LONGEVERON

A Regenerative Medicine Company

Stem cell therapies addressing life threatening conditions in the most vulnerable populations - children and the elderly

Investor Presentation

Nasdaq (LGVN) | May 2026

Forward Looking Statements

Certain statements in this press release that are not historical facts are forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, which reflect management's current expectations, assumptions, and estimates of future operations, performance and economic conditions, and involve known and unknown risks, uncertainties, and other important factors that could cause actual results, performance, or achievements to differ materially from those anticipated, expressed, or implied by the statements made herein. Forward-looking statements are generally identifiable by the use of forward-looking terminology such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expects," "intend," "looks to," "may," "on condition," "plan," "potential," "predict," "preliminary," "project," "see," "should," "target," "will," "would," or the negative thereof or comparable terminology, although not all forward-looking statements contain these words, or by discussion of strategy or goals or other future events, circumstances, or effects. Factors that could cause actual results to differ materially from those expressed or implied in any forward-looking statements in this release include, but are not limited to, the ability of our clinical trials to demonstrate safety and efficacy of our product candidates, and other positive results; our ability to successfully transition toward a more capital-efficient, asset-light operating model; our ability to secure one or more strategic licensing partnerships for our stem cell therapy laromestrocel in our development programs; the ability to reach alignment with the FDA on a potential path toward regulatory approval; receipt of trial results and other available evidence sufficient to support the Company filing a BLA following the readout of top-line results of the ELPIS II data; the timing and focus of our ongoing and future preclinical studies and clinical trials, and the reporting of data from those studies and trials;; market and other conditions, our cash position and need to raise additional capital, the difficulties we may face in obtaining access to capital, and the dilutive impact it may have on our investors; our financial performance, and ability to continue as a going concern; the period over which we estimate our existing cash and cash equivalents will be sufficient to fund our future operating expenses and capital expenditure requirements; the ability of our clinical trials to demonstrate safety and efficacy of our investigational product candidates, and other positive results; the timing and focus of our ongoing and future preclinical studies and clinical trials, and the reporting of data from those studies and trials; the size of the market opportunity for certain of our investigational product candidates, including our estimates of the number of patients who suffer from the diseases we are targeting; our ability to scale production and commercialize the investigational product candidate for certain indications; the success of competing therapies that are or may become available; the beneficial characteristics, safety, efficacy and therapeutic effects of our investigational product candidates; our ability to obtain and maintain regulatory approval of our investigational product candidates in the U.S. and other jurisdictions; our plans relating to the further development of our investigational product candidates, including additional disease states or indications we may pursue; our plans and ability to obtain or protect intellectual property rights, including extensions of existing patent terms where available and our ability to avoid infringing the intellectual property rights of others; the need to hire additional personnel and our ability to attract and retain such personnel; and our estimates regarding expenses, future revenue, capital requirements and needs for additional financing.

Further information relating to factors that may impact the Company's results and forward-looking statements are disclosed in the Company's filings with the Securities and Exchange Commission, including Longeveron's Annual Report on Form 10-K for the year ended December 31, 2025, filed with the Securities and Exchange Commission on March 17, 2026, its Quarterly Reports on Form 10-Q, and its Current Reports on Form 8-K. The Company operates in highly competitive and rapidly changing environment; therefore, new factors may arise, and it is not possible for the Company's management to predict all such factors that may arise nor assess the impact of such factors or the extent to which any individual factor or combination thereof, may cause results to differ materially from those contained in any forward-looking statements. The forward-looking statements contained in this press release are made as of the date of this press release based on information available as of the date of this press release, are inherently uncertain, and the Company disclaims any intention or obligation, other than imposed by law, to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.

LONGEVERON

Corporate Overview

Corporate Overview: Repositioning LGVN for Long-Term Growth

Strategic Leadership: Led by newly appointed CEO Steve Willard (Feb 2026), a veteran with a proven record of achieving $1B+ valuations and executing $330M+ licensing deals.

The "New LGVN": Under new leadership, LGVN is shifting to a capital-light model, re-sequencing the potential BLA preparedness activities timeline to prioritize the HLHS August 2026 data readout and extend operating runway.

Programs: Our laromestrocel (Lomecel-B®) stem cell therapy has four actionable opportunities for licensing: Hypoplastic Left Heart Syndrome (HLHS), Pediatric Dilated Cardiomyopathy (PDCM), Alzheimer's Disease (AD) and Aging-related Frailty (AF).

New Focus on Licensing: Focus on securing high-value global licensing opportunities for laromestrocel.

Cash Runway: In March 2026, the Company completed a financing of up to $30M with fundamental investors led by Coastlands Capital and Janus Henderson.

- **Pipeline-in-a-Product: Laromestrocel (Lomecel-B®)** A first-in-class allogeneic cell therapy with **five FDA expedited designations** (RMAT, Fast Track, Orphan Drug, and Rare Pediatric Designations).
- **Scientific Leadership**: Longeveron was co-founded by stem cell researcher Joshua Hare, M.D., who did his medical training at University of Pennsylvania, Johns Hopkins, and Harvard, and is currently the Founding Director of the Interdisciplinary Stem Cell Institute and Chief Science Officer at the University of Miami Miller School of Medicine.
- **IP Strength**: Supported by a robust portfolio of 50+ issued patents and 60+ pending patents worldwide, enhancing the licensing potential.
- **Industry Recognition**: Longeveron has published numerous scientific papers regarding laromestrocel. These include reports of its clinical trials in prestigious scientific journals, including *Nature Medicine* and *Cell Stem Cell.*

Lead Indication: Pediatric Heart Failure (HLHS)

Hypoplastic Left Heart Syndrome ("HLHS"): Is a congenital heart birth defect that is a terminal orphan condition with no approved medicinal therapies.

- **Current Treatment Plan:** The standard treatment for HLHS is a series of three complex heart reconstruction surgeries performed over the first five years of life to redirect blood flow, although many patients still face significant long-term risks such as right ventricular failure.
- **The Problem:** Current surgical standards result in an up to 50% mortality rate by adolescence due to right ventricular failure.
- **The Solution:** By injecting laromestrocel into the right ventricle during the 2nd surgery, we focus on addressing the underlying cause of right ventricular failure in HLHS infants.

- **Clinical Signal:** Phase 1 (ELPIS I) demonstrated 100% transplant-free survival at 5 years, compared to a historical 20% mortality/transplant rate for patients following the standard surgical care**.**
- **The Binary Catalyst:**
  - The **Phase 2b** trial (ELPIS II) is fully enrolled (n=40).
  - Top-line 12-month **data expected in August 2026.**
  - Total Addressable Market is approx $1B Annually (U.S.).
- **PRV:** Our HLHS Program may be eligible for a Priority Review Voucher (PRV) upon BLA approval (value approx. $150 to $200 Million, based on recent PRV sales).

This event is a primary driver for a valuation re-rating mirrored to recent peer successes (CAPR).

Addressing Unmet Medical Needs of Chronic and Life-threatening Conditions

Hypoplastic Left Heart Syndrome (HLHS)

- One of the most severe pediatric congenital heart conditions
- Cause unknown
- Devastating for patient & family
- Limited treatment options
  - Series of surgical repairs
  - Heart transplant
- HLHS accounts for 2-3% of all congenital heart disease

Pediatric Dilated Cardiomyopathy (PDCM)

- Pediatric cardiomyopathies affect at least 100,000 children worldwide
- Nearly 40% of children with DCM require a heart transplant or die within two years of diagnosis
- Effective treatment options are limited
- Current treatment focuses on managing symptoms, improving heart function, & preventing complications rather than addressing the underlying cause or causes

Alzheimer's Disease (AD)

- 1 in 3 older adults dies with Alzheimer's or another dementia
- AD kills more than breast cancer and prostate cancer combined
- In 2024, AD and other dementias cost U.S $360 billion
- Between 2000 and 2021, deaths from AD have increased 141% *(deaths from heart disease have decreased 2.1%)*

Aging-related Frailty (AF)

- By 2030, 1 in 6 people in the world > 60 years old, representing over 1.4 billion people
- In 2020, # of people > 60yrs outnumbered children <5yrs
- Accumulation of molecular and cellular damage with the passage of time
- Gradual decrease in physical & mental capacity, a growing risk of disease and death

Follow-on Indications: PDCM & AD

Pediatric Dilated Cardiomyopathy (PDCM)

- **Strategic Expansion**: Leveraging the cardiac survival signal from HLHS, the Company applied for and the FDA approved an IND for a single Phase 2 registration study in PDCM.
- **Monetization Asset**: This program represents a high-value follow-on asset designed for strategic licensing to global pharmaceutical partners post-HLHS data.
- **Timing:** 2027 or upon adequate funding
- **Trial Size:** 70
- **Total Addressable Market:** $1B+ Worldwide
- **FDA Designation Potential:** As a single Phase 2 registrational study, this proposed trial could be sufficient for BLA application pending the trial results, and could potentially be eligible for Rare Pediatric Disease and Orphan drug designations, opening the possibility for a second PRV.

Alzheimer's Disease (AD)

- **Differentiated Data**: Recently completed Phase 2a trial showed positive results in brain volume preservation (CLEAR MIND) and other endpoints. Results published in *Nature Medicine*.
- **Regulatory Edge**: (*to Company's knowledge) laromestrocel is the only cellular therapeutic currently holding an FDA RMAT designation for Alzheimer's disease.
- **Partnership Focus**: Currently seeking a global partner to fund and execute a single Phase 2/3 registration trial.
- **Strategic Growth (Alzheimer's):** *Only cellular therapeutic with RMAT designation; recently completed Phase 2a with positive brain volume data.

Program Snapshot & Prioritization

Program	Path Forward	Current Status	Clinical Data Signal	Corporate Priority	FDA Designation
HLHS (Pediatric Heart Failure)	License Deal (immediate)	Phase 2b Fully Enrolled (n=40)	Phase 1 demonstrated **100% 5-year transplant-free survival vs 70-80%** based on historical data	**August 2026** (Top-line 12-month data)	**Priority Review Voucher (PRV)** possible upon BLA approval
Alzheimer's Disease (AD)	License Deal (immediate)	**Phase 2a Complete** (CLEAR MIND); Seeking Strategic Partner	Demonstrated positive results in **brain volume preservation**	Grant funding and licensing partner for potential Phase 2/3 Registration trial	**FDA RMAT Designation** (*Only cellular therapy in AD with this status)
Pediatric Dilated Cardiomyopathy (PDCM)	License Deal (Est. 2028)	**Phase 2 Readiness**; FDA-approved IND	Leverages cardiac survival signal from the HLHS program	**2027** (Proposed Trial Initiation pending funding)	Positioned as a high-value monetization asset for global licensing
Aging-related Frailty	License Deal or Partnerships (Est. 2026)	Phase 2b completed Study published in Cell Stem Cell	Trial results show a positive efficacy signal to improve functional capacity and quality of life in older individuals	Evaluating options for partnerships in orthopedic markets	N/A

Strategic Value of the IP Portfolio

At a sub $50 M market cap, the market is assigning **negative value** to our operating assets, essentially treating 50+ issued patents as a zero-value line item. This creates a massive **Value Gap** compared to our IP-protected peers who have achieved billion-dollar valuations on similar clinical signals.

Pillar 1: Robust Intellectual Property (The Moat)

- **110+ Global Patent Assets:** 50+ issued and 60+ pending patents covering both composition-of-matter and method-of-use.
- **Protection:** IP covers uses of laromestrocel for aging-related conditions, Alzheimer's, HLHS, and inflammation.
- **Critical Manufacturing Assets:** Proprietary **potency assays** and cell-processing IP create significant barriers to entry for biosimilars.

Pillar 2: Regulatory Exclusivity (The Timeline)

- **12-Year Market Exclusivity potential:** Targeted upon BLA approval for HLHS, leveraging both Orphan Drug (7 years) and pediatric-specific pathways.
- **High-Value Designations:** 5 FDA expedited designations (RMAT, Fast Track, Orphan, Rare Pediatric) that accelerate the pathway to exclusivity.

Pillar 3: Monetization Pathways (The Value Transition)

- **Immediate Licensing Assets:** Alzheimer's (RMAT-designated) and PDCM programs are currently positioned for global licensing to capture non-dilutive capital.
- **The $200M "Floor":** Eligibility for a Priority Review Voucher (PRV) upon BLA approval, providing a liquid asset currently valued at a significant multiple over our total market cap (note, recent PRV sales ranged from $150-$200 M).

Patent counts and exclusivity timelines are estimates based on current filings and existing FDA regulations. Eligibility for the PRV is contingent upon the successful approval of a Biologics License Application (BLA) for a designated Rare Pediatric Disease.

Valuation Details

Key Investor Takeaways

Public-market precedent exists for allogeneic cell therapy companies achieving **$1B+ valuations** prior to U.S. commercial revenue, particularly in rare and life-threatening indications.

Capricor Therapeutics provides a relevant valuation and regulatory precedent:

- Market capitalization expanded from **< $10M to ~$1B over ~4 years**
- Valuation inflection driven by late-stage clinical progress, **frequent FDA Type B meetings**, and a **non-dilutive partnership**
- Entered a major collaboration with **Nippon Shinyaku** (~$75M non-dilutive capital; ~$700M headline value)

Mesoblast further demonstrates investor support for MSC-based products addressing serious inflammatory and cardiovascular conditions

Longeveron trades at a significant discount relative to these peers despite:

- Multiple FDA expedited program designations (RMAT, Fast Track, Orphan Drug, Rare Pediatric Disease)
- Positive clinical data across multiple Phase 2/ 2b studies
- A differentiated **pipeline-in-a-product** strategy spanning pediatric and aging-related indications

Near-Term Value Inflection Drivers (LGVN)

- ELPIS II top-line data in Hypoplastic Left Heart Syndrome (August 2026)
- Pre-BLA and continued FDA engagement in HLHS
- Planned single Phase 2/3 trial in Alzheimer's disease with BLA-enabling potential
- Advancement of Pediatric Dilated Cardiomyopathy into study

Longeveron is poised to achieve inflection points similar to those enjoyed by our competitors.

Public Market Comparables

Metric	Mesoblast Ltd	Capricor Therapeutics	Longeveron Inc.
Ticker	NASDAQ: MESO	NASDAQ: CAPR	NASDAQ: LGVN
Market Capitalization* (subject to market changes)	~$1.5–2.5B	~$1.1–1.3B	~sub $50M
Core Technology	Allogeneic mesenchymal stem cells (MSCs)	Cell and exosome-based therapies	Allogeneic MSCs (laromestrocel)
Lead Indication(s)	GVHD; cardiovascular & inflammatory diseases	Duchenne muscular dystrophy (DMD)	HLHS, AD, PDCM, Aging-related Frailty
Clinical Stage	Commercial ex-US; late-stage / post-approval programs	Late-stage (Phase 3)	Phase 2 / 2b completed or ongoing
Regulatory Positioning	Multiple FDA interactions; Fast Track / Orphan programs	RMAT; orphan-focused development	RMAT, Fast Track, Orphan Drug, Rare Pediatric Disease

Public Market Comparables Value Inflection Point

Capricor Therapeutics (NASDAQ: CAPR)

Inflection Point	Date	Valuation Prior (Market Cap)	Valuation After / Impact
Pre-Phase 3 Results	Nov 2025	~$150M - $300M	**Quiet Period:** Stock traded in the **$4.00 - $6.00** range with relatively low volume.
HOPE-3 Topline Results	Dec 2025	~$500M	**Parabolic Move:** The stock shot from ~$6.00 to over **$30.00**, driving the market cap above **$1.5B**.
Regulatory Update	Jan/Feb 2026	~$1.5B	**Correction/Consolidation:** Settled to a market cap of **$1.1B - $1.3B** as the company prepared its final BLA submission.

Mesoblast Ltd (NASDAQ: MESO / ASX: MSB)

Inflection Point	Date	Valuation Prior (Market Cap)	Valuation After / Impact
FDA Rejection (CRL)	Aug 2023	~$450M - $500M	**Crash:** Stock fell **63.9%** in a single day as the market priced in a multi-year delay.
FDA "Adequate Data" Signal	Mar 2024	~$180M (End of 2023)	**Surge:** Shares jumped **78.6%** after the FDA confirmed existing Phase 3 data was sufficient for resubmission.
BLA Acceptance	July 2024	~$2.2B	**Growth:** Market cap climbed toward the $2B mark as confidence in a 2025 approval grew.
PDUFA/CLBP Path Clarity	Jan 2026	~$2.3B	**Stabilization:** Market cap stabilized around **$2.4B - $2.8B** after the FDA provided a clear roadmap for back pain (CLBP) therapy.

Valuation Floor - Longeveron potential shot on goal for PRV

Underpinning Our Valuation Floor: ~$200M PRV Asset Alone

- **Pipeline-in-a-Product: laromestrocel** is a first-in-class allogeneic cell therapy with **five FDA expedited designations** (RMAT, Fast Track, Orphan, Rare Pediatric).
- **The Potential $200M Value Floor:** Due to HLHS Rare Pediatric Disease status, LGVN is eligible for a Priority Review Voucher (PRV) upon BLA approval. PRVs have reached a market value of ~$200 million, a contingent asset worth a significant multiple over LGVN's current market cap.
- **Regulatory Asset**: Following the February 2026 reauthorization of the Rare Pediatric Disease program, LGVN is eligible for a Priority Review Voucher (PRV) upon HLHS approval for a BLA.
- **Lead Indication (HLHS):** Rare pediatric heart failure; fully enrolled; Phase 2b clinical data in August 2026.

Recent Voucher Sale Details

- ***4/2026 - $180M by Rocket Pharmaceuticals***
- ***1/2026 - $200M by Jazz Pharmaceuticals***
- ***9/2025 - $175M by Merck***
- ***6/2025 - $160M by Bavarian Nordic***
- ***5/2025 - $155M by Abeona Therapeutics (Pediatric)***
- ***2/2025 - $150M by Zevra Therapeutics (Pediatric)***
- ***12/2024 - $150M by Acadia Pharmaceuticals (Pediatric)***
- ***11/2024 - $150M by PTC Therapeutics (Pediatric)***
- ***8/2024 - $158M by Ipsen Biopharmaceuticals (Pediatric)***

In its March 2026 Private Placement financing, the Company agreed to sell to the participating investors an interest in 50% of proceeds received from the potential future sale of a Rare Pediatric Disease Priority Review Voucher, to the extent received from the U.S. FDA in connection with the Company's laromestrocel program for HLHS.

Why LGVN? Why Now?

LGVN Near-Term Value Inflection Drivers

Milestone	Indication	Timing
Ph 2b Top-Line Data Readout	**HLHS (ELPIS II):** Fully enrolled (n=40) trial - Top-line 12-month data in HLHS	**August 2026**
Strategic Licensing	**Alzheimer's (AD):** Seeking global partnerships for a single Phase 2/3 trial following positive CLEAR MIND brain volume data.	**Ongoing 2026**
Trial Initiation	**Pipeline Expansion**: Leveraging the HLHS cardiac signal to start a registration study in Pediatric DCM, the FDA has approved an IND for a single Phase 2 registration study.	**2027**

Strategic Investment Thesis: The Valuation Disconnect

- **Key Investor Takeaways**
  - $1B+ Valuation Precedent: Validated public-market peers (Capricor, Mesoblast) demonstrate that allogeneic cell therapy products addressing rare, life-threatening heart conditions can achieve billion-dollar valuations prior to U.S. commercial revenue.
  - The "Capricor Blueprint": Capricor (CAPR) provides a direct regulatory and valuation roadmap, having expanded from <$10M to ~$1B over four years via late-stage clinical progress and a $1.5B multi-stage partnership with Nippon Shinyaku.
  - The potential $200M PRV "Floor": LGVN's Rare Pediatric Disease designation is a high-value asset; recent Priority Review Voucher (PRV) sales in early 2026 have reached $200 million (Jazz Pharmaceuticals), potentially valuing this single regulatory asset at a significant multiple over LGVN's current market cap.
  - New Strategic Leadership: CEO Steve Willard (Feb 2026) brings a proven pedigree, including a 50% overhead reduction at NRx Pharmaceuticals and a 2000% stock price increase at Cellphire.

Longeveron: A Restructured Path to Value.

- **Longeveron trades at a massive discount to peers despite holding the same high-value ingredients**:
  - Validated Clinical Signal: ELPIS I (Phase 1) demonstrated 100% transplant-free survival at 5 years in HLHS infants—a terminal condition where the standard of care survival is only ~70-80%.
  - Capital Efficiency: Revised operational strategy extends cash runway by re-sequencing BLA-enabling activities to focus on the ELPIS II data.
  - Pipeline-in-a-Product: A single, scalable allogeneic MSC (laromestrocel) with five FDA expedited designations (RMAT, Fast Track (x2), Orphan, Rare Pediatric) across pediatric cardiology and Alzheimer's disease.

Therapies for life-threatening, rare pediatric & chronic aging-related conditions

POSITIVE CLINICAL DATA

- Positive data in 5 clinical trials across 3 indications
- Well established safety profile

REGULATORY PATHWAY TO BLAs

- FDA Type C mtg for HLHS & on-going Phase 2b trial
- FDA Type B mtg for AD; planned single, Phase 2/3 clinical trial

5 FDA DESIGNATIONS

- HLHS: Orphan Drug, Fast Track & Rare Pediatric Disease
- AD: Regenerative Medicine Advanced Therapy (RMAT) & Fast Track

LARGE U.S. MARKETS

HLHS: ~$1 billion

PDCM: ~$1+ billion

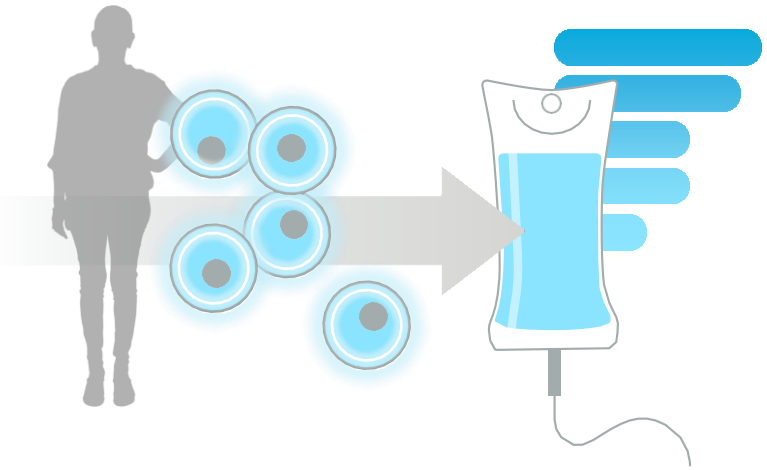
AD: ~$5+ billion

Aging-related Frailty: ~$4+ billion

Clinical pipeline in Hypoplastic Left Heart Syndrome (HLHS), Pediatric Dilated Cardiomyopathy (PDCM), Alzheimer's disease (AD), and Aging-related Frailty (AF)

Cellular Therapy Laromestrocel (Lomecel B™) -- A Pipeline in a Product

- Stem cell therapy uses stem cells to repair, regenerate or replace damaged or diseased cells in the body
- Allogeneic (donor-derived) mesenchymal stem cells (MSCs) isolated from bone marrow of healthy young adults (18 to 45)
- Cells are culture-expanded - replicated under controlled laboratory conditions - into the billions
- After a specific number of expansion cycles called “passages”, the cells are harvested, separated into specific doses (e.g. 50 million cells), and frozen until future use in patients
- Laromestrocel development programs:
  - Hypoplastic Left Heart Syndrome (HLHS) - on-going Phase 2b trial
  - Pediatric Dilated Cardiomyopathy (PDCM) – IND approval for single Phase 2
  - Alzheimer’s disease (AD) - completed through Phase 2a
  - Aging-related Frailty (AF) - completed through Phase 2b



Laromestrocel -- A Pipeline in a Product

	Global Patient Population	Phase 1	Phase 2	Phase 3	Milestones
Hypoplastic Left Heart Syndrome	**> 30,000[1]**				• Ph2b enrollment completed, Top-line data anticipated Aug 2026 • Rare Pediatric Disease, Orphan Drug, Fast Track Designations
Pediatric Dilated Cardiomyopathy	**100,000[2]**	Phase 1 not required*			• IND approved 2025 • *FDA confirmed possible single Ph2b/3 study (no Ph1)
Alzheimer's Disease	**> 32 million[3]**				• Completed through Ph2a • RMAT & Fast Track Designations • Results published in *Nature Medicine* ('25)
Aging-related Frailty	**70-100 million[4]**				• Completed Ph2b Multi-Dose trial • Results published in *Cell Stem Cell* ('26)

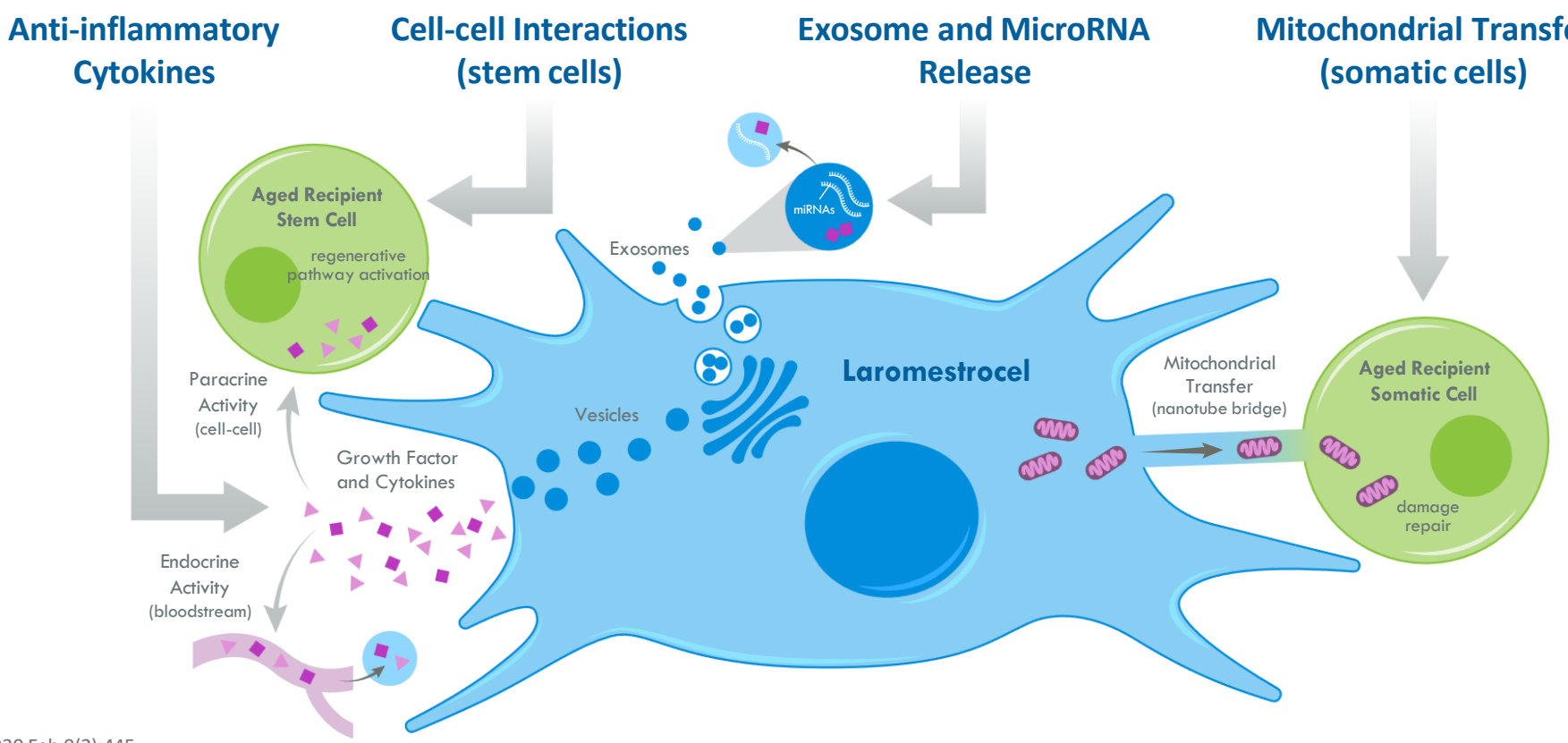
[1] Global patient population estimated using prevalence in first world countries, incidence of 2.6 HLHS patients/10,000 live births and 130 million births per year. U.S. HLHS prevalence is ~1,000 patients per year. E.U., Japan, and China incidence rates range from ~2.1 to 2.8 per 10K live births. Sources: Bakker MK, et al. *BMJ Open*. 2019;9(7); POLI (GlobalData); U.N. Dept Economic and Social Affairs, 2015; ClearView Analysis, 2022. [2] Malinow I, et al. *Front Pediatr.* 2024;19(12). [3] Based on 2022 estimate of global persons >50 years of age with AD (32 million) and prodromal AD (69 million), not including preclinical AD, as reported in Gustavsson A, et al. *Alzheimer's Dement.* 2023;19(2):658-670.
[4] Estimate based calculation using global incidence of frailty among community-dwelling adults 60 years or older reported as 43.4 new cases per 1000 person-year, as reported in Ofori-Asenso R, et al. *JAMA Network Open* 2019;2(8), and global population size of 8.1 billion persons (Pew Research Center, 2025).

Laromestrocel Multiple Potential Mechanisms of Action (MOA)

Pro-vascular, Pro-regenerative and Anti-inflammatory: Repairs Tissue and Promotes Healing

Potential Laromestrocel Key Advantages:

- Superior efficacy for addressing inflammation
- Cells migrate to sites of tissue damage
- Enhanced safety as inherently Immuno-evasive
- Convenient off-the-shelf administration



Jimenez-Puerta GJ, et al. *Journal of Clinical Medicine*. 2020 Feb;9(2):445.
Mazhari R and Hare JM. *Nature Clinical Practice Cardiovascular Medicine*. 2007 Feb;4(1):S21-6.

Laromestrocel Potential Mechanisms of Action

Potential Mechanisms of Action

- Pro-vascular/pro-endothelial
- Anti-inflammatory
- Anti-fibrotic
- Stimulate intrinsic regenerative/repair

These mechanisms support use in:

- Diseases with endothelial dysfunction
- Inflammation
- Fibrosis
- Need for endogenous repair

Laromestrocel for Hypoplastic Left Heart Syndrome (HLHS)

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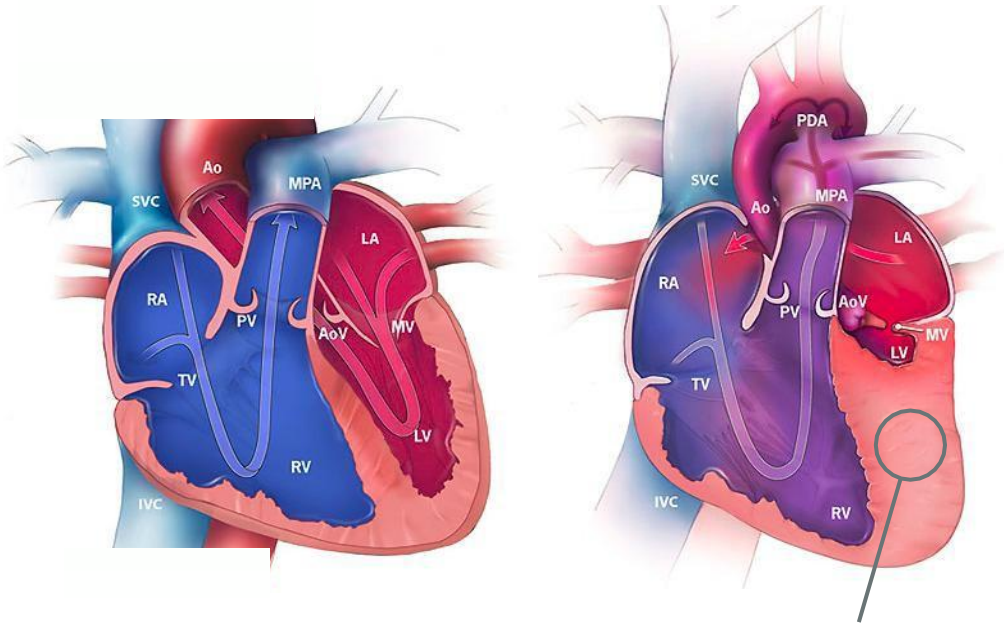
Significant Unmet Need in HLHS

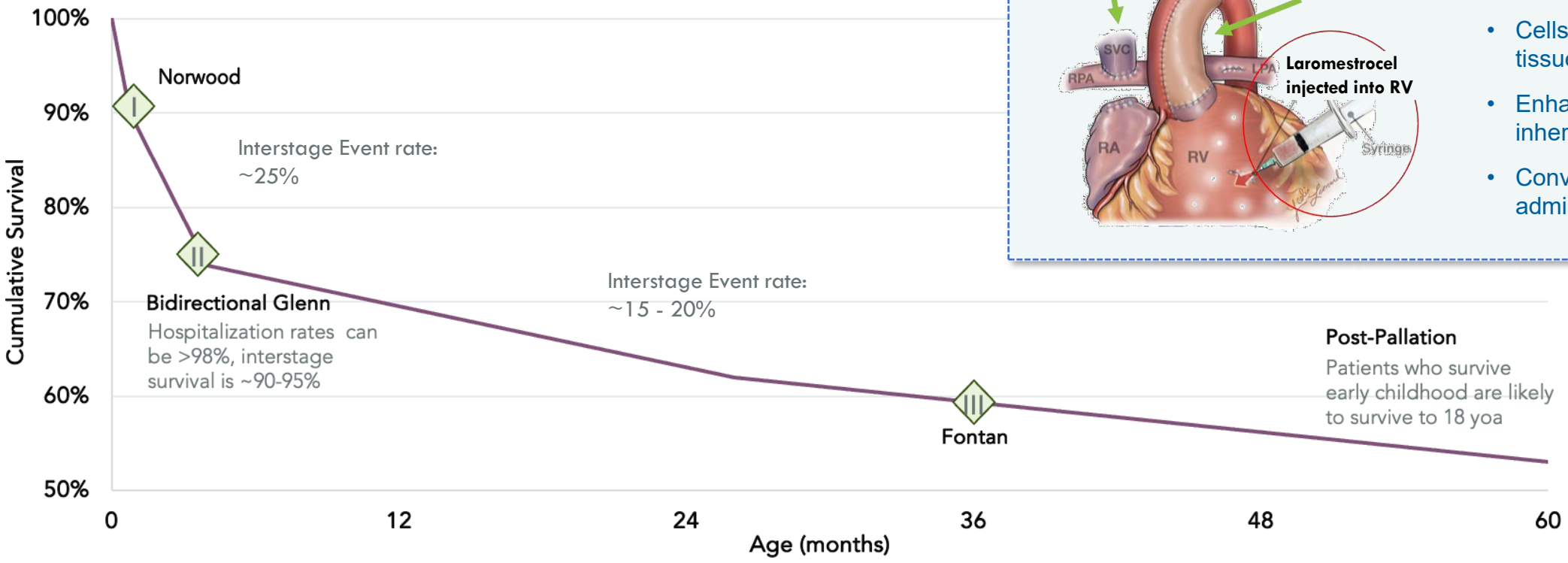
- Rare congenital heart defect: Univentricular malformation
- Children with HLHS require 3 staged open-heart surgeries for survival
- Even with surgery, survival to adolescence estimated at only 50% to 60%[2]
- 5 years transplant-free survival ~80%[3,4]
- Urgent need for additional strategies to boost RV performance and survival



Normal Heart HLHS

1. Ohye RG, et al. Comparison of shunt types in the Norwood procedure for single-ventricle lesions. The New England journal of medicine (2010) 362:1980-92. 2. Newburger JW, et al. Transplant-Free Survival and Interventions at 6 Years in the SVR Trial. Circulation(2018) 137:2246-2253. 3. Kaushal S, et al. Long-Term Transplant-Free Survival is Improved in Hypoplastic Left Heart Syndrome with Cell-Based Therapy. 2023 American Heart Association Scientific Meeting. Philadelphia, PA (11 – 14 Nov 2023). 4 Lynch et al. Outcomes of Children with Hypoplastic Left Heart Syndrome and Heart Failure on Medical Therapy (2024) JACC: Advances 3:100811.

Laromestrocel - a potential therapy for HLHS administered during the stage II Glenn surgery



Laromestrocel administered into RV during stage II surgery

- Administration via intramyocardial injection has been clinically shown to enhance cell retention and integration with cardiac tissue, and reduce scar size*
- Cells migrate to sites of tissue damage
- Enhanced safety as inherently immuno-evasive
- Convenient off-the-shelf administration

With surgery alone, 5-years transplant-free survival is ~55%

The first 5-years of life carries the largest burden of mortality for HLHS children

Interstage and cumulative survival rates from: https://www.lhm.org.uk/hypoplastic-left-heart-syndrome/. Additional sources: Goldberg CS, et al. Circulation. 2023;148(17); Best. Front Ped. 2021; Liu. J Am Heart Assoc. 2018; Newburger. Circulation. 2018. Image adapted from: Bittle et al., Circulation Res. 2018;123:288-300. *Tran TTH et al, *Regen Therapy*. 2025 Dec;30:812-837.

Long-term Survival Data Presented at 2024 Congenital Heart Surgeon's Society Annual Meeting

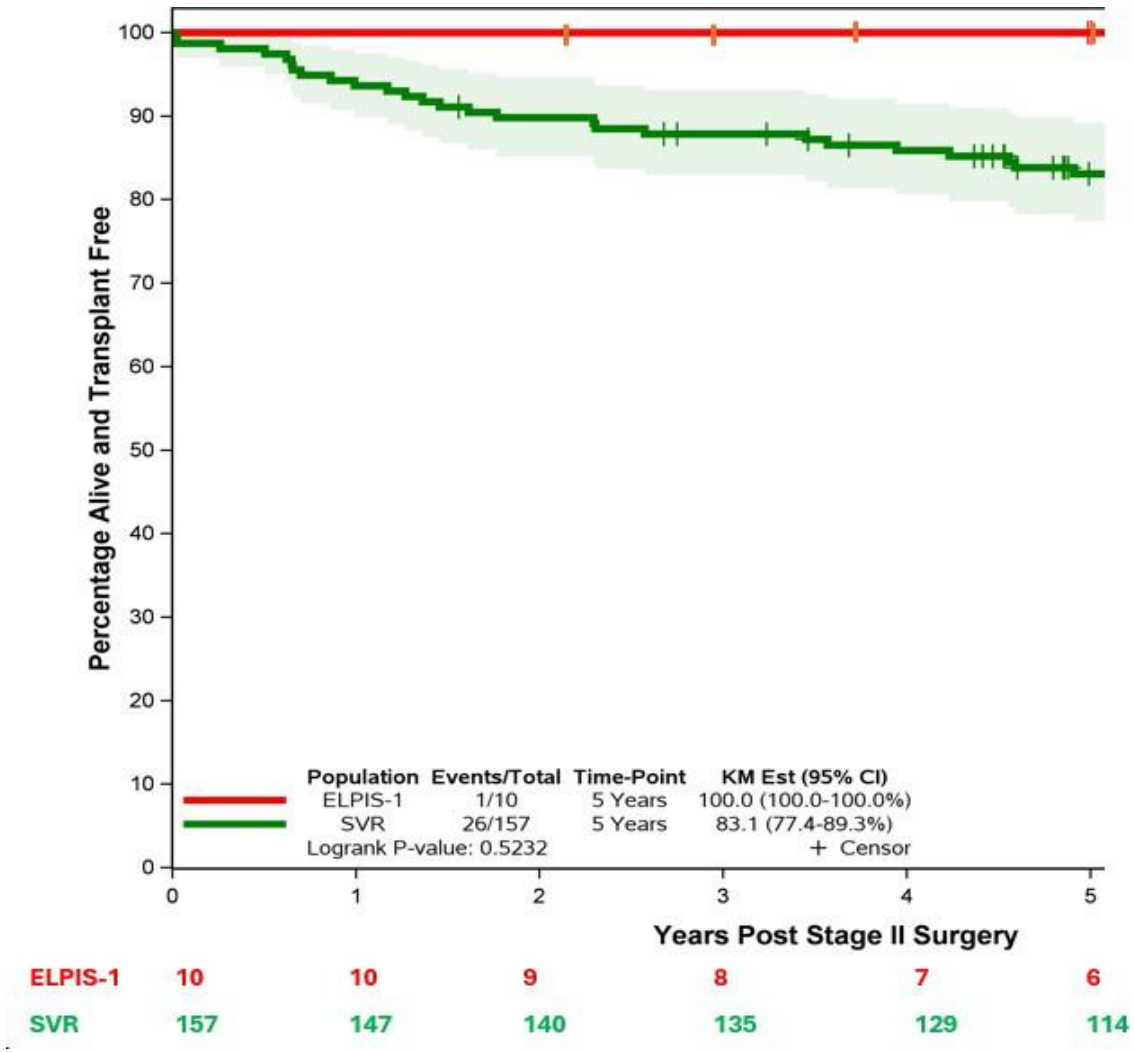
ELPIS I - 100% transplant-free survival for 10 patients up to 5 years post Glenn surgery

- ELPIS I met its primary endpoint of safety through 1-year post-treatment, with 100% survival rate, 100% transplant-free and patients maintained expected rate of growth one year after treatment
- 5-year survival data show 100% transplant free survival (NNT 5)
- 5-year transplant-free compared to 80% in a propensity-matched historical control group.[1,2,3,4]
- No laromestrocel related safety issues were reported
- No Major Adverse Cardiovascular Events (MACE) were reported during the study
- Findings support the use of laromestrocel as a potential adjunct to HLHS reconstruction surgery to improve transplant-free survival

1. Ohye RG, et al. Comparison of shunt types in the Norwood procedure for single-ventricle lesions. The New England journal of medicine (2010) 362:1980-92. 2. Newburger JW, et al. Transplant-Free Survival and Interventions at 6 Years in the SVR Trial. Circulation(2018) 137:2246-2253. 3. Kaushal S, et al. Long-Term Transplant-Free Survival is Improved in Hypoplastic Left Heart Syndrome with Cell-Based Therapy. 2023 American Heart Association Scientific Meeting. Philadelphia, PA (11 – 14 Nov 2023). 4 Lynch et al. Outcomes of Children with Hypoplastic Left Heart Syndrome and Heart Failure on Medical Therapy (2024) JACC: Advances 3:100811.

Long-term Survival in HLHS from ELPIS I Trial of laromestrocel

Post-Stage II Heart Transplant-Free 5-years Survival



SVR patients matched with ELPIS I patient's population (N=157)

ELPIS I patient's population (N=10)

- 100% Transplant-free survival for all patients in ELPIS I, ranging from 3 years 8 months to 5 years 2 months post stage-II surgery.
- Patients Receiving the RVPA shunt in the SVR trial experienced ~80% transplant-free survival 5 years post stage-II surgery.

LONGEVERON

Longitudinal Follow-Up of Children With HLHS and Association Between Norwood Shunt Type and Long-Term Outcomes: The SVR III Study Caren S. Goldberg, MD at al, Circulation Volume 148, Number 17 https://doi.org/10.1161/CIRCULATIONAHA.123.065192

ELPIS II: Phase 2b Study Design for HLHS

Clinical Screening

Eligibility Criteria

All participants must have HLHS requiring Stage II palliation for HLHS (Glenn or Hemi-Fontan operation allowed)

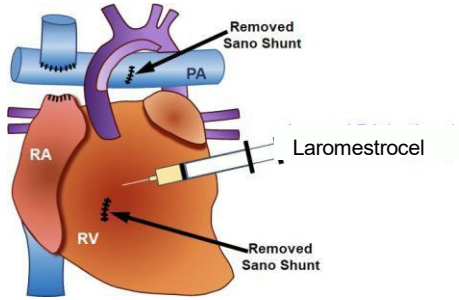
Baseline

- Patient assessments
- Randomization (1:1)

Injections During Stage II Surgery (randomized, blinded)

N=20 → **Group 1** Standard of Care

N=20 → **Group 2** 2.5 x 10^5 cell/kg laromestrocel



Post Surgical Follow-Up (day 5, week 4, month 6, month 12)

Key Measures Assessed

- All-cause mortality
- MACE
- Transplant-free survival
- Hospital visits and # of days in hospital
- Right ventricle ejection fraction

ELPIS II is a Phase 2b, Randomized, Multi-center study to evaluate laromestrocel injection in patients with HLHS, being conducted at leading clinical centers, in collaboration with the National Heart, Lung, and Blood Institute (NHLBI) through grants from the National Institutes of Health (NIH).

ELPIS II enrollment completed June 2025; Top-line data anticipated August 2026

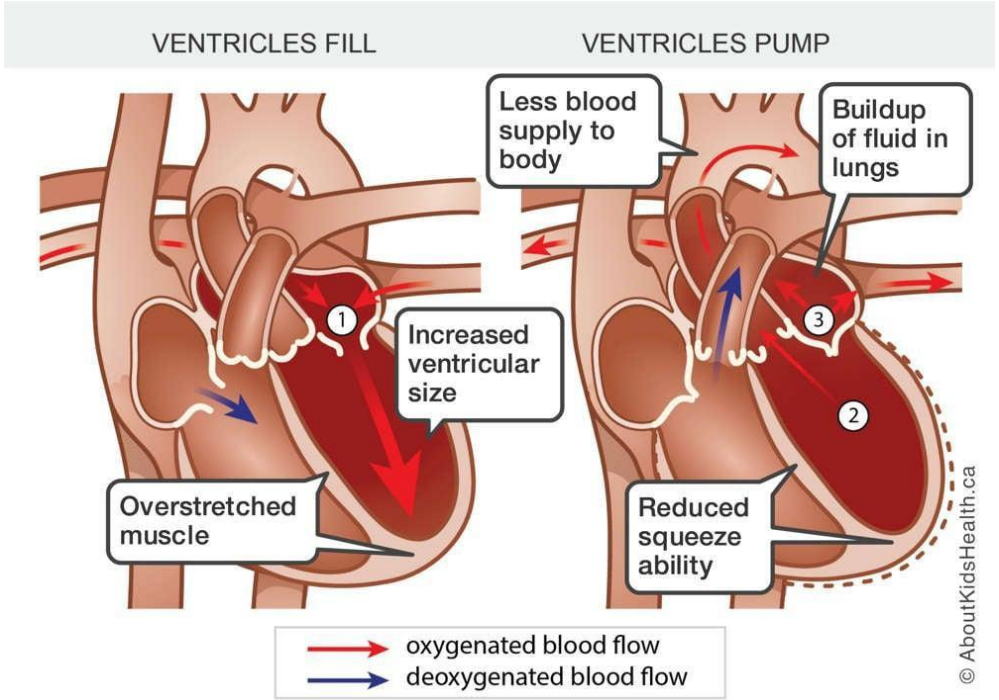
Laromestrocel for Pediatric Dilated Cardiomyopathy (PDCM)

LONGEVERON

Pediatric Dilated Cardiomyopathy (PDCM) - 2nd indication

- Pediatric Dilated Cardiomyopathy (PDCM) is a rare, progressive, life-threatening disease
- ~40% of children with dilated cardiomyopathy require a heart transplant or die within two years of diagnosis
- Current treatment focuses only on managing symptoms, improving heart function and preventing complications
- PDCM is associated with loss of cardiomyocytes and replacement by noncontractile fibrous tissue. Results from **preclinical and clinical trials highlight the potential of MSCs to promote cardiomyogenesis, reduce fibrosis and inflammation, and support neovascularization**

PDCM affects at least 100,000 children worldwide



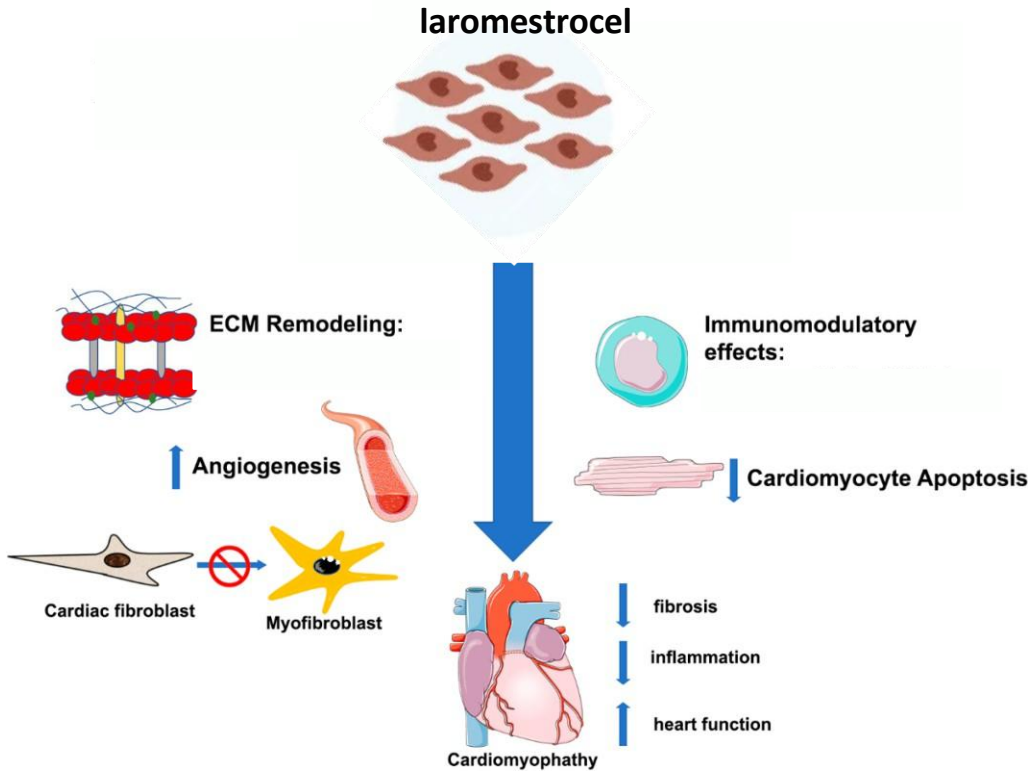
In PDCM the heart overstretches and weakens, increasing the size of the ventricular chambers. The overstretched muscle cannot pump properly, resulting in less blood flow to the body, and causing fluid buildup in the lungs.

Lesizza P, et al. In: *Dilated Cardiomyopathy: From Genetics to Clinical Management*. 2019, Chapter 11.; Lipshultz SE, et al. *Circulation.* May 2018;140(1).; Pittenger MF, et al. *NPJ Regenerative Medicine.* 2019;4(22).

Derived from: AboutKidsHealth.com

Laromestrocel for PDCM

By reducing inflammation, inhibiting fibrosis, and promoting new blood vessel formation, laromestrocel may stop or reverse deterioration of heart function in PDCM.



Graphic adapted from: Gubert F, et al. *Int J of Mol Sci.* 2022;22(14):7447.

FDA supports an accelerated clinical development and regulatory pathway for laromestrocel to initiate Phase 2b/3 study

✓ Laromestrocel IND approved for PDCM in July 2025

✓ FDA accepted IND application allows for development program to move directly to a single Phase 2/3 registrational trial

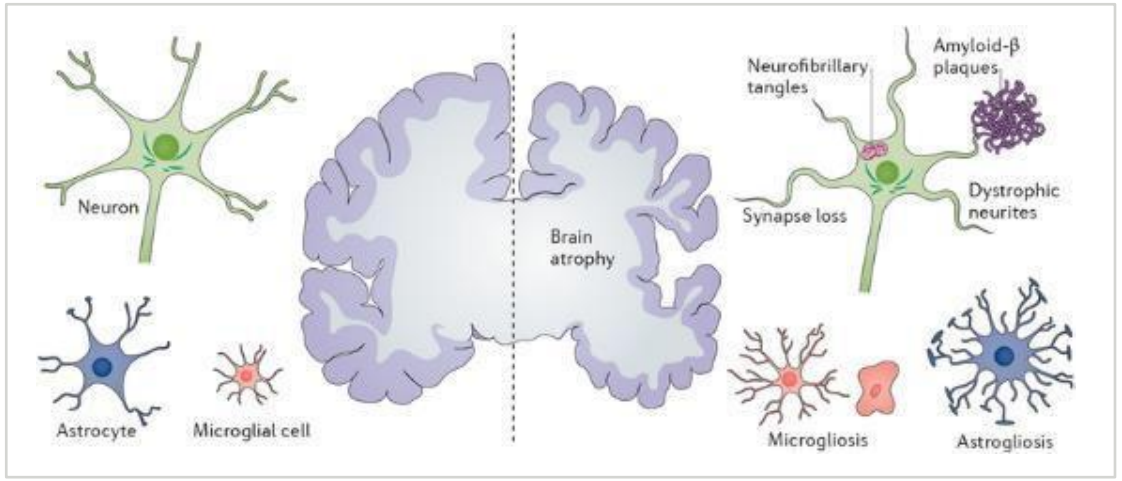
Laromestrocel for Alzheimer's Disease (AD)

LONGEVERON

Laromestrocel for Alzheimer's Disease

Targeting CNS Inflammation

- Previous therapies targeted amyloid plaques (b-secretase inhibitors and anti-amyloid antibodies) or neurofibrillary tangles (antibodies) with little evidence of disease state improvement
- Inflammation is increasingly recognized as a major pathway to the pathology leading to neurodegeneration in AD
- Genetic evidence for inflammation being important in AD comes from *TREM2* (an important protein in multiple immune cells) variants associated with AD*
- Inflammatory responses in brain to the pathologies of AD are increasingly recognized to drive the pathogenesis of the disease+
- **U.S. FDA has granted the following for laromestrocel for AD:**
  - Regenerative Medicine Advanced Therapy (RMAT) Designation
  - Fast Track Designation

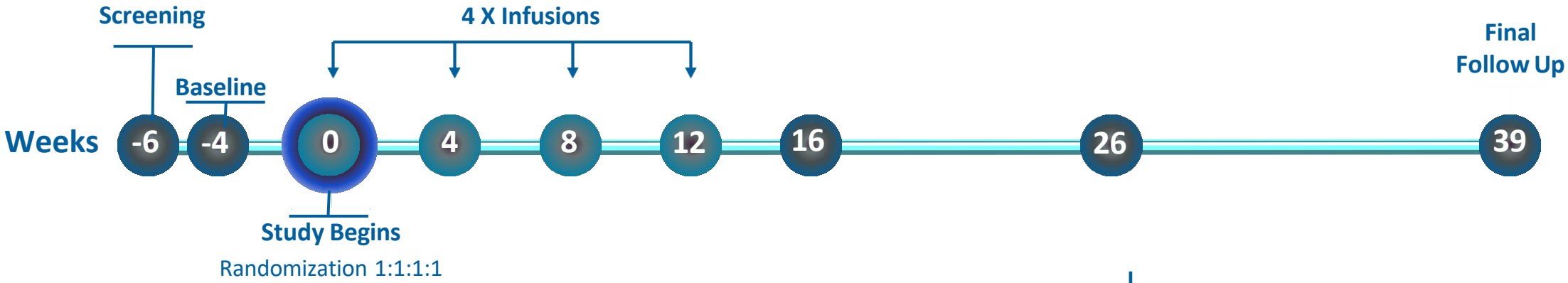


- MSCs effect in animal models of Alzheimer's disease:
  - Cross the blood brain barrier (BBB)
  - ↓ pro-inflammatory; ↑ anti-inflammatory biomarkers
  - Improve immune functioning
  - Promote neurogenesis
  - Improve endothelial function

*Shi Y, Holtzman DM (December 2018). *Nature Reviews. Immunology*. 18 (12): 759–772
+Heppner FL; Ransohoff RM; Becher B (2015).. *Nature Reviews Neuroscience*. 16 (6): 358–372

Figure from Congdon EE, Sigurdsson EM. Tau-targeting therapies for Alzheimer disease. *Nat Rev Neurol.* 2018 Jul;14(7):399-415.

CLEAR MIND Phase 2a Study Design



Randomization 1:1:1:1

- Group 1: Placebo [N=12]
- Group 2: Single Dose laromestrocel (25M) [N=13]
- Group 3: Multi dose laromestrocel (25M) [N=13]
- Group 4: Multi dose laromestrocel (100M) [N=11]

Primary Endpoint	Percentage of patients with at least 1 SAE 4 weeks from any infusion
Secondary Endpoint	CADS composite imaging and neurocognitive testing scores
Exploratory Endpoints	Change from baseline cognitive tests, MRI biomarkers

CLEAR MIND Phase 2a Results for Alzheimer’s Disease

- Trial results selected for featured research oral presentation at the 2024 Alzheimer's Association International Conference (AAIC) July 2024
- Laromestrocel demonstrated positive benefit/risk profile
- Laromestrocel treated patients showed an overall slowing/prevention of disease worsening compared to placebo
- The trial achieved the primary safety and secondary efficacy endpoints and showed statistically significant improvements in pre-specified clinical and biomarker endpoints in specific laromestrocel groups compared to placebo
- The established safety profile of laromestrocel for single and multiple dosing regimens was demonstrated in study data that showed no incidence of hypersensitivity, infusion-related reactions, and no cases of amyloid-related imaging abnormalities (ARIA)
- Administration of laromestrocel was associated with slowing cognitive and functional decline as demonstrated by statistically significant results in the Montreal Cognitive Assessment and statistical trending improvements compared to placebo in CDR-SB and MMSE
- There was a statistically significant improvement relative to placebo observed in the Alzheimer’s Disease Cooperative Study Activities of Daily Living (ADCS-ADL)
- Brain MRI results demonstrated a 49% reduction in brain volume loss and improvement in cerebral blood flow

CLEAR MIND Phase 2a Conclusions and Pathway to BLA

- Results of the CLEAR MIND clinical trial support the therapeutic potential of laromestrocel in the treatment of mild Alzheimer's disease and provided evidence-based support for further clinical development
- Results of the CLEAR MIND Phase 2a clinical trial were published in *Nature Medicine*[1]
- FDA Regenerative Medicine Advanced Therapy (RMAT) Designation, July 2024
- Positive Type B meeting with U.S. FDA in March 2025 supporting the advancement of laromestrocel as a potential treatment for Alzheimer's disease
  - Planned single Phase 2/3 clinical trial, if positive, possibly acceptable for Biological License Application (BLA) submission for Alzheimer's disease
  - Adaptive design allows early interim analysis, which if positive, may trigger BLA application
  - Initial alignment with FDA on proposed trial study design, population and endpoints
  - Initiation of planned Phase 2/3 clinical trial desired in 2H 2026, contingent upon obtaining non-dilutive funding and/or partnering support

1. Rash BG, Ramdas KN, Agafonova N, Naioti E, McClain-Moss L, Zainul Z, Varnado B, Peterson K, Brown M, Leal T, Kopcho S, Carballosa R, Patel P, Brody M, Herskowitz B, Fuquay A, Rodriguez S, Jacobson AF, Leon R, Pfeffer M, Schwartzbard JB, Botbyl J, Oliva AA Jr, **Hare JM**. Allogeneic mesenchymal stem cell therapy with laromestrocel in mild Alzheimer's disease: a randomized controlled phase 2a trial. *Nat Med.* 2025 Mar 10. doi: 10.1038/s41591-025-03559-0

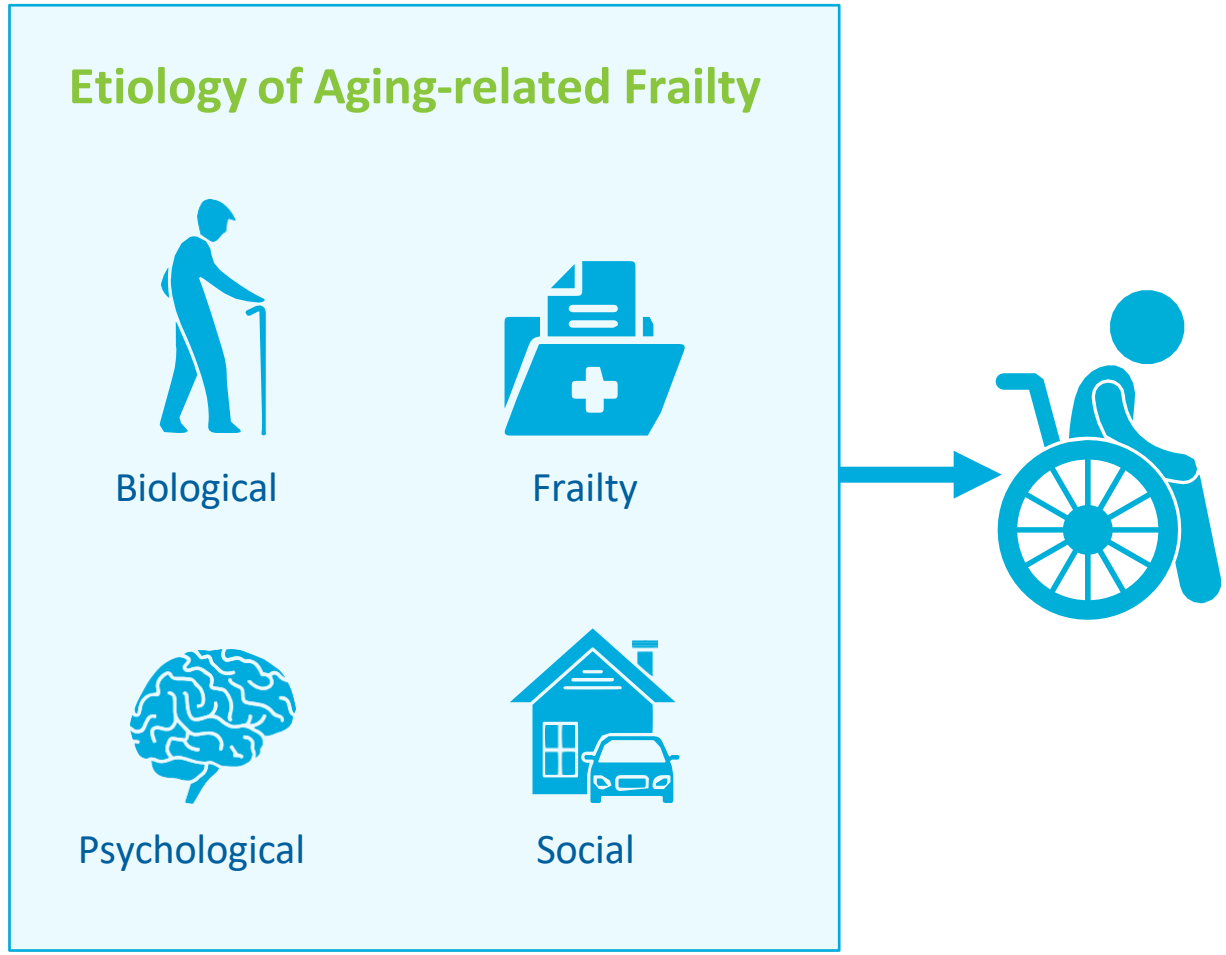
Laromestrocel for Aging-related Frailty (AF)

Aging-related Frailty*

Diminishing Health, Independence and QoL

- Frailty
  - Age-associated decline in reserve and function across multiple physiologic systems leading to inability to cope with stressors
  - Characterized by mobility disability, weakness, fatigue, weight-loss, slowness, low activity, etc.
- Higher risk for poor clinical outcomes
  - Infections, falls, fracture, hospitalizations, death
- High unmet need and high prevalence
- No approved treatments for Frailty
  - General prevalence of ~15% of individuals >65 using CHS Frailty Phenotype definition.[1]

Etiology of Aging-related Frailty



*Frailty/Aging-related Frailty" presently does not have a consensus definition of the indication for regulatory purposes

[1]Bandeen-Roche K, et al. J Gerontol A *Biol Sci Med Sci.* 2015

Laromestrocel for Aging-related Frailty

Completed U.S. Phase 2b Study Aging-related Frailty Study (N=143)

- Designed to determine whether there was a dose response to a single infusion of laromestrocel in Aging-related Frailty
- There were 5 treatment groups: placebo and 4 different doses of laromestrocel: 25, 50, 100 and 200 million cells
  - Note: highest dose treatment group added after start of study
- Patients were defined as aged 70 to 85, with evidence of inflammation by elevated TNF-a levels at baseline, and with mild to moderate frailty (by CHS scale) and impaired mobility
- Primary efficacy endpoint measure was 6MWT – a test of physical endurance (distance walked in 6 minutes)

Results:

There was a statistically significant increase in 6MWT in multiple laromestrocel treatment groups 9 months after a single infusion of laromestrocel compared to placebo

- There was also a dose-response to laromestrocel as measured in 6MWT at 6 months
- There were no SAEs attributed to treatment with laromestrocel and most AEs were related to the process of administration (associated with the insertion of a catheter for IV infusion)

Financial Position

Cash and cash equivalents:	**$15.8M**
Class A common stock outstanding:	**29.3 M**
Class B common stock outstanding:	**1.5 M**
Series A non-voting convertible preferred stock outstanding:	**11,873**
Shares of common stock exercisable under outstanding warrants:	**22.4 M**

(all as of 3/31/2026)

Longeveron Priorities for Next 12 Months

- Conclude data read-out of the ELPIS II clinical trial in HLHS and meet with FDA following read-out to determine path forward
- Continue our partnership identification and evaluation efforts
- Initiate enrollment in our single pediatric dilated cardiomyopathy trial, subject to obtaining necessary financing

Experienced and Successful Leadership

Joshua Hare, MD

EXECUTIVE CHAIRMAN, CO-FOUNDER & CHIEF SCIENCE OFFICER

Steve Willard

CEO

Lisa Locklear

EVP & CHIEF FINANCIAL OFFICER

Paul Lehr

GENERAL COUNSEL & SECRETARY

Nataliya Agafonova, MD

CHIEF MEDICAL OFFICER

Devin Blass

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Thank You

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