

Chimeric Antigen Receptor-Natural Killer (CAR-NK) Cell Therapy Market: Future Demand and Top Key Players Analysis | 2029

*The Business Research Company's
Chimeric Antigen Receptor-Natural Killer
Cell Therapy Global Market Report 2025 –
Market Size, Trends & Global Forecast
2025-2034*

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/EINPresswire.com/ -- What Is The

Expected Cagr For The [Chimeric Antigen Receptor-Natural Killer \(CAR-NK\) Cell Therapy Market](#)
Through 2025?

In recent times, the chimeric antigen receptor-natural killer (CAR-NK) cell therapy market has experienced a significant expansion. The market's size is anticipated to climb from \$2.27 billion

in 2024, reaching \$2.42 billion by 2025, which indicates a compound annual growth rate (CAGR) of 6.6%. The considerable growth witnessed in the preceding period is due to multiple factors. These include an increase in the global prevalence of cancer, the growing emphasis on immunotherapy, the initial clinical success of natural killer (NK) cell therapies, government support for cancer research initiatives, and the proliferation of cell therapy manufacturing facilities.



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In the coming years, the market for [chimeric antigen](#)

[receptor-natural killer \(CAR-NK\) cell therapy market size](#) is set to expand considerably. Forecasts suggest it will reach a value of \$3.09 billion by 2029, with a compound annual growth rate (CAGR) of 6.3%. This upward trend can be credited to increasing investments in cellular immunotherapy, collaboration growth between biotech and pharmaceutical companies, an increased need for off-the-shelf cancer treatments, the expansion of clinical trials for CAR-NK therapies, and a surge in precision oncology adoption. During the forecast period, key trends will involve technological advancements in genetic engineering, improvements in chimeric antigen receptor (CAR) construct design, progress in allogeneic natural killer (NK) cell platforms, research &

development in tumor microenvironment modulation, and the incorporation of artificial intelligence (AI) into cell therapy development.

Download a free sample of the chimeric antigen receptor-natural killer (car-nk) cell therapy market report:

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What Are The Key Factors Driving Growth In The Chimeric Antigen Receptor-Natural Killer (CAR-NK) Cell Therapy Market?

The global surge in cancer cases is predicted to fuel the expansion of the chimeric antigen receptor-natural killer (CAR-NK) cell therapy market. Cancer is a collection of diseases marked by unregulated proliferation and diffusion of anomalous cells, which can infiltrate and harm bodily tissues. The escalating prevalence of cancer can be attributed to elements like aging demographics and unhealthy lifestyles. The risk of cancer escalates with age due to increased accumulation of mutations and detrimental habits like smoking, poor nutrition, and lack of physical activity. CAR-NK cell therapy aids in the treatment of cancer by modifying natural killer cells to accurately identify and eliminate cancer cells, thereby reinforcing the immune system's specific onslaught on tumors. For example, the World Health Organization (WHO), an intergovernmental organization based in Switzerland, in February 2024, projected a 77% increase from 20 million new cancer cases in 2022 to over 35 million cases by 2050. Hence, the escalating prevalence of cancer globally is fueling the growth of the chimeric antigen receptor-natural killer (CAR-NK) cell therapy market.

What Are The Top Players Operating In The Chimeric Antigen Receptor-Natural Killer (CAR-NK) Cell Therapy Market?

Major players in the Chimeric Antigen Receptor-Natural Killer (CAR-NK) Cell Therapy Global Market Report 2025 include:

- Takeda Pharmaceutical Company Limited
- Artiva Biotherapeutics Inc.
- Nkarta Inc.
- ImmunityBio Inc.
- Fate Therapeutics Inc.
- Acepodia Inc.
- PersonGen BioTherapeutics Inc.
- Cartherics Inc.
- Century Therapeutics Inc.
- Catamaran Bio Inc.

What Are The Key Trends Shaping The Chimeric Antigen Receptor-Natural Killer (CAR-NK) Cell Therapy Industry?

Prominent firms in the Chimeric Antigen Receptor-Natural Killer (CAR-NK) cell therapy market are making strides towards creating enhanced solutions like conditioning chemotherapy-free treatment for the development of more secure and effective off-the-shelf cellular therapies. This

treatment method eliminates the necessity for intensive chemotherapy prior to the administration of cellular therapies, thus minimising toxicity and unwanted side effects. For example, in November 2024, Fate Therapeutics Inc., a clinical-stage biopharmaceutical company from the United States, introduced FT522, a novel CAR NK cell therapy targeting CD19 off-the-shelf. This ground-breaking therapy utilizes alloimmune defense receptor technology, which allows CAR NK cells to persist and selectively wipe out pathogenic B cells in patients suffering from relapsed or refractory B-cell lymphoma and autoimmune diseases. It has shown encouraging safety and effectiveness in early-phase clinical trials without the requirement for severe immune system suppression.

Comprehensive Segment-Wise Insights Into The Chimeric Antigen Receptor-Natural Killer (CAR-NK) Cell Therapy Market

The chimeric antigen receptor-natural killer (CAR-NK) cell therapy market covered in this report is segmented

- 1) By Type: Cytokine Therapy, Adoptive Natural Killer (NK) Cell Therapy, Genetically Engineered Natural Killer Cell Therapy, Other Types
- 2) By Cell Source: Peripheral Blood-Derived Natural Killer Cells, Cord Blood-Derived Natural Killer Cells, Induced Pluripotent Stem Cell (iPSC)-Derived Natural Killer Cells, Natural Killer Cell Lines
- 3) By Application: Solid Tumors, Hematological Malignancies, Other Applications
- 4) By End User: Hospitals, Cancer Research Institutes, Biotechnology And Pharmaceutical Companies

Subsegments:

- 1) By Cytokine Therapy: Interleukin Therapy, Interferon Therapy, Colony Stimulating Factor Therapy, Tumor Necrosis Factor Therapy
- 2) By Adoptive Natural Killer Cell Therapy: Autologous Natural Killer Cell Therapy, Allogeneic Natural Killer Cell Therapy, Expanded Natural Killer Cell Therapy, Activated Natural Killer Cell Therapy
- 3) By Genetically Engineered Natural Killer Cell Therapy: Chimeric Antigen Receptor Natural Killer Cell Therapy, T Cell Receptor Engineered Natural Killer Cell Therapy, Gene Edited Natural Killer Cell Therapy, Cytokine Gene Modified Natural Killer Cell Therapy
- 4) By Other Types: Combination Therapy, Immune Checkpoint Inhibitor Therapy, Antibody Dependent Cellular Cytotoxicity Therapy, Oncolytic Virus Therapy

View the full chimeric antigen receptor-natural killer (car-nk) cell therapy market report:

<https://www.thebusinessresearchcompany.com/report/chimeric-antigen-receptor-natural-killer-car-nk-cell-therapy-global-market-report>

Global Chimeric Antigen Receptor-Natural Killer (CAR-NK) Cell Therapy Market - Regional Insights

In the 2024 report on the global market for Chimeric Antigen Receptor-Natural Killer (CAR-NK) Cell Therapy, North America held the leading position. Asia-Pacific, however, is projected to

experience the fastest growth in the next forecast period. The report includes data on other regions as well, featuring Asia-Pacific, Western Europe, Eastern Europe, South America, the Middle East, and Africa.

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