

Artiva Biotherapeutics

Corporate Presentation
September 2025

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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 the potential benefits, activity, potency, effectiveness, and safety of the Company’s current and future product candidates; the Company’s expectations with regard to the design and results of its research and development programs, preclinical studies, and clinical trials, including the timing and availability of data from such studies and trials; the Company’s preclinical, clinical, and regulatory development plans for its current and future product candidates, including the timing or likelihood of regulatory filings and approvals for its product candidates; the potential market size and size of the potential patient populations for the Company’s current and future product candidates; the Company’s business strategy; and the Company’s future results of operations and financial position. Words such as “believe,” “anticipate,” “plan,” “expect,” “intend,” “will,” “may,” “goal,” “objective,” “target,” “path,” “potential,” “opportunity,” 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, 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 or preliminary 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 Securities and Exchange Commission (the “SEC”), including the section titled “Risk Factors” in the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 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 which 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.

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Artiva: Developing allogeneic, off-the-shelf, NK cell-based therapies for patients suffering from devastating autoimmune diseases and cancers

AlloNK: Leading NK cell therapy for autoimmune disease

- Allogeneic, non-genetically modified, cryopreserved NK cell therapy in combination with mAbs for targeting
- Addressing significant unmet need in large market (\$160B 2023 Global Sales)¹
- 64% CRR² for AlloNK + RTX in Phase 1/2 trial for B-NHL supporting robust B-cell depletion; at median follow up of 19.4 months, median DoR not reached²
- Ongoing trials in autoimmune disease in refractory RA, SLE, LN & other autoimmune indications

“Manufacturing-first” approach

- Improving end-to-end process pioneered by GC Cell for >10 years
- Estimated \$6,000 COGS assuming 6 billion AlloNK cells per treatment
- Exclusive worldwide ex-APAC³ IP rights to NK cell manufacturing and programs

Well-capitalized

- \$142MM cash* as of June 30, 2025
- Cash runway into Q2 2027

Near-term milestones

- By YE 2025: Initial safety and translational data across multiple autoimmune indications, and lead indication selection
- 1H2026: Initial clinical response data in the lead autoimmune indication from ongoing clinical trials with longer follow-up to inform emerging TPP and registrational strategy



Artiva's Strategy: Safe and Effective NK Cell-Based Therapies for a Community Setting

1

MoA: Deep B-cell Depletion

AlloNK for enhanced antibody dependent cell-mediated cytotoxicity (ADCC)

2

"Manufacturing-first"

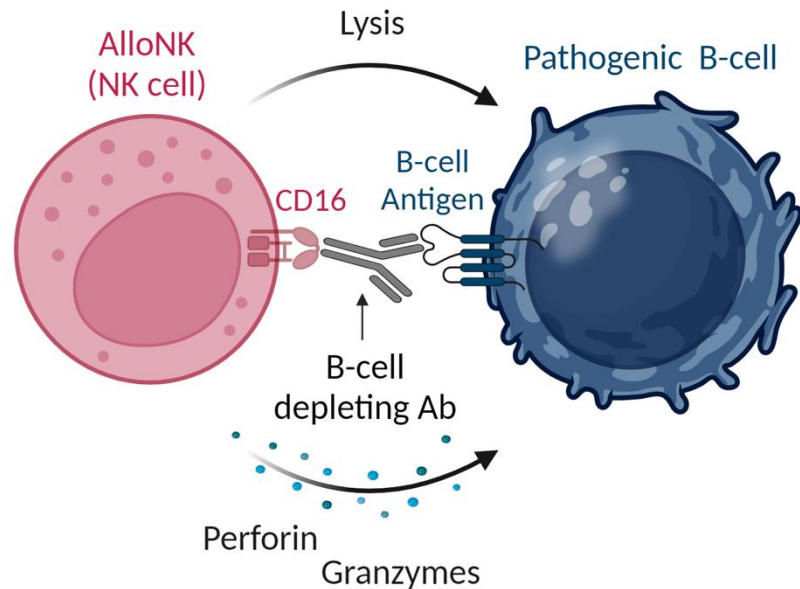
Scalable manufacturing process using cord blood and unmodified NK cells

3

Outpatient Administration

Potential for adoption in a community setting

ADCC Enhancement



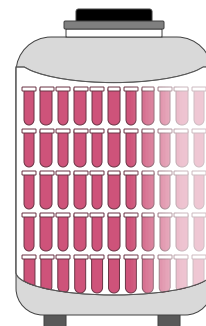
NK Selection

Selected for high affinity CD16 variant and KIR-B haplotype



AlloNK®

Allogeneic, off-the-shelf non-genetically modified NK cell therapy + mAb for targeting



Cryopreserved Drug

Expanded and activated using proprietary feeder cell process



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



Fred Aslan
CEO



Subhashis Banerjee
CMO



Chris Horan
CTOO



Neha Krishnamohan
CFO, EVP Corp Dev



Jennifer Bush
COO



Heather Raymon
SVP Research &
Early Development



Ben Dewees
SVP Regulatory
Affairs



David Moriarty
SVP Clinical
Operations



Feng Xu
SVP Biometrics

abbvie

Genentech

kyverna™

BIOMARIN

Goldman
Sachs

Lilly

Bristol Myers Squibb

HORIZON

organovo®

Celgene

igm
biosciences®

venrock

Dermira®

KINNATE
BIOPHARMA

vividion
THERAPEUTICS

Development Experience Across Multiple Notable Blockbuster Approvals

ALDURAZYME®
(LARONIDASE)

KUVAN®
(sapropterin dihydrochloride) Tablets

Naglazyme®
(GALSULFASE)

ORENCIA®
(abatacept)

SOTYKTU™
(deucravacitinib) 6 mg tablets

taltz®
(ixekizumab)

uplizna™
inebilizumab-cdon

XELJANZ®
[tofacitinib]

Note: Chief Executive Officer (CEO); Chief Medical Officer (CMO); Chief Technical Operations Officer (CTOO); Chief Operating Officer (COO); Chief Financial Officer (CFO)



Artiva Biotherapeutics

“Deep B Cell Depletion” Approaches Represent Next Wave in Autoimmune Diseases



Deep B Cell Depletion

Targeted Therapies (RTX, TNF, JAK, etc.)

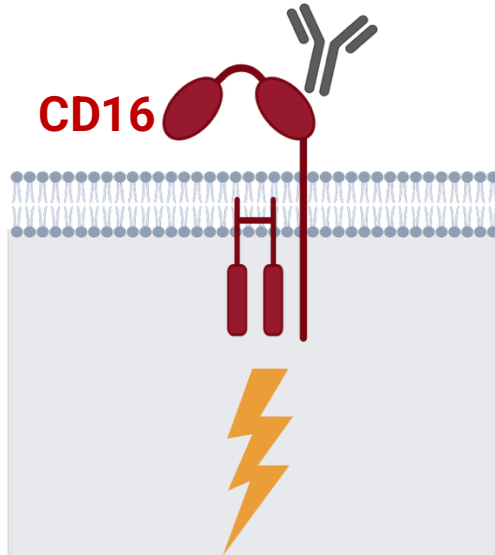
Rx in 1990s



AlloNK Differentiation in Mechanism of Action

NK + mAb: ADCC via CD16 Receptor

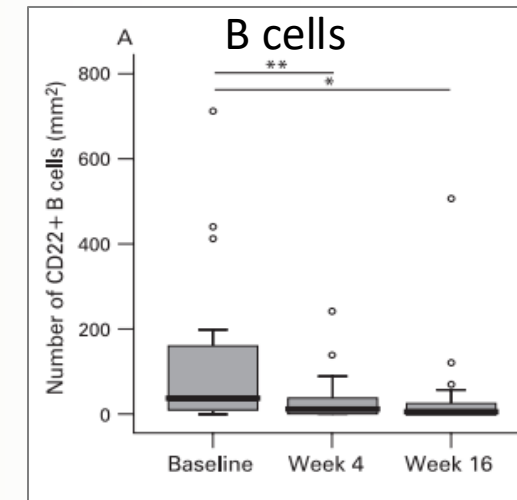
CD16 is a strong NK cell activating receptor ^[1]
bypassing inhibitory signaling ^[2]



mAbs not effective enough in tissue: Rituximab causes complete B-cell depletion in tissue of some patients, not others, demonstrating ability of mAb to penetrate tissue ^[3-7]

Similar results were obtained with anti-CD19 antibodies

EX: RA, synovial tissue (N=24) ^[4]



AlloNK Potential to bring more mAb into tissue: NK cells traffic to tissues ^[8], with potential for mAb bound to CD16 ^[9]

Objective: Deep B-cell depletion in tissue leading to ADCC enhancement in tissues

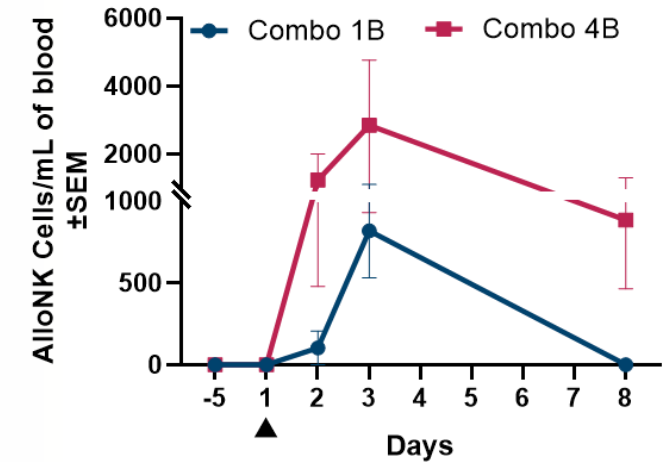


Role of Conditioning with Flu / Cy in Treatment with AlloNK

NK cell persistence

- **Temporarily reduces host immunity** that could reject AlloNK
- **Boosts IL-15** to support **NK cell persistence** [1]

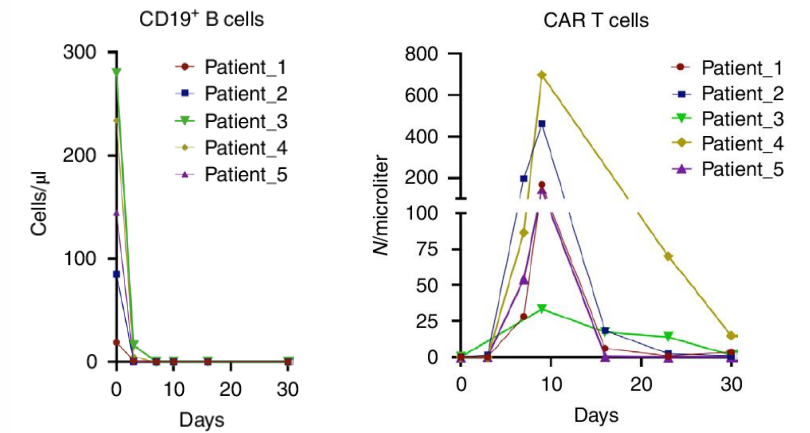
AlloNK PK is dose-dependent, with AlloNK detectable 1wk post infusion at 4B dose (NHL study) [2]



Initial B-cell depletion

- Rapidly but transiently **reduces B-cells**; potentially enhances depth of depletion of AlloNK+mAb

Flu / Cy shows rapid but transient B-cell depletion with B-cells substantially reduced before Auto-CAR-T is onboard [3]



Note: Flu: fludarabine; Cy: cyclophosphamide; mAbs: monoclonal antibodies

(1) Bot A 2015 Blood, Supported by Artiva data, not shown

(2) NCT04673617, Data as of April 8, 2025. Subjects from combination cohort (Cy+Flu+AlloNK+Rituximab) @ 1 billion AlloNK / dose (n=3) and 4 billion AlloNK / dose (n=8)

(3) Mackensen et al 2022. Nature Medicine volume 28, 2124-2132.

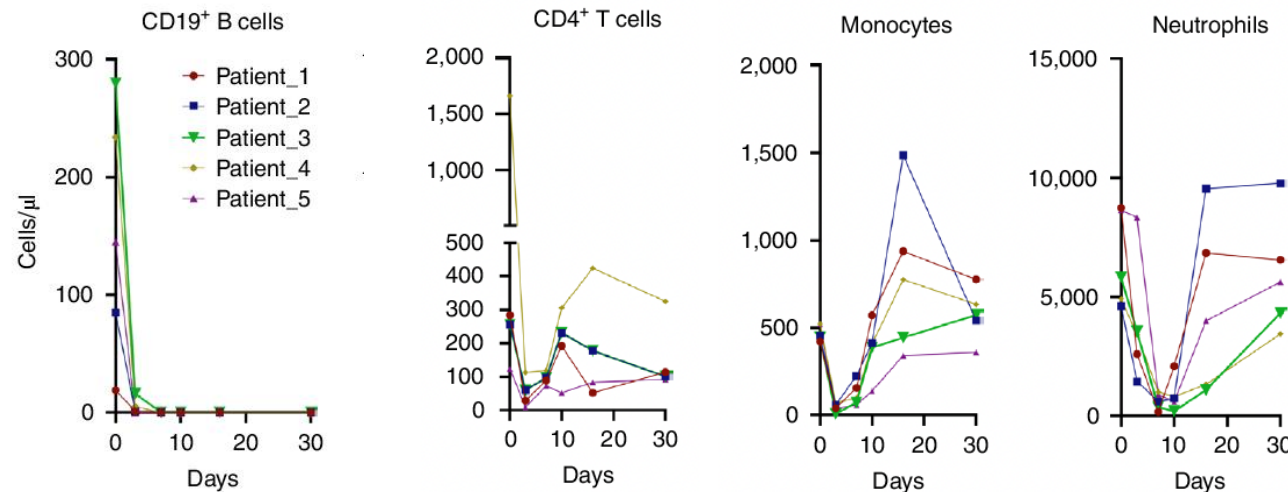


Low Doses of Flu / Cy Conditioning Regimen with Limited Tolerability Impact

Doses utilized in AlloNK treatment regimen are a **fraction** of what has been shown to have potential tolerability impact in other studies and in the literature

- Cy Dose: Euro-Lupus protocol (3g total); **minimal infection risk** or impact on fertility^{1,2,3}
- Flu Dose: 6 monthly doses (540mg/m² total) found to be **well tolerated** with only minor infections noted⁴

Temporary immunosuppressive impact: Schett CD19 auto-CAR-T data in autoimmune patients shows white blood cells including neutrophils **rapidly recover after depletion post conditioning regimen**⁵



AlloNK Treatment: Potentially similar patient management to monoclonal antibodies or biologics

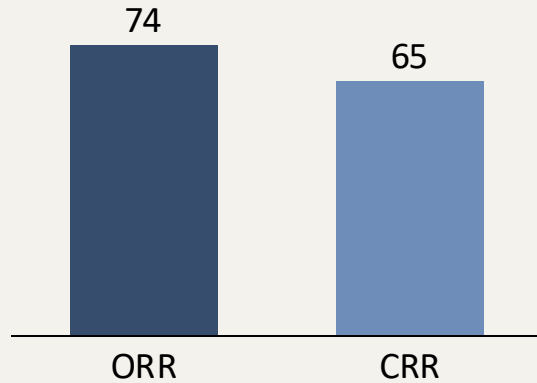


ADCC Enhancement with Non-Genetically Modified NK Cell Have Shown High Response Rates and Durability in Over 80 Patients with B-cell Lymphoma

Single-center
Academic
Trials¹

Non-Hodgkin Lymphoma (NHL) + rituximab (CD20 mAb)

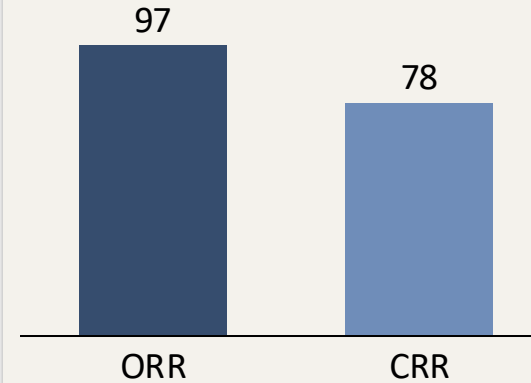
n = 19, Response Rate (%)



~62% of CRs
ongoing at
12mo*

Classical Hodgkin Lymphoma (cHL) + acimtamig (CD30 NK engager (NKE))

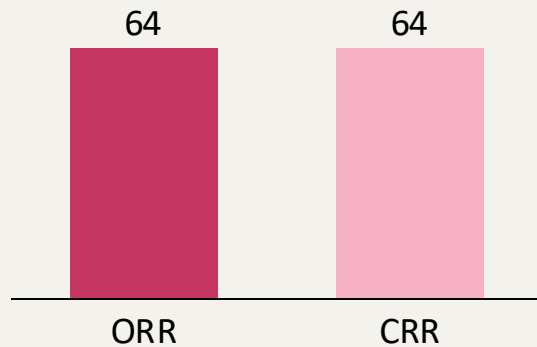
n = 32 at RP2D, Response Rate (%)



92% of CRs
ongoing at 6mo³

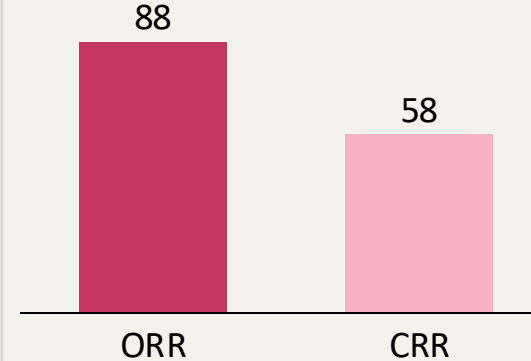
AlloNK[®]
Multi-center
trials²

n = 14, Response Rate (%)



67% of CR*
ongoing at
12mo*

n = 24, Response Rate (%)



77% of CRs
ongoing at 6mo

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 themselves, and caution should be exercised when comparing data across trials.
(1) NHL: ASH 2021, Bachanova, abstract #3854; (1) cHL: Nieto et al. Nature Med 2025. Reflects December 31, 2023 data cut
(2) NHL: ASGCT 2025, abstract #858. AlloNK data as of March 7 2025, data cut off. Reflects preliminary data from the Phase 1/2 B-NHL clinical trial from patients not exposed to prior CAR-T; (2) cHL: Maakaron et. al. 2025 J Clin. Oncol. 43 (16 suppl); Reflects April 17, 2025 data cut
(3) Reflects RP2D; Excludes four T-NHL patients at RP2D
* At 12 months after first cycle of treatment; all patients with CR as best response, including those who converted from PR to CR



AlloNK+RTX Phase 1/2 Clinical Data in CAR-T Naïve Aggressive B-NHL Patients in line with Auto-CAR-T

Autologous CAR-T
Allogeneic CAR-T

T-cell engager
Antibody-drug conjugate

Comparator	n	Median prior lines	CAR-T naïve	Aggressive B-NHL	Complete Response Rate (%)	Median DoR (mo)
Artiva AlloNK + rituximab	14	3	100%	93%	64	NR / @19.4 m median f/u
Kite/Gilead Yescarta	101	3	100%	100%	58	11.1
BMS Breyanzi	257	3	100%	100%	53	23.1
Allogene ALLO-501	33	3	100%	100%	42 58% @ RP2D	11.1 23.1 @ RP2D
Genmab/Abbvie Epkinly	157	3	61%	100%	39	12.0
ADC Therapeutics Zynlonta	145	3	91%	100%	24	10.3

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 themselves, and caution should be exercised when comparing data across trials.
Note: AlloNK data as of March 7 2025, data cut off. Reflects preliminary data from the Phase 1/2 B-NHL clinical trial from patients not exposed to prior CAR-T.
Note: Yescarta: Neelapu et al N Engl J Med. 2017;377(26): 2531-2544.
Breyanzi: Abramson et al Blood 2024; 143(5): 404-16. ALLO501: Locke et al J Clin Oncol 2025 DOI:10.1200/JCO-24-01933; Epkinly: Thieblemont et al J Clin Oncol. 2023;41(12):2238-2247.; Zynlonta: Caimi et al Haematologica 2023 Aug 31;109(4):1184-1193

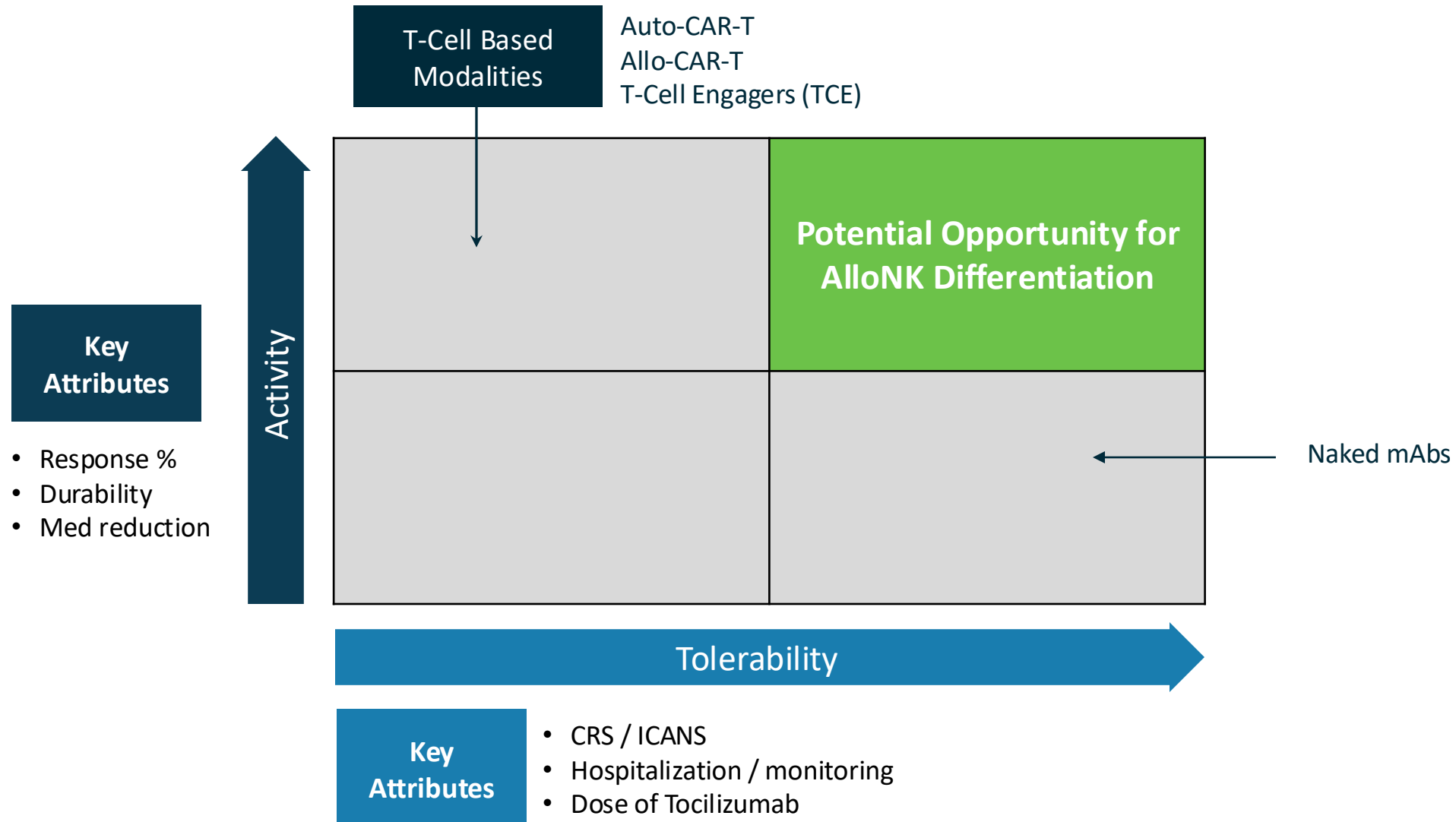


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Similarities in Proposed MoA between Autoimmune Disease and B-NHL

	In B-NHL, B-cells transform into cancer		In autoimmune disease, B-cells produce auto-antibodies
Where are B-cells found?	B-NHL lesions found in lymph nodes and often in bone marrow, spleen, and tonsils – Source: NCI	Where are B-cells found?	B-cells found in primary lymphoid tissues (e.g., bone marrow), and in secondary lymphoid tissues (e.g., spleen, lymph nodes, tonsils) – Source: NIH
Proposed MoA for CRs in NHL	Deep B-cell depletion of transformed B-cells in lymphoid tissue and periphery can lead to durable responses	Proposed MoA for Durable Disease Remission	Deep B-cell depletion of pathogenic B-cells in lymphoid tissue and the periphery can lead to durable disease remission

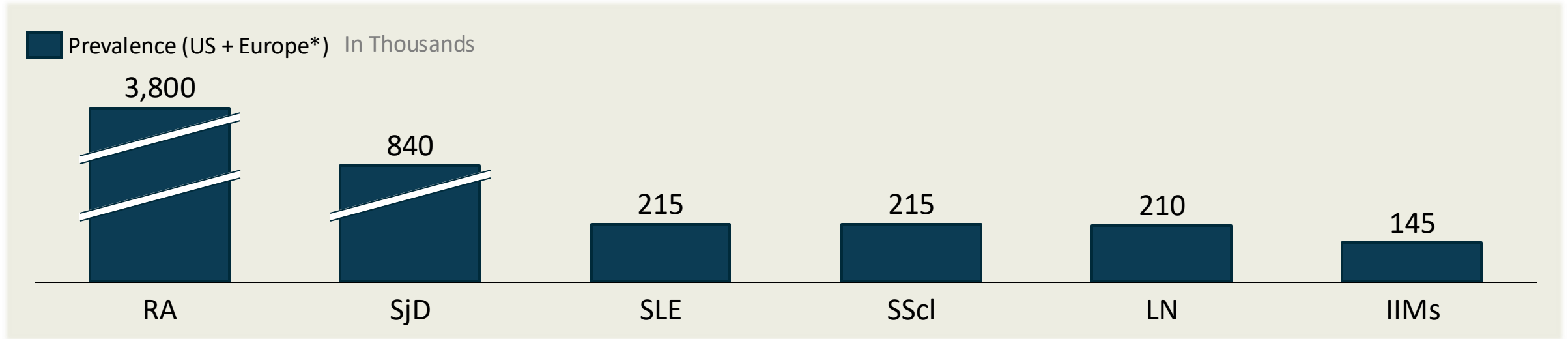
AlloNK's Experience Suggests the Potential for Activity in the Community Setting



Note: CRS: Cytokine release syndrome, ICANS: immune effector cell-associated neurotoxicity syndrome, mAbs: monoclonal antibodies



AlloNK is Being Explored in Indications with Large Market Opportunity



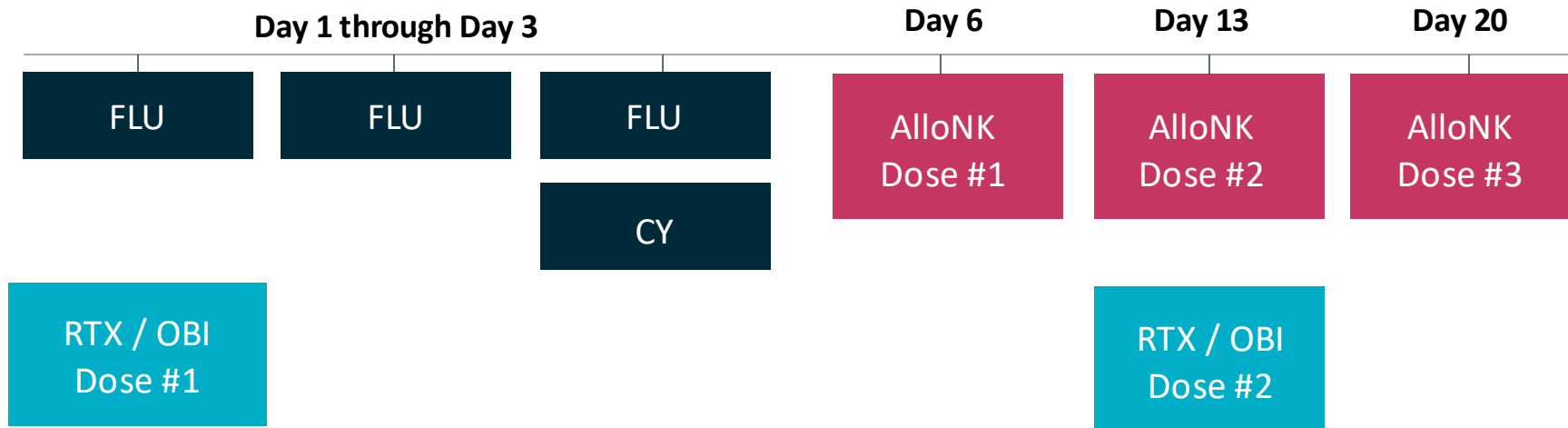
AlloNK is Well Positioned versus Other Modalities to Address Large Patient Populations Typically Treated in the Community Setting

	Auto-CAR-T	Allogeneic Cell Therapy	T-Cell Engagers
AlloNK Potential Advantages:	Scalability, Community access	Manufacturing-First CRS management	Regulatory Path (CBER) Advantage CRS management



AlloNK Clinical Development: Patient Journey in Ongoing Autoimmune Clinical Trials

Reflects a treatment cycle



FLU: fludarabine 30mg/m²; CY: cyclophosphamide 1g/m²;
RTX: rituximab 1000mg; OBI: obinutuzumab 1000mg

- Conditioning regimen similar to Schett / AlloNK B-NHL trial
- Cy Dose: Euro-Lupus protocol (3g total); **minimal infection risk** or impact on fertility^{1,2,3}
- Flu Dose: 6 monthly doses (540mg/m² total) found to be **well tolerated** with only minor infections noted⁴
- RTX / OBI dose per guidelines or dose in clinical trials where relevant

[1] Houssiau 2002 Arthritis & Rheumatology 46(8): 2121-31
[3] Ioannidis 2002 J Rheumatol 29:2129-35

[2] Tamirou 2017 Arthritis & Rheumatology 69(6): 1267-71
[4] Tassioulas 1997 Fludarabine in non-malignant disorders



AlloNK Clinical Development: Ongoing Trials in Autoimmune Diseases

LN + SLE without kidney involvement

- Early-mover with first NK cell IND cleared following CAR-T PoC in SLE/LN
- Exploring 1B -> 4B cells / dose; Obinutuzumab

RA, SLE, PV, AAV in Community Setting

- First mover evaluation of initial tolerability and activity in community setting
- Supports **prioritization of community sites**

Phase 2a Basket Trial

RA, Sjögren's disease, IIMs, Systemic sclerosis

- Targeting indications with **large potential market opportunity** and where proof of concept seen with B-cell targeting agents
- Starting at 1B cells / dose and plan to escalate to 4B cells / dose for AlloNK in combination with rituximab

Differentiated Protocol Features:

- Continuous enrollment (no stagger) within dose cohort
- No required hospitalization
- Flexibility on which indication to expand enrollment

Over a dozen patients treated with AlloNK + mAb across RA, SLE, LN, SjD, and SSc in ongoing trials
Over a dozen sites active and enrolling



Artiva's "Manufacturing-First" Approach

GC Cell established track record in cell therapy with over two decades of cell therapy research and pioneering manufacturing process

- High yielding, reliable process platform
- Over 50 clinical AlloNK batches have been produced

Artiva's purpose-built facility in San Diego

- 9,000sf multi-suite, cGMP compliant production up and running
- Tech transfer complete, clinical manufacturing underway
- End-to-end clinical supply cold chain established:
 - From starting materials to the bedside
 - Cryopreserved in an infusion-ready media
 - Thawed at bedside, 5-10 min IV infusion



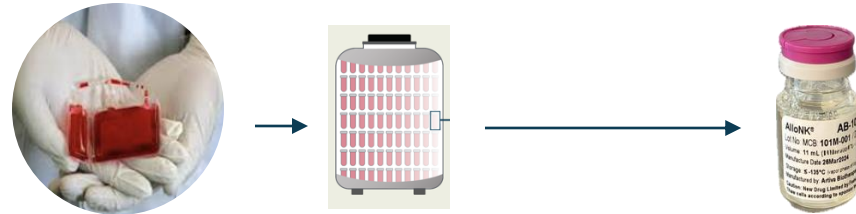
AlloNK's "3 Cs" in TechOps

CMC

- Extensive experience with AlloNK > **50 clinical batches**
- Release testing performed on DP from **8 donor MCB's**
- Demonstrated both **batch-to-batch** and **donor-to-donor consistency**
- **IP protected** process

Simplicity and robustness

CAPACITY



1 UC unit = 50+ MCB units x 80-100+ DP vials/batch

Today: 1 UC unit = 4,000+ DP vials Ψ = 600+pts*

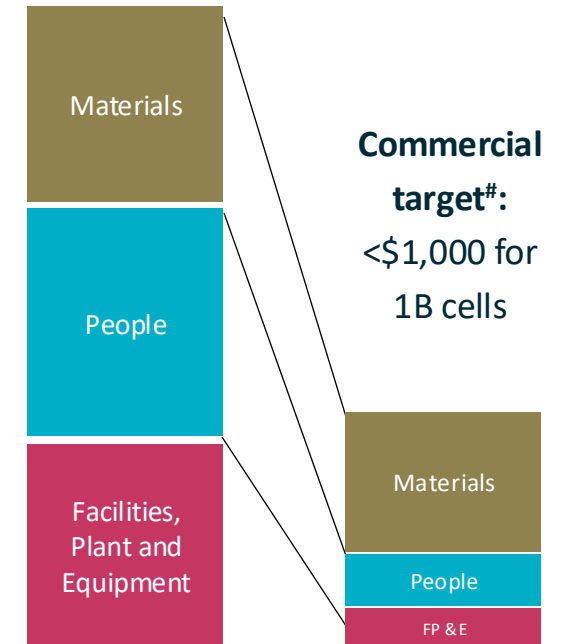
1 suite using 50L reactor
x 2 runs/ mo
x 100 DP vials/ batch
= up to 2,000 DP vials/ yr

Current facility at capacity (3 suites) = 1,000 pts/yr*

COGS

Scale today:
Clinical COGS

Future scale:
Commercial COGS



End-to-end cold chain logistics in place



Artiva Biotherapeutics

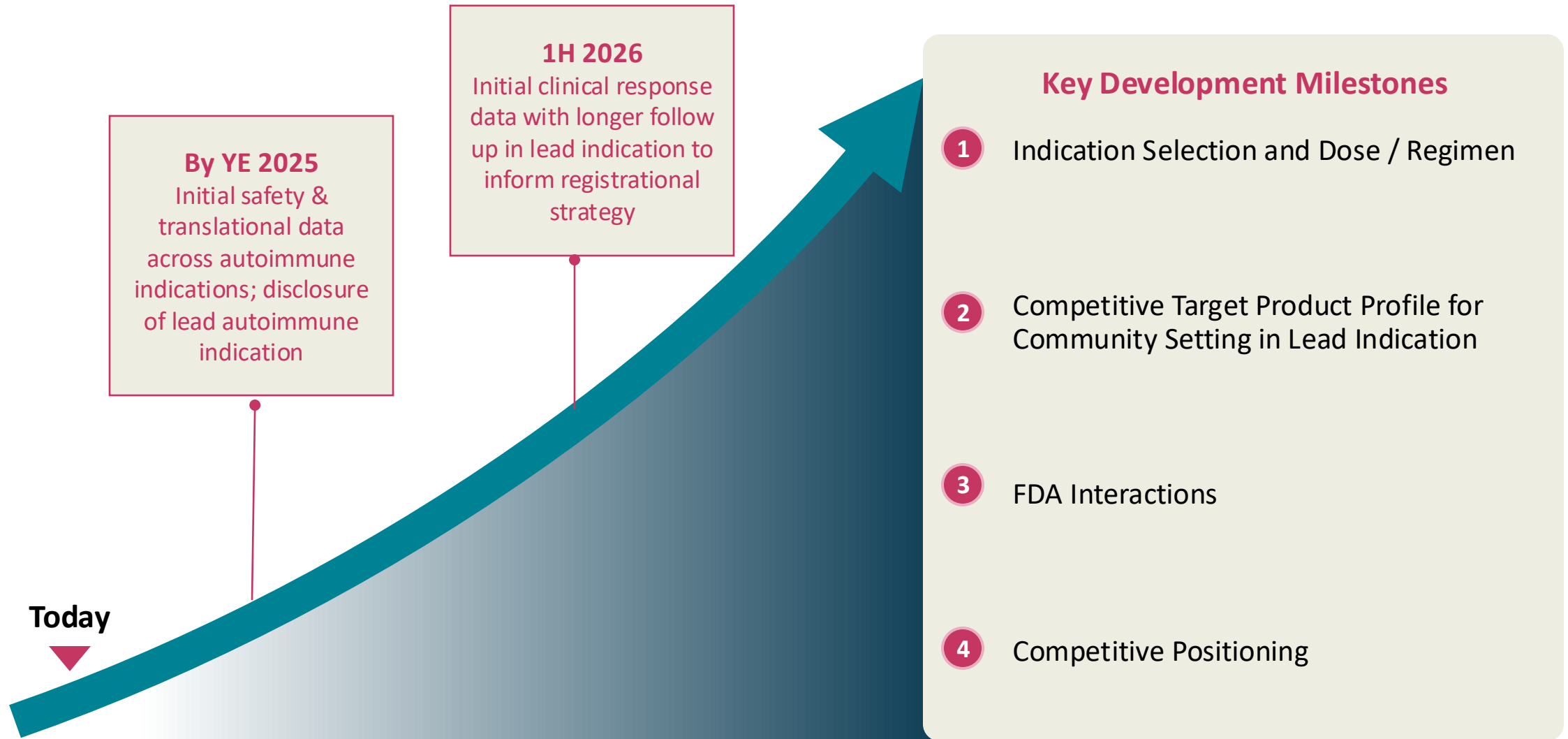
Ψ 1 DP vial = 1 billion AlloNK cells.

* Assumes 6B cells per patient; Up to 2,000 DP vials per suite per year

Assumes 600 DP vials / run driven by larger bioreactor and other process improvements.

IP: Intellectual Property; MCB: Master Cell Bank; DP: Drug Product; CMC: Chemistry, Manufacturing and Control.

Value Creation and Path to Registration



Artiva: A Leader in NK Cell Therapy Building a Differentiated Profile to Address a Large Market Opportunity



Targeting a \$160B Growing Market with Significant Unmet Need



A Leader in NK Cell Therapy¹



Potential Enrollment & Commercial Advantage with Outpatient Administration and Scalability



Starting at a Dose that Showed CRs in B-NHL



Clinical Experience to Date Shows Potential for Activity with Tolerability in Community Setting



Additional Information

Artiva's Pipeline: Focus on AlloNK in Autoimmune Diseases and Cancer

Product Candidate	Indication	Preclinical	Phase 1	Phase 2	Phase 3	Partnerships
Artiva-funded Trials	AlloNK (AB-101) ADCC-Enhancer	Refractory RA, Sjögren's disease, IIMs, SSc	+ Rituximab			
		SLE, LN	+ Obinutuzumab or + Rituximab			
		RA, PV, AAV, SLE ⁽¹⁾	+ Rituximab ⁽¹⁾			
		NHL ⁽²⁾	+ Rituximab ⁽²⁾	Trial Complete		
	CAR-NK (AB-205)	Hematological malignancies	CD5-CAR-NK			
	CAR-NK (AB-201)	Solid tumors	HER2-CAR-NK			

Note: Artiva holds ex-APAC rights to all programs.

Note: RA: Rheumatoid Arthritis; SjD: Sjögren's Disease; SLE: Systemic Lupus Erythematosus; SSc: Systemic Sclerosis; LN: Lupus Nephritis; IIMs: Idiopathic Inflammatory Myopathies; AAV: Anti-neutrophil cytoplasmic antibody (ANCA) associated vasculitis (AAV); PV: Pemphigus Vulgaris; NHL: Non-Hodgkin lymphoma

(1) Investigator-Initiated Basket Trial

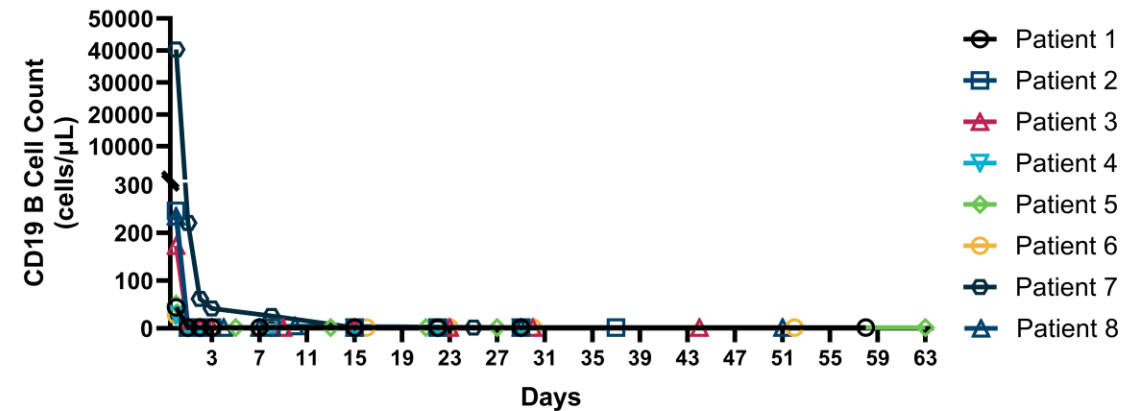
(2) Trial completed; Trial in close-out after decision to discontinue the remaining long-term follow-up period



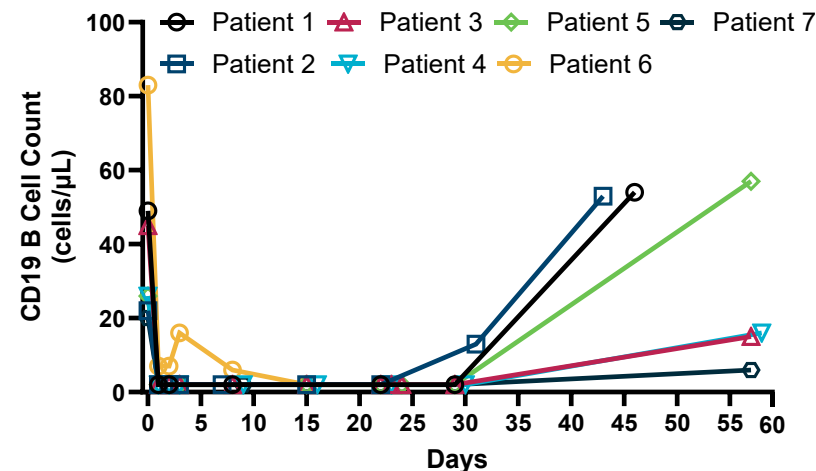
Peripheral B-cell Depletion Following First Cycle of AlloNK + Rituximab in the Phase 1/2 B-NHL Clinical Trial

- 45 patients with B-NHL treated in Phase 1/2 clinical trial
 - 16 patients in monotherapy (MC+AlloNK) and 29 patients in combination with rituximab
- Absence of peripheral B-cells observed in all 29 patients treated with MC + AlloNK + RTX (combination)¹
 - All patients but one patient achieved non-quantifiable B-cell levels by Day 8 following start of therapy
 - The one patient achieved such levels by Day 15
- All patients with quantifiable B-cells at baseline who completed the first cycle are graphed on the right

Flu/Cy + AlloNK + RTX B-cell depletion following first cycle (combination)¹



Flu/Cy+ AlloNK without RTX (monotherapy) – potential proxy for CY/FLU only²



AlloNK has Demonstrated Lack of “Runaway” CRS and Outpatient Administration in B-NHL

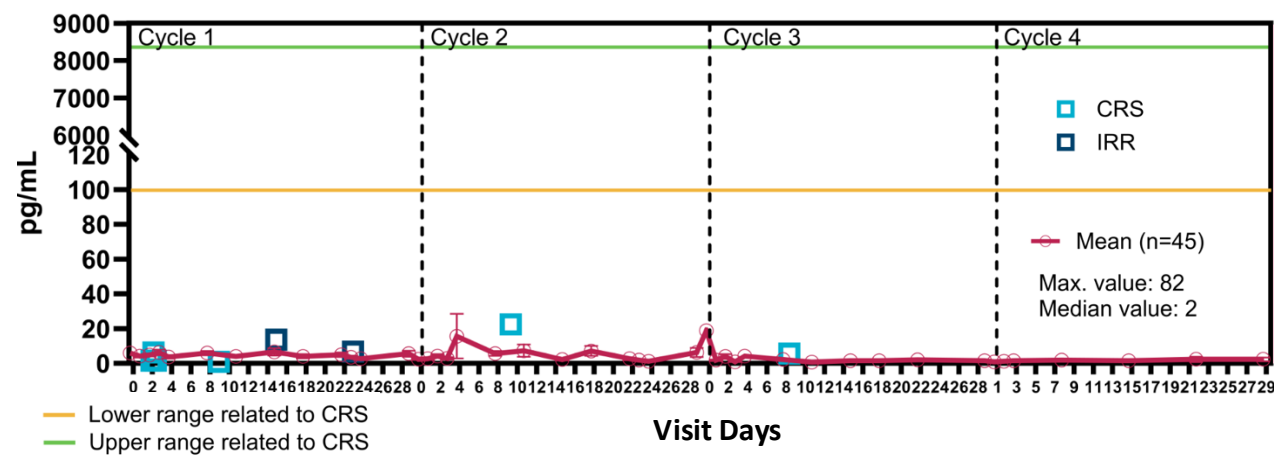
Cell Therapy Associated TEAEs

Cell Therapy associated AEs, n (%)	Overall (N=45)		Combo (N=29)	
	All	Grade ≥3	All	Grade ≥3
CRS*	4 (9)	0	2 (7)	0
ICANS	0	0	0	0
GvHD	0	0	0	0
IRR	7 (16)	3 (7)	5 (17)	3 (10)

Grade 1 reported in 3 patients and Grade 2 CRS reported in 1 patient

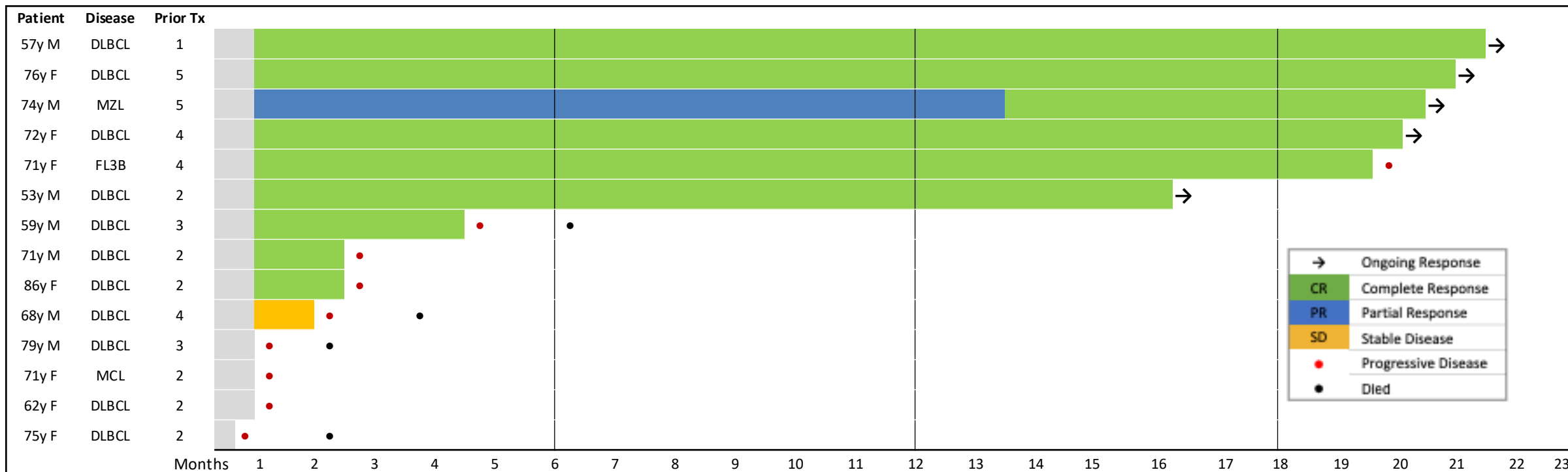
All cases were re-classified as IRRs due to onset (<24h), symptoms, event resolution and absence of cytokine increases

No Increase in IL-6 Levels Across All Treatment Cycles



IL-1, IL-6, IL-8 and TNF- α **did not show increased levels** in any patients including in patients with CRS or IRRs

High Response Rates of AlloNK in Combination with Rituximab in all Patients Naïve to prior CAR-T in Phase 1/2 B-NHL Clinical Trial; At Median Follow Up of 19.4 months Median DoR not Reached



Combo CAR-T naïve N=14

ORR	64%
Complete Response (CR)	9 (64%)
<i>CR at 12mo</i>	<i>6 (43%)</i>
Median Duration of Response (DoR, months)	Not reached (1.0, Not reached @ 19.4m follow up)
Overall Survival (months)	Not reached (1.01, Not reached) (~71% alive)

- 9 out of 14 patients naïve to prior CAR-T achieved a CR (64%)
- Median DoR is not reached at median follow up of 19.4 months



Estimated Prevalence for Select B-cell Driven Autoimmune Diseases

	United States	Europe	Combined
Rheumatoid Arthritis	1.5M	2.3M	3.8M
Multiple Sclerosis	750K	1.2M ^δ	2.0M
Sjögren's Disease	260K	580K	840K
Systemic Lupus Erythematosus (<i>Non-Lupus Nephritis</i>)	100K	115K ^δ	215K
Lupus Nephritis	100K	110K	210K
ANCA Vasculitis	100K	205K	305K
Systemic Sclerosis (<i>Scleroderma</i>)	85K	130K	215K
Myasthenia Gravis	60K	90K	150K
Myositis	45K	100K	145K
Pemphigus Vulgaris	16K	35K	51K
Total	~7.9M		

