Autolus

Developing Next Generation Programmed T Cell Therapies

July 2023

Disclaimer

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Building a fully integrated CAR T company

Expanding excellence in R&D and manufacturing to commercialization

Obe-cel met primary endpoint in pivotal study

- Lead product candidate obe-cel potentially best-in-class for relapsed/ refractory adult acute lymphoblastic leukemia (ALL)
- Pivotal phase 2 trial in ALL met primary endpoint
- Attractive profile in B-NHL indications

Pipeline

- Pipeline built on modular innovation targeting cancers with limited treatment options

Scalable manufacturing

- In house cell manufacturing for clinical trial supply
- Commercial fit-for-purpose cell manufacturing facility running through validation process
- Planned annual capacity of at least 2,000 batches to service global demand in ALL

Collaboration

- Collaboration worth $250 million with Blackstone Life Sciences, of which $220M already received, to develop obe-cel in adult ALL
- Established technology collaborations with Moderna, BMS and Cabaletta
- Opportunity for partnering of pipeline programs

Strong cash position

- Blue chip investor base with recent fundraise adding $164M gross proceeds
- Q2 2023 cash position of $307.8M
- Strong cash position to deliver on current strategy through approval of obe-cel

LEAD CLINICAL PROGRAM

Obe-cel

A standalone, potentially best-in-class CD19 CAR T cell therapy candidate

Obe-cel background – a fast-off CD19 CAR T therapy

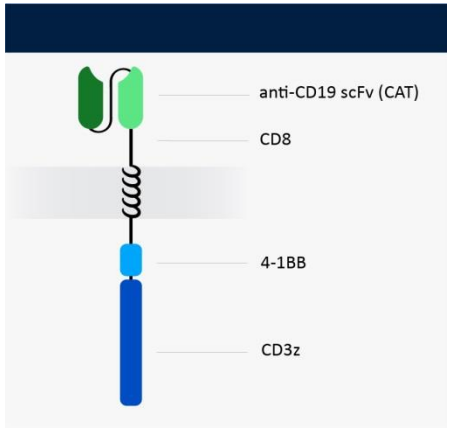
- CD19 CAR-T therapy has revolutionized the field of R/R B-ALL[1]
- Obe-cel is an autologous CD19 CAR with a fast off-rate CD19 binding domain designed to mitigate safety concerns and improve persistence[2,3]
- The clinical activity of obe-cel has been tested in R/R pediatric[2] and adult B-ALL[3], and more recently in other B-cell malignancies (NCT02935257)[4]

ASCO 2023: Results from adult patients with r/r B-ALL treated with obe-cel in the pivotal FELIX Phase II study (NCT04404660)

1 Pasvolsky O et al., Blood Adv 2023 [Epub ahead of print]; 2 Ghorashian S et al., Nat Med 2019;25(9):1408–14;
3 Roddie C et al., J Clin Oncol 2021;39(30):3352–63; 4 Roddie C et al., Blood 2022;140(Suppl 1):7452–3, ASH abstract

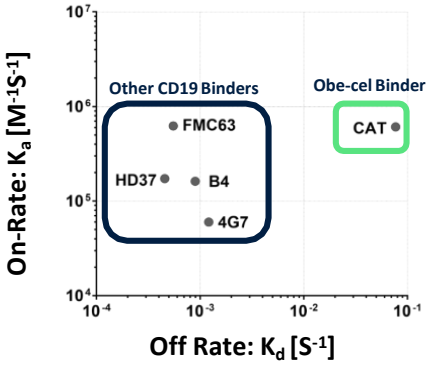
Obe-cel has a unique mechanism of action

Designed for increased activity and reduced toxicity



CD19 binder with fast off-rate

Fast off-rate



Obe-cel has a shorter half-life of interaction compared to binders used in approved products

- obe-cel = 9.8 seconds
- Kymriah® = 21 minutes

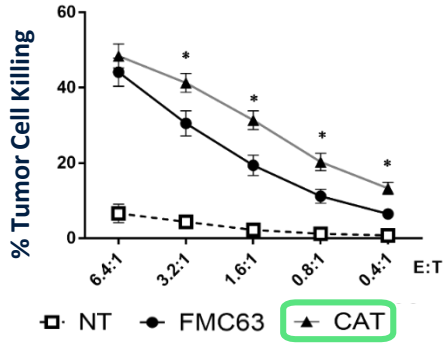
Potential for improved potency, reduced toxicity

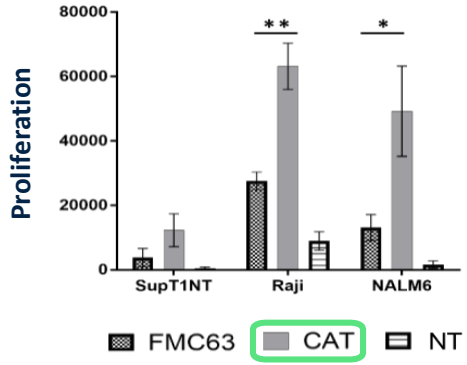
Avoided over-activation of CAR T cells
-> Reduced toxicities

Increased CAR T peak expansion
-> Improved persistence

Avoided exhaustion of CAR T cells
-> Improved engraftment
-> Improved persistence

Enhanced cytotoxicity and proliferation





Ghorashian et al. *Nature Medicine* 2019

FELIX data at ASCO and EHA 2023

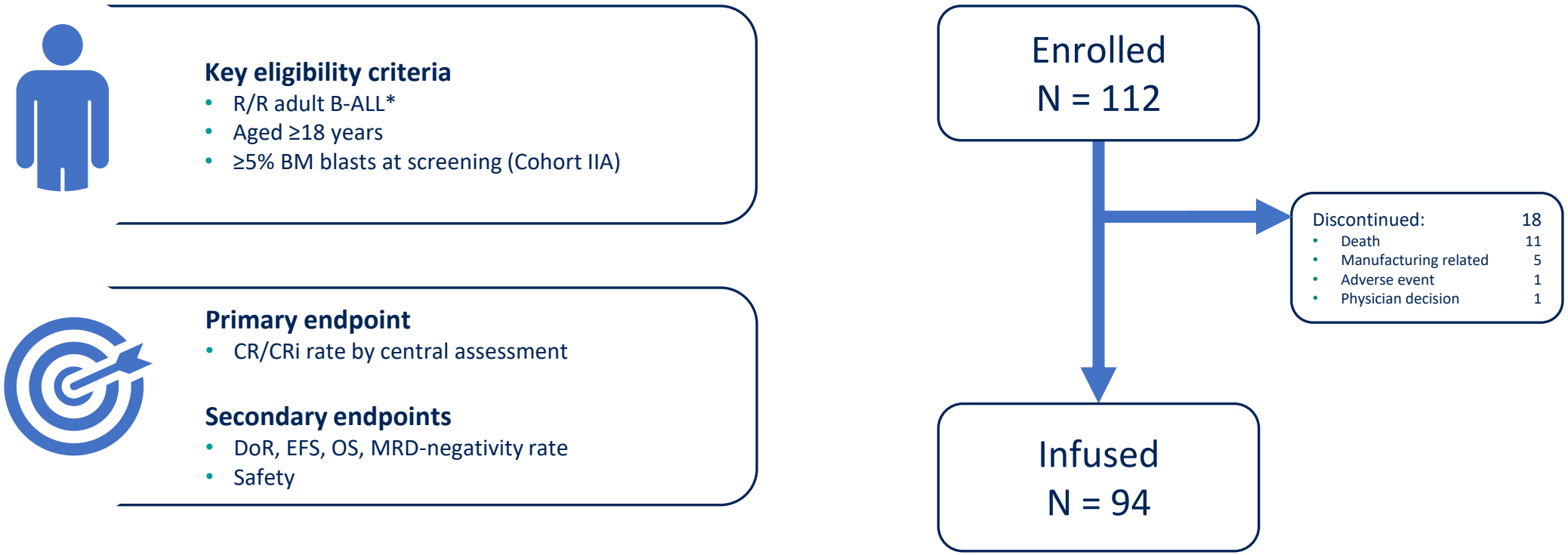
eligibility, endpoints, and disposition

84% of enrolled patients were infused with obe-cel

Key eligibility criteria
- R/R adult B-ALL*
- Aged ≥18 years
- ≥5% BM blasts at screening (Cohort IIA)

Primary endpoint
- CR/CRi rate by central assessment

Secondary endpoints
- DoR, EFS, OS, MRD-negativity rate
- Safety



Median duration of follow-up: 9.5 months (1.9–19.0)

*** R/R B-ALL: Primary refractory; First relapse if first remission ≤12 months; R/R disease after ≥2 lines of systemic therapy; R/R disease after allogeneic transplant; R/R Philadelphia chromosome-positive ALL if intolerant to/failed two lines of any TKI or one line of second-generation TKI, or if TKI therapy is contraindicated**
Enrollment: all eligibility criteria met and the leukapheresate accepted for manufacturing

Roddie et al., ASCO 2023, data cut-off date: March 16, 2023

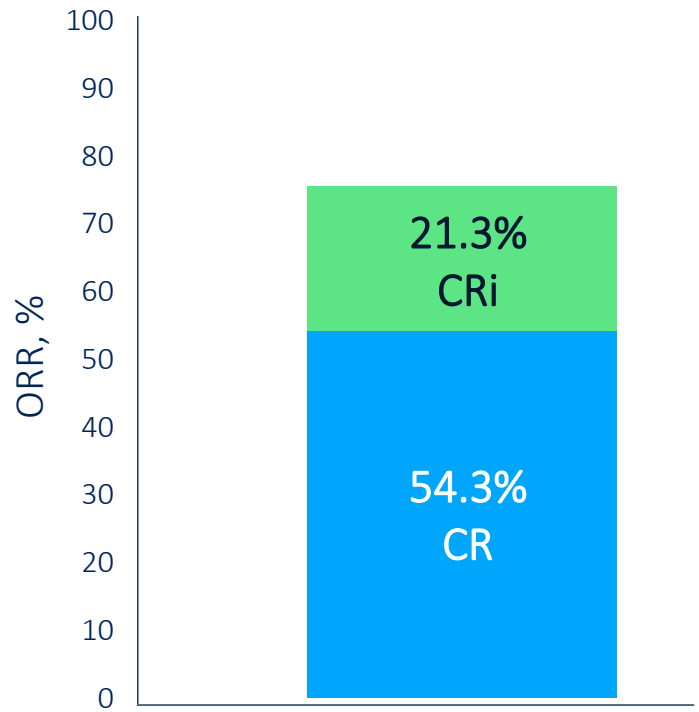
FELIX: baseline characteristics

Heavily pre-treated patients with high disease burden

	Total infused (N = 94)
Age years, median (range)	50 (20–81)
Gender male/female, n	47/47
Philadelphia chromosome-positive, n (%)	25 (26.6)
Prior therapies, median (range) ≥3 prior lines, n (%)	2 (1–6) 29 (30.9)
Refractory to last prior line of therapy, n (%)	50 (53.2)
Prior allogeneic SCT, n (%)	36 (38.3)
Prior blinatumomab, n (%) Prior inotuzumab, n (%) Prior blinatumomab and inotuzumab, n (%)	33 (35.1) 30 (31.9) 15 (16.0)
BM blasts % at screening, median (range)	49.5 (6–100)
BM blasts % at pre-conditioning, median (range)	41.1 (0–100)
Extramedullary disease at pre-conditioning, n (%)	18 (19.1)

FELIX: disease response per IRRC assessment

76% of infused patients achieved CR/CRi



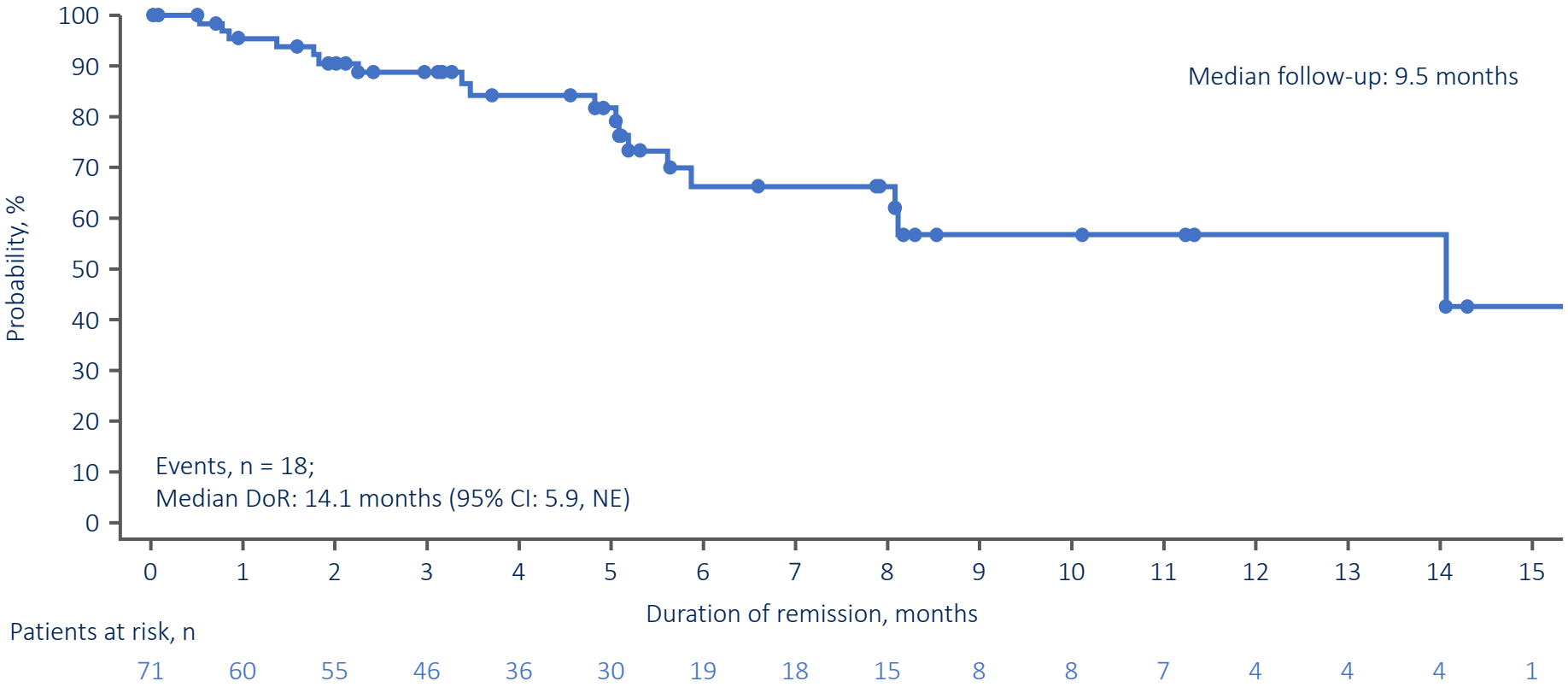
ORR: 76%
95% CI (66, 84)
p<0.0001*

97% of responders with evaluable samples were MRD negative at 10^{-4} level by flow cytometry

*One-sided p-value from the exact test on H0: ORR ≤40% vs H1: ORR >40%
CR, complete remission, CRi, CR with incomplete blood count recovery; IRRC, independent response review committee; MRD, minimal residual disease; ORR, overall remission rate

FELIX: duration of remission

61% responders in ongoing remission without subsequent anti-cancer therapies



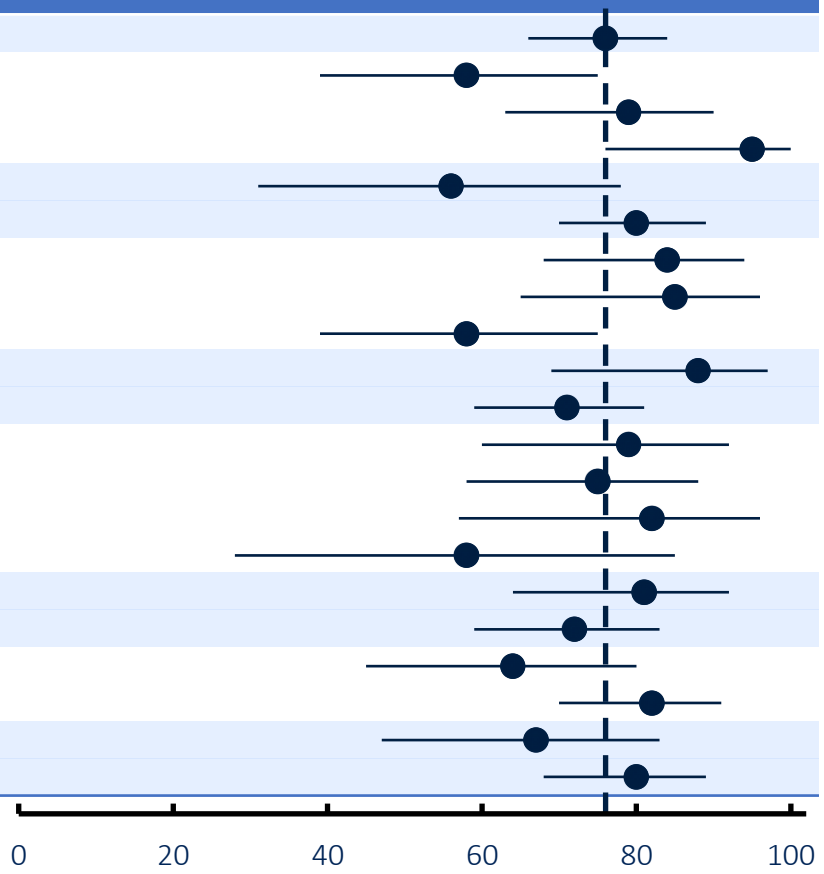
13% responders who proceeded to SCT while in remission were censored at the time of SCT

NE, not estimable

FELIX: subgroup analysis of CR/CRi (IRRC assessment)

High risk subgroups include EMD and high BM blasts at pre-conditioning

Subgroup		Total N (%)	ORR % (95% CI)
Overall		94 (100)	76 (66, 84)
Age, years	18–39	31 (33)	58 (39, 75)
	40–64	42 (45)	79 (63, 90)
	≥65	21 (22)	95 (76, 100)
EMD prior to pre-conditioning	Yes	18 (19)	56 (31, 78)
	No	76 (81)	80 (70, 89)
BM blasts % prior to pre-conditioning	≤20	37 (39)	84 (68, 94)
	>20–75	26 (28)	85 (65, 96)
	>75–100	31 (33)	58 (39, 75)
Philadelphia chromosome	Yes	25 (27)	88 (69, 97)
	No	69 (73)	71 (59, 81)
Previous lines of therapy	1	29 (31)	79 (60, 92)
	2	36 (38)	75 (58, 88)
	3	17 (18)	82 (57, 96)
	≥4	12 (13)	58 (28, 85)
Previous allogeneic SCT	Yes	36 (38)	81 (64, 92)
	No	58 (62)	72 (59, 83)
Previous blinatumomab	Yes	33 (35)	64 (45, 80)
	No	61 (65)	82 (70, 91)
Previous inotuzumab ozogamicin	Yes	30 (32)	67 (47, 83)
	No	64 (68)	80 (68, 89)



CR, complete remission; CRi, CR with incomplete blood count recovery; EMD, extramedullary disease; IRRC, independent response review committee; ORR, overall remission rate

FELIX: safety – CRS and ICANS

Low rates of Grade ≥3 CRS and/or ICANS were observed

	BM blasts ≤20% at pre-conditioning (N = 37)	BM blasts >20% at pre-conditioning (N = 57)	All infused patients (N = 94)
CRS			
Any grade, n (%)	24 (64.9)	47 (82.5)	71 (75.5)
Grade ≥3, n (%)	1 (2.7)	2 (3.5)	3 (3.2)
ICANS			
Any grade, n (%)	5 (13.5)	19 (33.3)	24 (25.5)
Grade ≥3, n (%)	1 (2.7)	6 (10.5)	7 (7.4)

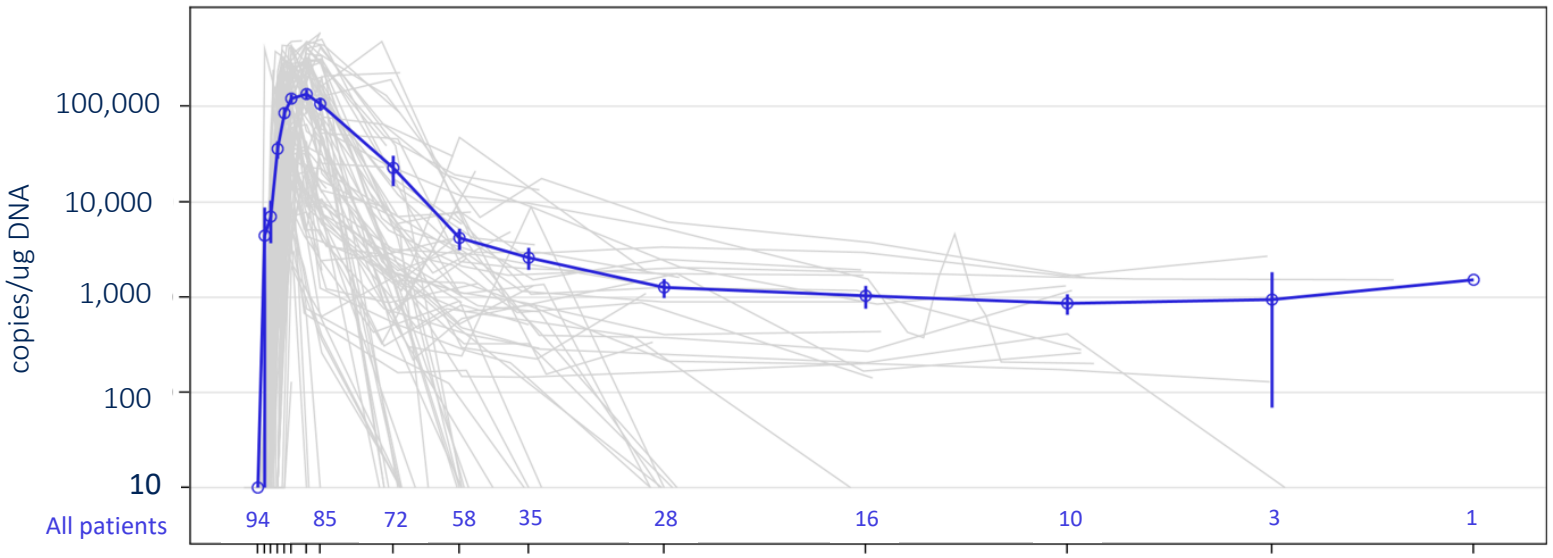
- Tocilizumab and steroid was used to treat CRS in 53/94 (56%) and 16/94 (17%) patients, respectively
- 3/94 (3%) patients required vasopressor for treatment of CRS
- 6/7 (86%) Grade ≥3 ICANS were observed among patients with >75% BM blasts at pre-conditioning

CRS, cytokine release syndrome; ICANS, immune effector cell associated neurotoxicity syndrome

FELIX: obe-cel expansion and persistence

CAR T cellular kinetics are consistent with the ALLCAR19 study[1]

Mean (SE) for CAR-T therapy by PCR in peripheral blood



	FELIX (N = 94)	ALLCAR19 (N = 20)
C_{max}, copies/ug Geo-Mean, CV%	114,982 (287.6)	127,152 (109.7)
T_{max}, days Median, range	14 (2–55)	13 (7–21)
$AUC_{0–28d}$, copies/ug×d Geo-Mean, CV%	1,139,380 (225.4)	1,251,802 (108.9)

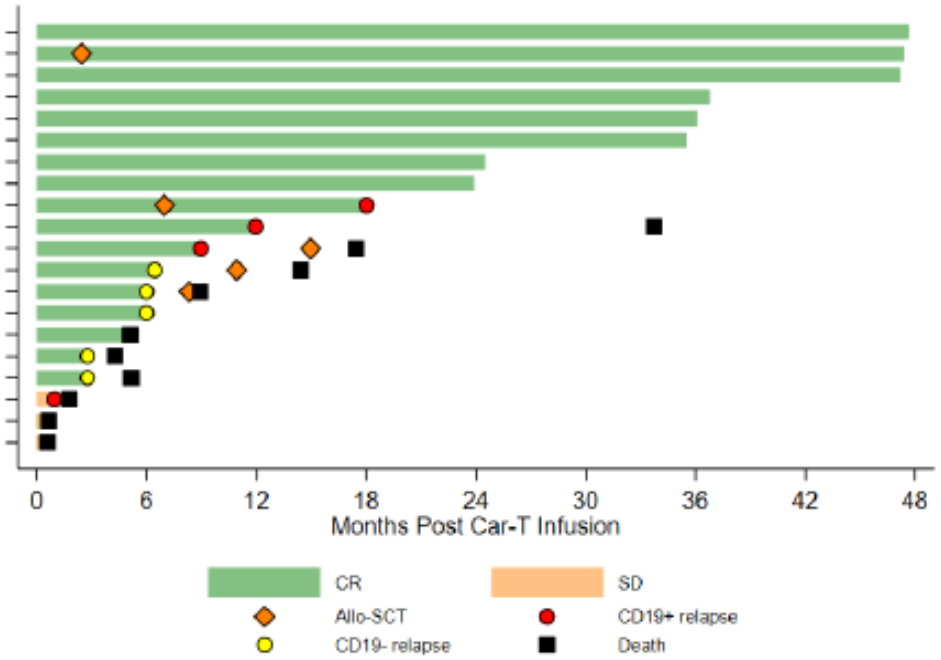
AUC, area under the curve; CV, coefficient of variation; Geo, geometric; PCR, polymerase chain reaction; SE, standard error

1. Roddie C et al., J Clin Oncol 2021;39(30):3352–63

Obe-cel - Tandem Meeting - long term follow up from Phase 1 ALLCAR19 study

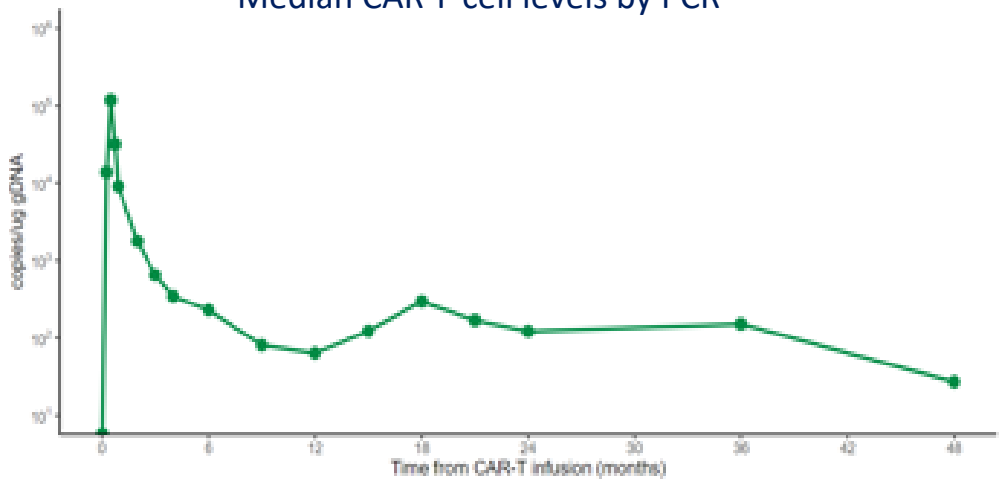
'Long-Term Follow-up of AUTO1, a Fast-Off Rate CD19 CAR, in Relapsed/Refractory B-Cell Acute Lymphoblastic Leukemia and Factors Associated with Durable Response'

ALLCAR19 Swim plot



ALLCAR19 Median persistence

Median CAR T-cell levels by PCR



- Of the 20 infused B-ALL patients, 7/20 (35%) are in ongoing CR at a median FU of 36 months (IQR 24-47) post obe-cel
- All patients with long term remissions have long term persisting CAR T cells

Roddie et al., Tandem Meeting 2023, data cut-off date: November 2, 2022

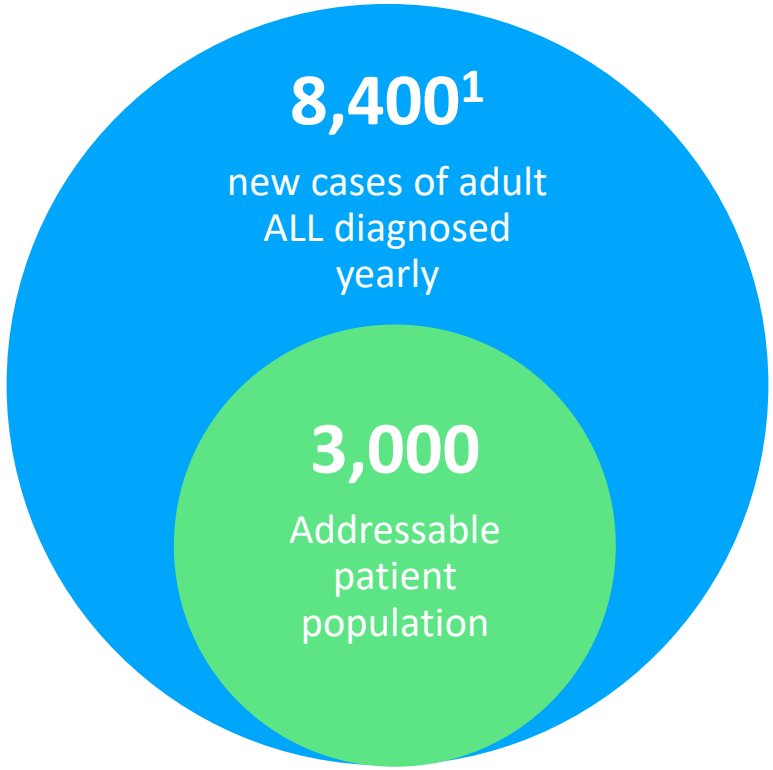
FELIX: conclusions

- Obe-cel infusion resulted in a CR/CRi rate of 76%, with 97% of responders becoming MRD negative
  - With a median of 9.5 months' follow-up, 61% of responders remain in remission
- Obe-cel infusion resulted in very low rates of Grade ≥3 CRS (3.2%) and low rates of Grade ≥3 ICANS (7.4%)
  - In total, obe-cel was evaluated in 94 patients with r/r B-ALL
  - 31% of patients had received ≥3 prior lines of therapy and 33% had >75% marrow burden at infusion
- Robust manufacturing process, with product released for 94% of leukapheresed patients and a median vein to release of 21 days
  - 84% of enrolled patients received obe-cel
- Excellent CAR T-cell engraftment with C_{max} of 114,982 copies/ug DNA and T_{max} at 14 days

Over 8,000 new cases of adult ALL annually worldwide

Successful therapy requires high level of activity and sustained persistence paired with good tolerability

- Median overall survival is < 1 year in r/r adult ALL
- Combination chemotherapy enables 90% of adult ALL patients to experience Complete Response (CR)
  - Only 30% to 40% achieve long-term remission
- Current T cell therapies for adult patients are Blincyto® and Tecartus™
  - Both therapies are highly active, but frequently followed by subsequent treatments (e.g. alloSCT)
  - Blincyto®: favourable safety profile, few patients experiencing severe CRS and ICANS, but limitations on convenience - continuous i.v. infusion during 4-week treatment cycles
  - Tecartus™: more challenging to manage - induces elevated levels of severe CRS, a high levels of severe ICANS, and requires vasopressors for many patients
- Opportunity to expand the addressable patient population in earlier lines of therapy



NOTES

1. SEER and EUCAN estimates (respectively) for US and EU

FELIX study suggests improved safety and efficacy profile vs SoC

Current standard of care for r/r adult ALL[1]

	STANDARD OF CARE		FELIX
	Blincyto®[2] (blinatumomab)	**Besponsa®[3] (inotuzumab ozogamicin)**	**Obe-cel (obecabtagene autoleucel)**
N	271	109	94
ORR	44%	81%	76% (64% on ITT)
median DoR	7.3m	4.6m	14.1m §
CRS ≥ Grade 3	26%	Not reported	3%
Neurotox any Grade	65%	NA	26%
Neurotox ≥ Grade 3	13%	NA	7%
Subsequent SCT post treatment	24%	41%	13%
Other notable observations	NA	14% Hepatic VoD	3% vasopressor use

§ Based on a median follow up of 9.5 months with a range of 1.9 to 19 months

1. Data are not from head-to-head clinical testing and should not be viewed as comparative data

2. Kantarjian et al., 2017/ USPI (product label) 3. Kantarjian et al., 2016/ USPI (product label) 4. Roddie et al. ASCO 2023
The estimates of EFS/PFS are read from the KM curves. The efficacy data for blinatumomab and inotuzumab ozogamicin data are based on the ITT population, FELIX on modified ITT

High grade ICANS are indicative of intensity of patient management

Relapsed/refractory ALL patients need therapies with high level of clinical activity and well manageable safety profile[1]

	Tecartus(R)		Obe-cel
	ZUMA-3[2]	ROCCO[3]	FELIX[4]
N (dosed)	55	76	94
N >5% tumor burden at apheresis	55	52	94
ORR	71% (55% on ITT)	91% (64 of 70) (31% CR at apheresis)	76% (64% on ITT)
median DoR	13.6m	NA	14.1m §
CRS ≥ Grade 3/4	24%	6% (5/75)	3%
Neurotox any Grade	60%	59%	26%
Neurotox ≥ Grade 3/4	25%	39%* (29/76)	7%#
Subsequent SCT post treatment	18%	14%	13%
Other notable observations	40% vasopressor use [5]	NA	3% vasopressor use

*ROCCO: 6 patients died with ICANS & infection.
§ FELIX median follow up of 9.5 months with a range of 1.9 to 19 months
# FELIX: 6 of 7 patients with ICANS ≥ G3 had more than 75% tumor burden at lymphodepletion

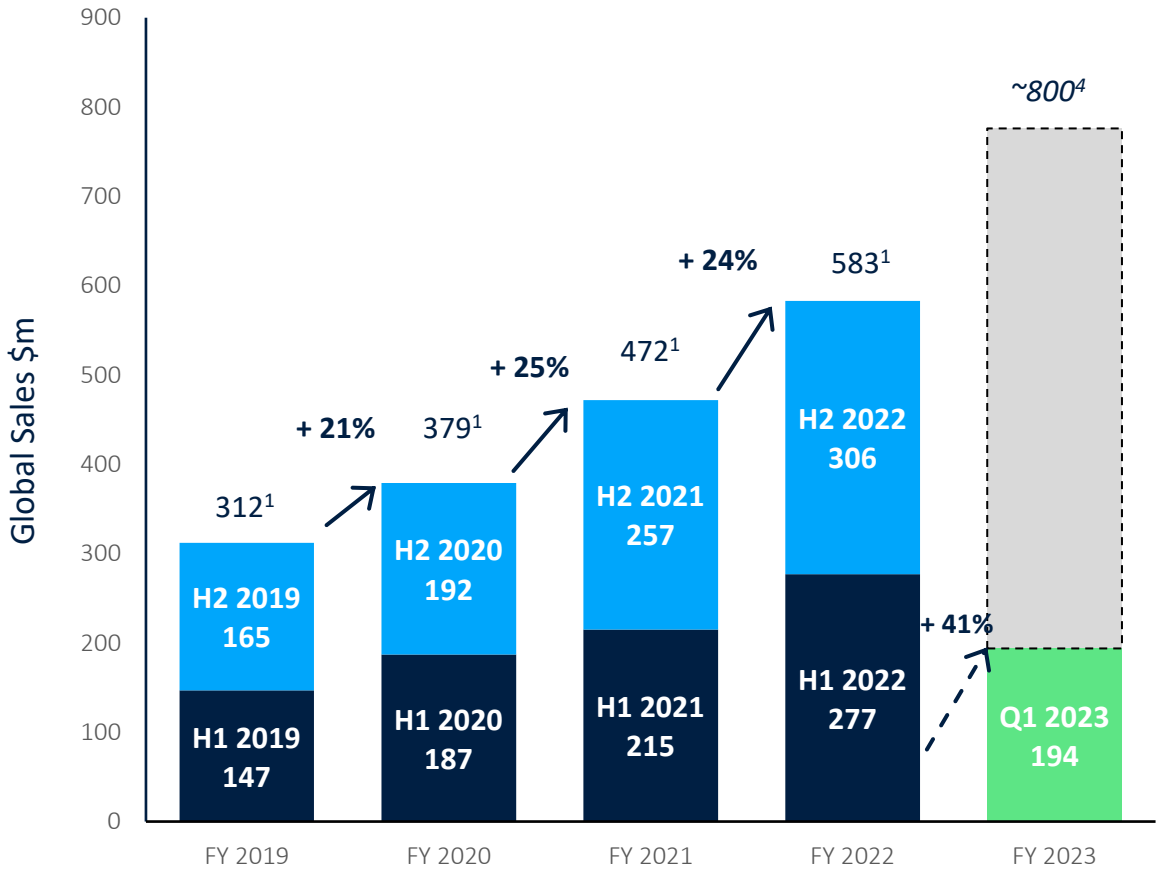
1. Data are not from head-to-head clinical testing and should not be viewed as comparative data

2. Shah et al. Lancet 2021 5. Shah et al. ASCO 2021 3. Roloff et al. ASCO 2023. 4. Roddie et al. ASCO 2023
The estimates of EFS/PFS are read from the KM curves. The efficacy data in ZUMA-3 evaluating brexucabtagene autoleucel and in FELIX for obe-cel are based on the modified ITT population

Obe-cel could launch into an expanding ALL market if approved

Blincyto®, current market leader, shows annual revenue growth of c.24% driven by well manageable safety profile

Reported Blincyto® sales[1]



- Blincyto® sales price estimated to be $207k[2] (for 2 cycles) supporting approx. >2,000 commercial adult ALL patients, growing at a rate of 24%
- Kymriah® is priced at $508k in pediatric ALL. Breyanzi® is priced at $447k in DLBCL[3]. Tecartus™ is priced at $424k[3] for adult ALL
- Breyanzi® and other CAR T cell therapies are expanding delivery center footprint
- Tecartus™ is expected to establish CAR T use in adult ALL
- If approved, obe-cel has the potential to be best-in-class curative therapy and expanding use beyond academic transplant centers

NOTES

1. As per Amgen quarterly SEC filings
2. https://www.cms.gov/medicare/medicare-part-b-drug-average-sales-price/2022-asp-drug-pricing-files
3. Red Book pricing database https://www.ibm.com/products/micromedex-red-book/pricing
4. Autolus crude extrapolation from Q1 2023, based on sustaining $194m for Q2, Q3, Q4 2023

Obe-cel next steps to commercialization

Preparing for launch in 2024

Data and path to approval

- Filing of Biologics License Application (BLA) to U.S. Food and Drug Administration (FDA) expected for end of 2023
- Filings of EU and UK marketing authorization applications planned for H1 2024
- Program has RMAT, PRIME and ILAP and ODD designations

Manufacturing

- Complete full characterization of Nucleus facility
- GMP license from MHRA planned for 2H 2023
- Facility has initial capacity to produce up to 2,000 batches PA; sufficient for global demand in ALL

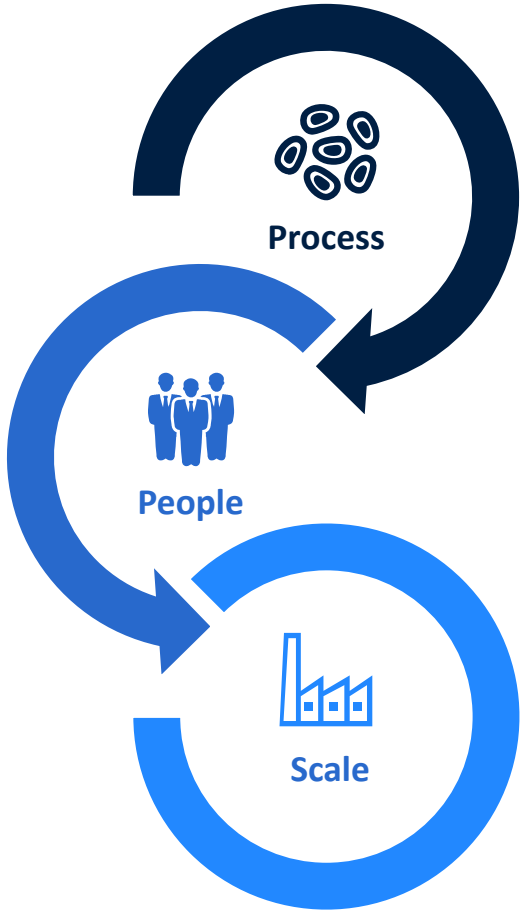
Commercialization

- Focus in 2023 on Medical affairs, value and HEOR evidence generation and center onboarding
- Focus in 2024 on launch preparation and execution

Product supply

Critical success factors for a personalized cell therapy

Reliable and timely delivery of every batch with consistent quality is critical for each patient



- Process
  - Consistent manufacturing process performance over a wide range of patient cell material
  - Consistently short turnaround time
  - A semiautomated production platform enabling product consistency and economies of scale
- People
  - Leadership to drive outcome
  - Highly trained and motivated work force - training center and program implemented
  - Culture of continuous improvement - continuing operational excellence program
- Scale of operation
  - Capacity to match demand
  - Right sized and scalable capacity to realize attractive COGS

Supply of FELIX study pressure tested all aspects of product delivery

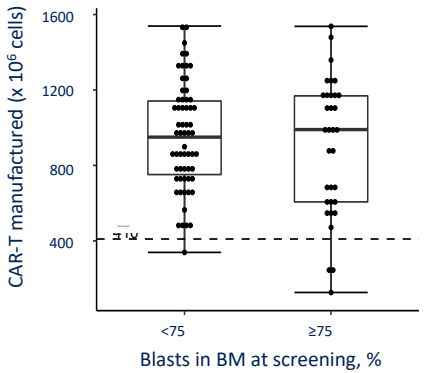
New approach to manufacturing – requires new thinking to be successful

- Semi-automated manufacturing process optimized to manage wide range of apheresis materials
- Efficient and precise in process controls and release analytics
- Training center in place enabling the build and maintenance of the operating workforce
- 2 shifts / 7 days per week commercial manufacturing operations implemented
- Operational excellence program in place driving ongoing optimization of manufacturing operations and COGS
- Transatlantic logistics operated for 24 US clinics during COVID restrictions (flights as low as 5% of pre-pandemic levels)

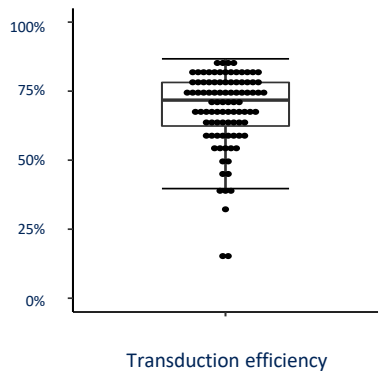
CliniMACS **Prodigy®**

Miltenyi Biotec

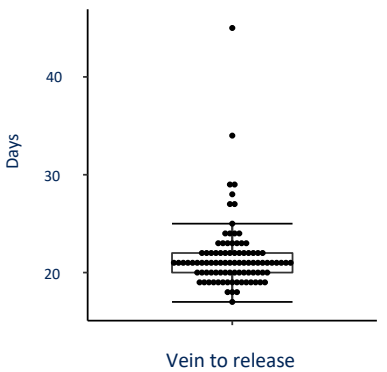
96% of products reached target dose



Median transduction efficiency of **72%**



Median **21 days** from vein to release

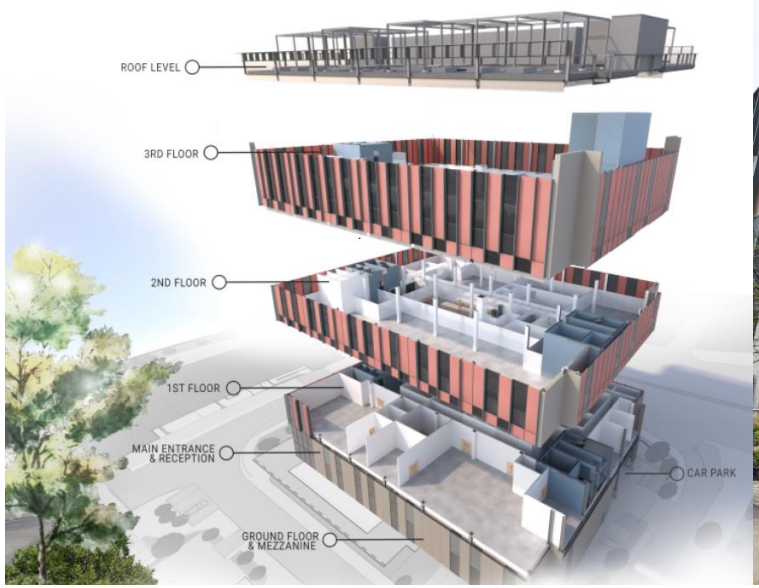


Roddie et al., ASCO 2023, data cut-off date: March 16, 2023

The Nucleus

State of the art design and operations established – validation on track

Design



- ~70,000 sq ft facility
- Modular build using PAMs
- 70% built off-site
- 60% Reduced build time

Build

- Nov 8, 2021 ground breaking
- Nov 25, 2022 first clean room in operation

Operations

- Dec 14, 2022 first Prodigy operational
- May 2023 capacity challenge
- Designed for 2,000+ batches per year
- Target vein to delivery time 16 days at launch

Building the obe-cel opportunity

Deep value program with potentially broad applicability

The obe-cel product family and franchise opportunity

Obe-cel
CD19

- Optimal CD19 CAR design
- Potential best-in-class efficacy and safety profile
- Supported by state-of-the-art manufacturing
- Supported by mature FELIX clinical/CMC package

→ B-ALL and B-NHL
→ B-cell mediated autoimmune disease

AUTO1/22
CD19/CD22

- Dual CD19 & CD22 Targeting
- Designed to prevent antigen negative escape
- Supported by Phase 1 data in pediatric B-ALL

→ B-ALL and B-NHL

AUTO8
CD19/BCMA

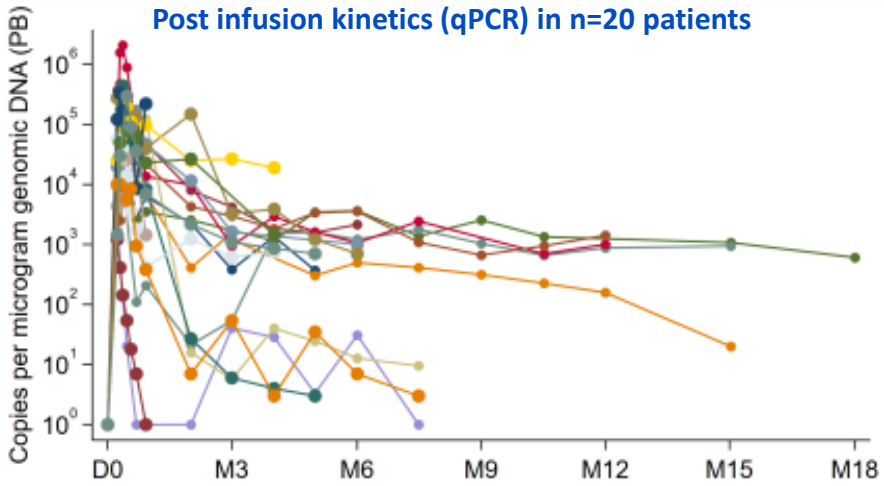
- Dual CD19 & BCMA Targeting
- Designed to induce deep and durable responses
- Phase 1 data expected end 2023

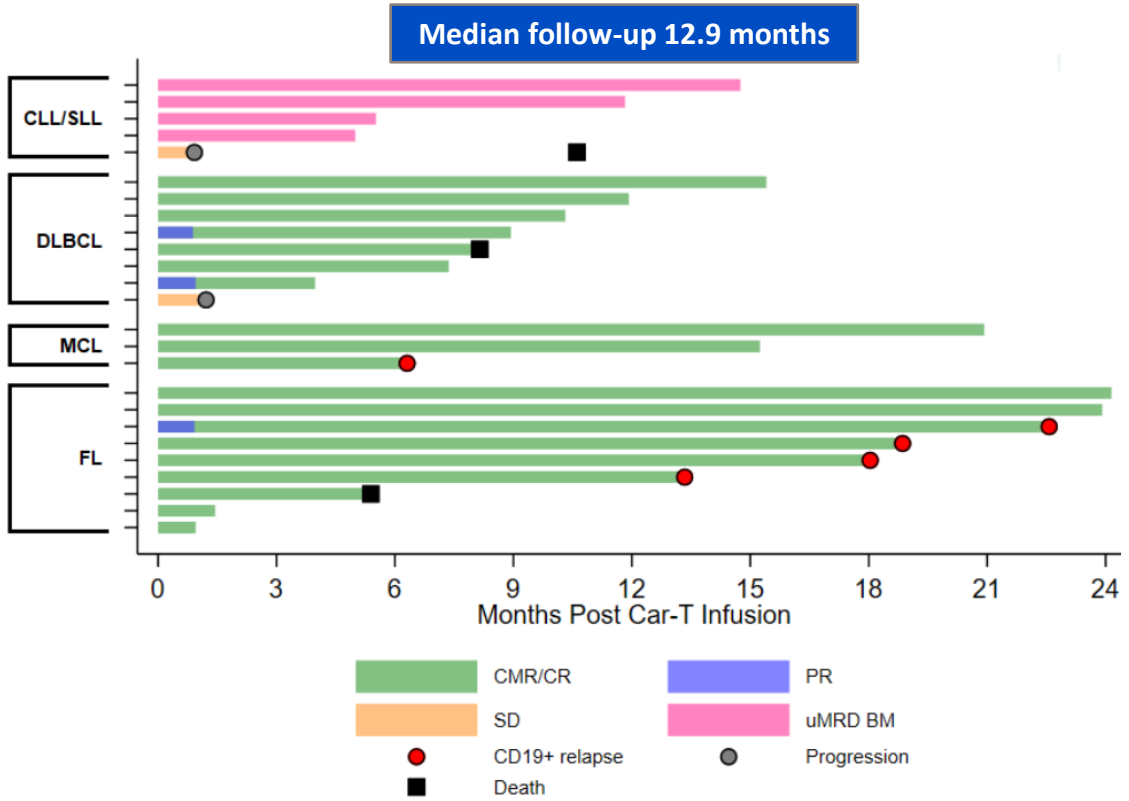
→ Multiple Myeloma
→ B-cell and plasma cell mediated autoimmune

Obe-cel in B-NHL/CLL: High level clinical activity with durable outcomes

Long term persistence driving durable outcomes

ALLCAR19 – B-NHL and CLL	
N	25
ORR	
All patients	92%
Follicular Lymphoma	100%
Mantle Cell Lymphoma	100%
DLBCL	88%
CLL/SLL	80%





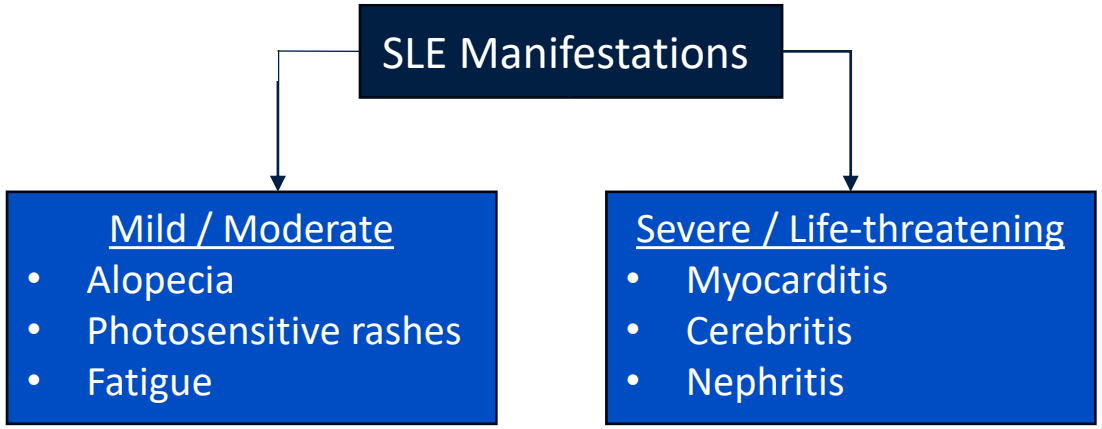
- No ≥ grade 3 CRS and ICANS reported
- 2 deaths in remission from COVID19; 1 death from PD

Roddie et al., ASH 2022, data cut-off date: November 2, 2022

Obe-cel: expanding into B-cell mediated autoimmune disease

Systemic Lupus Erythematosus (SLE)

- SLE is a multi-organ systemic autoimmune disease that affects approximately 160K - 320K patients in the US[1]
- Characterised by activation of autoreactive B-cells, production of autoantibodies and immune complex formation causing tissue injury and organ damage



Rationale for obe-cel in SLE

- High unmet need remains, with the efficacy of B-cell depleting mAbs limited due to persistence of autoreactive B-cells in lymphatic organs and inflamed tissues
- Proof-of concept data published by the Erlangen Group[2] showed a transformational treatment effect of CD19 CAR T-cell therapy in patients with severe SLE with a very well tolerated safety profile
- With the improved profile of obe-cel we expect we will be well positioned in the treatment of severe SLE

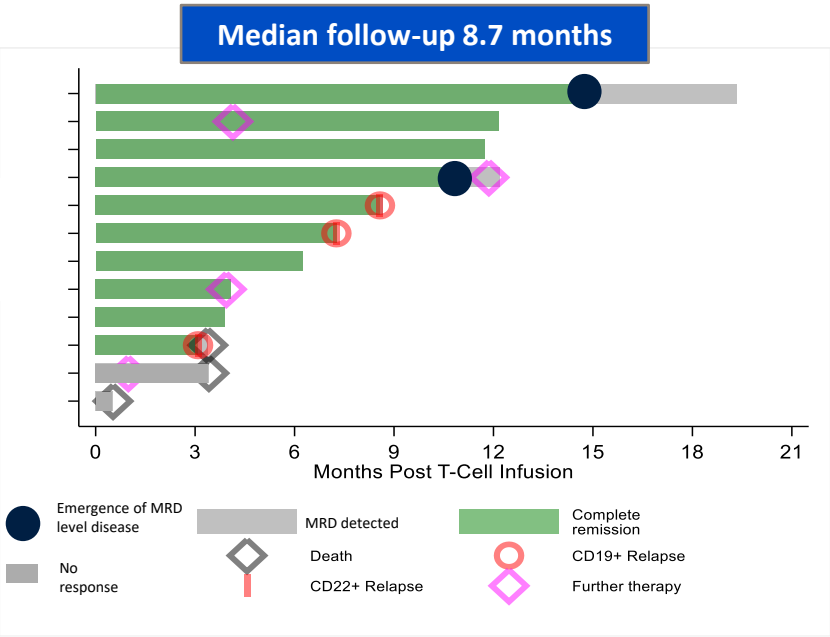
Autolus to conduct a Phase 1 study in patients with severe, refractory SLE with first patient visit planned in early 2024

1. Helmick et al., *Arthritis Rheum.* 2008, 2. Mackensen et al., *Nat Med.* 2022

AUTO1/22 in pediatric ALL

No antigen negative relapse seen in responding patients

CARPALL Disease Response (n=12)	
Molecular MRD neg CR/Cri by d30	10 (83%)
Disease progression	2
Relapse	
Antigen negative relapse	0
CD19+/CD22+ relapse	5



- Favourable tolerability profile with no severe CRS
- Excellent CAR T expansion and very encouraging activity:
  - 83% MRD negative CR/CRi
  - Despite high-risk pts (4 Kymriah failures, 3 CD19neg disease, 3 non-CNS extramedullary disease)
- 2 of 3 patients who had CD19neg disease achieved CR/CRi demonstrating the efficacy of the CD22 CAR
- 1 year EFS 60% despite the high-risk patient cohort
- At median FU 8.7 months, no cases of leukemic relapse or emergence of MRD related to antigen escape

Ghorashian et al., EBMT Annual Meeting 2023

AUTO8: combining a sensitive BCMA CAR with the CD19 CAR from obe-cel

Designed to induce deep and durable responses

BCMA CAR

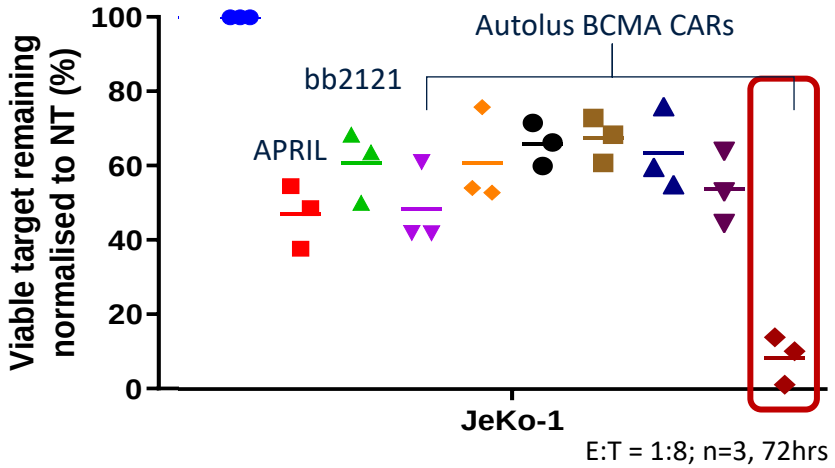
Novel format CAR designed to be highly sensitive to low BCMA density found on malignant plasma cells

CD19 CAR

Coupled to obe-cel to drive persistence and long-term durability of response, and to deplete CD19+ myeloma stem cell

AUTO8

Screening for high sensitivity BCMA binders



E:T = 1:8; n=3, 72hrs

Phase 1 Design

Cohort 1: BCMA CAR — 50MM — 150MM

Cohort 2: BCMA CAR + CD19CAR — 50MM — 150MM

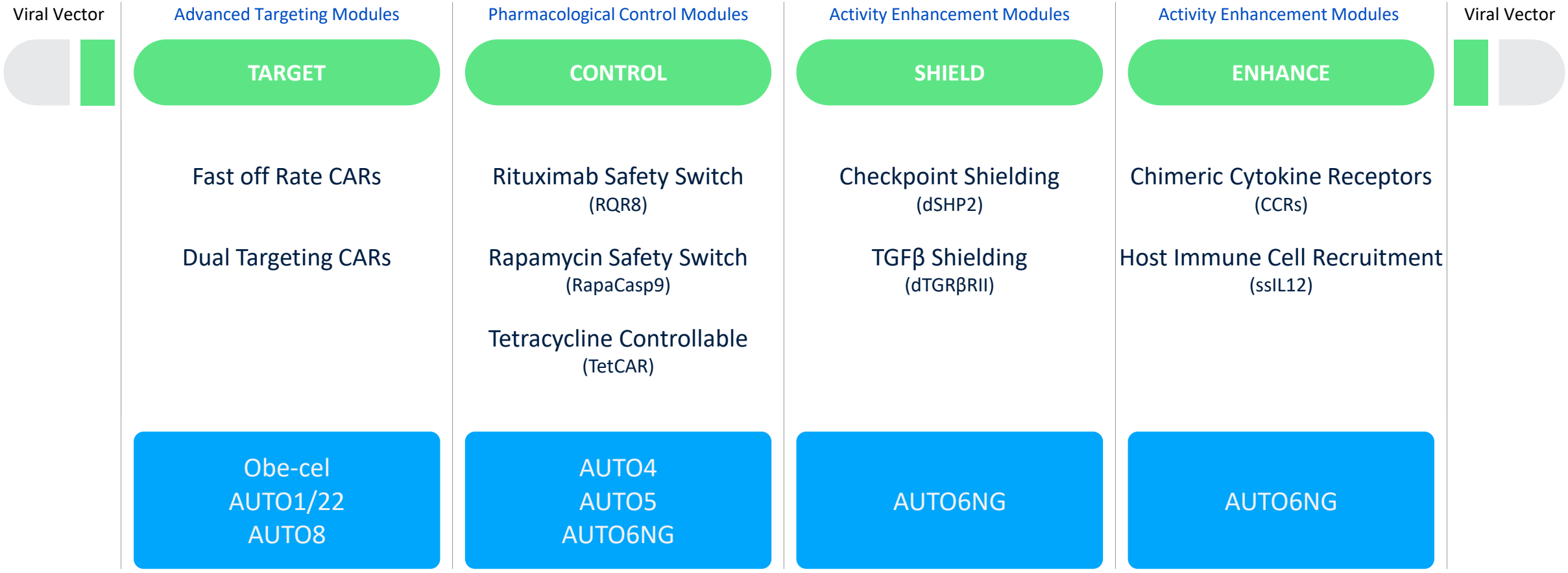
Phase 1 study currently enrolling patients with first data expected end 2023

Other Pipeline Programs

A broad portfolio of potential next generation modular T cell therapies

A broad toolkit which is core to our strategy of modular innovation

Advanced T cell programming



Leveraging our industry leading technology platform via partnerships

Technology partnerships

- Leveraging our modular programming technology to generate safer and more effective therapies
- Tumor targeting, pharmacological control and activity enhancement for cellular therapies
- Validating collaborations with leading pharma and biotech companies
- Potential for value creation through near term option exercise fees, milestone payments and royalties from net sales

- Moderna Tx
  - Access to propriety binders for the development of mRNA-based therapeutics for the treatment of cancer
- Bristol Myers Squibb
  - Access to the RQR8 safety switch for selected cell therapy programs for the treatment of cancer
- Cabaletta Bio
  - Access to the RQR8 safety switch for selected cell therapy programs for the treatment of autoimmune diseases

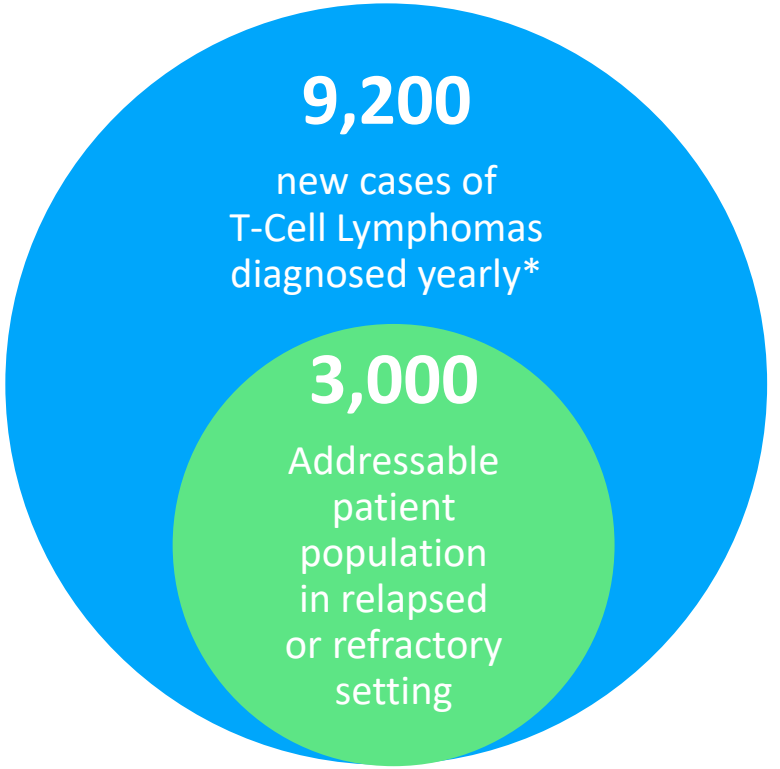
Autolus pipeline

PRODUCT	INDICATION	TARGET	STUDY NAME	COLLABORATION	PHASE	UPCOMING CATALYST
Obe-cel	Adult B-ALL	CD19	FELIX		Pivotal	Q4 2023: FELIX data updates Q4 2023: BLA filing with FDA
Obe-cel	Systemic Lupus Erythematosus	CD19	TBD		Preclinical	Q1 2024: Phase 1 initiation
Obe-cel	B-NHL and CLL	CD19	ALLCAR19	UCL	Phase 1	Data in peer reviewed journal
Obe-cel	PCNSL	CD19	CAROUSEL	UCL	Phase 1	Data in peer reviewed journal
Allogeneic obe-cel	B-Cell malignancies	CD19	KCAT19	UCL	Phase 1	-
AUTO1/22	Pediatric ALL	CD19 & CD22	CARPALL	UCL	Phase1	Data in peer reviewed journal
AUTO4	TRBC1+ Peripheral TCL	TRBC1	LibrA T1		Phase 1	Data in peer reviewed journal
AUTO5	TRBC2+ Peripheral TCL	TRBC2	-		Preclinical	-
AUTO6 NG	Neuroblastoma	GD2	MAGNETO	UCL	CTA submitted	Q4 2023: Phase 1 initiation
AUTO8	Multiple Myeloma	BCMA & CD19	MCARTY	UCL	Phase 1	Q4 2023: First clinical data
AUTO9	Acute Myeloid Leukemia	CD33, CD123 & CLL1	TBD	UCL	Preclinical	-

AUTO4 and AUTO5 for Peripheral T-Cell Lymphoma

T-Cell Lymphoma is an aggressive disease with a very poor prognosis

- A large portion of T-Cell Lymphoma patients are refractory/relapse following first-line treatment (68%)[1]
- Standard of care is variable and often based on high-dose chemotherapy and stem cell transplants:
  - Median 5 yrs OS: 32%[2]
- Relapsed/refractory patients have a worse prognosis
  - Median PFS approximately 3 months/ Median OS < 6 months[1,3]
- Brentuximab survival benefit restricted to CD30 positive ALCL subtype[4]
  - approx. 12% of total PTCL patient population[4,5]
- T cell lymphoma has not benefited from advances in immunotherapy
  - Pan T-cell depletion highly toxic; few/no tumor-specific antigen targets



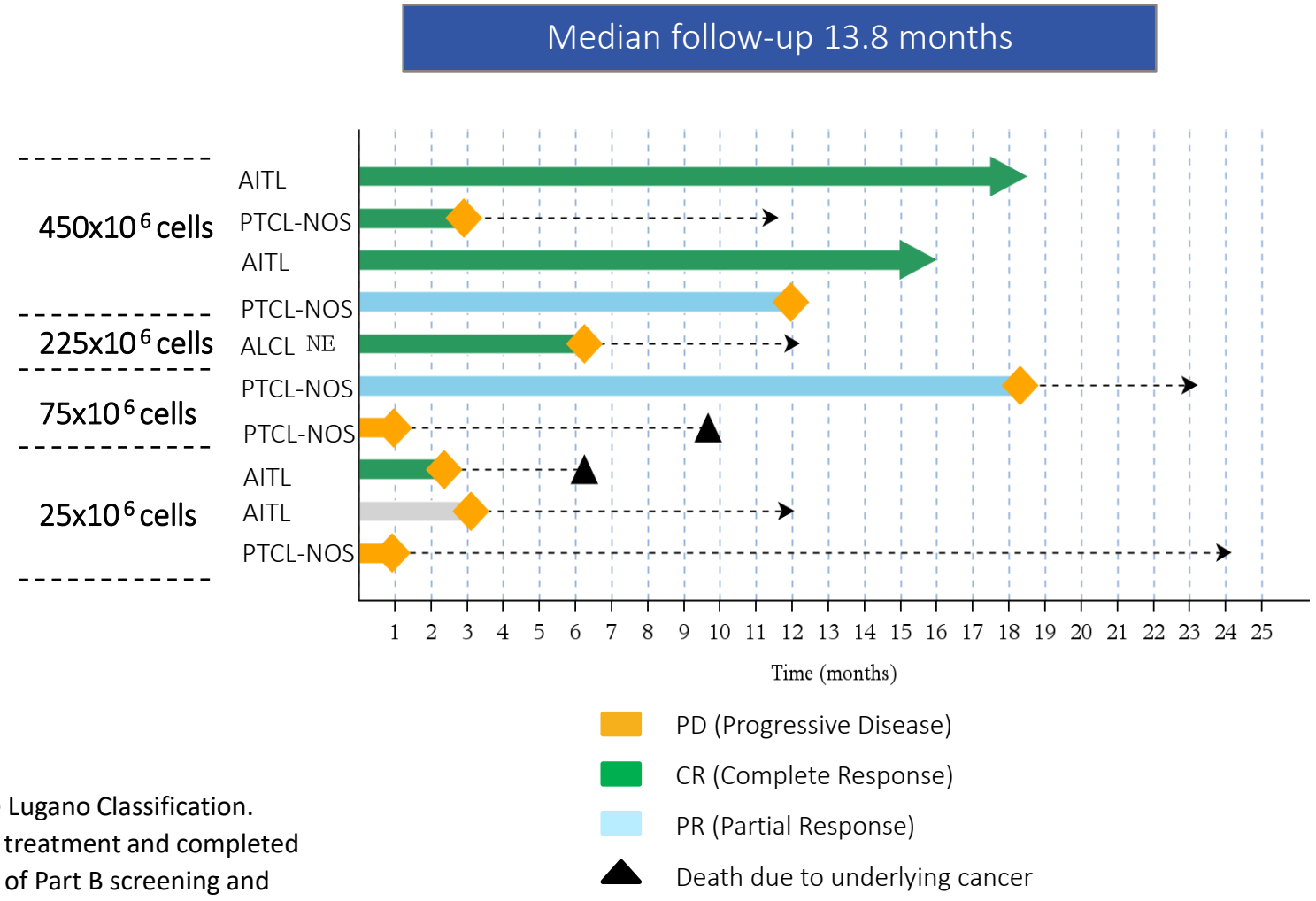
*Japan, US and EU5 (2020 DRG Epidemiology Data)

[1]Bellei M et al, Haematologica 2018, [2] Weisenburger et al., Blood 2011; [3]Mak et al, JCO 2013;, [4]Horwitz et al, Lancet, 2019, [5]Vose et al., JCO 2008

AUTO4 for Peripheral T-Cell Lymphoma: ICML 2023

Process A

- At the highest dose (450x10^6) 4 out of 4 patients achieved a response (Process A)
- On-going complete metabolic responses in 2 out of 4 patients at 15 and 18-months post-dosing
- Presence of CAR T-cells in the lymph nodes of patients suggest fast homing of CAR T-cells to the tumor site, despite absence in the blood
- AUTO4 treatment was well tolerated with no dose-limiting toxicities



Efficacy assessments were performed by the Investigators according to the Lugano Classification. Evaluable Set consists of patients who have received an infusion of AUTO4 treatment and completed the Day 28 evaluation. All patients had relapsed/refractory disease at time of Part B screening and enrolment

NE=not evaluable. Patient achieved CMR post bridging

Cwynarski et al IMCL 2023, data cut-off date: April 28, 2023

Strong cash position with key financing partner

Strong cash position to deliver on current strategy into 2025

$307.8m
Cash at June 30, 2023

Autolus is funded into 2025

- *BLA filing with FDA end of 2023*
- *MAA filings with EMA and MHRA in 1H 2024*
- *Expected initial approvals in 2024/2025*

Q4 2022 Cash inflows

$164m
December public offering

$19.3m
R&D tax credits from HMRC

$70m
Obe-cel program progress triggered $70M in milestones

Blackstone collaboration

- *$100m in equity 2021*
- *$120m of $150m in project financing*
- *$30m milestone remaining*

Summary

Autolus planned news flow

Obe-cel

- FELIX data update expected at ASH 2023
- Biologics License Application (BLA) to FDA by end of 2023
- Longer term follow up data planned for medical conferences in H1 2024

Pipeline

- Update on AUTO8 planned for 2023
- Multiple academic clinical studies ongoing expected to generate additional news flow in 2024
- Opportunity for news flow related to collaborations and technology licensing

Manufacturing

- Commencement of GMP operations in H2 2023

The Autolus opportunity

Building a fully integrated CAR T company - Expanding excellence in R&D and manufacturing to commercialization

- Deliver on obe-cel opportunity in oncology
  - Potential best in class product candidate
  - Met ORR primary endpoint in adult patients with r/r ALL; low rates of Grade ≥3 CRS and/or ICANS
  - Planned BLA filing end of 2023
  - Additional opportunity in B-NHL indications
- Expand obe-cel into B-cell mediated autoimmune diseases
  - Initiate first clinical study in systemic lupus erythematosus (SLE)
- Early pipeline with potential broad applicability in cancers with limited treatment options
  - Strong ongoing collaboration with UCL exploring multiple tumor types

- Established CAR T process development and manufacturing expertise. Reliable delivery and consistent quality of clinical product during FELIX trial
- New commercial manufacturing facility qualification and validation activities on schedule. Planned capacity to serve global demand in ALL (2000+ batches per year)
- Strong technology foundation, validating collaborations with leading pharma and biotech companies – BMS, Moderna and Cabaletta Bio
- Strong cash position with $307.8m (June 30, 2023)

Autolus

Thank you