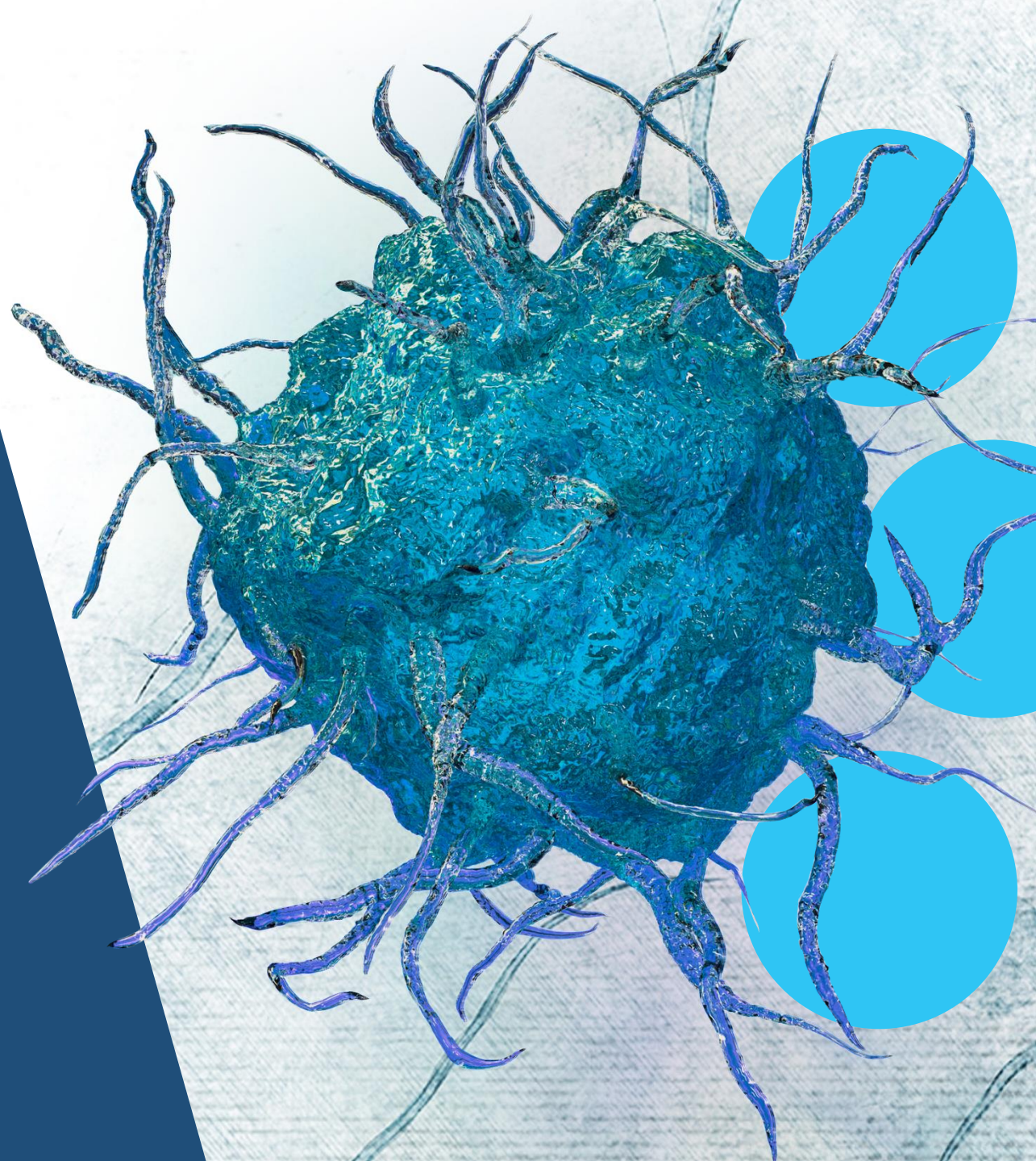
Pioneering Engineered Natural Killer Cells

Transforming the treatment of autoimmune disease



nkarta | May 2026

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Creating a Different Kind of Cell Therapy

Harnessing natural killer (NK) cells to deliver a new approach to cell therapy

Creating an off-the-shelf product designed for outpatient dosing in community settings

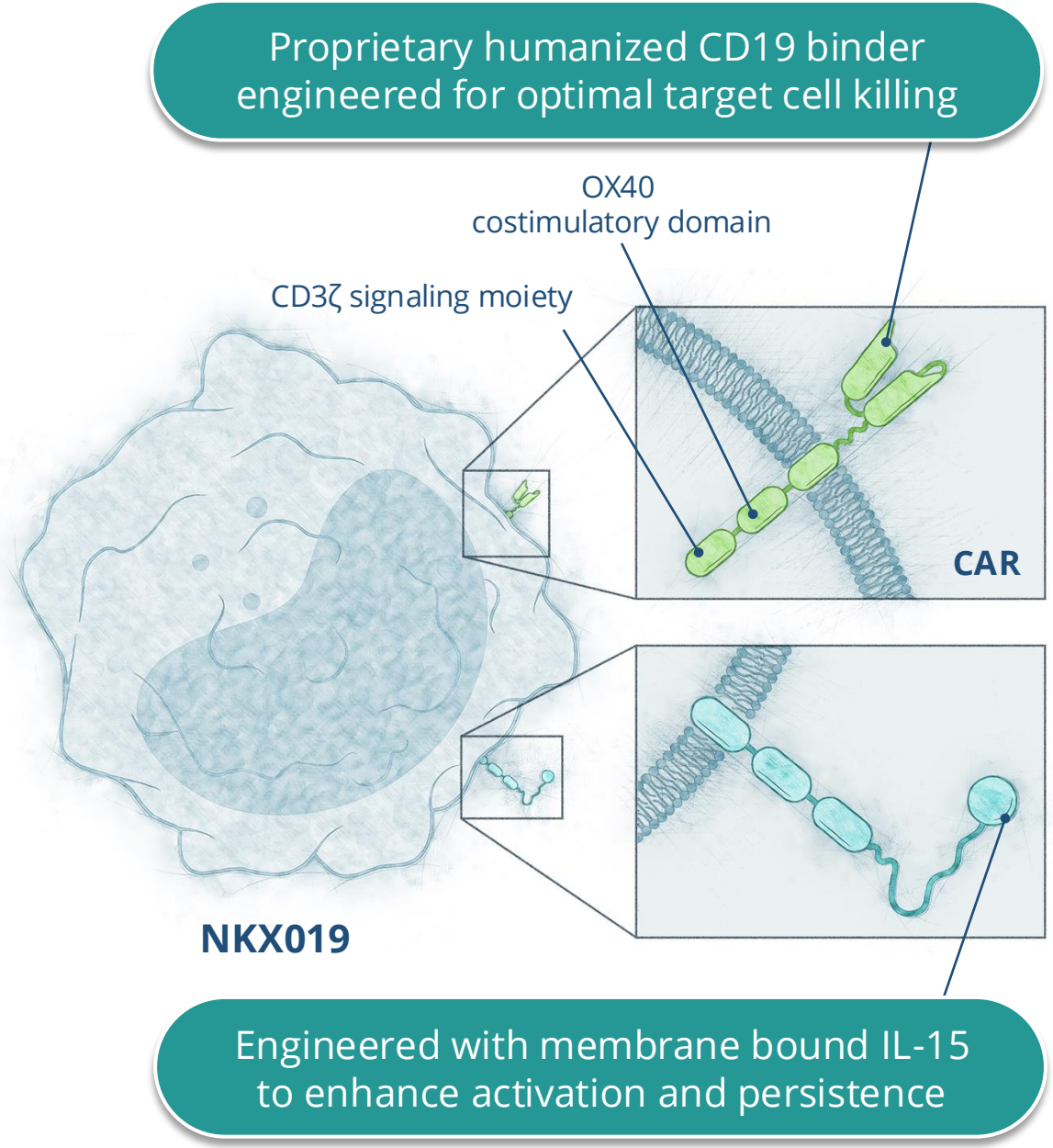
Pioneering donor-derived, scalable NK cells to broaden access for autoimmune patients

Safely Harnessing NK Cells' Natural Killing Ability

Healthy, pre-screened donors provide off-the-shelf availability

Outpatient dosing in community-based health settings

No immune effector cell-associated neurotoxicity syndrome (ICANS) or life-threatening cytokine release syndrome (CRS)[1]



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1: Dickinson, et al. *EHA.* 2023.

Challenging the Treatment Paradigm for Autoimmune Disease

Autoimmune disease driven by pathologic B cells is a major unmet need

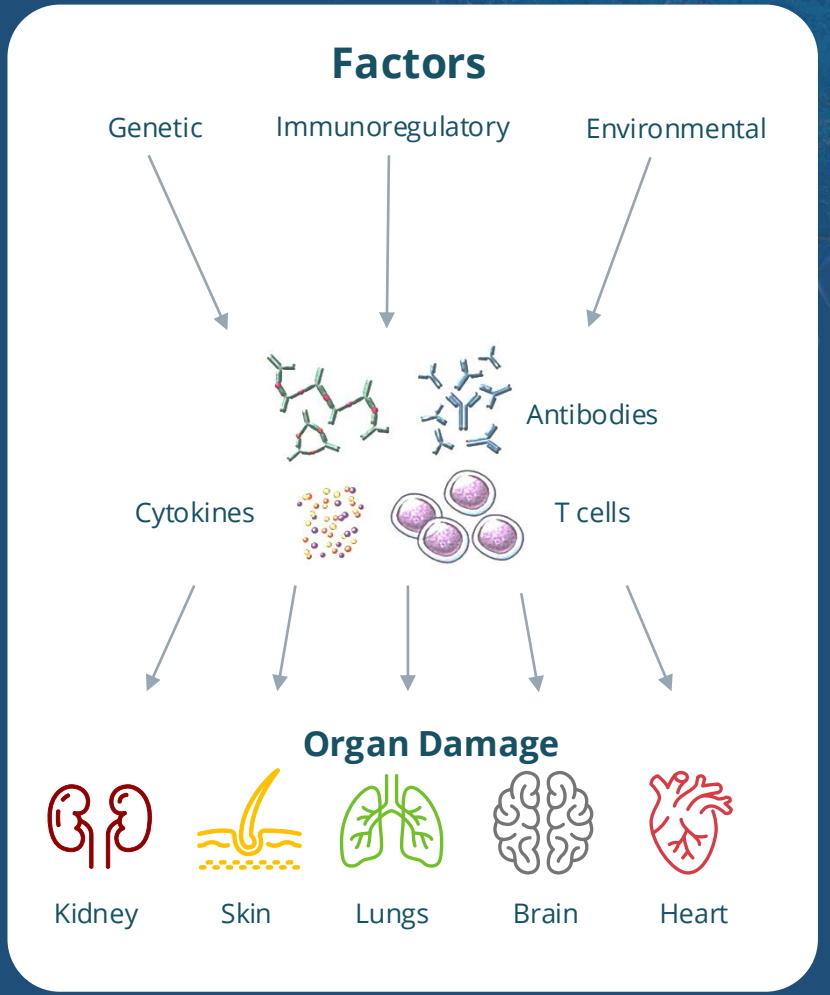
- Estimated 7 million U.S. patients[1]

Treatment with long-term immune suppression is often inadequate and limited by toxicity[2]

- Patient care is predominantly outpatient
- Chronic medications without disease remission

CD19-directed CAR cell therapy has challenged the current treatment paradigm

- Drug-free remissions >2 years after a single treatment in academic trials[3]

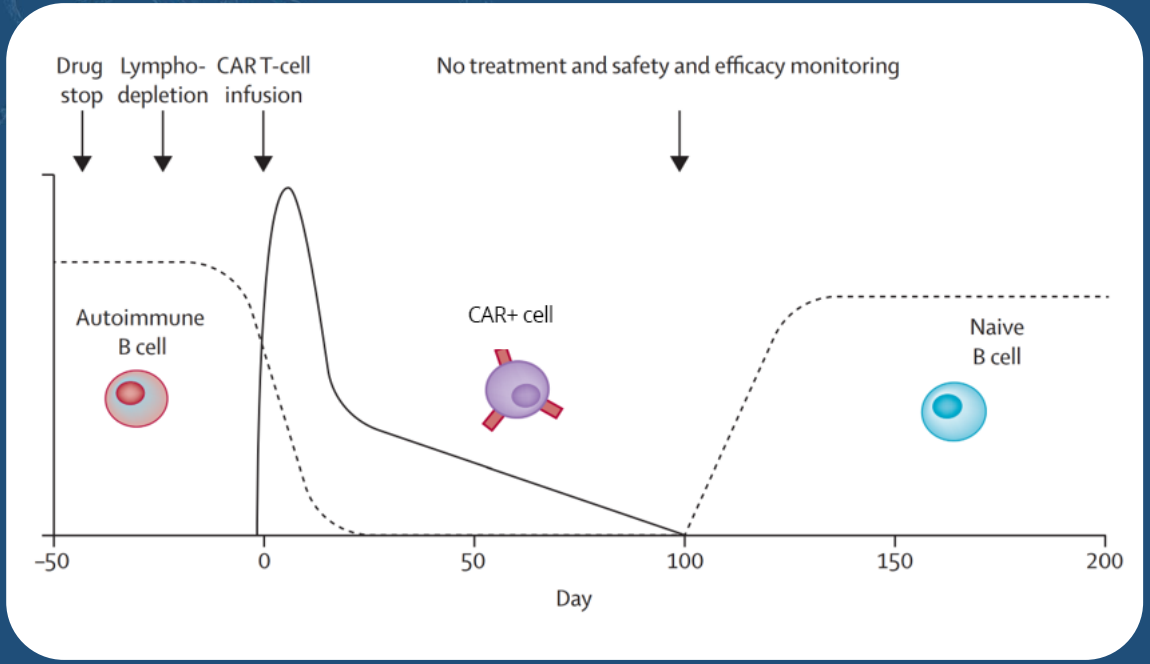


Adapted from: Tsokos, *NEJM*. 2011; 365:2110-2121.

CAR: chimeric antigen receptor

1: Canaccord Genuity, 14 Nov 2023.
2: Diana Paredes-Ruiz *Expert Rev Clin Imm*, 20(4), 359–373.
3: Mueller, et al. *NEJM. 2024; 390:687-700.*

Cell Therapy Has Shown the Ability to Bring About Drug-Free Remission in Autoimmune Patients



Adapted from: Schett, et. al, *Lancet* 2023. 402: 2034-2044.

Transient B-cell suppression can provide durable disease control

- CAR+ cells rapidly eliminated
- Post-treatment recovery with naïve B cells may lead to an “immune reset”

Drug-free remissions were achieved after a single treatment across multiple indications in academic trials[1]

- Systemic lupus erythematosus/lupus nephritis
- Idiopathic inflammatory myopathy (myositis)
- Systemic sclerosis (scleroderma)

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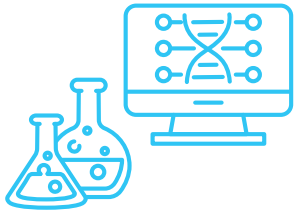
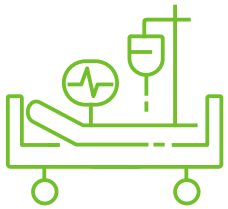
1: Mueller, et al. *NEJM.* 2024; 390:687-700.

Logistical Burdens and Toxicity Have Limited CAR T Cell Therapy's Adoption



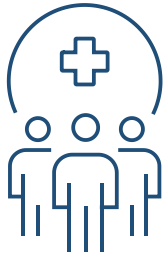
Autologous CAR T logistical and manufacturing challenges hamper accessibility

- Apheresis and cell processing facilitated by oncology/BMT providers
- Delay in patient treatment while CAR T cells are manufactured
- Higher manufacturing failure rates are a drawback for autologous CAR T



CAR T cell toxicity profile creates dependency on additional specialists

- Rapid *in vivo* expansion of CAR T cells produces high levels of proinflammatory cytokines, resulting in potential for high-grade CRS and ICANS needing ICU support



Standard of care therapy for autoimmune disease is predominantly outpatient

- Cell therapy often requires prolonged inpatient monitoring
- Achieving more widespread adoption of cell therapy will require deeper partnerships between “primary” care providers and patients

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BMT: bone marrow transplant; CAR: chimeric antigen receptor; CRS: cytokine release syndrome; ICANS: immune effector cell-associated neurotoxicity syndrome; ICU: intensive care unit

CAR NK Cells May Be Ideally Suited to Treat Autoimmune Disease

Off-the-shelf, allogeneic CAR NK cells may offer superior safety and accessibility without compromising clinical activity

- ✓ Outpatient dosing in community settings
- ✓ On-demand, off-the-shelf availability for autoimmune patients
- ✓ Limited *in vivo* expansion means low risk low-grade CRS or ICANS

Established proof of concept for CD19 CAR NK in autoimmune disease[1]

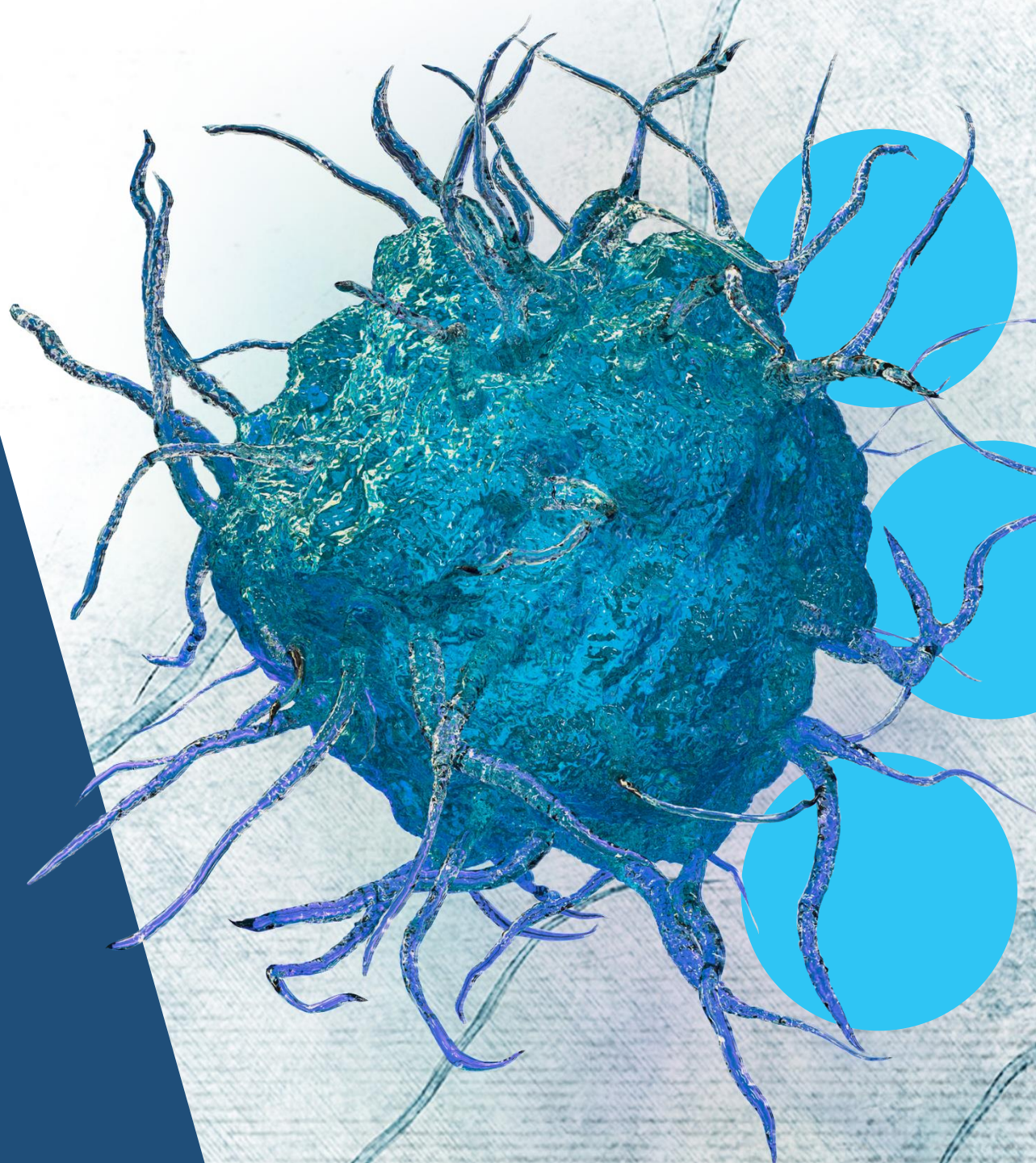
- ✓ B-cell depletion and immune reset achieved in relapsed/refractory SLE
- ✓ Low disease activity or remission in 75% of patients at 6 months
- ✓ No ICANS of any grade and only low-grade CRS

CAR: chimeric antigen receptor; CRS: cytokine release syndrome; ICANS: immune effector cell-associated neurotoxicity syndrome; SLE: systemic lupus erythematosus

1: Gao, et al. *Lancet*. 2025; 406:2968–2979.

CD19 CAR NK

NKX019



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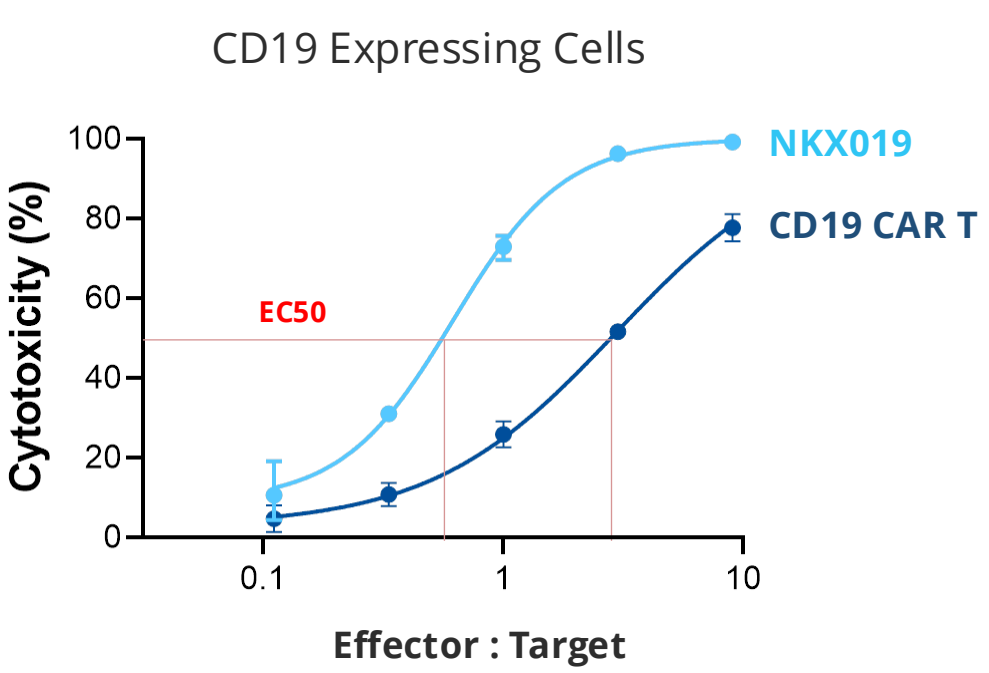
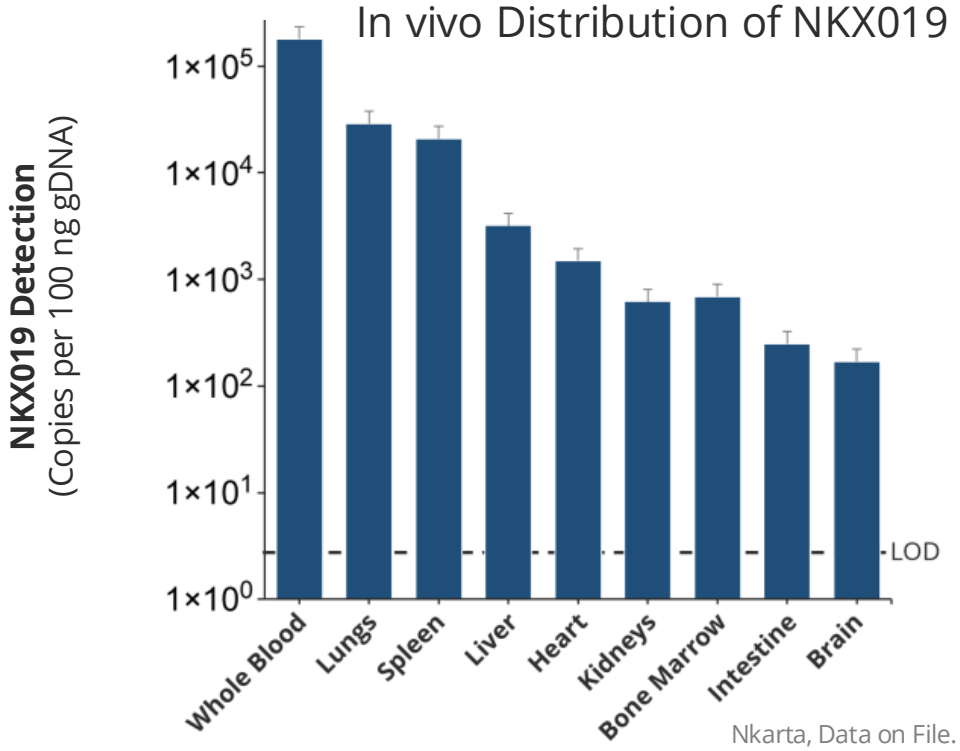
NKX019 Exhibits Superior Killing of CD19+ Cells Compared to CAR T Therapy





Nkarta, Data on File.

NKX019 exhibits superior killing in B cell tumor cells, including against low CD19-expressing cells[1]

NK cells traffic throughout the body, including to traditionally privileged sites[2]

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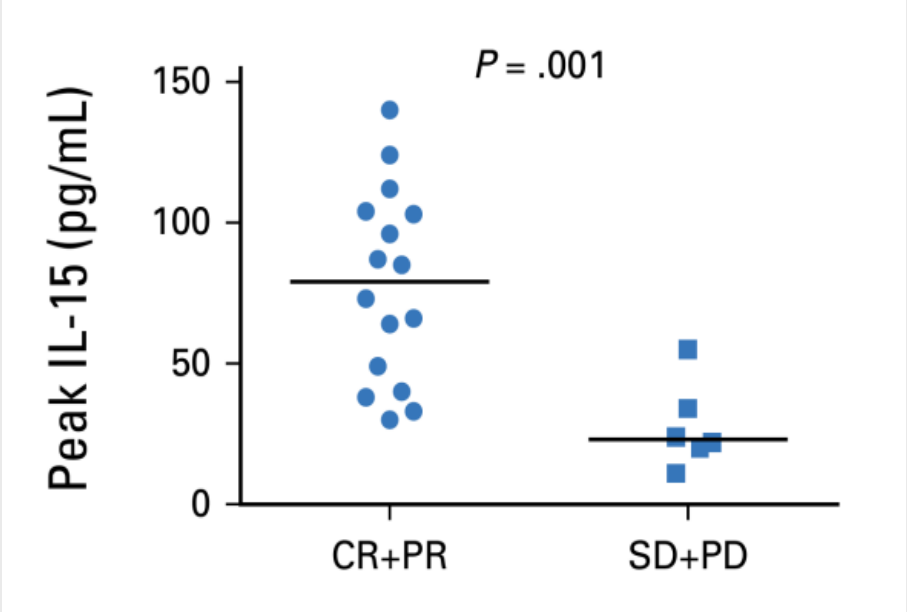
Nalm6 cells engineered to express varying levels of CD19 were obtained from R. Majzner, Stanford
Effector : Target is the ratio of NK or T cells to tumor cells.

1: Dickinson, et al. *Blood.* 2021; 138 (Suppl 1): 3868.
2: Peng, et al. *Clin Rev Allergy Immunol.* 2014; 47 (2): 119.

NKX019 Clinical Responses Achieved without Increasing Proinflammatory Cytokines

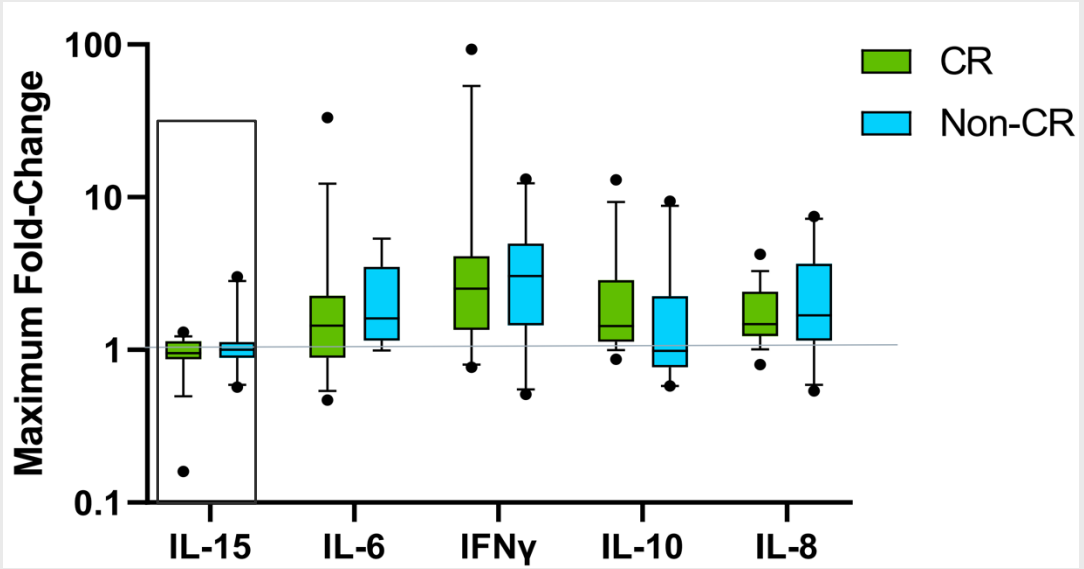
No ICANS or Life-Threatening CRS Observed in Nkarta NKX019 Oncology Study[1]

CAR T clinical responses are associated with significant increases in serum cytokines



Kochenderfer, et al. *J Clin Oncol.* 2017; 35 (16): 1803.

NKX019 does not require serum cytokine elevation for CR in NHL



Nkarta. Data on File.

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CR: complete response; NHL: non-Hodgkin lymphoma; PR: partial response; SD: stable disease; PD: progressive disease
IL-15: interleukin-15; IL-6 interleukin-6; IFNγ: interferon gamma; IL-10: interleukin-18; IL-8: interleukin-8

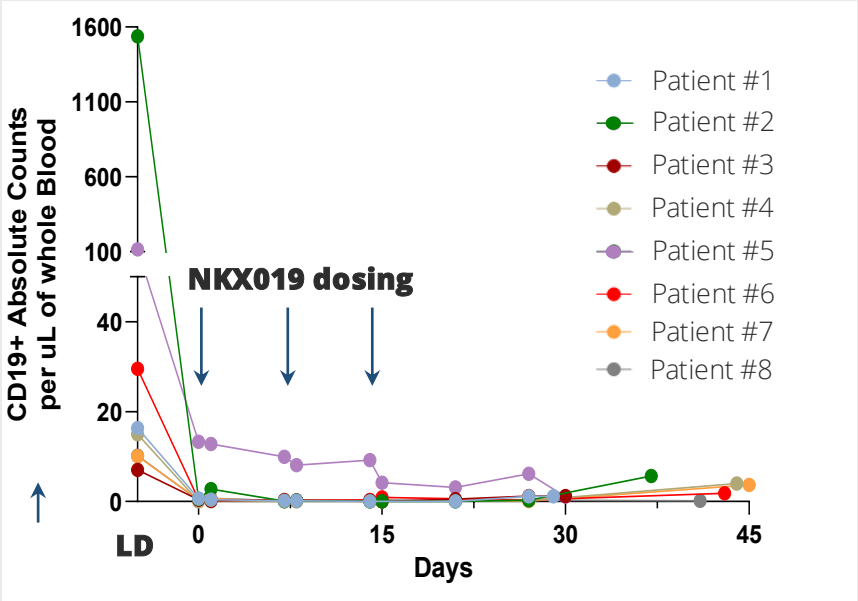
1: Hill, et al. Pan Pacific Lymphoma Meeting. 2024.

NKX019 Depleted and Reset the B Cell Compartment in NHL Patients

Patient samples from NHL trial show that NKX019 effectively eliminates CD19+ cells from circulation

Deep suppression achieved by 30 days following a single cycle of treatment (LD + 3 doses NKX019)

Peripheral CD19+ counts after one cycle of NKX019 in NHL



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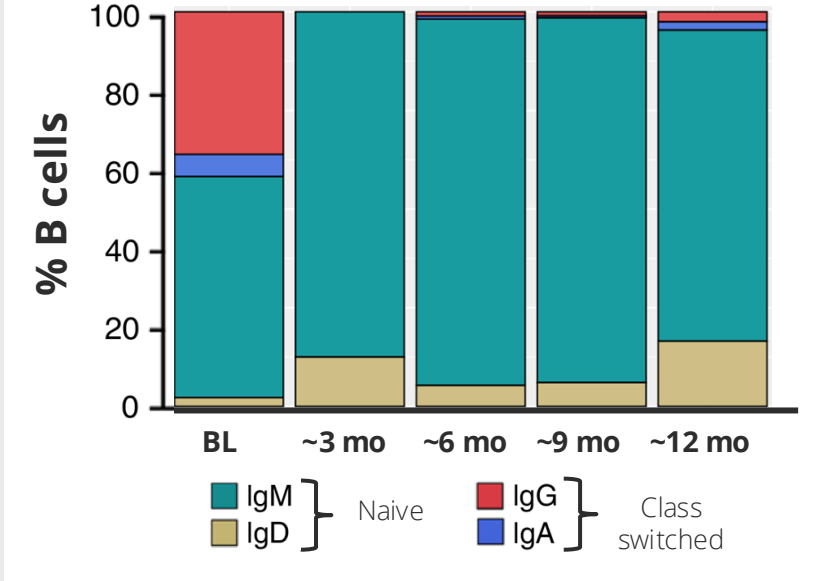
B-cell isotypes are reset after NKX019 treatment in NHL trial

Naïve B cells (IgM and IgD) class switch after activation to express IgG and IgA, a requirement for SLE autoantibodies[1]

Little to no recovery of autoantibody-producing plasmablasts or memory B cells following treatment

Case study: Baseline to 12-month follow-up



Nkarta. Data on File.

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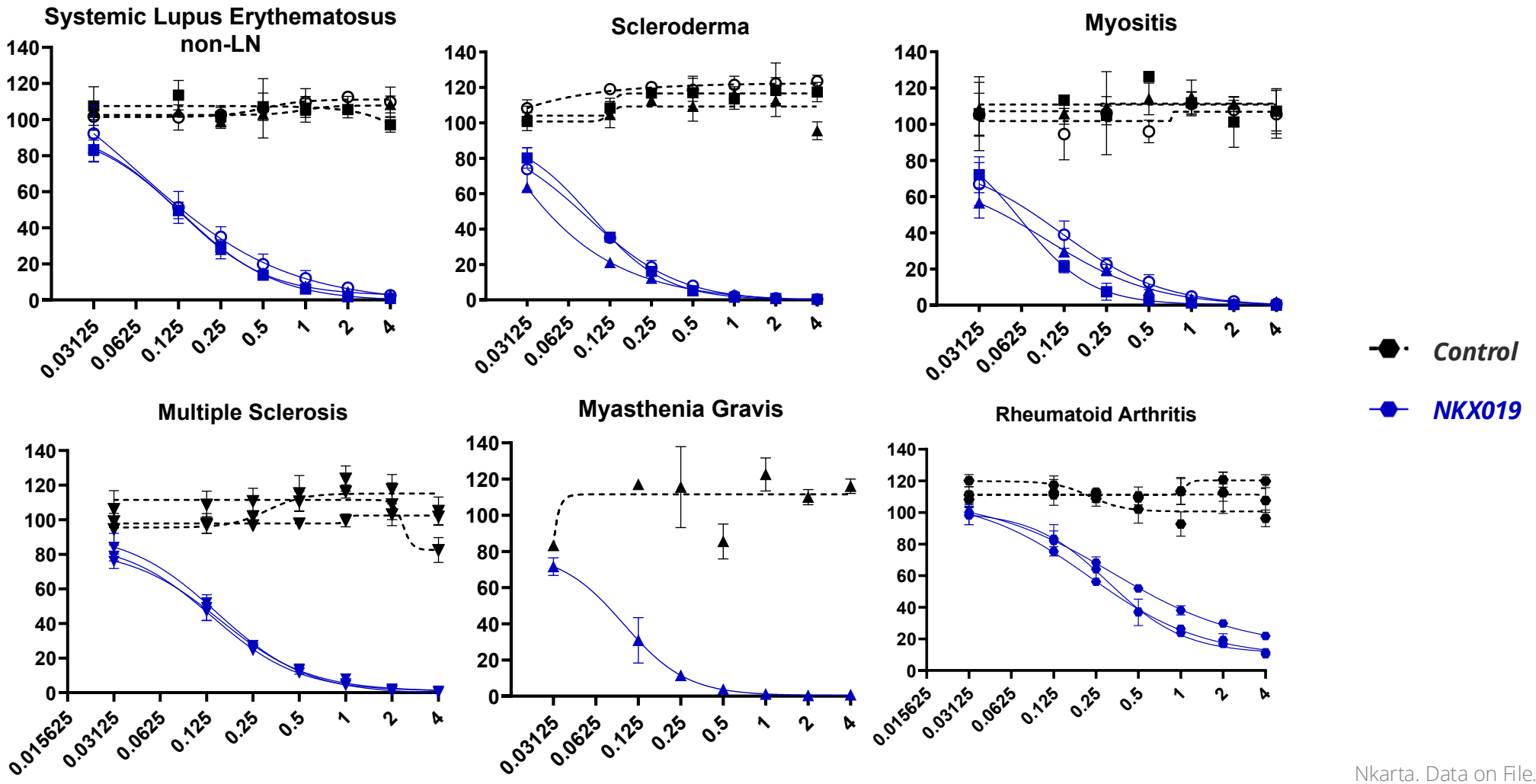
1: Liu, et al. *Autoimmunity.* 2004; 37 (6-7): 431.

NKX019 Targets and Kills CD19+ Cells Across Multiple Autoimmune Indications

In vitro studies using blood samples from individuals with autoimmune diseases show consistent B cell killing by NKX019



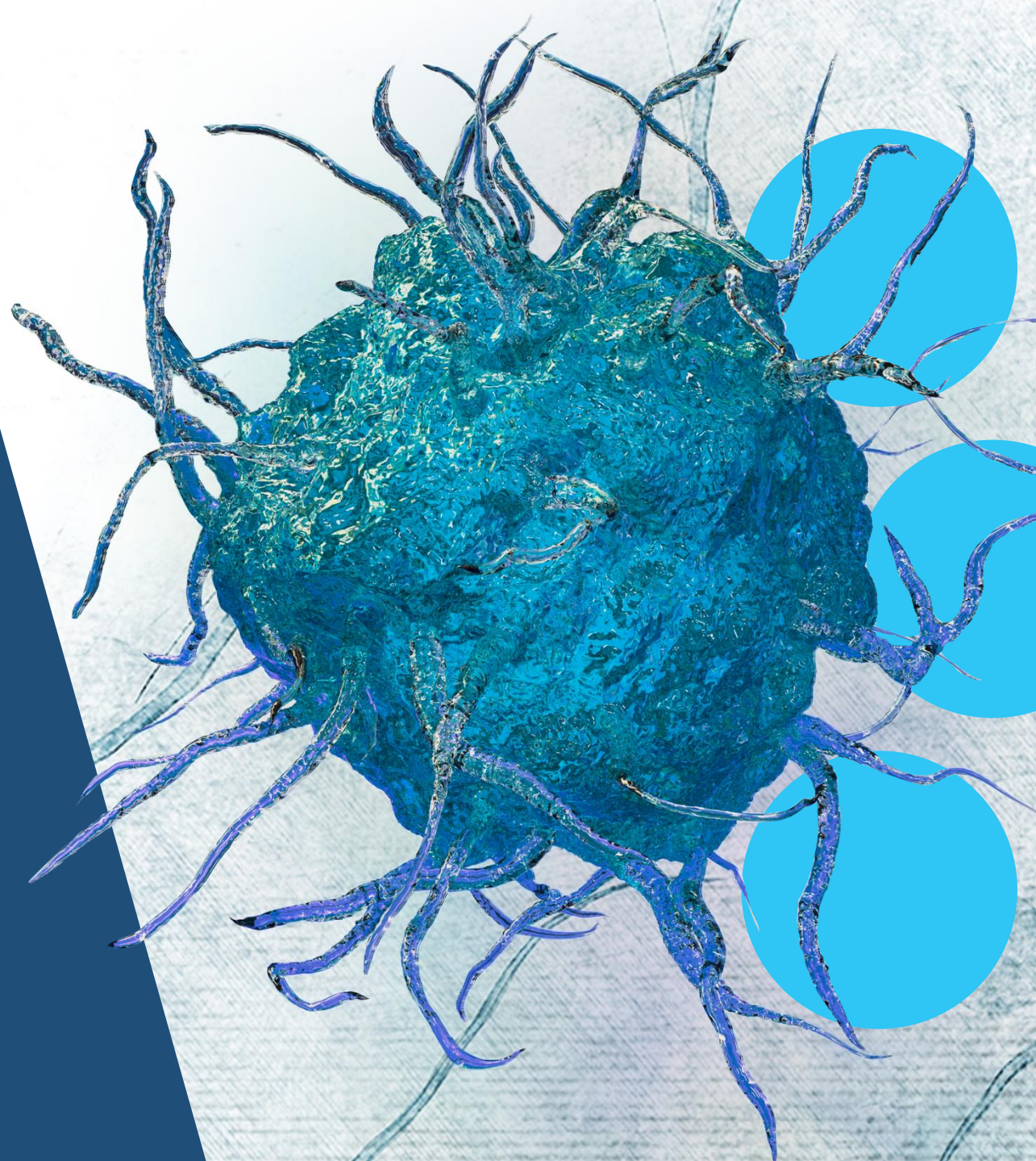
Nkarta. Data on File.

E:T Ratio - Effector : Target is the ratio of NK cells to PBMCs

n=3 patients, except myasthenia gravis n=1

ONGOING CLINICAL TRIALS

NKX019



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NKX019
CD19 CAR NK

Trials in Progress

Ntrust-1
Lupus Nephritis & Primary Membranous Nephropathy

Ntrust-2
Scleroderma, Myositis, ANCA-Associated Vasculitis & Rheumatoid Arthritis

Investigator-Sponsored Trial
Systemic Lupus Erythematosus

Investigator-Sponsored Trial
Myasthenia Gravis

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Cohesive Study Objectives Across NKX019 Clinical Trials

Primary

Safety and tolerability of NKX019 in the treatment of B-cell mediated autoimmune diseases

Secondary

Clinical activity, immunogenicity and pharmacokinetics

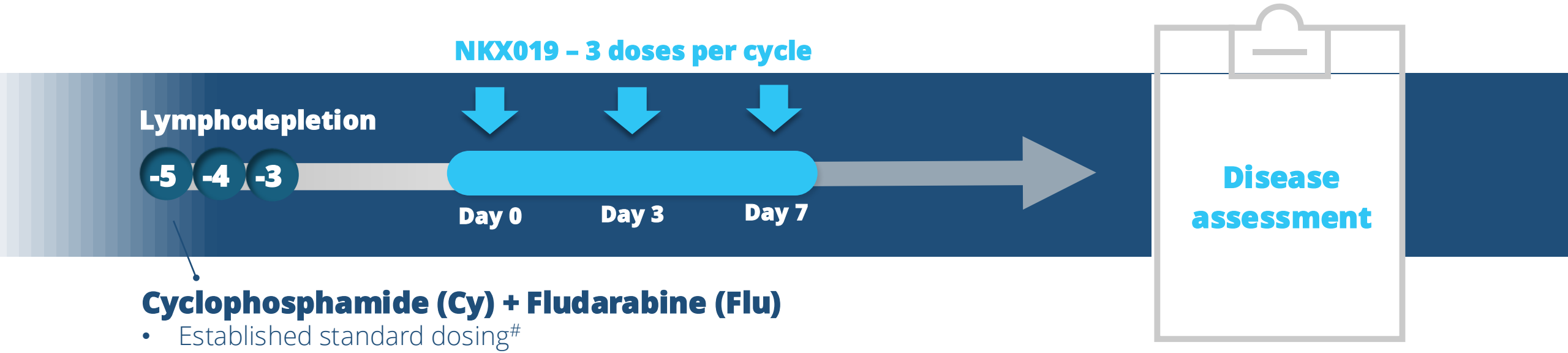
Exploratory

Autoantibodies, pharmacodynamics and cytokine profile

NKX019 Treatment Schema

Dose escalation to 4B CAR+ NK cells per dose

- **Outpatient** administration enables expanded treatment in community settings
- **Redosing option** (if needed) to deepen or restore patient response



Cyclophosphamide (Cy) + Fludarabine (Flu)

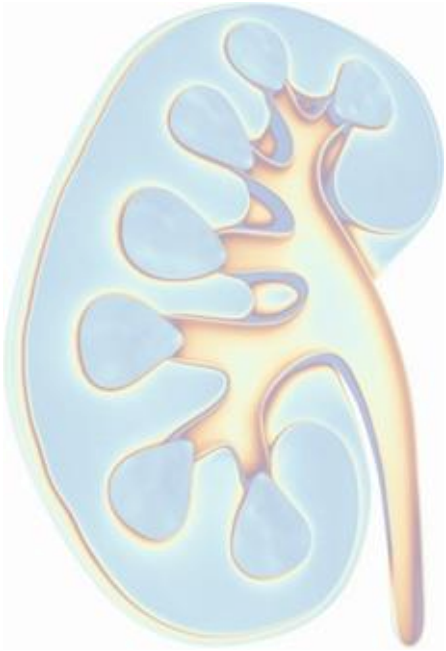
- Established standard dosing#
- Dose optionality for cy-only for patients with cytopenia
- Outpatient administration

#LD= Flu total 90 mg/m^2 as 30 mg/m^2/day on Days -5, -4, and -3 and Cy total 1 g/m^2 as 1 g/m^2/day on Day -3. Cytopenic participants may receive Cy alone total 1 g/m^2 as 1 g/m^2/day on Day -3.

1: Hill, et al. Pan Pacific Lymphoma Meeting. 2024.

Ntrust-1: Phase 1 Clinical Trial

Patients with refractory lupus nephritis (LN) or primary membranous nephropathy (pMN)



Key Eligibility: Adults (18-75 yo) who have tried standard of care and still have active disease with proteinuria

LN

US prevalence: ~60,000

2019 ACR Criteria

Class III or IV LN by renal biopsy

anti-ANA, anti-dsDNA or anti-Smith

pMN

US prevalence: ~30,000

Active pMN by renal biopsy

Positive anti-PLA2R or other pMN autoantibody

Study Status: Enrolling in 4B cell dose cohort;
Initial clinical update expected in 2026

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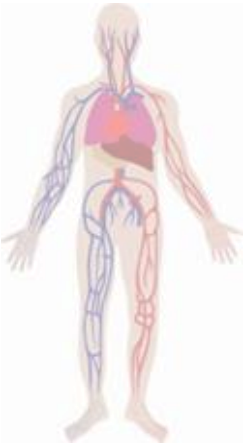
ANA: antinuclear antibodies; dsDNA: double stranded deoxyribonucleic acid; PLA2R: phospholipase A2 receptor

Ntrust-2: Phase 1 Clinical Trial

Ntrust-2



Patients with refractory systemic sclerosis (SSc), inflammatory myopathy (IM), ANCA-associated vasculitis (AAV) and rheumatoid arthritis (RA)

Key Eligibility: Adults (18-65 yo) who have tried standard of care and still have active or progressive disease

SSc
US prevalence: ~85,000

2013 ACR/EULAR criteria
Skin and/or lung disease

IM
US prevalence: ~50,000

2017 ACR/EULAR criteria
Positive myositis antibody
No other cause of myositis

AAV
US prevalence: ~70,000

2022 ACR/EULAR criteria
PR3-ANCA or MPO-ANCA antibody positive

RA
US prevalence: ~130,000

2010 ACR/EULAR criteria
RF or ACPA positive
Active joint disease

Study Status: Enrolling in 4B cell dose cohort;
Initial clinical update expected in 2026

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PR3-ANCA: proteinase 3 anti-neutrophil cytoplasmic antibodies; MPO-ANCA: myeloperoxidase anti-neutrophil cytoplasmic antibodies

Investigator-Sponsored Trials

Patients with refractory systemic lupus erythematosus (SLE) and myasthenia gravis (MG)

SLE with or without lupus nephritis

US prevalence: ~200,000

SLEDAI Criteria
Class III, IV, +/- V LN by renal biopsy
anti-ANA, anti-dsDNA or anti-Smith

Key Eligibility: Adults (18-65 yo) who have refractory disease despite standard of care

MG

US prevalence: ~100,000

MGFA Class II-IV disease

AChR and/or MuSK antibody

Key Eligibility: Adults (18-80 yo) who have refractory disease despite standard of care

Study Status: Enrollment ongoing

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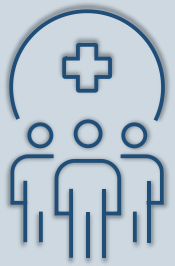
AChR: acetylcholine receptor; MGFA: Myasthenia Gravis Foundation of America; MuSK: muscle specific kinase

Summary



Focused on clinical trial execution

Several indications being evaluated in the clinic to allow multiple shots on goal

Ntrust-1

Ntrust-2

Data updates from Ntrust-1 and Ntrust-2 expected at medical meeting in 2026

Cash runway into 2029 to enable achievement of clinical milestones