

# This Discovery Of Immune Cells May Start The Development Of New Anti-cancer Therapies

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Recently, in research published in the *Immunity*, researchers from University College London in the United Kingdom revealed that a special type of immune cells can be activated to kill cancerous cells through research on mice. Related research may give hope for the development of new types of anticancer therapy.

Researcher Sergio Quezada said that after immunotherapy, some immune cells that have traditionally been considered to assist or regulate, such as some CD4 + T cells, become toxic and can directly kill cancer cells. Now researchers have revealed the molecular and cellular mechanisms behind its activity; researchers have found that T cell growth factor IL-2 and transcription factor Blimp-1 are mainly responsible for turning on the potential killing activity of CD4 + T cells in cancerous tumors.

Researchers point out that these immune cells have amazing potential for killing cancer cells, but to maximize their potency, we need to know how the mechanism is activated; this study provides evidence and reasons to use Blimp-1 to maximize the anti-tumor activity of CD4 + T cells; researchers are currently researching to develop new personalized cell therapies that increase Blimp-1 activity to drive potential tumor control. T cells are a special class of lymphocytes that play a key role in the body's immune response. In immunotherapy, T cells can be modified to protect against cancer, and these cells can "patrol" the body and find infected cells to kill it; however, T cells do not recognize most cancers because cancers originate from the body's own tissues and appear normal for most T cells, which may pose a great challenge to T cell therapy, so researchers need to find new ways to drive T cells to directly kill cancer cells.

Researcher Professor Karl Peggs said that cell therapies have only recently entered the clinic and become mainstream. There are still many unknowns on how to optimize these therapies, especially how to improve their therapeutic activity in solid tumor cancers; the results of this paper can help researchers gain insight into the regulators of T cell differentiation, thus providing corresponding novel elements to help target and enhance the efficacy of therapies. Such studies can also help scientists understand the intricacies of the body's immune system and how it can be used to effectively kill cancer cells.