Monoclonal antibody treatment available for early COVID-19 at Stanford Health Care

An infusion of monoclonal antibodies can ease COVID-19 symptoms and reduce complications in recently diagnosed, non-hospitalized people at high risk. Now people can refer themselves.

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After Bella, Josipa and Mike Matusich tested positive for COVID-19, Josipa Matusich underwent monoclonal antibody treatment and avoided severe complications from the disease. She has a lung condition that increased her risk.

Steve Fisch

When Josipa Matusich, 46, learned that she and her family had been exposed to COVID-19 at the end of February, they decided to get tested. "The tests came back negative," the clinical laboratory scientist recalled. "But after a few days, I started to feel achy and had a low-grade fever." They were tested again and this time, the results were positive. Josipa; her husband, Mike; and their 16-year-old daughter, Bella, all had COVID-19.

Matusich knew that she was at risk of having severe complications because of medications she takes to combat an autoimmune disease that affects her lungs. She emailed her rheumatologist and pulmonologist, and researched the only effective treatments for early COVID-19: monoclonal antibody therapy.

At the same time, Upinder Singh, MD, the Stanford Medicine division chief of infectious disease as well as a professor of medicine and of microbiology and immunology, was conducting her own investigation.

"Every day we generate a list of Stanford patients newly diagnosed with COVID-19," Singh said, "and we consider a variety of factors including their age and any other medical conditions. I was reaching out to these patients to talk about monoclonal antibody therapy. Josipa stood out to me, and I gave her a call."

Monoclonal antibodies are immune molecules that are produced in a laboratory and designed to mimic the body's natural response to infection. In the case of COVID-19, the antibodies are made to recognize and bind to a part of the SARS-Co-V2 virus that enables it to infect human cells. Clinical trials conducted at Stanford Medicine and elsewhere indicate that this binding blocks the progression of the disease and reduces the chance of severe complications in high-risk people if administered early.

The treatment is for patients who have mild to moderate symptoms of the disease but an elevated risk of complications. They receive the antibodies through a one-time intravenous infusion within 10 days of diagnosis. The antibodies reduce the chance of hospitalization and death, speed healing, and lower the likelihood that an infected person transmits the virus to others.

"More than a year into this pandemic, we have some very effective vaccines," Singh said. "But we haven't seen similar advances in treatment of mild to moderate COVID-19. Now we finally have something to offer high-risk patients. These monoclonal antibodies neutralize the virus very effectively."

In November, the Food and Drug Administration issued the first of several emergency use authorizations for monoclonal antibodies to treat mild to moderate COVID-19 in non-hospitalized people age 12 and older who weigh at least 88 pounds and are at an increased risk.

People at high risk for complications include those who are over 65; have kidney disease, diabetes, heart disease and/or high blood pressure; are immunocompromised; or have a high body mass index. But not all those who qualify for monoclonal antibody therapy choose to receive it.

"About half the people I call say, 'Oh, I don't need that. I don't feel so bad,'" Singh said. "Unfortunately, some go on to develop severe symptoms and end up hospitalized. Even young people can progress to life-threatening complications."

Although her symptoms were mild, Matusich was eager to receive the treatment at Stanford Medicine's infusion center at Hoover Pavilion.

“I’ve been on immunosuppressants for basically my whole life,” she said. “So I was very happy when Dr. Singh called me to set up an appointment. She was so kind and concerned for me and my whole family.”

“Josipa really understood the science behind the therapy,” Singh recalled. “She was a good advocate for herself and her family.” Although Mike Matusich was not high risk, he enrolled in the clinical trial evaluating monoclonal antibodies for mild to moderate COVID-19. As a study participant, he received the treatment and made four more visits to the infusion center to donate blood so doctors like Singh could monitor his immune responses. Their daughter recovered without treatment.

The one-time infusion was a breeze, Josipa Matusich said. “The infusion center is easy to find, and parking is available right there. A nurse came out to escort me inside. It was a good experience.”

Within a few days, Matusich’s symptoms began to ease. But her pulmonologist is still treating her for lingering COVID-related breathing problems.

“I’d say I’m pretty much back to normal except for my lungs,” Matusich said. “I knew, as a person with preexisting lung problems and a history of immunosuppressants, I was high risk for severe COVID. But I was less worried about complications after getting the monoclonal antibody treatment.”

Singh added, “I tell people that I would take this treatment myself if I were high risk and had just been diagnosed with COVID. I would give it to my parents. Frankly, I would travel to get this treatment. I’m just so glad we finally have something safe and effective that we can offer people like Josipa.”

Monoclonal antibody therapy at Stanford Health Care is currently available at no out-of-pocket cost to patients. People at high risk for complications can learn more about monoclonal antibody treatment and access a self-referral form here: https://stanfordhealthcare.org/COVID19mab.