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Umbilical Cord Blood-derived Natural Killer Cells

National Cancer Institute

Source

National Cancer Institute. *Umbilical Cord Blood-derived Natural Killer Cells*. NCI Thesaurus. Code C118949.

A population of allogeneic, cytokine-differentiated, highly lytic natural killer (NK) cells derived from CD34+ cells isolated from human umbilical cord blood (UCB) with potential cytotoxic activity. CD34+ hematopoietic stem cells (HSC) are isolated from human UCB mononuclear cells, differentiated into mature, highly lytic, CD3- CD56+ NK cells, by a specific combination of cytokines that includes stem cell factor (SCF), fms-related tyrosine kinase 3 ligand (Flt3-L), interleukin-15 (IL-15) and insulin-like growth factor-1 (IGF-1), and expanded ex vivo. Upon administration, the UCB-derived NK cells may lyse cancer cells.