



Jay Versluis bikes to Mount Sinai Medical Center in Miami Beach, where Dr. Mike Cusnir, medical director of Mount Sinai's Comprehensive Cancer Center, treated his colon cancer with immunotherapy. After nine months of infusions, Versluis has stopped the immunotherapy and has been clear of tumors since the end of 2017. Prior to this treatment, he was in a wheelchair with a grim prognosis.

#### LATEST NEWS

# Immunotherapy is giving some cancer patients a new life when they had all but given up

BY CINDY GOODMAN  
*Special to the Miami Herald*

May 25, 2018 08:00 AM  
Updated May 25, 2018 03:53 PM

For years, Jay Versluis has worked to treat his colon cancer.

Versluis, of Miami, was only 43 when he was diagnosed in 2015, leading him to multiple surgeries and rounds of chemotherapy that left him in a wheelchair with a grim prognosis.

In late 2016, Versluis sought treatment at Mount Sinai Comprehensive Cancer Center in Miami Beach, where doctors discovered his tumors had a genetic marker that could respond to immunotherapy, one of the newer ways to treat cancer.

Within the first two months of immunotherapy infusions, the tumors were gone. "The doctors were as surprised as I was," he said. "I was doing so well after only two months of treatment that I could bike to my treatments."

---

#### Latest news by email

The afternoon's latest local news

Enter Email Address

I'm not a robot

reCAPTCHA  
Privacy - Terms

SIGN UP

---

After seven more months of infusions, Versluis has stopped the immunotherapy and has been clear of tumors since the end of 2017.

While not every cancer patient is eligible for immunotherapy, some, like Versluis, are greatly improving their odds of survival when it works.

Immunotherapy, used as an alternative to, or in combination with chemotherapy, can be either immune-based cancer drugs called checkpoint inhibitors or chimeric antigen receptor (CAR) T-cell therapy, which uses patients' own immune cells. Both are therapies that enlist and strengthen the immune system to attack cancer tumors.

"We now have a better way to kill and control the cancer tumor," said Dr. Luis Raez, chief of hematology/oncology and medical director of Memorial Cancer Institute in Broward.

With chemotherapy, the traditional treatment for many cancers, more than half of people who are treated see the disease return. With lung cancer, chemotherapy typically leads to only a 5 percent improvement in people's chances of living five years, but comes with a 70 percent chance of being exposed to serious toxicities.

A newer option is an immune checkpoint inhibitor, a drug — often made of antibodies — that unleashes an immune system attack on cancer cells. The inhibitor is administered to patients through an infusion.

So far, at least five FDA-approved checkpoint inhibitors have been successful in targeting the PD-1 or PD-L1 proteins and boosting the immune system attack against cancer cells. These drugs, first approved in 2011 for treating melanoma, a deadly skin cancer, have shown promise in treating skin, lung and bladder cancer and more recently, colon and pancreatic cancers.

At Memorial Cancer Institute in Hollywood and Pembroke Pines, Raez said he and his colleagues have been using three drugs targeting the PD-1 or PD-L1 protein for the last five years on more than 200 people and have seen remarkable success with lung cancer patients who had not responded to chemotherapy or other treatments.

A key step, Raez said, is to determine if a person's lung cancer is genetically vulnerable to the checkpoint inhibitor drugs. "Those who have a high expression of this certain marker (PD-L1) on their tumor respond better," Raez said.

Dr. Mike Cusnir, medical director of Mount Sinai Comprehensive Cancer Center in Miami Beach, said immunotherapy has led to responses in patients that include complete remission.

"It is short of being unbelievable," he said, noting some of the most impressive results have been with melanoma and kidney cancers. "Those cancers were almost untreatable, and now with immunotherapy, we see survival rates are better compared to what they used to be."

Cusnir believes the future will result in FDA approval for a checkpoint inhibitor drug that would treat multiple types of cancers.

“If we see a tumor with certain genetic mutations, it could be treated with the drug regardless of the tumor’s origin. The marker would tell us that the cancer is likely to respond,” he said.

For now, Cusnir cautions that immunotherapy is not appropriate for all types for cancers and research is underway to determine why certain types are resistant, such as prostate cancer.

The second type of immunotherapy, used mostly with blood cancers, involves chimeric antigen receptor (CAR) T-cell therapy.

Patients’ T-cells are removed from their blood, then the gene for a special chimeric antigen receptor (CAR) is inserted into the T cells in the laboratory. The modified cells are infused back into the patient, bind to an antigen on the cancer cells, and kill them.

So far, CAR T-cell therapy has been used largely in patients with advanced blood cancers. But these treatments have drawn the attention of researchers because of the rapid and lasting responses they have produced in some patients — both children and adults —for whom other treatments were not working.

In just the last few years, progress with CAR T cells has greatly accelerated, with researchers developing a better understanding of how these therapies work.

“This is a big paradigm shift,” said Dr. Guenther Koehne, chief of bone marrow transplantation and hematologic oncology at the Miami Cancer Institute at Baptist Health South Florida.

“When patients didn’t respond to chemo, there was little promise before. Now with CAR T-cells, we can give them an infusion and get them back into remission with a high rate of response,” Koehne said.

For many patients with advanced blood cancers, a stem-cell transplant is standard treatment. However, about one-third of these patients experience a relapse after the transplant. Now, oncologists are using CAR T-cells to revive the tumor-fighting powers of the donors’ transplanted immune systems.

South Florida’s oncologists say each person’s treatment plan must be customized to improve their chances of survival. They also note immune therapies have side effects.

Oncologists have discovered that immunotherapy, particularly CAR T-cell therapy, can affect changes in blood pressure, mental status and fever.

**SUBSCRIBE NOW**

**Unlimited access: 99¢ for 1 month**

Comprehensive Cancer Center at the University of Miami Miller School of Medicine, said CAR T-cell therapy must be done under close supervision with intense monitoring.



Dr. Krishna Komanduri, director of the adult stem cell transplant program at the Sylvester Comprehensive Cancer Center at the University of Miami Miller School of Medicine  
Sylvester Comprehensive Cancer Center

“This is not just a benign treatment. It can put a patient into complete remission, but also lead to acute toxicities,” Komanduri said.

He said patients must be healthy enough to handle the possible side effects, which could include multiorgan dysfunction. “Any time you unleash the immune system, there are potentially dangerous consequences.”

While the treatment can be expensive, Komanduri said most insurers will cover it and efforts are underway to encourage Medicare and Medicaid to cover more of the cost.

But for those who have had a successful treatment, particularly when it's paid for by insurance, there's a tremendous sense of gratitude.

Four years ago, doctors diagnosed Richard Ronay, a 68-year-old computer programmer, with stage 4 cancer that originated in his lung and had spawned multiple tumors. When the tumors failed to respond to chemotherapy, Raez at Memorial recommended immunotherapy and removal of the tumors with a cyberknife.

The combination eliminated the tumors with minimal side effects of a rash and some fatigue. After two years of infusions, Ronay has completed immunotherapy and has been clear of tumors for almost a year.

“I don't know how it could have gone better,” Ronay said. “While I was doing chemotherapy, I thought I only had about two or three months to live. This outcome is awesome. I live a normal life with few physical limitations.”

