

Colorectal Cancer

Colorectal cancer is caught by screening (colonoscopy or stool tests), removed with surgery, and treated with chemo or targeted drugs based on how far it has spread.

THE ONE-LINE TRUTH

Cells in the colon or rectum pick up broken genes over many years until they ignore all stop signals and grow out of control.

The chain — how it unfolds

1. For ten to twenty years, a polyp grows silently with no symptoms at all. — why: The colon is long (five feet), stretchy, and does not have many pain nerves in the lining, so a small clump of extra cells (a polyp) does not block anything, does not hurt, and does not bleed enough to notice.
2. The first symptom is often invisible blood in the stool or unexplained anemia (low red blood cells). — why: As the polyp picks up more broken genes and becomes cancer, the surface gets fragile and raw, and stool scraping past it causes tiny bleeding every day. You cannot see it, but over months that slow loss of blood drains your iron stores, and your bone marrow cannot make enough red blood cells, so you feel tired, weak, and short of breath.
3. A tumor in the left colon or rectum causes a change in bowel habits — new constipation, thin stool, or feeling like you cannot fully empty. — why: The left colon and rectum are narrower than the right colon, and they carry formed (solid) stool. A tumor growing into that narrow space acts like a partial cork, so stool has to squeeze past it. Your body responds by making the colon muscles work harder (cramping), and the stool that gets through is thin (pencil stool) or you feel like something is still stuck inside.
4. If the tumor blocks the colon completely, you get severe belly pain, swelling, vomiting, and no stool or gas passing — this is a surgical emergency. — why: When stool and gas cannot move forward, they pile up behind the blockage, stretching the colon and the belly like a balloon. The pressure cuts off blood flow to the colon wall (ischemia), which can cause the colon to die or burst (perforate), spilling bacteria-filled stool into the belly and causing life-threatening infection (peritonitis and sepsis).

5. Weight loss, loss of appetite, and constant fatigue happen when the cancer is advanced or has spread. — why: Cancer cells burn huge amounts of energy and release chemicals (cytokines like TNF and IL-6) that turn on your body's stress mode, break down muscle and fat for fuel (cachexia), kill your appetite, and make you feel exhausted all the time — even though you are not doing anything. If the cancer spreads to the liver, the liver cannot do its job of making proteins and cleaning toxins, which makes the weight loss and fatigue even worse.
6. Blood or mucus in the stool, especially with a tumor in the rectum, is a red flag to get checked right away. — why: The rectum is close to the anus, so any bleeding or mucus from a rectal tumor is visible on the toilet paper or in the bowl. Bright red blood usually means the tumor is low in the rectum or anus; dark or maroon blood means it is higher up in the colon. This is not the same as hemorrhoid bleeding (which is usually just a streak on the paper after straining) — cancer bleeding is often mixed in with the stool or comes with other warning signs like a change in bowel habits or weight loss.
7. If cancer cells break off and travel through the blood or lymph, they grow in the liver, lungs, or other organs (stage IV, metastatic cancer). — why: The colon drains blood into the portal vein, which goes straight to the liver, so the liver is the first place cancer cells land and grow (liver metastases, seen in about half of people with advanced colorectal cancer). From there, or through other blood vessels, cancer cells can reach the lungs, bones, or brain. Once cancer has spread to distant organs, surgery usually cannot remove it all, so treatment shifts to chemotherapy, targeted drugs (like bevacizumab, cetuximab, or panitumumab), or immunotherapy (for MSI-H tumors) to shrink the tumors, control symptoms, and prolong life.
8. Screening (colonoscopy or stool tests) catches polyps before they become cancer, or catches cancer early when it is curable with surgery alone. — why: Because colorectal cancer grows slowly and silently for years, screening looks for trouble before you feel anything. A colonoscopy lets the doctor see inside the colon, snip off any polyps (polypectomy), and send them to the lab — if a polyp is removed before it picks up enough mutations to become cancer, you just prevented cancer. If cancer is found early (stage I or II, still in the colon wall with no spread), surgery to remove that section of colon cures more than 90% of people. That is why the U.S. Preventive Services Task Force (USPSTF) and the American Cancer Society recommend starting screening at age 45 for people at average risk, and earlier (often age 40 or even younger) if you have a family history of colorectal cancer or polyps, or if you have inflammatory bowel disease (ulcerative colitis or Crohn disease).

Spot it — what you see, and why

- Blood in the stool (bright red or very dark, tar-like): The tumor grows into the bowel wall and breaks open tiny blood vessels, so blood leaks into the passing stool. Bright red blood usually means the tumor is near the end of the colon or rectum; dark, tar-like blood means it is higher up and the blood has been digested as it traveled down.
- Change in bowel habit lasting more than a few weeks (new diarrhea, new constipation, or feeling like you can't empty your bowel completely): The growing tumor narrows the tube of the bowel, so stool has a harder time moving through. This can cause backup (constipation), or the bowel may make extra mucus and fluid to try to push past the blockage (loose or narrow stools).
- Belly pain or cramping that doesn't go away: The tumor can partially block the bowel, so the muscle of the intestine squeezes harder to push stool past the blockage. That extra squeezing causes cramping pain. Sometimes the tumor also irritates the bowel lining directly.
- Unexplained weight loss: Cancer cells use a lot of energy and release chemicals that change how the body burns calories. The tumor may also bleed slowly over time, and ongoing blood loss makes the body weaker. Some people lose appetite because of pain or early fullness.
- Feeling very tired or weak (fatigue): Slow bleeding from the tumor lowers the number of red blood cells (anemia), so less oxygen reaches muscles and the brain. The cancer itself also releases substances that make the whole body feel worn down.
- Anemia (low red blood cell count) with no clear reason: The tumor oozes small amounts of blood into the bowel every day. Over weeks and months that hidden bleeding uses up the body's iron stores faster than they can be replaced, so fewer red blood cells get made.

Red flags — act now

- Blood in the stool (visible or found on testing)
- Unexplained weight loss of more than 10 pounds without trying
- New constipation or diarrhea lasting more than a few weeks
- Severe belly pain or a hard lump you can feel in your abdomen
- Anemia (low red blood cells or low iron) that doctors cannot explain by diet or other causes

Treat it — in this order

1. Colonoscopy with biopsy to confirm cancer and measure how deep it has grown → Lets the doctor see the tumor, take a tiny piece of tissue, and send it to the lab. The pathologist looks at the cells under a microscope to confirm it is cancer (adenocarcinoma) and tell you the grade (how abnormal the cells are). This is the first step — you cannot start treatment until you know for sure it is cancer.
2. Surgery (partial colectomy or low anterior resection) to cut out the tumor and nearby lymph nodes → Removes the piece of colon or rectum where the cancer is growing, plus the lymph nodes that drain that area (at least 12 nodes, per guideline). This stops the cancer cells from spreading and gives the best chance of cure if the cancer has not left the colon yet. Surgery is the only treatment that can cure stage I, II, or III colorectal cancer.
3. Adjuvant chemotherapy (FOLFOX or CAPOX) after surgery for stage III or high-risk stage II → Kills microscopic cancer cells that might be hiding in the blood or lymph after surgery. FOLFOX (5-FU, leucovorin, oxaliplatin) or CAPOX (capecitabine, oxaliplatin) damages the DNA of dividing cells so they cannot copy themselves. Giving it after surgery (adjuvant) lowers the chance the cancer comes back. Guideline: always offer it for stage III; consider it for stage II with high-risk features (T4 tumor, < 12 nodes examined, perforation, or poorly differentiated cells).
4. Targeted therapy (bevacizumab, cetuximab, or panitumumab) added to chemotherapy for metastatic cancer (stage IV) → Bevacizumab blocks VEGF, a signal that tells tumors to grow new blood vessels. Without blood supply, the tumor starves. Cetuximab and panitumumab block EGFR, a protein on cancer cells that tells them to grow — but they ONLY work if RAS genes are normal (wild-type). Adding targeted drugs to chemotherapy shrinks tumors more and helps people live longer when cancer has spread to liver, lungs, or other organs.
5. Immunotherapy (pembrolizumab or nivolumab) for MSI-high or dMMR tumors → Blocks checkpoint proteins (PD-1) that cancer uses to hide from the immune system. When you remove the brakes, the body's own T cells wake up and attack the cancer. This works extremely well in MSI-high cancers (about 15% of colorectal cancers) because they have tons of mutations that the immune system can see. Response rates are much higher than chemotherapy in this group.

Your top priorities at the bedside

1. Monitor for signs of bowel obstruction every shift: measure abdominal girth, listen for bowel sounds, ask about passage of stool and flatus, and watch for vomiting. — why: A growing tumor can narrow the colon and block the passage of stool. Complete obstruction stops blood flow to the bowel wall, causing tissue death (ischemia) and perforation within hours. Early detection allows time for decompression or emergency surgery.

2. Check hemoglobin and hematocrit daily and watch for signs of acute bleeding like black tarry stools, bright red blood per rectum, low blood pressure, or fast heart rate. — why: Colorectal tumors have fragile blood vessels that can bleed suddenly. A drop in hemoglobin below 7 grams per deciliter reduces oxygen delivery to organs. Acute bleeding may need blood transfusion or emergency colonoscopy to stop the source.
3. Assess pain level every 4 hours using a 0-to-10 scale, ask where the pain is located, and give prescribed pain medicine on schedule before pain becomes severe. — why: Uncontrolled pain raises heart rate and blood pressure, delays movement after surgery, and prevents deep breathing, which increases the risk of pneumonia and blood clots. Tumor pain also signals possible obstruction or spread to nearby organs.