

Artiva Biotherapeutics

September 2026

Disclaimers and Forward-looking Statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Statements in this presentation that are not statements of historical fact are forward-looking statements. Such forward-looking statements include, without limitation, statements regarding: expectations of Artiva Biotherapeutics, Inc. (the "Company") regarding AlloNK and its potential benefits, mechanism of action, activity, potency, differentiation, safety, tolerability, effectiveness, depth and duration of response, comparability to other products/candidates or modalities, scalability, outpatient administrability, potential for adoption in a community setting, potential to help patients get off immunomodulatory drugs and/or steroids, market opportunity, competitive landscape, ability to address an unmet need, potential timing and outcome of regulatory interactions, registrational strategy (including potential and timing to advance into a registrational trial and design of a potential registrational trial), potential and timing of additional clinical data, potential to move into follow-on indications, and potential to be approved for marketing or be first-in-class; the Company's plans and expectations regarding its research and development programs, including the design, timing, and results of preclinical and clinical study designs and results, and the timing or likelihood of regulatory filings and approvals; and the Company's business strategy, IP protection, ability to deliver value creation, future results of operations, and financial position, including cash runway. Words such as "opportunity," "potential," "estimate," "emerging," "near-term," "next," "focus," "can," "design," "TBD," "target," "initial," "future," "path," "runway," references to specific future dates or periods, and similar expressions are intended to identify forward-looking statements, though not all forward-looking statements necessarily contain these identifying words. These forward-looking statements are based on the beliefs of the management of the Company as well as assumptions made by and information currently available to the Company. Such statements reflect the current views of the Company with respect to future events and are subject to known and unknown risks and uncertainties, including business, regulatory, economic and competitive risks and uncertainties about the Company, including, without limitation, risks inherent in developing product candidates, the fact that initial, preliminary, and interim data from the Company's clinical trials may change as more patient data become available and remain subject to audit and verification procedures that could result in material differences from the financial data, future results from the Company's ongoing and planned clinical trials, the Company's ability to obtain adequate financing to fund its planned clinical trials and other expenses, risks that future clinical trial results may not be consistent with interim, initial, preliminary, or topline results or results from prior preclinical studies or clinical trials, trends in the industry, the Company's relationships with its existing and future collaboration partners, the legal and regulatory framework for the industry, and future expenditures. In light of these risks and uncertainties, the events or circumstances referred to in the forward-looking statements may not occur. The actual results may vary from the anticipated results, and the variations may be material. Other factors that may cause the Company's actual results to differ from current expectations are discussed in the Company's filings with the U.S. Securities and Exchange Commission, including the section titled "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2025. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date this presentation is given. Except as required by law, the Company undertakes no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

This presentation discusses product candidates that are under clinical study and have not yet been approved for marketing by the U.S. Food and Drug Administration. No representation is made as to the safety or effectiveness of these product candidates for the use for which such product candidates are being studied.

The clinical data for AlloNK in this presentation are based on separate studies and include pooled data from the Phase 2a company-sponsored basket trial (NCT06991114) and investigator-initiated basket trial (NCT06581562), and cross-study comparative data. No head-to-head trial has been conducted evaluating AlloNK against any other products or product candidates included herein. Differences exist between clinical trial design, patient populations, and the product candidates themselves, and caution should be exercised when pooling and/or comparing data across trials as pooled data and cross-study comparisons are inherently limited and such data may not be directly comparable.

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Artiva Biotherapeutics: AlloNK in Autoimmune Disease

Potentially **first to market** in refractory RA, a patient population with **high unmet need** and **~$5B* spent in the US** on cycling standard of care (SoC) agents (b/tsDMARDs)

Ph3 **registrational study** (CONCERT-RA) **read-out expected H2 2028**, with est. **cash runway into 2029**
↪ *$349.4 million in cash, cash equivalents and investments as of June 30, 2026*

Leverages **deep B-cell depletion:** potent mechanism vis-à-vis other novel approaches

High response rate in refractory RA patients, with potential for **>1 year b/tsDMARD-free** and opportunity for **multiple treatment courses** for long-term disease control

Tolerability profile suitable for **outpatient administration**, with **no CRS or ICANS**, no complex monitoring and limited hospitalization for AEs

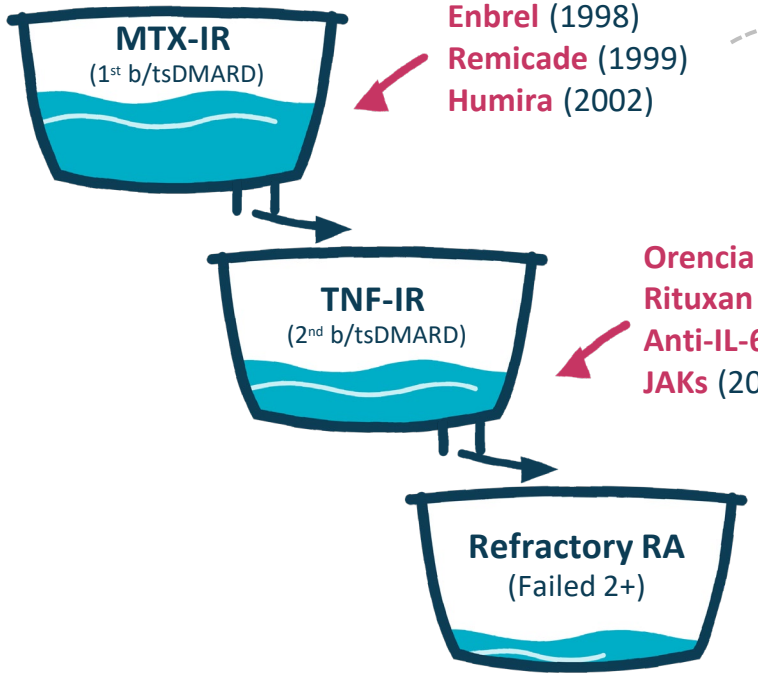
Favorable competitive landscape: supports potential **multi billion-dollar opportunity**

Refractory RA: The Next Frontier in RA Treatment

First Biologics
(anti-TNFs)

b/tsDMARDs

Today



Enbrel (1998)
Remicade (1999)
Humira (2002)

Orencia (2005)
Rituxan (2006)
Anti-IL-6 (2010-17)
JAKs (2016-19)

Prevalence of b/tsDMARD-treated patients in the United States

~575k treated with b/tsDMARDs [2]

150–200k
Failed 2+ b/tsDMARDs [2]

The next frontier: 80–90% of these patients will not achieve an ACR50 response on their next b/tsDMARD

Artiva Biotherapeutics

[1] Black, et al. Lancet Rheumatol. 2023 Sep 25;5(10):e594-e610. From Supplement (Fig. 3), adjusted for population growth
[2] Multiple publications based on real-world registry data, including: Paudel et al 2024 Rheumatology; Watanabe et al 2024 Rheumatology; Roodenrijs et al 2021 Rheumatology; Jung et al 2023 Arthritis Res Ther.; Failed 2+ b/tsDMARDs population represents ~10-15% of all RA patients

What is Refractory RA from a Patient's Perspective? How Could AlloNK Help?

Experience with First Patient in Investigator-Initiated Trial…

Refractory RA; frustrated with SoC

- Mother of 3 children, diagnosed with RA at 28 years old
- **Multiple** csDMARDs and b/tsDMARDs; **high disease activity** (baseline CDAI 57)
- **11 intra-articular injections or aspirations** in the 2 years before enrolling in the trial

> *"At times I would be at work barely moving, barely functioning"*

Rapid and ultra-deep clinical response after AlloNK

- **Complete peripheral B-cell depletion**; re-population with **naïve phenotype**
- **52.5 point reduction** in CDAI (5pts DAS28-ESR), with **mACR50 achieved** by 6 mo
- **No subsequent b/tsDMARD for >18mo** as of Apr2026

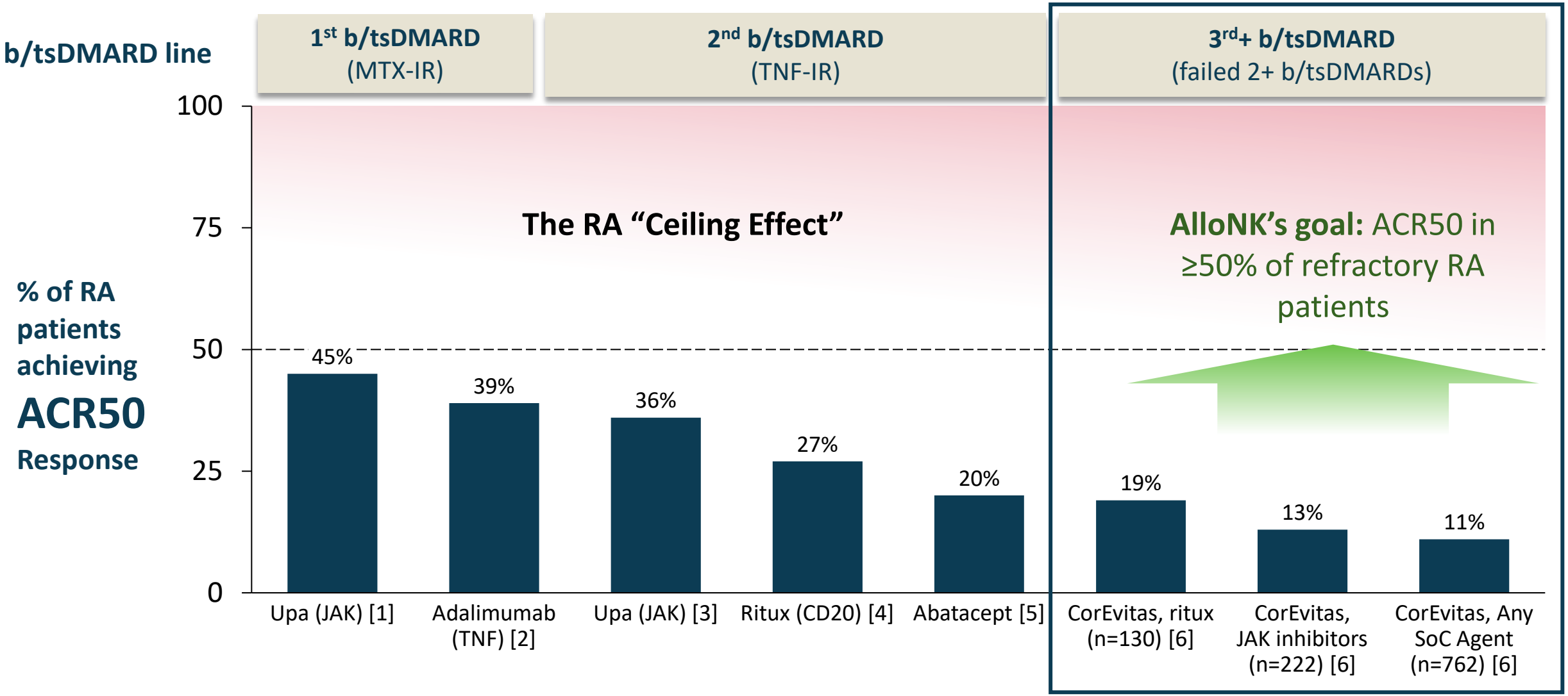
> *"I love roller skating, but would go through periods where I couldn't even put on my skates – Now I'm in the rink again"*

…Indicative of TPP in Refractory RA*

- ❑ **Refractory RA** patients struggling with **high disease activity** and impact on **quality of life**, with **poor chance of response** to SoC
- ❑ **ACR50 response**, with **>1 year** period of **no b/tsDMARDs**
- ❑ Delivery in **outpatient rheumatology** infusion center
- ❑ **No CRS or ICANS**; manageable side-effects; no hospitalization for AEs

TPP: Target Product Profile
mACR50: modified ACR50 calculated only for the IIT, where HAQ-DI and Pain were not collected: TJC&SJC >50% and 2 other components >50%

The Unmet Need in RA: Poor Responses in Patients who Failed 2+ b/tsDMARDs



(1) SELECT-COMPARE. Fleischmann et al 2019 DOI 10.1002/art.41032; wk12 (2) Humira USPI, Study RA-III, 6mo (3) SELECT-BEYOND. Genovese et al 2018 DOI: 10.1016/S0140-6736(18)31116-4; 12wk
(4) REFLEX. Cohen et al 2006 DOI: 10.1002/art.22025 (5) Orencia USPI, Study IV, 6mo
(6) Unpublished internal analysis; CorEvitas registry, patients trt Aug 2015 - Aug 2025; Including only subjects with moderate-severe RA (CDAI >10) and ≥ 6 SJC and TJC at baseline; % subjects reaching ACR50 at 6mo

CONCERT-RA: Phase 3 Pivotal Study in Refractory RA

Design

- Single registrational RCT
- N = ~150 RA pts with inadequate response to 2+ b/tsDMARDs
- Randomized 2:1 to AlloNK + RTX vs. RTX-only
- RTX-only non-responders may cross over into AlloNK + RTX arm at 6 months

Endpoint

- Primary efficacy endpoint: ACR50 at 6 months
- ACR50 at 6 months: Targeting AlloNK + RTX arm >50% vs RTX-only ~20-25%

Dosing

- 4B cells AlloNK x 2 doses (Days 6 and 20)

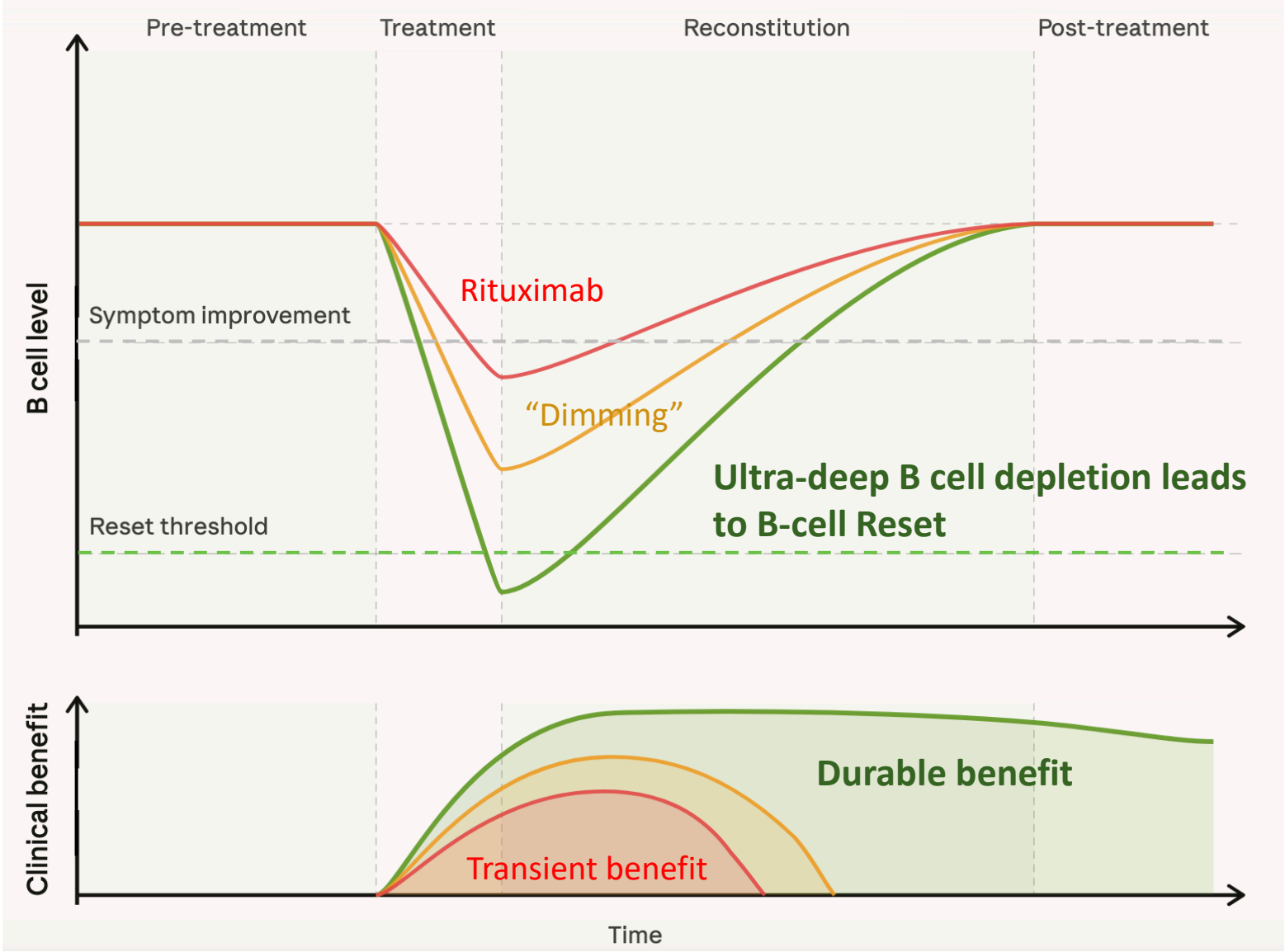
Execution

- Global trial with 80+ sites; 40+ sites already active in ongoing Phase 2a basket study
- Expect to present top-line data by end of 2028

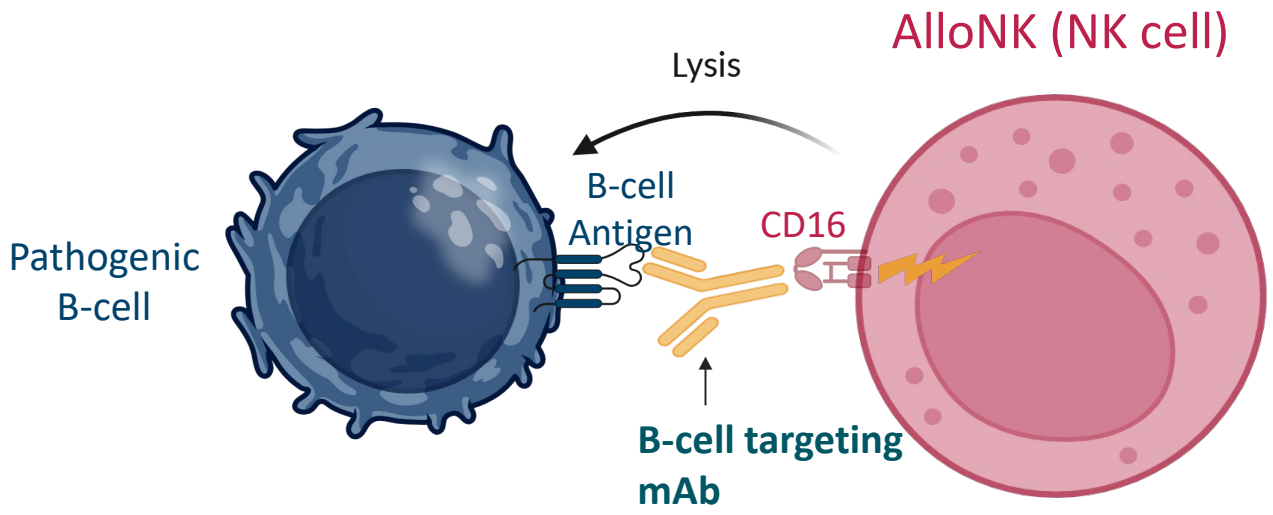
Deep B-Cell Depletion leads to B-Cell Reset™

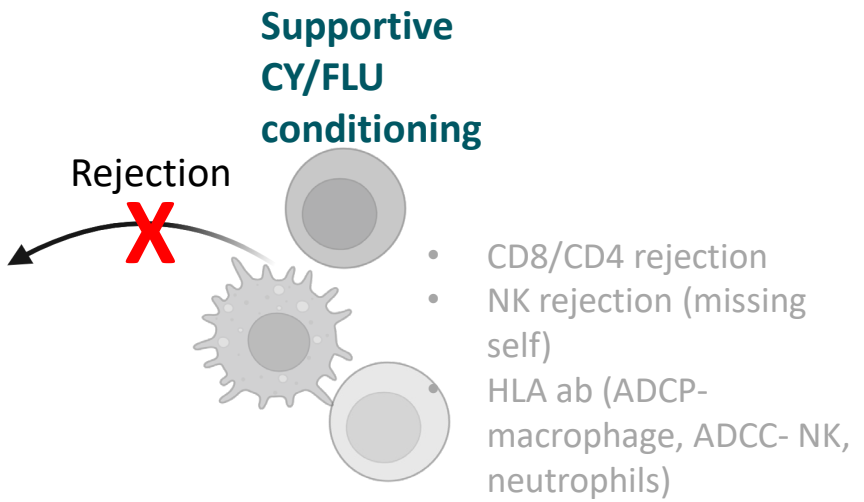
Role of B cells in autoimmune disease:

1. Autoantibody production / tissue damage
2. Antigen presentation / T cell amplification
3. Cytokine secretion / inflammation



AlloNK MoA: Enhancing ADCC against B cells



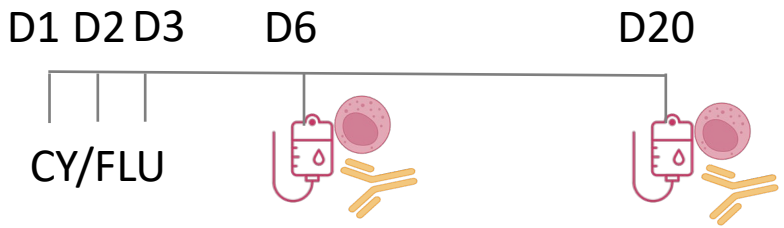




AlloNK Dose: 4B cells x 2

CY/FLU conditioning

Monoclonal Antibody



AlloNK Regimen Designed for Adoption in Outpatient Rheumatology Setting

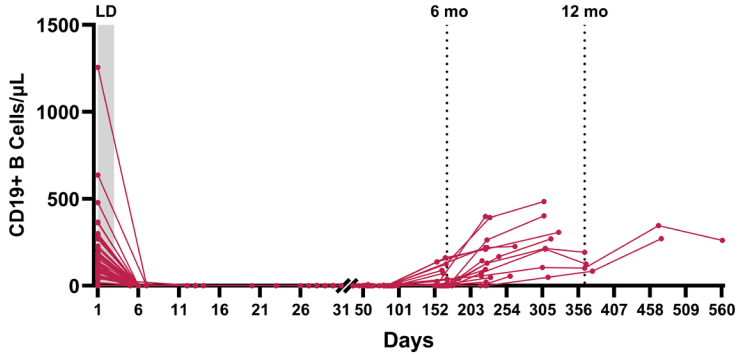


- ✓ Off-the-shelf, infusion-ready
- ✓ No hospitalization or specific monitoring
- ✓ No hematologist required
- ✓ Buy-and-bill or “white-bagged” via Specialty Pharmacy

* Artificial rendering of representative clinical trial site with illustrative components of AlloNK treatment regimen

AlloNK + RTX Showed Consistent Complete B-Cell Depletion in Autoimmune Diseases

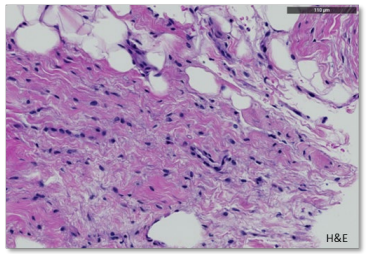
Peripheral



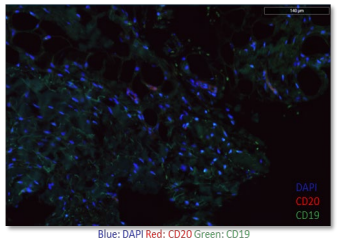
- Uniform and consistent B-cell depletion observed by Day 13 in all 51 patients with autoimmune diseases treated with Cy / Flu + AlloNK + RTX
- Complete B-cell depletion by high sensitivity assay in all RA patients (vs ritux published data showing incomplete[1])

Tissue

Day 28 Synovial Biopsy



H&E

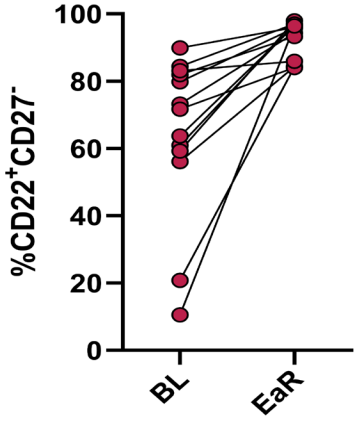


CD19/CD20 IF

Note: Synovial intima was not captured in baseline biopsy

- No CD19+ B cells in single tissue biopsy case study in RA patient
- Tissue biopsy collection ongoing for larger dataset

B-Cell Reset



- B-cell reconstitution after AlloNK + RTX demonstrated increase in naïve B cells (N=13)
- Studies with RTX showed correlation between higher proportion of naïve/transitional cells with a good response in RA patients[2]

Note: Preliminary data from ongoing autoimmune clinical trials as of April 03, 2026 data cutoff: Phase 2a basket trial, Phase 1/1b trial in SLE/LN, investigator-initiated basket trial
Right panel reflects patients who have seen B-cell reconstitution since treatment from AlloNK + RTX treated patients. (n=13)
[1]Adapted from Dass et al., Arthritis & Rheumatology (2008) 58(10):2993–99, DOI:10.1002/art.23902. [2]Adlowitz et al 2015
Cy: cyclophosphamide; Flu: fludarabine; mAbs: monoclonal antibodies; anti-CD20 mAbs: RTX: rituximab; OBI: obinutuzumab; BL: Baseline, EaR: Early reconstitution

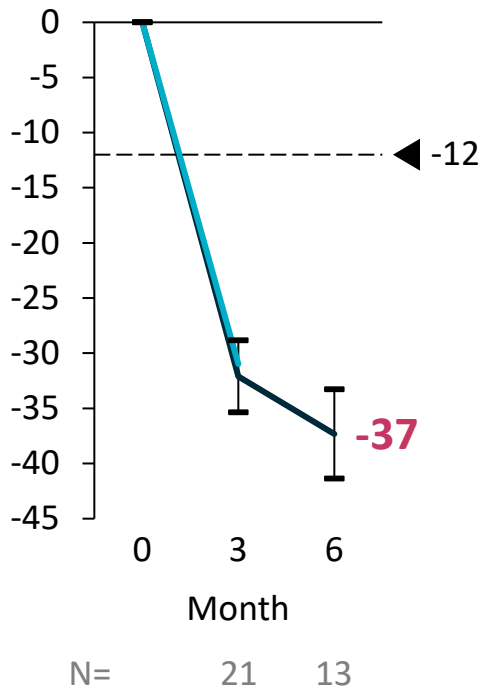
AlloNK + Rituximab Demonstrated Compelling Efficacy in Refractory RA

Initial clinical data across IIT and Phase 2a basket study (n=21)

- Mean 14.8yrs disease duration
- High baseline disease activity
- 81% failed 2+ prior classes of b/tsDMARDs
- Rapid improvement in clinical scores
- **71% ACR50** at 6 months (n=7)

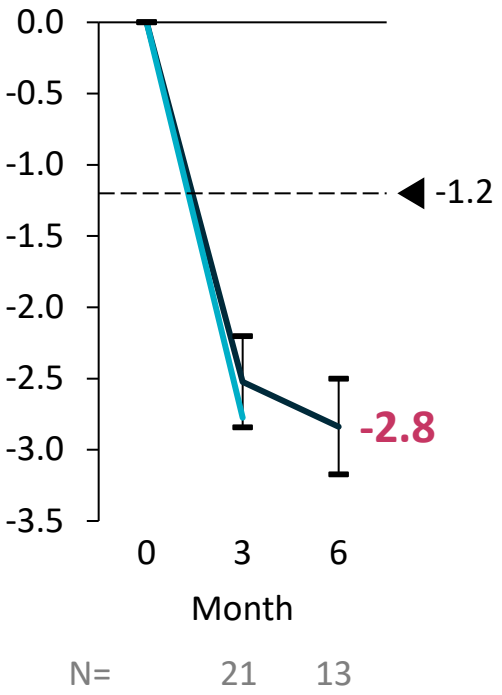
CDAI

Mean change (+/- SEM)
(mean 50.7 baseline)



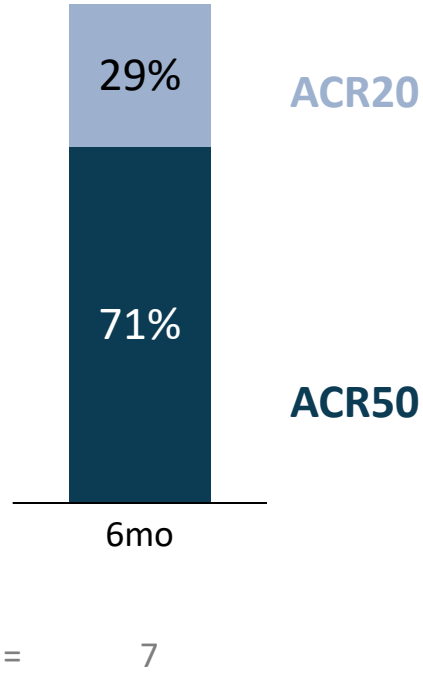
DAS28-ESR

Mean change (+/- SEM)
(mean 7.3 baseline)



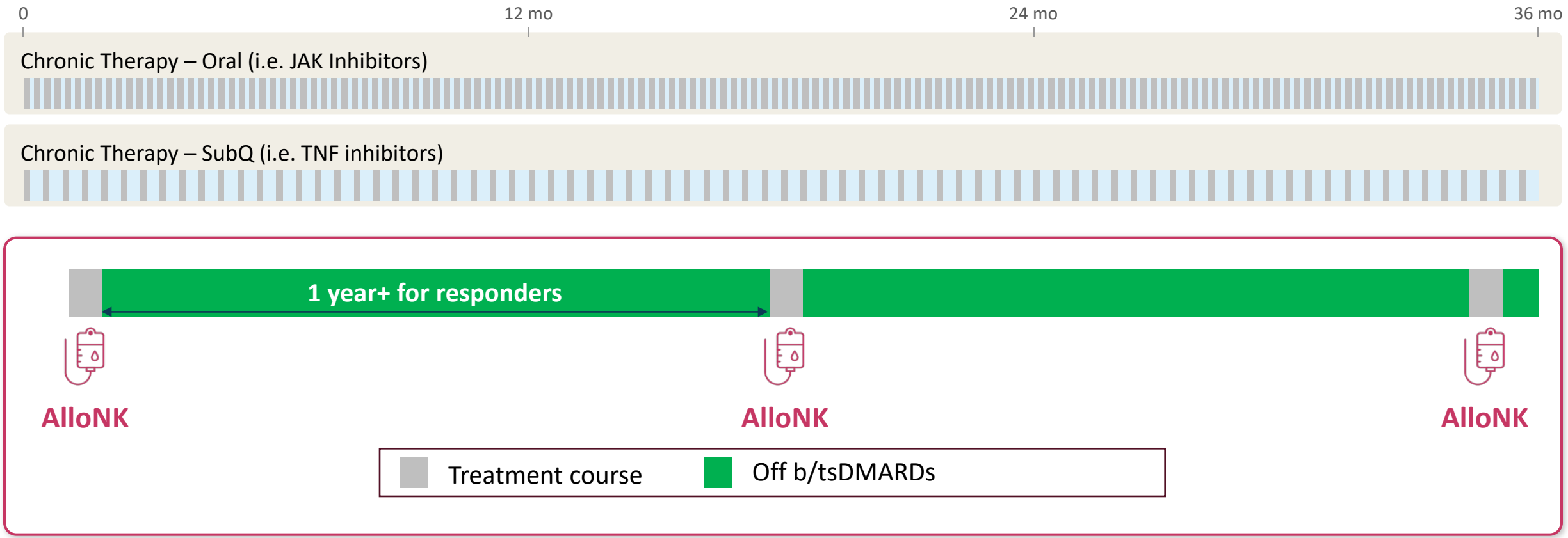
ACR Response (basket$^{\phi}$)

% Response at 6 months



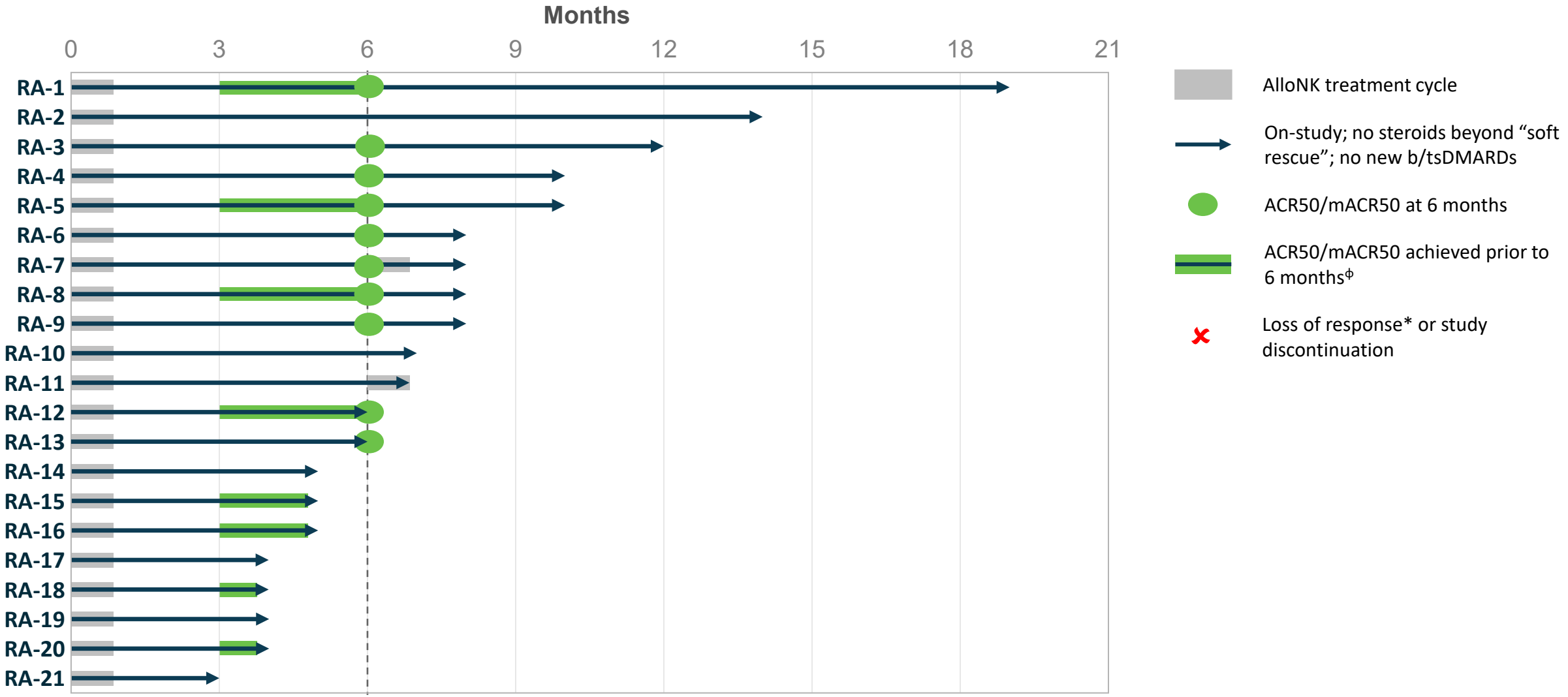
* Minimal Clinically Important Improvement
ϕ CRP and full ACR components collected in basket study only
POOLED INITIAL DATA AS OF 03APR2026; Month 3 = 12wks; Month 6 = 22 or 24 wks

Illustrative Rethinking of Cell Therapy-like Activity with Biologics-like Ease-of-Use



Re-dosed as needed with the potential to drive long term clinical benefit and freedom from b/tsDMARD therapy

“Swimmer’s plot” for RA patients



ϕ Noted at 3mo only if subject achieved ACR50 at 6mo (Subject RA-2 had ACR50 at 3mo but not 6mo; all others maintained ACR50 from 3 to 6mo)
* Loss of response = patient requires rescue steroids beyond "soft rescue" rules similar to those applied in RA registrational trials (up to 20mg/d x 5d or equivalent), and/or started new b/tsDMARD

mACR50 calculated only for the IIT, where HAQ-DI and Pain were not collected: TJC&SJC >50% and 2 other components >50%
POOLED INITIAL DATA AS OF 03APR2026; Month 6 = 22 or 24 wks; Last Visit Carried Forward for missing data

Tolerability Profile of AlloNK + RTX Observed Compared Favorably to Autologous CAR-T and BCMA Targeted T-Cell Engagers

Deep B-cell Depletion Datasets

	AlloNK + ritux	*Auto CAR-T* **Schett / CASTLE[1]**	*T-Cell Engager* **teclistamab[2]**
No. of Patients	55	24	10
CRS (any/Gr 3+)	- / -	75% / -	80% / -
Tocilizumab for CRS	-	58%	80%
Infections (any/Gr3+)	29% / 2%	N.R. / 13%	70% / 30%
IVIG for Hypogamm.	-	N.R.	100%

Comparable to Serious Infection Rates for Approved RA therapies[3]:

AlloNK + RTX: 2%

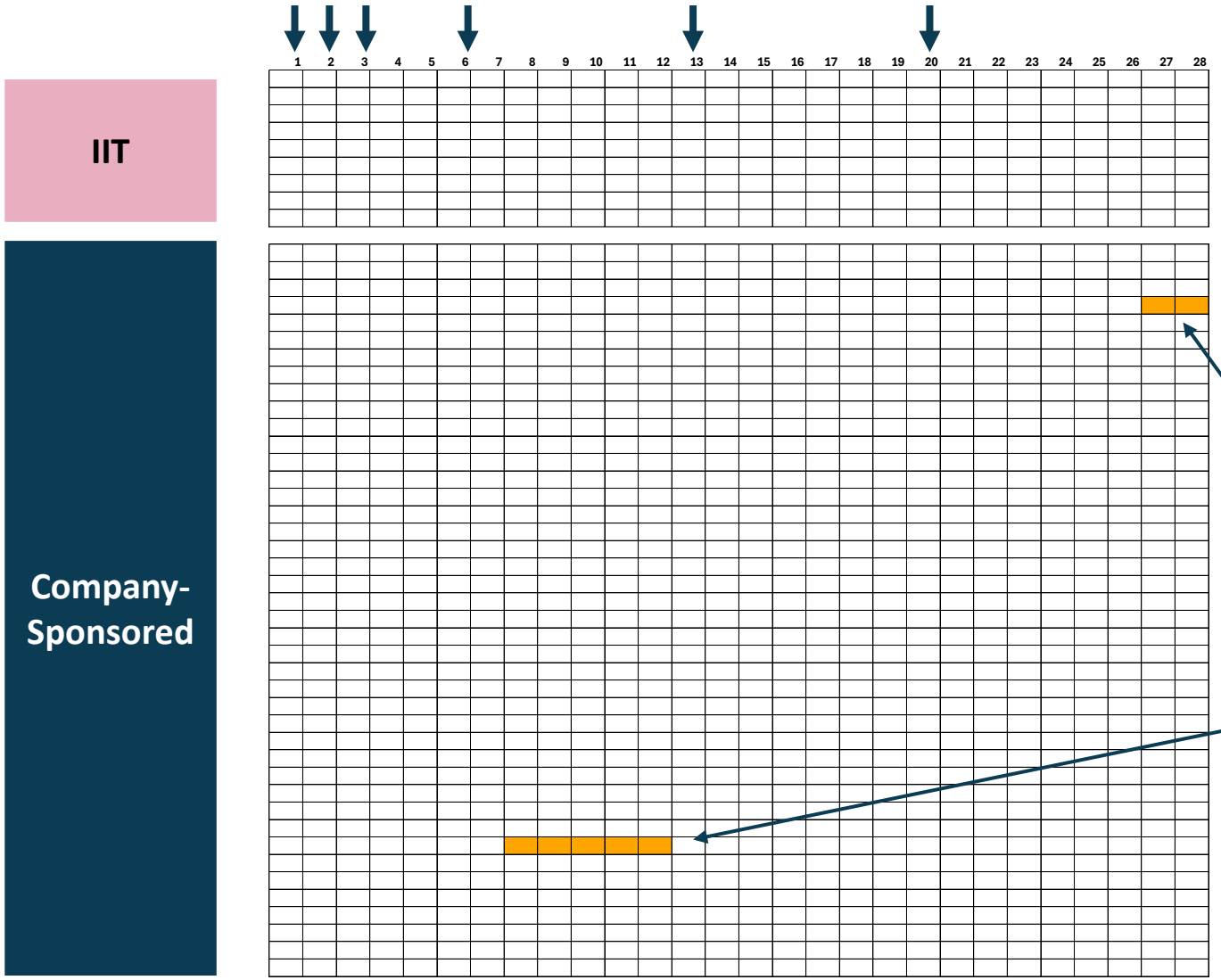
Rituxan: **2%**
Orencia: **3%**
TNF – Humira: **4.3** / 100 patient years
JAK – Rinvoq: **4.6** / 100 patient years

- Most common TEAEs consistent with those associated with rituximab or CY/FLU
  - Any TEAE ≥ 20%: Nausea (53%), headache (36%), leukopenia (22%), neutropenia (22%), alopecia (20%), lymphopenia (20%)
  - Any Grade 3+ TEAE ≥ 5%: Lymphopenia (5.5%), neutropenia (5.5%)
- Most common infections: UTI (15%), URTI (13%); no patients hospitalized in first 28d for infection
- No discontinuations from any TEAEs; no SAEs related to AlloNK

Note: FOR ILLUSTRATIVE PURPOSES ONLY; no head-to-head trial has been conducted evaluating AlloNK against other data included herein. Differences exist between clinical trial design, patient populations and the product candidates/products themselves, and caution should be exercised when pooling and/or comparing data across unrelated trials as pooled data and cross-study comparisons are inherently limited and such data may not be directly comparable.
Pooled preliminary data as 03Apr, 2026 data cutoff for CY/FLU + AlloNK + rituximab from ongoing autoimmune clinical trials: Phase 2a basket trial NCT06991114, investigator-initiated basket trial NCT06581562.
N.R.: Not Reported CRS: cytokine release syndrome; ICANS: immune effector cell-associated neurotoxicity syndrome; mAbs: monoclonal antibodies; RA: rheumatoid arthritis; IVIG: intravenous immunoglobulin
(1) Hagen et al ACR 2025. Abstract #0641 (2) Bucci et al ACR 2025. Abstract #0236 (3) Initial AlloNK + ritux Grade 3+ infection rate and serious infection rate both 2%; Infection rates in USPI for Humira, Rinvoq, Orencia and Rituxan

Experience in First 55 Autoimmune Patients Treated with AlloNK + RTX

Hospitalization Rates Consistent with mAb Alone Showing Ability to Manage Patients as Outpatient



Outpatient Treatment Day

Hospitalization for AE

No hospitalizations for TEAEs related to AlloNK

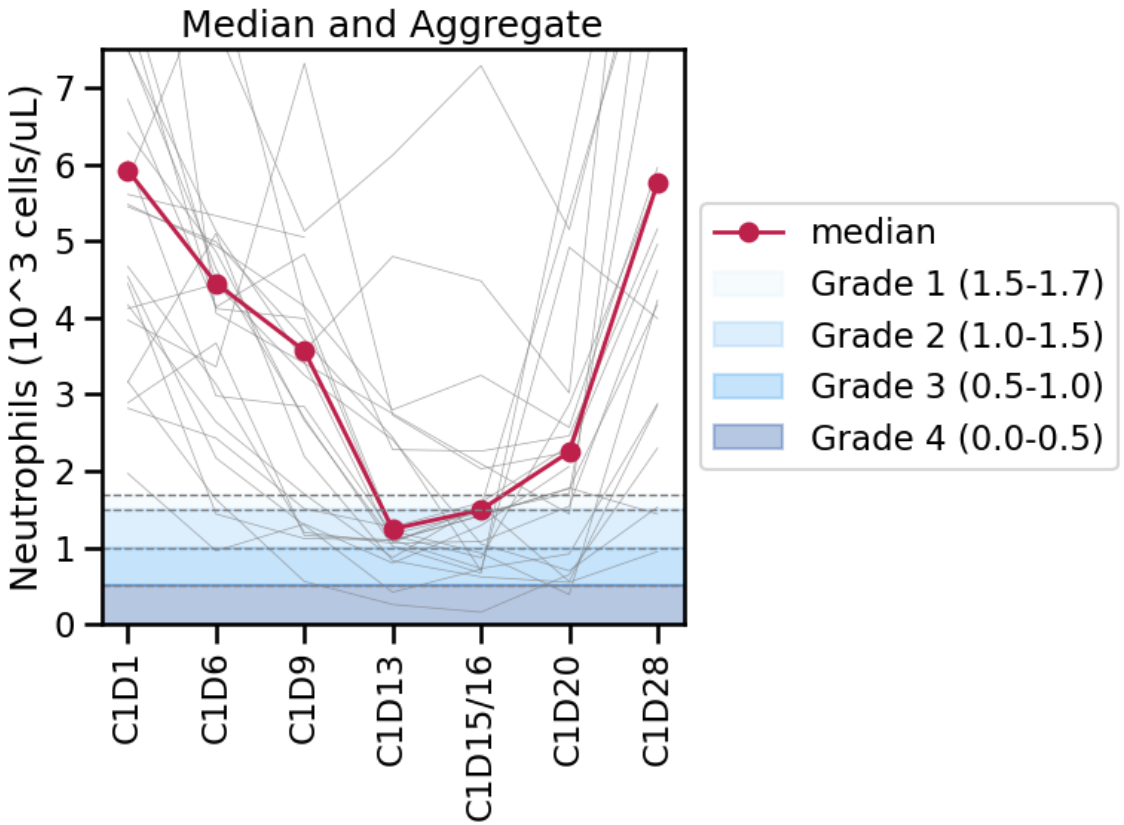
Only 2 of these 55 patients hospitalized for a TEAE during first 28 days

- SjD subject: Dehydration from diarrhea (Days 27-29; 2 nights)
- RA subject: Diabetic ketoacidosis in patient with diabetes (Days 8-12; 4 nights)

Pooled initial data as 03Apr, 2026 data cutoff for CY/FLU + AlloNK + rituximab from ongoing autoimmune clinical trials: Phase 2a basket trial NCT06991114, investigator-initiated basket trial NCT06581562
* Protocol variances: AlloNK on d5 vs d6; first mAb dose on d1 vs d2; second mAb dose on d13 in company sponsored trial vs d15 in IIT, second dose of AlloNK in both at D13
** Protocol and practice variations: some patients had >6 infusion days due to separation of AlloNK and mAb dosing

Neutrophil Counts Returned to Normal by Day 28 in Most RA Subjects

Absolute Neutrophil Counts in N=30 RA subjects
from AB-101-05 and IRIS-RD-01 studies



AlloNK Competitive Positioning vs Scalable B-Cell Depletion Modalities

	Ideal Product Attributes	AlloNK	TCE	*in vivo* CAR-T
Product Profile Advantages	• Outpatient dosing	✓	✓	✓
	• No conditioning	X	✓	✓
	• No CRS / complex monitoring	✓	X	X
	• Scalable manufacturing	✓	✓	✓
Current Regulatory Position in RA	• Pivotal dose established	✓	X	X
	• CBER alignment single registrational RCT	✓	X	X
	• Initiating Phase 3	✓	X	X

Vision: Arrest Cycling of Today's Therapies, Capturing Already Existing Market

US RA MARKET

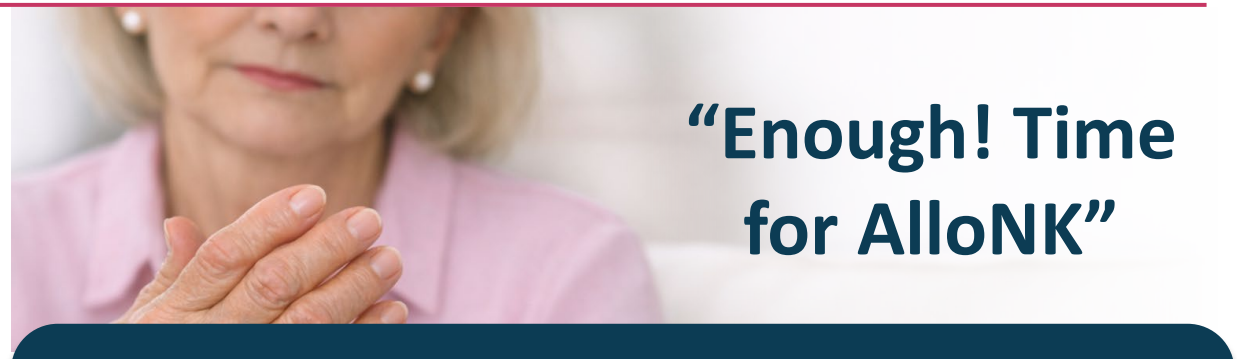
~$20B/yr with majority spend on b/tsDMARDs[1-4]

HUMIRA adalimumab · RINVOQ upadacitinib · Enbrel etanercept · ORENCIA (abatacept) · ACTEMRA tocilizumab · Rituxan Rituximab

~575k treated with b/tsDMARDs [5]

150–200k
Failed 2+ b/tsDMARDs [5]

~$5B/yr (25%*) spent on existing drugs in refractory RA patients



"Enough! Time for AlloNK"

Vision for AlloNK

- To be first FDA-approved deep B-cell depleting therapy for refractory RA
- To provide ≥50% ACR50 at 6 months
- To have ability to re-treat for long-term disease control
- To be a cell therapy rheumatologists can "own"
  - Buy-and-bill or Specialty Pharmacy (HCP option)
  - Supply-chain follows clinical trial experience
  - Standard post-treatment monitoring

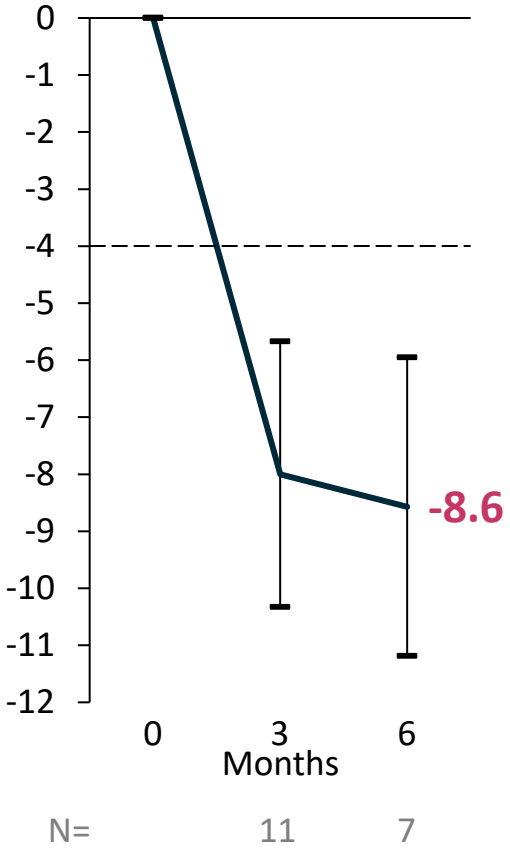
Arthritis Res Ther.; Failed 2+ b/tsDMARDs population represents ~10-15% of all RA patients
[1] Emergen Research est. $16.5B; [2] Ken Research est. $19B; [3] Precedence Research est. $26B;
[4] Research & Markets est. $27B * 150k failed 2+ b/tsDMARDs out of 575k total treated with any b/tsDMARD ~25%
[5] Multiple publications based on real-world registry data, including: Paudel et al 2024 Rheumatology; Watanabe et al 2024 Rheumatology; Roodenrijs et al 2021 Rheumatology; Jung et al 2023

Clinical Responses Observed in SjD

----- Min. Point Change for Response

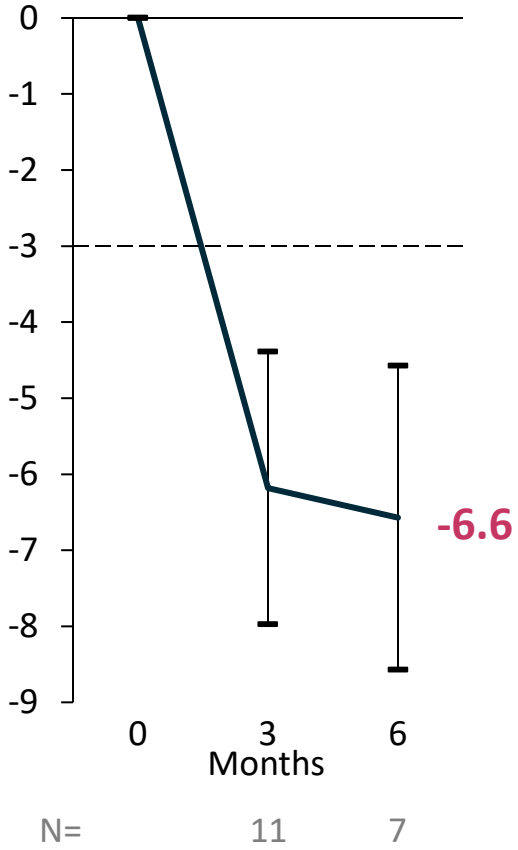
ClinESSDAI (change)
(Mean +/- SEM)

Mean 16.1 baseline



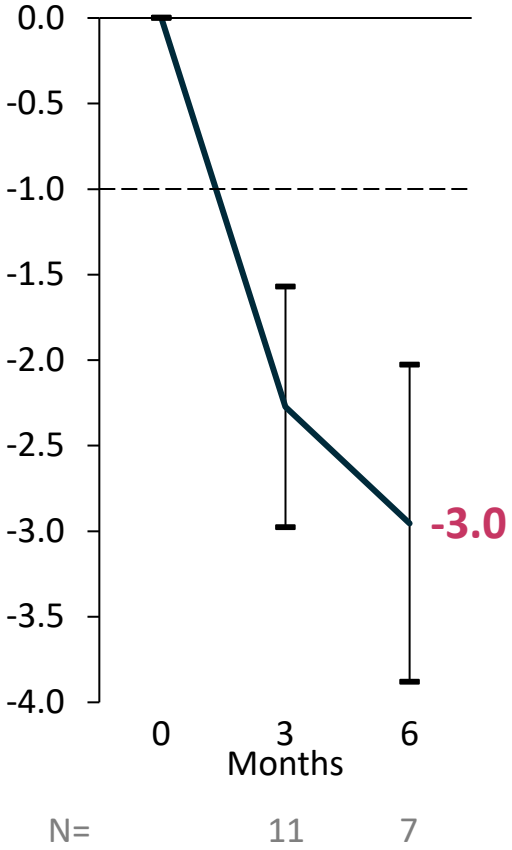
ESSDAI (change)
(Mean +/- SEM)

Mean 13.1 baseline



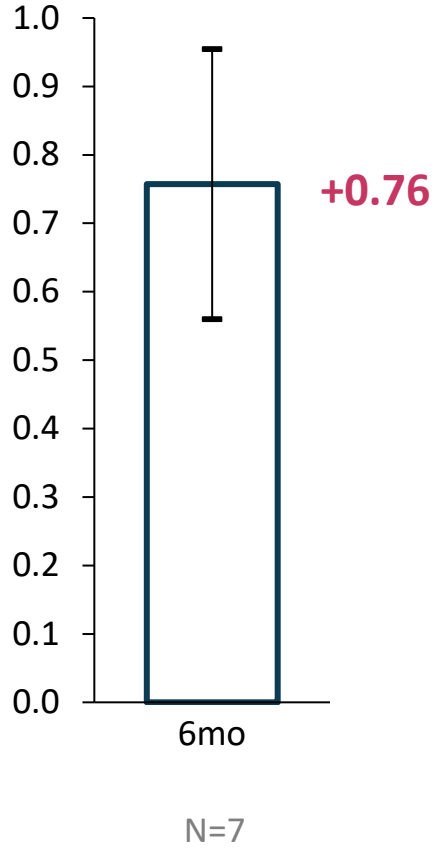
ESSPRI (change)
(Mean +/- SEM)

Mean 8.0 baseline



SSF at 6mo (change)
(Mean +/- SEM)

Mean 0.65 baseline

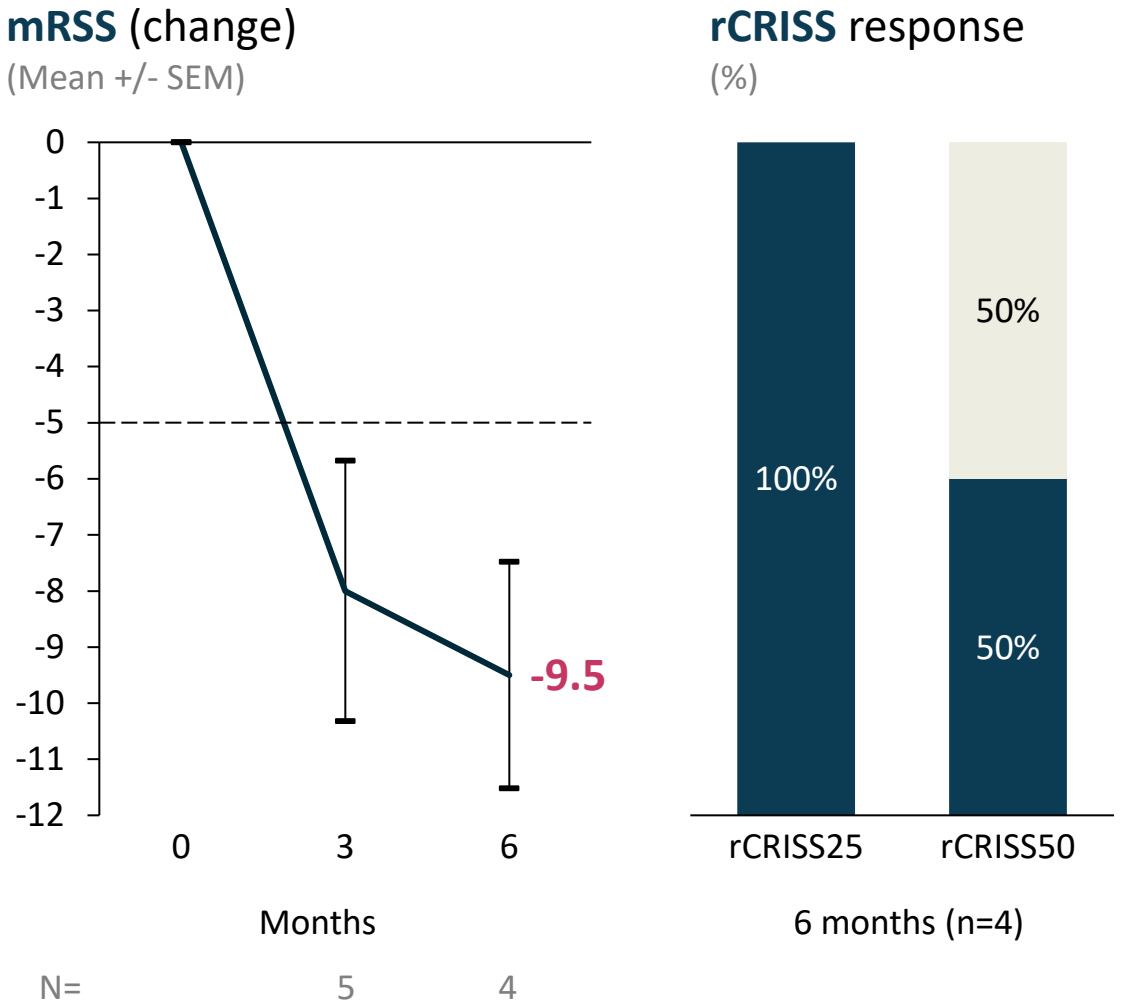


All patients off steroids

INITIAL DATA AS OF 03APR2026; Month 3 = 12wks; Month 6 = 22 or 24 wks

Clinical Responses Observed in Systemic Sclerosis (SSc)

- Mean age 54yrs, 60% male
- Mean 4.1yr disease duration
- Mean baseline mRSS = 19.8
- Resistant to prior immunomodulators (incl. 3/5 with prior rituximab)
- Assessed ΔmRSS (score of skin thickness) and rCRISS* (0–1 composite score estimating overall improvement using skin, lung, and function measures)
- **All patients off steroids**



* rCRISS25: ≥25% probability (score ≥0.25) that a patient has improved overall.
rCRISS50: ≥50% probability (score ≥0.50) of overall improvement, a stricter threshold.
INITIAL DATA AS OF 03APR2026

Expected Data and Trial Maturation in RA

PHASE 3 CONCERT-RA

H2'26 — CONCERT-RA initiation

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H1'28 — CONCERT-RA enrolled

H2'28 — **CONCERT-RA top-line**

PLANNED DATA UPDATES

- ❑ Updated ACR50 (target ≥ 50% in pivotal population)
- ❑ Continued activity across disease measures

- ❑ Median time to next treatment (target 1yr+ for responders)
- ❑ Ability to re-treat with AlloNK (PK, PD)

VALIDATION

Phase 2 data supporting high PoS of CONCERT-RA

Target Product Profile for commercial adoption

Management Team with Deep Expertise in Cell & Gene Therapy and Autoimmune Disease



Fred Aslan
CEO



Diego Miralles
Head of R&D



Subhashis Banerjee
CMO



Chris Horan
CTOO



Jennifer Bush
COO



Heather Raymon
SVP Research & Early Development



Nicholas Veomett
VP, Corp Dev

Development Experience Across Multiple Notable Blockbuster Approvals

HUMIRA adalimumab
ORENCIA (abatacept)
SOTYKTU (deucravacitinib) 6 mg tablets
taltz (ixekizumab)
Naglazyme (GALSULFASE)
olumiant (baricitinib) tablets
XELJANZ [tofacitinib]
uplizna inebilizumab-cdon
ALDURAZYME (LARONIDASE)

Note: Chief Executive Officer (CEO); Research and Development (R&D); Chief Medical Officer (CMO); Chief Technical Operations Officer (CTOO); Chief Financial Officer (CFO); Chief Operating Officer (COO)

Artiva Investment Thesis: Multiple De-Risking Events Provide Conviction on Multi-Billion Dollar Opportunity

Significant value inflection points before launch if…

- ☐ Phase 2 open-label data continues to support TPP in refractory RA
- ☐ Artiva maintains position as first novel approval in refractory RA (single pivotal study, BLA in 2029)
- ☐ AlloNK re-treatment data supports ability to give multiple courses for long-term disease control
- ☐ Tolerability profile, including with conditioning, continues to trend like early data
- ☐ Data in additional indications (e.g. SjD, SSc, IIM) supports future for “pipeline in a product”
- ☐ Additional clinical data validates potential for optimizing TPP (e.g., cy/flu dose/schedule)