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Memorial Sloan Kettering
Cancer Center

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If you are a patient, we recommend that you use these tools only in consultation with your healthcare provider.

Who Can Use These Tools?

These nomograms are appropriate for patients who have undergone surgery for colon cancer, assuming that all of the primary cancer was completely removed during the original surgery. They are designed for patients with localized colon cancer that shows no evidence of metastasis, or spread beyond the colon, before or at the time of surgery.

These tools are only appropriate for patients with tumors found in the colon — between the pouch that forms the first part of the large intestine (known as the cecum) and the S-shaped section of the colon that connects to the rectum (the rectosigmoid, or sigmoid colon). Patients using these nomograms may or may not have had chemotherapy.

Probability of Being Disease-Free Five to Ten Years After Surgery

Our [disease-free probability nomogram](#) can be used to predict the probability that a patient will be disease-free from colon cancer five to ten years following complete resection, or surgical removal of all cancerous tissue.

This tool is based on a database of 1,320 patients with nonmetastatic colon cancer treated at Memorial Sloan Kettering Cancer Center. It provides a more accurate picture of the five- or ten-year risk of recurrence than older assessment tools, such as the staging system of the American Joint Committee on Cancer.

You will need the following information to use this nomogram:

Age: Patient's age at the time of surgery.

Preoperative CEA level: Carcinoembryonic antigen (CEA), which is a tumor marker for colorectal cancer.

Tumor location: This nomogram is only for patients with tumors localized in the colon, found between the cecum and rectosigmoid (greater than 18 cm from the anal verge).

Tumor differentiation: Poor, moderate, or well differentiated.

Lymphovascular invasion: Whether one or more tumor cells were found in the lymphatic or vascular structure.

Perineural invasion: Whether one or more tumor cells were found in or around the nerves.

Number of positive and negative lymph nodes : Value between 0 and 50.

Depth of tumor penetration into the colon wall (T stage) : The stage of the tumor based on the TNM anatomic staging system.

Adjuvant chemotherapy: Whether the patient received chemotherapy after surgery.

If you are a patient, we recommend that you use this tool only in consultation with your healthcare provider.

Overall Survival Probability Five Years After Surgery

This [colon cancer nomogram](#) can be used to predict the probability of surviving at least five years following complete resection (surgical removal) of all cancerous tissue. The tool also provides a highly likely range for the probability of survival, known as the 95 percent confidence interval.

This tool is based on records from 128,853 primary colon cancer patients reported to the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute. This nomogram provides a more accurate picture of overall survival at five years than the American Joint Committee on Cancer staging system.

This nomogram can be used to create three different estimates of varying accuracy, based on the amount of data included.

For a basic estimate of overall survival probability, you will need the following information:

Depth of tumor penetration into the colon wall (T stage) : The stage of the tumor based on the TNM anatomic staging system.

N stage: The nodal stage of the tumor based on the TNM anatomic staging system.

For a more accurate estimate, you will need:

Depth of tumor penetration into the colon wall (T stage) : The stage of the tumor based on the TNM anatomic staging system.

Number of positive lymph nodes : Value between 0 and 16.

Number of total lymph nodes: Value between 0 and 45.

For the most accurate estimate, you will need:

Age: Patient's age at the time of surgery.

Sex: Male or female.

Depth of tumor penetration into the colon wall (T stage) : The stage of the tumor based on the TNM anatomic staging system.

Grade: Poor, moderate, or well differentiated.

Number of positive lymph nodes : Value between 0 and 16.

Number of total lymph nodes: Value between 0 and 45.

If you are a patient, we recommend that you use this tool only in consultation with your healthcare provider.

Contact Us

If you have questions or comments about these prediction tools, please contact us at nomograms@mskcc.org.

Use our [colorectal cancer nomograms](#).

Request an Appointment

Call [800-525-2225](tel:800-525-2225)

Available Monday through Friday, 8 a.m. to 6 p.m. (Eastern time)

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