

[Open Peer Review on Qeios](#)

# Anti-Her-2-CAR Retroviral Vector-Transduced Autologous Peripheral Blood Lymphocytes

National Cancer Institute

## Source

National Cancer Institute. *Anti-Her-2-CAR Retroviral Vector-Transduced Autologous Peripheral Blood Lymphocytes*. NCI Thesaurus. Code C79834.

Autologous human peripheral blood lymphocytes (PBLs) transduced with a retroviral vector encoding an anti-Her-2 (epidermal growth factor receptor 2) chimeric T cell receptor (chimeric antigen receptor or CAR) gene with potential immunostimulatory and antineoplastic activities. Autologous PBLs from a patient with Her-2-positive cancer are pulsed with a retroviral vector that encodes the CAR gene specific for Her-2. After expansion in culture and reintroduction into the patient, anti-Her-2-CAR retroviral vector-transduced autologous peripheral blood lymphocytes, which express anti-Her-2-CAR on their cell surfaces, bind to Her-2 antigen on tumor cell surfaces. Subsequently, Her-2-expressing tumor cells may be lysed. Her-2 (ErbB-2), a receptor tyrosine kinase (RTK) overexpressed by a variety of cancer cell types, belongs to the EGFR superfamily and plays key roles in both tumor cell proliferation and tumor angiogenesis.