

**Colon Cancer**

Lillie Golub

Margaret H. Rollins School of Nursing

Nursing 102: Nursing Care of Adults

Mrs. Casamento, RN, BSN

March 21, 2025

Colon cancer is one of the most prevalent and deadly diseases both in the United States and across the globe. It is a disease that will typically impact those over the age of 50 and male. In recent years the incidence rate of disease has increased among those under the age of 50. There are complex challenges that come with a colon cancer diagnosis, and survival must never be taken for granted. Going forward the primary focus needs to be treatment, prevention, detection, new research, community education, and the effect it has on the nursing profession.

### **What is Colon Cancer?**

Colon cancer, also known as colorectal cancer (CRC), originates from a malignant neoplasm. It progresses from mucosa of the rectum and colon. A majority are categorized as adenocarcinomas. The normal mucosa then becomes a single polyp. From that it is either malignant or benign then becomes multiple polyps and become what we know as colon cancer (Gupta, 2022). This development is slow and can take years to be detectable and can even be asymptomatic. By the time symptoms display, the rate of survival decreases immensely as the cancer is usually in a later stage and likely has metastasized and limits treatment options. This is one of the reasons it is the most common cancers.

According to Seigel et. al (2025), it is estimated that there will be 154,270 new cases and an estimated 52,900 deaths from colon cancer in the United States in 2025. Most of this population is male and over the age of 50. The NIH has reported that with increased age, especially 65-74 years of age, is the highest age group that is diagnosed and the highest death rates(n.d.). Marx et. al states “the population of early-onset CRC (EOCRC) patients, under 50-year-old, has been steadily rising over the past few decades, and by 2030, the rates of early-onset colon and rectal cancers are expected to increase by 27.7% and 46% respectively (pg. 1, 2023).”

With this increase in early onset colon cancer in addition to the already high population of CRC, what is the effect on the nursing community? One of the biggest worries has been a long-standing problem is burnout among healthcare professionals, especially nurses. Burnout is “a state of chronic stress characterized by high levels of emotional exhaustion and depersonalization with low levels of professional efficacy” and there is a one-third occurrence of burnout among nurses (Dulk & Kohal, 2022, pg. 1). The amount of care needed could potentially surpass the nursing care available. This could compromise a nurses mental and physical health along with optimal patient care.

Nurses might feel encouraged to pursue a higher-level education. “In a 2016 survey by the American Society of Clinical Oncology, a shortage of physicians in oncology was predicted to impact the US” and this led there being a need for nurses to further their education to become an Oncology Nurse Practitioner (Sheldon & Booker, 2023, pp. 1017-1019). The first standards were determined in 2007 to establish scope of practice in 2016. In 2019 this was updated to keep current with medical advancements (Sheldon & Booker, 2023).

### **Risk Reduction/ Treatment of the Problem**

With CRC (colorectal cancer) there are risk facts that are modifiable and some that are non-modifiable. Nonmodifiable risk factors can include age, gender, and family health history. Modifiable risks be a lot of lifestyle factors such as diet, alcohol, and smoking. Diet is one factor that has been linked to CRC. A high caloric, high fat, red meat, and sugary drinks have been linked to higher incidences of this disease. Heavy alcohol consumption has been linked to an increased risk in younger adults for CRC. According to Venugopal and Carethers (2021) or those who smoke the risk is increasingly high because the risk of adenomas advancing in formation is

even higher than non-smokers. It is imperative to implement smoking cessation and stop drinking alcohol, maintain a healthy weight and eat only nutritional food.

For cancer having a first degree relative puts an individual at a much higher risk of developing the disease. So, it might not be a risk factor that is modifiable, but it is something that an individual is aware of and knows to get screened earlier than the age of 50. Foda et. al believe providers need to know how to identify CRC based on genetic testing and family history of how it presented in the family member (2023).

The average age of beginning screening is at the age of 50 but, with the increase of early onset CRC population newer guidelines recommend having the age reduced 45. Many patients don't get colonoscopies for simple reasons such as insurance issues or having to get a referral and having another appointment. Another option is open access colonoscopy. This service will provide a colonoscopy without the pre-procedural evaluation by a doctor (Kadakuntla, 2021). These centers would increase the screenings and potentially reduce costs for patients. With more screenings the detection of CRC earlier can help to detect this disease before it metastasizes. The number of adenomas detected was 39.7% while regular centers was 38.6% (Kadakuntla et. al, 2021). Although not a large difference it has helped reduce risks of finding CRC when it is too late.

The first line of screening is typically the colonoscopy. It is an endoscope that is flexible examines the rectum and colon while the patient is under sedation. But before that is done there is a bowel preparation that includes making sure all fecal matter is cleared out of the area for best visualization the day and evening before. Polyps or lesions that are greater than or equal to 1cm are then biopsied to determine malignancy (Gupta, 2022). If there is no evidence of malignancy the patient will only need scans every 10 years.

Another type test is a colon capsule, and the patient swallows a pill with a small camera in it after a bowel preparation. The camera is swallowed then started in the ileum terminal. There are 35 pictures are taken every second and have view with a wide angle, and new software that can estimate polyp size (Shukat and Levin, 2022). The camera is then returned for image collection by the facility and reviewed by the doctor. But a positive result would need to be confirmed with a colonoscopy (Shukat & Levin, 2022, pg. 525).

Those who do not want anything invasive can have a blood-based tests. There is a gene known as SEPT9 and can detect advanced neoplasia and CRC. It has a specificity of 79% and is FDA approved if an individual chooses to be tested this way. Even with this test, it is still recommended that any abnormal results should still get a colonoscopy (Gupta, 2022).

Chemotherapy has shown to help in the treatment of CRC. But while killing the cancerous cells the healthy cells are also killed. With chemotherapy there is no differentiation in what are good cells and what are bad cells. “In contrast, target therapies work on cancer cells by directly targeting protein or cells involved in cell proliferation, growth, and metastasis” (Underwood, 2024, pg. 2).

Another form of treatment is surgical. Laparoscopic surgery is another consideration. One could do an open colectomy, but the laparoscopic option is much less invasive. Patients that would qualify for this would have non metastatic colon cancer. A trial conducted by Clinical Outcomes of Surgical Therapy Study (COST trial) found that when comparing a laparoscopic and open colectomy for stage I-III cancer patients had nearly equal outcomes (Dowli et. al, 2022).

This continued research can have a huge factor on patient care. It can help to discover the best individual treatment for every patient. Improve the standard of care by having nurses further

their education for better patient care. Lastly, this research can educate a patient and caregiver about what options are available and where to look for new ones.

### **Planning of Teaching Content**

Learning objectives for the community would include being able to identify at least modifiable factors that can reduce the risk of colon cancer. It would also be important for a learner to be able to identify two reasons to get screened. In addition to learning objectives providing informational pamphlets will be a great way to reinforce the teaching that was provided. Having visual aids can also help for individuals who are more visual learners. Utilizing images and diagrams would be an excellent method for visual learners.

One way to get the members of the community participating would be having an individual answer a question with 4 multiple choice questions. If correctly answered they will receive a prize. Another option would be to provide a crossword puzzle associated with the topic. Once completed the individual will receive a prize for completing it. Engaging community members in fun activities will likely make them more receptive to the education provided and help to retain it in a different way than just reading a pamphlet.

### **Conclusion**

Addressing the complex disease that is colon cancer is essential for prevention with early detection with screening, diagnosis, and treatment of colon cancer not only for people but the nursing profession as well. Effects can be negative by potentially increasing burnout or positive by nurses advancing their education. Education on screening different options available are so important for early detection. Different forms of information such as supplemental pamphlets, question and answer for a prize, crossword puzzle, and visual aids members of the community will have a better understanding of risks that can cause this disease and preventative measures.

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