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# Autologous Dendritic Cell-based Immunotherapeutic AV0113

National Cancer Institute

## Source

National Cancer Institute. *Autologous Dendritic Cell-based Immunotherapeutic AV0113*.  
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A therapeutic interleukin-12 (IL-12)-expressing dendritic cell (DC)-based vaccine composed of autologous monocyte-derived DCs loaded with autologous tumor cell lysate and exposed to the microbial cell wall component lipopolysaccharide (LPS), with potential immunomodulating and antineoplastic activities. The monocyte-derived immature DCs are loaded with autologous tumor cell lysates and are subsequently exposed to LPS and interferon-gamma (IFN-gamma). Upon administration of autologous DC-based immunotherapeutic AV0113, the mature DCs migrate into the lymph nodes, express the immune stimulatory cytokine interleukin-12 (IL-12) and activate the immune system by promoting the activation of natural killer (NK) cells and induce a cytotoxic T-lymphocyte (CTL)-mediated immune response against tumor cells, which may result in immune-mediated tumor cell death and inhibition of tumor cell proliferation. Exposure to LPS and IFN-gamma allows the maturation of DCs and optimizes the presentation of tumor-associated antigens (TAAs) by DCs to T-lymphocytes.