UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): January 8, 2024

Nkarta, Inc.

(Exact name of Registrant as Specified in Its Charter)

Delaware	**001-39370**	**47-4515206**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**
1150 Veterans Boulevard South San Francisco, CA		**94080**
(Address of Principal Executive Offices)		**(Zip Code)**

Registrant's Telephone Number, Including Area Code: (925) 407-1049

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 par value per share	NKTX	The Nasdaq Stock Market LLC (Nasdaq Global Select Market)

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Item. 7.01 Regulation FD Disclosure.

On January 8, 2024, Nkarta, Inc. (the "Company") made available an updated corporate presentation to reflect certain business and strategic updates. The Company intends to use this presentation in meetings with analysts, investors, and others from time to time. A copy of the presentation is attached as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated by reference herein. The corporate presentation will also be available in the "Investors" section of the Company's website at www.nkartatx.com. The Company's website and any information contained on the Company's website are not incorporated by reference into, and are not considered part of, this Current Report on Form 8-K.

The information in Item 7.01 of this Current Report on Form 8-K (including Exhibit 99.1) shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be, or be deemed, incorporated by reference in any filings under the Securities Act of 1933, as amended (the "Securities Act"), unless the Company specifically states that the information is to be considered "filed" under the Exchange Act or incorporates it by reference into a filing under the Securities Act or the Exchange Act.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit Number	Description
99.1	Corporate Presentation, dated January 2024.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Nkarta, Inc.

Date: January 8, 2024

By: /s/ Alicia Hager

Alicia J. Hager, J.D., Ph.D.
Chief Legal Officer

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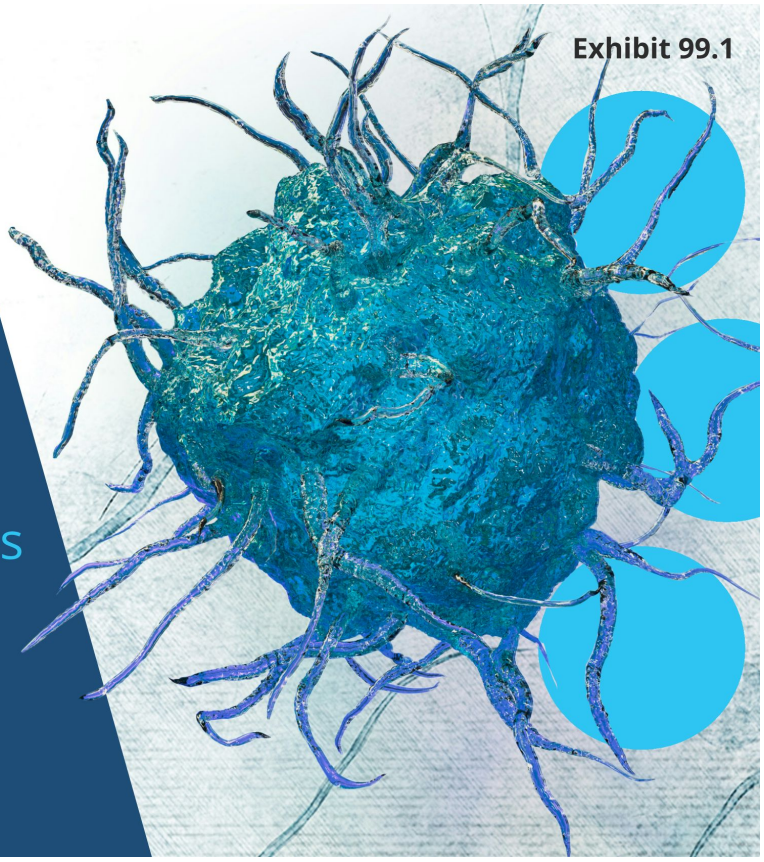
Exhibit 99.1



ENGINEERING

Natural Killer Cells

for next generation treatment of cancer and autoimmune diseases

ON DEMAND

JANUARY 2024

Forward-looking statements

This presentation contains forward - looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, regarding future events and the future results of the company that are based on current expectations, estimates, forecasts, and projections about the industry in which the company operates and the future of our business, future plans and strategies, projections, anticipated trends and events, the economy, and other future conditions, and the beliefs and assumptions of the management of the company. Words such as **"address," "anticipate," "believe," "consider," "continue," "develop," "estimate," "expect," "further," "goal," "intend," "may," "plan," "potential," "project," "seek," "should," "target," "will,"** variations of such words, and similar expressions are intended to identify such forward-looking statements. Such statements reflect the current views of the company and its management with respect to future events and are subject to inherent risks, uncertainties, and changes in circumstances that are difficult to predict and may be outside our control. Therefore, you should not rely on any of these forward-looking statements. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, the company's actual results, performance, or achievements could differ materially from the results expressed in, or implied by, these forward-looking statements. Please see section entitled "Risk Factors" in our annual, quarterly and other filings with the Securities and Exchange Commission for a description of these risks and uncertainties.

This presentation has been prepared by the company based on information it has obtained from sources it believes to be reliable. Summaries of documents contained in this presentation may not be complete. The company does not represent that the information herein is complete. The information in this presentation is current only as of the date on the cover, and the company's business or financial condition and other information in this presentation may change after that date. The company undertakes no obligation to update any forward - looking statements in order to reflect any event or circumstance occurring after the date of this presentation or currently unknown facts or conditions.

Interim data from clinical trials are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more data on existing patients become available. The clinical trial programs are ongoing, and the final results may be materially different from those reflected in any interim data the company reports. Further, others, including regulatory agencies, may not accept or agree with the company's assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product and the value of the company in general. In addition, the information the company chooses to publicly disclose regarding a particular study or clinical trial is typically a summary of extensive information, and you or others may not agree with what the company determines is the material or otherwise appropriate information to include in its disclosure, and any information the company determines not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product, product candidate or business.

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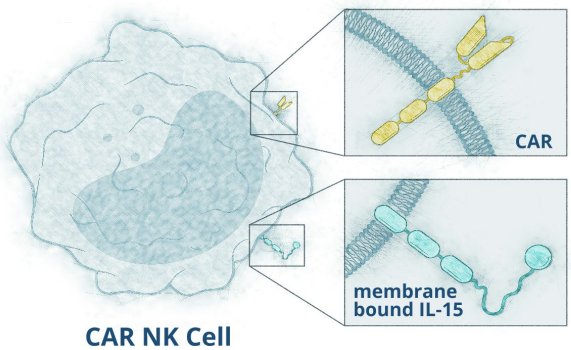
Delivering the future of cell therapy by harnessing the killing ability of natural killer (NK) cells

- Fully allogeneic from healthy, pre-screened donors
- On-demand, off-the-shelf availability for outpatient administration
- Programs in autoimmune disease and oncology
- Multiple clinical updates expected in 2024
- Cash runway into 2026



CAR NK Cell

- CARs engineered for optimal target cell killing
- Candidates engineered with a targeting CAR and membrane bound IL-15

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Pipeline with transformational potential

Program (Target)	Indication	Research	IND-Enabling	Clinical	Status
NKX019 (CD19)	Lupus Nephritis (SLE)				IND cleared 4Q 2023 First patient enrollment expected 1H 2024
NKX019 (CD19)	r/r NHL				Phase 1 dose-compression cohort ongoing Update planned mid 2024
NKX101 (NKG2D)	r/r AML				Phase 1 ongoing Update planned 1H 2024
NKX101 (NKG2D)	Solid Tumors				Gated on proof of concept in r/r AML
NKX070 (CD70)	Heme & Solid Tumors				Collaboration CRISPR THERAPEUTICS
NK + T (Undisclosed)	Undisclosed				Collaboration CRISPR THERAPEUTICS

Autoimmune Oncology

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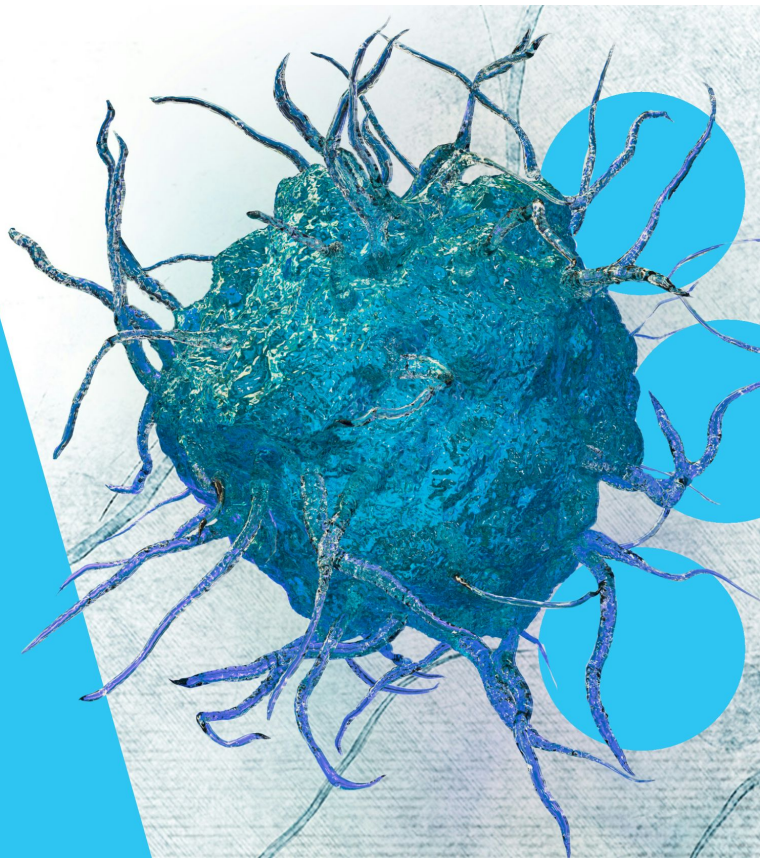
AML, acute myeloid leukemia; NHL, non-Hodgkin lymphoma; r/r: relapsed or refractory; SLE, systemic lupus erythematosus

NKX019 in Autoimmune Disease



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Cell therapy offers a promise of a disease-modifying option for patients with refractory autoimmune disease

Autoimmune disease is a major unmet need

- Estimated 7 million patients in U.S. with a form of B-cell mediated autoimmune disease[1]

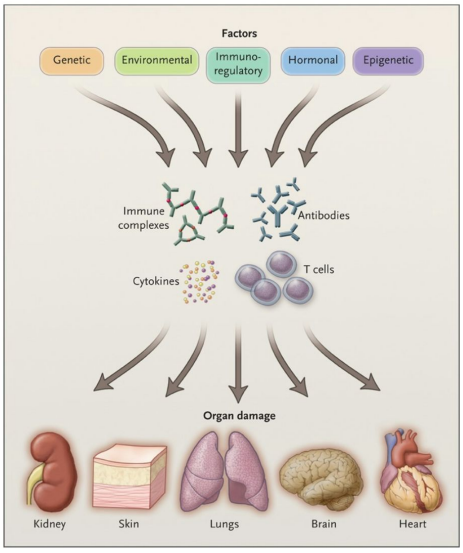
Pathogenic B cells can drive systemic diseases via combination of intrinsic and extrinsic factors

Effectiveness of current therapies is inadequate

- Often consists of lifelong immune suppression
- B-cell directed agents have limited activity

CD19-directed cell therapy has challenged the treatment paradigm for autoimmune diseases

- Drug-free remissions after a single treatment in academic trials[2]



Tsokos, *N Engl J Med* 2011; 365:2110-2121.

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1: Canaccord Genuity, 14 Nov 2023.
2: Mackensen et al. *Nature Med*. 28 Oct 22. 2124–2132.

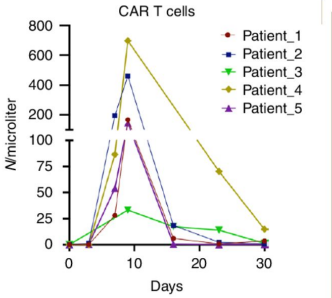
CD19-directed cell therapy leads to long-term responses despite short-term persistence and limited B-cell suppression

Transient CAR T cell persistence, (peaking ~10 days) differing from CAR T in oncology

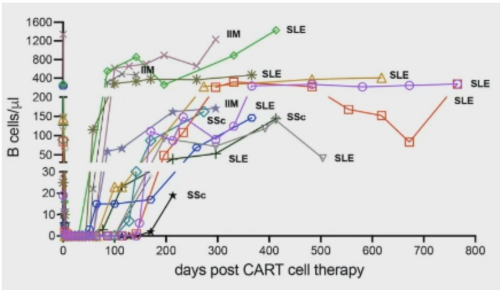
- In oncology, long-term CAR T cell engraftment and B cell aplasia are common
- Less antigen burden may explain difference in persistence and exposure

Immune "reset" and disease control occurs after B cell suppression as short as 50 days

- Autoantibodies remain sustainably negative in most patients, even after B cells recover
- Immune responses also retained, including to vaccines



Mackensen et al. *Nature Med*. 28 Oct 22. 2124–2132.



Muller et al. Abstract 220, ASH 2023.

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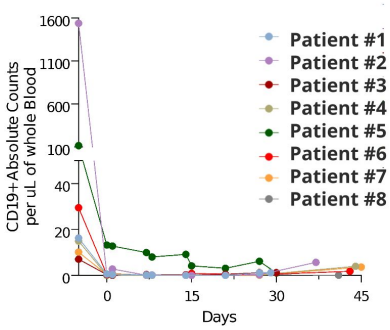
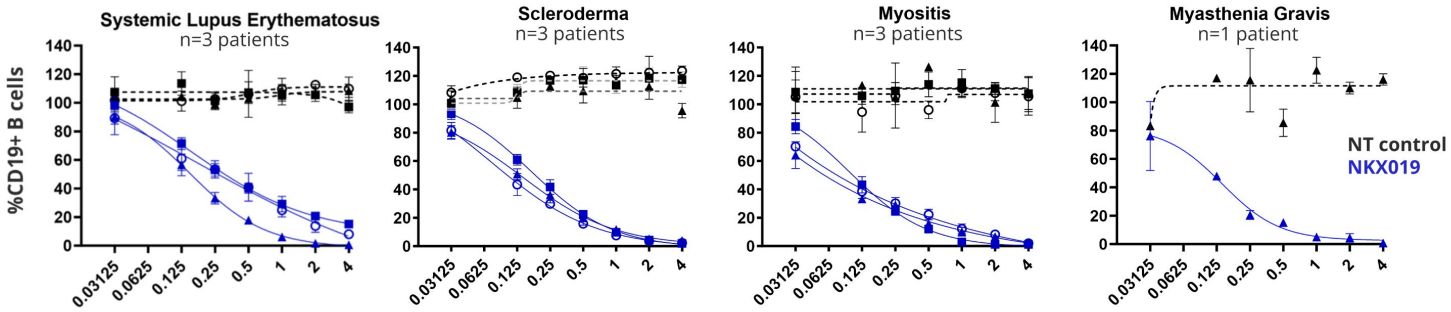
NKX019 targets and kills cells from patients across indications

Patient samples from ongoing NHL trial show effective elimination of CD19+ cells from circulation by NKX019

- Normal and malignant cells cleared with a single cycle
- Deep suppression achieved by day 30



In vitro studies using blood from patients with various autoimmune disease show consistent B cell killing



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CD19 CAR NK cells may be ideally suited for autoimmune disease

NK cells reach peak activity at infusion for rapid target exposure

- Allows maximal immediate effect without in vivo expansion or permanent engraftment
- T cells require expansion, which delays effects and requires lymphodepletion (LD)

Opportunity to reduce chemotherapy exposure via disease-tailored LD

- Autocrine stimulation via mbIL-15 may reduce need for LD-induced cytokines
- Elimination of fludarabine limits risks of cytopenias, infection, and secondary MDS[1]

Allogeneic NK cells are cleared by host immunity

- Low risk of prolonged B-cell aplasia
- Long-lived CAR T cells have FDA-issued risk of T-cell malignancy[2]

Superior safety and accessibility in non-malignant setting

- On-demand availability without need for cumbersome infrastructure
- Low risk of expansion-related toxicity including CRS and ICANS

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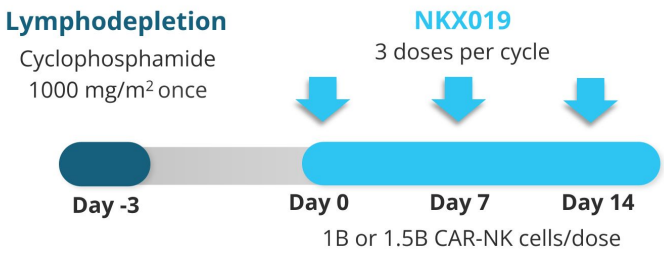
1: Fludarabine USPI
2: Nelson. *Lancet*. Vol 402. 2181. December 9, 2023

NKX019 CAR NK for autoimmune diseases: A multicenter, open-label, phase 1 study



Endpoints:

- Safety and tolerability
- Pharmacokinetics
- Renal function
- Autoantibody serology

Off the shelf administration reduces burden to patients and providers

First patient dosing expected 1H 2024

Opportunity to investigate broader applicability of NKX019 in multiple autoimmune diseases

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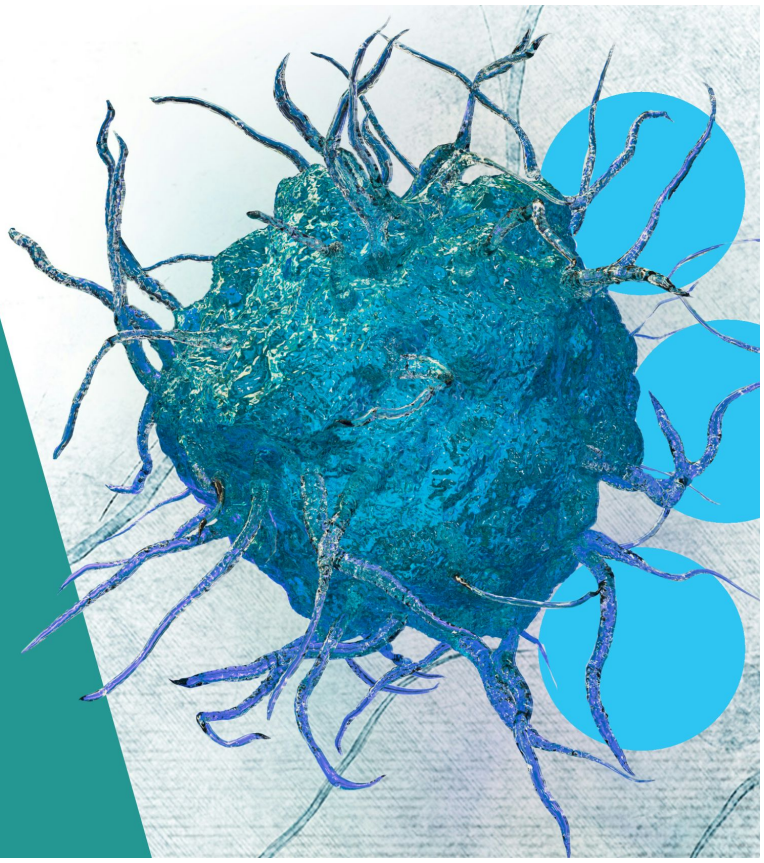
CAR: chimeric antigen receptor

NKX019 and NKX101 in oncology



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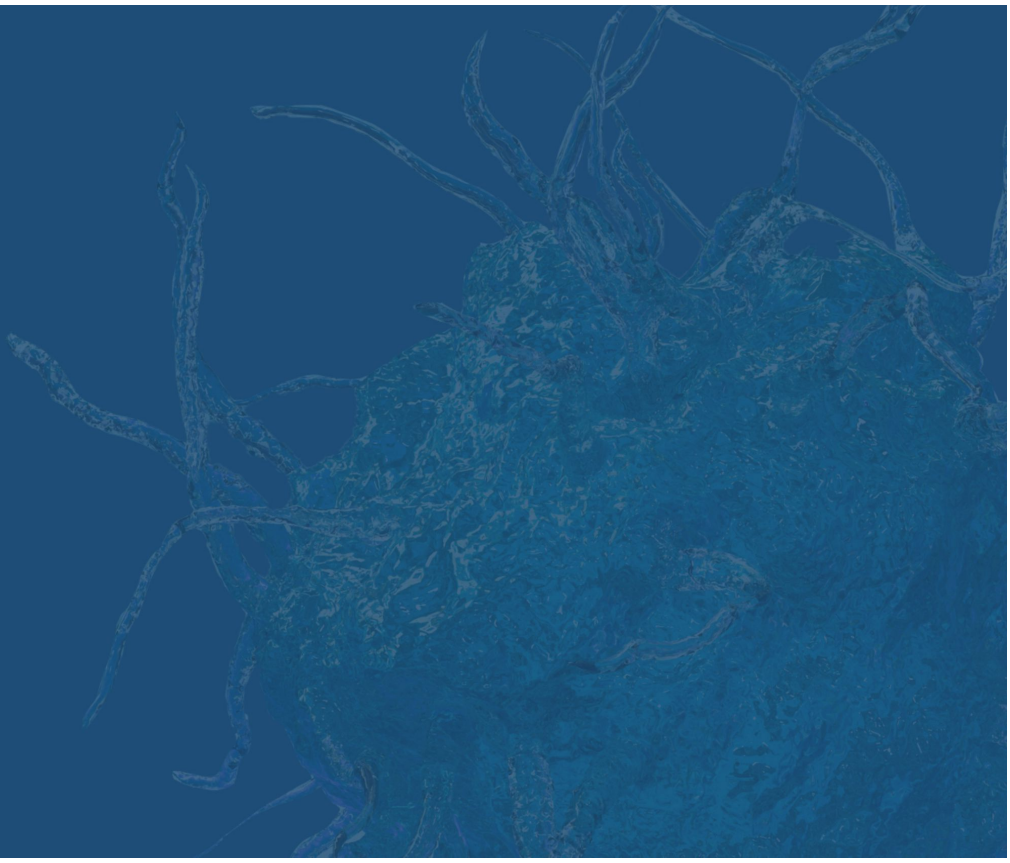
NKX019

CD19 CAR NK in r/r non-Hodgkin lymphoma



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Autologous CAR T-cell therapy has set the bar for cellular therapies in r/r NHL but has limitations

CAR T-cell therapy is not broadly accessible

- Only 20-30% of patients with LBCL who could benefit from CAR T receive it
- Patients often need to change providers and receive bridging chemotherapy

Potential toxicity requires proximity to a specialized inpatient treatment center

- Over 25% of patients require ICU care
- Grade 3+ CRS: 13 to 49%, Grade 3+ ICANS / neurotoxicity: 18 to 31%

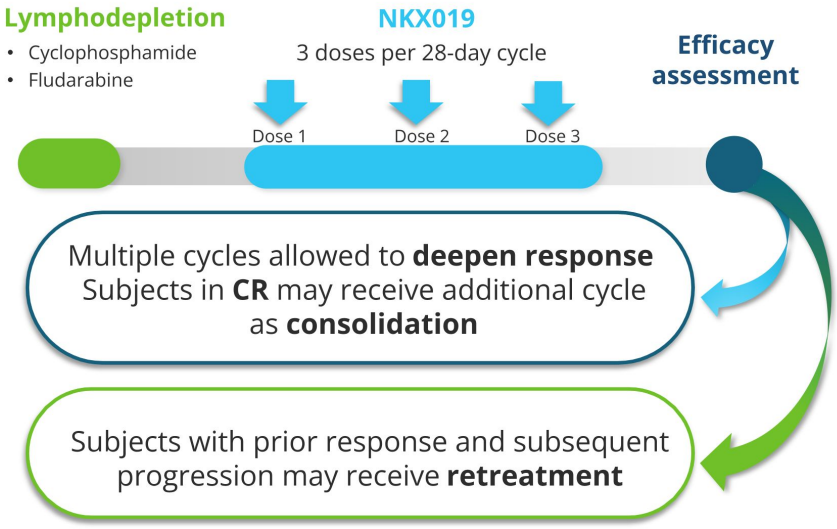
Only 30-40% of patients with LBCL treated with CAR T-cell therapy have 6-month CR

- No ability to re-dose for incomplete response
- Outcomes among those that relapse are poor

YESCARTA USPI; KYMRIAH USPI; BREYANZI USPI; Azoulay et al, 2020; Tomas, et al. 2022.

CAR, chimeric antigen receptor; CR, complete response; CRS, cytokine release syndrome; ICANS, immune effector cell-associated neurotoxicity syndrome; ICU, intensive care unit; LBCL, large B-cell lymphoma; NHL, non-Hodgkin lymphoma.

NKX019 for B-cell malignancies: A multicenter, open-label, phase 1 study in r/r NHL



NCT05020678

7 of 10 — **CR in Phase 1 dose escalation cohort[1]**

No ICANS, neurotoxicity, or GVHD of any grade and only transient fevers within 24 h of infusion

4 of 4 — **CR in retreatment of patients with progression after NKX019**

Study amended to increase dose intensity and prevent relapse

1. Dickinson, et al. Oral presentation at EHA 2023, program section s347.

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CAR, chimeric antigen receptor; CR, complete response;; r/r, relapsed/refractory; CRS, cytokine release syndrome; ICANS, immune effector cell-associated neurotoxicity syndrome

NKX019 Amendment: Compressed Dosing

Dose compression cohort enrolling patients with large B-cell lymphoma (LBCL), targeting patients who have received *prior CD19 CAR-T cell therapy*

New compressed dosing schedule to intensify exposure to NKX019 in the first week after LD

NKX019 on Days 0, 3, and 7 following standard LD with Flu/Cy

Previous cohorts received NKX019 on Days 0, 7 and 14

Study amendment also includes

- Potential higher doses of CAR NK cells
- Tailored LD with Cy monotherapy for patients with prolonged cytopenias
- Elimination of inpatient requirement
- Streamlined protocol assessments to reduce burden on sites and patients

Next clinical update planned for mid-2024

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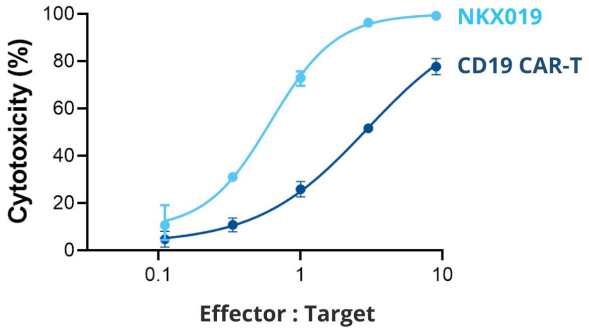
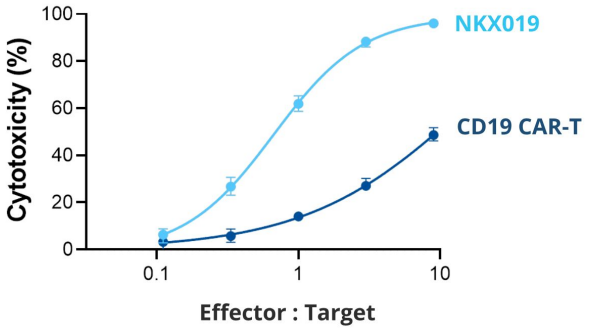
CAR, chimeric antigen receptor; cy, cyclophosphamide; flu, fludarabine; LD, lymphodepletion

NKX019 has superior target cell killing compared to CD19 CAR T cells, even with low levels of CD19 expression

High CD19 Expressing Cells



Low CD19 Expressing Cells



CD19 downregulation allows normal and malignant B cells to escape CAR T cells[1]
NKX019 maintains superior killing in B cell tumor cells expressing low CD19 levels[2]

Nalm6 cells engineered to express varying levels of CD19 were obtained from R. Majzner, Stanford; Effector : Target is the ratio of NK or T cells to tumor cells.

1: Fioretti, et al. Cancer Immunol Immunother. 2023 Jan;72(1):257-264.
2: Dickinson, et al. Blood (2021) 138 (Supplement 1): 3868.

NKX101

NKG2D CAR NK in r/r acute myeloid leukemia

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AML is a rapidly progressing leukemia with a poor prognosis

Heterogenous group of blood cancers treated with risk-adapted chemotherapy

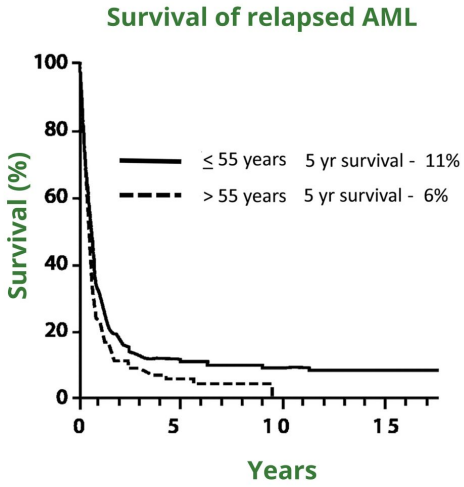
- Most patients will ultimately die from relapse or complications from therapy

Allogeneic HCT is best chance of long-term cure

- Limited to patients who are fit
- **Pre-HCT CR** improves outcomes

Outcomes for patients who relapse or have refractory disease are especially poor

- Low response rates with standard chemotherapy
- 12-18% CR rate, including venetoclax-based regimens



1: Canaccord Genuity, 14 Nov 2023.
2: Mackensen et al. *Nature Med*. 28 Oct 22. 2124–2132.

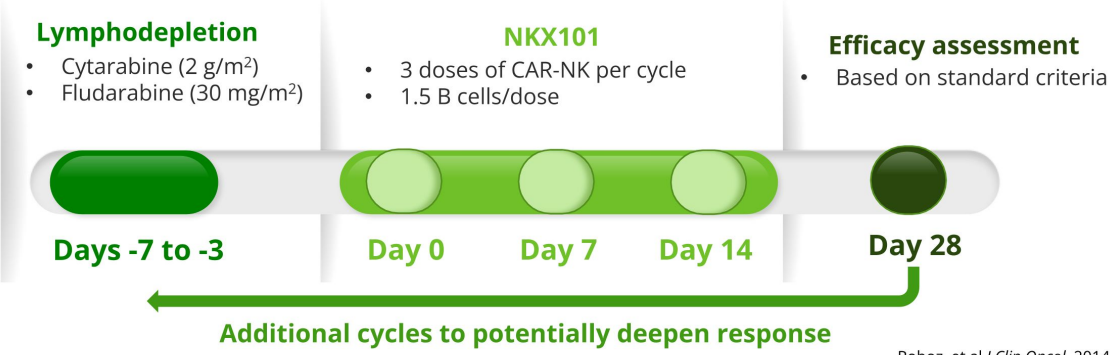
NKX101 for relapsed/refractory AML following disease-tailored LD

Fludarabine/Ara-C with anthracycline (e.g. FLAG-Ida) is a frequent salvage regimen for r/r AML with true CR rate of ~10% and cCR rate of ~20% as a comparator arm

- Anthracyclines (idarubicin, mitoxantrone, etc.) add toxicity and limit addressable population

Ara-C (cytarabine) is a DNA damaging agent with potent immunosuppressive effects

- Incorporated across AML treatment landscape, including upfront therapy



NCT04623944

Roboz, et al *J Clin Oncol.* 2014 Jun 20;32(18):1919-26.
Perl, et al *N Engl J Med.* 2019 Oct 31;381(18):1728-1740.
Holubova, et al. *Int J Mol Sci.* 2019 Jul 15;20(14):3472.
Ogbomo, et al. *Neoplasia.* 2008 Dec; 10(12): 1402–1410.
Cytarabine USPI

CR: complete response; cCR, cumulative CR rate; FLAG-Ida: fludarabine, cytarabine +/- GCSF and idarubicin; NK: natural killer; NKG2D: natural killer group 2, member D

ASH 2023: Updated follow-up of patients with r/r AML

4 of 6 patients achieved CR/CRi

- High-risk features such as prior HCT, TP53 mutation and high blast burden
- 3 of 4 remained in CR/CRi at 4 months

Safety profile consistent with available therapies

- No CRS, ICANS or GvHD of any grade
- Myelosuppression and infection were the most common ≥Grade 3 toxicities

Next clinical update planned for 1H 2024

- 12-20 additional patients
- Additional follow-up for initial patients

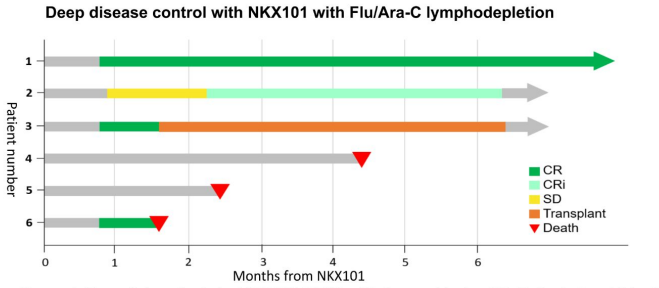


Figure 1. Four of six patients had CR/CRi (67%), with three achieving CR. Patients 1 and 6 had no detectable minimum residual disease (MRD) by flow cytometry after one treatment cycle. Patient 3 had MRD of 0.18% after one cycle and was immediately taken to consolidative hematopoietic cell transplant. Patient 2 had three cycles of treatment with successive decrease in disease burden, resulting in CRi. Data as of October 31, 2023.

Of those who achieved CR/CRi, three out of four remained in CR/CRi at 4 months.

Sauter, et al. ASH 2023

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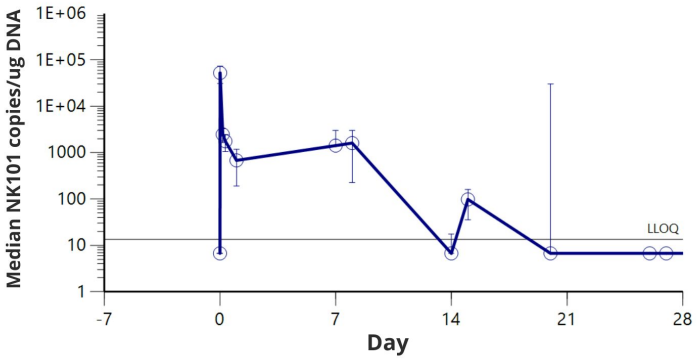
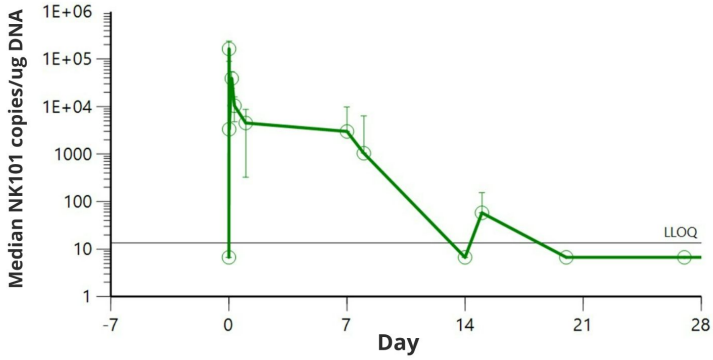
AML, acute myeloid leukemia; CAR, chimeric antigen receptor; CR, complete response; CRi, complete response with incomplete count recovery; CRS, cytokine release syndrome; ICANS, immune effector cell-associated neurotoxicity syndrome; GvHD, graft versus host disease; r/r, relapsed or refractory

Disease-tailored lymphodepletion does not compromise PK

Fludarabine/Cyclophosphamide



Fludarabine/Ara-C



- NKX101 dosed on days 0, 7, and 14
- Exposure consistent with previously published data using haploidentical NK cells[1]
- No need for exogenous IL-2 or other cytokine support

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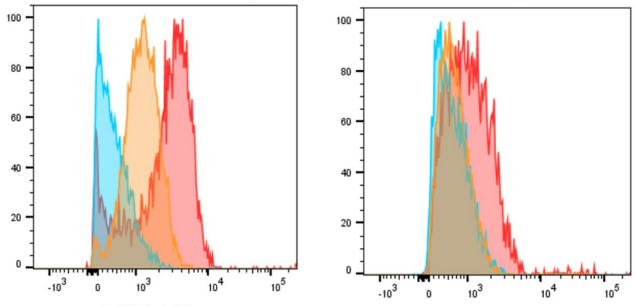
1: Romee, et al. Sci Transl Med. 2016 Sep 21; 8(357)

Ara-C upregulates NKG2D ligands and increases sensitivity to NK cell killing

Ligands are upregulated with stress, including chemotherapy

- NKG2D CAR binds to 8 known ligands
- Mediates natural target cell elimination

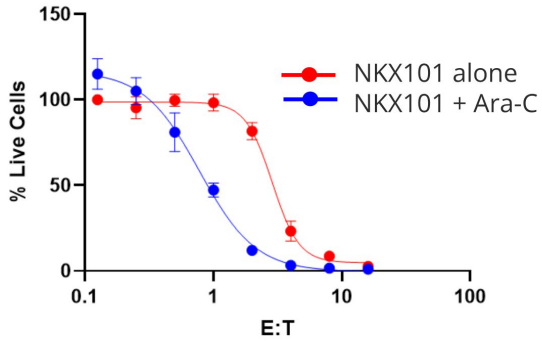
Ligand staining after 1hr of Ara-C Exposure



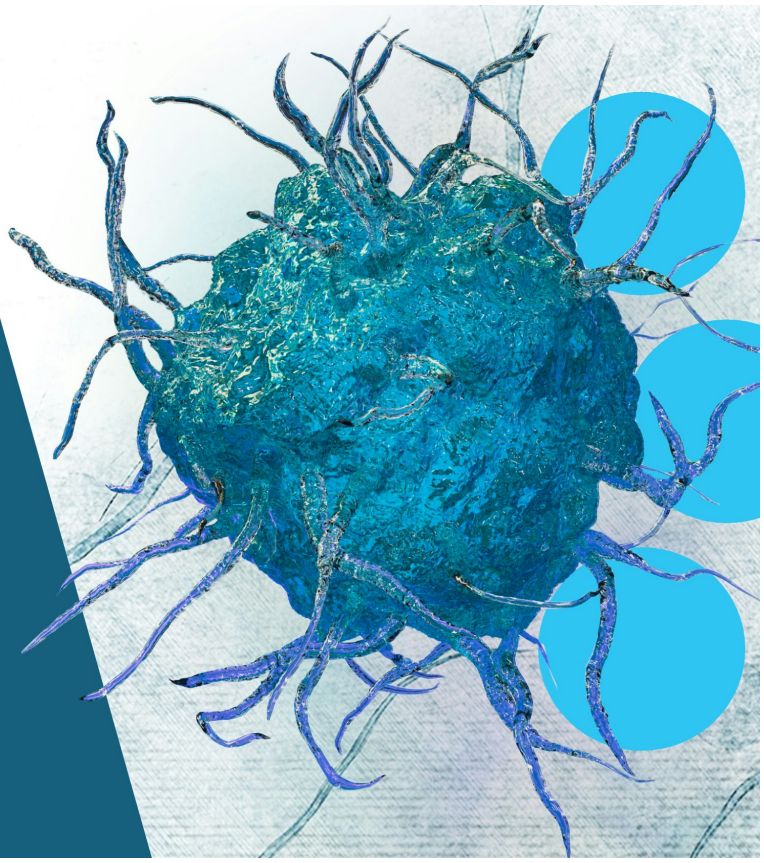
Blue: Isotype
Orange: Untreated
Red: Ara-C treated

Pre-treatment of AML cells increases sensitivity to NK killing in vivo

- Dose dependent effect
- May increase opportunity for CAR-mediated killing



Summary



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Autoimmune expansion | 2024 updates | Cash runway

- Pipeline expanded into autoimmune disease
- Further investment in oncology gated by clinical signals from next data updates
- $278.4 M in cash and cash equivalents as of 30 Sept 2023
- Projected cash runway into 2026
- Multiple clinical updates expected in 2024

Anticipated 2024 clinical milestones

1H 2024	*NKX019 in lupus nephritis* - Dose first patient and program update
1H 2024	*NKX101 in AML* - Clinical data from 12 to 20 new patients in flu/Ara-C cohort
Mid 2024	*NKX019 in NHL* - Clinical data from dose compression cohort in patients with LBCL after prior CAR-T