GASTROINTESTINAL CANCERS OVERVIEW

Gastrointestinal cancers include tumors of the colon, rectum, stomach, pancreas, esophagus, anus, gallbladder, liver, and bile duct. Colorectal, stomach (also called gastric), and pancreatic cancers are the most common gastrointestinal cancers in the United States.

Gastrointestinal Cancers Incidence & Mortality

Each year more than 275,000 people are diagnosed with gastrointestinal cancers, and nearly 136,000 die of these diseases. The American Cancer Society (ACS) estimates that gastrointestinal cancers accounted for 19 percent of all new cancer diagnoses and more than 24 percent of all cancer deaths in 2009.

Cancer type	Estimated New Cases	Estimated Deaths
All GI cancers	*275,720*	*135,830*
Colon & rectum	146,970	49,920
Pancreas	42,470	35,240
Liver & intrahepatic bile duct	22,620	18,160
Stomach	21,130	10,620
Esophagus	16,470	14,530
Gallbladder & other biliary	9,760	3,370
Small Intestine	6,230	1,110
Anus, anal canal, & anorectum	5,290	710
Other digestive organs	4,780	2,170

Colorectal cancer is the third most common cancer in both men and women, and accounts for 53 percent of all gastrointestinal cancer diagnoses. An estimated 49,920 people died of colorectal cancer in 2009, which accounted for nine percent of all cancer deaths. However, due to advances in screening techniques, the incidence of colorectal cancer is on the decline. Mortality rates are also on the decline, due to improvements in treatment for colorectal cancer.

Pancreatic cancer—often called the "silent killer" because it yields few early symptoms—accounted for more than 15 percent of gastrointestinal cancer diagnoses, nearly 26 percent of gastrointestinal cancer deaths, and six percent of all cancer deaths in 2009.

Gastrointestinal Cancer Survival Rates & Screening Recommendations

The decline in colorectal cancer incidence and mortality is primarily due to increased screening and polyp removal, which both prevent the development of invasive cancers. Yet, the overall survival rates for many GI cancers remain low due to few effective screening techniques and the absence of clear, early symptoms. For example, patients with pancreatic cancer are typically diagnosed at an advanced stage and have very low (5 percent) five-year survival rates.

Five-Year Survival Rates for Select Gastrointestinal Cancers, 1996-2004

Cancer Type	All Stages	Local	Regional	Distant
Colon & rectum	64.4%	89.7%	68.4%	10.8%
Stomach	24.7%	60.7%	24.8%	3.7%
Esophagus	15.8%	34.4%	17.1%	2.8%
Liver	11.7%	23.8%	7.7%	2. 9%
Pancreas	5.1%	20.0%	8.2%	1.8%

Gastrointestinal cancers are typically found unexpectedly—when a patient is receiving treatment for another condition, or begins experiencing symptoms that are confirmed as cancer-related through ultrasound, CT scan, endoscopy, or biopsy. Usually, symptoms present late in the course of the disease, and with the exception of colorectal cancer, there are few screening recommendations for gastrointestinal cancers due to limited clinical evidence of efficacy.

Colorectal Cancer Screening Recommendations—The American Gastroenterological Association, the American College of Gastroenterology, the American Society for Gastrointestinal Endoscopy, the American Cancer Society, and the American College of Radiology have developed consensus guidelines for screening for colorectal cancer, with the goal of cancer prevention.

Beginning at age 50, both men and women of average risk should follow one of these testing schedules.

The following tests detect both polyps and cancer:

- Flexible sigmoidoscopy, every five years
- Colonoscopy, every 10 years
- DCBE, every five years
- CT colonography, every five years

These tests primarily detect cancer:

- Guaiac-based FOBT, every year
- Fecal immunochemical test, every year
- Stool DNA test, talk with your doctor about how often to use this test

Other Screening Recommendations—Individuals with a personal or family history of colorectal polyps or cancers are advised to pursue a more aggressive and frequent screening regimen. Many doctors also recommend that patients with Barrett's esophagus, a known risk factor for esophageal cancer, have an upper endoscopy and biopsy every two to three years to check for esophageal cancer. There are no screening guidelines for stomach, pancreatic, and liver cancers.

Efficacy of Colon Cancer Screening Methods—While studies in the last year have examined less invasive screening alternatives to colonoscopy, none has proven as effective as colonoscopy in detecting polyps associated with colorectal cancer. A study published in January of 2005 in the *Lancet* showed that conventional colonoscopy remains much more sensitive than other screening tests for colorectal cancer, finding 98 to 99 percent of tumors—about twice as many as virtual colonoscopy or barium enema.

Additionally, a study published in the *Annals of Internal Medicine* in 2005 found that a one-time, in-office FOBT detected blood in the stools of less than 5 percent of 2,665 patients later found to have tumors or precancerous colon polyps; the study showed that blood was detected in the stools of 24 percent of patients who used a take-home FOBT, which requires two samples from three different bowel movements.

Adherence to Clinical Guidelines—The National Cancer Institute's *Cancer Trends Progress Report 2007 Update* showed that screening for colorectal cancer remains low, though it is increasing. The report showed that between 1987 and 2005, the percentage of adults over 50 who had a colorectal endoscopy (e.g., sigmoidoscopy or colonoscopy) nearly doubled from 27 percent to 50 percent, but that the number of those who had a home FOBT decreased from 22 percent in 2003 to 17 percent in 2005. Additionally, a study of more than 129,000 Americans, published in the October 2005 issue of the *American Journal of Public Health*, found that only 42 percent of men and 31 percent of women had ever received a colonoscopy or sigmoidoscopy for early colon cancer detection.

Medical Illustrations

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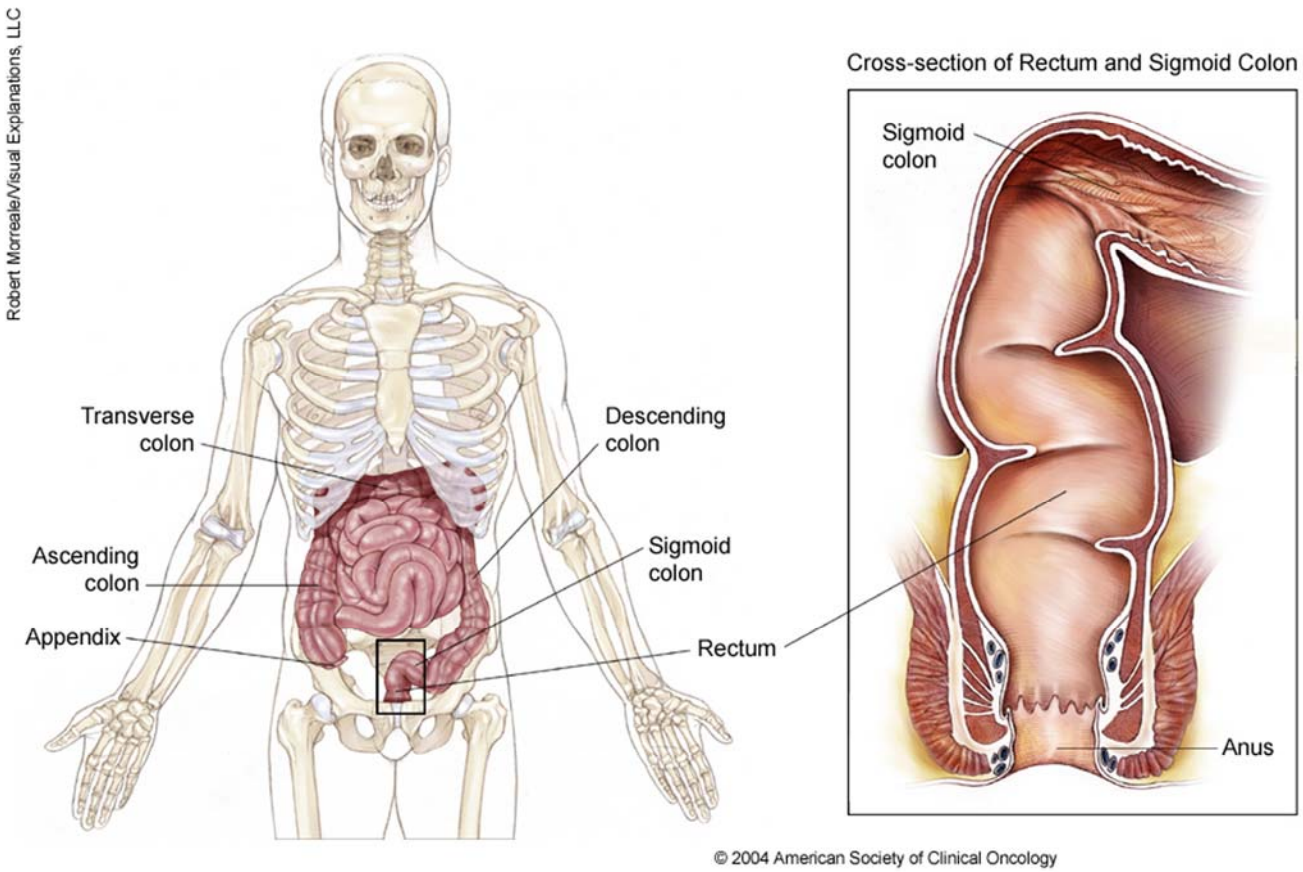
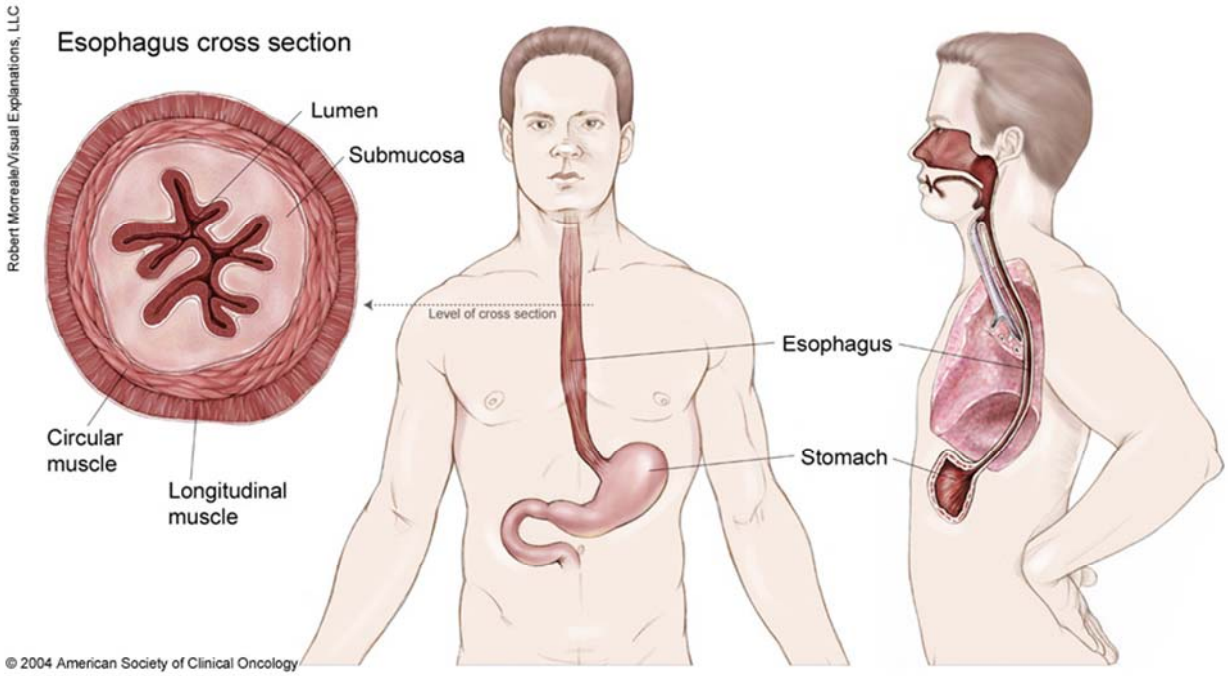
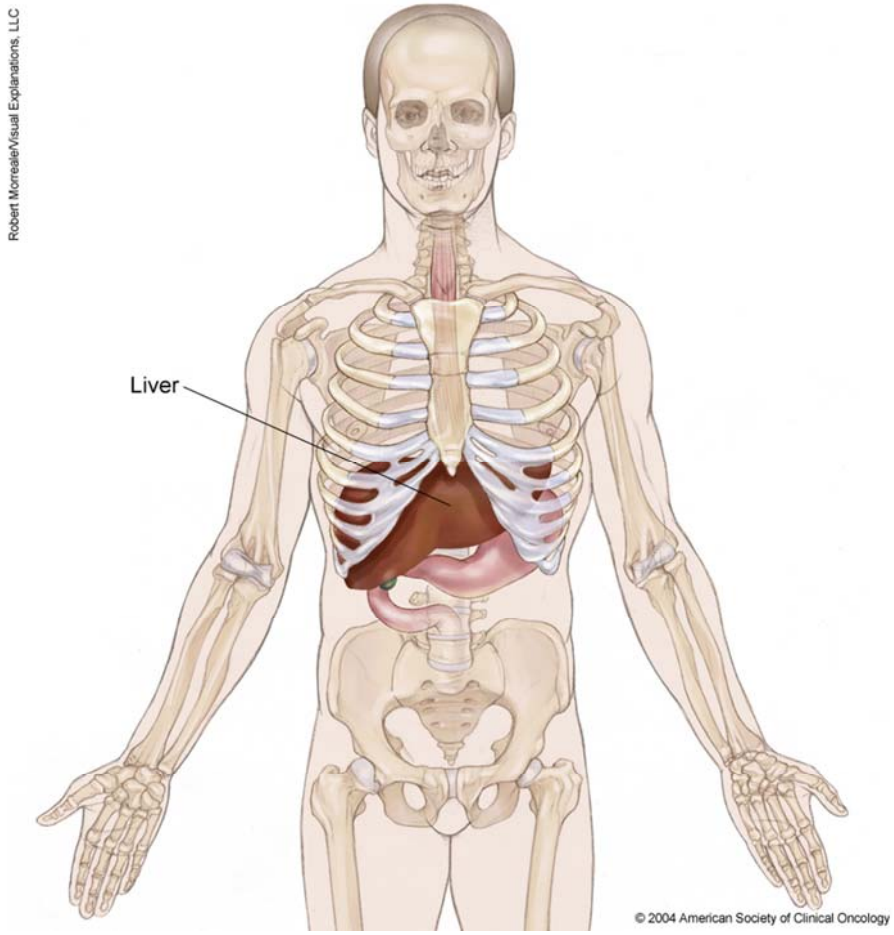
Colorectal Cancer



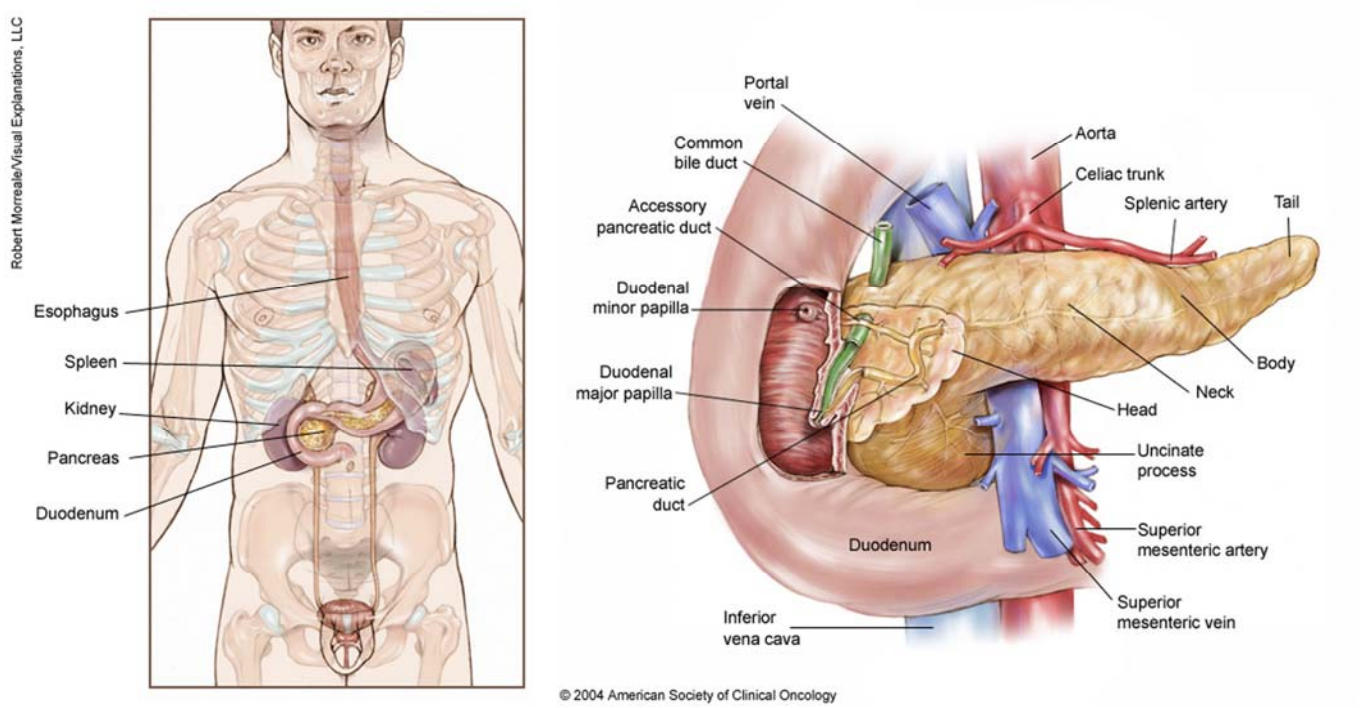
Esophageal Cancer



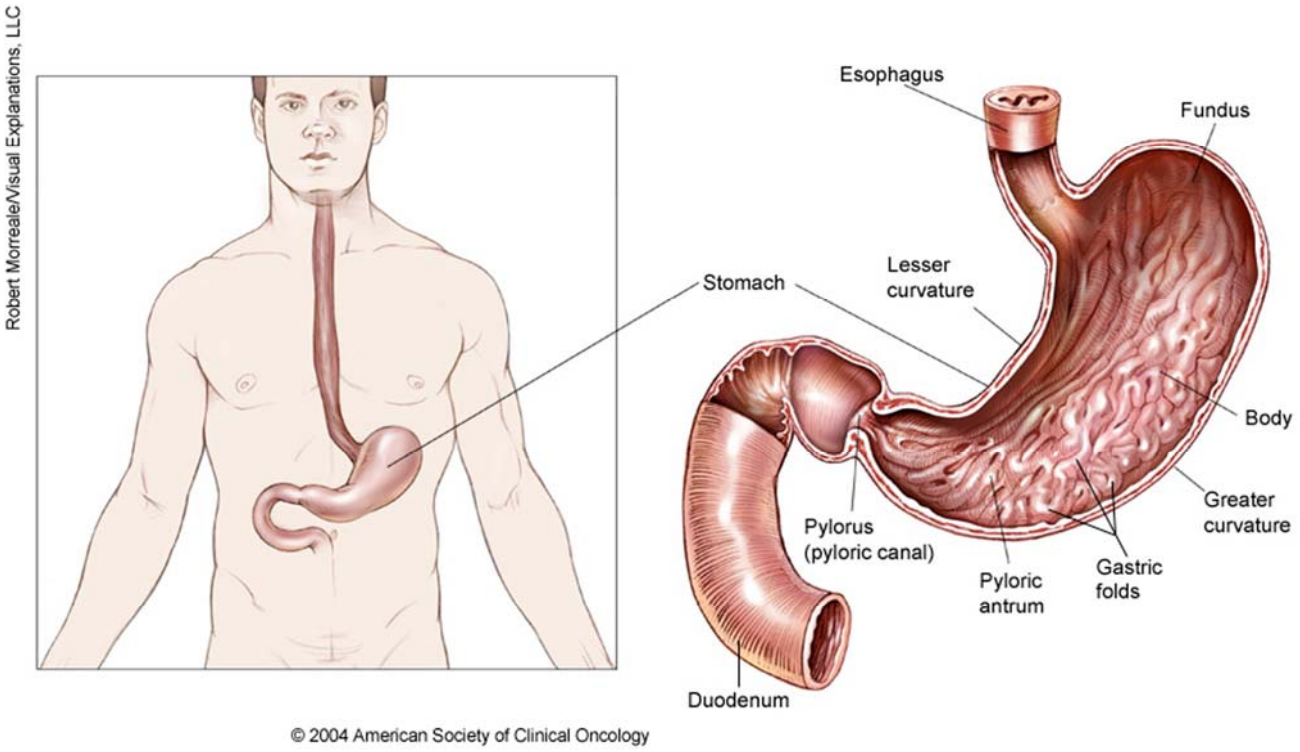
Liver Cancer



Pancreatic Cancer



Stomach Cancer



References

American Cancer Society: *Cancer Facts & Figures 2009.* Atlanta, GA; American Cancer Society: 2009.

Chao A et al. Underuse of Screening Sigmoidoscopy and Colonoscopy in a Large Cohort of US Adults. *American Journal of Public Health*. 2005;94:1775-81.

Collins JF et al. Accuracy of Screening for Fecal Occult Blood on a Single Stool Sample Obtained by Digital Rectal Examination: A Comparison with Recommended Sampling Practice**.** *Ann Intern Med,* 2005;142:81-85.

National Cancer Institute's 2005 Cancer Trends Progress report accessible at: http://progressreport.cancer.gov/doc_detail.asp?pid=1&did=2005&chid=22&coid=218&mid=.

Pickhardt P et al. Location of Adenomas Missed by Optical Colonoscopy. *Annals of Internal Medicine*. 2005;141:352-9.

Rockey DC et al. Analysis of air contrast barium enema, computed tomographic colonography, and colonoscopy: prospective comparison. *Lancet*. 2005;365:305-311.