgical Resection: Part II ***ONF*** *2018, 45(4), E53-E66* ***DOI****: 10.1188/18.ONF.E53-E66*
- DeVita, V.T., Hellman, S., & Rosenber, S.A. *Cancer:Principles and Practice of Oncology.* Lippincottt, Williams & Wilkins, 2005.
- Hackert T, Sachsenmaier M, Hinz U, et al. Locally Advanced Pancreatic Cancer: Neoadjuvant Therapy With Folfirinox Results in Resectability in 60% of the Patients. *Ann Surg*. 2016;264(3):457-463.
- Itano, J.K., et al. (2015). *Oncology Nursing Society Core Curriculum for Oncology Nursing, 3rd ed.* Oncology Nursing Society: Pittsburg, PA
- Kunzmann V, Algül H, Goekkurt E, et al. Conversion rate in locally advanced pancreatic cancer (LAPC) after nab-paclitaxel/gemcitabine- or FOLFIRINOX-based induction chemotherapy (NEOLAP): Final results of a multicenter randomised phase II AIO trial (abstract 671O). Data presented at the 2019 European Society for Medical Oncology (ESMO) Congress, Barcelona, Spain; September 27 through October 1, 2019