Drug shows early promise for advanced lung cancer

April 20 2015, by Amy Norton, Healthday Reporter

Keytruda is already approved to treat melanoma.

(HealthDay)—A new drug that boosts the immune system's cancer-fighting potential is showing early promise for some patients with advanced lung cancer.

The drug, marketed as Keytruda, was recently approved in the United States for treating advanced melanoma, but is not yet approved for lung cancer.

Still, experts were encouraged by preliminary findings reported Sunday at the annual meeting of the American Association for Cancer Research in Philadelphia, and published simultaneously in the *New England Journal of Medicine*.

In a study of nearly 500 patients with advanced lung cancer, those with high levels of a particular protein in their tumor cells responded well to

the drug, researchers reported.

Close to half of these patients saw their tumors shrink, and so far, the effect has typically lasted beyond a year.

"The duration of patients' response is particularly exciting," said lead researcher Dr. Edward Garon, an associate professor of medicine at the University of California, Los Angeles.

Dr. Benjamin Creelan, a lung cancer researcher who was not involved in the study, agreed.

"The durability of these responses is impressive," said Creelan, who is with the thoracic oncology program at the Moffitt Cancer Center, in Tampa, Fla.

The results add to recent advances in battling advanced lung cancer—a disease that historically has had a poor prognosis. According to the U.S. National Cancer Institute, only about one-third of patients see any tumor shrinkage with standard chemotherapy, and even with treatment, people typically survive for a year.

Some newer drugs that target certain abnormal proteins on lung cancer cells have become available, Garon noted, but not too many patients have those specific abnormalities.

Keytruda (pembrolizumab) belongs to a new group of drugs that block a "pathway" called PD-1, which then frees up the immune system to attack cancer cells. Last September, the U.S. Food and Drug Administration approved Keytruda for treating advanced melanoma that no longer responds to other drugs.

The drug's manufacturer, Merck, priced it at $12,500 a month.

Last month, the FDA approved another PD-1 drug—nivolumab (Opdivo)—for treating some cases of advanced lung cancer.

In the new study, Creelan said, the effectiveness and safety of Keytruda, which is given by IV, "appeared comparable to nivolumab."

And that's good news, Creelan said. "Trial results like these represent a revolution in care of lung cancer patients," he said.

The Merck-funded study involved 495 patients in the advanced stages of non-small-cell lung cancer, which accounts for the vast majority of lung cancer cases in the United States.

All of the patients received infusions of Keytruda every two to three weeks. Garon's team also analyzed their tumor samples to measure levels of a protein called PD-L1.

The point was to see whether patients' PD-L1 levels correlated with their likelihood of responding to the treatment, Garon explained. If they did, that could give doctors a way of targeting the drug to patients likely to benefit.

As it turned out, PD-L1 was a good predictor.

Of the whole study group, 19 percent responded to the treatment, meaning their tumors shrank by at least 30 percent, Garon said.

But among patients with PD-L1 activity in at least half their tumor cells, 45 percent responded to the drug.

"It's exciting to be able to identify a group of patients who are likely to do well," Garon said.

After about a year of follow-up, most of the study patients with high PD-L1 levels were still alive, Garon said.

The researchers are still tracking what the typical survival might be. They're also continuing to study Keytruda's potential benefits for patients with lower amounts of PD-L1 in their tumor cells.

The most common side effects were fatigue, skin rash and appetite loss. But about 10 percent of patients had more severe side effects, Garon said. Nine developed serious cases of lung inflammation, including one who died.

Although Keytruda is on the market, it is not specifically approved for lung cancer yet. And the PD-L1 test is not commercially available, Garon said.

For people with lung cancer, Garon and Creelan pointed to the bigger picture: New approaches to battling the disease are under development and starting to come to the market.

"I think we're going to be seeing more options opening up for these patients," Garon said.

More information: The U.S. National Cancer Institute has more on lung cancer treatment.