Cancer Immunotherapy: T cell against cancer

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Abstract

☐ The T lymphocyte, especially its capacity for antigen-directed cytotoxicity, has become a central focus for engaging the immune system in the fight against cancer. Basic science discoveries elucidating the molecular and cellular biology of the T cell have led to new strategies in this fight, including checkpoint blockade, adoptive cellular therapy and cancer vaccinology. This area of immunological research has been highly active for the past 50 years and is now enjoying unprecedented bench-to-bedside clinical success. Here, we provide a comprehensive historical and biological perspective regarding the advent and clinical implementation of cancer immunotherapeutics, with an emphasis on the fundamental importance of T lymphocyte regulation. We highlight clinical trials that demonstrate therapeutic efficacy and toxicities associated with each class of drug. Finally, we summarize emerging therapies and emphasize the yet to be elucidated questions and future promise within the field of cancer immunotherapy.

☐ **Subject Areas:** Genetic and Cell Biology.

☐ **Keywords:**

- T lymphocyte
- immunotherapeutics
- antigen-directed cytotoxicity
- Solid Cancer

References:

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