TerranearPMC Safety Share

Week of March 20, 2017 – Colorectal Cancer

It a recent study published by the National Cancer Institute (NCI), data collected from the mid-1980s to 2013 indicates that colon cancer rates for people in their 20's and 30's have increased about 1 to 2 percent per year. Further, the study reports that the rates for middle-aged adults also rose; however, at a slower pace.

This study shows a shift in age-groups that are now the target of colon cancer. In the past, older Americans were most prone or predisposed to colon cancer, and now Generation X (aka GenX) and Millennials have a reason to be concerned. Just so there is no misunderstanding, persons within the Gen X age group are those that were born following the baby boomers. And while there are no precise dates for when this age group starts and ends, demographers and researchers typically use starting birth years ranging from the early-to-mid 1960s and ending birth years ranging from the late 1970s to early 1980s.

Meanwhile Millennials (also known as Generation Y) are the demographic age group that follows Generation X. Again, there are no precise dates for when this cohort starts or ends, researchers typically use the early 1980s as starting birth years and the mid-1990s to early 2000s as ending birth years.

While researchers could see a growing trend in the incident rate of colorectal cancer among these two young age groups, the American Cancer Society has recently admitted that the magnitude of the increased incident rates are very shocking. Rectal cancer rates climbed even faster in recent decades; at about 3 percent per year for people in their 20s and 30s and 2 percent annually for those ages 40 to 54. As a result, three in 10 new cases of rectal cancer now are diagnosed in patients younger than 55 — double the proportion in 1990. By contrast, rectal cancer rates in adults ages 55 and older have dropped for the past four decades.

Although scientists at the NCI have, as yet, have not determined the reason for this shift, some researchers hint that there might be a complex interaction involving the same factors that have contributed to the obesity epidemic. That is, changes in diet, a sedentary lifestyle, excess weight and low fiber consumption.

Colorectal cancer refers to malignancies in the colon or rectum, which are parts of the large intestine. Most cancers there start as polyps, or growths, on an inner wall. Most polyps are benign, but over time some can develop into cancer. The American Cancer Society estimates that more than 95,000 new cases of colon cancer and almost 40,000 new cases of rectal cancer will be diagnosed in 2017. **About 50,000 people are expected to die of colorectal cancer in the United States this year.**

The chance of a polyp changing into a cancer depends on the kind of polyp. There are two main types of polyps are:

- Adenomatous polyps (adenomas): These polyps sometimes change into cancer. Because of this, adenomas are called a *pre-cancerous condition*.
- Hyperplastic polyps and inflammatory polyps: These polyps are more common, but in general they are not pre-cancerous.

If cancer forms in a polyp, it can eventually begin to grow into the wall of the colon or rectum.

Another pre-cancer condition is known as Dysplasia and refers to an area in a polyp or in the lining of the colon or rectum where the cells look abnormal (but not like true cancer cells).

When the size of a polyp becomes larger than one centimeter, or if more than two polyps are found in a patient, or if dysplasia is seen in the polyp after it is removed, surgery is typically recommended.

The wall of the colon and rectum is made up of several layers. Colorectal cancer starts in the innermost layer (the mucosa) and can grow outward through some or all of the other layers. When cancer cells are in the wall, they can then grow into blood vessels or lymph vessels (tiny channels that carry away waste and fluid). From there, they can travel to nearby lymph nodes or to distant parts of the body. This phenomenon is more commonly known as metastasis.

In the early stages of the disease, there are usually no obvious symptoms of colon cancer. Early detection is possible by following the guidelines for regular screening. Regular screening is recommended, and should be part of a continued health plan for anyone over 50.

There are several ways to treat colorectal cancer, depending on its type and stage.

Local treatments: Some treatments are called *local therapies*, meaning they treat the tumor without affecting the rest of the body. Types of local therapy used for colorectal cancer include:

- Surgery (the type of surgery will depend on whether it is for colon or rectal cancer)
- Radiation therapy
- Ablation or embolization

This last treatment type refers to treatments that destroy tumors without removing them. This includes radiofrequency ablation (RFA) which uses high-energy radio waves to kill tumors, *percutaneous ethanol injection (PEI)*, where concentrated alcohol is injected directly into the tumor to kill cancer cells, and Cryosurgery, which destroys the tumor by freezing it with a thin metal probe.

These treatments are more likely to be useful for earlier or less advanced stages, although they might also be used in some other situations.

Systemic treatments: Colorectal cancer can also be treated using drugs, which can be given by mouth or directly into the bloodstream. These are called *systemic therapies* because they can reach cancer cells anywhere in the body. Depending on the type of colorectal cancer, several different types of drugs might be used, including chemotherapy and targeted therapy. Depending on the stage of the cancer and other factors, different types of treatment may be combined at the same time or used after one another.

Aside from early screening, there other things we can do to help reduce our risk to colorectal cancer. This means eating a healthier choice of foods (fruits, vegetables), drink alcohol in moderation, maintain a healthy weight and exercise regularly, and of course, stop smoking.

I am not accustomed to saying anything with certainty after only one or two observations – Andreas Vesalius (16th Century Physician)