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Some lung cancer patients benefit from immunotherapy even after disease progression

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Some advanced lung cancer patients benefit from immunotherapy even after the disease has progressed as evaluated by standard criteria, according to research presented at the European Lung Cancer Conference (ELCC).[1] The findings pave the way for certain patients to continue treatment if the disease is not progressing according to new, more specific, criteria.

The Response Evaluation Criteria in Solid Tumours (RECIST) evaluates changes in tumour size and identifies whether patients are responding to treatment or progressing. An enlarging tumour on a CT scan signals that patients are progressing, and treatment is changed to best supportive care or a different drug. Immune-related RECIST was developed to account for the fact that tumours enlarge temporarily in patients taking immunotherapy.

"Immunotherapy causes lymphocytes, the white blood cells that fight against tumour cells, to infiltrate the tumour leading to a transient increase in size," said lead author Dr Angel Artal-Cortes, Medical Oncologist, University Hospital Miguel Servet, Zaragoza, Spain. "With chemotherapy, tumour enlargement indicates that the tumour is growing and the disease is progressing."

The study presented today is a post hoc analysis of the phase 2 POPLAR trial, which randomised patients with non-small cell lung cancer

(NSCLC) who had progressed on platinum-based chemotherapy to second-line treatment with the anti-programmed death ligand 1 (PD-L1) antibody atezolizumab or chemotherapy with docetaxel. Response to treatment was assessed with RECIST and immune-related RECIST criteria. As previously reported, atezolizumab significantly improved survival compared with docetaxel.[2]

The study protocol allowed patients to continue atezolizumab treatment if they had not progressed according to immune-related RECIST and had no major toxicities, even if conventional RECIST indicated progression. The post hoc analysis evaluated overall survival and performance status in the 61 patients who continued atezolizumab after standard progression. The investigators found that the tumours in 82% of these patients subsequently stabilised or shrank. Median overall survival was 11.8 months and objective response rate increased when immune-related RECIST was used.

Artal-Cortes said: "We found that there was a benefit for some patients continuing with the drug even after a CT scan suggested progressive disease. Atezolizumab can control lung cancer for a longer period of time than was initially thought. Patients who were maintained on atezolizumab had no major increase in toxic side-effects since most of these occur in the first few months."

He concluded: "Our results suggest that immune-related RECIST should be kept in mind to decide whether or not to continue atezolizumab treatment in patients who are responding to the drug, have a good performance status, no serious toxicities from the drug, and no major symptoms from the tumour."

Commenting on the research, Marina Garassino, MD, Head of Thoracic Medical Oncology, National Cancer Institute of Milan (Fondazione IRCCS Istituto Nazionale dei Tumori), Italy, said: "This study shows that

conventional RECIST may not be the best criteria to evaluate response to immunotherapy. It found that immune-related RECIST better predicted outcome with immunotherapy than RECIST."

"The research suggests that immunotherapy can be prolonged when the new criteria are used," she added. "Patients continuing atezolizumab based on immune-related RECIST benefited from the drug even though it was a progressive disease by the RECIST criteria. This was a post hoc analysis of a phase 2 trial and so the results need to be confirmed in other studies."

More information: 1 Abstract 96PD - 'Evaluation of non-classical response by immune-modified RECIST and efficacy of atezolizumab beyond disease progression in advanced NSCLC: results from the randomized Phase II study POPLAR' will be presented by Dr Angel Artal-Cortes during the Poster Discussion session 'Epidemiology and innovations in biomarker development': on Saturday, 6 May, 16:45 (CEST).

2 Fehrenbacher L, et al. Atezolizumab versus docetaxel for patients with previously treated non-small-cell lung cancer (POPLAR): a multicentre, open-label, phase 2 randomised controlled trial. *Lancet*. 2016;387(10030):1837-1846. DOI: 10.1016/S0140-6736(16)00587-0. Epub 2016 Mar 10.

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