

Artiva Biotherapeutics

May 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.

The trademarks included herein are the property of the owners thereof and are used for reference purposes only. Such use should not be construed as an endorsement of such products.



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



Differentiated Autoimmune Opportunity Supported by Strong Financial Position

- 1 Deep B-cell depletion – potent mechanism vis-à-vis other novel approaches
- 2 Strategic interest across modalities (auto-CAR-T, TCE, in vivo, allo)
- 3 Refractory RA – approx. \$5B* being spent on patients unlikely to respond after failed 2+ b/tsDMARDs
- 4 AlloNK activity and tolerability – potentially high impact if first-in-class in RA; other indications
- 5 CY/FLU tolerability in community setting
- 6 Favorable competitive landscape – supports potential multi billion dollar opportunity

Balance Sheet Strengthened by Recent Financing, with Cash Runway into 2029

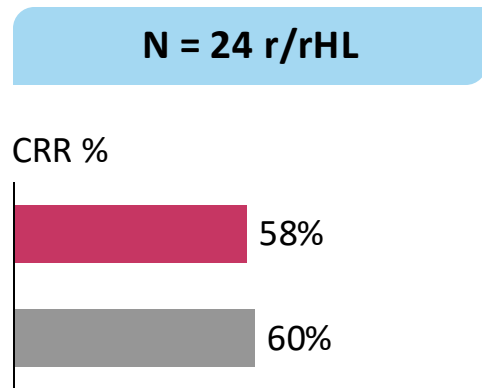
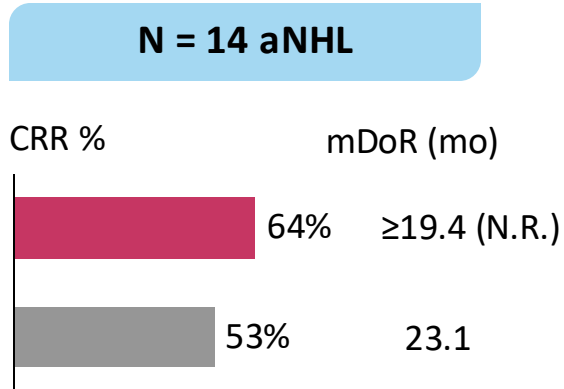
- **\$86.8 million** in cash, cash equivalents and investments as of March 31, 2026
- Estimated net proceeds of **~\$280.5 million** from the May 2026 offering¹



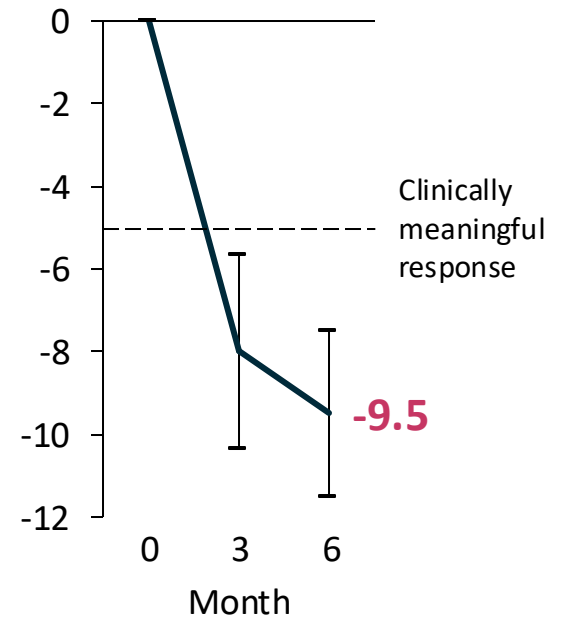
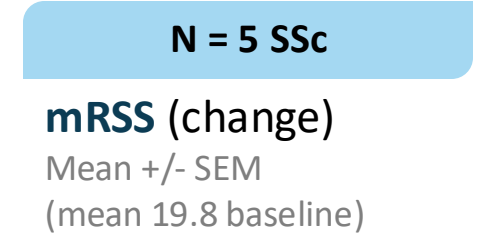
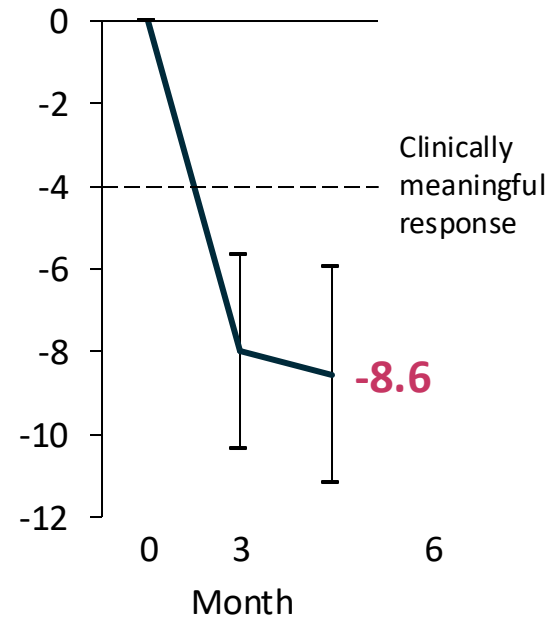
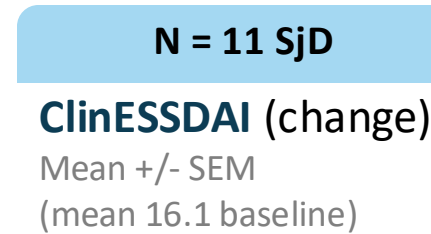
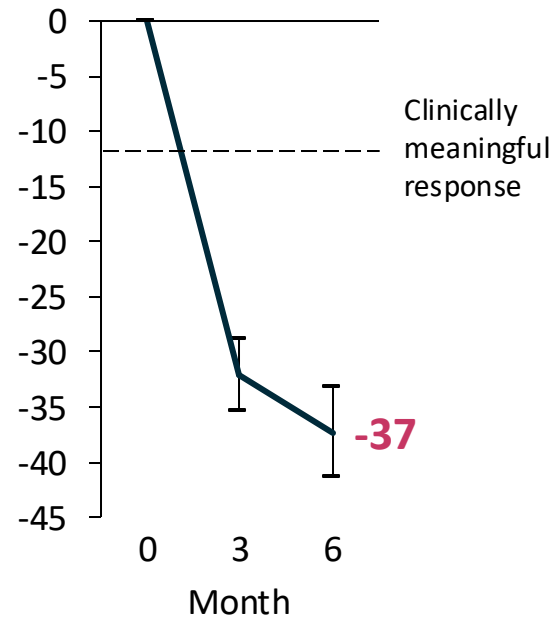
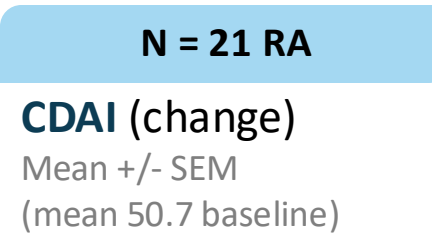
Consistent Activity Observed Across Indications

N=14 aNHL, N=24 r/rHL, Over 70 Autoimmunity Patients Initiated Treatment as of end of April 2026

Includes all patients with 3 or more months of follow-up in IIT and Basket Study



■ AlloNK + rituximab
■ Auto-CAR-T benchmark*

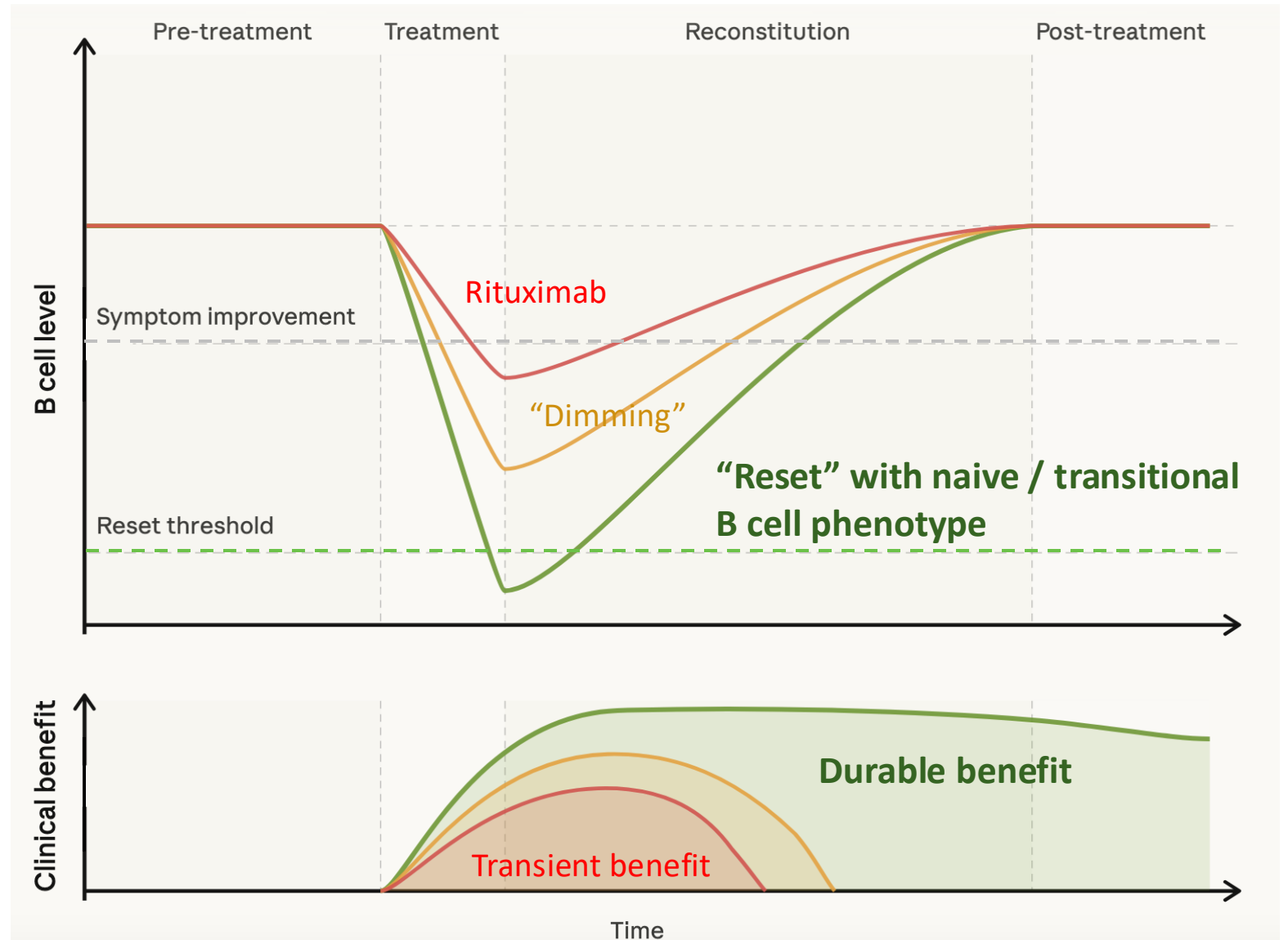


No discontinuations due to AEs, no patient started a new b/tsDMARD

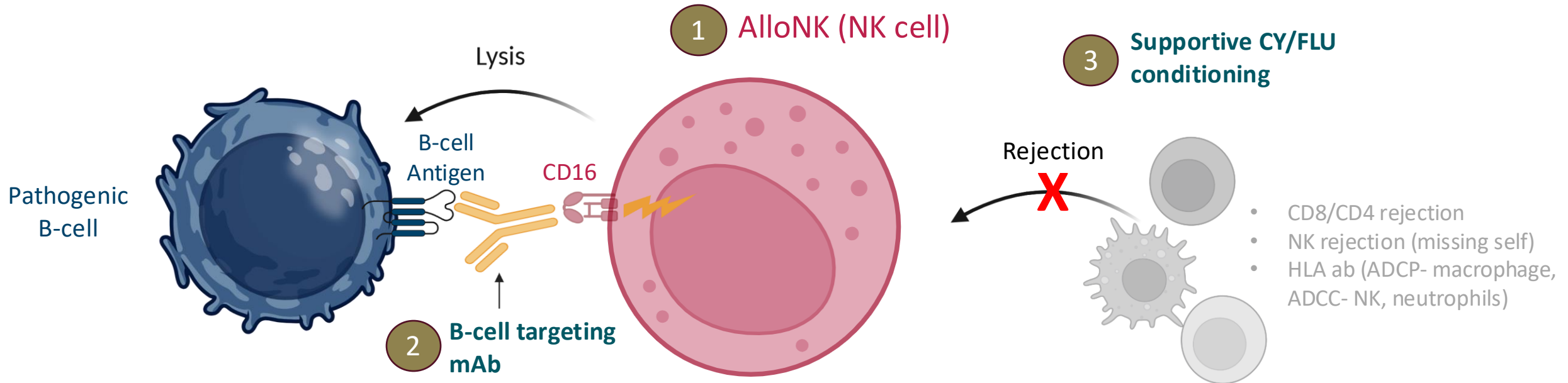
B-Cell Depletion and “Reset” Hypothesis

Role of B cells in autoimmune disease:

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



AlloNK: CD16 is a strong cell activating receptor, driving ADCC against B cells



AlloNK Dose: 4B cells x 2

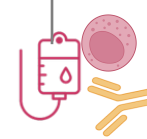
CY/FLU conditioning

Monoclonal Antibody

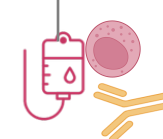
D1 D2 D3

CY/FLU

D6

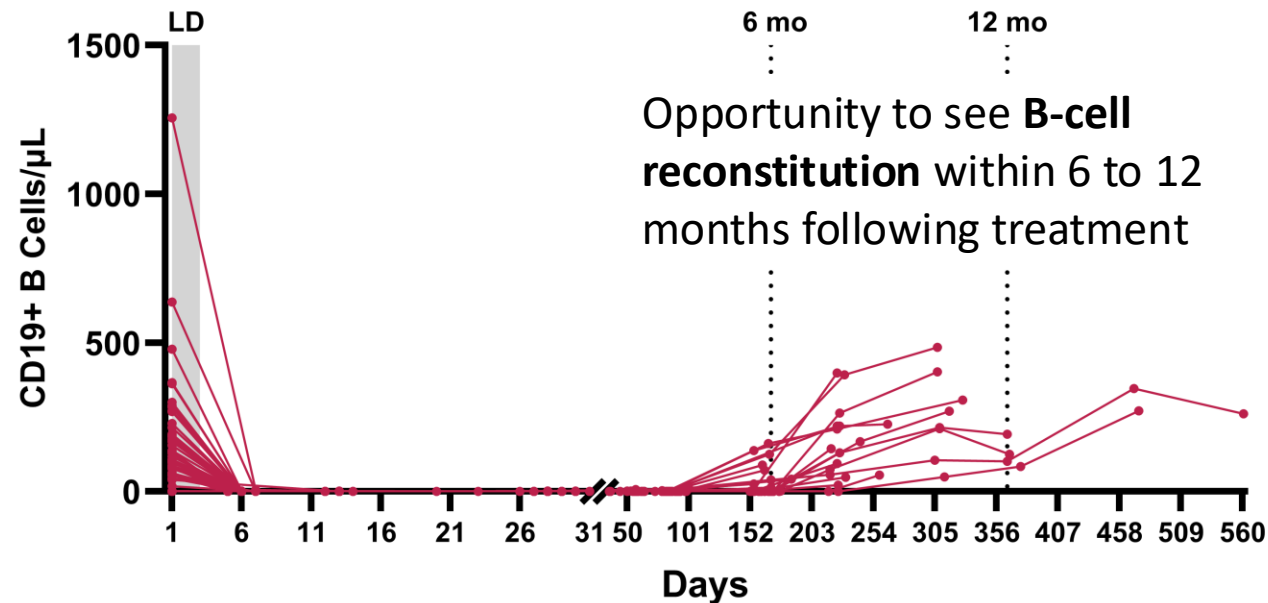


D20



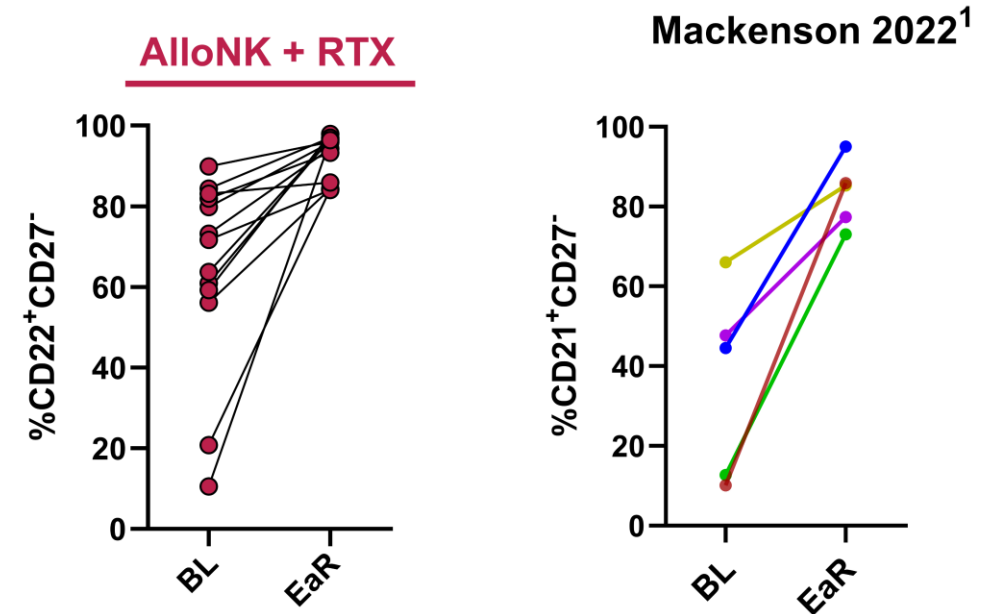
AlloNK + RTX Showed Consistent Complete B-Cell Depletion in Autoimmune Diseases

Uniform and consistent B-cell depletion observed by Day 13 in all 51 patients with autoimmune diseases



- Uniform and consistent B-cell depletion observed by Day 13 in all 51 patients with autoimmune diseases treated with Cy / Flu + AlloNK + RTX

B-cell Reconstitution in Patients Treated with AlloNK + RTX Consistent with Auto-CAR T Academic Study



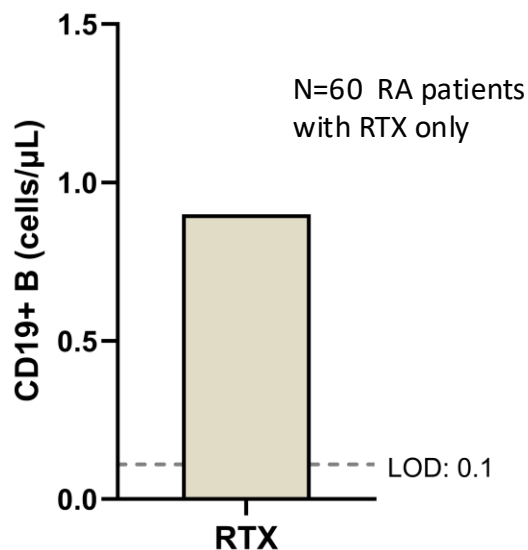
- B-cell reconstitution after AlloNK + RTX demonstrated increase in naïve B cells (N=13)
- Studies with RTX showed correlation between higher proportion of naïve/transitional cells with a good response in RA patients²



AlloNK + RTX Showed Complete B-Cell Depletion Using High Sensitivity Assay

RTX-only

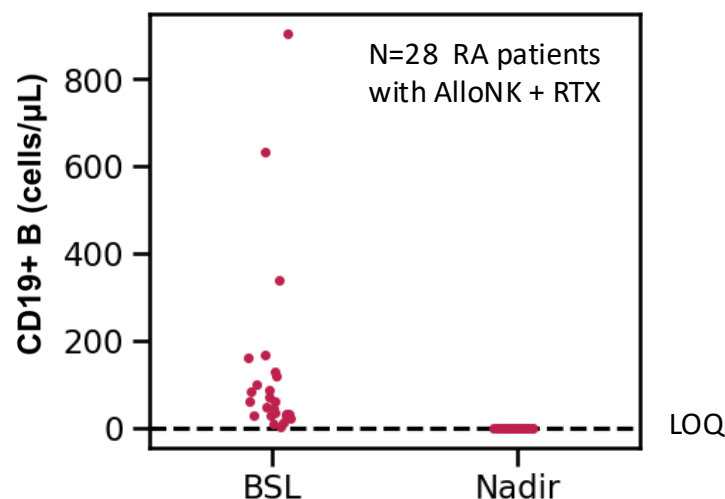
Median level of B-cells (cells/ μ L) at 2 weeks using high sensitivity assay¹



RTX-only resulted in incomplete depletion using high sensitivity assay

AlloNK + RTX

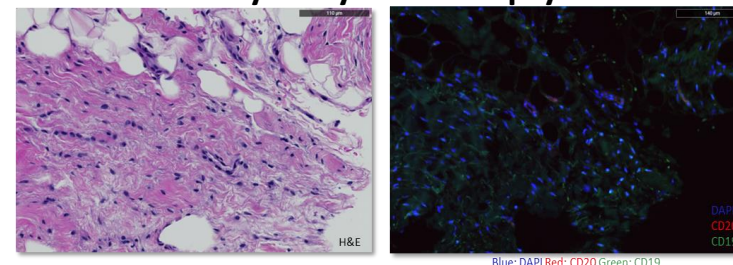
B-cells (cells/ μ L) at nadir using high sensitivity assay



AlloNK + RTX achieved complete B-cell depletion in all RA patients

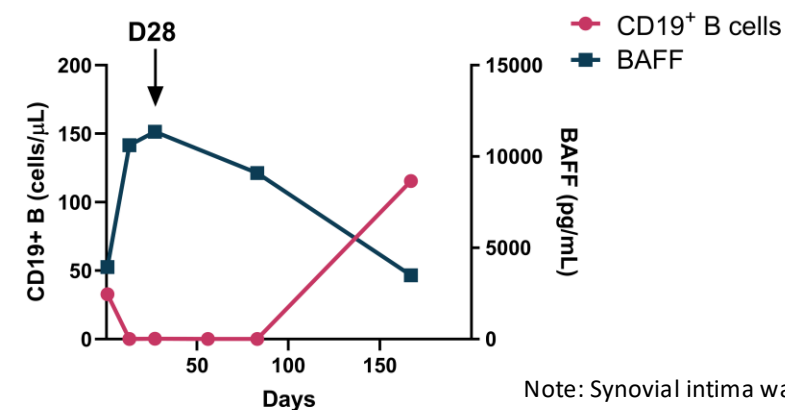
No CD19+ B cells in single tissue biopsy case study in RA patient

Day 28 Synovial Biopsy



H&E

CD19/CD20 IF



Note: Synovial intima was not captured in baseline biopsy

Note: 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 trials as pooled data and cross-study comparisons are inherently limited and such data may not be directly comparable. Preliminary data as of April 3, 2026 data cutoff; Reflects patients with respective follow up as noted on chart for whom samples were analyzed as of the data cutoff.

Preliminary AlloNK data from ongoing autoimmune clinical trials: Phase 2a basket trial, investigator-initiated basket trial. Lower limit of quantitation (LLOQ)= 0.2 cells/ μ L.

Note: RTX: Rituximab, RA: Rheumatoid Arthritis; BSL: Baseline, LOQ: Limit of quantitation, LOD: Limit of detection

(1) Adapted from Dass et al., Arthritis & Rheumatology (2008) 58(10):2993-99, DOI:10.1002/art.23902.



Incomplete Depletion Likely Leads to Relapse

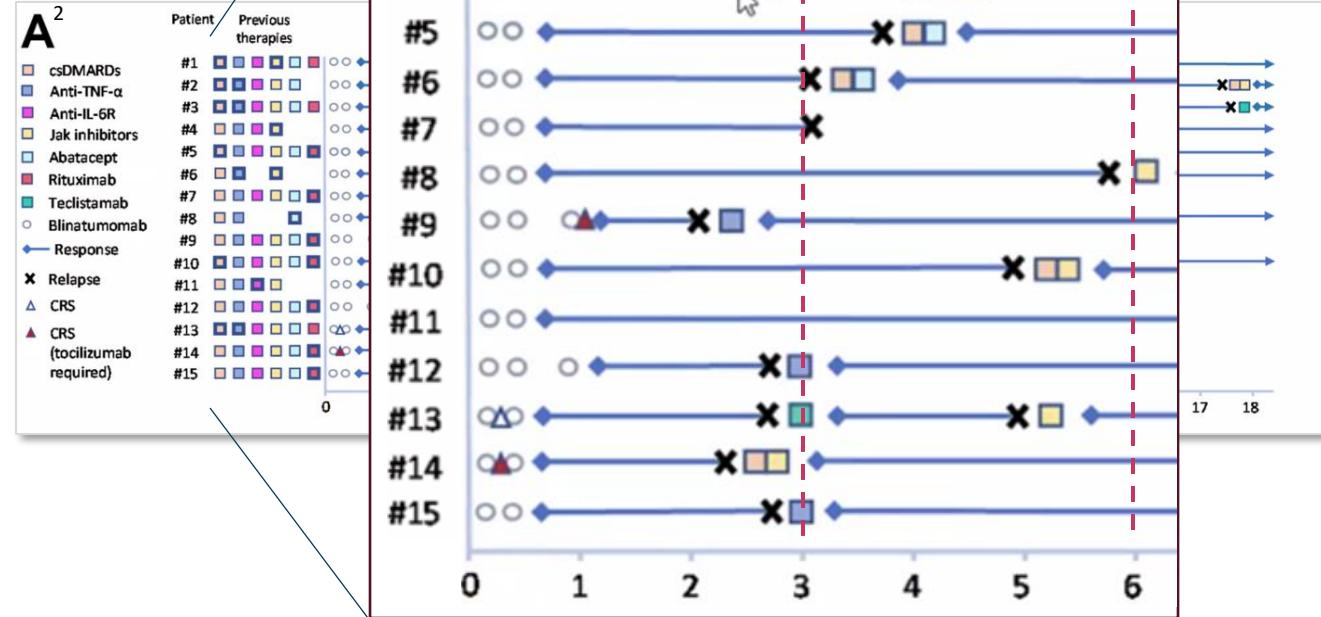
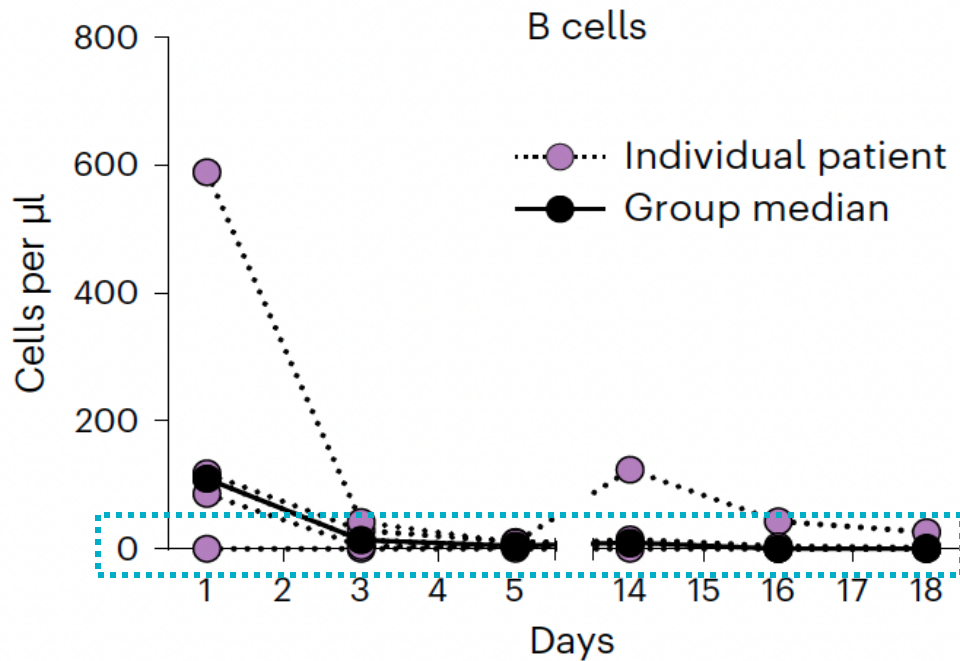
nature medicine

Article

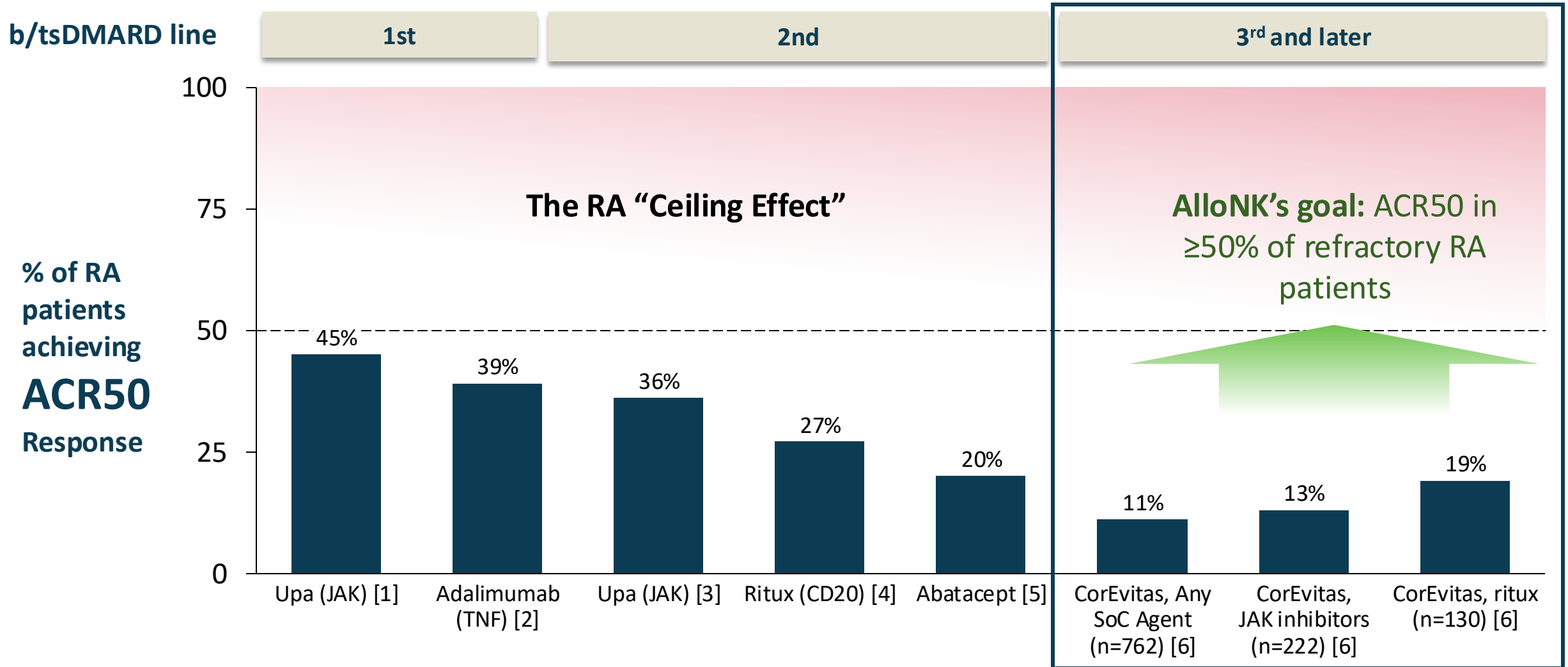
<https://doi.org/10.1038/s41591-024-02964-1>

Bispecific T cell engager therapy for refractory rheumatoid arthritis

Blinatumomab (CD19 TCE) B-cell depletion in 6 patients with RA¹

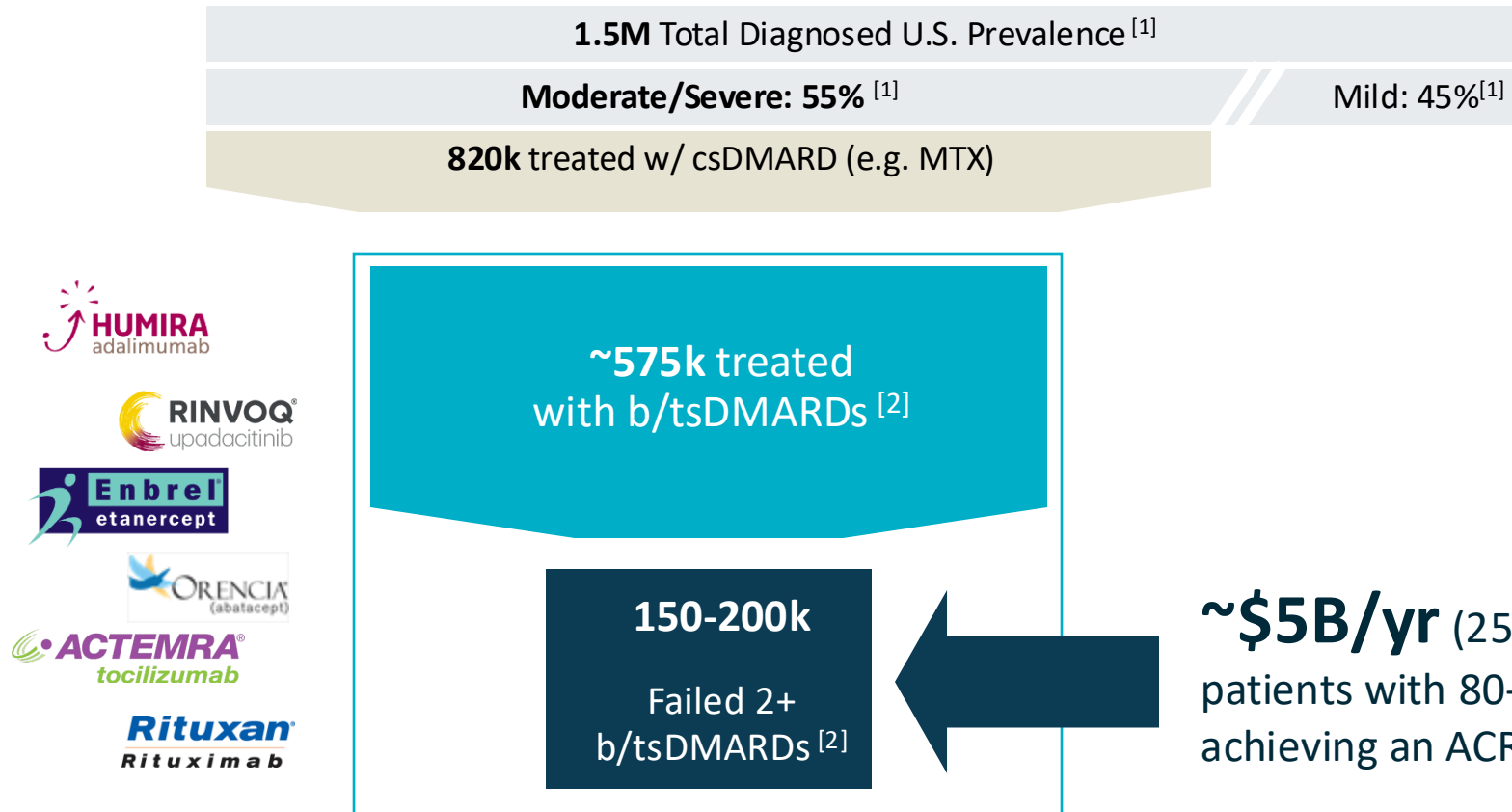


The Unmet Need in RA: Poor Responses in Patients who Failed 2+ b/tsDMARDs



~\$5B Spent on US RA Patients Who Failed 2+ b/tsDMARDs

US RA market:
~\$20B/yr^[3-6]



[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

[3] Emergen Research est. \$16.5B;

[4] Ken Research est. \$19B;

[5] Precedence Research est. \$26B;

[6] Research & Markets est. \$27B

* 150k failed 2+ b/tsDMARDs out of 575k total treated with any b/tsDMARD ~25%

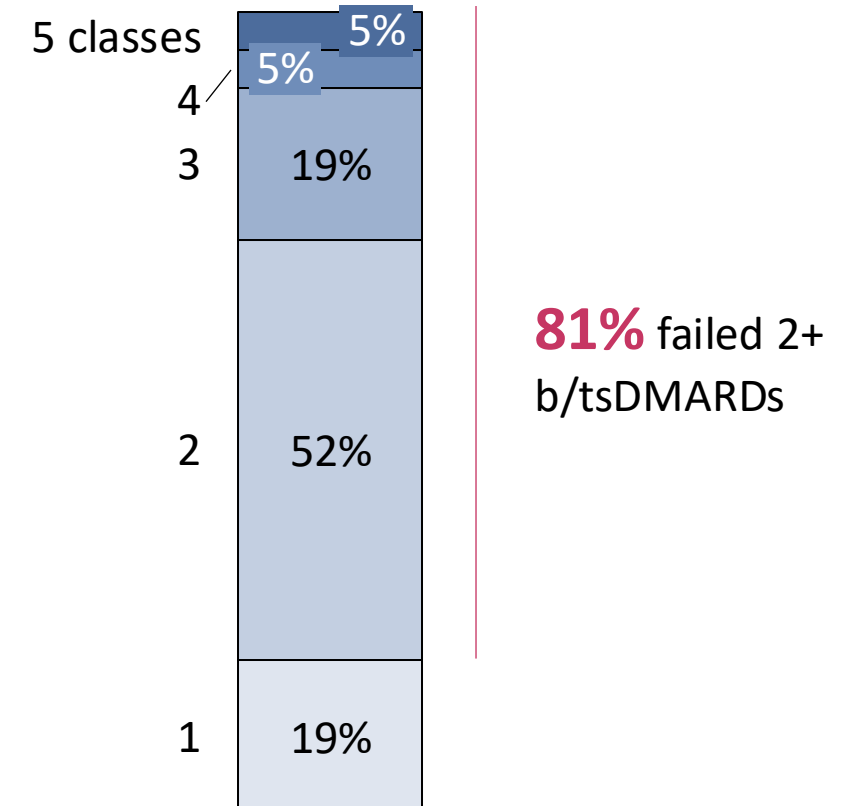


AlloNK+RTX Initial Clinical Data in RA: Patient Demographics

21 RA Patients* with 12+ Week Follow-Up

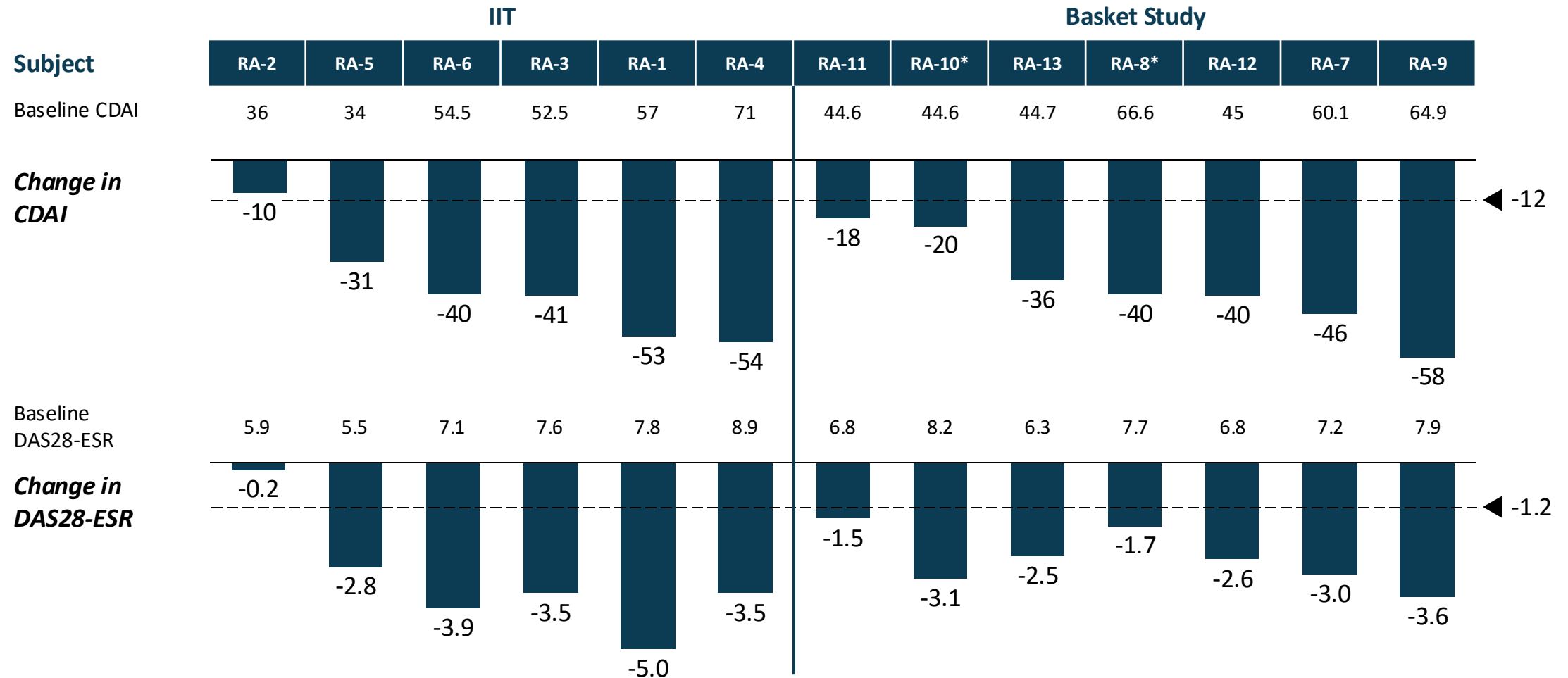
	Mean (range)
<i>Demographics</i>	
Age (yrs)	52.5 (31-76)
Female (%)	100%
Disease Duration (yrs)	14.8 (1.6-41)
<i>Disease Activity</i>	
CDAI	50.7 (24.9-75.6)
DAS28-ESR	7.3 (5.5-8.9)

Prior Classes b/tsDMARDs



CDAI & DAS28-ESR Reduction Observed at 6 Months

----- MCI** (≥ 12 for CDAI;
 ≥ 1.2 for DAS28)

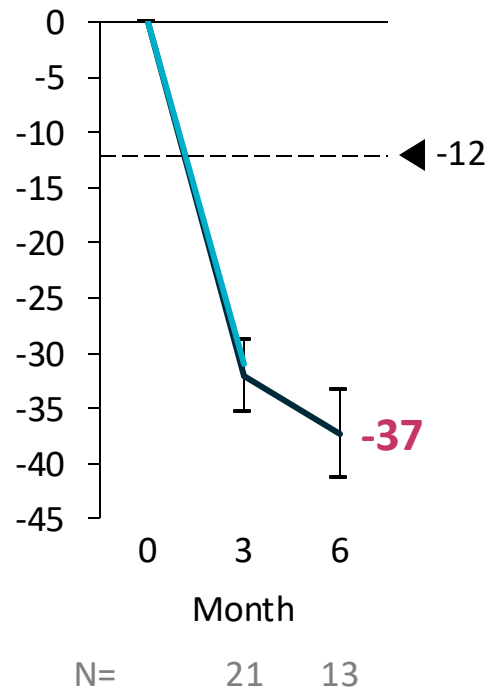


CDAI & DAS28 Change from Baseline

AlloNK + Ritux: Mean Change from Baseline (+/- SEM)

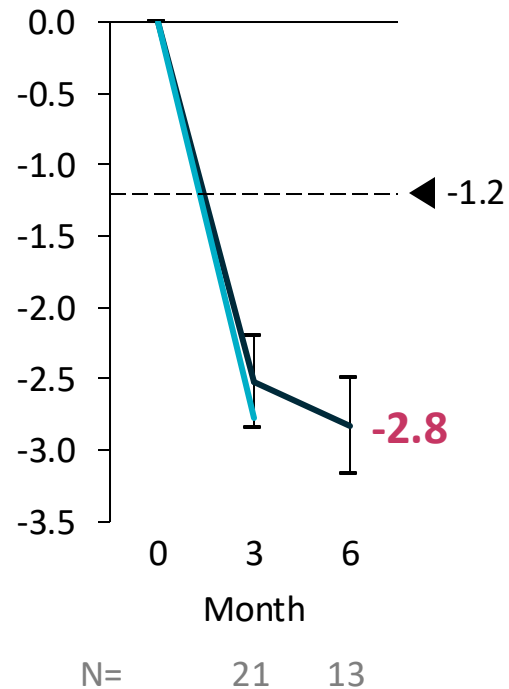
CDAI

(mean 50.7 baseline)



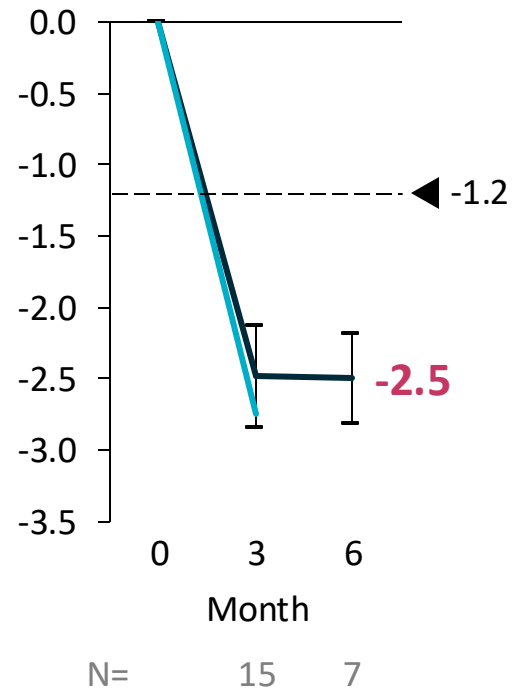
DAS28-ESR

(mean 7.3 baseline)



DAS28-CRP (basket^φ)

(mean 6.7 baseline)



- Rapid improvement in clinical scores, with further reduction from 3 to 6mo
- Newer subjects (n=8 w/ only 12wk f/u) responded similarly to first 13 subjects



ACR50 Scoring Using Currently Available ACR Components as Proxy

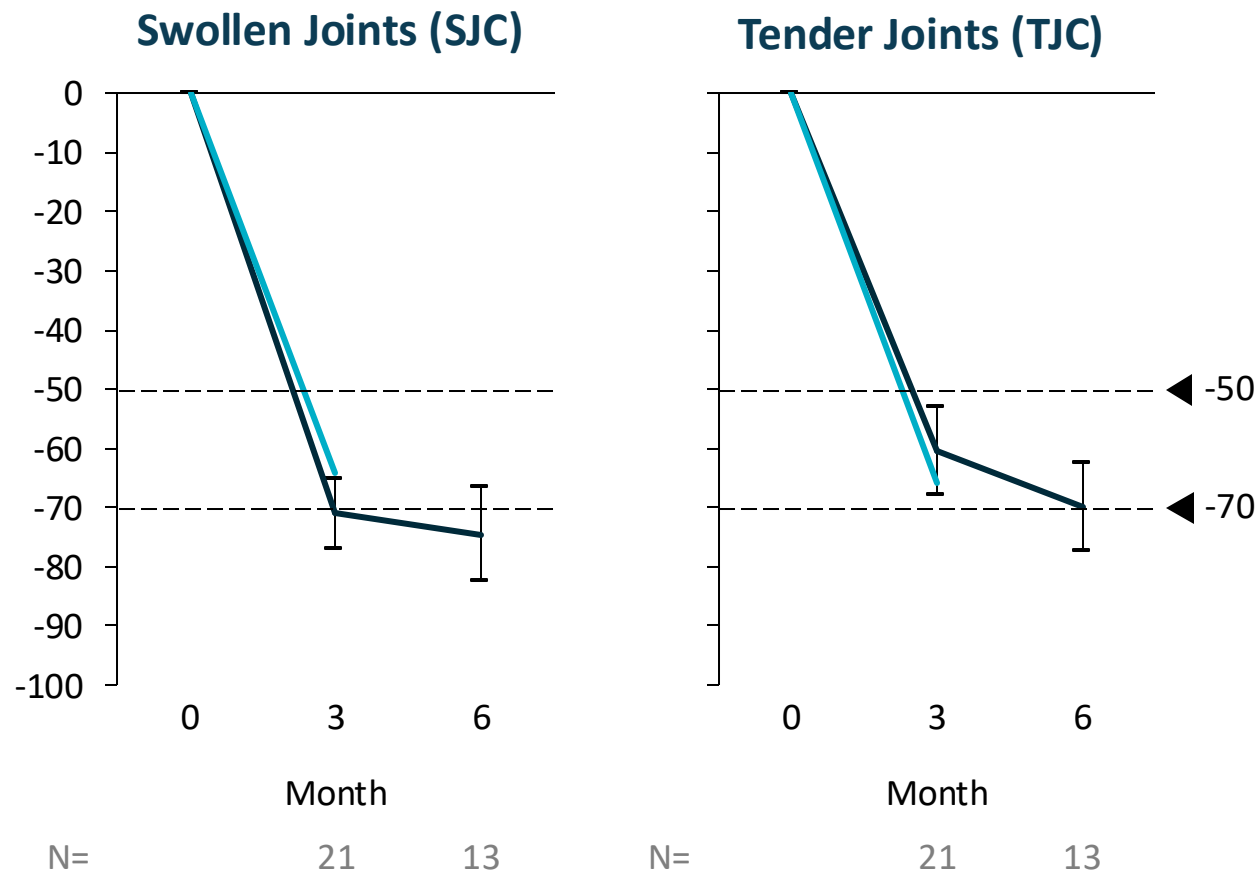
ACR Components	ACR50	mACR50
TJC	✓	✓
SJC	✓	✓
PtGA	✓	✓
PhGA	✓	✓
ESR or CRP	✓	
HAQ-DI		
Pain		

3 of 5

2 of 3

ACR Component Scores

AlloNK + Ritux: Mean Change from Baseline (+/- SEM)



- Required for ACR50 Response: $\geq 50\%$ improvement in **both SJC and TJC**
- Newer subjects (n=8 w/ only 12wk f/u) responded similarly to first 13 subjects



High Initial ACR Response Rate Observed at 6 Months

Majority of Component Scores Showed $\geq 70\%$ Improvement

ACR Heat-Map at 6 Months: % Change from Baseline

 $\geq 50\%$ improvement

Subject
Prior MoAs
SJC
TJC
PhGA
PtGA
HAQ-DI
Pain
ESR or CRP
ACR50
mACR50
% Δ DAS28-ESR
Any ACR / mACR 50

RA-1	RA-2	RA-3	RA-4	RA-5	RA-6
2	3	2	2	2	4
-87.5	-7.7	-78.9	-87.5	-100	-100
-100	-10	-81.3	-71.4	-100	-78.9
-90.9	-92.9	-88.9	-77.8	-68.8	-70.6
-71.4	-25	-52.9	-60	-87.5	-11.1
-44	-75.4	-67.4	-56.5	0	-75.8
✓		✓	✓	✓	✓
-64%				-51%	-55%
✓		✓	✓	✓	✓

83% ACR50/mACR50 in IIT

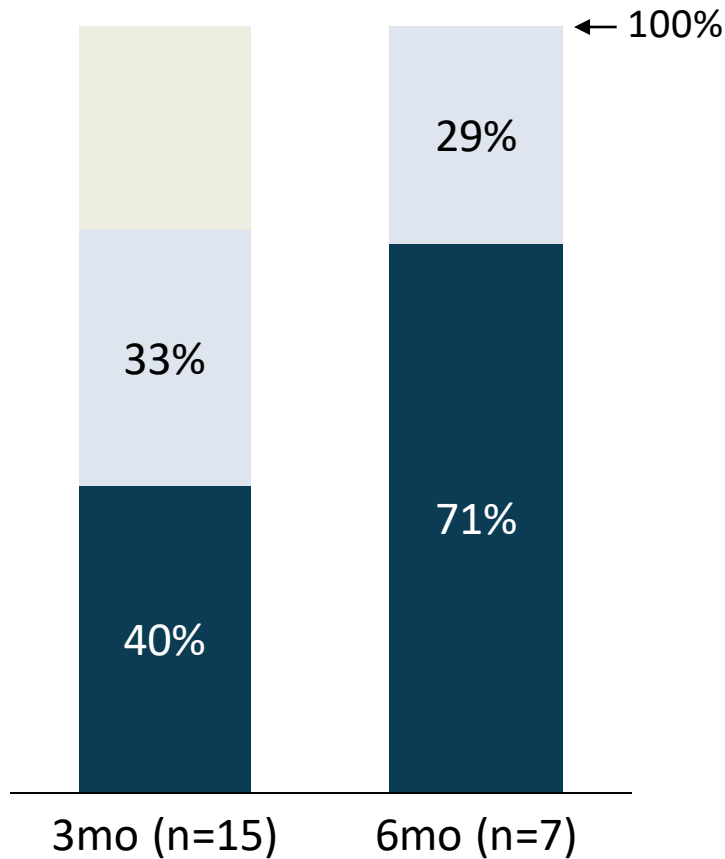
RA-7	RA-8	RA-9	RA-10	RA-11	RA-12	RA-13
3	1	2	1	2	2	2
-91.3	-82.1	-95.7	-36.4	-38.5	-88.9	-75
-60	-53.8	-88.5	-46.2	-41.2	-91.7	-86.4
-81.5	-86.3	-97.3	-32.2	-47.9	-95.3	-62.9
-82.5	84.8	-72.6	-18.4	-27.4	-81.8	-91.9
-100	-47.1	0	33.3	14.3	-36.8	-5.9
-89.3	-90.8	-47.7	-55.1	21.2	-94.5	-65.6
-61.5	-85.1	-66.7	-92.4	-76.3	204.5	27.3
✓	✓	✓			✓	✓
✓	✓	✓			✓	✓

71% ACR50 in Basket Study

High ACR Response Rate Observed in Refractory RA Patients at 6 Months

ACR Responses Among RA Patients in Company-Sponsored Basket Study

ACR50 ACR20



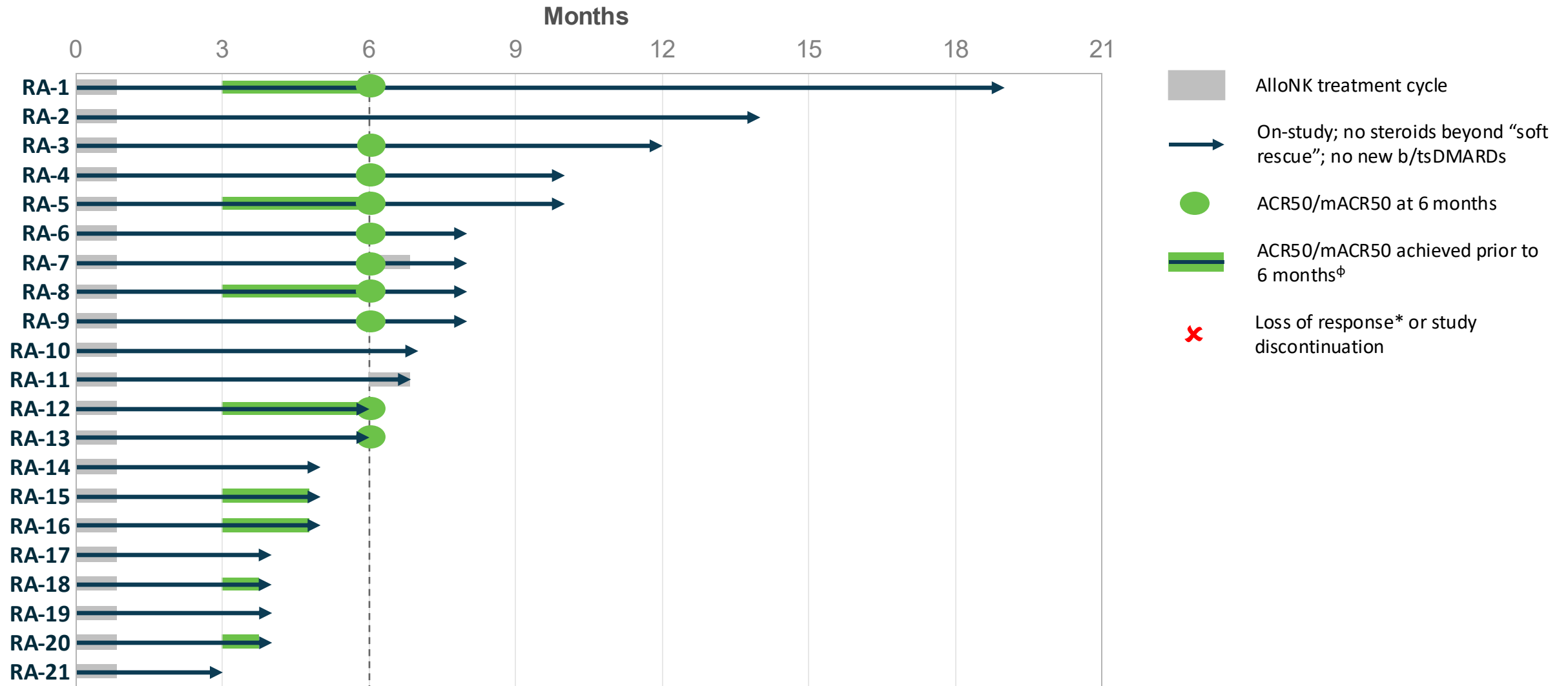
Deep responses, supporting TPP of $\geq 50\%$ ACR50 at 6 months

RCT with more uniform parameters

- Patients can remain on MTX and/or up to 10mg of steroids
- Dosing regimen: doses of 4B AlloNK cells



“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	<i>Auto CAR-T Schett / CASTLE¹</i>	<i>T-Cell Engager teclistamab²</i>
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 therapies³:

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



Artiva Biotherapeutics

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

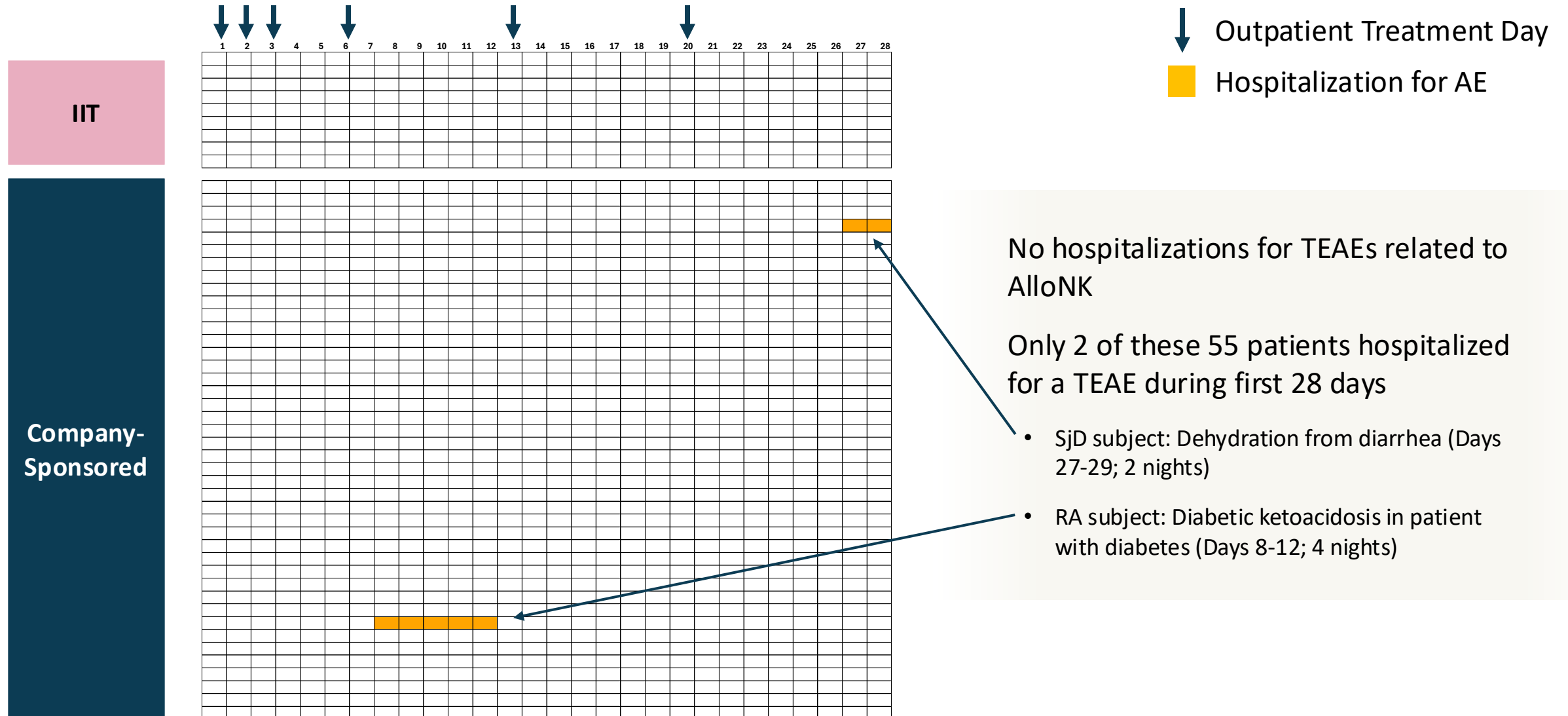
(1) Hagen et al ACR 2025. Abstract #0641

(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

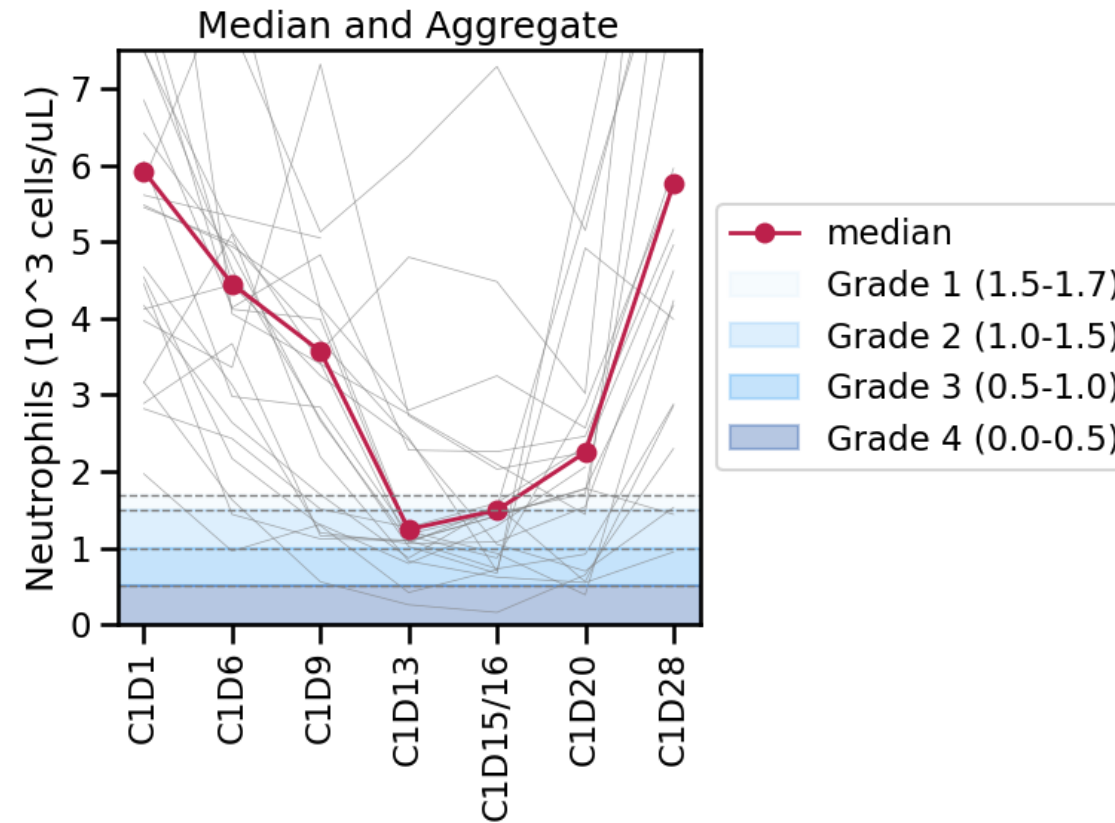
Experience in First 55 Autoimmune Patients Treated with AlloNK + RTX

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



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



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

1 Scalability, \$8K COGS

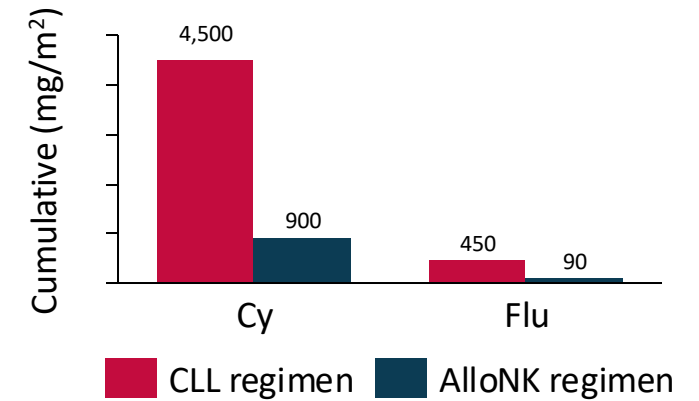


2 Outpatient treatment

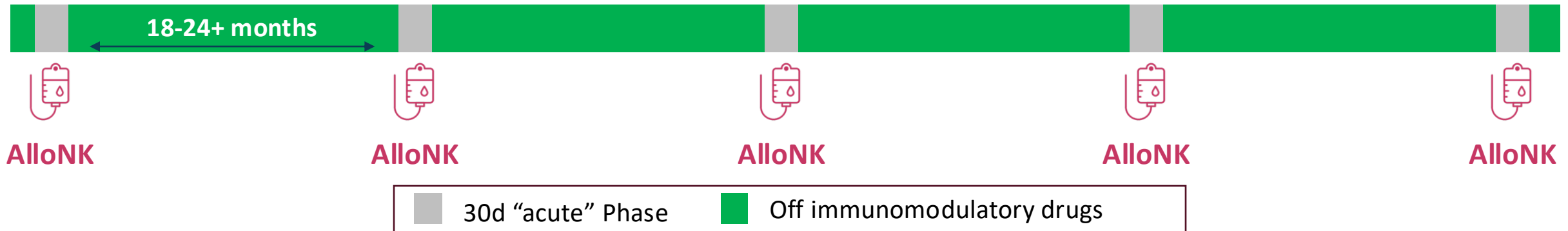


40 activated sites

3 Low doses of CY/FLU



4 Potential for long-term control on AlloNK – off other chronic meds



Registrational Strategy

- Single registrational RCT; N = ~150 RA pts with inadequate response to 2+ b/tsDMARDs
 - Randomized 2:1 to AlloNK + RTX vs. RTX-only
 - Primary efficacy end point: ACR50 at 6 months
 - AlloNK dosing: 4B cells x 2 doses (Days 6 and 20)
 - RTX-only non-responders may cross-over into AlloNK + RTX arm at 6 months
 - Global trial with 80+ sites; 40 sites already active in 05 study
 - Proposed safety database (patients treated with AlloNK + RTX):
 - N=100+ RA patients from RCT alone
 - N=250+ total, mostly RA patients, including patients with other autoimmune diseases
-
- Targeted ACR50 at 6 months: AlloNK+RTX: 50%+; RTX-only: 20-25%
 - Expected RCT primary efficacy read-out in H2'28; expected BLA filing in 2029
 - Expected clinical updates in 30-50+ RA patients in ACR'26, EULAR'27 and ACR'27
 - Expected read-outs: ACR50%, mDoR, safety



Program Commercial Objectives



“Enough! Time for cell therapy”

- To be the first FDA-approved **deep B-cell depleting therapy** for **refractory RA** patients who have **failed 2+ b/tsDMARDs**
- To be a **one-time** treatment (**“reset”**) lasting more than **18 months** with several patients still benefiting **3 years** later; patients **off other immunomodulatory drugs**
- To have greater than 50% of patients experience an **ACR50 response** at 6 months; **higher than any approved product in RA**
- To be a cell therapy **rheumatologists can “own”, and provide in their infusion chair**



Illustrative Market Reach in US alone

50 clinics in RCT in US



250 clinics

x

1-2 patients
per month

...out of >2,000 rheum
community clinics with
infusion chairs ^[1,2]

...where top HCPs see estimated
20-30 **2+b/tsDMARD-IR** patients
per month ^[3,4]

Reimbursement framework expected to be in line with other IV therapies



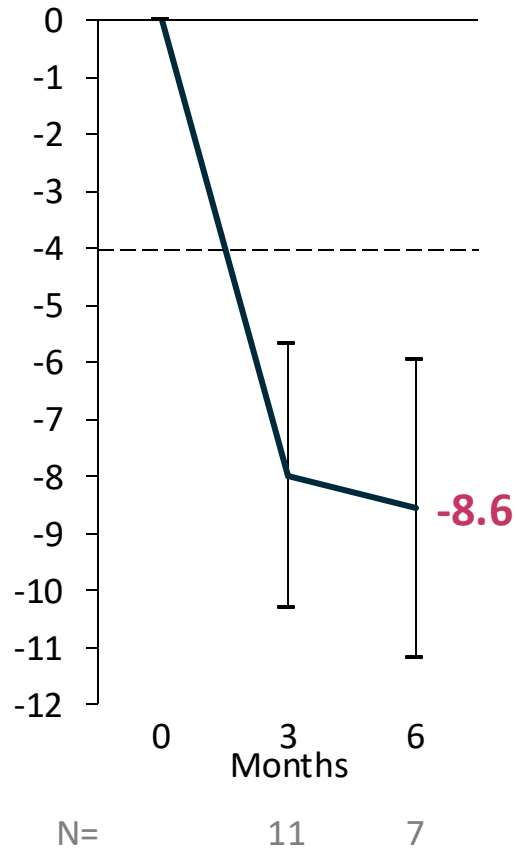
Clinical Responses Observed in SjD

----- Min. Point Change for Response

ClinESSDAI (change)

(Mean +/- SEM)

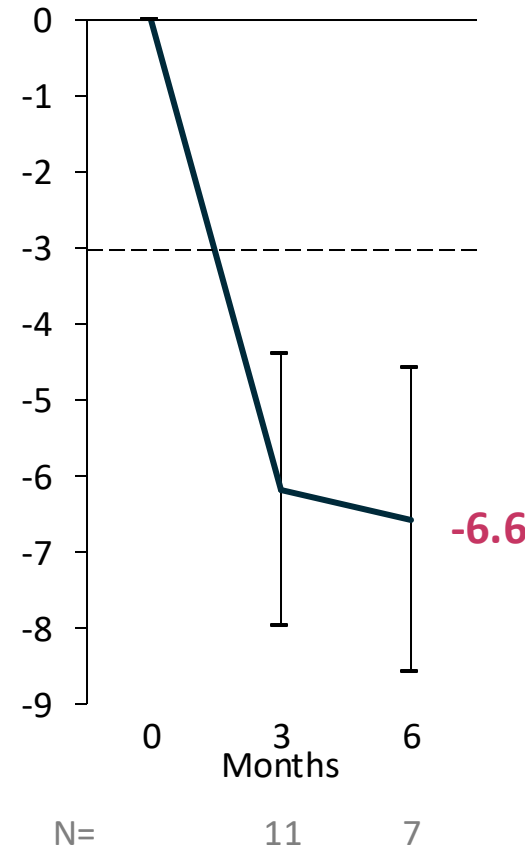
Mean 16.1 baseline



ESSDAI (change)

(Mean +/- SEM)

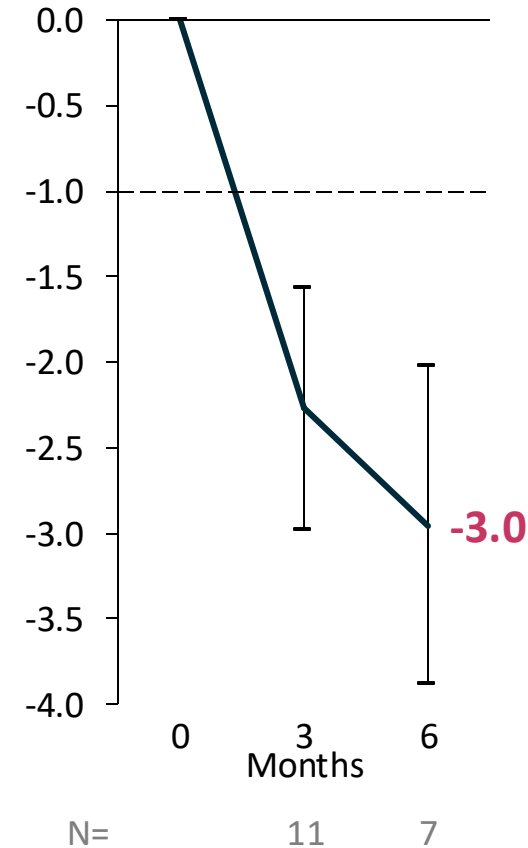
Mean 13.1 baseline



ESSPRI (change)

(Mean +/- SEM)

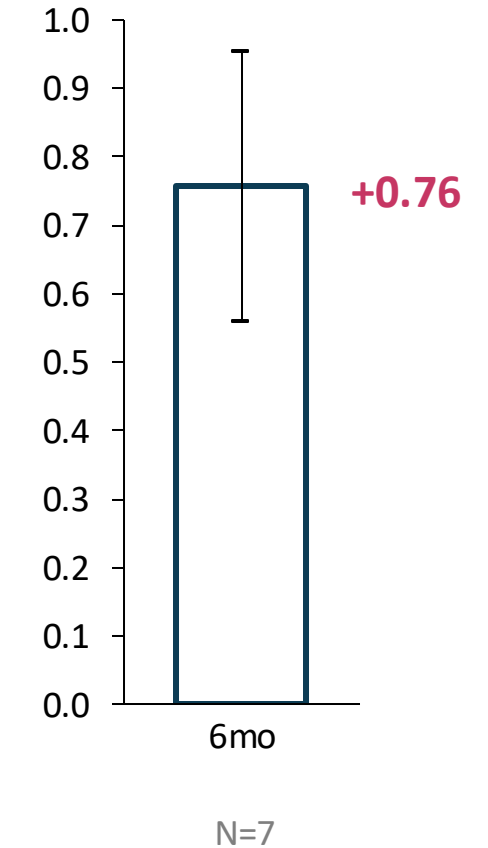
Mean 8.0 baseline



SSF at 6mo (change)

(Mean +/- SEM)

Mean 0.65 baseline



All patients off steroids



Clinical Responses Observed in SjD

----- Min. Point Change for Response

Benchmarking Against Other Emerging Rx in SjD

	Disease Duration	Clin ESSDAI	ESSDAI	ESSPRI	SSF	FACIT-F	PtGA
AlloNK + rtx, 6mo	Mean 12.2yr	-8.6	-6.6	-3.0	+0.76	+13.0	-44%
Ianalumab Ph2 + Ph3, 24wk ^[1,2]	Max 7.5yr	-	-5.1 to -5.9 ^[1]	-1.8 ^[2]	+0.1 ^[1]	+8.6 ^[2]	-34% ^[2]
Nipocalimab Ph 2, 24wk ^[3]	Mean 6.2yr	-6.4	-4.6	-2.3	-	-	-
Dazodalibep Ph2, 169d ^[4]	-	-	-6.3	-1.8	+0.39	+8.1	-
Telitacicept Ph3 (CN), 24wk ^[5]	Mean <2yr	-	-4.4	-1.9	-	-	-

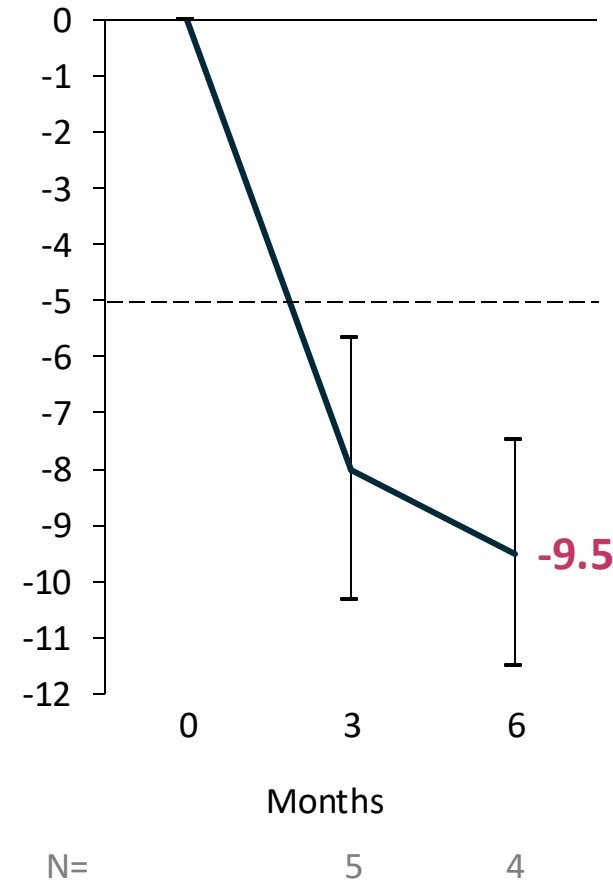


Clinical Responses Observed in Systemic Sclerosis (SSc)

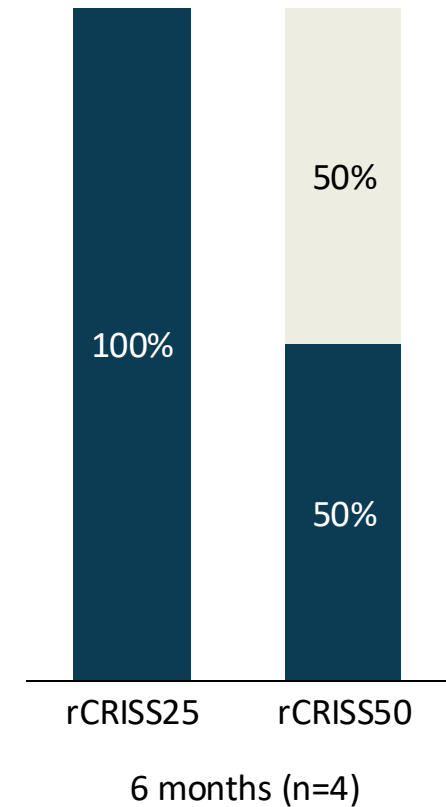
----- Min. Point Change for Response

- 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 Δ mRSS (score of skin thickness) and rCRISS* (0–1 composite score estimating overall improvement using skin, lung, and function measures)
- **All patients off steroids**

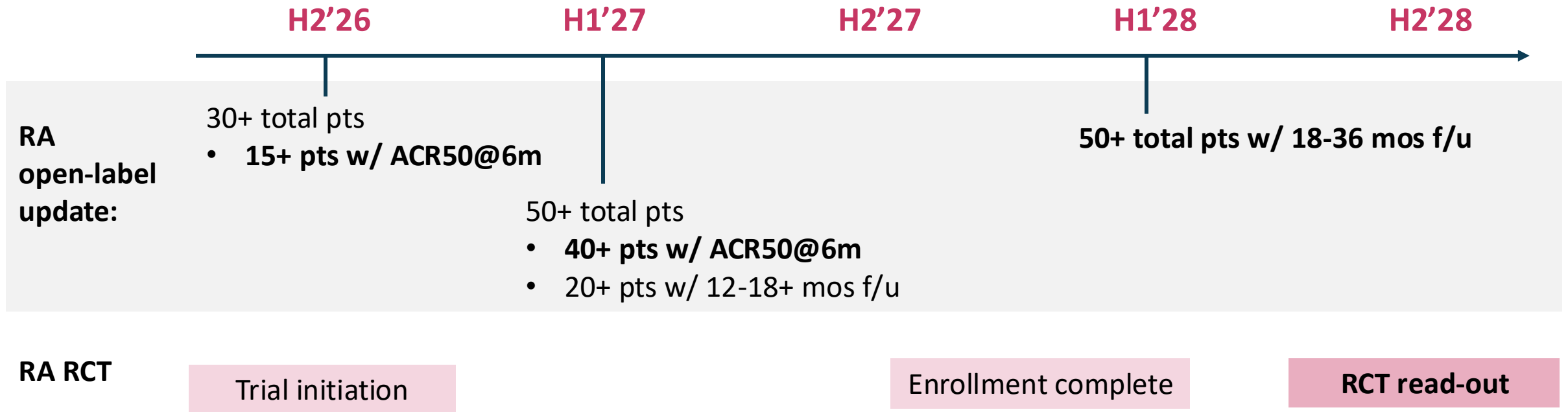
mRSS (change)
(Mean $\pm$ SEM)



rCRISS response
(%)



Expected Data and Trial Maturation in RA



Plans for second indication TBD
Other basket indications: SjD, SSc, IIM



Road Map to Becoming Potential First-in-Class

- ☒ Deep B-cell depletion MoA (low sensitivity + high sensitivity B-cell assay, B-cell reconstitution)
- ☒ Initial safety profile consistent with desired TPP in community (rheumatologists can “own”)
- ☒ Unmet need in 2+ b/tsDMARD failure in RA (25% of \$20B+ b/tsDMARD market)
- ☒ Efficacy/initial durability signal >>> SOC; potential success of ACR50 >50% in RCT
- ☒ FDA alignment on potential registrational trial for AlloNK + RTX
- ☐ First deep B-cell depleting agent to potentially get approval in RA



Opportunity Summary

- 1 Deep B cell depletion - potent mechanism vis-à-vis other novel approaches
- 2 Strategic interest across modalities (auto-CAR-T, TCE, in vivo, allo)
- 3 Refractory RA – approx. \$5B* being spent on patients unlikely to respond after failed 2+ b/tsDMARDs
- 4 AlloNK activity and tolerability – potentially high impact if first-in-class in RA; other indications
- 5 CY/FLU tolerability in community setting
- 6 Favorable competitive landscape – supports potential multi billion-dollar opportunity

