

## **Gastrointestinal tract cancer: Prevention and early detection are the keys to cure**

**Dr. Ananya Das, MD, FACP, FASGE**

Director of Endoscopic Research  
Mayo Clinic Arizona, Associate Professor of Medicine, Mayo College of Medicine  
13400 E Shea Blvd, Scottsdale, AZ85259, USA

Cells are the basic structural and functional units of all the organs in the human body. Simply stated, cancer of any organ in the body is uncontrolled growth of the cells of that organ. The word cancer means crab; it is so named as cancer grows inside the body like a crab (Fig. 1).

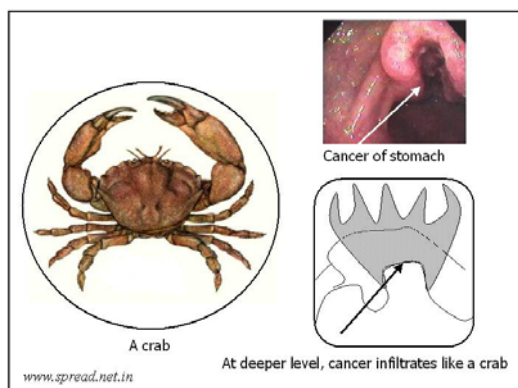


Fig. 1: Meaning of the word “cancer”

Although all cancers behave differently in terms of their biological behavior and

response to therapy, in general, they are fatal diseases unless they are caught early and eradicated, usually by surgical treatment. The gastrointestinal tract, which is made up by the food pipe, stomach the small and large intestines and in an extended sense also, the liver, gallbladder, bile ducts and pancreas is a very important organ-system in the body (Fig. 2) and is primarily responsible for intake, digestion, assimilation of nutrients and also, has function of excretion of fecal material. Because of its relatively large surface area cancers of the gastrointestinal tract are quite common, and are rather difficult to treat because of relative inaccessibility of the

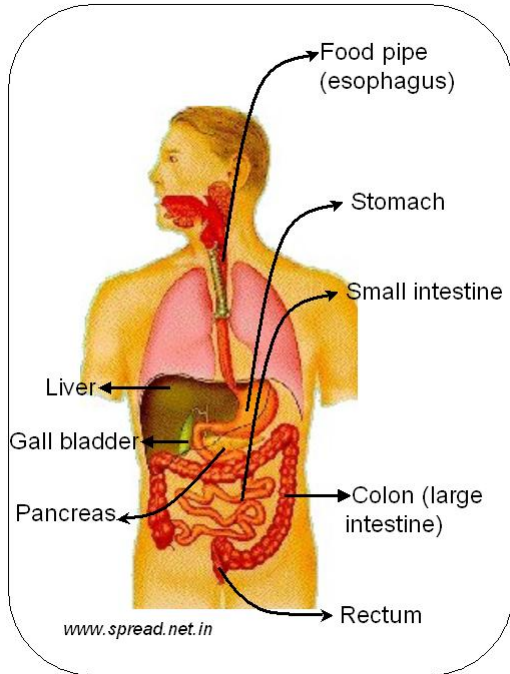


Fig. 2: Gastrointestinal tract

portions of the GI tract. Cancers of the gastrointestinal tract are very common in India; although extensive information on their patterns of occurrence, and risk factors are not entirely known there is enough information available to make reasonable recommendations for preventive actions.

Cancer of the food pipe is very common in India and the biggest culprits in terms of risk factors are smoking (along with

other forms of tobacco use) and alcohol. Chronic heartburn due to reflux of acid from the stomach is a very strong risk factor in the western countries but this particular type of food pipe cancer due to gastroesophageal reflux disease (see the chapter on GERD in [www.spread.net.in](http://www.spread.net.in)) is not common in India. Food pipe cancer is almost always deadly because of its late manifestation by which it may be already beyond any possibility of cure. Its most common manifestation is difficulty of swallowing food or feeling of food particularly solid food getting stuck in your chest while eating. So, what can you do prevent such cancers? Very simply, stop smoking including use tobacco in any form and drinking alcohol. If you have any difficulty in swallowing particularly if it is persistent and progressive, please go and see a gastroenterologist as soon as possible to get an endoscopy done.

## **Shanti Patient Related Education And Directions (SPREAD)**

Cancer of the stomach also is very common in India and may be related to a chronic infection by bacteria known as *Helicobacter pylori*. Besides, smoking and alcohol are other risk factors. In this type of cancer, family history of such cancer by itself is a strong a risk factor. Gastric or stomach cancer may present with upper abdominal pain, anemia, dyspepsia or symptoms of vague indigestion. While most of these symptoms are non-specific and are very similar to peptic ulcer symptoms, you should not ignore these symptoms at all and seek medical care early. If you are above 50 and if you have so called alarm symptoms such as weight loss, persistent vomiting (often of stale food material ingested several hours earlier signifying obstruction) or either throw up blood in the vomits, or if you have black foul-smelling tarry stool, then you must get an upper endoscopy test as soon as

possible. What can you do prevent stomach cancer? Do not smoke and drink alcohol excessively. Although some experts argue to test for *Helicobacter pylori* infection and treat with multiple antibiotics, such an approach is not generally recommended in India till date.

Previously, cancer of the small intestine was considered somewhat uncommon. But with the advent of capsule endoscopy, which is the method of endoscopy to visualize the small bowel with highest degree of precision, small intestinal tumors are being diagnosed more and more often. If you have recurrent black stool or are anemic with test for stool occult blood positive and if conventional upper gastrointestinal endoscopic examination and colonoscopy (endoscopic examination through anus) failed to detect any lesion, you should undergo capsule endoscopy.

The cancers of the large intestine also known as colon are one of the commonest cancers in the western countries but are much less common in India possibly because of intake large amount of vegetables in Indian diet. The cancers of the intestine at their early stage present with anemia and often with passage of altered blood in stool, which can be picked up even in microscopic quantity by a simple stool test. Constipation particularly developing rather acutely and associated with weight loss often signifies more advanced disease. Cancers in the last part of the colon, which is known as rectum, almost always present with fresh blood in stool. Although, such bleeding from rectum can be explained by simple hemorrhoids or what is commonly known as 'piles' (see the chapter on piles in [www.spread.net.in](http://www.spread.net.in)), it is of course foolish to assume so without

getting a check by a lower endoscopy to make sure that it is not a cancer. Also, hemorrhoids can be treated at the same time of the endoscopic examination, if indicated (see the chapter on piles in [www.spread.net.in](http://www.spread.net.in)). Besides the usual suspect of smoking and alcohol, family history is very important in case of cancer of the large intestine. If you have any immediate family member (siblings, parents) with known colon cancer and particularly if those family members had colon cancer at an early age in life, it is of paramount importance to get yourself checked out by a lower endoscopy known as colonoscopy looking for pre-cancerous lesions in the large intestine. Also patients with any chronic inflammatory condition of the intestines often known as ulcerative colitis is prone to developing colon cancer should get periodic checks by lower endoscopy.

Liver cancers usually arise in the background of chronic liver disease, which is more commonly known as cirrhosis of liver. Alcohol and chronic infection with hepatitis B and Hepatitis C viruses are in turn the commonest causes of cirrhosis. What can you do prevent liver cancer – obviously one important step as to avoid consuming alcohol in excess, which is one of the common causes of cirrhosis in India. It is important not to get exposed to the hepatitis B and C viruses. These infections usually develop as a result of intravenous drug use, exposure to contaminated medical instruments and blood products and unprotected sex with multiple partners. There is a hepatitis B vaccine available which will protect you against hepatitis B and it is routinely available at your doctor's clinic. There is no vaccine for hepatitis C. What if you already have chronic liver disease such

as cirrhosis? Your doctor should periodically check your liver for any suspicious lesion by doing a sonogram of the liver and specific blood test for liver known as alpha fetoprotein.

Gallbladder cancers are very common in the Indian subcontinents and usually women are at the highest risk. This is easy to explain because gallstones and associated chronic inflammation of the gall bladder the commonest risk factor of gallbladder cancer and gallstones are much more common in women. Removal of diseased gallbladder with stones and chronic inflammation particularly if its causing symptoms is the best way to prevent gallbladder cancer but of course it is invasive intervention.

Unlike gallbladder cancers, pancreatic cancers are on the other hand much more common in men usually in the elderly age group. Chronic alcohol consumption

and smoking are the usual suspects in terms of known risk factors although family history is important as well. Since there are no reliable early tests to detect pancreatic cancers, most patients with such cancers usually present at an advanced stage with jaundice or yellow discoloration of the skin and eyes and are often rapidly fatal. It is, however, important to point out that jaundice is in most case is usually due to infection with different hepatitis viruses, which of course has nothing to do with pancreatic cancers.

So it is clear that for most gastrointestinal cancer smoking and alcohol are the predominant risk factors and if you reading this article with any serious intent and looking for a message to take home: stop smoking and excessive drinking. When I say smoking, I do mean use of tobacco in any form including chewing tobacco. How do you

know if you are drinking excessively: try this simple test; honestly answer these four questions; have you ever felt you should **cut down** on your drinking? Have **people annoyed you** by criticizing your drinking? Have you ever felt bad or **guilty** about your drinking? Have you ever had a **drink first thing in the morning** to steady your nerves or to get rid of a hangover (Eye opener)? If you answer any of these questions affirmatively then you are probably drinking excessively and should discuss this with your doctor.

Besides quitting smoking and excessive drinking, there are numerous other ways to change your life style towards healthy living. Issues such as whether high fiber diet with lots of green vegetables, vitamin C and a low dose of aspirin prevent cancers including many gastrointestinal cancers are subjects of ongoing research but at this point it is

## ***Shanti Patient Related Education And Directions (SPREAD)***

prudent to recommend those as part of a healthy living.

The other important point to note that by the time most gastrointestinal cancers have specific symptoms such as difficulty in swallowing or gross bleeding in vomit or stool or jaundice, they are much likely to be at an incurable stage. So do not delay seeking care for symptoms that are relatively new, progressive, not responding to usual home remedies and particularly if they are associated with weight loss or symptoms of anemia such as fatigue, looking pale and feeling short of breath with a little exertion. In general, the gastrointestinal tract can be very thoroughly checked out by endoscopic tests (which are basically flexible tubes with camera at the tip that can be introduced in to the alimentary tract), the upper endoscopy for checking stomach and small intestine, and colonoscopy or

sigmoidoscopy for the large intestine. These tests are safe in good hands, widely available (most district town will have facilities for these tests). Even in private settings, the costs of an upper endoscopy and colonoscopy should not exceed 500-600 rupees and 1,000-1,200 rupees respectively. The structures such as liver, gallbladder and pancreas are best examined with a computed tomography (CT), which usually costs around 3000-4000 rupees. Abdominal ultrasonography (at about 400-500 rupees) is a cheaper and is usually preferred before CT scan but it may be less accurate alternative.

Please remember **Prevention is better than cure**. This is particularly true for most gastrointestinal cancers particularly when chance of cure is very small with such tumors given the usual delay in diagnosing them.

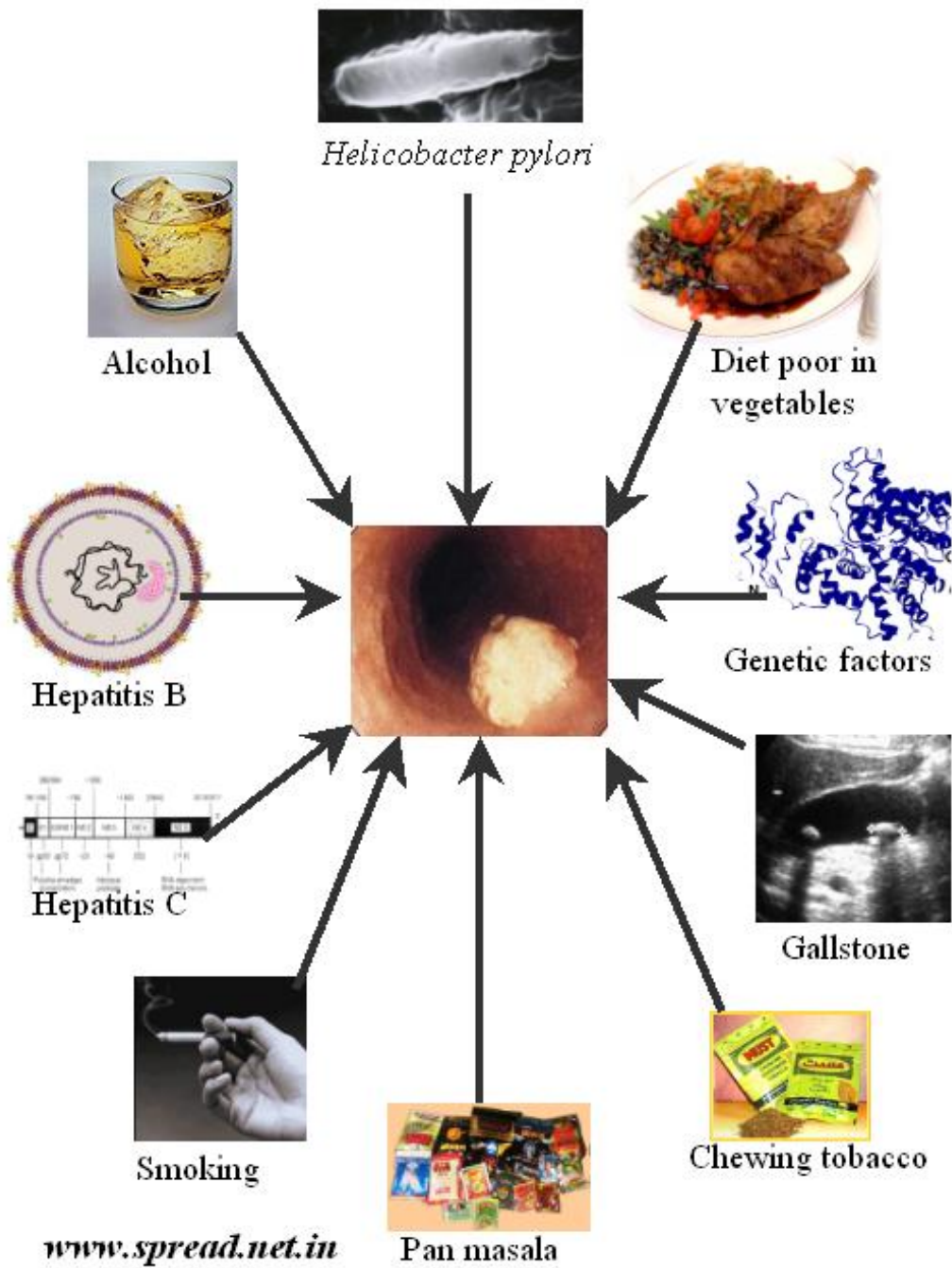


Fig. 3: Factors associated with increased risk of cancer of gastrointestinal tract including liver, gallbladder and pancreas.