

## **Billings patients have access to immunotherapy - a promising treatment for certain cancers**

**By ZACH BENOIT Jul 21, 2015 Updated Apr 25, 2016**

A new type of cancer drug that shows great promise in extending the lives of some patients is now being used in Billings.

Called immunotherapy, the drugs prompt a patient's own immune system to attack cancer cells, often by either boosting the immune system or using forms of other engineered diseases to spur it into action.

"To think that we would treat lung cancer with immunotherapy now is crazy," said Dr. Patrick Cobb, an oncologist at St. Vincent Healthcare's Frontier Cancer Center. "Twenty years ago, nobody thought this would work. The concept made sense, but they didn't see how it would work."

Cobb uses one such immunotherapy drug, called Opdivo, to treat a handful of lung cancer patients.

The U.S. Food and Drug Administration approved the drug in March 2015 to treat serious lung cancer in some patients and trials are underway with other forms of cancer. The drug was previously approved to treat melanoma.

While long-term studies aren't yet available, Cobb said that the results are promising. For patients who went through two rounds of chemotherapy, 9 percent were still alive 18 months later.

For those using Opdivo, 30 percent were still alive in the same time frame.

**Darlene Spieler**, of Billings, was diagnosed with stage IV lung cancer and is the first of just five patients using the immunotherapy treatment with Cobb. She started the treatment in May and, after her first CT scan on July 13, is encouraged by the results.

Already a cancer survivor — she beat bladder cancer in 2001 — Spieler was diagnosed with lung cancer two years ago.

"There's not too much they can do for lung cancer," she said. "But it is helping. I had that first scan and it shows that one of the tumors is leaving."

The treatment works by getting the body's T cells to destroy cancer cells, something they don't normally do.

Cobb said that's because the cancer cells — or at least the ones on which the immunotherapy treatment works — have what is called a PD-1 protein that effectively hides them from T cells. The treatment breaks through that shield.

"It puts out a signal, it's like a cloaking device on Star Trek," Cobb said. "The drugs interrupt the PD-1 signal and another interrupter, which allows the T cells to come in and destroy the cell. It gets rid of this cloaking that certain cells have."

However, there are a handful of factors keeping the treatment from gaining wider use.

First of all, it — along with other immunotherapies — doesn't work on everybody. According to the American Cancer Society, results from a recent study saw the tumors of lung cancer patients whose disease had progressed after earlier treatment either shrink or disappear in 15 percent of the participants, while about half of those in the study "had responses lasting for six months or longer."

It's not yet known exactly why the treatments only work for certain people, but doctors hope to develop a test that will identify those it could benefit, according to a May 31 article in the New York Times.

In addition, the drugs are "frightfully expensive" when compared to more common methods, Cobb said.

He estimated that six months of chemo treatments cost about \$6,000, while the drugs cost \$60,000 over the same time.

Last, as with many drugs, the treatment comes with some side effects. Opdivo can, among other things, cause fatigue, shortness of breath, decreased appetite, coughing, nausea and constipation, according to the ACA.

In rare cases it can also cause the immune system to attack healthy tissue, such as in the lungs or kidneys. Cobb said those incidents are usually treated with steroids.

Spieler said she's suffered minimal side effects so far, mostly just some early fatigue and her "eyes acting up a bit."

"I eat. I'm not sick to my stomach or anything like that," she said.

*-[https://billingsgazette.com/news/local/billings-patients-have-access-to-immunotherapy-a-promising-treatment-for-certain-cancers/article\\_9a57f20d-6d88-5297-8375-7b8e2824b054.html](https://billingsgazette.com/news/local/billings-patients-have-access-to-immunotherapy-a-promising-treatment-for-certain-cancers/article_9a57f20d-6d88-5297-8375-7b8e2824b054.html)  
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