Autolus

# Developing Next Generation Programmed T Cell Therapies

November 2025

For Investor communication only. Not for use in product promotion.

Autolus.com

# Disclaimer

These slides contain forward-looking statements within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that are not historical facts, and in some cases can be identified by terms such as “may,” “will,” “could,” “expects,” “plans,” “anticipates,” and “believes.” These statements include, but are not limited to: statements regarding Autolus’ development and commercialization of its product candidates; Autolus' manufacturing, sales and marketing plans for AUCATZYL, including expectations regarding the commercial launch in the United States and the ability to reach patients in a timely manner; the amount and timing of milestone payments under Autolus' collaboration and license agreements;  and future development plans of obe-cel, including the timing or likelihood of expansion into additional markets or geographies and related regulatory approvals. Any forward-looking statements are based on management’s current views and assumptions and involve risks and uncertainties that could cause actual results, performance, or events to differ materially from those expressed or implied in such statements. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, which include, without limitation: Autolus' ability to maintain regulatory approval of AUCATZYL; its ability to execute its commercialization strategy for AUCATZYL; its ability to develop, manufacture and commercialize its other product candidates and the timing or likelihood of expansion of AUCATZYL into additional markets or geographies; Autolus' ability to establish and expand a commercial infrastructure and to successfully launch, market and sell AUCATZYL; actions of regulatory agencies, which may affect the initiation, timing and progress of clinical trials or future regulatory approval; the labelling for AUCATZYL/obe-cel in any future indication or patient population, if approved; the potential for payors to delay, limit or deny coverage for AUCATZYL; Autolus' ability to obtain, maintain and enforce intellectual property protection for AUCATZYL or any product candidates it is developing; the results of clinical trials are not always being predictive of future results; the cost, timing and results of clinical trials; that many product candidates do not become approved drugs on a timely or cost effective basis or at all; the ability to enroll patients in clinical trials; and possible safety and efficacy concerns. For a discussion of other risks and uncertainties, and other important factors, any of which could cause Autolus’ actual results to differ from those contained in the forward-looking statements, see the section titled “Risk Factors” in Autolus' Annual Report on Form 10-K filed with the Securities and Exchange Commission, or the SEC, on March 20, 2025, as well as discussions of potential risks, uncertainties, and other important factors in Autolus’ subsequent filings with the Securities and Exchange Commission. All information in this presentation is as of the date of the presentation, and Autolus undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events, or otherwise, except as required by law. You should, therefore, not rely on these forward-looking statements as representing the Company’s views as of any date subsequent to the date of this presentation.

# Autolus is positioned for value creation

## Obe-cel product franchise supports multiple growth opportunities

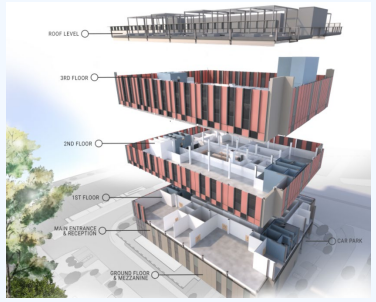
- Highly active, fast off-rate CD19 CAR T therapy with well managed safety profile
- Approved in US, UK* and EU†
- Target of 60 US centers achieved
- Developing early-stage pipeline of novel CAR-T therapies

| Product | Indication | Target | Preclinical | Phase 1 | Phase 2/Pivotal | Approved |
|---|---|---|---|---|---|---|
| AUCATZYL® | Adult ALL | CD19 | | | | |
| obe-cel | Pediatric ALL | CD19 | | | | |
| obe-cel | Lupus Nephritis | CD19 | | | | |
| obe-cel | Progressive Multiple Sclerosis | CD19 | | | | |

## Commercial execution and market expansion supported by:

### In-house, purpose-built manufacturing facility

**Design**



**Build**

**Operations**

### Strategic collaborations and strong cash position

**$367.4‡**
as of September 30, 2025

BIONTECH moderna Bristol Myers Squibb

*Conditional marketing authorization, †European Commission (EC) conditional approval, ‡Cash, cash equivalents and marketable securities

# Building value with obe-cel


**Strong execution in r/r B-ALL:**

- ✓ Market leadership
- ✓ Broad market access / coverage
- ✓ Reliable product delivery
- ✓ Significant opportunity to grow CAR T market in adult B-ALL
- ✓ Physician interest in ISTs in 1L ALL

**Leveraging investments:**

- Evolution of team to support next phase of commercial growth
- Business process efficiencies targeting margin improvement

**Potential “pipeline in a product" new indications:**

- Pediatric ALL – Potential pivotal study
- Lupus nephritis – Potential pivotal study
- Multiple sclerosis – Phase 1 study

**Drive market share in ALL – Improve margins – Expand beyond ALL**

AUTOLUS' FIRST APPROVED PRODUCT

# AUCATZYL®

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

# AUCATZYL® now approved in US, UK and EU

AUCATZYL indicated for the treatment of adults with relapsed or refractory B-cell precursor acute lymphoblastic leukemia (B-ALL)

- Highly active, fast off-rate CD19 CAR T therapy with a well managed safety profile
- First FDA-approved CAR T therapy without a REMS obligation – building on a substantial safety data base
- First and currently only approved CAR T therapy with customized, tumor-burden guided dosing
- Established infrastructure for manufacturing and commercialization
- Commercial presence in key US centers – target of 60 centers achieved ahead of plan
- Recently approved in UK* and EU†; pricing and reimbursement evaluation ongoing on a country-by-country basis

AUCATZYL®
obecabtagene autoleucel
suspension for IV infusion

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Obecabtagene Autoleucel in Adults with B-Cell Acute Lymphoblastic Leukemia

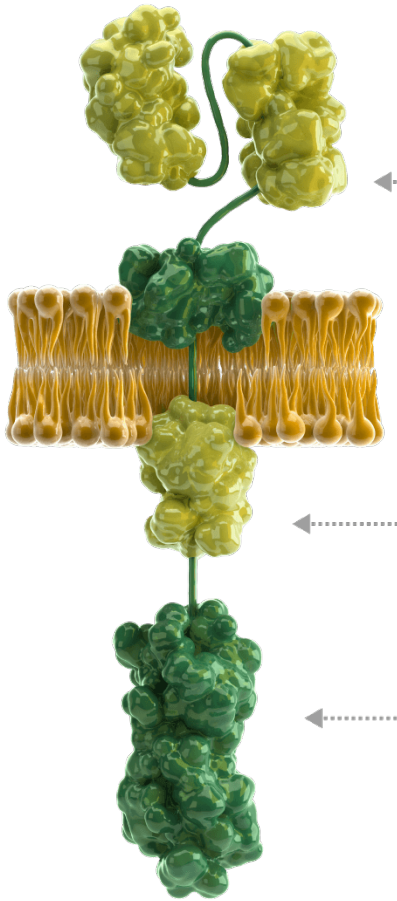
Roddie C, et al "Obecabtagene autoleucel in B-cell acute lymphoblastic leukemia" N Engl J Med 2024; DOI: 10.1056/NEJMoa2406526; *Conditional marketing authorization, †European Commission (EC) conditional approval

# Safety Information

- The safety of AUCATZYL includes a boxed warning for CRS, neurologic toxicities, and secondary hematological malignancies. ICANS, including fatal or life-threatening reactions, occurred in patients receiving AUCATZYL. T-cell malignancies have occurred following treatment of hematologic malignancies with BCMA- and CD19-directed genetically modified autologous T-cell immunotherapies.
- In the FELIX trial, severe, including life-threatening and fatal infections occurred in patients after AUCATZYL infusion. The non-COVID-19 infections of all grades occurred in 67% (67/100) of patients. Grade 3 or higher non-COVID-19 infections occurred in 41% (41/100) of patients.
- Please see full Prescribing Information, including **BOXED WARNING** and Medication Guide.

# We believe AUCATZYL® has a unique mechanism of action

## Clinical data show increased activity and reduced toxicity



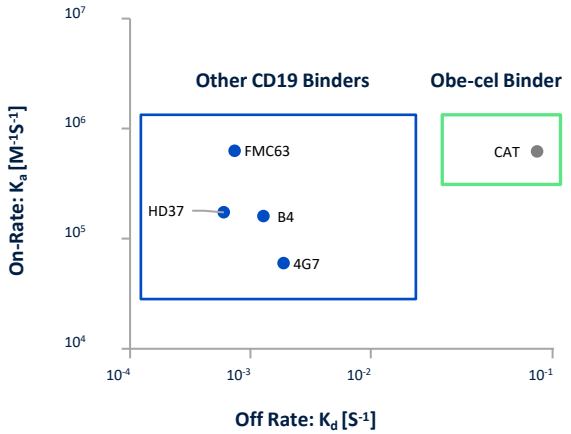
**CAT19 fast off-rate binder[2]**

**CD8-derived hinge region/ transmembrane domain[2]**

**4-1BB co-stimulatory domain[1,4]**
Shown to enhance CAR T-cell expansion and reduce exhaustion compared with CD28 CARs in preclinical studies

**CD3Ζ activation domain[1]**

### Fast off-rate




Shorter half-life of interaction compared to binders used in other approved products

- AUCATZYL® = 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 peak activity and persistence |
| Avoided exhaustion of CAR T-cells | → | Improved engraftment<br>Improved persistence |

References:1. AUCATZYL. Prescribing Information. Autolus, Inc. 2024. 2. Ghorashian S, Kramer AM, Onuoha S, et al. Enhanced CAR T cell expansion and prolonged persistence in pediatric patients with ALL treated with a low-affinity CD19 CAR. Nat Med. 2019;25:1408-1414. 3. Data on file. Autolus, Inc. 2024. 4. Zhao X, Yang J, Zhang X, et al. Efficacy and safety of CD28- or 4-1BB-based CD19 CAR-T cells in B cell acute lymphoblastic leukemia. Mol Ther Oncolytics. 2020;18:272-281.

# AUCATZYL was approved based on results from the FELIX trial

FELIX 19

## FELIX Phase 1b/2

| | |
|---|---|
| Cohort IA<br>≥5% BM blast | Cohort IIA<br>≥5% BM blast |
| Cohort IB<br><5% BM blast<br>MRD+ | Cohort IIB<br><5% BM blast<br>MRD+ |
| | Cohort IIC<br>Isolated EMD<br>at screening |

| Patients (N) | Ph1b/2 pooled[1] |
|---|---|
| Enrolled | 153 |
| Infused | 127 |

### Background

- Open-label, multinational, single-arm Phase 1b/2 trial in adult patients with R/R B-ALL[1-2]; largest CAR T cell therapy trial in R/R B-ALL to date (N=153 enrolled)
- Conducted during COVID-19 pandemic with highly immune compromised patients

### Summary of Trial Experience

- High ORR, encouraging EFS/OS and favorable tolerability with low levels of high-grade CRS and ICANS
- Timely and reliable clinical product supply and logistics despite COVID-19 pandemic restrictions
- Across all Phase 1b/2 cohorts, 40% of responders in ongoing remission without subsequent stem cell transplant/other therapy[1]
- Survival outcomes suggesting potential of long-term plateau[1]

[1,2] **Roddie C, et al "Obecabtagene autoleucel in B-cell acute lymphoblastic leukemia" N Engl J Med 2024; DOI: 10.1056/NEJMoa2406526**

# FELIX trial published in New England Journal of Medicine[1]

Favourable response rate and tolerability, despite challenging patient population

### High overall response rate with deep molecular responses

- Durable responses, particularly in patients with a low-to-intermediate bone marrow burden

| Response by disease status at lymphodepletion | Overall Remission Rate (CR/CRi) |
|---|---|
| All patients (n=127) | 77% |
| Morphological disease (n=91) | 75% |
| Measurable residual disease (n=29) | 96% |
| Isolated extramedullary disease (n=7) | 71% |

### Excellent tolerability profile

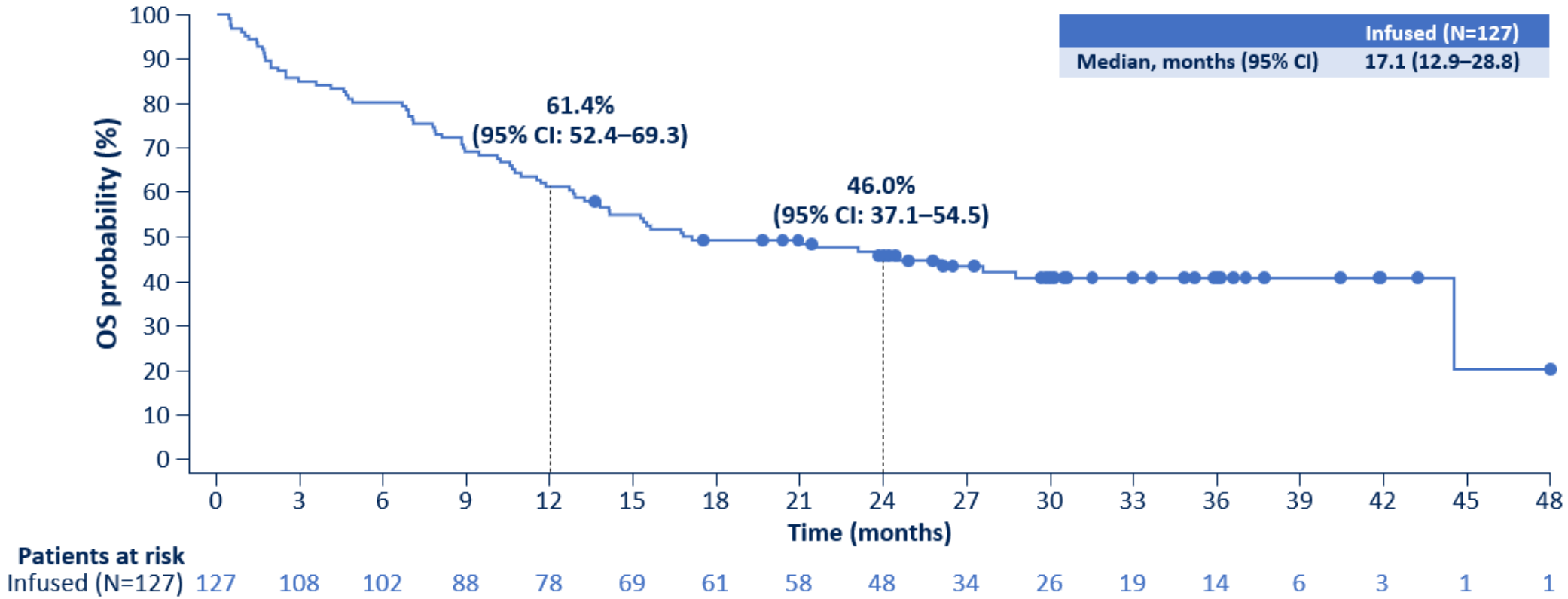
- Very low rates of high-grade immunotoxicities
- No high-grade events in low disease burden patients

| Safety by disease burden at lymphodepletion | Grade ≥3 CRS | Grade ≥3 ICANS |
|---|---|---|
| All patients (n=127) | 2% | 7% |
| >75% Blasts (n=40) | 2% | 12% |
| 5-75% Blasts (n=51) | 4% | 8% |
| <5% Blasts (n=36) | 0% | 0% |

1. Roddie C, et al "Obecabtagene autoleucel in B-cell acute lymphoblastic leukemia" N Engl J Med 2024; DOI: 10.1056/NEJMoa2406526

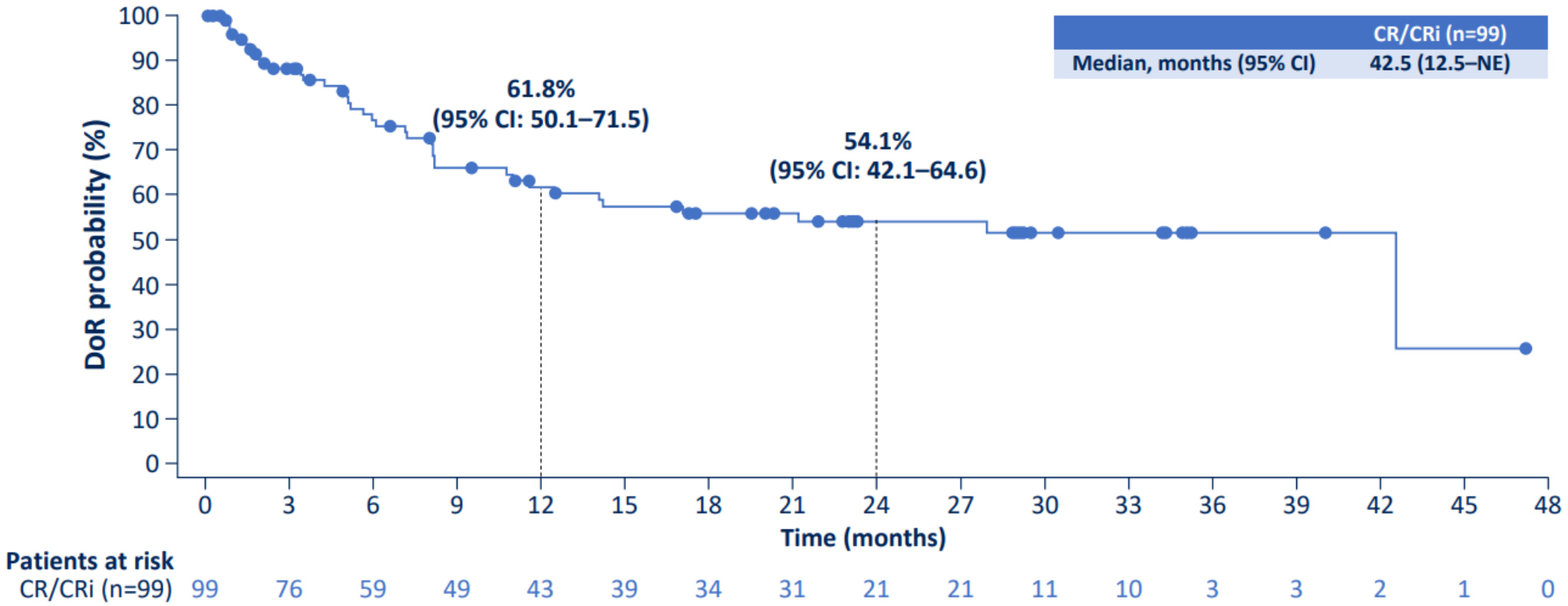
# Data continue to show long term remissions in r/r adult B-ALL

At 24 months, overall survival probability was 46.0%



# Duration of response: median 42.6 months at last data cut

More than half of patients still in remission at 24 months



AUTOLUS' FIRST APPROVED PRODUCT

# AUCATZYL® Launch progress

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

# Expect strong first year of U.S. AUCATZYL® launch

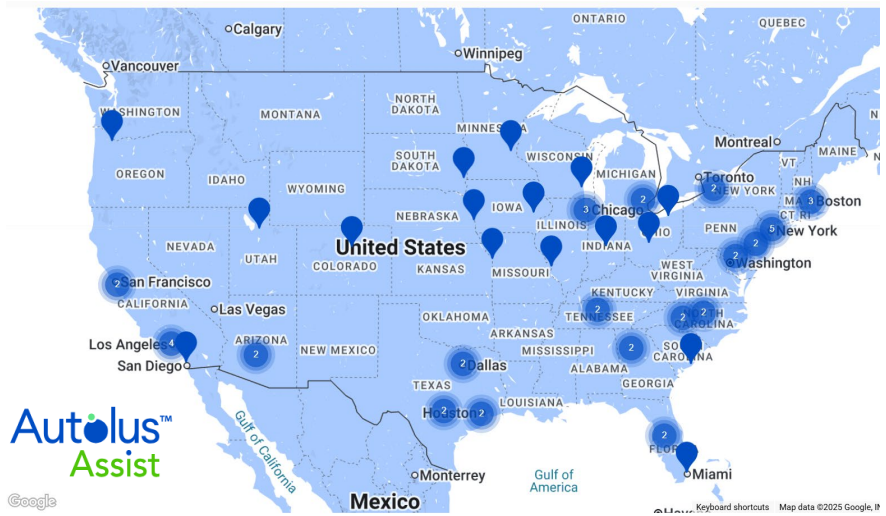
## AUCATZYL Net Product Sales

**Q3 2025:** $21.1 million

**Deferred Revenue:**
$7.6 million

**Nine Months Ended September 30, 2025:**
**$51.0 million**

## Executing on Product Delivery & Patient Access




- 60 authorized treatment centers
- Manufacturing success rate >90%
- Attained patient access for >90% of U.S. covered lives

# AUCATZYL geographic growth opportunities in ALL

## Expansion

**Potential New Markets**

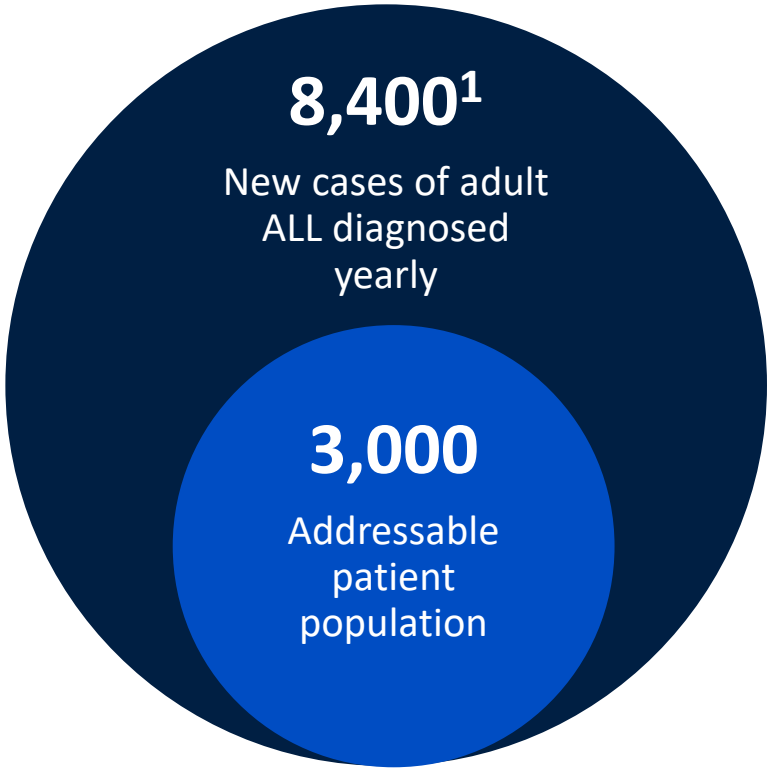
- ✓ Conditional marketing authorization in the UK received April 2025
  - NICE pricing and reimbursement process ongoing

- ✓ European Commission (EC) conditional approval received July 2025
  - Ongoing country-by-country evaluation of pricing and reimbursement decisions to assess feasibility of market entry; no anticipated EU sales in 2025 or 2026
  - Continuing to work with German Multicenter Study Group for Adult Acute Lymphoblastic leukemia (GMALL) and regulators, enable ISTs, and generate more real-world data in support of pricing negotiations

# 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
- 1st line therapy is based on high dose chemotherapy cycles given over a period of 12 – 36 months
- In 1st line therapy approx. 90% of patients achieve a CR, but most patients relapse
- Blincyto® is incorporated into frontline therapy as an additional component
- Aucatzyl® offers opportunity as a standalone therapy for patients in 2nd and subsequent lines of therapy




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

# Expanding the obe-cel opportunity

Deep value program with potentially broad applicability

# Pipeline-in-a-product: expanding obe-cel's potential beyond adult B-ALL

| Indication | Trial | Status |
|---|---|---|
| Pediatric r/r B-ALL | CATULUS Phase 1/2 | Initial data at ASH 2025; RMAT designation received |
| Systemic Lupus (SLE) | CARSLYLE Phase 1 | Initial data at ACR 2025, ASH 2025 |
| Lupus Nephritis (LN) | LUMINA Phase 2 | First patient expected to be dosed by YE 2025 |
| Progressive Multiple Sclerosis | BOBCAT Phase 1 | First patient dosed October 2025 |

**Supported by external opportunities:**

- Investigator-sponsored trials in earlier line settings of acute lymphoblastic leukemia (ALL)
- Real world experience obe-cel data being generated by ROCCA Consortium in r/r aALL

Oncology Autoimmune

# MOA and established commercial capabilities are key differentiators

Obe-cel is the only CD19 CAR with an FDA approval outside of autoimmune disease

## Autolus Potential Advantage

- Favorable tolerability to drive acceptability in non-oncology indications
- Deep cut into the CD19+ B and plasma cell
- Robust, economical and scalable manufacturing and established commercial infrastructure
- Potential for accelerated clinical program
- Only FDA-approved CAR-T therapy in development for autoimmune indications

**Supports differentiated approach and potential for obe-cel in autoimmune disease areas**

# Obe-cel shows promise as a new approach for SLE/LN

50 million cell dose selected as recommended Phase 2 dose

**Patient population: Patients (50M cell cohort n=6) were significantly impaired with their kidney function and had across the board some of the highest SLEDAI-2K scores included in current SLE studies.**

**Efficacy: Minimum follow up of 6 months**

- Achievement of DORIS in 83.3% (n=5/6) of patients
- Achievement of CRR in 50% (n=3/6 pts) of patients
- No evidence of new disease activity at up to month 14 of follow-up, no lupus directed therapy

**Safety: Obe-cel was generally well tolerated in all patients with no ICANS, no high-grade CRS and no DLTs**

**PK/Biomarkers: All patients showed deep B-cell depletion shortly after infusion, which was subsequently followed by a predominance of naïve B-cell reconstitution, suggesting an obe-cel-driven immune reset.**

**Next Steps: Phase 1 enrollment is ongoing in adolescents (aged 12–17 years) at the same dose and in adults at a higher dose. Data support progression into a Phase 2 lupus nephritis trial**

Leandro et al., American College of Rheumatology Conference 2025 Abstract #2458

# Obe-cel is well tolerated with no DLTs, ICANS or high-grade CRS

50 million cell dose patient cohort (n=6)

## Key Safety Findings

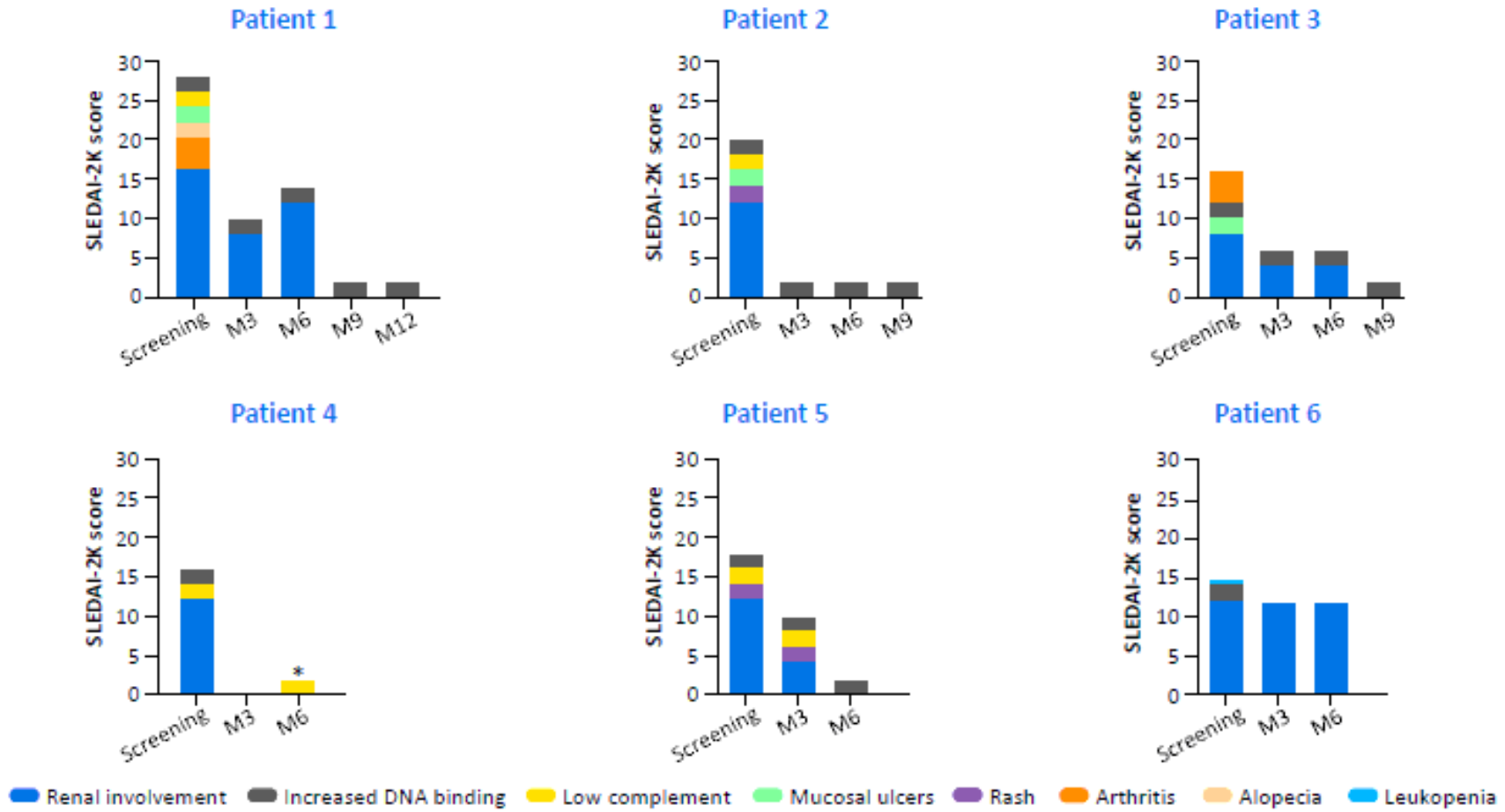
- No DLTs were observed following obe-cel infusion
- No patients experienced immune effector cell-associated neurotoxicity syndrome (ICANS)
- Only Grade 1 CRS (fever ≥38°C) was observed in 3/6 patients
- All patients had Grade ≥3 neutropenia after lymphodepletion which resolved by Day 22
- All infections were manageable; no Grade ≥4 infections occurred
- Transient hypertension was observed in five patients (n=3 had pre-existing hypertension)

| | Infused patients (N=6) | |
|---|---|---|
| | Any grade, n (%) | Grade ≥3, n (%) |
| **Any treatment-emergent adverse event** | 6 (100) | 6 (100) |
| **Neutropenia** | 6 (100) | 6 (100) |
| **Infection** | 6 (100) | 2 (33.3) |
| **Hypertension** | 5 (83.3) | 4 (66.7) |
| **Anemia** | 4 (66.7) | 3 (50.0) |
| **Cytokine release syndrome** | 3 (50.0) | 0 |
| **Febrile neutropenia** | 2 (33.3) | 2 (33.3) |
| **Thrombocytopenia** | 1 (16.7) | 1 (16.7) |
| **Immune effector cell-associated neurotoxicity syndrome** | 0 | 0 |

Leandro et al., American College of Rheumatology Conference 2025 Abstract #2458

CRS, cytokine release syndrome; DLT, dose-limiting toxicities; ICANS, immune effector cell-associated neurotoxicity syndrome.

# All patients achieved significant and sustained SLEDAI-2K reductions (50M cell dose cohort, n=6)



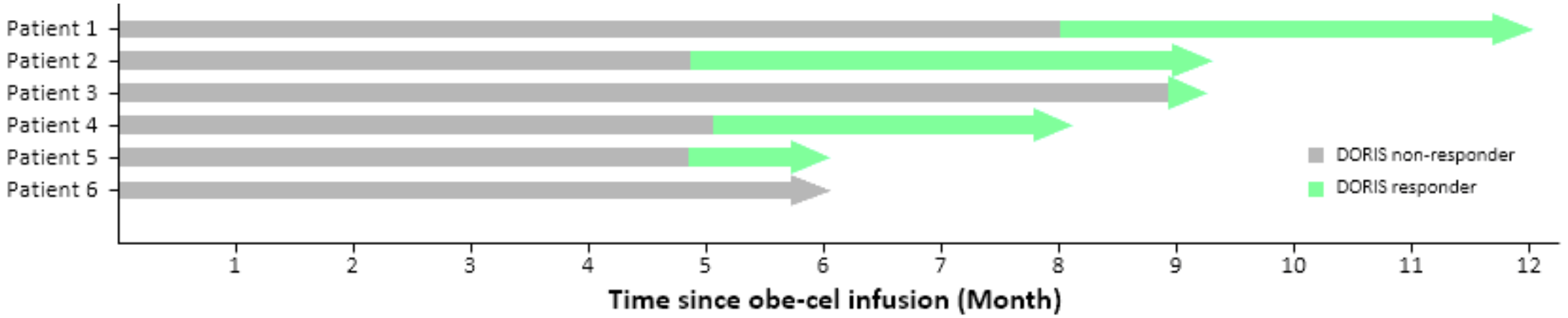

- All non-renal descriptors resolved by month four
- Median SLEDAI-2K reduction of 14 points (range 3-18) at month six
- Three patients (50%) are in ongoing complete renal response (CRR) with onset at 1 month

*Subsequent timepoint in normal range.

Leandro et al., American College of Rheumatology Conference 2025 Abstract #2458

# Five patients (83.3%) achieved DORIS with median onset of 5.1 months

50 million cell dose patient cohort (n=6)




- Responses ongoing with no flare as of last follow-up
- Median onset of DORIS remission: 5.1 months (range: 4.9 – 8.9)
- No patient received any immunosuppressive therapy after obe-cel
- By month 6, all patients tapered the steroid dose to ≤5 mg/day

Leandro et al., American College of Rheumatology Conference 2025 Abstract #2458

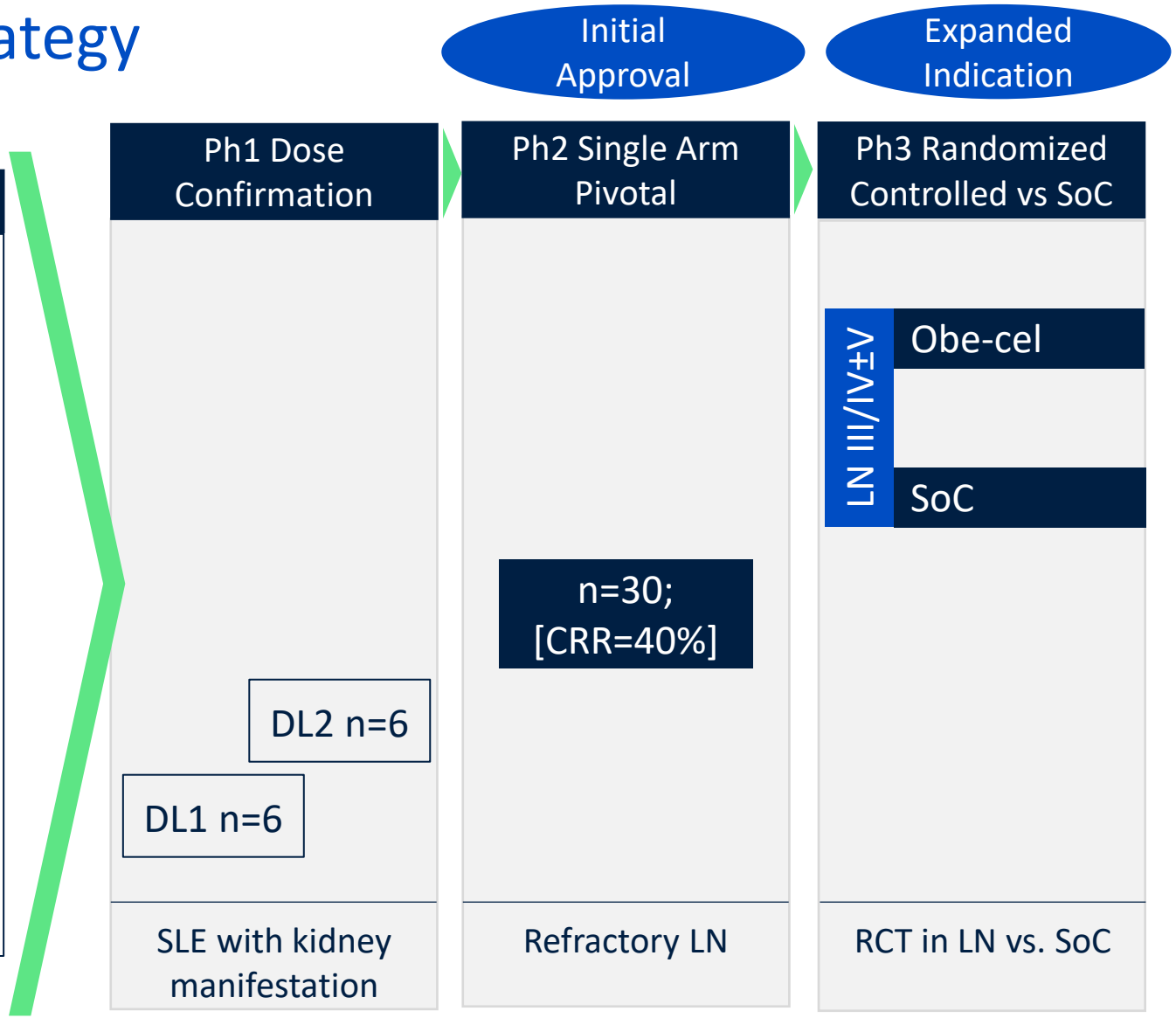
DORIS (Definition of Remission in SLE) Irrespective of serology; may be on antimalarials, low dose steroids (prednisolone ≤ 5mg/day): SLEDAI-2K = 0 and PGA < 0.5 on a visual analog scale from 0-3.

# Lupus nephritis development strategy

Leveraging a fast to market strategy

## Development Rationale

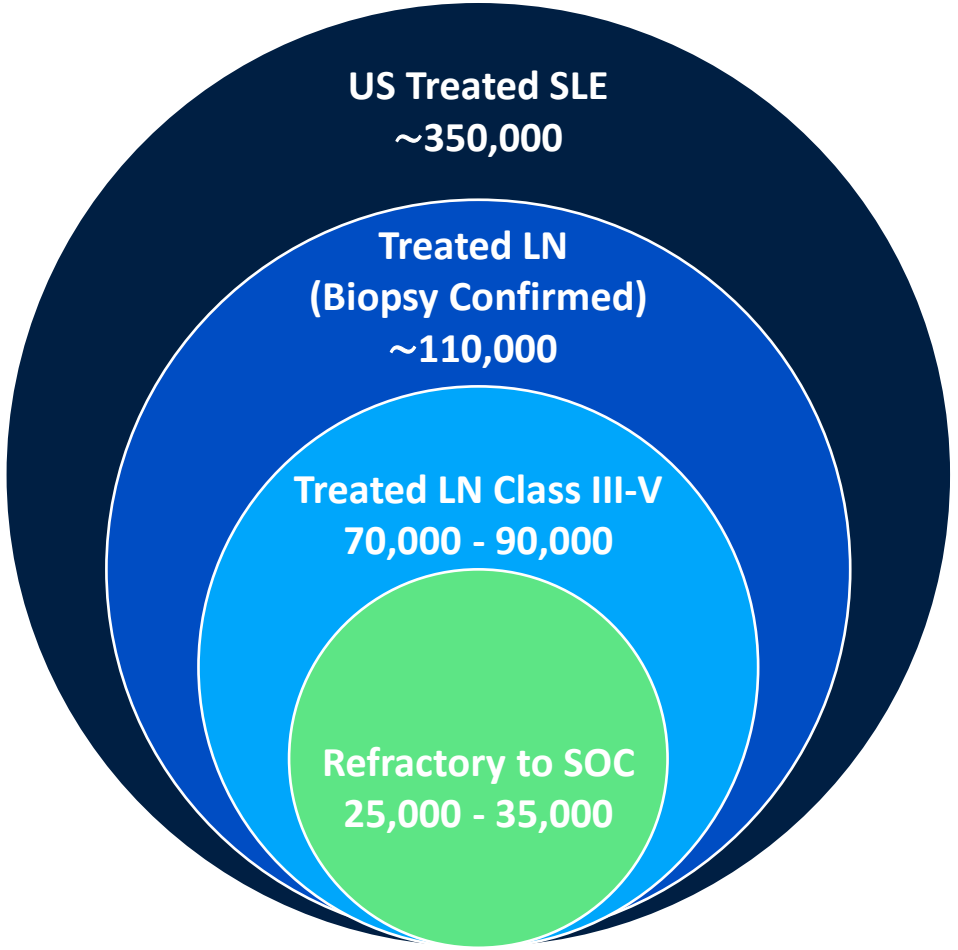
- LN is assessed by quantitative lab- parameter based endpoints (CRR) vs. SLE with a composite endpoint depending on clinical assessments
- Current guidelines require for Class III/IV LN triple therapy including B-cell modifier or CNI, without any treatment options for those being refractory to both
- Lack of SOC for refractory LN opens the possibility to single arm trial path for initial approval
- Outcome of refractory LN single arm trial serves as good predictor for RCT in earlier LN vs. SOC




**Anticipate dosing first patient in Phase 2 pivotal trial by year end 2025**

# Refractory lupus nephritis is a high unmet medical need

- Kidneys are one of the most common organs involved in SLE - 30% – 40% are lupus nephritis patients
- High disease activity is associated with inflammatory processes
- Uncontrolled inflammation leads to high chronicity due to accumulated kidney damage
- Despite treatment advances including regulatory approvals of belimumab and voclosporin the goal to sufficiently improve short and long-term outcomes in patients with LN remains unmet
- There are no treatment options for refractory patients




Clarivate/DRG Epidemiology, Arthritis Rheumatol. 2023 Apr;75(4):567-573, Arthritis & Rheumatology. 2017;69(10):2006-2017

# Multiple sclerosis development strategy

**Establish Phase 1 Clinical Proof of Concept in MS**

- 3 x 6 dose escalation design - a higher dose may be required for CNS effect
- Biomarker readouts to provide nearer term evidence of biological effect at 6 months +
- Definitive clinical outcomes based on clinical disability progression at 12 months +

**Initiate Phase 2/3 study in progressive MS patients exhibiting PIRA**

- Anticipate a randomised phase 2/3 study design as path to approval
- Phase 1 clinical PoC is derisking for initiation of development in other neurology indications

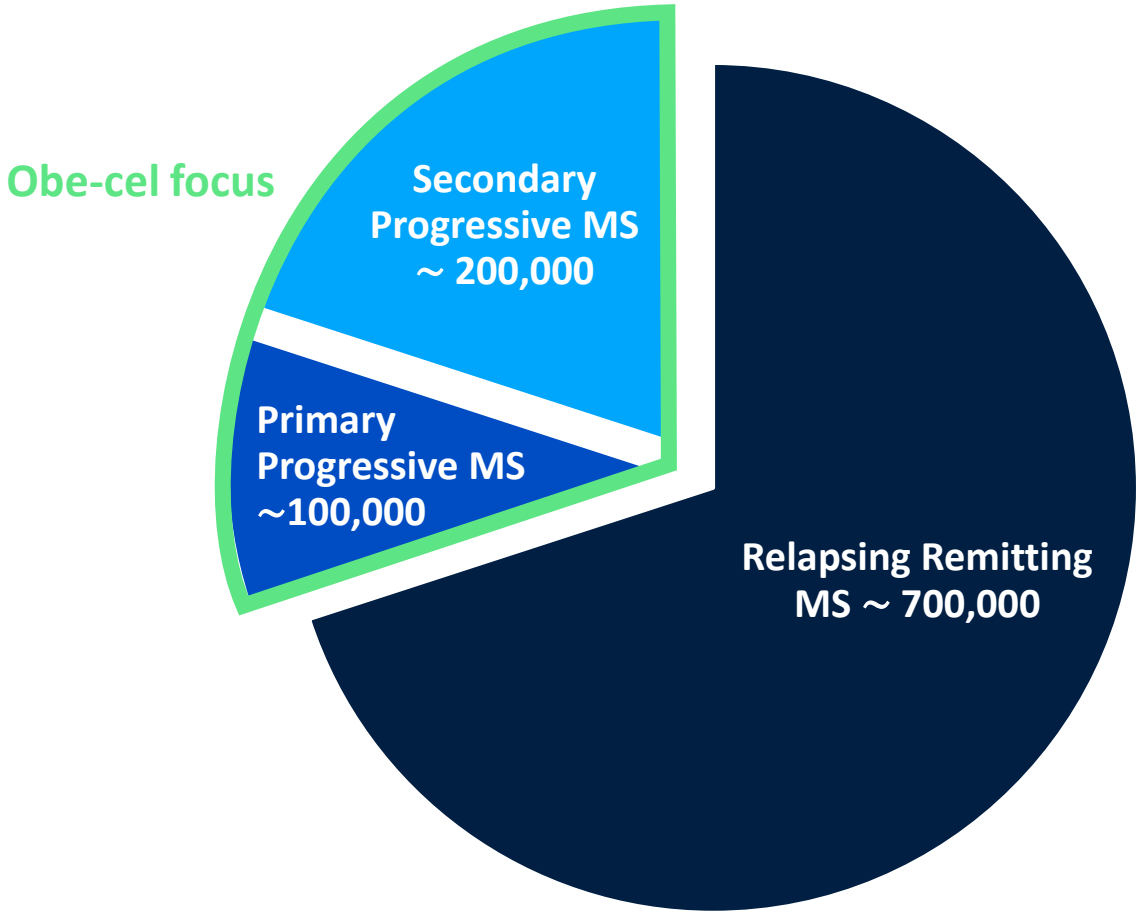
**First patient dosed in October 2025**

# Progressive multiple sclerosis is a high unmet medical need

- MS impacts approximately 1,000,000 individuals in the US[1] and there is currently no known cure

- Around 30% of patients have progressive disease and more than half of Progressive MS patients experience disability progression despite receiving disease modifying agents[2]

- Highest unmet need for patients who continue to progress despite being treated with highly effective agents for at least 6 months




1: GlobalData MS Market Forecast 2020-2030 April 2023
2:Watson, C., Thirumalai, D., Barlev, A. et al. Treatment Patterns and Unmet Need for Patients with Progressive Multiple Sclerosis in the United States: Survey Results from 2016 to 2021. Neurol Ther 12, 1961–1979 (2023). https://doi.org/10.1007/s40120-023-00532-2

# Partnerships, pipeline programs and technologies

A broad portfolio of potential next generation modular T cell therapies

# Pipeline supports growth with multiple development opportunities

| Product | Indication | Target | Preclinical | Phase 1 | Phase 2/Pivotal | Approved | Status |
|---|---|---|---|---|---|---|---|
| **AUCATZYL®** | **Adult ALL** | **CD19** | | | | | **FDA, MHRA^ & EC approved†** |
| **obe-cel** | Pediatric ALL | CD19 | | | | | **Initial data at ASH 2025** |
| **obe-cel** | Lupus Nephritis | CD19 | | | | | **Enrolling by YE 2025** |
| **obe-cel** | Progressive Multiple Sclerosis | CD19 | | | | | **Currently enrolling** |

| Product | Indication | Target | Preclinical | Phase 1 | Status |
|---|---|---|---|---|---|
| **obe-cel*** | B-NHL & CLL | CD19 | | | **Data in peer reviewed journal** |
| **obe-cel*** | Primary CNS Lymphoma | CD19 | | | **Data in peer reviewed journal** |
| **AUTO8*** | Multiple Myeloma | CD19 & BCMA | | | **Phase 1 Enrolling** |
| **AUTO8*** | Light chain Amyloidosis | CD19 & BCMA | | | **CTA approved; first patient expected by YE 2025** |
| **AUTO1/22*** | Pediatric ALL | CD19 & CD22 | | | **Initiating new cohort in Q2 2025** |

^Conditional marketing authorization; †European Commission (EC) conditional approval; *UCL Collaboration

Oncology Autoimmune

# 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

BIONTECH

Leveraging technology platform for BioNTech's programs

Bristol Myers Squibb

Access to the RQR8 safety switch for selected cell therapy programs for the treatment of cancer

moderna

First patient dosed in Phase 1/2 study of mRNA-based T-cell engager utilizing an Autolus proprietary binder licensed to Moderna

# Upcoming news flow

# Upcoming milestones

| Anticipated Milestone or Catalyst | Anticipated Timing |
|---|---|
| Initial clinical data from CATULUS trial in pediatric ALL | ASH Annual Meeting 2025 |
| Longer-term follow up data from CARLYSLE trial | ASH Annual Meeting 2025 |
| Expect to dose first patient in Phase 2 LUMINA trial in lupus nephritis | By YE 2025 |
| Expect to dose first patient in Phase 1 ALARIC trial in AL amyloidosis (UCL collaboration) | By YE 2025 |

Obe-cel Oncology | Obe-cel Autoimmune/B cell Mediated Disease

# Summary

# Autolus is positioned for value creation

## Obe-cel product franchise supports multiple growth opportunities

- Highly active, fast off-rate CD19 CAR T therapy with well managed safety profile
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- Target of 60 US centers achieved
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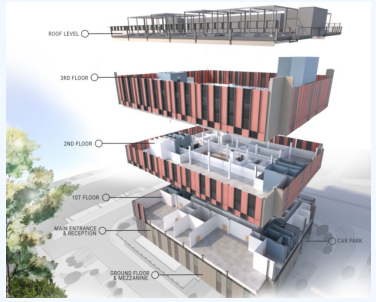
## Commercial execution and market expansion supported by:

### In-house, purpose-built manufacturing facility

**Design**



**Build**

**Operations**

### Strategic collaborations and strong cash position

**$367.4‡**
as of September 30, 2025

BIONTECH

moderna

Bristol Myers Squibb

*Conditional marketing authorization, †European Commission (EC) conditional approval, ‡Cash, cash equivalents and marketable securities

Autolus

# Thank you

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