How an effective cancer therapy may damage the heart

Cytotoxic T-lymphocyte antigen 4 (CTLA-4) is a protein receptor on T immune cells that prevents the cells from killing other cells, such as cancer cells. Blocking CTLA-4 with a specific antibody is an effective
treatment for some cancers, but it can damage the heart. New research published in *The FASEB Journal* reveals the mechanisms involved in this side effect—a finding that could be used to help prevent it.

Experiments conducted in mice showed that blocking CTLA-4 activates certain T cells called Th17 cells, which increase inflammation. Inhibiting this activation reversed anti-CTLA-4–mediated heart damage.

"Targeting this axis could potentially offer a preventive or therapeutic strategy for managing cardiotoxicity in patients undergoing anti-CTLA-4-based immune checkpoint inhibitor therapy," the authors wrote.


Provided by Wiley

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