Colon Cancer: The facts

Burden of the disease:

138,000 new cases are diagnosed each year
Over 55,000 patients will die this year of Colon Cancer
It is the nation’s number 2 cancer killer after Lung Cancer
The incidence increases after age 40
One in 20 individuals will eventually develop advanced colon cancer
Colon cancer produces no signs of its existence until it is at an advanced stage.
65% of patients with colon cancer present with advanced disease, with a fatality rate of 50% in 5 years.
Early diagnosed colon cancers have a 5 year survival rate of over 90%

What do we know about colon cancer?

Over 90 % of colon cancers develop, over time, from colon polyps
30-50% of all individuals above the age of 50 year have colon polyps. The incidence increases with age.
Colon polyps are non-cancerous “bumps” that grow out from the inner lining of the colon.
Recent data suggest it takes 5 years for a pre-cancerous polyp to turn into a cancer.
Risk factors include:
   - Age over 40 year
   - Past history of gynecological or breast cancer
   - Personal history of colon polyps or colon cancer
   - Personal history of ulcerative or Crohn’s colitis
   - Family history of colon cancer
   - Family history of adenomatous (pre-cancerous) colon polyps

The National Cooperative Colon Polyp study clearly showed that the identification and removal of polyps and a maintenance colonoscopic surveillance program dramatically reduced the risk of developing colon cancer” *Editorial, American Journal of Gastroenterology, February 2000.*
Up to 80 % of colon cancer deaths can be prevented by the timely removal of colon polyps.

People are dying needlessly of colon cancer. Telephone surveys have unfortunately shown that the average American is poorly informed about colon cancer and is too embarrassed to submit to colon cancer screening.

Strike first !!!
Lead a healthy life:
- Exercise regularly and maintain a healthy weight
- Follow a low fat diet (less than 30% of total calories)
- Eat a fiber rich diet. (Preliminary studies have shown that a diet rich in fiber may not be as protective against colon cancer as initially thought)
- Limit alcohol intake
- Consider taking vitamins A, C, E and Folic acid
- Minimize consumption of salt-cured, pickled and smoked food.

Be educated about colon cancer facts.
- Communicate with your physician.
- Health conditions permitting, ALL INDIVIDUALS AT AGE 50 OR OLDER SHOULD BE SCREENED FOR COLON CANCER once every 7 to 10 years, and more frequently if polyps are identified or if they have a history of colon polyps or colon cancer in the immediate family.

Be aware of potential early warning signs for colon cancer, and report to your physician with these changes:
- Change in the frequency of bowel habits. Whether it is diarrhea or constipation
- Change in the stool caliber
- Presence of blood in the stools, in the commode or on the toilet paper
- Increasing fatigue and shortness of breath as a sign of blood loss and anemia

Options for screening:

Screening is the search for cancer and pre-cancerous polyps in individuals with early warning signs or otherwise healthy persons. The available screening tools are:

1. Fecal Occult Blood Testing (FOBT)

Meaning in plain English: Testing stools chemically for the presence of minute amounts of blood.

Rationale: Polyps and cancer have a richer blood supply and bleed easier than healthy tissue. As stools rub against a polyp or a cancer in the colon, the tumor may ooze a minute amount of blood that is too small to be appreciated by the eye and the blood will be mixed with the stools. The presence of blood in the stools is one of the indicators of the existence of a polyp or cancer.

How is the test done: A small sample of the stools is smeared on a special testing paper and the paper developed with a special solution. A change in color to blue indicates the presence of blood. The physician could collect a stool sample during a routine examination or the patient could collect a sample off spontaneously voided stool using
wooden sticks. Alternatively, self-test kits are available in the form of tissue paper that can be dropped in the toilet bowl and will change color if blood is present.

**Pros:** Easy to do and for a low cost. As many as 10% of individuals with positive FOBT will have a cancer despite having no symptoms, and another 25-40% will have precancerous polyps. Testing stools for occult blood can reduce death from colon cancer by 30%. It should be performed yearly after age 40.

**Cons:** Very poor accuracy and poor predictability. It should hence be used with other screening tests. The patient should avoid the use of aspirin, arthritis pills, vitamin C supplements or products rich in vitamin C, as these products will alter the results of the test.

2. **Sigmoidoscopy (sig-moyd-os-ko-pee):**

**Meaning in plain English:** The lining of the last few inches of the colon is visually examined with a flexible tube that is inserted into the colon through the rectum.

**Rationale:** Polyps and cancer look different from the normal lining of the colon. This is a very useful test that will visually examine the last few inches of the colon for polyps or cancer. A negative exam does not exclude the presence of a cancer in the unexamined portion of the colon.

**How is the test done:** The person will give himself an enema to clean the colon. The instrument is introduced into the rectum with the individual lying on his/her left side. The test takes 3 to 5 minutes and the results are available immediately. You will be able to resume regular activities immediately after the test is completed.

**Pros:** Relatively easy, inexpensive, fast and accurate test

**Cons:** Only the last few inches of the colon are examined. Cancers arising further up in the colon will be missed. Some discomfort may be felt during the test.

3. **Barium enema (bare-i-um ene-ma):**

**Meaning in plain English:** A liquid solution (barium) is introduced into the colon through the rectum and X-rays are taken of the abdomen. The test is done by a Radiologist (X-ray physician) in an X-ray facility.

**Rationale:** The barium solution will coat the lining of the colon and identify any irregularities on the surface. The irregularities will be seen on the X-ray films.
**How is the test done:** The colon is cleansed with laxatives. A tube is inserted into the colon and barium is slowly placed in the colon through the tube followed by air. The person will be lying on a table, will be asked to turn from side to side and X-rays will be taken of the abdomen. The test takes about an hour to be completed. The results may take a few days to be official. You will be able to resume regular activities immediately after the test is completed.

**Pros:** Relatively thorough examination of the entire colon. Will detect most large polyps or cancers.

**Cons:** Small polyps or cancers can be missed. The test only confirms the presence of polyps or cancers. One cannot remove or biopsy the polyps or he cancers with this test.

**4. Colonoscopy (colon-os-ko-pee):**

**Meaning in Plain English:** The lining of the entire colon is visually examined with a flexible tube that is inserted into the colon through the rectum.

**Rationale:** Polyps and cancer look different from the normal lining of the colon. This is a very useful test that will visually examine the entire colon for polyps or cancer and will remove the vast majority of polyps and a number of cancers without surgery.

**How is the test done:** The colon is cleansed with a special solution the evening before the test. Right before the procedure is started, a needle is inserted in a vein (an IV) and medications will be administered directly through that IV to make the person sleepy and comfortable. The flexible tube (colonoscope) is inserted into the rectum and advanced under visual control to the end of the colon. Most polyps and some cancers can be removed using special tools that are inserted through the colonoscope. The test takes 20 minutes. It has a very high degree of sensitivity in detecting polyps and cancers. The results of the biopsies, if any are taken, will be available within 1 week, otherwise if no biopsies are taken, the results will be available immediately.

**Pros:** The most reliable and thorough test for colon polyps and cancer. During the same examination most polyps and some cancers can be removed. The test is usually performed under sedation and as such is very well tolerated.

**Cons:** One day off work and one needs to arrange for transportation. This can be avoided if the patient chooses to have the test done without sedation.

**5. Virtual Colonoscopy (vur’chooal colon-os-ko-pee):**

**Meaning in Plain English:** The abdomen will be scanned, most frequently using a CAT (Computerized Axial Tomography) scanner, and the computer reconstructs a view of the colon that can be analyzed for the presence of growths on the lining of the colon.
**Rationale:** The appearance of polyps or cancer in the reconstructed computer images is different from the appearance of the smooth normal colon wall. It is this contrast that makes polyps and cancer identifiable.

**How is The Test Done:** The colon is cleansed the day before the examination. A small tube will be inserted in the rectum, through which air is insufflated. You will be lying on a table that will move through a large donut shaped structure (CAT scanner). The test takes a few minutes.

**Pros:** The test does not require sedation, and as such individuals undergoing the test can drive themselves and can resume normal activities after the test.

**Con:** The test is only a diagnostic examination, meaning if a polyp is identified (30-40% of cases), a colonoscopy will need to be scheduled to remove the polyp. The test does involve cleansing of the colon as is done for a colonoscopy and the insufflation of air into the colon through a tube placed in the rectum. There is discomfort associated with the air insufflation. The technology is not to the level of differentiating a polyp from food remnant in the colon. The test is not yet covered by MediCare or other insurances.

**6. Genetic Testing of the stool:**

**Meaning in Plain English:** A stool sample is analyzed for the presence of abnormal genes that are associated with colon cancer and colon polyps.

**Rationale:** As we best understand it, colon cancer is the result of changes in the genetic makeup of cells. A number of specific changes have been identified in polyps and cancers. Cells normally shed in the colon and get mixed with the stools. We can analyze the stools for the presence of abnormal genes.

**How is The Test Done:** The patient submits a stool sample.

**Pros:** The simplest of the tests from a patient’s perspective

**Con:** The test is not yet readily available and the test is not yet covered by many insurances. While we know a handful of genes that are associated with colon cancer, we do not know them all. As such, a test that is negative, does not reliably exclude the presence of cancer or polyps.