

Colon and Rectal Cancer

Note: For Medicare members/enrollees, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

Note: For Medicaid members/enrollees, circumstances when state Medicaid coverage provisions conflict with the coverage provisions within this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

DISCUSSION

The incidence of colon and rectal cancer (CRC) per 100,000 people decreased from 60.5 in 1976 to 46.4 in 2005 and, more recently, 38.7 in 2016. In addition, mortality from CRC has been decreasing for decades and is currently down by more than 50% from peak mortality rates. These improvements in incidence of mortality from CRC are thought to be a result of screening and better treatment modalities.¹

Recent data shows continued rapid decline in incidence among aged 65 years and older, with a decrease of 3.3% annually between 2011 and 2016. Conversely, incidence has increased among those younger than 65 with a 1% annual increase in those 50 to 64 years of age and 2% annual increase in those younger than 50. CRC death rates also showed age-dependent trends.¹

Staging

Staging in colon cancer is based on the tumor, node, and metastases (TNM) system. The TNM categories reflect very similar survival outcomes for rectal and colon cancer; therefore, they share the same staging system.¹

Staging identifies the severity of the cancer and which treatment options to use. Options include the use of surgery, chemotherapy, and radiation. In Stage 4 colorectal cancer, the cancer most commonly spreads to the bones, liver, or lungs. Radiation therapy (RT) or chemotherapy may be given at this stage.^{1,2}

Colon Cancer Treatment

External beam radiation therapy (EBRT) is the type of RT used most often for people with colon or rectal cancer. Neoadjuvant or adjuvant radiation therapy with chemotherapy can be considered for select patients with T4 tumors penetrating to fixed structures or for patients with recurrent disease. Radiation fields should include the tumor bed and surgical clips. Furthermore, chemoradiation can be utilized in patients with unresectable disease or in patients who are unable to undergo a resection.¹

Rectal Cancer Treatment

Radiation therapy is associated with lower rates of local recurrence for patients with stage II or stage III rectal cancer. It is generally recommended that patients undergo preoperative chemoradiation for stage II/III rectal cancer, which is associated with improved local control when compared to post-operative radiation therapy. A newer approach, total neoadjuvant therapy, gives radiation and the entire course of chemotherapy before surgery. This technique may be associated with improved, colostomy-free survival and higher rates of pathologic response.

Several studies have examined the efficacy of a shorter course of radiation using five fractions. Overall, short-course radiation given over five fractions appears to be equivalent to conventional radiation treatment schedules that use 25 to 28 fractions.²

DEFINITIONS

- **Adjuvant radiation therapy** - Additional radiation therapy given after the primary treatment to lower the risk of cancer recurrence.
- **External beam radiation therapy (EBRT)** - External radiation (or external beam radiation) is the most common type of radiation therapy used for cancer treatment. A machine aims high-energy rays (or beams) from outside the body into the tumor.
- **Fractions** - A way of dividing a total dose of radiation into separate doses to be administered over a period of time.
- **Gray (Gy)** - One of the two units used to measure the amount of radiation absorbed by an object or person, known as the absorbed dose. One gray (Gy) is the international system of units (SI) equivalent of 100 rads, which is equal to an absorbed dose of 1 Joule/kilogram.
- **Interstitial brachytherapy** - Interstitial brachytherapy is used for rectal cancers. A tube filled with radioactive pellets is placed into the rectum and delivers treatment right into the tumor. Often used in populations who cannot tolerate surgery or in recurrences. This is typically administered a few times per week for several weeks.
- **Intraoperative radiation therapy (IORT)** - Intraoperative radiation therapy is an external type of radiation that is given directly to the tumor during surgery. It is used in colorectal cancers when the tumor cannot be removed completely or if recurrence is a high risk at the surgery site. Special shields protect the normal tissue during surgery while a one-time large dose of radiation therapy is administered.
- **National Comprehensive Cancer Network® (NCCN®)** - An alliance of 32 leading cancer centers devoted to patient care, research, and education. The NCCN guidelines are utilized for Radiation Therapy and Medical Oncology standards. NCCN consensus clinical standards are periodically updated and NantHealth, Inc. reviews these and updates its policies within a timely manner.
- **Stereotactic body radiation therapy (SBRT)** – Radiation treatment outside the brain is called (SBRT). SBRT may be used for certain lung, spine, colon and rectal, and liver tumors.
- **Three dimensional conformal radiation therapy (3D-CRT)** - A procedure that uses a computer to create a three dimensional picture of the tumor. This allows doctors to give the highest possible dose of radiation to the tumor, while sparing the normal tissue as much as possible.

POLICY

The following table outlines the criteria that must be met for the number of fractions and dosing relative to colon and rectal cancer radiation treatments. This dosing table represents evidence-based doses and fractions for the designated type of cancer treatment. Variations outside of the ranges may indicate a deviation from standard treatment.

	Number of Fractions	Total Dose	Technique
Colon Cancer	22-28	45-50.4 Gy	3D
Rectal Cancer	25-30	45-54 Gy	3D
Resectable Disease - Hypofractionation	5	25 Gy	3D
Palliation Treatment	1-15	8-37.5 Gy	3D

REFERENCES

1. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Colon Cancer. (Version 1.2022). Available at https://www.nccn.org/professionals/physician_gls/pdf/colon.pdf. ©National Comprehensive Cancer Network, 2022.
2. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Rectal Cancer. (Version 1.2022). Available at https://www.nccn.org/professionals/physician_gls/pdf/rectal.pdf. ©National Comprehensive Cancer Network, 2022.

3. Radiation therapy for colorectal cancer. American Cancer Society. <https://www.cancer.org/cancer/colon-rectal-cancer/treating/radiation-therapy>. Accessed May 12, 2022.

Please see all related radiation therapy treatment policies for additional information on the treatment modalities. (3D-CRT, EBRT, SBRT and SRS)

CODING [ICD-10, HCPCS]*

*Procedure codes appearing in medical policy documents are only included as a general reference. This list may not be all-inclusive and is subject to updates. In addition, codes listed are not a guarantee of payment. CPT codes are available through the AMA.

Code	Description
C18.2	Malignant neoplasm of ascending colon
C18.4	Malignant neoplasm of transverse colon
C18.6	Malignant neoplasm of descending colon
C18.8	Malignant neoplasm of overlapping sites of colon
C18.7	Malignant neoplasm of sigmoid colon
C18.9	Malignant neoplasm of colon unspecified
C19	Malignant neoplasm of rectosigmoid junction
D01.0	Carcinoma in situ of colon
DDYCZZ	Intraoperative radiation therapy (IORT) of colon
DDY7CZZ	Intraoperative radiation therapy (IORT) of colon
DDY7CZZ	Intraoperative radiation therapy (IORT) of rectum
G6003	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: up to 5 MeV
G6004	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks: 6-10 MeV
G6015	Intensity-modulated treatment delivery, single or multiple fields/arcs, via narrow spatially and temporally modulated beams, binary, dynamic MLC, per treatment session
G6016	Compensator-based beam modulation treatment delivery of inverse planned treatment using 3 or more high resolution (milled or cast) compensator, convergent beam modulated fields, per treatment session
Z51.0	Encounter for antineoplastic radiation therapy
Z51.1	Encounter for palliative care
Z51.5	Personal history of irradiation
Z53.09	Surgery contraindicated
Z92.3	Personal history of irradiation

REVISION AND REVIEW HISTORY

No.	Description	Metadata
1	Original Effective Date:	5/2022
2	Policy Review Dates:	5/14/2022, 5/16/2022, 6/2/2022, 7/20/2022, 8/24/2022
3	Policy Revision Dates:	5/14/2022, 5/16/2022, 6/2/2022, 7/20/2022, 8/26/2022
4	Department Owner:	Medical Affairs
5	NH Advisory Committee Approval Dates:	5/27/2022, 6/2/2022, 8/26/2022
6	Revision Changes:	8/26/2022 – Range for rectal cancer from 25-30 fractions/45-50.4 Gy to 25-30 fractions/ 45-54 Gy and added for Rectal cancer - Resectable disease – Hypofractionation 5 fractions and 25 Gy