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# Oncolytic Adenovirus ICOVIR5-infected Autologous Mesenchymal Stem Cells

National Cancer Institute

## Source

National Cancer Institute. *Oncolytic Adenovirus ICOVIR5-infected Autologous Mesenchymal Stem Cells*. NCI Thesaurus. Code C107160.

Bone marrow-derived autologous mesenchymal stem cells (MSCs) infected with the oncolytic, replication-competent adenovirus ICOVIR5, with potential antineoplastic activity. Upon infusion of the oncolytic adenovirus ICOVIR5-infected autologous MSCs, these cells target the adenovirus to tumors. The oncolytic virus then selectively transfects and replicates in the tumor cells causing a direct cytotoxic effect and lysis of the tumor cells. In addition, the viral infection may stimulate an immune response against the virally-infected tumor cells. This may lead to an inhibition of cancer cell proliferation. ICOVIR-5, a virus derived from wild-type human adenovirus serotype 5 (Had5), has been modified to selectively replicate in tumor cells that have a deregulated retinoblastoma/E2F pathway.