Immunotherapy combination shows benefit for patients with advanced melanoma

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A combination of two drugs that target different proteins on immune system T cells kept advanced melanoma in check significantly longer than one of the drugs alone in a phase 3 clinical trial involving 714 patients. Dana-Farber Cancer Institute investigators co-led the study. Findings will be presented at the American Society of Clinical Oncology (ASCO) Annual Meeting, being held virtually June 4-8, 2021, and are included in the ASCO press program.

The trial, known as the RELATIVITY-047 study, compared the effectiveness of the drug nivolumab, an immune checkpoint inhibitor, by itself against a combination of the LAG-3 blocking antibody relatlimab and nivolumab given as a fixed-dose. Trial participants who received the combination therapy as their initial treatment had a median progression-free survival—the time in which the disease did not worsen—of 10.1 months, compared to 4.6 months for those treated with nivolumab alone, investigators found. Twelve months after treatment, 47.7% of patients treated with the two-drug regimen had no advance of their disease, compared to 36% of those who received only nivolumab. The side effects of the combination were generally manageable.

Both nivolumab and relatlimab are antibody drugs. They target separate proteins on T cells to revive and reinvigorate the cells' natural attack on tumor cells. Nivolumab targets PD-1, a checkpoint protein that prompts T cells to call off their attack when it binds to a corresponding protein on tumor cells. Relatlimab targets the protein LAG-3, an immune checkpoint receptor protein that functions to control T-cell response,

activation and growth.

"Immune checkpoint inhibitors such as nivolumab have revolutionized the treatment of patients with advanced melanoma," said F. Stephen Hodi, MD, the director of the Melanoma Center and the Center for Immuno-Oncology at Dana-Farber and the co-senior author of the study.

"However, novel combinations of checkpoint inhibitors with other immune agents are needed to improve results. The RELATIVITY trial is the first study of a combination treatment to demonstrate a clinically important benefit by simultaneously inhibiting the LAG-3 and PD-1 pathways."

Provided by Dana-Farber Cancer Institute

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