Ilixadencel

National Cancer Institute

Source

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An off-the-shelf immune primer consisting of allogeneic monocyte-derived dendritic cells (MoDCs) that have been stimulated with a combination of activating factors to produce pro-inflammatory factors including tumor necrosis factor-alpha (TNF-alpha), interleukin-1 beta (IL-1 beta), interleukin-12, p70 (IL-12 p70), C-C motif chemokine 4 (CCL4; macrophage inflammatory protein 1-beta; MIP-1-beta), C-C motif chemokine 5 (CCL5; RANTES), and C-X-C motif chemokine 10 (CXCL10), with potential immunostimulating and antineoplastic activities. Upon intratumoral injection of ilixadencel, the dendritic cells (DCs) release type 1 T-helper cell (Th1)-associated chemokines, including CCL4, CCL5 and CXCL10, that may recruit natural killer (NK)-cells and pre-DCs into the tumor microenvironment (TME). The interaction between NK cells and ilixadencel DCs may induce NK-cell-mediated killing of tumor cells, resulting in release of tumor-associated-antigens (TAAs). The production of interferon-gamma (IFN-gamma) by activated NK-cells and TNF-alpha/beta released by ilixadencel DCs will induce maturation and promote cross-presentation of TAAs by recruited endogenous "bystander" DCs. Migration of these antigen-loaded and matured "bystander" DCs to the tumor-draining lymph node will lead to a Th1-polarized activation of tumor-specific T-cells.