CMScript
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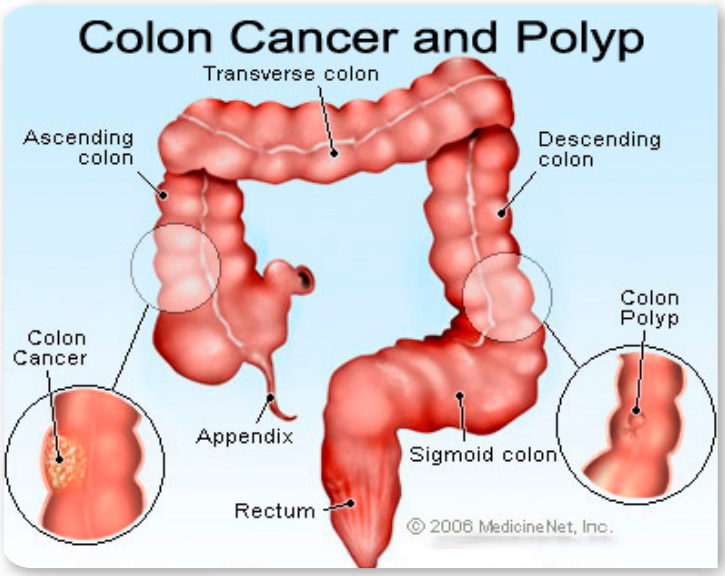
CMS Council for Medical Schemes

Colorectal Cancer

Colorectal cancer refers to cancer of the colon and the rectum. The colon is the large intestine and the rectum is the lower part of colon. Colorectal cancer is the third most common cancer worldwide and the fourth most common cause of death. It represents 9.4% of all cancers in men and 10.1% of cancers affecting women. In South Africa, colon cancer is ranked as the fifth most common type of cancer.

How does the condition occur?

Cancer of the colon and rectum first affects the epithelial lining of the intestine. It may also start as a benign (non-cancerous) polyp, then become malignant (cancerous), invade and destroy normal tissues and ultimately spread to the surrounding organs Cancer cells may migrate away from the primary area of origin and spread to other parts of the body such as the liver and lungs.



What causes colorectal cancer?

In most cases, it is not clear what causes colon cancer. Researchers have found that colon cancer occurs when healthy cells in the colon develop errors in their DNA (deoxyribonucleic acid). Several factors can however increase a person's risk of colorectal cancer. The following are some of the risk factors:

- A personal history of colorectal cancer or polyps: The risk of colorectal cancer increases in individuals who have had colon cancer or adenomatous polyps (mass of tissue).
- Family history of colon cancer: Individuals with a parent, sibling or child with the disease, are more likely to develop colon cancer.
- Inflammatory intestinal conditions: Chronic inflammatory diseases of the colon, such as ulcerative colitis and crohn's disease, can increase an individual's risk of colon cancer.
- Inherited syndromes: Genetic syndromes passed through generations of your family can increase your risk of colon cancer. These syndromes include familial adenomatous polyposis and hereditary nonpolyposis colorectal cancer, which is also known as Lynch syndrome
- Being overweight: People who are overweight have an increased risk of colon cancer as well as an increased risk of dying of colon cancer.
- Physical inactivity: People who are not active have a greater chance of developing colorectal cancer.
- Certain types of diets: Food that is high in fat and low in fibre can raise a person's risk for developing colorectal cancer.
- Smoking: People who smoke may have an increased risk of colon cancer.
- Alcohol use: Colorectal cancer has been linked to heavy alcohol use.
- Age: Colorectal cancer is much more common after the age of 50 years. Colon cancer can occur in younger people, but it occurs less frequently.
- Having type 2 Diabetes: People with type 2 diabetes have an increased risk of developing colorectal cancer.

Signs and symptoms

Initially, colorectal cancer may not cause any symptoms. When symptoms appear, they will likely vary, depending on the cancer's size and location in the large intestine. The first signs of colorectal cancer may include the following:

- Persistent abdominal discomfort, such as cramps, gas or pain.

- A change in bowel habits such as alternating diarrhea and constipation that lasts for days. Vomiting may occur in later stages.
- Blood in the stool.
- A feeling that the bowel doesn't empty completely.
- Weakness and fatigue.
- Unexplained weight loss.
- A feeling of needing a bowel movement.

Diagnosis and staging

If the signs and symptoms indicate that you could have colorectal cancer, the treating doctor will conduct a number of tests to confirm the diagnosis. The following tests and procedures may be conducted:

- Medical History: A History of the patient's health habits, past illnesses and treatments.
- Physical examination: An examination of the body to check general signs and symptoms of disease such as lumps or anything else that seems unusual.
- Blood tests: To measure the number of blood cells which are important for the normal functioning of the body and to measure the amounts of certain substances released into the blood.
- Digital rectal exam: An exam of the rectum. The doctor or nurse inserts a lubricated, gloved finger into the rectum to feel for lumps or anything else that seems unusual.
- Fecal occult blood test (FOBT): A test to check stool (solid waste) for blood that can only be seen with a microscope. A small sample of stool is placed on a special card or in a special container and returned to the doctor or laboratory for testing. Blood in the stool may be a sign of polyps, cancer, or other conditions.
- Colonoscopy: To examine the inside of the colon and rectum using a thin, flexible tube called a colonoscope. It may also have a tool to remove polyps or tissue samples, which are checked under a microscope for signs of cancer.
- Barium Enema X-ray: To examine the inside of the colon using x-ray. A liquid that contains barium (a silver-white metallic compound) is put into the rectum. The barium coats the lower gastrointestinal tract and x-rays are taken. This procedure is also called a lower GI series.
- Biopsy: The removal of cells or tissues so that they can be viewed under a microscope by a pathologist to check for signs of cancer.

Once the diagnosis has been confirmed, staging of the cancer will be done to determine the extent of the cancer in the body. Knowing the cancer stage is important for determining the likely course of the condition (prognosis) and treatment options. Computerized tomography (CT) scan, and an ultrasound scan may be used for staging and risk assessment of the colon and rectum. The stages of colorectal cancer are then classified as below:

- Stage I: The cancer has grown through the superficial lining (mucosa) of the colon or rectum but hasn't spread beyond the colon wall or rectum.
- Stage II: The cancer has grown into or through the wall of the colon or rectum but hasn't spread to nearby lymph nodes.
- Stage III: The cancer has invaded nearby lymph nodes but isn't affecting other parts of your body yet.
- Stage IV: The cancer has spread to distant sites, such as other organs — for instance, to your liver.

Treatment

The choice of treatment will depend largely on the stage of the cancer and the location of the cancerous tissue. The three primary treatment options are surgery, chemotherapy and radiation.

Surgical treatment

When the cancer is located in the colon, the following surgical procedures may be indicated:

- Polypectomy – Is the removal of polyps (mass of tissue) from the colon, this procedure is done during colonoscopy where the cancer is small, localized in a polyp and in a very early stage.
- Colectomy - In this surgery, all or part of the colon together with surrounding lymph nodes are cut out.

Additional procedures may include:

- Stenting – A procedure whereby a metal is positioned across the tumour to relieve the obstruction allowing time to optimise and adequately stage the patient prior to surgery.
- A stoma – An opening on the belly created during surgery to allow waste to pass out of the body.

When the cancer is located in the rectum, the following surgical procedures may be indicated:

- Polypectomy - The cancer is removed as part of the polyp, which is cut out during colonoscopy.
- Trans-anal excision – This procedure is done to remove some early stage I rectal cancers that are relatively small, and not too far from the anus.
- Anterior resection - The cancer in the upper part of the rectum is cut out completely. The remaining colon is then connected back to the remaining part of the rectum or brought out as an opening (stoma) on the belly.
- Low anterior resection with colo-anal anastomosis - The rectal cancers involving the middle and lower third of the rectum is cut off. The colon is then connected to the anus, a procedure known as colo-anal anastomosis.
- Diverting colostomy – This procedure entails bringing out the obstructed intestine onto the abdominal wall where the patient presents with obstructive symptoms. This often helps the patient recover enough to start other treat-

ments (such as chemotherapy) prior to definitive surgery.
- Abdominoperineal resection (APR) - In this procedure the anus, rectum and sigmoid intestine are removed. An opening is then made on the belly to allow waste to pass out of the body.
- Extralevator abdomino-perineal resection – This surgical procedure is done in patients with distal rectal cancer in whom an anterior surgery cannot be performed

Radiation therapy

Radiation therapy is a cancer treatment that uses high-energy X-rays or other types of radiation to kill cancer cells or keep them from growing. Radiotherapy can also be used to relieve symptoms caused by metastases in the bones.

Chemotherapy

Chemotherapy is a cancer treatment that uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping them from dividing. When chemotherapy is taken by mouth or injected into a vein or muscle, the drugs enter the bloodstream and can reach cancer cells throughout the body. Treatment may be given before surgery (neo-adjuvant) to reduce the size of the tumor or after surgery (adjuvant therapy) to suppress secondary tumour formation.

Supportive/Palliative care

Supportive care is care given to improve the quality of life in patients with cancer. The goal of palliative care is to prevent or treat, as early as possible, the symptoms and side effects of the cancer and its treatment, in addition to the related psychological, social, and spiritual problems. Palliative care will include management of symptoms and side effects such as, pain, diarrhea, nausea and vomiting through medication, surgical procedures and in some cases radiation therapy.

PMB level of care

Treatable colorectal cancer is a prescribed minimum benefit (PMB) condition under diagnosis treatment pair (DTP) code 950C. According to the PMB regulation, treatable cancers are defined as follows:

- They involve only the organ of origin, and have not spread to adjacent organs;
- There is no evidence of distant metastatic spread;
- They have not, by means of compression, infarction, or other means, brought about irreversible and irreparable damage to the organ within which they originated (for example brain stem compression caused by a cerebral tumour) or another vital organ.
- If points (i) to (iii) do not apply, there is a well demonstrated five-year survival rate of greater than 10%, for the given therapy, for the condition concerned.

According to the PMB regulations, schemes have to pay for the diagnosis, treatment and care costs of treatable colorectal cancer, regardless of the medical scheme option. This would include diagnostic tests and follow-up tests, consultations with doctors and other health professionals, surgery, radiology, chemotherapy, radiation therapy as well as palliative care.

Patients who have metastatic colorectal cancer are also entitled to some palliative care benefits. In these patients the cancer is not treatable and death will be imminent. Other palliative measures might therefore be taken to make the patient comfortable. These should be reimbursed as PMB level of care under DTP code 260S.

Glossary

- Anterior - situated nearer the front part of the body.
- Distal – situated away from the centre of the body, or from the point of origin.
- Excision – surgical removal of part or all of a structure or organ
- Polyp – a small growth, usually non-cancerous and with a stalk, protruding from a mucous membrane.
- Posterior – directed toward or situated at the back
- Resection – removal, as of an organ, by cutting.

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