UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of
The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): May 6, 2024

GlycoMimetics, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**001-36177**	**06-1686563**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

9708 Medical Center Drive
Rockville, MD 20850
(Address of principal executive offices, including zip code)

(240) 243-1201
(Registrant's telephone number, including area code)

N/A
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Common Stock, $0.001 par value	GLYC	The Nasdaq Stock Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 2.02 Results of Operations and Financial Condition.

On May 6, 2024, GlycoMimetics, Inc. (the "***Company")*** issued a press release announcing, in addition to the information described in Item 7.01 below, its financial results for the first quarter ended March 31, 2024. A copy of this press release is furnished herewith as Exhibit 99.1 to this Current Report and is incorporated herein by reference.

In accordance with General Instruction B.2. of Form 8-K, the information in this Item 2.02, and Exhibit 99.1 hereto, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "***Exchange Act***"), or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference in any of the Company's filings under the Securities Act of 1933, as amended (the "***Securities Act***"), or the Exchange Act, whether made before or after the date hereof, regardless of any incorporation language in such a filing, except as expressly set forth by specific reference in such a filing.

Item 7.01. Regulation FD Disclosure.

Topline Results from Phase 3 Clinical Trial

On May 6, 2024, the Company issued a press release announcing, in addition to the information described in Item 2.02 above, topline results from its pivotal Phase 3 clinical trial of its drug candidate uproleselan in patients with relapsed/refectory acute myeloid leukemia. A copy of this press release is furnished herewith as Exhibit 99.1 to this Current Report and is incorporated herein by reference.

Updated Corporate Presentation

A copy of a slide presentation that the Company plans to use for anticipated investor meetings is attached to this Current Report as Exhibit 99.2 and is incorporated herein solely for purposes of this Item 7.01 disclosure.

The information in this Item 7.01, including Exhibits 99.1 and 99.2 attached hereto, is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference in any of the Company's filings under the Securities Act or the Exchange Act, whether made before or after the date hereof, regardless of any incorporation language in such a filing.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

Exhibit Number	Exhibit Description
99.1	Press Release, dated May 6, 2024, "GlycoMimetics Announces Results of Pivotal Phase 3 Study of Uproleselan in Relapsed/Refractory (R/R) Acute Myeloid Leukemia (AML)"
99.2	GlycoMimetics, Inc. Corporate Presentation, May 6, 2024
104	Cover Page Interactive Data File (the cover page XBRL tags are embedded within the Inline XBRL document)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

GLYCOMIMETICS, INC.

By: /s/ Brian M. Hahn
Brian M. Hahn
Senior Vice President and Chief Financial Officer

Date: May 6, 2024

GlycoMimetics Announces Results of Pivotal Phase 3 Study of Uproleselan in Relapsed/Refractory (R/R) Acute Myeloid Leukemia (AML)

- Study of uproleselan combined with chemotherapy did not meet its primary endpoint of overall survival in the intent to treat population
- Adverse events were consistent with known side effect profiles of chemotherapy used in the study
- Comprehensive data analysis with medical, statistical, and regulatory experts underway and will be shared as appropriate; company will submit results for presentation at an upcoming medical meeting
- National Cancer Institute (NCI) Phase 2/3 study in newly diagnosed AML patients remains ongoing
- Conference call and webcast to be hosted today, May 6, 2024, at 8:30 a.m. ET.

ROCKVILLE, Md.--(BUSINESS WIRE) – May 6, 2024-- GlycoMimetics, Inc. (Nasdaq: GLYC), a late clinical-stage biotechnology company discovering and developing glycobiology-based therapies for cancers and inflammatory diseases, today announced topline results from its Phase 3 global pivotal study of uproleselan in 388 patients with R/R AML. In the study, uproleselan combined with chemotherapy did not achieve a statistically significant improvement in overall survival in the intent to treat population versus chemotherapy alone.

Patients treated with uproleselan had a median overall survival of 13 months, compared to 12.3 months in the placebo arm. Adverse events were consistent with known side effect profiles of chemotherapy used in the study.

“While the outcome of our Phase 3 study in R/R AML is not what we hoped, we wish to thank the investigators, the participating patients and their families for their dedication to this large, well-controlled randomized study,” said Harout Semerjian, Chief Executive Officer of GlycoMimetics. “We are thoroughly analyzing the data in collaboration with medical, statistical and regulatory experts and are committed to submitting a comprehensive data analysis for presentation at an upcoming medical meeting.”

The randomized, double-blind, placebo-controlled Phase 3 clinical study evaluated uproleselan in combination with MEC (mitoxantrone, etoposide and cytarabine) or FAI (fludarabine, cytarabine and idarubicin) in patients with R/R AML. Patients received either uproleselan or placebo for 8 days over 1 cycle of an induction and, if applicable, up to 3 cycles of consolidation. The primary endpoint of the study was overall survival without censoring for transplant. Secondary endpoints included incidence of severe oral mucositis, complete remission rate and remission rate. A total of 388 patients across 70 sites in nine countries were randomized 1:1 between treatment and placebo arms.

The NCI and the Alliance for Clinical Trials in Oncology are conducting an adaptive Phase 2/3 study of uproleselan in adults with newly diagnosed AML who are 60 years or older and fit for intensive chemotherapy. The randomized, controlled study is evaluating the addition of uproleselan to a standard cytarabine/daunorubicin regimen (7+3) versus chemotherapy alone. The Phase 2 portion of the study completed enrollment of 267 patients in December 2021. Results of the pre-planned Phase 2 event free survival interim analysis will be reported when available.

First Quarter 2024 Preliminary Financial Results

Today, the company also disclosed its preliminary financial results for the first quarter of 2024.

- Cash position: As of March 31, 2024, GlycoMimetics had cash and cash equivalents of $31.3 million, compared to $41.8 million as of December 31, 2023.
- R&D Expenses: The company's research and development expenses increased to $6.0 million for the quarter ended March 31, 2024, as compared to $5.4 million for the same period in 2023. These increases were due to raw material acquisition costs for future manufacturing batches.
- G&A Expenses: The company's general and administrative expenses decreased to $5.1 million for the quarter ended March 31, 2024, compared to $5.5 million for the same period in 2023. The decrease was due to lower personnel-related and external consulting expenses.
- Shares Outstanding: Shares of common stock outstanding as of March 31, 2024, were 64,450,835.

Conference Call Information

The company will host a conference call and webcast today at 8:30 a.m. ET. To access the call by phone, please go to this registration link and you will be provided with dial in details. Participants are encouraged to connect 15 minutes in advance of the scheduled start time.

A live webcast of the call will be available on the "Investors" tab on the GlycoMimetics website. A webcast replay will be available for 30 days following the call.

Please note this call will replace the previously announced First Quarter 2024 Financial Results call scheduled for May 9, 2024 at 8:30 a.m. ET.

About AML

AML is the most common acute leukemia in adults. A cancer of the bone marrow, nearly 21,000 people in the United States are diagnosed with AML each year. Despite the availability of multiple treatments, disease prognosis is poor, and new treatment options are needed to improve outcomes. Newly diagnosed AML has the lowest 5-year survival rate of all leukemias at 31.7%. The five-year survival rate for people with relapsed/refractory disease is only 10%.

About Uproleselan

Discovered and developed by GlycoMimetics, uproleselan (yoo' pro le'se lan) is an investigational, first-in-class E-selectin antagonist. GlycoMimetics has received Breakthrough Therapy and Fast Track designations from the U.S. Food and Drug Administration (FDA) and Breakthrough Therapy designation from the Chinese National Medical Products Administration for uproleselan as a potential treatment for adult AML patients with relapsed or refractory disease. E-selectin is a leukocyte adhesion molecule constitutively expressed on endothelial cells of the vasculature and bone marrow. In AML, there is evidence that E-selectin–ligand interaction between endothelial cells in the protective niche of the Bone Marrow microEnvironment (BME) and leukemic stem cells and blasts promotes leukemic cell survival and hides them from AML therapies. Uproleselan is designed to disrupt E-selectin binding and prevent leukemic myeloid cells using the protective niche of the BME.

About GlycoMimetics, Inc.

GlycoMimetics is a late clinical-stage biotechnology company discovering and developing glycobiology-based therapies for cancers, including AML, and for inflammatory diseases. The company's scientific approach is based on an understanding of the role that carbohydrates play in cell recognition. Its specialized chemistry platform is being deployed to discover small molecule drugs, known as glycomimetics, that alter carbohydrate-mediated recognition in diverse disease states, including cancers and inflammation. GlycoMimetics is leveraging its differentiated expertise with this scientific approach in order to advance its pipeline of wholly owned drug candidates. The company's goal is to develop transformative therapies for diseases with high unmet medical need. GlycoMimetics is headquartered in Rockville, MD in the BioHealth Capital Region. Learn more at www.glycomimetics.com.

Forward-Looking Statements

This press release contains forward-looking statements. These forward-looking statements may include, but are not limited to, statements regarding the conduct of, and timing for analysis and presentation of data from, clinical trials; potential development and regulatory activities; and the potential benefits and impact of uproleselan. Actual results may differ materially from those described in these forward-looking statements. For a further description of the risks associated with these statements, as well as other risks facing GlycoMimetics, please see the risk factors described in the company's Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commission (SEC) on March 27, 2024, and other filings GlycoMimetics makes with the SEC from time to time. Forward-looking statements speak only as of the date of this release, and GlycoMimetics undertakes no obligation to update or revise these statements, except as may be required by law.

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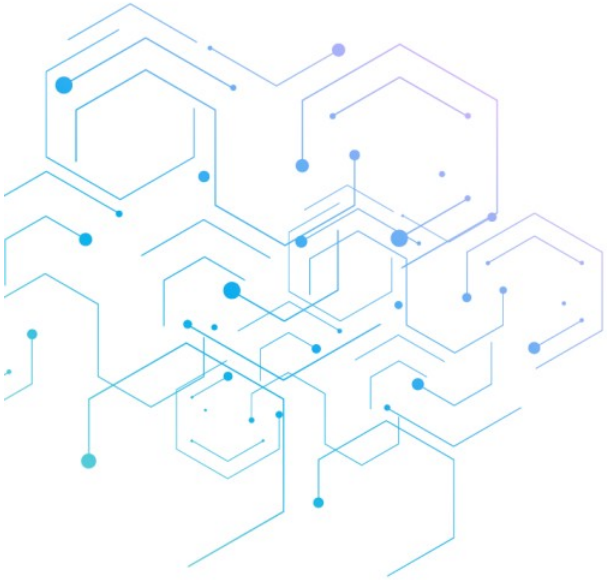
GlycoMimetics
Transforming Lives
Glycobiology-based Therapeutics
May 2024 | NASDAQ: GLYC



Forward-Looking Statements

- To the extent that statements contained in this presentation are not descriptions of historical facts, they are forward-looking statements reflecting the current beliefs and expectations of the management of GlycoMimetics, Inc. ("GlycoMimetics," "we," "us," or "our"). Forward-looking statements contained in this presentation may include, but are not limited to: (i) the expected or projected timing of events, data readout and data analysis from clinical trials; (ii) the planned or potential clinical development and potential indications, benefits and impact of our drug candidates, including uproleselan and GMI-1687; (iii) the timing of receipt of clinical data; (iv) the potential safety, efficacy or clinical utility of our drug candidates; (v) the size of patient populations targeted by drug candidates we or our collaborators develop; (vi) the likelihood and timing of regulatory filings, and plans for interactions with regulatory authorities; (vii) our business and product development strategies, including our cash needs and expected cash runway; and (viii) any other statement containing terminology such as "may," "will," "should," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "intends," or "continue," or the negative of these terms or other comparable terminology.
- Forward-looking statements are subject to known and unknown risks, uncertainties, and other factors that may cause our or our industry's actual results, levels of activity, performance, or achievements to be materially different from those discussed, implied or otherwise anticipated by such statements. You are cautioned not to place undue reliance on such forward-looking statements, which are current only as of the date of this presentation. Examples of risks, uncertainties and factors that may cause differences between our expectations and actual results include unexpected safety or efficacy data, unexpected side effects observed during preclinical studies or in clinical trials, whether results of early clinical trials will be indicative of results from later clinical trials, changes in expected or existing competition or additional market research that may cause our expectations about market opportunity to change, changes in the regulatory environment for our drug candidates, failure of our collaborators to support or advance our collaborations or drug candidates, our need for future capital, the inability to adequately protect our intellectual property, and becoming a party to litigation or other disputes. For a further description of the risks associated with forward-looking statements, as well as other risks facing GlycoMimetics, please see the risk factors described in the Company's Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commission on March 27, 2024, as well as other reports we file with the U.S. Securities and Exchange Commission from time to time, including those factors discussed under the caption "Risk Factors" in such filings. Forward-looking statements speak only as of the date of this presentation, and GlycoMimetics undertakes no obligation to update or revise these statements, except as may be required by law.

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Near-Term Catalysts and Promising, Glycobiology-based Pipeline

Uproleselan: Multiple Late-Stage Clinical Trials

- **Phase 3 trial** in R/R AML (n=388), topline results announced in Q2 2024
- **Fully enrolled Phase 2 trial** in front-line AML (n=267) ongoing, **NCI-sponsored**
- **Ongoing IITs** in other AML populations. Preliminary data presented at ASH 2022/2023
- **Novel MOA/first-in-class** → potential **broad utility** with **Breakthrough Therapy**, **Fast Track**, and **Orphan** designations

Promising Early-Stage Pipeline

- Novel small molecules inhibit carbohydrate signaling
- Potential application in multiple inflammatory diseases
- **GMI-1687**
  - Phase 1a trial in healthy volunteers completed
  - Initial indication: treatment of sickle cell disease (SCD) vaso-occlusive crisis (VOC)
  - Being developed for self-administration at time of VOC
- **Galectins**
  - Targeting fibrotic diseases
  - First oral Galectin-3 antagonist

Targeted Operational Execution

- Updating uproleselan plans and evaluatin financial guidance

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A Portfolio of Promising Product Candidates

Program	Therapeutic Area	Discovery	Preclinical	Phase 1	Phase 2	Phase 3	Market
SELECTINS							
UPROLESELAN (GMI-1271)*	Relapsed / Refractory AML	Topline results announced in Q2 2024					
	Newly Diagnosed "Fit" AML	Fully enrolled 267 patients Dec 2021					
	Relapsed / Refractory Pediatric AML	Ph1 by NCI do sed 1st patient					
GMI-1687*	SCD Vaso-occlusive Events and Inflammatory diseases	Ph1a completed					
GALECTINS							
GMI-2093	Fibrosis and Oncology	Lead declared March 2022					

GlycoMimetics *Partnered with Apollomics in Greater China

Breakthrough Therapy Designation in AML

Uproleselan (GMI-1271)

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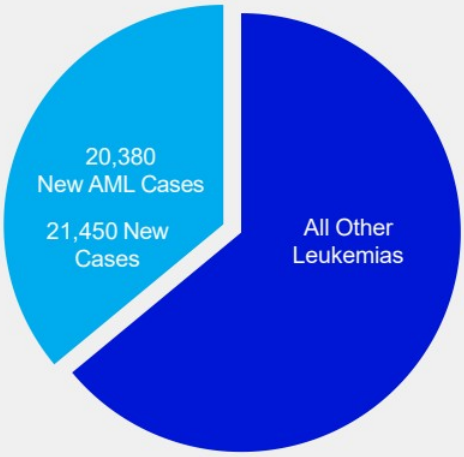
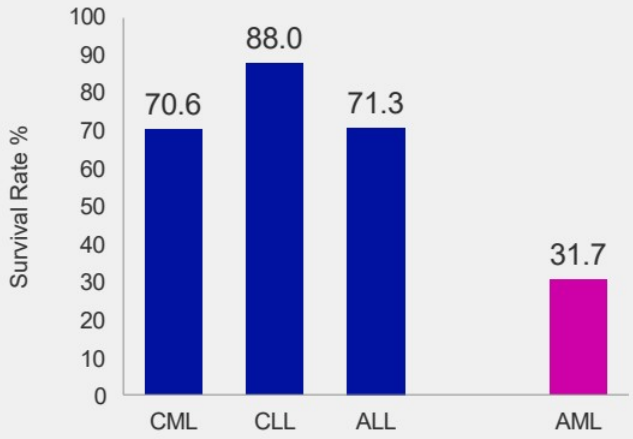
Significant Unmet Medical Need In AML[1]

ESTIMATED NEW CASES (2023)

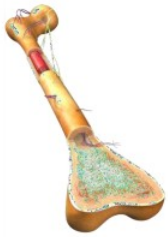


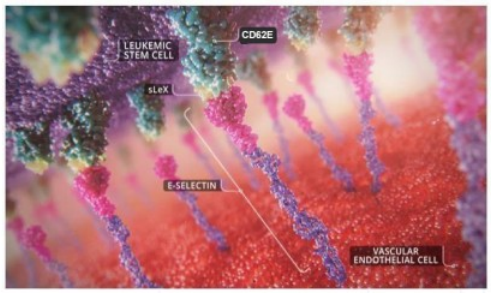
5-YEAR RELATIVE SURVIVAL (2013 – 2019)[1]

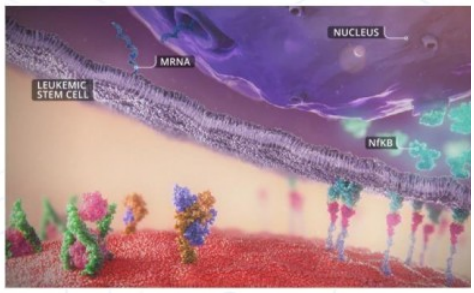


American Cancer Society. Cancer Facts and Figures 2023. Atlanta: American Cancer Society; 2023. Accessed May 10, 2023. https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2023/2023-cancer-facts-and-figures.pdf.

Uproleselan: First-in-Class E-Selectin Antagonist for AML







E-selectin:

- ✓ Leukocyte adhesion molecule constitutively expressed on marrow endothelial cells, also inducibly expressed throughout vasculature by innate inflammatory mediators
- ✓ Up-regulated by AML blasts via secreted inflammatory mediators, such as TNF-alpha and IL1-beta

E-selectin/E-selectin Ligand Interaction:

- ✓ Enables AML blast and leukemia stem cell sequestration in bone marrow
- ✓ Activates pro-survival NF-kB pathways
- ✓ E-selectin ligand sLex up-regulated on AML cells via multiple distinct drug resistance mechanisms

Uproleselan, a First-in-class E-Selectin Antagonist:

- ✓ Releases AML blasts and leukemic stem cells from vascular sequestration, agnostic to AML mutational status
- ✓ Disrupts NF-kB mediated chemoresistance pathways
- ✓ Potential broad utility across AML

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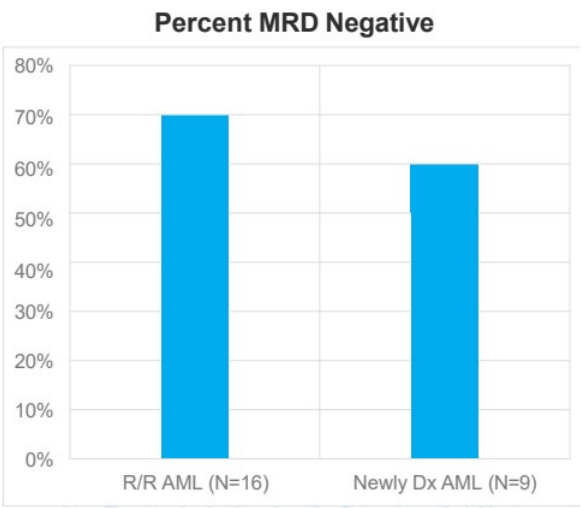
Phase 1/2 Results in R/R and Newly Diagnosed AML Patients

AML population	CR	CR/CRi	Median O/S	MRD-negative
Relapsed / Refractory (n = 54)	35%	41%	8.8 mos	69%
Newly Diagnosed (n = 25) >=60yrs	52%	72%	12.6 mos	55%

E-selectin ligand expression

- Detectable in every patient tested
- Higher levels in R/R patients achieving CR/CRi, MRD- and prolonged median OS



blood Results Published in *Blood February '22*

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Potential Foundational Backbone Across Spectrum in AML

~20,380 Newly Diagnosed AML Patients in the U.S.[1]

~12K "Fit"	Patients eligible for intensive chemotherapy	~8K Unfit"
>8K PATIENTS/YEAR	**NEWLY DIAGNOSED, ELDERLY AML** **NCI-Sponsored Phase 2/3** Combination of Uproleselan + 7&3	**8K** PATIENTS/YEAR **Recent venetoclax approval**

+

8.5K PATIENTS/YEAR

RELAPSED / REFRACTORY AML
GLYC-Sponsored Phase 3
Combination of Uproleselan + MEC/FAI

Uproleselan Value Proposition

- Improve achievement / depth of remission
- Extend overall survival
- Mitigate chemotherapy-related toxicity

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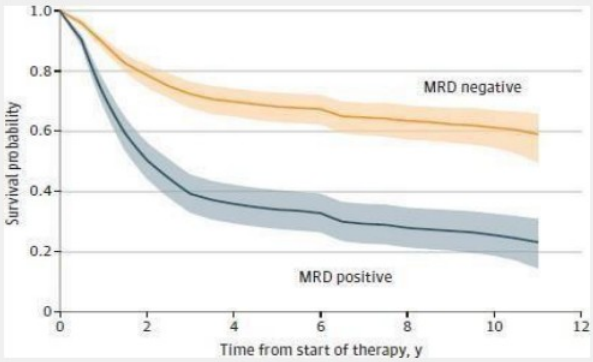
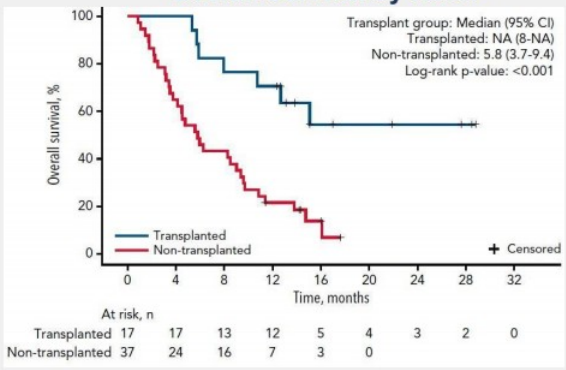
1. National Cancer Institute SEER Program. Cancer Stat Facts: Acute Myeloid Leukemia.

MRD Negativity and HSCT Both Favorably Prognostic

Overall Survival by MRD status[1]



Overall Survival by HSCT[2]



Meta-analysis of 81 studies (N >11,000)

- MRD negativity favorably prognostic for survival
- Effect independent of age, subtype, timing, method

Uproleselan Phase 1/2 overall survival by HSCT

- N=54 R/R AML patients at 10 mg/kg RP2D
- Overall MRD-negative: 56% 1L, 69% R/R
- 10 longest survivors all MRD-negative

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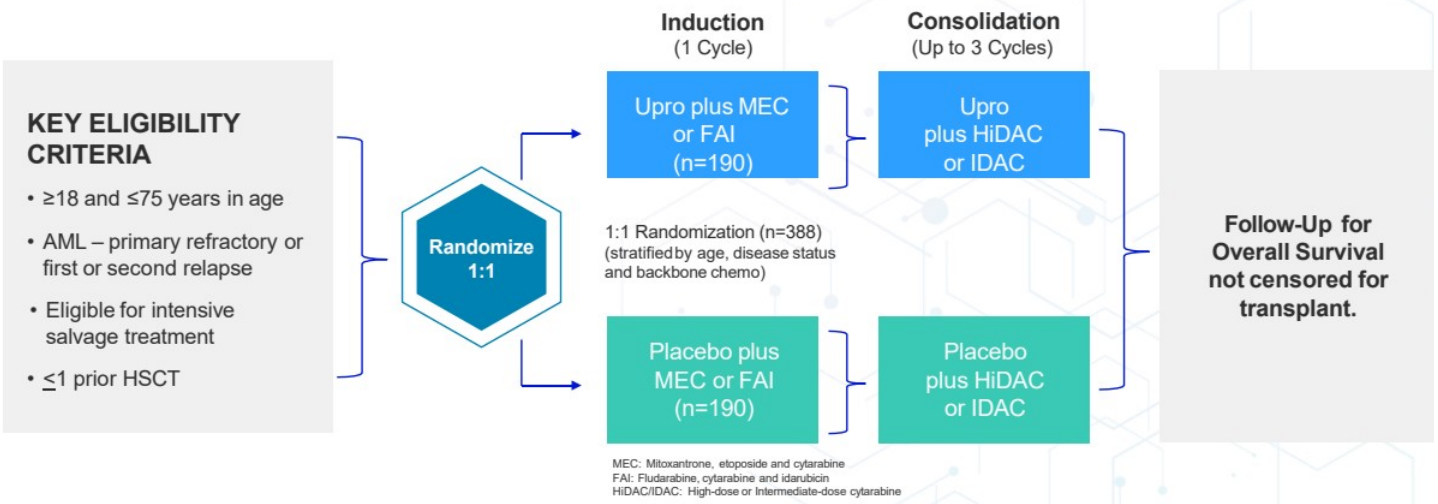
1. Short, et al. JAMA Oncology 2020 6(12): 1890-1899; 2. DeAngelo et al, Blood 2022 139(8):1135-1146.

Phase 3 Global Pivotal Study of Uproleselan in R/R AML



Primary endpoint of overall survival was not achieved
Median overall survival: 13 months (uproleselan) vs. 12.3 months (placebo arm)
Adverse events consistent with known side effect profiles of chemotherapy used in the study
Comprehensive analysis ongoing; plan to submit for presentation at an upcoming medical meeting

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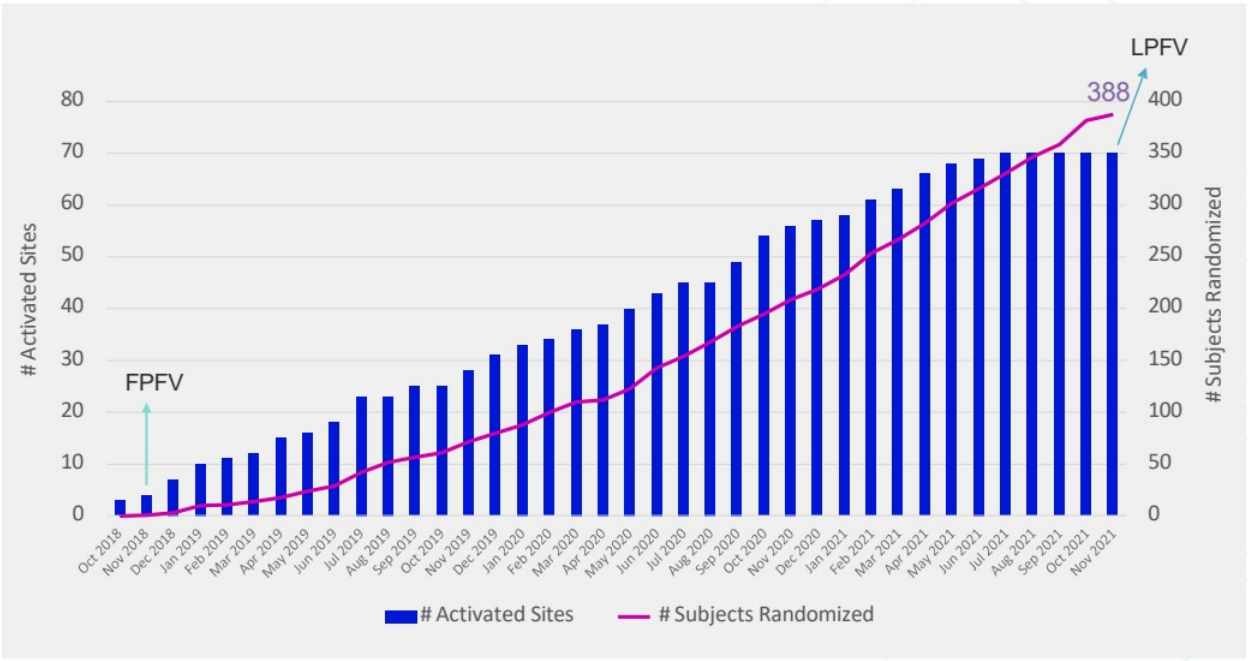
Trial GMI-1271-301 Enrollment



- 380 patients planned, 388 patients enrolled
- 12 patients (3%) lost to follow- up/ withdrew consent

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Phase 3 Patient Characteristics Broadly Similar to Phase 2

	301 Study | N=388	201 Study | N=66
Relapsed/Refractory Patient Demographics		
Age, median (range)	58 (20-75)	59 (26-84)
Refractory, n (%)	129 (33%)	22 (33%)
Relapsed, n (%)	259 (67%)	44 (67%)
Duration of prior remission ≤6 mos	56 (22%)	18 (41%)
Prior Therapies		
HSCT	70 (18%)	12 (18%)
≥2 Induction Regimens	63 (16%)	22 (33%)
ELN Risk Category		
Adverse	42%	50%
Intermediate	23%	17%
Favorable	21%	11%
Unknown	14%	22%

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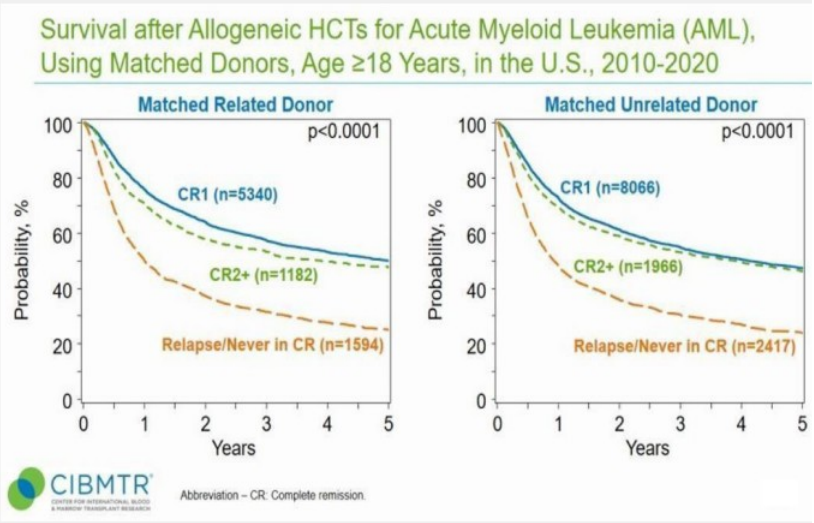
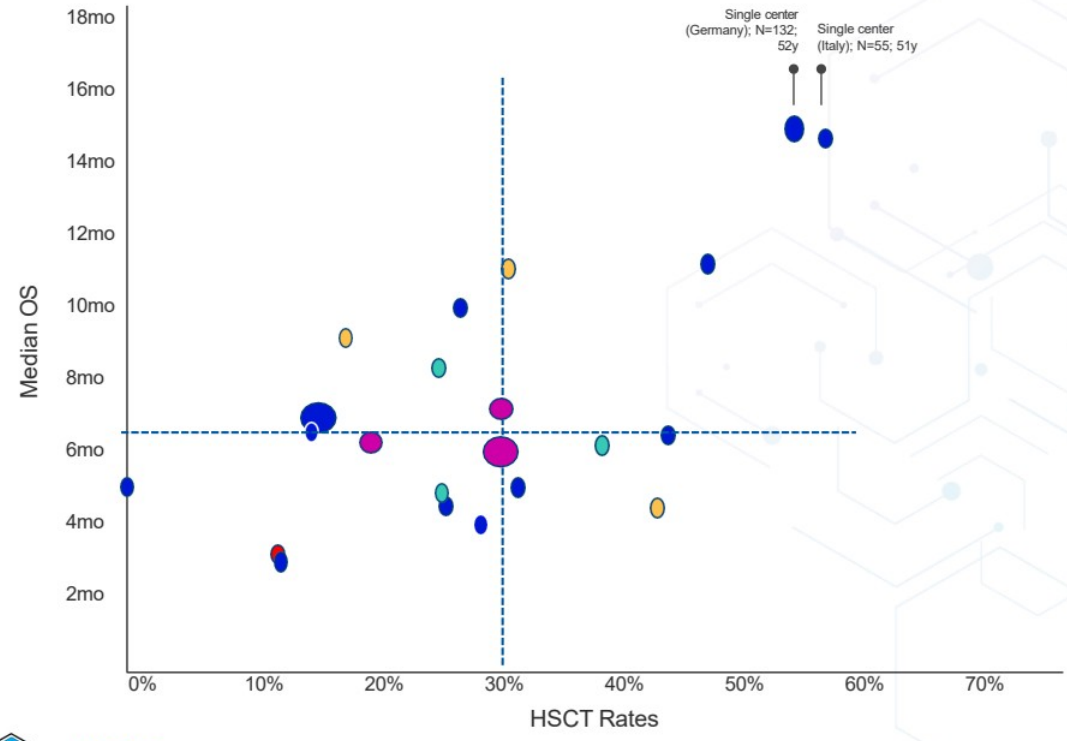
Time-Based Analysis Triggered with a March 31, 2024 Data Cutoff

- June 2023 FDA cleared Phase 3 time-based OS analysis after defined cutoff if 295 events not reached by that date
- Clinically mature data in Q2 2024 reflects > 3 years median follow-up and > 2 years post-transplant follow-up for the substantial majority of remaining patients that received stem cell transplants
- After 2 years post-transplant, AML relapse becomes infrequent



Bolon YT, Atshan R, Allbee-Johnson M, Estrada-Merly N, Lee SJ.Current use and outcome of hematopoietic stem cell transplantation: CIBMTR summary slides (slide 79), 2022.

Intensive Chemotherapy (IC) in R/R AML



Typical ~6-7 months mOS and HSCT rates ~25-30%

- Phase III, RCT
- Prospective cohort study
- Retrospective study
- Phase I or II study

NOTES

Scatter plot is not exhaustive but includes trials with similar populations to Phase 3 trial of uproleselan.

Outcomes with intensive chemotherapy may be heavily impacted by patient. characteristics including age, ELN risk, disease status and prior therapy, and that patient numbers are small for some of the data shown.

Size of bubble is proportional to sample size.

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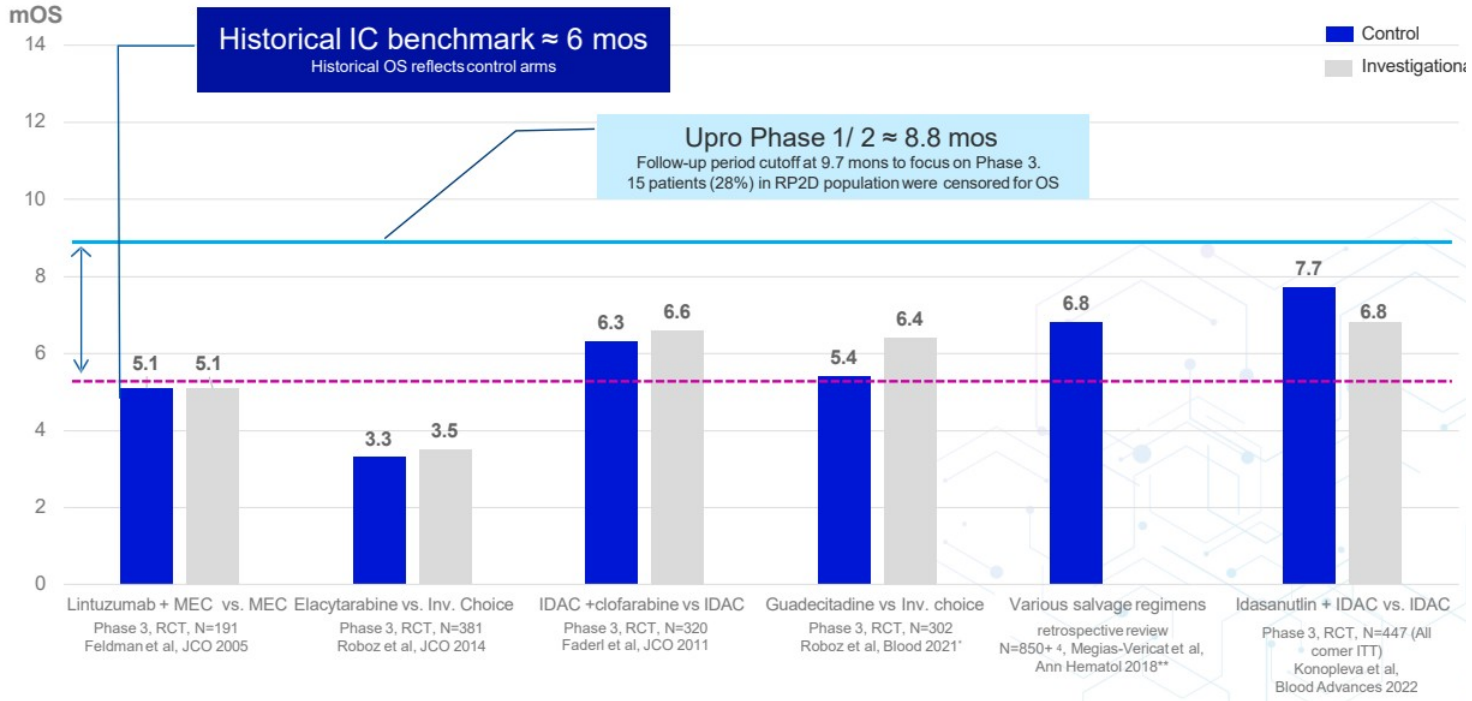
Historical Intensive Chemotherapy benchmarks for mOS are ~6 months



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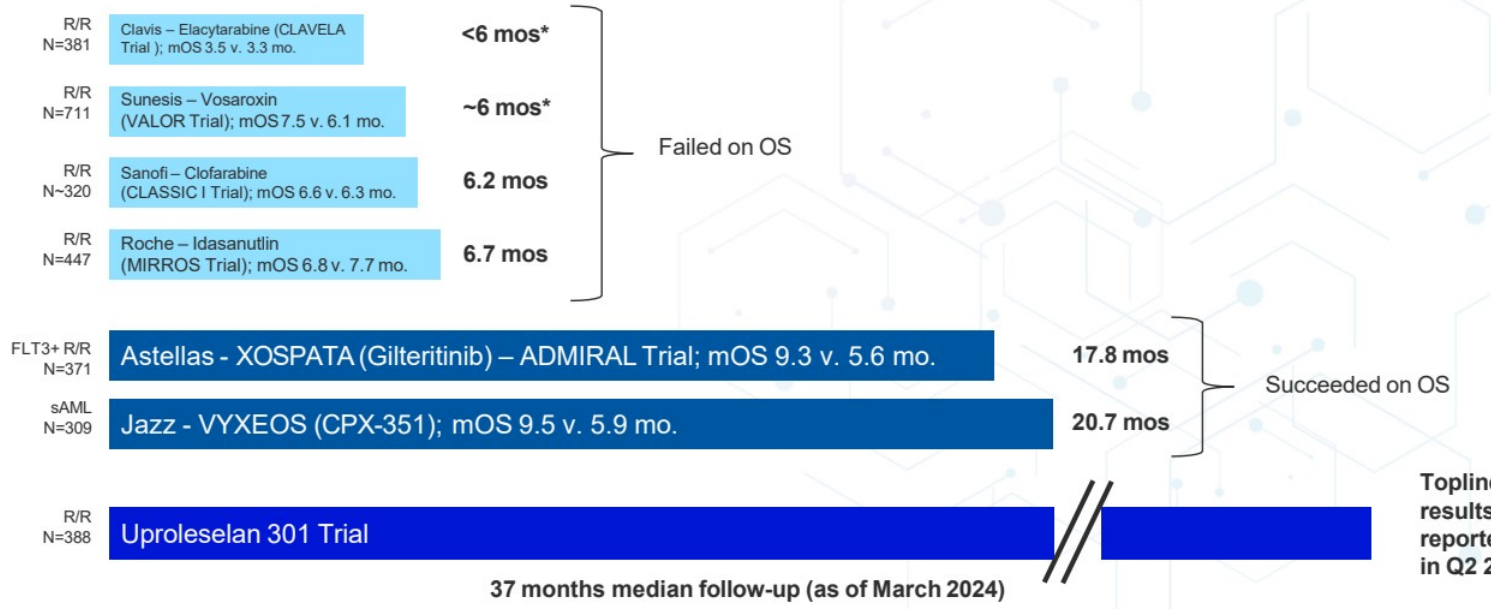
Note: patient outcomes for IC eligible populations often vary depending upon patient and disease characteristics
* Control group includes patients on MEC and FLAG-IDA
** All patients in this analysis received MEC

Duration of Follow-Up and Outcomes in Key AML Trials



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*Median follow-up at time of event trigger for CLAVELA and VALOR estimated from protocol and/or final results as it was not included in the publication

Follow-Up Versus Outcome in Select AML Trials

Trial	Median Survival (mos)	Median Follow-up (mos)	Enrolled (N)	Planned Events	OS HR	P-value
CLAVELA	3.5 vs 3.3 mos	< 6*	381	302	0.97	0.96
VALOR	7.5 vs 6.1 mos	~ 6*	711	562	0.87	0.0610
CLASSIC I	6.6 vs 6.3 mos	6.2	320	258	1.00	1.00
MIRROS	6.8 vs 7.7 mos	6.7	436	296	1.09	0.52
VIALE-A	15 vs 10 mos	20.5	433	270	0.66	**< 0.001**
VYXEOS	9.6 vs 6.0 mos	20.7	309	236	0.69	**0.003**
ADMIRAL	9.3 vs 5.6 mos	17.8	371	258	0.64	**< 0.001**
Uproleselan	13 vs.12.3 mos	37 (Mar '24)	388	295	TBD	TBD

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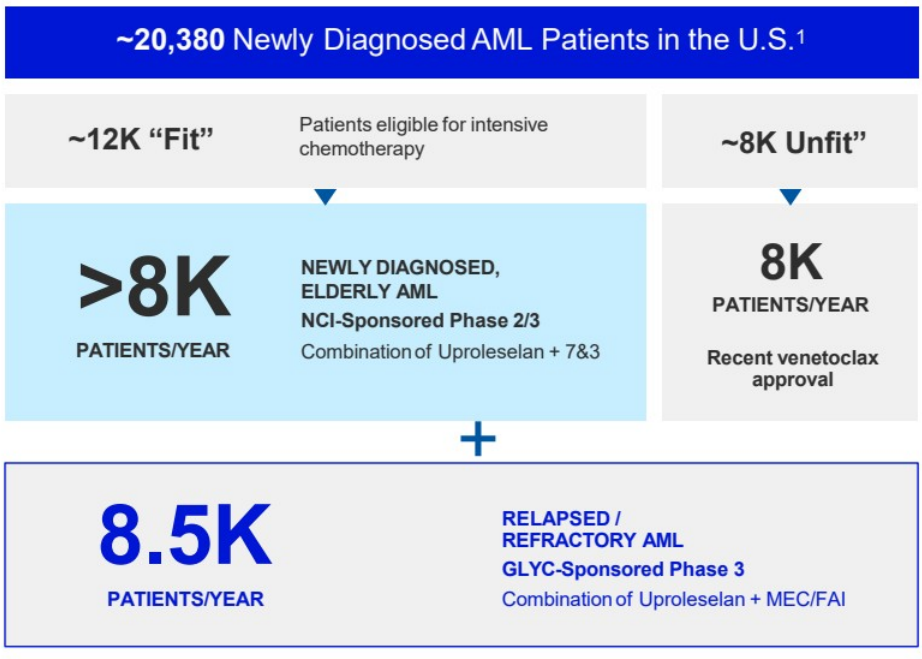
*Median follow-up at time of event trigger for CLAVELA and VALOR estimated from protocol and/or final results as it was not included in the publication

Potential Foundational Backbone Across Spectrum in AML



Uproleselan Value Proposition

- Improve achievement / depth of remission
- Extend overall survival
- Mitigate chemotherapy-related toxicity

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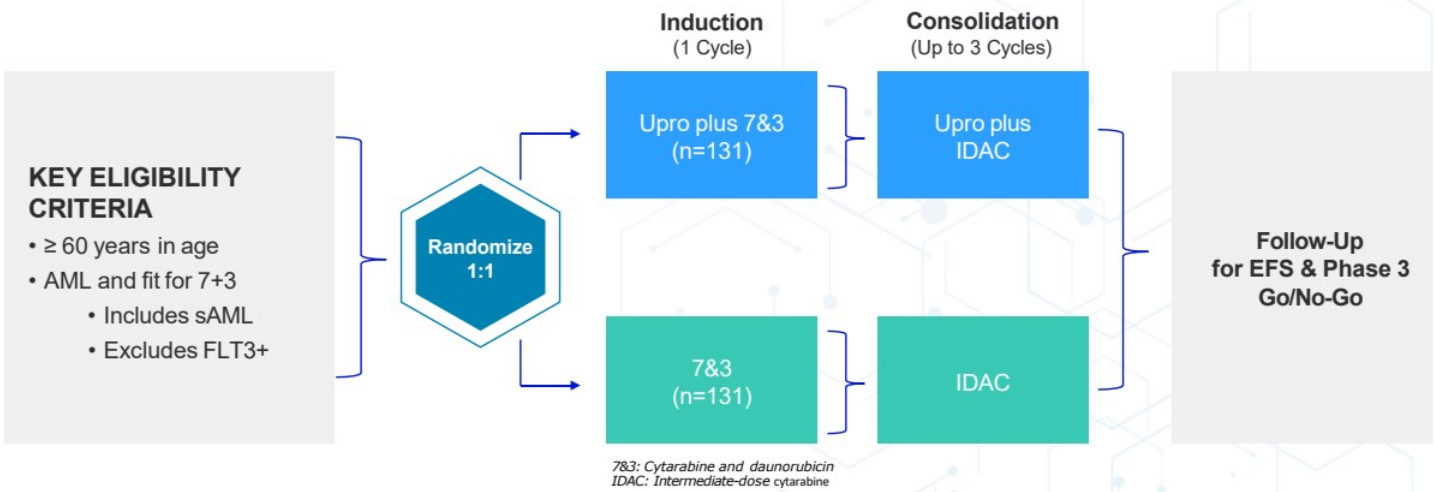
1. National Cancer Institute SEER Program. Cancer Stat Facts: Acute Myeloid Leukemia.

NCI / Alliance Frontline “Fit” AML Phase 2/3 Trial Design



7&3: Cytarabine and daunorubicin
IDAC: Intermediate-dose cytarabine

Enrollment of 267 Patients in Phase 2 Portion Completed in December 2021

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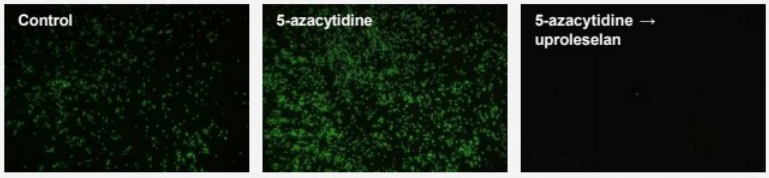
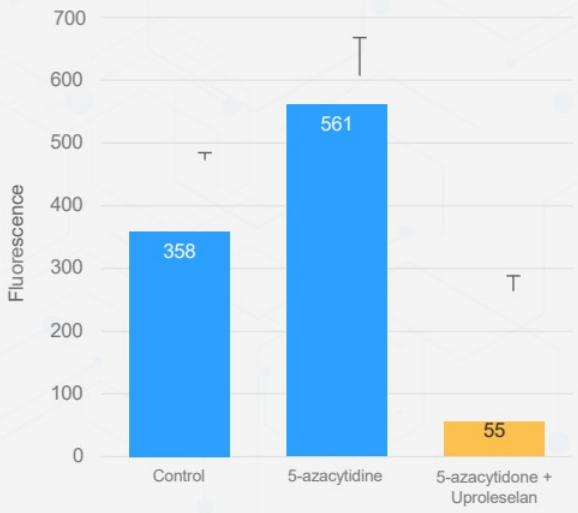
HMA Resistance is Driven by E-selectin, Broken by Uproleselan

UPROLESELAN INHIBITS BINDING OF BLASTS



KG1 AML cells were incubated for 96 hours in the absence or presence of 100 nM 5-azacytidine, labeled with calcein and allowed to adhere to E-selectin coated plates (control and 5-azacytidine above). After 45 minutes of adhesion, Uproleselan was added to the wells and fluorescence determined after 30 minutes

(5-azacytidine → Uproleselan above).



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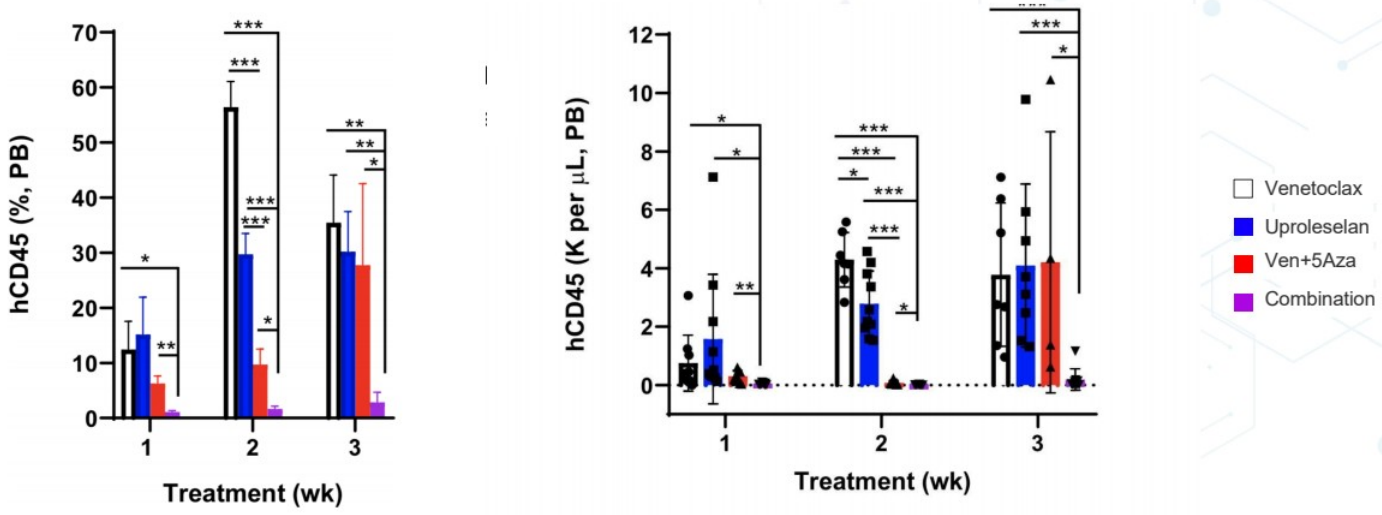
Targeting E-selection with GMI-1271 Overcomes Microenvironment-mediated Resistance to Venetoclax/HMA Therapy K.H. Chang, M. Muftuoglu, W.Zhang, M. Basyal, L. Ostermann, W.E.Fogler, J.L. Magnani, M. Andreeff, 2020

Uproleselan/ Venetoclax/ HMA Combination Significantly Reduces Leukemia Burden, Compared to Ven+5Aza Alone[1]

AML-PDX FROM A VENETOCLAX / HMA RESISTANT PATIENT



*p< 0.05; **p<0.01; ***p<0.001, Student's t-test for experiments that compare two groups.

ASH 2022/2023: First Clinical Uproleselan Data Generated Outside of GLYC-Sponsored Trials

Uproleselan data from two investigator-initiated trials presented at ASH in December 2022/2023

A Phase I Study of Uproleselan Combined with Azacitidine and Venetoclax for the Treatment of Older or Unfit Patients with Treatment Naïve Myeloid Leukemia B.A. Jonas, J.L. Welborn, N.S. Esteghamat, R.T. Hoeg, A.S. Rosenberg, L. Molnar, A. Linh Dang-Chu, S.L. steward, and J.M. Tuscano, 2022

Publication Number: 2764

Encouraging safety and evidence of disease activity

- **8 evaluable patients with poor prognosis**
  - 6/8 (75%) were ELN 2017 adverse risk disease
  - 3/8 (38%) had complex cytogenetics
- **Data outcomes**
  - 6/8 (75%) CR/CRi
    - 5/8 (63%) full CR
    - 1/8 (13%) CRi
      - 5/8 (63%) CR/CRi responses occurred with cycle 1
  - 4 CR/CRi MFC MRD negative
    - 50% overall MRD negative rate
    - 67% among CR/CRi responders

Uproleselan added to Cladribine Plus Low Dose Cytarabine (LDAC) in Patients with Treated Secondary Myeloid Leukemia (TS-AML) E.A. Huante, H. Kantarjian, K.S. Chien, C.D. DiNardo, N. Short, A. Maiti, G. Montalban, N. Daver, J.D. Kawedia, K. Bowie, S.A. Pierce, F. Ravandi, M. Konopleva, G. Garcia Manero, and T. M. Kadia, 2023

Publication Number: 2992

39% ORR in very high-risk patient population

- **18 evaluable patients**
  - All patients had unfavorable cytogenetics and had previously received treatment with a hypomethylating agent.
  - 11 patients (55%) had received prior treatment with venetoclax, and five (25%) had undergone stem cell transplantation.
- **Data outcomes**
  - Combination of Cladribine + LDAC with uproleselan overall well tolerated with few treatment-related AEs
  - Combination reduced bone marrow blasts in 13 (72%) patients
  - Three patients went on to receive a potentially curative hematopoietic cell transplantation (HCT)
  - Study investigators concluded data support this low-risk approach to marrow blast reduction and disease control in preparation for HCT

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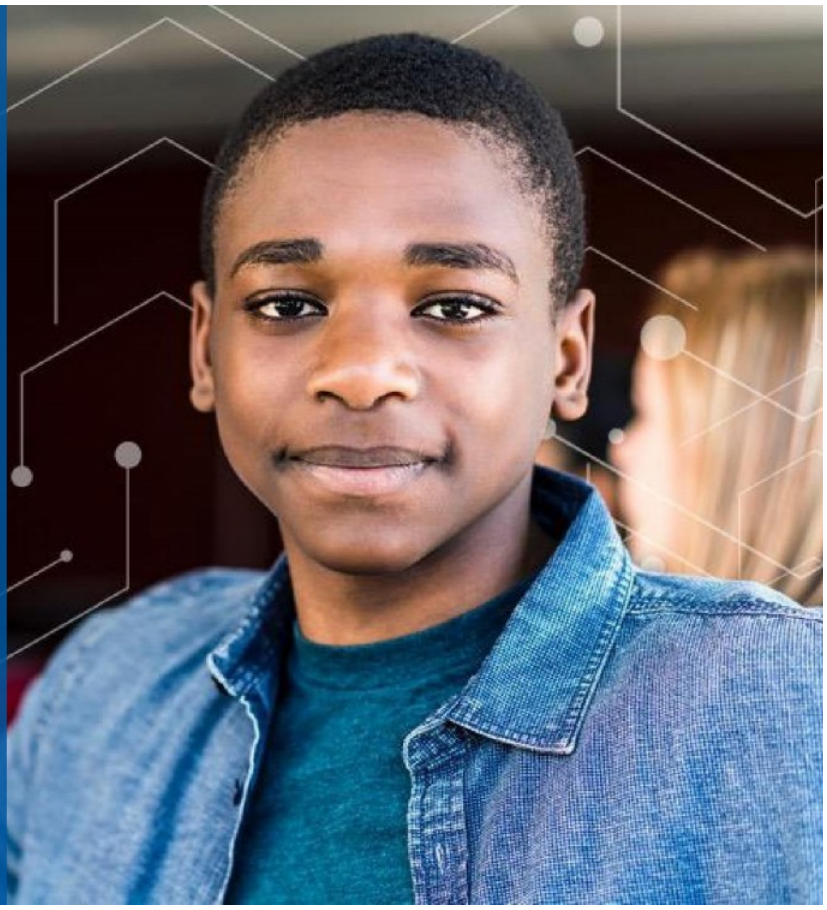
Treatment of Vaso-occlusive Crisis (VOC) in Patients with Sickle Cell Disease

GMI-1687



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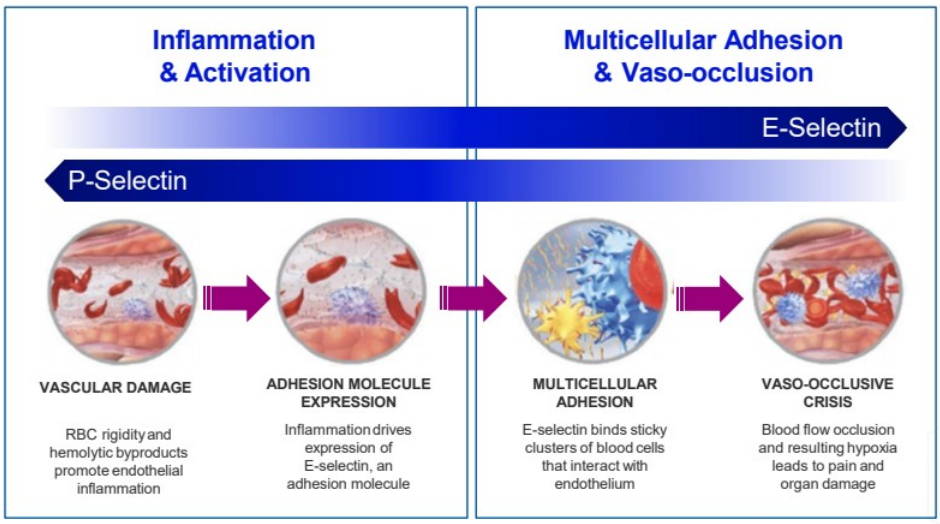
E-Selectin Mediates Multicellular Adhesion and Vaso-Occlusion



Data Supporting E-Selectin Role in Cellular Adhesion and Clotting

Preclinical

- E-selectin leads to rolling and cell arrest
- Blocking E-selectin inhibits leukocyte adhesion
- Blocking E-selectin restores blood flow in animal models of vessel occlusion in sickle cell disease

Clinical

- sE-selectin correlates with frequency of VOC
- sE-selectin correlates with poor survival
- Reduced sE-selectin correlated with clinical benefit in RESET trial (time to discharge)

E-selectin Antagonism Provides a Unique Therapeutic Target to Interrupt VOC in SCD patients

GlycoMimetics *Front. Immunol., 28 April 2021Sec. https://doi.org/10.3389/fimmu.2021.663886; Clin Hemorheol Microcirc. 2018; 68(2-3): 263–299.; Image adapted from https://www.rethinkscd.com*

Even with Prophylactic and Gene Therapy Approaches, VOC Will Remain A Significant Unmet Medical Need

On-Demand VOC Therapies
(Selected In Development)

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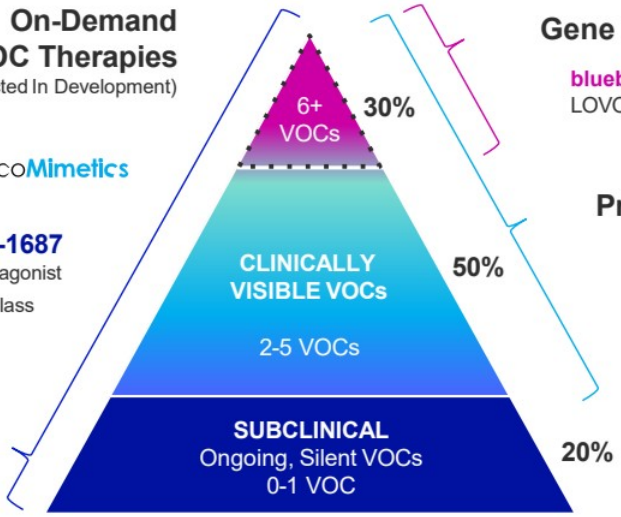
GMI-1687
E-selectin antagonist
First-in-class
Novel MoA



Gene Therapies (In Development)

bluebird bio	Editas Med.	Vertex/CRISPR	Beam Ther.
LOVO-CEL	EDIT-301	EXA-CEL	BEAM-101

Prophylactic Therapies

APPROVED

Multiple (generic)	Pfizer	Novartis
Hydroxyurea	Voxeletor	Crizanlizumab-tmca

PHASE 3

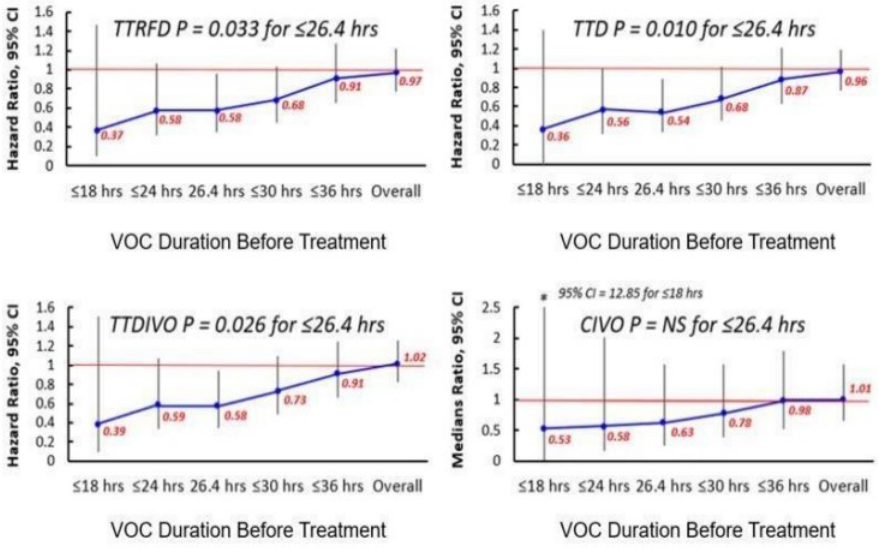
Pfizer	Novo Nordisk	Agios Pharma
Inclacumab; GBT021601	Etavopivat	Mitapivat

220,000 – 450,000 VOCs/year (in the era of prophylactic therapies)

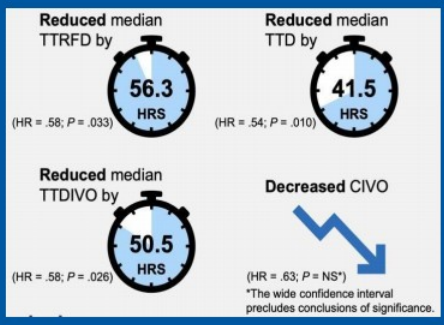
GlycoMimetics *Authorizationrevoked in EU

Dampier et al. 2017 American Society of Hematology Annual Meeting. Abstract# 4660.
N Engl J Med 2019; 381:509-51; N Engl J Med 2017; 376:429-439

Early Treatment Resulted in Clinical Benefit



For patients treated within first quartile of treatment (≤26.4hrs), a meaningful, statistically significant benefit was seen across study endpoints



TTRD = time to readiness for discharge; TTD = time to discharge; TTDIVO = time to discontinuation of IV opioids; CIVO = cumulative IV opioid use

Dampier et al, Blood 2023

GMI-1687 Seeks to Empower Patients to Take Control

Potentially **revolutionizing the treatment paradigm** to on-demand disease modifying therapy

Lessons Learned	GMI-1687
E-selectin drives VOC[1]	• **Fast-acting**, small molecule E-selectin antagonist to eliminate vaso-occlusion
Early treatment in VOC is critical	• Potential **self-administration** of GMI-1687 after patient recognizes VOC episode • 100% bioavailable in preclinical models following subcutaneous administration
Deliver full dose to stop VOC	• **Optimize dose and regimen** based on reductions in sE-selectin • Agreed to as part of FDA Pre-IND Meeting

Phase 1a Study Completed

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1 Morikis et al, Frontiers in Immunology, April 2021, Vol. 12, Article 663886

Potential Treatments in Oncology, Inflammation and Fibrosis

GALECTIN-3 INHIBITORS

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The Promise of Targeting Galectins

Potential to modulate the immune and inflammatory response to cancer and fibrosis

Target
Galectin-3 carbohydrate-binding protein

Chemistry
Rationally designed with proprietary platform

Differentiation
Compounds have high binding affinity and specificity for Galectin-3

Relevance
Central role in fibrosis and cancer

- Inflammation, aberrant cell activation/proliferation, fibrogenesis
- Blockade may prevent/reverse fibrosis following organ damage
- Antifibrotic/antitumor activity in various disease models

Orally Bioavailable

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Near-Term Catalysts and Promising, Glycobiology-based Pipeline

Uproleselan: Multiple Late-Stage Clinical Trials

- **Phase 3 trial** in R/R AML (n=388), topline results announced in Q2 2024
- **Fully enrolled Phase 2 trial** in front-line AML (n=267) ongoing, **NCI-sponsored**
- **Ongoing IITs** in other AML populations. Preliminary data presented at ASH 2022/2023
- **Novel MOA/first-in-class** → potential **broad utility** with **Breakthrough Therapy**, **Fast Track**, and **Orphan** designations

Promising Early-Stage Pipeline

- Novel small molecules inhibit carbohydrate signaling
- Potential application in multiple inflammatory diseases
- **GMI-1687**
  - Phase 1a trial in healthy volunteers completed
  - Initial indication: treatment of sickle cell disease (SCD) vaso-occlusive crisis (VOC)
  - Being developed for self-administration at time of VOC
- **Galectins**
  - Targeting fibrotic diseases
  - First oral Galectin-3 antagonist

Targeted Operational Execution

- Updating uproleselan plans and evaluatin financial guidance

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Thank You
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