

Side Matters: Are You Left or Right Sided?

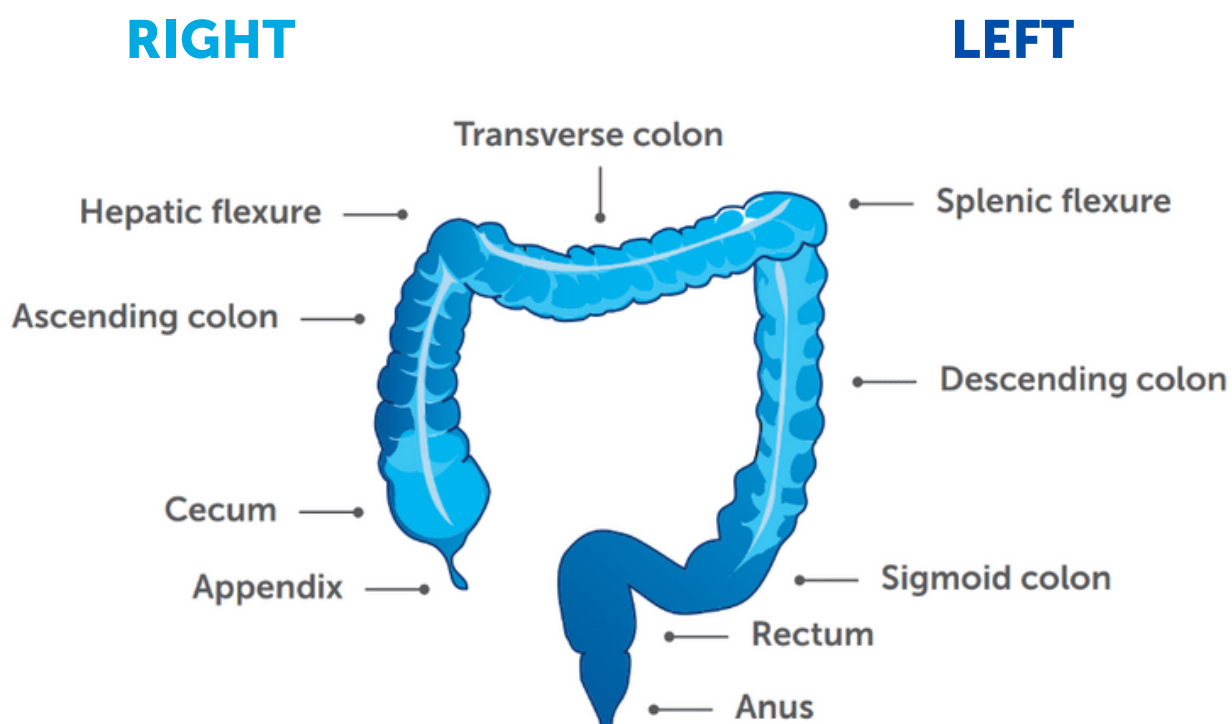
Find out why you need to know

Understanding your biomarkers and where your tumor is located can help you and your doctor choose the best treatment option.

The colon is a 6-foot long, tube-like organ at the end of the digestive system that processes and prepares the removal of waste from the body.

The colon is divided into the **right side** (which includes the cecum, ascending colon, and the hepatic flexure), the **left side** (which includes the splenic flexure, descending colon, sigmoid colon, rectosigmoid, and rectum) and the transverse colon, which is divided between the right and left sides.

Research suggests that there are biological differences between left-sided and right-sided colon cancers. This includes the biomarkers that are present on each side and the aggressiveness of the cancer. Patients with **left-sided tumors** typically have a better prognosis than those with **right-sided tumors**.^{1,2}



CANCER ON THE RIGHT

(cecum, ascending colon, right half of transverse colon, and hepatic flexure)



More often in women and people over 65

- Diagnosed more frequently in African Americans
- Often begins with flat, sessile polyps that go unnoticed until they are fairly large
- Usually diagnosed at a later stage
- Often presents with symptoms such as anemia and bleeding
- Associated with Lynch syndrome
- Responds well to immunotherapy
- Higher frequency of:
 - mucinous tumors
 - BRAF-mt or KRAS-mt mutations
 - MSI-H

CANCER ON THE LEFT

(splenic flexure, descending and sigmoid colon, left half of transverse colon, rectosigmoid and rectum)



More often in men and in people under 65

- Occurs more often than right sided colorectal cancers
- Tumors that grow along the wall of the colon
- Often presents with constipation, narrow stools, and other bowel habit changes
- Causes bowel obstructions more often than right-sided colorectal cancer
- Usually diagnosed in its early stages
- Associated with FAP (familial adenomatous polyposis)
- Higher occurrence of HER2 amplifications
- Overall better prognosis than right-sided tumors
- Responds better to standard chemotherapy and targeted therapies

Right-sided tumors, when diagnosed in early stages (stage I or II), have a slightly better prognosis than **left-sided tumors**.³

People with late-stage, **right-sided tumors** sometimes have KRAS, NRAS, and BRAF mutations. Those mutations can predict poor response to anti-EGFR therapies and shorter survival. Even if **right-sided tumors** are KRAS, NRAS, or BRAF wild-type tumors, they are **unlikely to respond to anti-EGFR therapies**.⁴

The good news is that recent studies show that **right-sided tumors** are more often diagnosed as MSI-H, which predicts a **positive response to checkpoint inhibitors and immunotherapy treatments**.

A **left-sided tumor** generally predicts that patients will **respond better to anti-EGFR therapies** (cetuximab and panitumumab) than to anti-VEGF therapies (bevacizumab) when given with chemotherapy as first-line treatment.

HER2 amplifications are more common in **left-sided** and rectal tumors, and also predicts a poor response to anti-EGFR agents.¹

A **left-sided tumor** also predicts better survival for stage IV patients.³

Prior to starting anti-EGFR agents, you need to have **biomarker testing** for NRAS, KRAS, BRAF and HER2 because these mutations can also occur in left-sided tumors.

Be sure to talk with your doctor about:

Stage

Biomarkers

Tumor Side

For additional questions and assistance: ccalliance.org/patient-family-support/helpline

For our Clinical Trial Finder: ccalliance.org/ctf

1 Shida D et al Prognostic value of primary tumor sidedness for unresectable stage IV colorectal cancer a retrospective study 2019 Annals of Surgical Oncology 26:1358-1365

2 Zakavelis G et al Current and future biomarkers in colorectal cancer. 2017 Ann Gastroenterol. 30: 613-621

3 Dekker E et al Colorectal Cancer 2019 The Lancet 394; 1467-1479

4 NCCN clinical cancer practice guideline in oncology (NCCN Guidelines) Ver.4-Nov 8, 2019 http://nccn.org/professionals/physician_gls/pdf/colon.pdf

ccalliance.org | Helpline: (877) 422-2030

The Colorectal Cancer Alliance is a national organization committed to ending colorectal cancer within our lifetime. We are your allies — a national network of passionate survivors, caregivers and advocates dedicated to helping you and your family navigate all aspects of the disease, from diagnosis and treatment to a lifetime of progression-free survival. We are a community of people eager to share experiences, address your concerns, and answer your questions. We understand the different stages of the colon cancer journey because we've been there. We are here for you when you need us because we believe tomorrow can't wait.



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