Immunotherapy for 'difficult to treat' lung cancer patients improves long-term survival: Clinical trial

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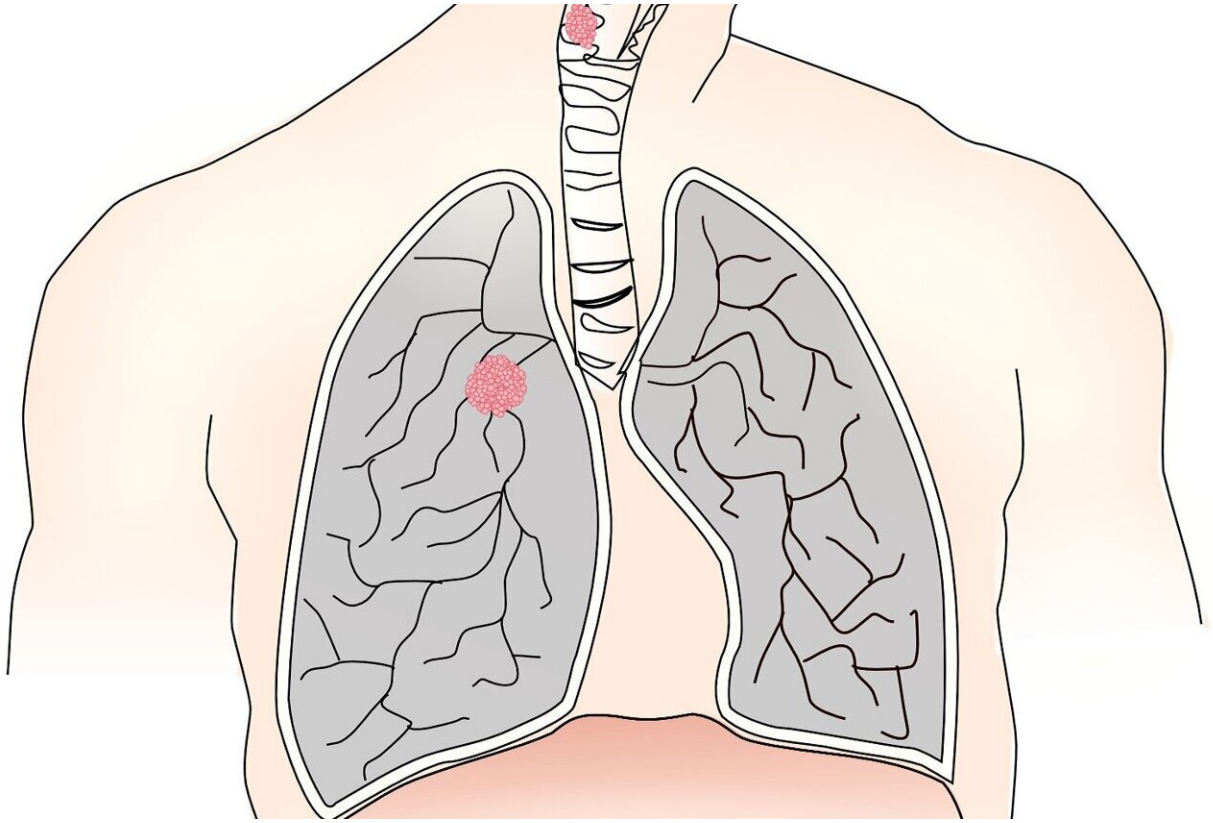

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A global study, led by UCL and UCLH, has shown that the cancer immunotherapy atezolizumab significantly improved the overall survival

of advanced stage non-small cell lung cancer patients who were not able to be treated with platinum-containing chemotherapy, when compared to single-agent chemotherapy.

The trial results, published today in *The Lancet*, are good news for non-small cell lung cancer patients who are not eligible for standard of care platinum-based chemotherapy, due to concerns about their ability to withstand the treatment.

Lung cancer is the leading cause of cancer death worldwide, with around 2.2 million new cases and 1.8 million deaths a year. The majority of patients present with advanced stage non-small cell lung cancer (NSCLC).

For the fittest patients with advanced stage NSCLC, first-line immunotherapy with or without platinum-based doublet chemotherapy (PDC) is now established as the standard of care treatment. This follows several randomized trials that were limited to 'fit' participants with a median age of 65 or younger and were able to tolerate PDC.

However, more than 40% of advanced stage NSCLC patients are in poor health and are often elderly with significant medical co-morbidities. Treatment with standard PDC is not suitable for many of these patients because of poor tolerance or toxicity concerns, leaving them with limited treatment options. They are frequently treated with less effective single-agent chemotherapy or offered best supportive care.

Currently, most treatment guidelines do not recommend immunotherapy treatment due to lack of randomized results to indicate that it is safe, well tolerated and increases overall survival for this poor prognosis population.

This is the first reported randomized phase III trial of first-line

immunotherapy treatment with atezolizumab (also known as Tecentriq) in an advanced NSCLC population deemed unfit for standard platinum-chemotherapy. The trial sought to establish the efficacy, safety and overall survival rate of first-line immunotherapy treatment with atezolizumab compared with single-agent chemotherapy in advanced stage NSCLC patients. Patients were randomized 2:1, with 302 patients receiving atezolizumab and 151 receiving single-agent chemotherapy.

The study showed that atezolizumab significantly improved overall survival and resulted in a clinically meaningful long-term survival benefit, with twice as many patients (24%) who were treated with atezolizumab remaining alive at two years compared to those treated with chemotherapy (12%), despite over 50% of chemotherapy patients who were still alive at two years receiving subsequent immunotherapy.

Professor Siow Ming Lee (UCL Cancer Institute and UCL Hospitals), who chaired the study Steering Committee and conceptualized the study design, said, "For over two decades, clinical trials have failed to provide significant therapeutic benefits to older NSCLC patients with poor health who are unfit for standard platinum doublet chemotherapy."

"IPSOS is the first randomized trial to show that immunotherapy treatment with first-line atezolizumab treatment significantly improves overall survival compared to single-agent chemotherapy for these poor prognosis patients, with twice as many remaining alive at two years. The treatment also resulted in stabilized or improved health-related quality of life measures, and no new safety concerns were identified."

More information: First-line atezolizumab monotherapy versus single-agent chemotherapy in patients with non-small-cell lung cancer ineligible for treatment with a platinum-containing regimen (IPSOS): a phase 3, global, multicentre, open-label, randomised, controlled study, *The Lancet* (2023). DOI: 10.1016/S0140-6736(23)00774-2

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