Medical Xpress

Immunotherapy drug can beat back early-stage lung cancer

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An immunotherapy drug is the first to significantly reduce the risk of

cancer recurrence or death in people with early-stage lung cancer, researchers report.

Atezolizumab reduced by 34% the risk of disease recurrence or death in a certain group of people with stage II to IIIA non-small cell lung cancer —those whose tumors carry a protein that can help malignant cells evade detection by the immune system, according to new findings.

By comparison, standard chemotherapy reduces the risk of future cancer or death by just 16%, researchers said.

Pending U.S. Food and Drug Administration approval for this use, atezolizumab (Tecentriq) could become standard treatment for patients whose genetics hamper the immune system's ability to seek out and kill cancer cells, said lead researcher Dr. Heather Wakelee, chief of oncology at the Stanford University Medical Center.

"That is a more profound benefit than we saw with chemotherapy, and therefore to me it would be something I would want to be able to offer my patients in that setting," Wakelee said.

This clinical trial "is the first time we've seen an immunotherapy that's effective in treating early-stage non-small cell lung cancer," said ASCO Chief Medical Officer and Executive Vice President Dr. Julie Gralow. "This is an important advance in understanding the role of immunotherapy in earlier-stage lung cancer, and potentially a step forward for many patients with lung cancer."

Lung cancer is the leading cancer killer in the United States, accounting for a quarter of all cancer deaths, the American Lung Association says. Non-small cell lung cancer makes up 4 out of 5 lung cancer cases.

Immune checkpoint inhibitors like atezolizumab work by removing the

brakes on the immune system that are intended to prevent an immune response so strong it starts attacking healthy cells in the body.

In this case, lung cancers are known to use a protein called PD-L1 to evade the immune system. About half of people diagnosed with early-stage lung cancer express PD-L1 on their tumor cells, researchers said in background notes.

The PD-L1 protein is typically only present in healthy cells; when white blood cells see the protein on a cancer cell, they mistake it for normal and don't attack. Atezolizumab blocks the signal sent by PD-L1, allowing the immune cells to recognize the cancer and kill it off.

The drug has already shown benefits in the treatment of later-stage lung cancer.

The new findings will be presented at the virtual annual meeting of the American Society of Clinical Oncology.

For the study, researchers recruited 1,280 lung cancer patients who'd had their tumors surgically removed and had gone through chemotherapy. Half randomly were chosen to receive atezolizumab, while the rest received supportive care.

Stage II-IIIA non-small cell lung cancer patients with levels of PD-L1 of 1% or greater in their tumors responded well to atezolizumab, with their risk of recurrence or death reduced by 34% compared to the control group.

Among all patients with stage II-IIIA lung cancer, those who got atezolizumab had a 21% reduction in the risk of recurrence or death.

The findings represent "the first global phase III trial using an immune

checkpoint inhibitor to show a disease-free survival outcome in early-stage non-small cell lung cancer," Wakelee said.

The drug is tough on patients, however.

Nearly 22% of patients suffered side effects that were severe to life-threatening, compared with 11.5% of people in the control group receiving supportive care. Nearly 20% of patients had to stop taking atezolizumab due to side effects.

Wakelee said this drug represents an opportunity to save the lives of lung cancer patients, if their malignancies are caught in time.

"It is important to emphasize that patients need screening to detect lung cancer early, when it is potentially curable," Wakelee said. She added that biopsies and testing should be done to see if people carry immune markers like PD-L1 that would make them good candidates for immunotherapy.

The clinical trial was funded by the drug's maker, Roche. Findings presented at medical meetings are considered preliminary until published in a peer-reviewed journal.

More information: The U.S. National Cancer Institute has more about immune checkpoint inhibitors.

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