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Interferon-gamma-expressing Adenovirus Vaccine ASN-002

National Cancer Institute

Source

National Cancer Institute. *Interferon-gamma-expressing Adenovirus Vaccine ASN-002*.
NCI Thesaurus. Code C66972.

A replication-defective adenoviral serotype 5 vector encoding a recombinant form of the human cytokine interferon-gamma (IFN-g), with potential antineoplastic and immunoregulatory activities. Upon intratumoral administration, the sustained expression of IFN-g by IFN-g-expressing adenovirus vaccine ASN-002 promotes a T-helper type 1 (Th1) immune response and inhibits the Th2-mediated cytokine production observed in many cutaneous lymphomas. IFN-g also mediates interleukin-12 (IL-12) production by antigen-presenting cells (APCs); activates macrophages, cytotoxic T-cells, and natural killer (NK) cells; upregulates major histocompatibility complex (MHC) molecules; and stimulates antibody-dependent cellular cytotoxicity (ADCC). Altogether, these IFN-g-mediated effects may result in both an inhibition of tumor cell proliferation and tumor cell death. Compared to IFN-g injections, the prolonged local production of IFN-g at the tumor site allows for higher efficacy and a reduction of systemic toxicity.