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Enadenotucirev

National Cancer Institute

Source

National Cancer Institute. *Enadenotucirev*. NCI Thesaurus. Code C113786.

A complex, replication-selective, E1B and partial E3 gene deleted, adenovirus type 11p (Ad11p)/Ad3 chimeric oncolytic virus with potential antineoplastic activity. Upon intralesional injection of enadenotucirev, the adenovirus selectively and rapidly replicates in cancer cells; however, it is unable to replicate in normal, healthy cells. This induces a selective adenovirus-mediated cytotoxicity in cancer cells, which leads to cancer cell lysis. Following the lysis of infected cells, the replicated virus is released and can infect adjacent cells, which both induces further tumor cell oncolysis and may activate the immune system to kill the infected tumor cells. The E1B protein causes p53 inactivation in host cells, which promotes viral replication. Deletion of E1B prevents replication in normal, healthy cells that express wild-type p53. The mutation and subsequent inactivation of p53 in cancer cells enables the E1B-deleted adenovirus to selectively replicate in cancer cells. Partial deletion of the E3 gene, which encodes the adenovirus death protein, enhances the safety profile of the administered adenovirus.