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Autologous GM-CSF-secreting Lethally Irradiated Colorectal Cancer Cell Vaccine

National Cancer Institute

Source

National Cancer Institute. *Autologous GM-CSF-secreting Lethally Irradiated Colorectal Cancer Cell Vaccine*. NCI Thesaurus. Code C111991.

A lethally irradiated, autologous colorectal cancer vaccine consisting of patient-specific colorectal cancer cells genetically modified to secrete the cytokine granulocyte-macrophage colony stimulating factor (GM-CSF), with potential immunostimulating and antineoplastic activities. Upon vaccination, the autologous GM-CSF-secreting lethally irradiated colorectal cancer cell vaccine releases GM-CSF. In turn, GM-CSF may increase the body's immune response against tumor cells by promoting the maturation and activation of dendritic cells (DCs), and enhancing tumor-specific antigen presentation to both B- and T-cells, which leads to better recognition of tumors by the immune system. In addition, GM-CSF promotes antibody-dependent cellular cytotoxicity (ADCC), and increases interleukin-2-mediated lymphokine-activated killer cell function.