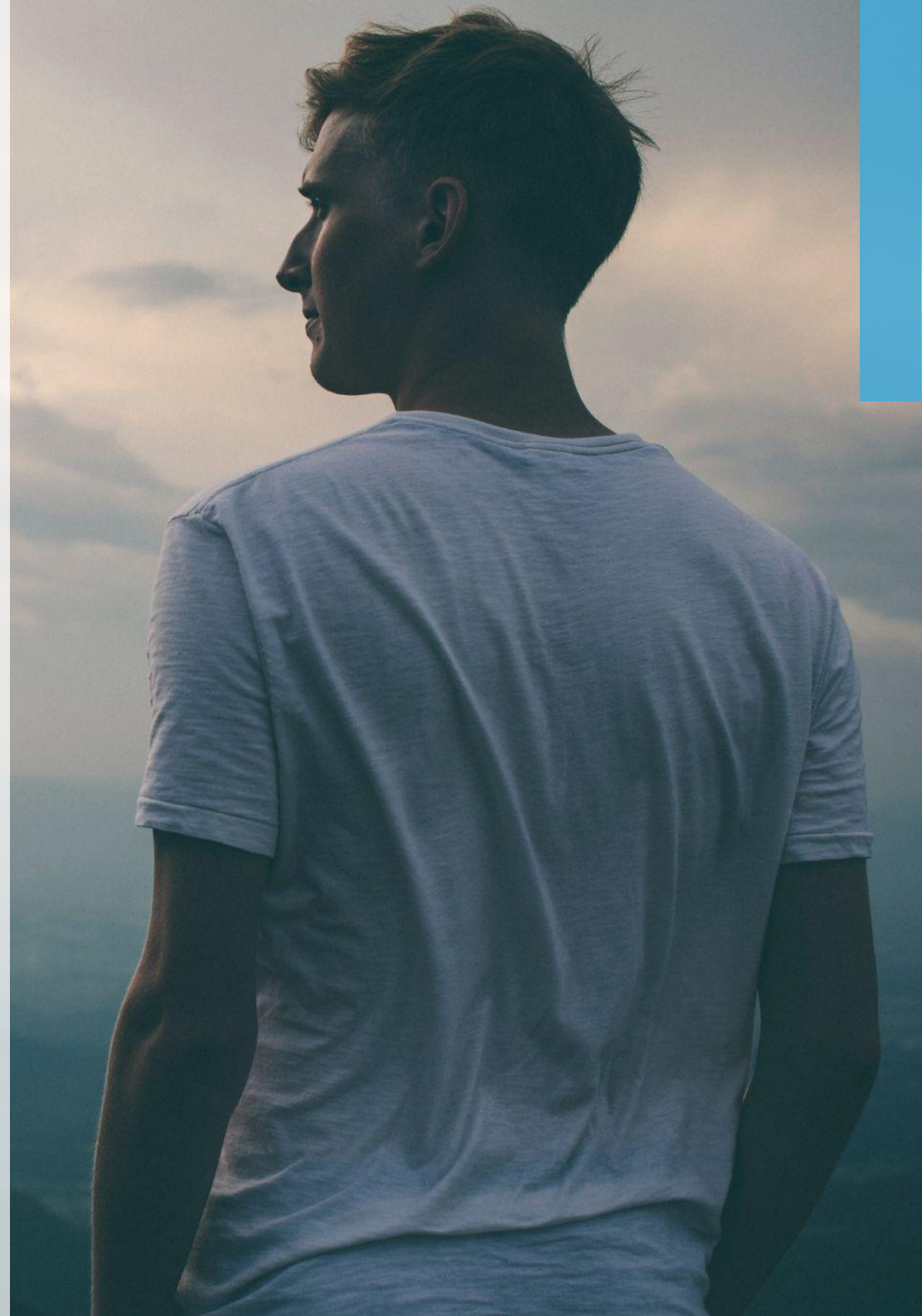




**The foremost  
Cancer Treatment  
is here.**





**Despite Being  
Relatively New,  
There Are Lots Of  
Scientific Papers  
Published On  
Car-NK Cell  
Therapy.**







# 5 reasons to consider CAR NK-Cell Therapy for Cancer Treatment

**Unlike traditional cancer treatments like chemotherapy, radiation and surgery, CAR-NK Cell Therapy offers multiple advantages:**

1. Minimally invasive
2. Pain-free
3. Uses the body's natural killer cells
4. Appropriate for all types of cancer
5. Provides life-long protection

# Welcome to the world of Immunotherapy

When my father developed cancer in 2014, I wasn't convinced by the treatment methods that were available to us. I then discovered Immunotherapy as the most promising option. There are many better treatment options than those recommended today to most patients. With our patients we see the consistent positive results of CAR-NK Cell Therapy. Immucura's mission is to apply the most advanced scientific options to overcome cancer.

Unfortunately for my father it was too late – but everything happens for a reason, and for me it was the motivation to help others.

***Johannes E. Schumacher***  
***Founder of The F3nix Institute***







# What Is CAR-NK Cell Therapy?

## A New Way To Treat Cancer

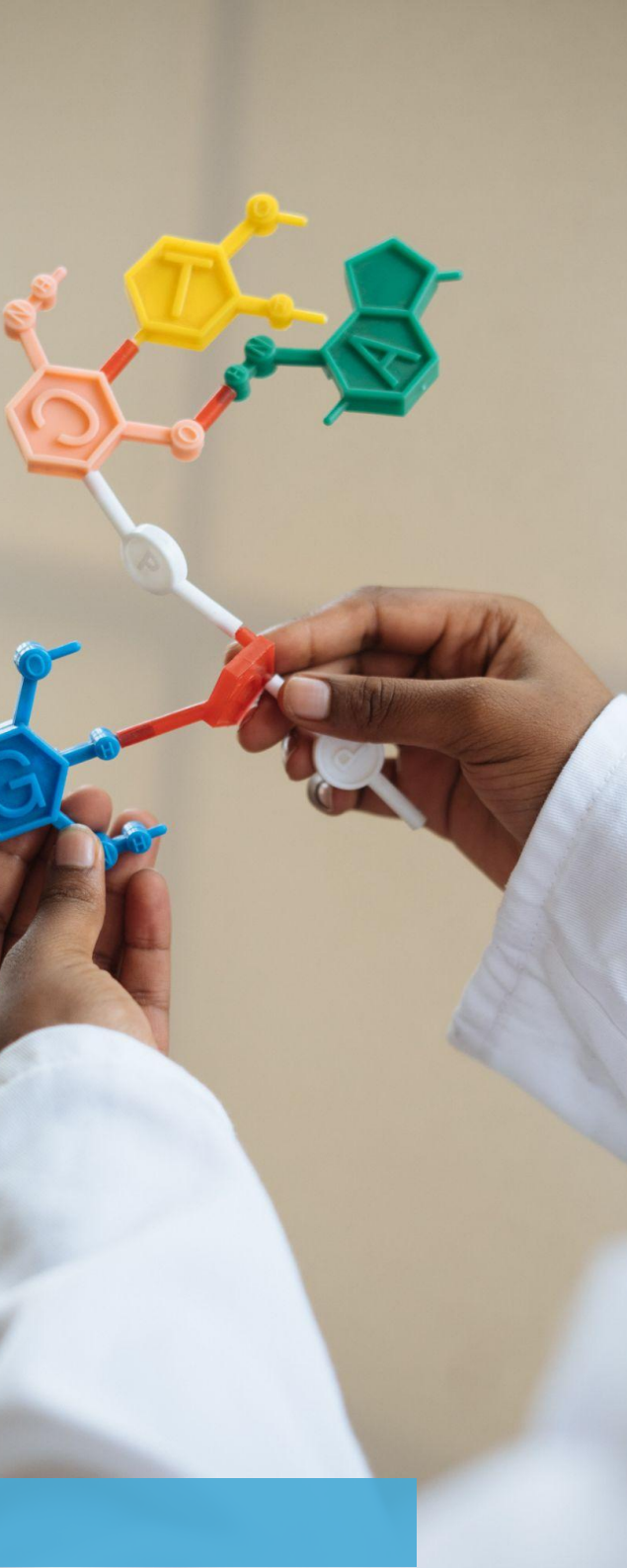
In a very similar way to CAR-T cell therapy, CAR-NK Cell Therapy is a type of immunotherapy that teaches the body's immune cells to recognize and destroy cancer.

NK (Natural Killer) Cells offer clear advantages in cancer Immunotherapy, overcoming the limitations and toxicities of T cells, which express chimeric antigen receptors (CARs).

Therefore, NK cells are being explored as an alternative platform for CAR engineering and are becoming recognised as important players in the next generation of cellular therapies targeting cancer.

CAR-NK Cell Therapy has demonstrated promising results in a range of patients across the globe. In some patients, this can lead to the total elimination of the cancer. In others, there is a significant improvement of the disease.





## What are Natural Killer Cells?

NK cells are short-lived innate lymphoid cells with a turnover time of about 2 weeks in the circulation at steady state. They typically represent 10–15% of peripheral blood lymphocytes. Their frequency can vary widely among healthy individuals, from 0% to 60% PB-NK cells (CD3 CD56 cells).

NK cells can be derived from multiple sources for use in CAR engineering, one important source is the umbilical cord blood (CB). In fact, their absolute number in CB by volume and fraction is higher than found in peripheral blood lymphocytes, representing 20–30% of the CB lymphocytic pool.

NK cells from diverse sources have been genetically modified to express CARs to redirect their activity against B-cell malignancies.

Despite the remarkable success of CAR T cells in the treatment of haematologic malignancies, similar outcomes have not been observed in the therapy of solid tumours with modified T cells.

In this context, the efficacy of CAR-NK cell therapy against solid malignancies such as glioblastoma, melanoma, breast, ovarian and prostate cancers plays an important role. Why these cancers specifically, are they random or are there publications for them only?



# What Does CAR-NK Cell Therapy Mean?

Chimeric antigen receptor (CAR) is the most commonly used approach for generating tumour target-specific immune cells through genetic modification of these cells.

CAR has been introduced into different types of immune cells including T cell, NK cells, and macrophages, and these CAR transduced immune cells are named as CAR-T, CAR-NK, and CAR-M, respectively.





## What Are the Benefits of CAR-NK Cell Therapy?

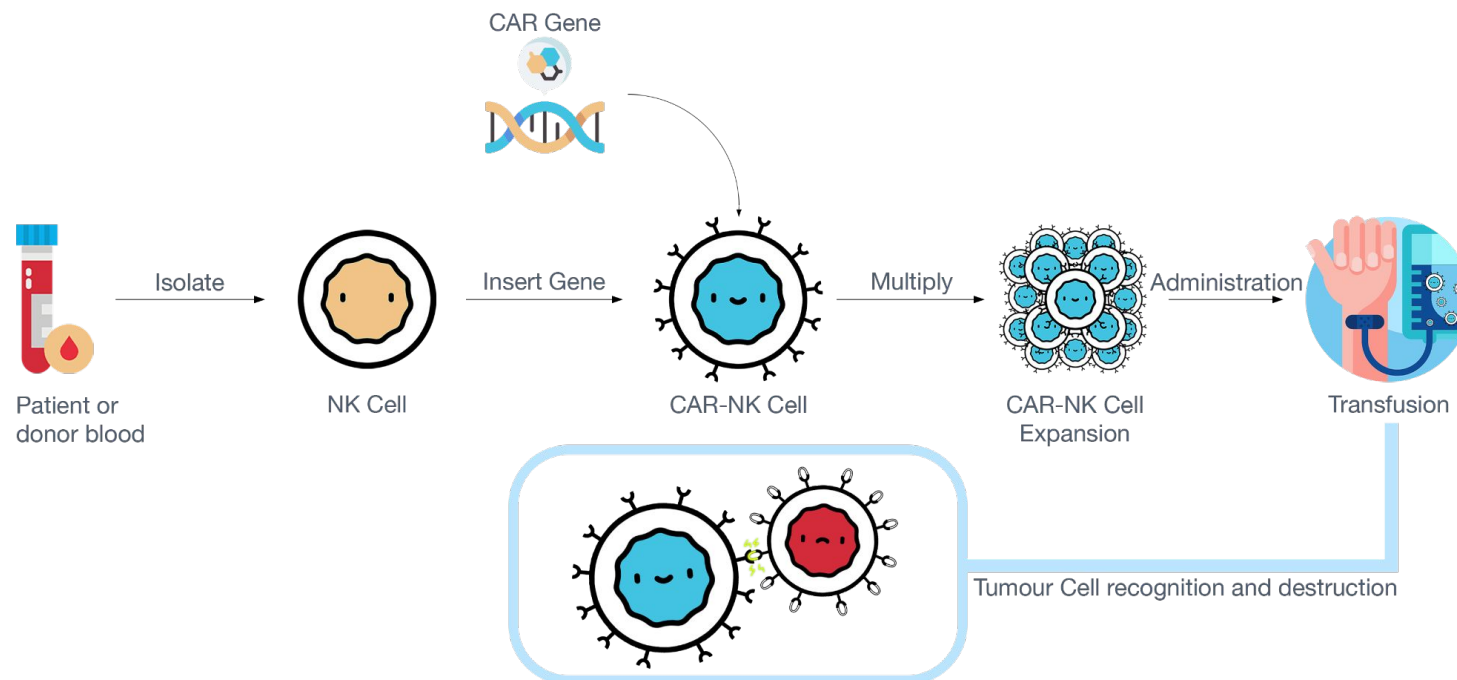
The huge benefit of a treatment like this is the NK Cell modifications will last for life. Each time a body's NK cells encounter a toxin or disease agent and develop antigen receptors and antibodies to fight it, the person has that ability forever. That means patients who receive modified NK cells now have the tools to fight their particular cancer for the remainder of their days.



# What is CAR-NK Cell Therapy?

CAR-NK Cell Therapy is a type of treatment in which a patient's NK cells (a type of immune system cell) are genetically changed in the laboratory so they will attack cancer cells. NK cells are taken from a patient's blood or from other sources. Then the gene for a special receptor that binds to a certain protein on the patient's cancer cells is added to the NK cells in the laboratory. The special receptor is called a chimeric antigen receptor (CAR). Large numbers of the CAR-NK cells are grown in the laboratory and given to the patient by infusion.

CAR-NK Cell Therapy is used to treat all types of cancer, and its proven efficacy is turning it into one of the most advanced and non-toxic cancer treatments available today.



## How the CAR-NK Cell Therapy works

As described above, CAR-NK cells are natural killer immune cells that have been modified to match markers present on the outside of cancer cells, allowing them to selectively find and attack them.

To create CAR-NK cells, NK-cells are extracted from the blood of the patient or the donator. They are then genetically treated in the laboratory, multiplied, and re-infused to the patient so that the engineered CAR-NK cells can selectively attack cancer cells. The patient's response is then monitored using a variety of tools.

## The CAR-NK Cell Therapy Process in 4 Steps

**There are four steps involved:**

1. Harvesting immune cells from an individual's peripheral blood
2. Genetically engineering those cells to express cancer-specific chimeric antigen receptors (CARs)
3. Expanding the quantity of those cells in the laboratory (called "ex vivo expansion")
4. Re-infusing the modified cells into the patient in order to selectively attack cancer cells



# What Is CAR-NK Treatment Like For The Patient?

The transformation of the natural killer cells is a complex process, while the treatment is very easy and non-invasive for the patient. If the patient's own blood is used, the NK cell serum administration takes place some days after the blood draw.

From beginning to end, the patient can continue his everyday life, no interruption of work or other routines is required. In addition, the patient's wellbeing and physical condition are not subject to any change connected to the treatment.

The NK transfusion itself is typically short and painless, lasting only about an hour. After staying with the medical team for monitoring, patients can continue their normal life.

CAR-NK Cell Therapy can be combined with the majority of other cancer treatments and can even boost the efficacy of other therapies. Through this therapy the patient's immune system is strengthened and it is likely that the recovery process is easier and faster.







# The foremost Cancer Treatment is here.



## Contact

+34 665 621 350



## Office

Avenida Playas del Duque, Local 1 y 2, 29660,  
Marbella, Málaga



## Open Hours

Mon to Friday: 10:00 am -6:00 pm

