

Targeted drug tagrisso could be advance against lung cancer

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The best treatment for a genetically driven form of lung cancer

continues to show lasting benefits, a new clinical trial update shows.

Tagrisso (osimertinib) nearly doubles [disease-free survival](#) in earlier-stage patients whose lung [cancer](#) is driven by a mutation in their EGFR ([epidermal growth factor receptor](#)) gene, researchers report.

After four years of follow-up, disease-free survival was 73% in the Tagrisso group versus 38% in patients who received a placebo, updated results showed.

Taken as a pill, the drug also cut patients' [cancer recurrence](#) in half compared to placebo, 27% versus 60%. In addition, patients were less likely to develop cancers in other parts of the body.

"One of the main benefits of this drug is that it has good brain penetration and it's a whole-body treatment," said [Dr. Nicholas Rohs](#), an assistant professor of oncology with the Icahn School of Medicine at Mount Sinai, in New York City. "Often when this disease relapses, it can relapse in the brain, in the bones or other different organs, where it's much more difficult to treat."

About 10% to 15% of lung cancers in the United States are driven by an EGFR mutation, according to the American Lung Association. These patients tend to have minimal to no smoking history.

EGFR is a protein on cells that helps them grow. This mutation causes cancer by promoting runaway growth.

Tagrisso works by interrupting the mutated EGFR's effect on [cancer cells](#).

"There's a signal in these cells saying grow, grow, grow, grow, grow because of this mutation in the EGFR domain," said Rohs, who was not

part of the study. "We basically block that signal and say, 'Hey, stop telling this cell to grow out of control.'"

The U.S. Food and Drug Administration [first approved Tagrisso](#) in 2018 for treatment of patients with metastatic solid-tumor lung cancers driven by EGFR mutations.

A second clinical trial then commenced to see whether Tagrisso could be used to help prevent lung cancer recurrence in patients with earlier-stage disease, following surgery to remove their tumors.

"We've been using this with great success in the metastatic setting for quite a while," Rohs said. "And when we find something works well in a more advanced setting, we often try and see if there's any way we could trickle down into the earlier-stage setting."

In the study, nearly 700 patients with stage IB to IIIA EGFR-driven lung cancer were randomly assigned to take 80 milligrams of Tagrisso or a placebo once a day for three years.

The results of that follow-up trial were so promising that the FDA approved Tagrisso for use in earlier-stage lung cancers in 2020, following early release of preliminary results.

But the clinical trial continued, to see if Tagrisso would continue to be effective over time.

The latest analysis, from researchers led by [Dr. Roy Herbst](#), deputy director of the Yale Cancer Center in New Haven, Conn., was published online recently in the [Journal of Clinical Oncology](#).

"This was now two more years of follow-up, roughly, which basically showed that when they followed patients as long as they had intended to,

that the results held true," said [Dr. William Dahut](#), chief scientific officer for the American Cancer Society.

The trial update also showed that Tagrisso's side effects were manageable, the experts said.

The most common side effects were diarrhea, itchy or inflamed skin, and cough or upper respiratory tract infection, the researchers found.

The drug can also cause liver irritation and can suppress blood cell counts, Rohs said.

"People actually stayed on the drug longer than they stayed on the placebo," Dahut said of the full trial results. "What that tells me is that the drug—by preventing the cancer from coming back, even though there were some [side effects](#)—was more tolerable than the fact that people had to stop the placebo and then get treatment where their cancer had recurred. So overall, it's a net positive for patients."

Tagrisso has become a front-line treatment for solid-tumor, EGFR-driven [lung](#) cancer, but Rohs is looking forward to better blood tests that will help doctors direct the pill to the right patients.

A month's supply of Tagrisso costs more than \$16,000 if paying straight out-of-pocket, according to [WellRx.com](#) and [GoodRx.com](#).

"Some of these patients are cured of [lung cancer](#)," Rohs said. "We're giving them a cancer-directed therapy and they don't have cancer anymore. We have to get better at finding out who to give this to."

The drug's maker, AstraZeneca, paid for the clinical trial.

More information: The American Lung Association has more about

[EGFR-driven lung cancer.](#)

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