Clinical trial assesses anti-melanoma vaccine's ability to induce an anti-cancer immune response

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Cancer vaccines prime the immune system to attack cancer cells, decreasing tumor progression. IL-12p70, a molecule produced by certain types of immune cells, has been shown to reduce tumor progression, but delivering it as part of a cancer vaccine has been limited because of its toxicity in high doses.

In the current issue of the *Journal of Clinical Investigation*, Dr. Beatriz Carreno and colleagues at Washington University report the results of a clinical trial that tested a vaccine to treat newly diagnosed advanced melanoma. A portion of each patient's own immune cells, known as dendritic cells, were modified to stimulate increased production of IL-12p70 by their immune system. This method avoided the toxicity seen with previous approaches. Carreno and colleagues found that IL-12p70 enhanced the effectiveness of the vaccine. Six out of seven patients exhibited a vaccine-stimulated immune response and three patients exhibited clinically significant changes in the progression of their tumors. These results underscore the role of IL-12p70 in the development of an anti-cancer immune response.

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More information: IL-12p70–producing patient DC vaccine elicits Tc1-polarized immunity, J Clin Invest. doi:10.1172/JCI68395

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