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# PDCD-1 Knockout Autologous T-lymphocytes

National Cancer Institute

## Source

National Cancer Institute. *PDCD-1 Knockout Autologous T-lymphocytes*. NCI Thesaurus. Code C128281.

A population of engineered autologous T-lymphocytes in which the gene encoding for the programmed cell death protein 1 (PDCD-1) is deleted, with potential immunomodulating activity. Following collection of peripheral blood lymphocytes and selection of T-cells, the PDCD-1 gene was knocked out and the T-cells were expanded. Upon reinfusion of the PDCD-1 knockout T-lymphocytes, these T-cells target and lyse cancer cells. The PDCD-1 protein, found on activated T-cells and often overexpressed on T-cells in cancer patients, negatively regulates T-cell activity; it plays a key role in immune evasion and prevents tumor cell lysis. PDCD-1 knockout enhances cytotoxicity and T-cell-mediated anti-tumor immune responses.