

# Gastrointestinal (胃腸科) Cancer and Prevention



Photo credit: yashodahealthcare.com

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# Outlines

1. Types of Cancer in Gastroenterology (消化道癌症類型)
2. Cancer Rate/Statistics-Gastric Cancer (胃癌), Colorectal Cancer (結直腸癌), Liver Cancer (肝癌), and Pancreatic Cancer (胰臟癌)
3. Causes (原因)
4. Signs and Symptoms (徵兆和症狀)
5. Diagnostic Tests (檢查診斷)
6. Treatments (治療)
7. Preventions (預防措施)

# Types of Gastrointestinal Cancers

- Esophageal Cancer (食道癌)
- Gastric/Stomach Cancer (胃癌)
- Colorectal Cancer (結直腸癌)
- Liver Cancer (肝癌)
- Pancreatic Cancer (胰臟癌)

Photo Credit anatomywarehouse.com

Cirrhosis (scarred, nodular)

Fatty liver (discolored)

Hepatitis (inflammation)

Normal liver (smooth, pink)

Gallstones in cystic duct

Pancreatic sclerosing cholangitis

Gallbladder

Gallstones in gallbladder

Gallstones in common bile duct

Pancreatic duct stones

Colon

Polyps  
(can occur anywhere  
in digestive system)

Inflammatory  
bowel disease:  
Ulcerative colitis  
Crohn disease  
(Granulomatous colitis)

Esophageal reflux disease  
(inflammation, white splotches)

Stomach

Gastric ulcer

Adenocarcinoma  
of stomach

Adenocarcinoma  
of pancreas

Duodenal ulcer

Pancreas

Gastritis

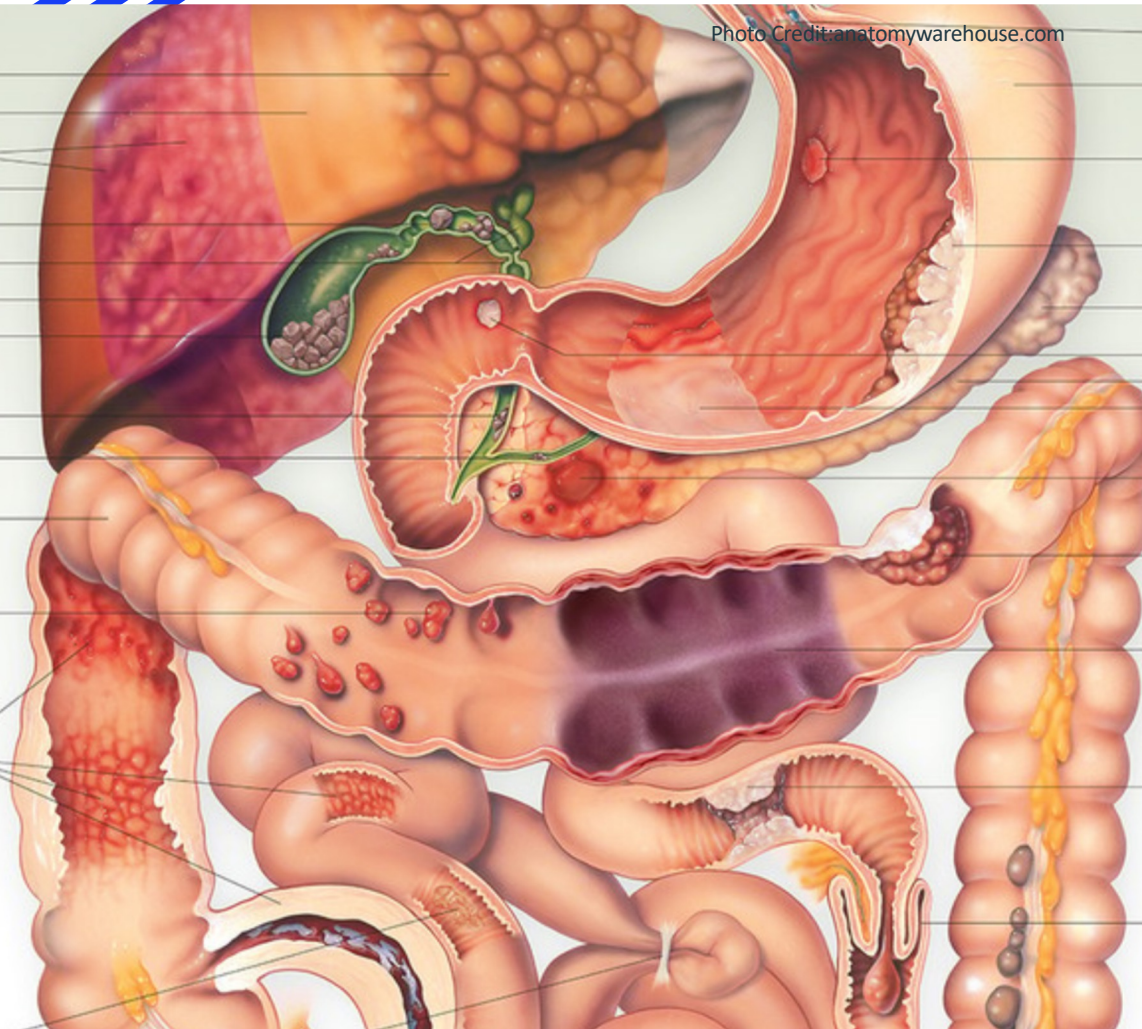
Pancreatitis

Adenocarcinoma  
of colon

Mesenteric ischemia

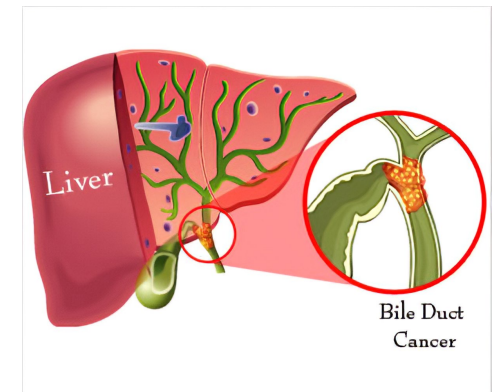
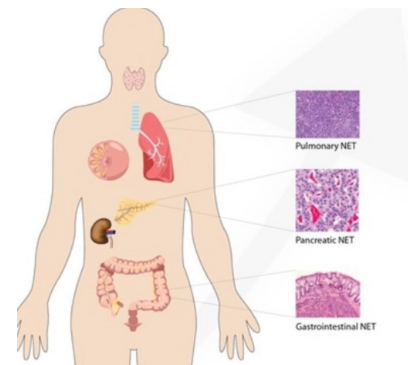
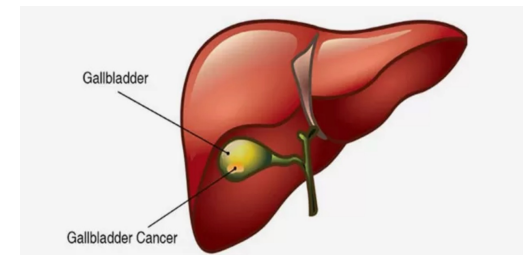
Adenocarcinoma  
of jejunum

Intussusception  
(bowel folding back on self)



# Types of Gastrointestinal Cancers

- Small Intestine Cancer (小腸癌)
- Gallbladder Cancer (膽囊癌) – rare
- Biliary Tract Cancer (膽道癌) - rare
- Gastrointestinal Stromal Tumors (GIST) (胃腸道基質腫瘤)
- Neuroendocrine Tumors (神經內分泌腫瘤) (NETs)
- Anal Cancer (肛門癌)



# Gastric Cancer

The American Cancer Society (美國癌症協會) estimates for gastric cancer (胃癌) in the United States for 2025 are:

- 30,300 new cases
- 10,780 deaths



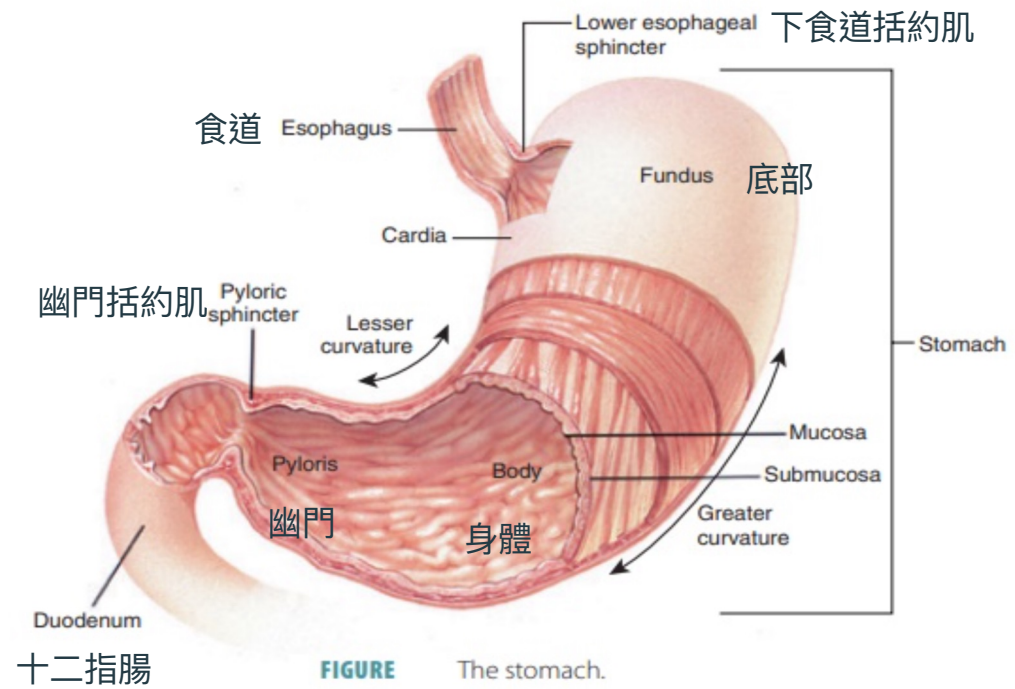
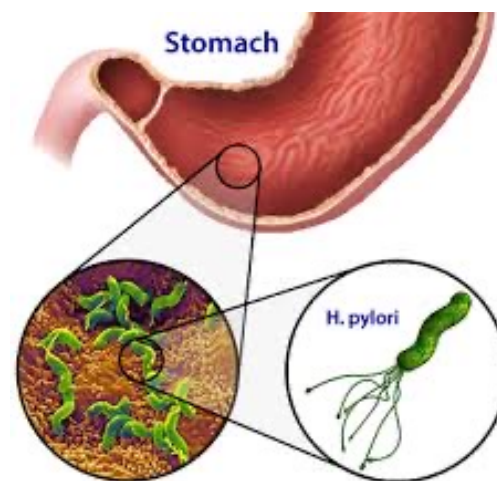


Photo Credit: pharmacy180.com

# Risk Factors

- Gender
- Race
- Ethnicity
- *Helicobacter pylori* (H Pylori) Infection (幽門螺旋桿菌感染)
- Being overweight or obese
- Diet-salt-preserved food and grilled food
- Alcohol use
- Tobacco use
- Family history
- Genetic mutation
- Hereditary syndromes





# Signs and Symptoms

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LIFE'S ON



## EARLY SYMPTOMS OF STOMACH CANCER



Heartburn &  
Indigestion



Bloating & Stomach  
Discomfort



Weight Loss & Low  
Appetite

Black/Tarry Stools



Blood in Stool/Vomit



Nausea & Vomiting



# Diagnostic Tests

- Medical history and physical exam
- Blood tests-anemia
- Fecal Occult Stool test (隱血便檢查)
- Upper Endoscopy (胃鏡)
- Biopsy (切片)-during an upper endoscopy
- Images-CT scan
- Endoscopic Ultrasound (內視鏡超聲波)

# Treatments

- Surgery (手術)
- Chemotherapy (化學治療)
- Targeted Drug Therapy (標靶藥物治療)
- Immunotherapy (免疫療法)
- Radiation Therapy (放射治療)
- Integrative (holistic) Care

# Colorectal Cancer (結直腸癌)

The 4th most common cancer in men and women in US

In the United States, colorectal cancer-the third leading cause of cancer-related deaths in men and the fourth leading cause of cancer related deaths in women

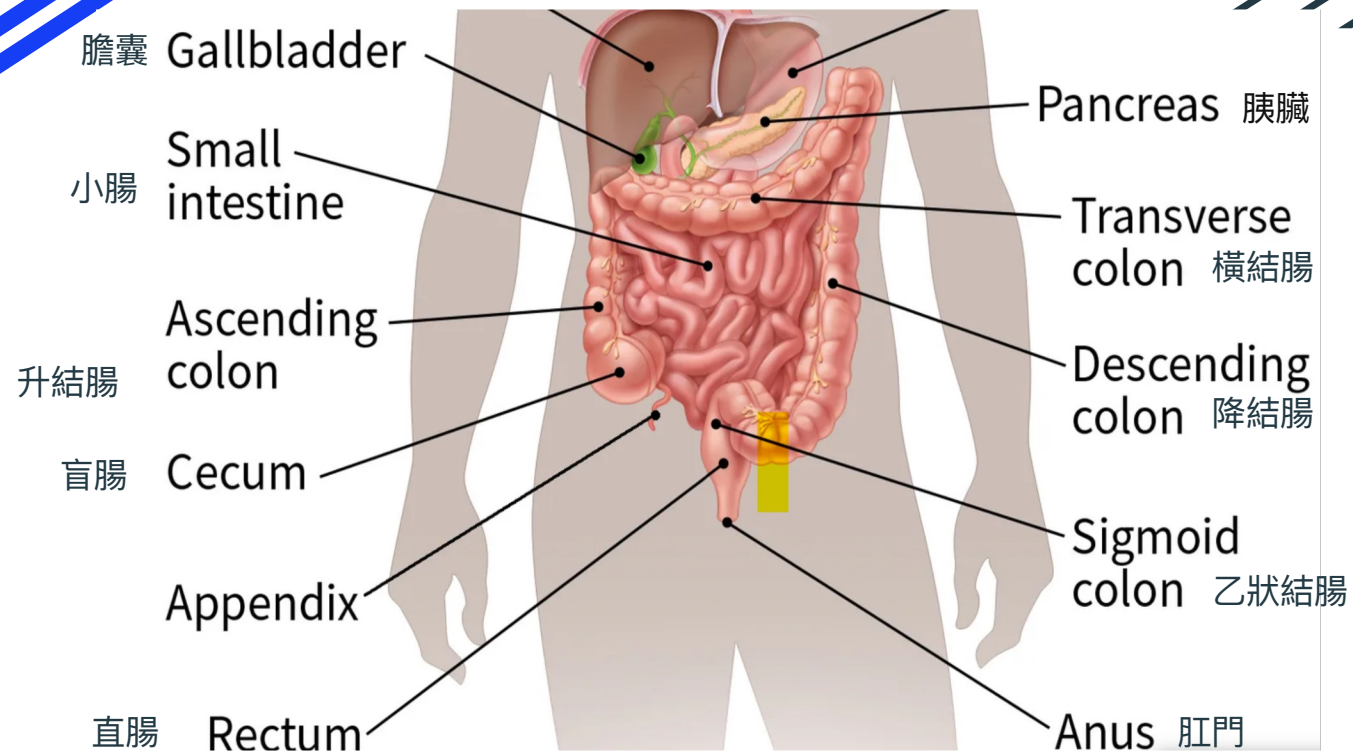
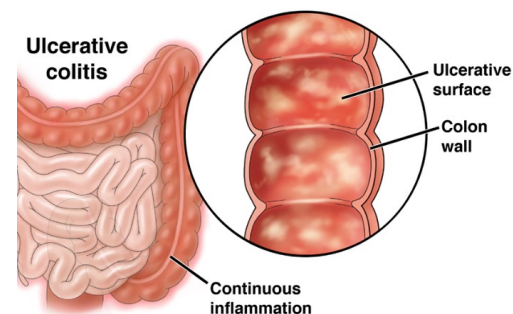


Photo Credit: American Cancer Society

# Risk Factors

- Inflammatory bowel disease (發炎性腸道疾病)
- Personal history of colorectal polyps or family history of colorectal cancer
- Genetic syndromes
- Lifestyle factors:
  - 1) lack of regular physical activity
  - 2) diet low in fruit and vegetables
  - 3) diet high in red meats or in processed meats
  - 4) overweight and obesity



FAP





# Signs and Symptoms



Bowel habits changes



Maroon colored or black stool



Rectal bleeding



Abdominal discomfort



Bowel doesn't empty completely



Abdomen fullness feeling



Fatigue



Weight loss

# Screening Modalities

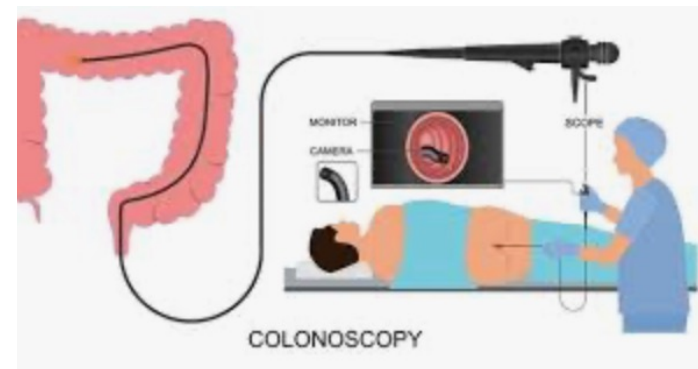
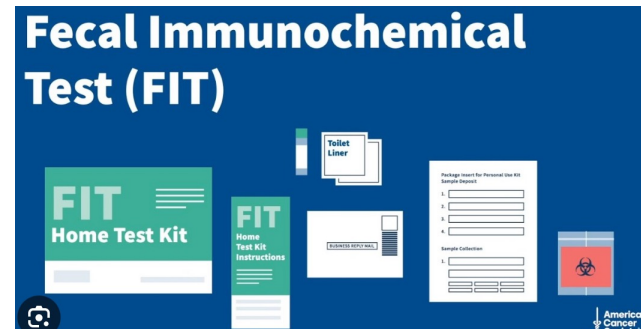
Colon cancer screening starting age: 45

Colon cancer screening:

1. Fecal immunochemical test (FIT)
2. FIT-DNA test
3. Colonoscopy

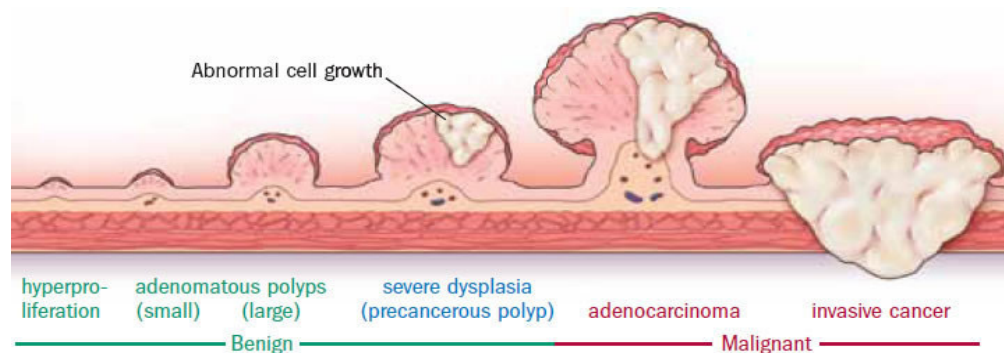
Diagnostic tests:

1. CT scan
2. Barium Enema (鋇劑灌腸檢查)
3. Tumor marker (CEA) blood test



# Types of Polyps (息肉)

- Hyperplastic polyp (過度增生息肉)
- Adenomatous polyp (腺瘤性息肉)
- Inflammatory polyp (發炎性息肉)



# Treatments

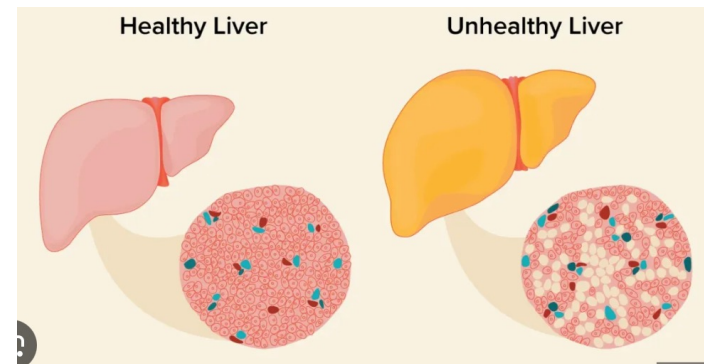
- Surgery
- Chemotherapy
- Ablation and Embolization
- Targeted Drug Therapy
- Immunotherapy
- Radiation Therapy

# Liver Cancer

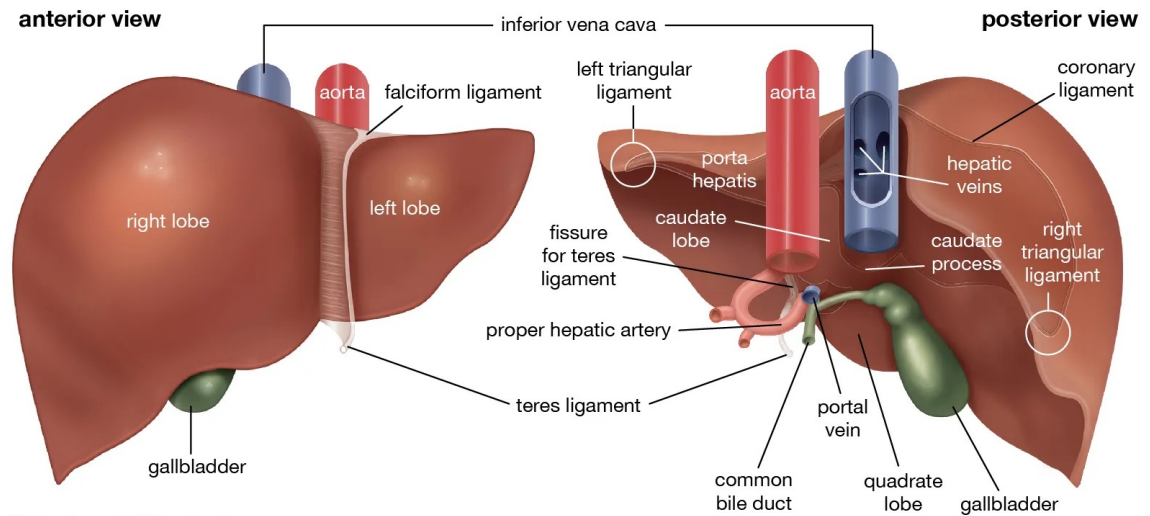
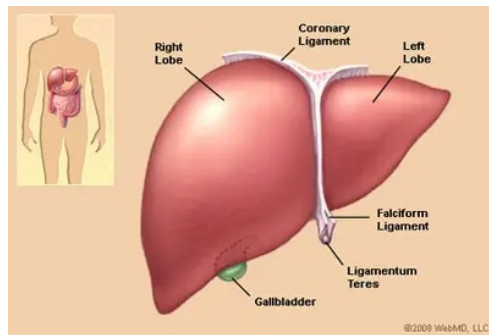
The American Cancer Society estimates for liver cancer and bile duct cancer in the United States for 2025 are:

- 42,240 new cases
- 30,090 people-death

Major risk factors-fatty liver and metabolic dysfunction-associated steatotic liver disease (MASH)



# Liver Functions



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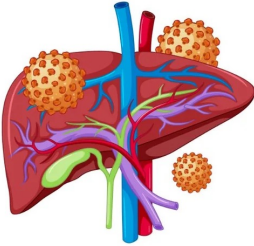



## Risk Factors


- Being overweight or having obesity
- Having a long-term hepatitis B virus or hepatitis C virus infection
- Smoking cigarettes
- Drinking alcohol
- Having nonalcoholic fatty liver disease, cirrhosis (scarring of the liver) (肝硬化)
- Having a condition in which the body takes up and stores more iron than it needs/hemochromatosis (儲存的鐵比所需更多)

# Signs and Symptoms


## Signs and Symptoms of Liver Cancer




Cirrhosis




Lumps




Swollen abdomen




Loss of appetite and Weight loss




Yellowish color of the skin and eye






Abdominal pain



Fever



Fatigue

 [www.induscancer.com](http://www.induscancer.com)  040 - 2355 1235 / 2360 7944  Helpline: 7729 800 800

# Diagnostic Tests

- Medical history and physical exam
- Ultrasound
- MRI/CT scan
- Liver Biopsy
- Lab tests- tumor marker blood test

# Treatments

- Surgery
- Liver transplant (肝臟移植)
- Microwave ablation (微波消融)-< 3 cm
- Embolization (栓塞術)
- Trans-arterial chemoembolization/TACE (動脈內化療栓塞)
- Radiation/Radioembolization (放射性栓塞術)
- Immunotherapy
- Targeted Drug Therapy
- Chemotherapy

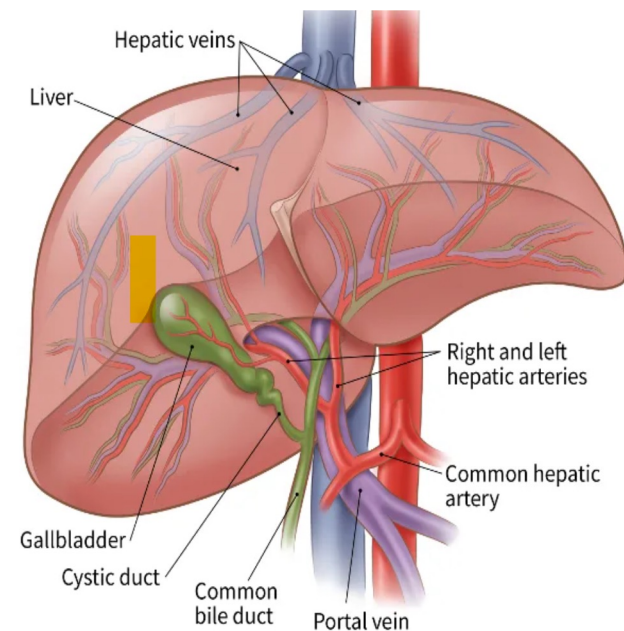


Photo Credit: American Cancer Society

# Pancreatic Cancer

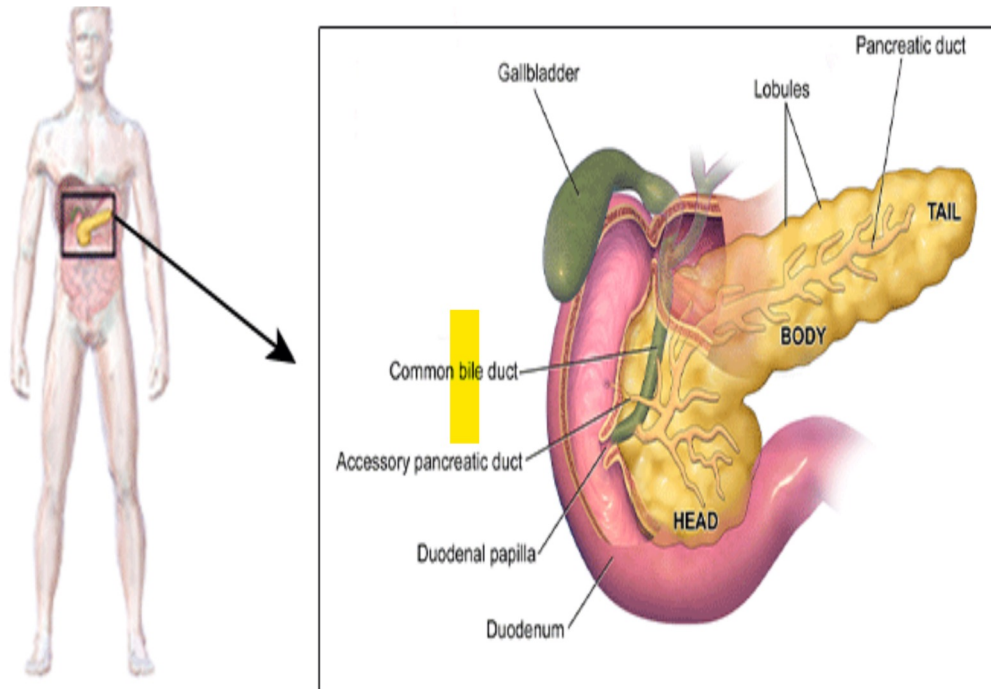


Photo Credit: [www.geeksforgeeks.org/biology/pancreas](http://www.geeksforgeeks.org/biology/pancreas)

# Pancreatic Cancer

The American Cancer Society's estimates for pancreatic cancer in the United States for 2025 are:

- 67,440
- 51,980 people died of pancreatic cancer



# Risk Factors



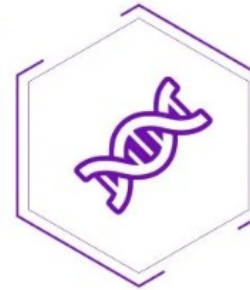
Age



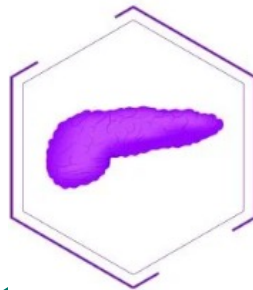
Gender



Obesity



Family History

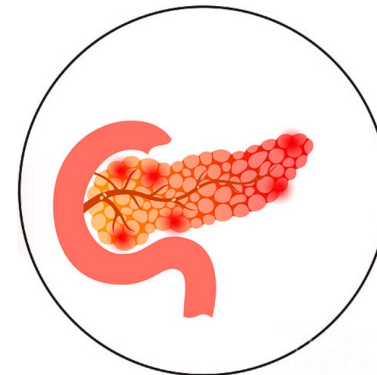


Chronic Pancreatitis

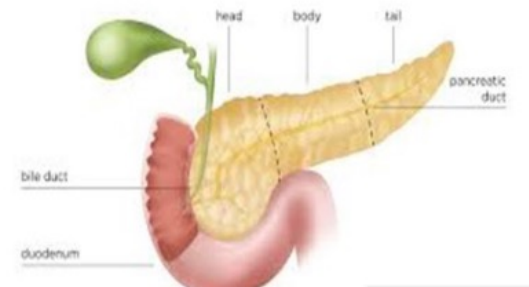
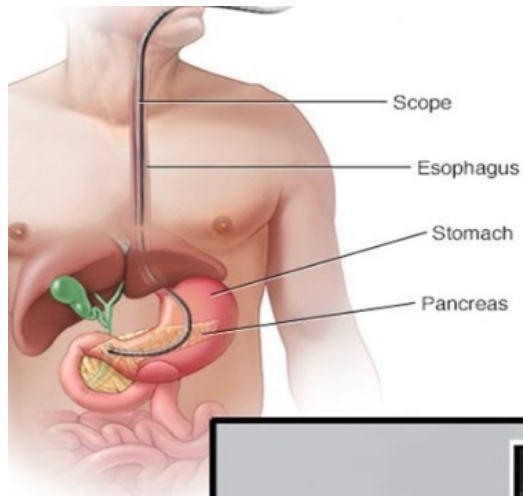


Alcohol

CHRONIC PANCREATITIS



# Signs and Symptoms



# Types of Pancreatic Cancer

The most common type: pancreatic ductal adenocarcinoma

1. The location
2. Block the pancreatic duct (胰管) or bile duct (膽管)

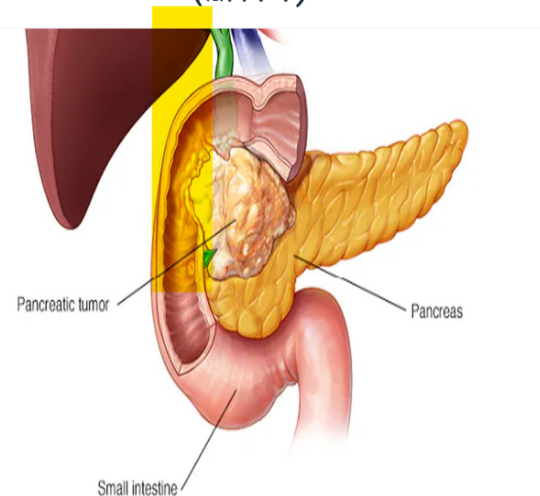


Photo Credit: MayoClinic

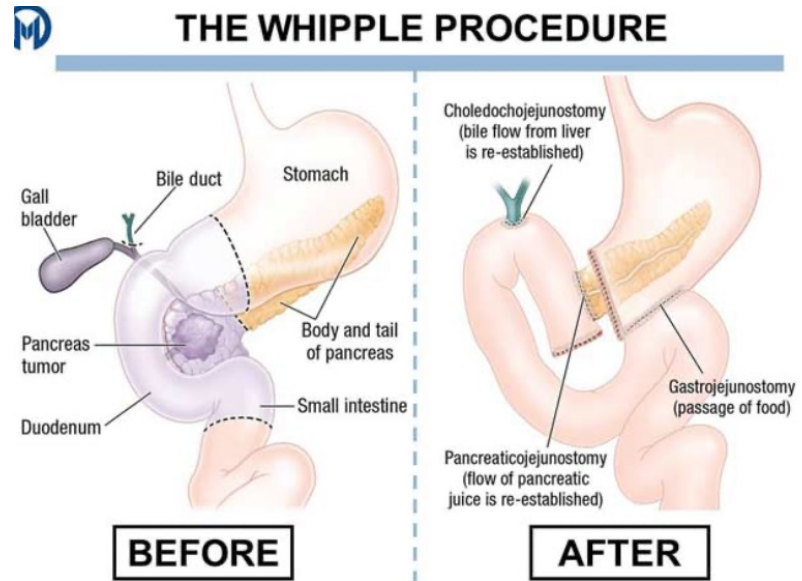
# Diagnostic Tests

- Medical history and physical exam
- Imaging tests
  1. CT scan
  2. MRI
  3. Endoscopic ultrasound with biopsy (EUS)
  4. Magnetic resonance cholangiopancreatography (MRCP)
- Blood test-cancer marker blood test



# Treatments

- Surgery-Whipple procedure with surgical biopsy
- Ablation
- Chemotherapy
- Radiation therapy
- Immunotherapy
- Pain Management



# Prevention in General

Maintain Healthy Lifestyle





## Other Measures

- Get regular medical check-ups
- Manage stress
- Reduce exposure to environmental toxins and chemicals
- Avoid sun exposure

# Screening

- Colonoscopy or yearly FIT stool test
- MRI for family history of pancreatic cancer
- Ultrasound for people with high risk of liver cancer

# Prevention for Stomach Cancer

- Treating *H pylori* infection
- Avoid salt-preserved food or grilled food
- Genetic testing-*CDH1* gene



# Prevention for Liver Cancer

- Screening and testing for chronic Hepatitis B and Hepatitis C infections
- Treating chronic Hepatitis B and Hepatitis C infections
- Receiving Hepatitis B vaccines to protect against Hepatitis B
- Treating diseases that increase liver cancer risk-hemochromatosis/iron overload

[Stomach Cancer | Gastric Cancer Facts and Information | American Cancer Society](#)

[How to eat to avoid gastric cancer?](#)

[Helicobacter pylori \(H. pylori\) infection - Symptoms & causes - Mayo Clinic](#)

[Gastrointestinal Neuroendocrine Tumors: Symptoms and Treatment](#)

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[How Endoscopy Detects Stomach Cancer | Johns Hopkins Medicine](#)

[Endoscopic Ultrasound \(EUS\) in Gastric Cancer: Current Applications and Future Perspectives](#)

[Large Intestine & Colon: Function, Anatomy & Location](#)

[Colorectal Cancer Information | Understanding Colorectal Cancer | American Cancer Society](#)

[Screening for Colorectal Cancer | Colorectal Cancer | CDC](#)

[Nutrition Essentials: Red Meat & Colon Cancer Risk | Cleveland Clinic](#)

[Colorectal Cancer \(CRC\) Community Education Toolkit | ACG](#)

[Understanding Polyps: A Guide for Colonoscopy Patients - Gastro Associates](#)

[Liver Cancer | Liver Cancer Resources | American Cancer Society](#)

[Fatty Liver-to-Cirrhosis Timeline](#)

[Understanding MASH | Taking On Fatty Liver & MASH](#)

[Liver: Anatomy and Functions | Johns Hopkins Medicine](#)

[MASLD and MASH: Fatty Liver Disease and Cancer Risk | American Cancer Society](#)

[Liver: Where It's Located, Function & Anatomy](#)

[Liver Cancer Basics | Liver Cancer | CDC](#)

[Pancreatic cancer - Symptoms and causes - Mayo Clinic](#)

[Pancreatic Cancer | Cancer of the Pancreas | American Cancer Society](#)



# Questions



What is colon cancer screening  
starting age?



What is the major risk factor for  
liver cancer in the future?