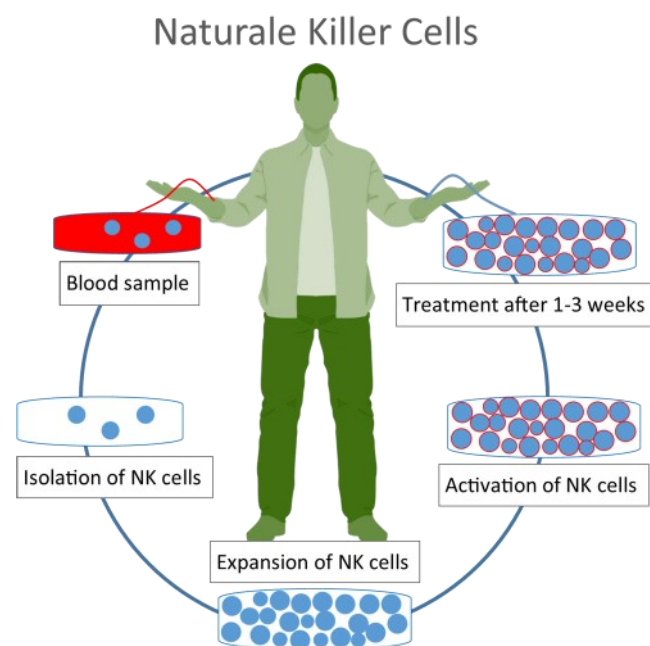


Natural Killer Cells are harvested from autologous blood. In cases with advanced disease or after depletion of the immune system through chemotherapy and repeated use of monoclonal antibodies, the use of allogenic Natural Killer Cells may be warranted.

The process of isolation from peripheral blood is relatively straight forward, however, to achieve a therapeutic dose, cells need to be expanded to several millions, a process which need 1- 3 weeks in a specialized laboratory.

Several treatments with **Natural Killer Cells** are needed.



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Cancer Treatment

Immunotherapy / Dendritic Cell Therapy

Dendritic cells are antigen-presenting cells (APCs) which play a critical role in the regulation of the adaptive immune response. The principal function of DCs is to search for cancer cells and present their antigens, only DCs can induce a primary immune response in resting naïve T lymphocytes. To perform this function, DCs capture antigens, processing them, and presenting them on the cell surface along with appropriate co-stimulation molecules. DCs will stimulate the whole immune system, including T Lymphocytes, B Lymphocytes and Natural Killer Cells.

Immunotherapy with Natural Killer Cells

Natural killer cells (NK cells) are white blood cells that destroy infected cells and cancer cells in your body. NK cells are important fighters in your immune system. Your immune system protects you from harmful invaders, like pathogens (viruses, bacteria and parasites) and cancer cells.

NK cells belong to a specific group of white blood cells called lymphocytes, which also includes B-cells and T-cells. NK cells are called “Nat-

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ural” killers because they can destroy potential threats without prior exposure to a particular pathogen. Other lymphocytes that destroy harmful cells, like cytotoxic T-cells, need previous exposure to a pathogen before they can destroy it.

Echo 7 oncolytic virus

Virotherapy is an officially approved, perspective cancer treatment method using oncolytic viruses. The active substance is ECHO-7 virus strain (Picornaviridae family, Enterovirus genus, ECHO group, type 7).

The direct antitumoural activity of Echo 7 is related to oncolysis. As a result of it, the virus changes tumour cell micro-environment and cancels the block on those immune reactions that are caused by tumour progression.

The cytolytic activity of Echo 7 is selective – with regard to malignant cells without damaging normal tissue cells and by promoting specific immunity against itself.

Peptides

PNC-27

PNC-27 is a peptide molecule that contains amino acid residues of the p53 protein. It binds to HDM-2 receptors, which are highly expressed on the cell membrane in tumours. Based on research, it was determined that these receptors are present in the cellular components of both solid and non-solid tumours, which increases the therapeutic potential of the peptide. After binding, the peptide induces cell death in both its forms (apoptosis and necrosis). As a result, the tumour can be reduced, limited, and, most importantly, prevented from spreading to surrounding healthy tissues (metastasis). PNC 27 combats solid tissue tumour cells as well as non-solid tissue tumour cells

Foxo-04 DRI

FOXO4-DRI is a synthetic peptide specifically engineered to disrupt the interaction between the FOXO4 protein and the tumour suppressor protein p53 within senescent (aging) cells. By targeting and selectively inducing apoptosis (programmed cell death) in these senescent cells—cells that have ceased dividing and accumulate with age—FOXO4-DRI has gained significant attention as a potent anti-aging therapeutic candidate.

Sources, production and activation of your blood cells

Dendritic Cells are created from monocytes harvested from your own peripheral blood and activated during 6 days in our laboratories. 50 ml Heparinized blood is needed (best to have 100 ml for two treatments).

The treatments are currently be manufactured under Good Manufacturing Practice guidelines.

Treatment protocol involves starting doses of 6 injections (monthly), usually accompanied with stem cell secretome to regenerate as much cells as possible.

