

Immunotherapy helps certain cancer patients avoid surgery: ‘We hope this is the future’

Kelly Spill didn’t cry when she was diagnosed with stage III rectal cancer at age 28.

She held her emotions together when her surgeon told her that she might not be able to carry another baby — treatment with radiation can significantly affect fertility — and that she might need to have a colostomy bag attached to her to collect her bodily waste after surgery.

“I didn’t cry at both of those,” said Spill, who at the time was newly engaged and just months postpartum.

“But then I asked [the doctor], ‘Would I still be able to go to Switzerland this summer to get married?’ And he was like, ‘Oh, absolutely not.’ And that’s what really broke me,” she said. “It really hit reality for me that my life has now completely changed.”

After welcoming son Jayce into the world, she and her fiancé had planned to elope to Switzerland. But after her cancer diagnosis, they opted for a quick, local winter wedding instead.

Now, five years later, not only has Spill carried another baby — giving Jayce a younger sister named Mya — she and her husband are expecting their third child together.

Spill, who has no family history of colorectal cancer, was among more than 100 adults in the United States who completed cancer treatment in a new study using only the immunotherapy drug dostarlimab, and she said the experience changed her life.

When Spill was diagnosed in 2020, her treatment plan recommended harsh chemotherapy drugs, radiation therapy and invasive surgery. But just before she was about to schedule her first chemotherapy appointment, she was given the opportunity to participate in the new study. When she realized that the approach using only dostarlimab would be less harsh on her body, she quickly signed up.

Immunotherapy is a form of cancer treatment that harnesses a person's own immune system to target and fight the disease. Dostarlimab, developed by the pharmaceutical company GSK and sold under the brand name Jemperli, has been found in previous research to make solid tumors essentially disappear among people with rectal cancer. Last year, the US Food and Drug Administration designated dostarlimab to be a "breakthrough therapy" for the treatment of certain rectal cancers.

But the new study, published last week in the New England Journal of Medicine, found that the immunotherapy treatment worked against not only advanced rectal cancer but other cancer types too, allowing patients to avoid surgery and other types of more invasive treatment to cure their disease.

Spill received 30-minute intravenous infusions of dostarlimab at a medical facility every three weeks and said she had no adverse side effects.

"It took four treatments until I found out that the tumor was halfway gone, and then by my ninth treatment, the tumor had completely disappeared. And I was then told I was cancer-free at that point," Spill said.

"I then was told I did not have to go through radiation, I did not have to go through surgery, and that was like one of the best days of my life, because I knew that I can then proceed with having a baby," she said. "This clinical trial has completely changed what my life could have looked like ... and it's like a miracle."

'It's for any cancer in the body'

The new study included 117 cancer patients who were separated into two groups. One cohort included people with advanced rectal cancer, and the other included people with other types of solid tumors, such as colon, gastric, bladder and prostate.

All of the participants had mismatch repair-deficient or dMMR cancer, meaning their tumor cells were mismatch repair-deficient cells. These types of cells usually have many DNA mutations and are estimated to affect up to 3% of all early-stage solid tumors, according to the study.

"We constantly wind up with breakdown in our cells, and using DNA, we can repair this ongoing injury to cells over time," said Dr. William Dahut, chief scientific officer for the American Cancer Society, who was not involved in the new research. "But if you have a deficit in that repair process, then you wind up with a greater number of abnormalities in DNA, which we call mutations. And we know people that have a greater number of mutations often have a greater ability to respond to immune-based treatment."

That ability to respond to immune-based treatment was shown in the new study.

The data was obtained from December 2019 through April 2025, and 103 of the participants completed treatment across both cohorts. They received intravenous infusions of dostarlimab for six months and were monitored through two years, part of a continuation of previous research.

“The first study we published in 2022 showed that we could do this in rectal cancer patients whose tumors had the mismatch repair-deficiency mutation, and what was remarkable there was that 100% of patients had their tumors disappear – and that’s something that’s never been achieved before in oncology,” said Dr. Luis Diaz, a head of solid tumor oncology and gastrointestinal medical oncologist at Memorial Sloan Kettering Cancer Center and an author of the new study.

Now, “what we just published shows two things. Those rectal cancer patients remain at 100%, at almost 50 patients responding completely, but it’s durable. Durable is important because the tumor has remained gone for up to five years or beyond for some patients, and that’s returned them to normal life,” Diaz said.

“The second part of the story is, it’s not just for rectal cancer,” he added. “It’s for any cancer in the body, as long as their tumor has the genetic mutation.”

The researchers found that 80% of the study participants who completed treatment with dostarlimab immunotherapy alone did not require surgery,

radiation or chemotherapy after six months of treatment. The findings were presented at the 2025 American Association of Cancer Research's annual meeting.

"In all the patients who had a clinical complete response, organs were preserved without additional therapy. Three patients who had rectal cancer were subsequently able to conceive and deliver healthy children, which would not have been possible with standard treatment for rectal cancer," the researchers wrote in the study.

Two years later, about 92% of all the patients across both cohorts had not had their cancer come back. Disease recurrence developed in only five patients across both cohorts: One person with rectal cancer saw their tumor regrow, and the other four had recurrence only in the lymph nodes.

Although 65% of the people who received at least one dose of dostarlimab reported adverse events, most of the side effects were mild and included fatigue, rash or irritation at the infusion site or itching. None of the participants in either cohort died during the study.

"It's been incredible for the patients, because we're effectively able to eliminate their disease with very minimal toxicity," said Dr. Andrea Cerck, a gastrointestinal medical oncologist at Memorial Sloan Kettering Cancer Center and an author of the new study.

“Our goal always in oncology is to cure, but often, many of our cures leave patients debilitated in certain ways,” she said. “What we’ve seen here with this treatment is that we could omit standard of care – radiation, chemotherapy and, most importantly, surgery – in 80% of the patients with minimal toxicity, which leaves them feeling well with their organs intact, and they’re living as normal lives as possible.”

The researchers wrote that although these findings are encouraging, “larger studies are needed to confirm the long-term benefit of this treatment, especially among patients with nonrectal tumors.” But the new study “provides a foundation” for these next steps.

A new age of cancer care

Chemotherapy, radiation and surgery are usually the main components of treatment plans for most types of cancer, and these approaches have been widely used for decades. For instance, the first radical mastectomy to treat breast cancer was performed in 1882. The first use of radiation therapy to cure cancer was described in 1899. In the 1950s, scientists announced the first complete cure of a human solid tumor by chemotherapy.

But in more recent years, there has been a “growing body of evidence” showing that immunotherapy can be effective in people who have mismatch repair-deficient tumors, said Dr. Stacey Cohen, a physician at the Fred Hutchinson Cancer Center in Seattle, who was not involved in the new study.

“It’s extremely innovative, because historically, we have thought of surgery as being the mainstay for localized cancer treatment, and any other adjunctive therapies are to decrease risk of recurrence. So as we move to an age where nonoperative management could be a new standard of care with durable and effective treatments, that’s very exciting for patients and providers alike,” Cohen said.

“But we know that not all patients will have such an amazing response, even if they have the correct biomarker,” she said. “And that’s just because there may be nuances of people’s tumors and the fact that one treatment doesn’t fit all.”

Cohen added that she has “two points of caution” when it comes to the new study results.

“One is that the immunotherapy did not work for every patient on this study,” she noted. Second, “this only applies for a highly select group of patients with dMMR/MSI tumors. It is critical that this biomarker be checked before immunotherapy is considered, as this type of treatment will not work for most patients.”

It’s important for cancer patients to have their tumors genetically sequenced because the process can help guide treatment decisions by determining which specific mutations may be driving the cancer, Dahut said.

Once those mutations are identified, patients can learn whether any new and emerging immunotherapies may benefit them by targeting those mutations.

“That’s one reason why patients should have their tumors sequenced at diagnosis, because this is not something that you necessarily would know that you had, but if you do have this, then your treatment – even for initial diagnosis or for recurrent disease or advanced disease – would have significantly more options available,” Dahut said.

With immune-based therapies, “what is striking is not only we’re seeing complete responses, but that the responses appear to be durable,” he added.

A rise in cancer among young adults

The new research comes as colorectal cancer cases have been rising among younger adults. A [report](#) released in 2023 by the American Cancer Society shows that the proportion of colorectal cancer cases among adults younger than 55 increased from 11% in 1995 to 20% in 2019.

When Cercek and her colleagues started the new study, she said, their goal was to find less-invasive treatment options for these younger people with colorectal cancer.

“One of our reasons behind the design of this trial is that we were seeing so many young patients in clinic and seeing how detrimental our treatment could be. So that was driving my research for a long time. Even before this study of immunotherapy in mismatch repair-deficient tumors, we were trying to improve treatment of early-stage disease for all our patients but especially for our young adults,” Cercek said.

"We hope this is the future. I think this sets the precedent of what we can accomplish with very effective systemic therapy," she said. "And there are other studies now ongoing, utilizing immunotherapy as well as other therapies, with hopefully replicating similar results, where we can just treat the tumor very well with a systemic treatment and not need to put patients through radiation or surgery."

Spill said she hopes other young adults with rectal cancer ask their providers about clinical trials that may benefit them – especially as cancer treatments evolve and advance to become less invasive.

"A lot of us think of clinical trials being the last resort, and I think we need to kill that stigma, because it really shouldn't be. You never know what could work for you," Spill said.

"There is a rise in colorectal cancer for men and women at a young age. And fertility doesn't only affect the women, it also affects men, too," she said. "At a young age, getting diagnosed with a cancer that we thought you only really get when you get older, it's scary."

Signs and symptoms of colorectal cancer may include changes in bowel habits, rectal bleeding or blood in the stool, cramping or abdominal pain, weakness and fatigue, and weight loss.

But Spill warned that often these symptoms may be overlooked or mistaken for other health conditions in young adults. Her own symptoms included constipation, bloody stool and abdominal pain, but because they emerged

after she had her first child, her doctors told her they were tied to being postpartum and internal hemorrhoids.

“One day I went to the bathroom and I looked down, and you would have thought it was my time of the month, and it most certainly was not. That’s when it became extremely alarming,” Spill said of the blood in her stool.

When she noticed massive amounts of blood again, she took photos and showed them to a primary care physician. The doctor immediately ordered a colonoscopy, and that’s what led to her cancer diagnosis.

“To self-advocate is such a big one,” Spill said. “If I didn’t push, push, push, I don’t know where I would be, and especially as a new mom.”

When Spill now thinks about her 28-year-old self, the woman who broke down in the doctor’s office after being told to cancel her Switzerland elopement plans, she has one message: “Take a deep breath and trust the timing.”