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Anti-CD3/Anti-EGFR-bispecific Monoclonal Antibody-armed Activated Autologous T-lymphocytes

National Cancer Institute

Source

National Cancer Institute. *Anti-CD3/Anti-EGFR-bispecific Monoclonal Antibody-armed Activated Autologous T-lymphocytes*. NCI Thesaurus. Code C125185.

Autologous activated T-cells that have been coated with bispecific antibodies (BiAb) comprised of an anti-CD3 monoclonal antibody heteroconjugated to an anti-epidermal growth factor receptor (EGFR) monoclonal antibody, with potential antineoplastic and immunomodulating activities. Upon administration, anti-CD3 x anti-EGFR bispecific antibody-armed activated T-cells (AATC) attach to and selectively cross-link CD3-expressing T-cells and EGFR-expressing tumor cells. This results in the activation of cytotoxic T-lymphocytes (CTLs) and selective cytotoxicity towards the EGFR-expressing tumor cells. In addition, cytokine and chemokine secretion by the T-cells further activates the immune system, which leads to the recruitment and activation of CTLs, and additional CTL-mediated tumor-specific cell lysis. CD3 is part of the functional T-cell receptor (TCR) complex, which is necessary for antigen recognition by T-cells, and is required for signal transduction. EGFR, a receptor tyrosine kinase, is overexpressed on the surfaces of various tumor cell types.