

Adding cetuximab to chemotherapy reduces advanced lung cancer death risk by 13 percent

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Patients with advanced non-small cell lung cancer who are given cetuximab (Erbix) in addition to chemotherapy are 13% less likely to die than those who receive chemotherapy alone, regardless of which chemotherapy drug cocktail is used, new research finds. They also experience slower disease progression and an increased chance of tumour shrinkage.

While a large study last year found that patients lived five weeks longer when the targeted drug cetuximab was added to a particular chemotherapy combination, it has not been clear whether it matters which chemotherapy combination the drug is added to, how its addition affects [disease progression](#) and what the exact magnitude of the survival benefit is.

Researchers combined the data from four trials that investigated the addition of cetuximab to various different platinum-based chemotherapy combinations in first-line treatment of advanced non-small [cell lung cancer](#). The findings of the meta-analysis, which included a total of 2,018 patients, were presented in Berlin today (Tuesday 22 September) at Europe's largest cancer congress, ECCO 15 - ESMO 34.

Meta-analyses, which integrate the results of several studies, are important for corroborating the findings of key studies and give a more accurate estimate of a drug's true effects.

"We found that patients who got cetuximab had a 13% lower chance of dying within the three years of follow-up compared with those who got chemotherapy alone," said Professor Jean-Louis Pujol, chair of thoracic oncology at Montpellier Academic Hospital and professor of medicine at Montpellier University in France. "For lung cancer, considering that this disease is very resistant to treatment and that the prognosis is very poor, an improvement of that magnitude is meaningful. It's about the same as what you get from giving chemotherapy after surgery and that's accepted as standard treatment."

The median survival, a more crude measure of the drug's effect on death, was 9.4 months in the chemotherapy alone group and 10.3 months in the chemotherapy plus cetuximab group.

The meta-analysis also uncovered a 10% improvement in progression free survival, which measures the length of time a patient survives before the cancer gets worse. None of the individual studies were powerful enough to identify any effect on this outcome on their own, as it is difficult to observe this in lung cancer because the disease progresses so quickly.

The study also found that patients who received the addition of cetuximab were 48% more likely to experience tumour shrinkage.

"Fewer than 30% of patients with advanced non-small cell lung cancer respond to chemotherapy, so even though adding cetuximab increases the chance by another 48%, pushing the response rate up to about 45%, this shows that non-small lung cancer remains a disease that is very resistant to treatment," Prof Pujol said.

The benefits for all these outcomes were seen across all subtypes of the disease.

Lung cancer is particularly difficult to treat and is the leading cause of cancer death worldwide, killing an estimated 1.31 million people a year. Patients with advanced disease have few treatment options and about 70% of them die within one year of diagnosis. Fewer than two percent survive five years. Platinum-based chemotherapy is the standard treatment.

Non-small cell lung cancer is the most common form of lung cancer and most patients have tumours that over-express the epidermal growth factor receptor (EGFR). Cetuximab belongs to a new class of anti-cancer drugs known as monoclonal antibodies and works by blocking the EGF receptor to interrupt uncontrolled cell division.

Studies of other EGFR blockers have not shown any benefit when they are combined with chemotherapy in first-line treatment of advanced non-small cell lung cancer, although they have been shown to help in second-line treatment. One explanation for why cetuximab has shown benefit in this case while the other drugs targeting the receptor haven't could be because it blocks the receptor in a different location. The drug is currently used to treat metastatic colorectal cancer and head and neck cancer. Frequent side effects include an acne-like rash.

"We now have enough evidence to recommend cetuximab for patients with advanced non-small cell [lung cancer](#) and we have confirmation that it doesn't matter what kind of [chemotherapy](#) it is used with," Prof Pujol said. "What we now need to investigate is whether this drug could also help at early stages of the disease."

Source: ECCO-the European CanCer Organisation

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