LINEAGE
CELL THERAPEUTICS

The future of cell therapy.



Corporate Overview

December 20, 2021

Forward-Looking Statements

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"We aim to pioneer a new branch of medicine, based on transplanting specific cell types into the body"

Business Overview

Company Overview

Innovative Platform	Manufacturing and transplanting *specific cell types* from a single pluripotent cell line; scalable "off the shelf" cell transplants for multiple conditions
Validating Partnerships	Genentech — A Member of the Roche Group; CIRM — California's Stem Cell Agency; Cancer Research UK
Clinical Programs	**OpRegen:** Dry Age-Related Macular Degeneration with GA **OPC1:** Cervical Spinal Cord Injury **VAC2:** Non-small Cell Lung Cancer (oncology platform)
Differentiated Data	Four cases of *retinal tissue restoration* observed in dry AMD patients One-third of spinal injury patients *gained at least 2 levels* of motor function *Potent induction* of immune responses observed in advanced cancer patients
Market Opportunity	Billion-dollar commercial opportunities with no or few treatment options
Financial Position	~$65.1 million in cash and marketable securities as of Sep 30, 2021
Market Capitalization	~$428 million as of November 5, 2021

Novel Clinical Cell Therapy Pipeline

LINEAGE	PROGRAM	PHASE 1	PHASE 2	PHASE 3	PARTNERS
 Ophthalmology	**OpRegen®** Dry AMD with Geographic Atrophy (GA)	24 patients treated			Genentech A Member of the Roche Group
 Demyelination	**OPC1** Spinal Cord Injury (SCI)	30 patients treated			CIRM CALIFORNIA'S STEM CELL AGENCY
 Immuno-oncology	**VAC2** Non-Small Cell Lung Cancer (NSCLC)	7 patients treated			CANCER RESEARCH UK

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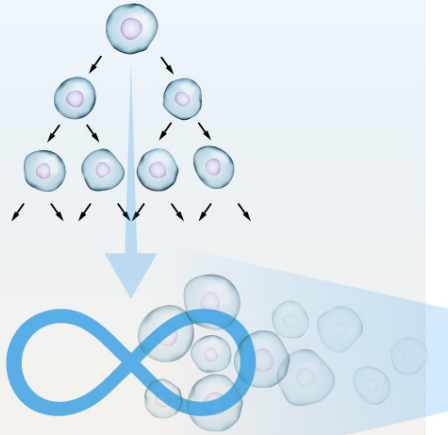
Lineage Technology Platform – Allogeneic Cell Transplants

Expansion

- Product development starts from a frozen vial of self-renewing stem cells
- These pluripotent cells can become any cell type in the body when provided with the correct instructions



Differentiation

- Lineage's proprietary process, honed from decades of institutional experience, creates only the cell type which is desired
- No alterations are made to the cell's DNA
- In-house cGMP manufacturing allows for commercial-scale production from a single vial of stem cells

Development

- Value is created through developing and implementing clinically and commercially-viable product attributes
- Pipeline expands by broadening indications or adding additional cell types

Retinal Cells → OpRegen

Spinal Cord Cells → OPC1

Immune Cells → VAC2

Other Pipeline Programs

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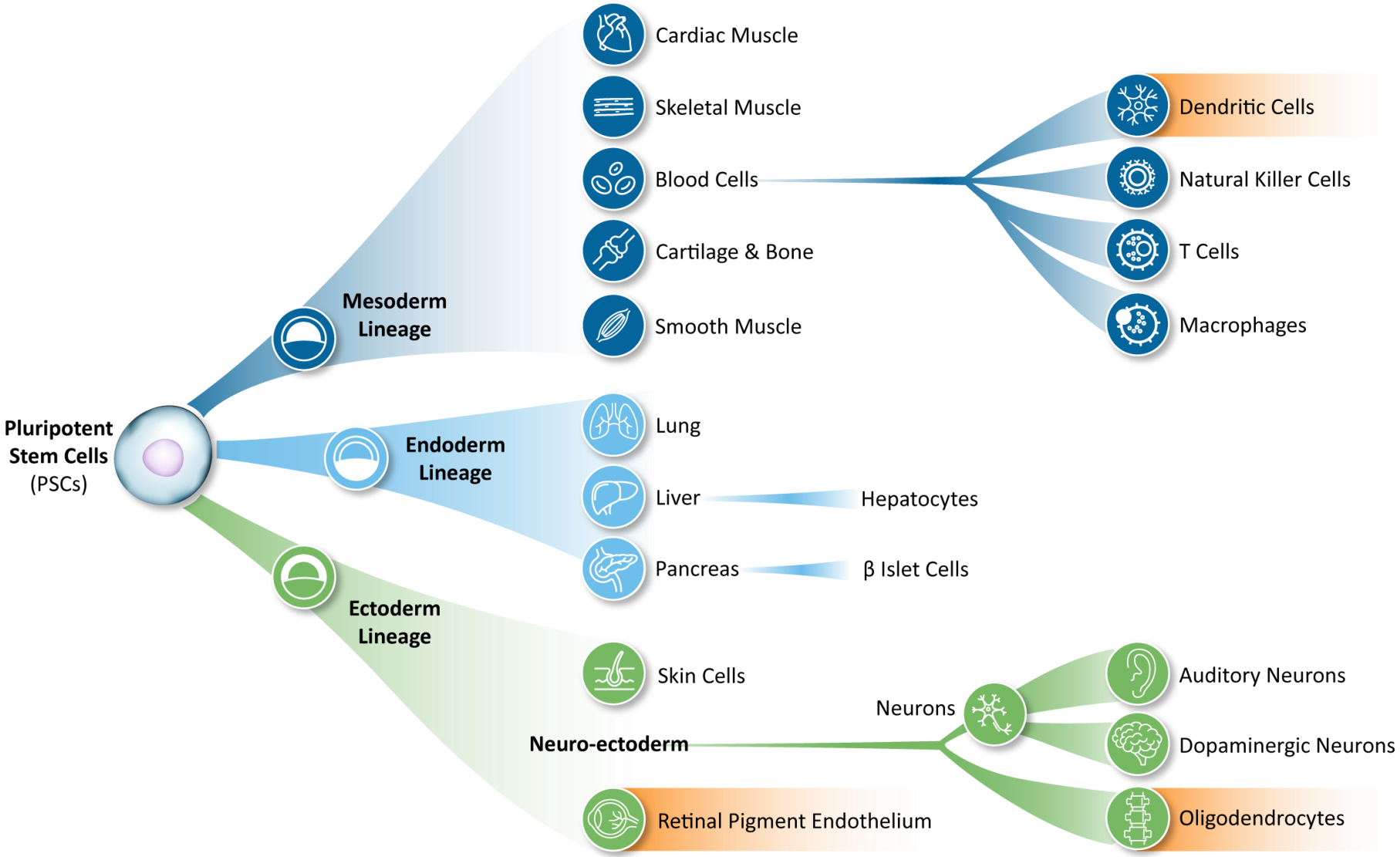
Future Product Candidate Opportunities



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Competitive Advantage – Differentiation (Process Development)

Lineage's competitive advantage is the *differentiation* of an *unlimited* supply of pluripotent stem cells into *specialized cell types*

Capabilities

- Source cell characterization, banking and versatile expansion systems
- Differentiation process development; culture conditions, systems, optimization of differentiation cues (growth factor selection, timing, etc.)
- Analytical method development for process control and product release
- Scale-up modalities, substrates, harvesting protocols
- Enhancements; genetic modification (optional), various expression systems
- Clinically compatible post-production processing

cGMP Facility

Multiple Clean Rooms for Parallel cGMP Production Runs

Extensive IP portfolio covers processes, products, and methods of use

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AMD is the leading cause of irreversible vision loss in the US

Source: aao.org

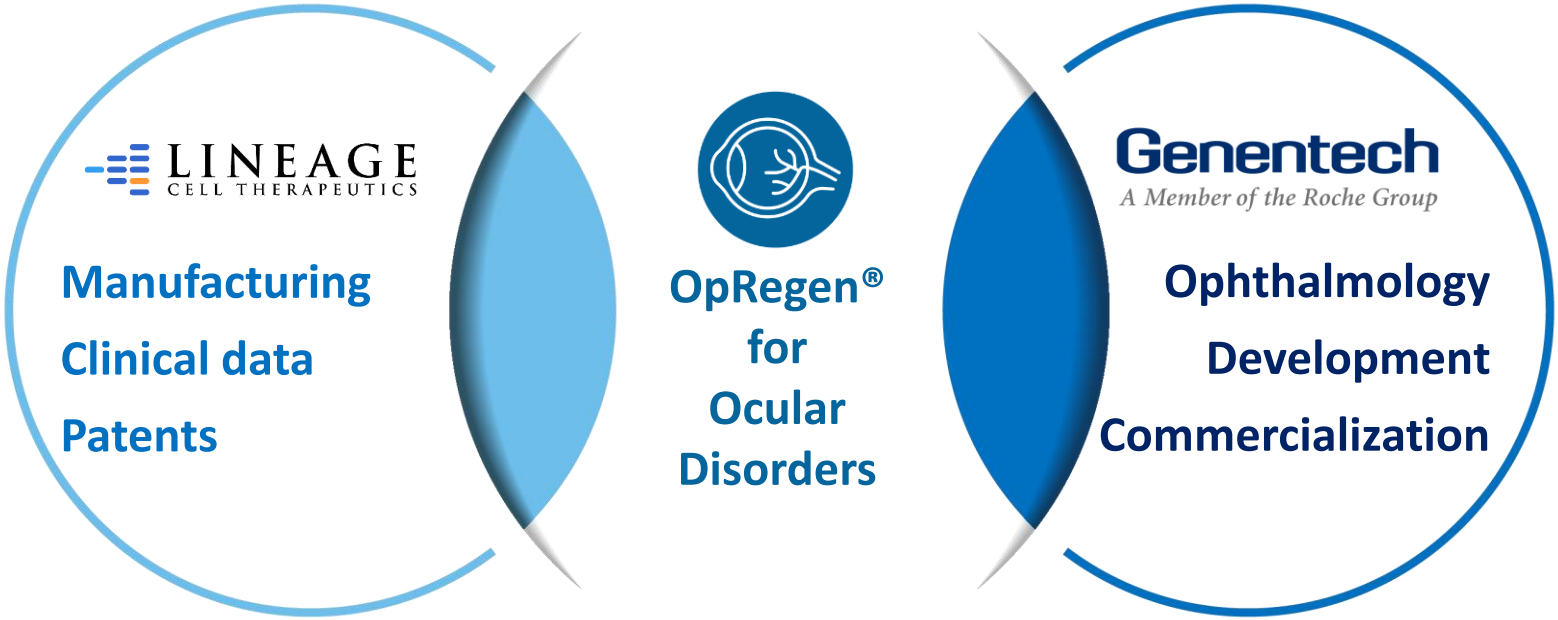
OpRegen®: RPE Cell Transplants to Treat Dry AMD

Worldwide Collaboration in Ocular Disorders

Genentech
A Member of the Roche Group

Exclusive collaboration for the development and commercialization of OpRegen for the treatment of ocular disorders

- **$50 million up front; double-digit tiered royalties; $620 million of potential payments**
- **Lineage to complete ongoing study and continue certain manufacturing activities**
- **Genentech responsible for clinical development and commercialization**

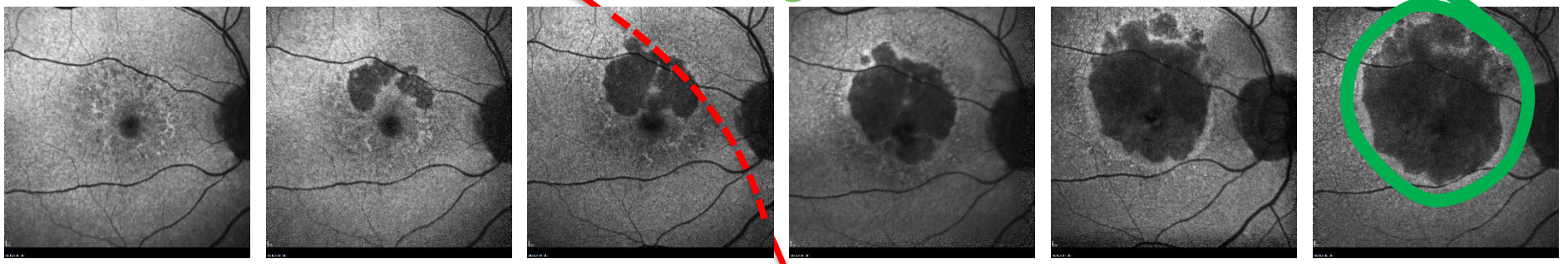


Dry AMD Can Lead Rapidly to Blindness

Visual acuity over time…

20/20 (normal)

The area of geographic atrophy or "GA" grows larger as retinal cells die



2012 2013 2014 2015 2017 2019

20/200 (legally blind in 3 years)

20/640

Dry AMD involves the progressive loss of retina cells, which can lead rapidly to blindness

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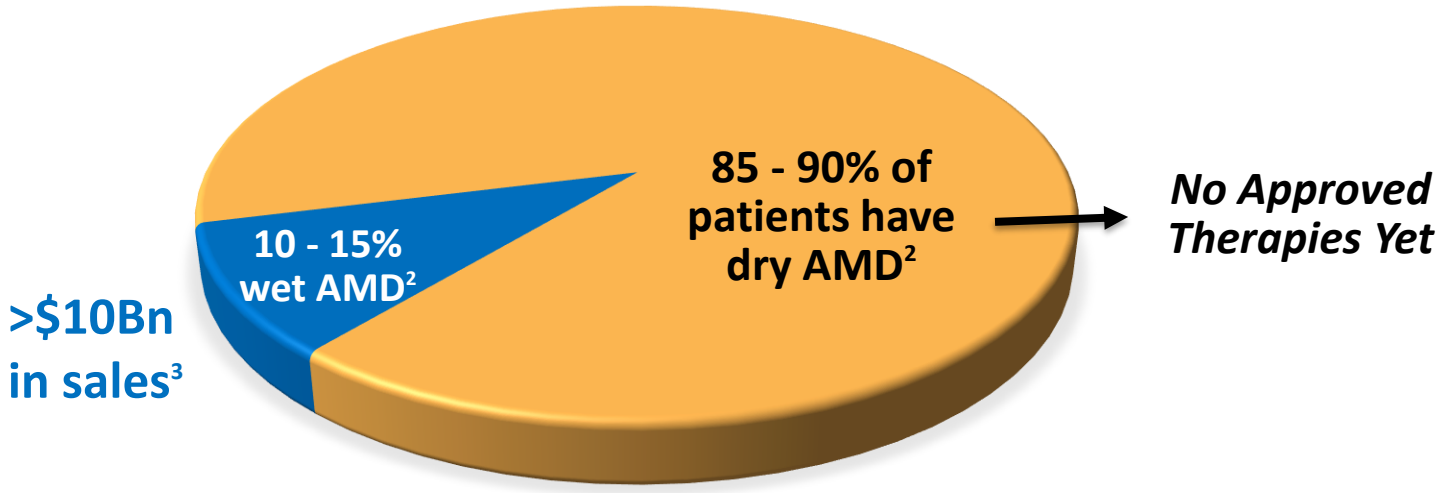
Image courtesy of Jordi Monés, MD, PhD

Multi-Billion Dollar Market Opportunity in the U.S.

Age-related Macular Degeneration (AMD) in all forms afflicts ~11 million people in the United States

Type of AMD	% of AMD Cases	FDA Approved Therapies
Wet AMD	10 – 15%	Lucentis & Eylea ($10 Billion in annual sales)
Dry AMD	**85 – 90%**	**None**



Sources: (1) Bright Focus Foundation. Macular Degeneration Facts & Statistics: Bright Focus Foundation. http://www.brightfocus.org/macular/about/understanding/facts.html; (2) JM Seddon, Epidemiology of age-related macular degeneration. (AP Schachat, S Ryan eds.) Retina, 3rd ed. St. Louis, MO: Mosby; 2001;1039-50; (3) 2018 product sales summary based on publicly reported revenue figures for Lucentis and Eylea.

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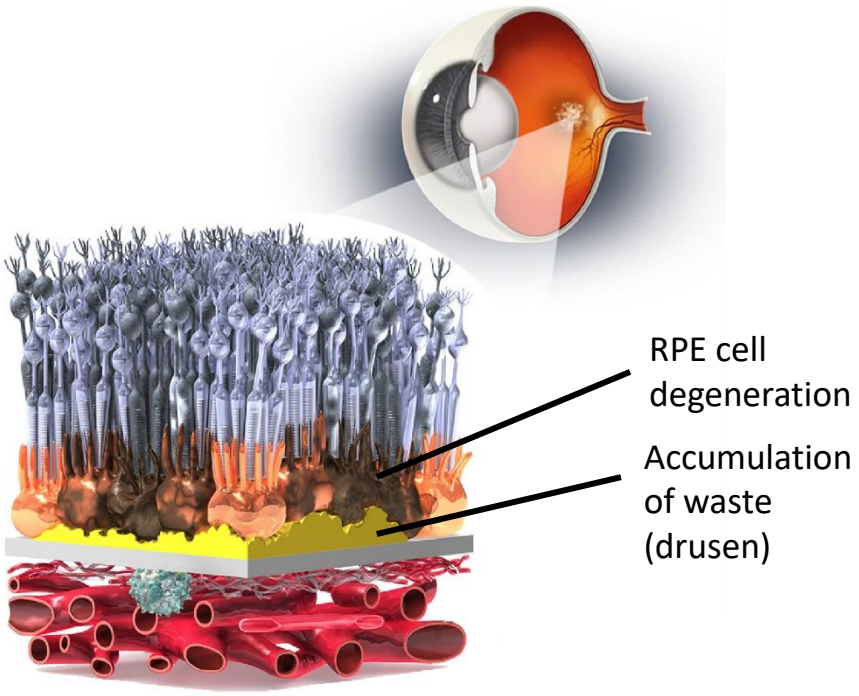
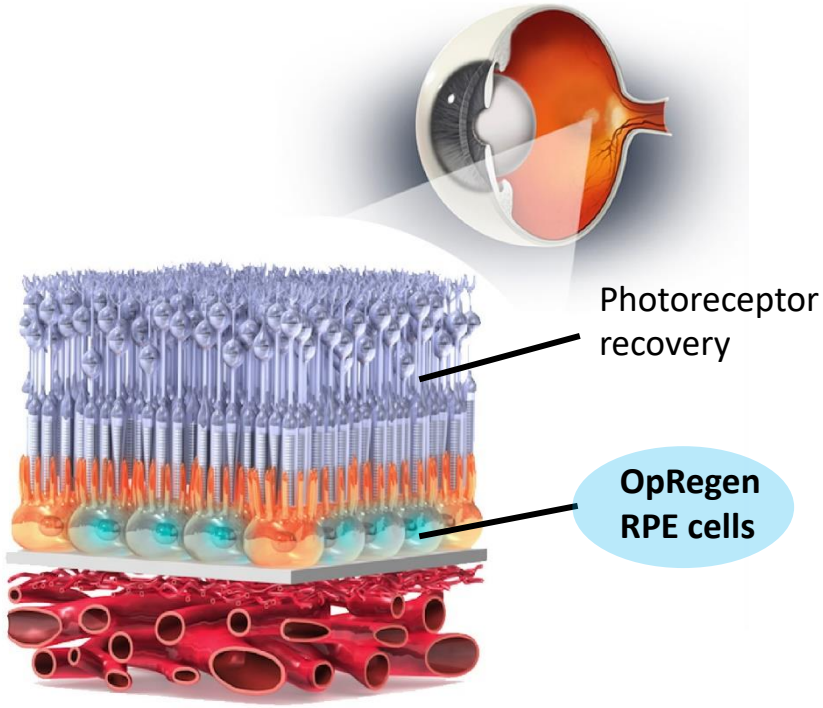
Lineage Approach – OpRegen, an RPE Cell Transplant

Pre-Transplant



Dry (atrophic) AMD involves the loss of retina cells, creating an area of geographic atrophy (GA), which causes impaired vision and blindness

Post-Transplant



OpRegen is an injection of RPE cells beneath the retina, to replace lost retinal cells and preserve or improve vision

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Image adapted from scienceofamd.org

Commercially-Suitable Manufacturing Process

- **OpRegen consists of pure RPE cells >99%**
  - Starts from an NIH-approved cell line established >20 years ago
  - Extensive functional and identity characterization is employed for product release
  - No genetic modifications are made to the cells
  - No residual pluripotent cells detectable in clinical material

- **Clinic-ready, immediate-use "thaw and inject" formulation**
  - No dose preparation required
  - From frozen cells to delivery device in 5 minutes

- **Current production scale is 5 billion RPE cells per 3-liter bioreactor**
  - Equal to 2,500 clinical doses/batch
  - Further scale-up can be performed in larger or parallel reactors

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Dry AMD Competitive Landscape

Cell Therapy

OpRegen (Ph1/2, Lineage Cell Therapeutics)
CPCB-RPE1 (Ph1/2, Regenerative Patch Tech.)
ASP7317 (Ph1, Astellas) (Enrollment Paused)
jCell (Preclinical, jCyte)

Visual cycle modulation

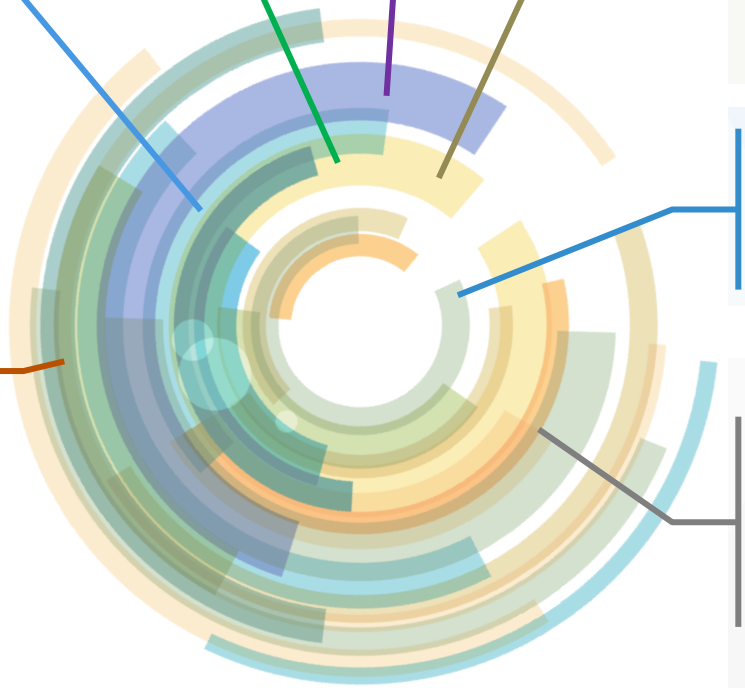
ALK-001 (Ph. 3, Alkeus)
FAILED
fenretinide (Sytera)
emixustat (Acucela)
OT-551 (Othera)

Anti-inflammatory

Complement inhibition location and molecule:
ANX007 (Ph2, Annexon)
APL-2 (Ph3, Apellis)
CB2782 (Preclinical, Catalyst)
Zimura (Ph3, Iveric bio)
ALXN1720 (Ph1, Alexion)
HMR59 (Ph2, Hemera)
danicopan (Ph1, AstraZeneca RD)
Ionis-FB-LRX (Ph2, Ionis)
NGM621 (Ph2, NGM Bio)
FAILED
eculizumab (Alexion)
tesidolumab (Novartis)
lampalizumab (Genentech/Roche)
CLG561 (Novartis)

Toxic by-product reduction

Prevent Amyloid Aß oligomer assembly:
GAL-101 (Ph1, Galimedix)
ALZ-801 (Preclinical, Alzheon)
Reduce DHA peroxidation:
RT011 (Preclinical, Retrotope)
FAILED
Glatiramer acetate (Teva)
RN6G (Pfizer)
GSK933776 (GSK)



Gene Therapy

Gyroscope (Ph1/2)
Hemera/Janssen (Ph1)
Novartis (Preclinical)

Neuroprotection

Repair mitochondrial dysfunction/oxidative stress:
elamipretide (Ph2, Stealth)
risuteganib (Ph2, Allegro)
photobiomodulation (Ph N/A, LumiThera)
brimonidine tartrate (Ph2, Allergan)
FAILED
NT-501 (Neurotech)
tandospirone (Alcon)
OT-551 (Othera)

Other approaches

Inflammasome Inhibition:
kamuvudine (Ph1, Inflammasome Therapeutics)
Xiflam (Preclinical, OcuNexus)
Matrix Modulation:
doxycycline (Ph2/3, Oracea)
HtrA1 inhibitor:
FHTR2163 (Ph2, Genentech/Roche)

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Adapted from https://retinatoday.com/resource/therapeutic-pipeline-for-amd (Accessed August 12, 2021)

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OpRegen Phase 1/2a Clinical Trial Interim Results

Replace and Restore

Phase 1/2a Clinical Trial - Promising Interim Results Continue (N=24)

STRUCTURE:

- **4 patients have shown evidence of retinal tissue restoration**
  - All four cases of restoration have shown evidence of smaller or unchanged areas of atrophy at 12 months post-treatment; all four had improved BCVA at 12 months
  - 4/4 (100%) of patients with fulsome coverage across the area of atrophy showed restoration

FUNCTION:

- **58% of all 12 Cohort 4 patients' treated eyes were at or above baseline visual acuity**
  - 15M, or last time point available, up to >3y post-treatment
  - Visual acuity continued to decline in the majority (67%) of untreated eyes
- **Statistically significant differences in visual acuity continue to be observed in Cohort 4 patients between OpRegen treated and fellow untreated eyes (n=12)**

SAFETY, TOLERABILITY, DURABILITY:

- **OpRegen transplants have been well tolerated with no unexpected AEs or SAEs**
- **Earliest grafts have persisted for more than 5 years**
- **Zero cases of rejection (N=24)**

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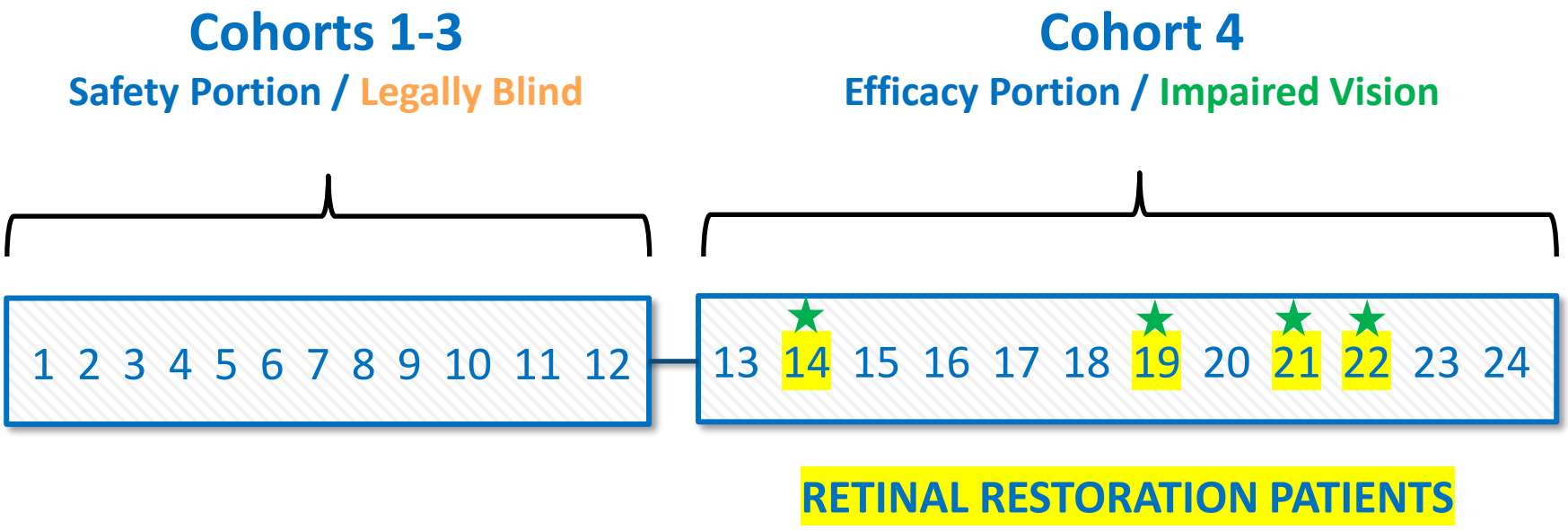
Phase 1/2a Clinical Trial of OpRegen – Enrollment Complete



Purpose:	**To evaluate the safety and efficacy of transplanted RPE cells in patients with dry AMD with geographic atrophy**
Design:	**Open label, single arm, international, multi-center**
Dose and Administration:	**One 50-100 ul dose of cells injected into the subretinal space**

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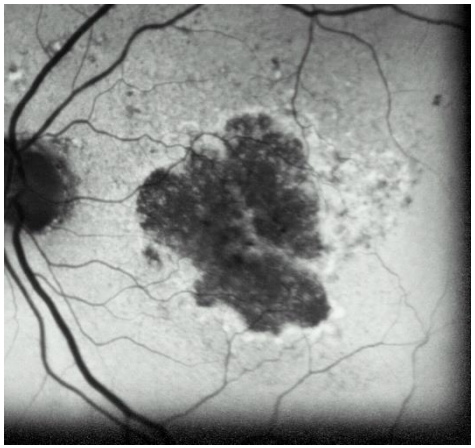
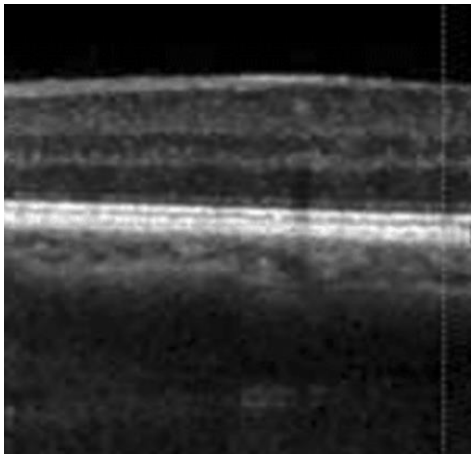
★ = OpRegen placed across area of atrophy

Imaging the Retina - Fundus Autofluorescence (FAF) and Optical Coherence Tomography (OCT)

FAF



OCT



- **A flash of light causes cells to fluoresce, which is recorded in a single plane and with minimal structural resolution**
- **OpRegen cells lack lipofuscin, the material which fluoresces, so OpRegen cells appear as atrophic areas**

- **Differences in light returned to a detector creates a 3D images of all retinal layers**
- **The AAO considers OCT the "gold standard" for imaging the retina**
- **Offers much greater detail of anatomical structures**

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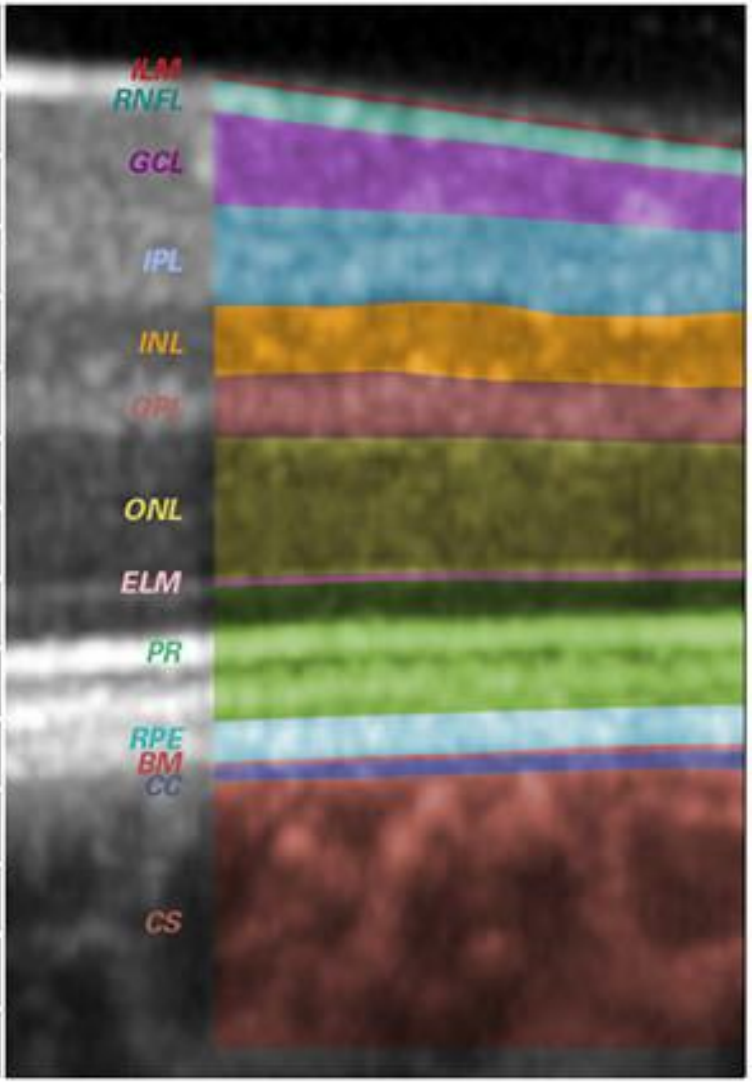
High Resolution OCT Provides Resolution Close to Histology

Retinal Layers	
Abbr.	**Name**
ILM	Internal Limiting Membrane
RNFL	Retinal Nerve Fibre Layer
GCL	Ganglion Cell Layer
IPL	Inner Plexiform Layer
INL	Inner Nuclear Layer
OPL	Outer Plexiform Layer
ONL	Outer Nuclear Layer
ELM	External Limiting Membrane
PR	Photoreceptor Layers
RPE	Retinal Pigment Epithelium
BM	Bruch's Membrane
CC	Choriocapillaris
CS	Choroidal Stroma



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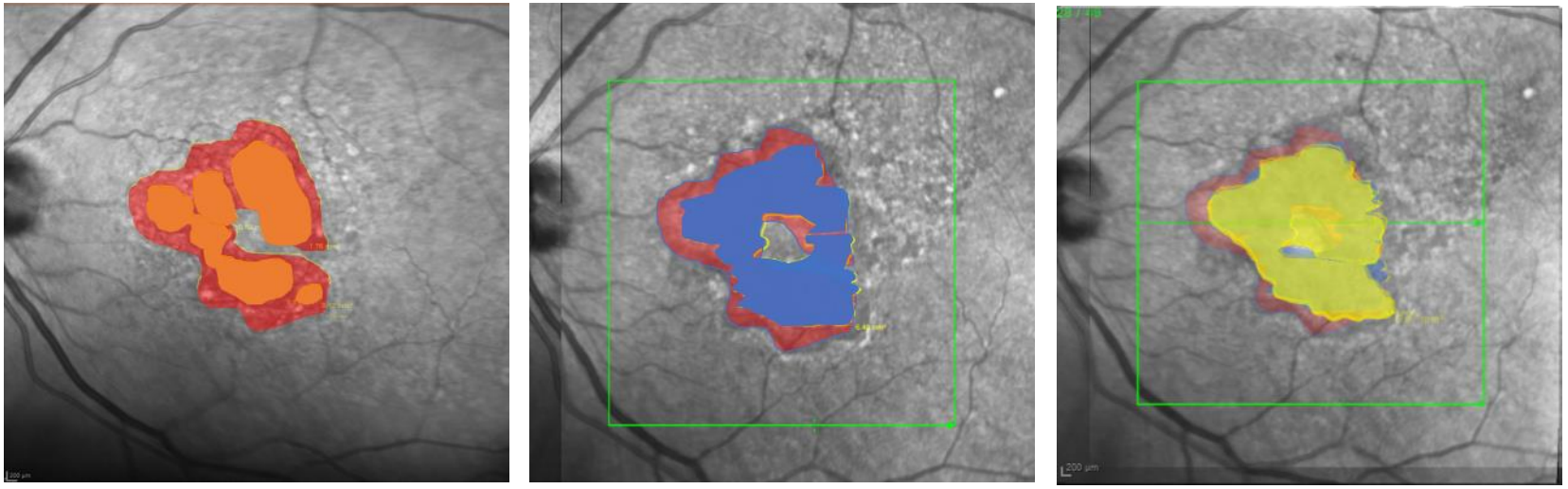
Source: https://www.heidelbergengineering.com/int/news/know-your-retinal-layers-33401465/

First Case of Retinal Restoration – *Smaller* Area of GA, Maintained for ~3 Years

Date	Time in Study	Colored area on Figure below	Area mm^2 (SQRT)	Changes in rate of progression from previous	Changes in rate of progression from baseline
May 2017	Minus 1 year	Orange	4.21 mm^2 (2.05)	N/A	N/A
July 2018	Baseline	Red	7.90 mm^2 (2.8)	+ 0.64 mm sqrt/yr	N/A
April 2019	Month +9	Blue	5.74 mm^2 (2.39)	- 0.61 mm sqrt/yr	- 0.61 mm sqrt/yr
October 2019	Month +15	Green	6.48 mm^2 (2.54)	+ 0.30 mm sqrt/yr	- 0.20 mm sqrt/yr
June 2020	Month +23	Yellow	6.52 mm^2 (2.55)	+ 0.015 mm sqrt/yr	- 0.13 mm sqrt/yr



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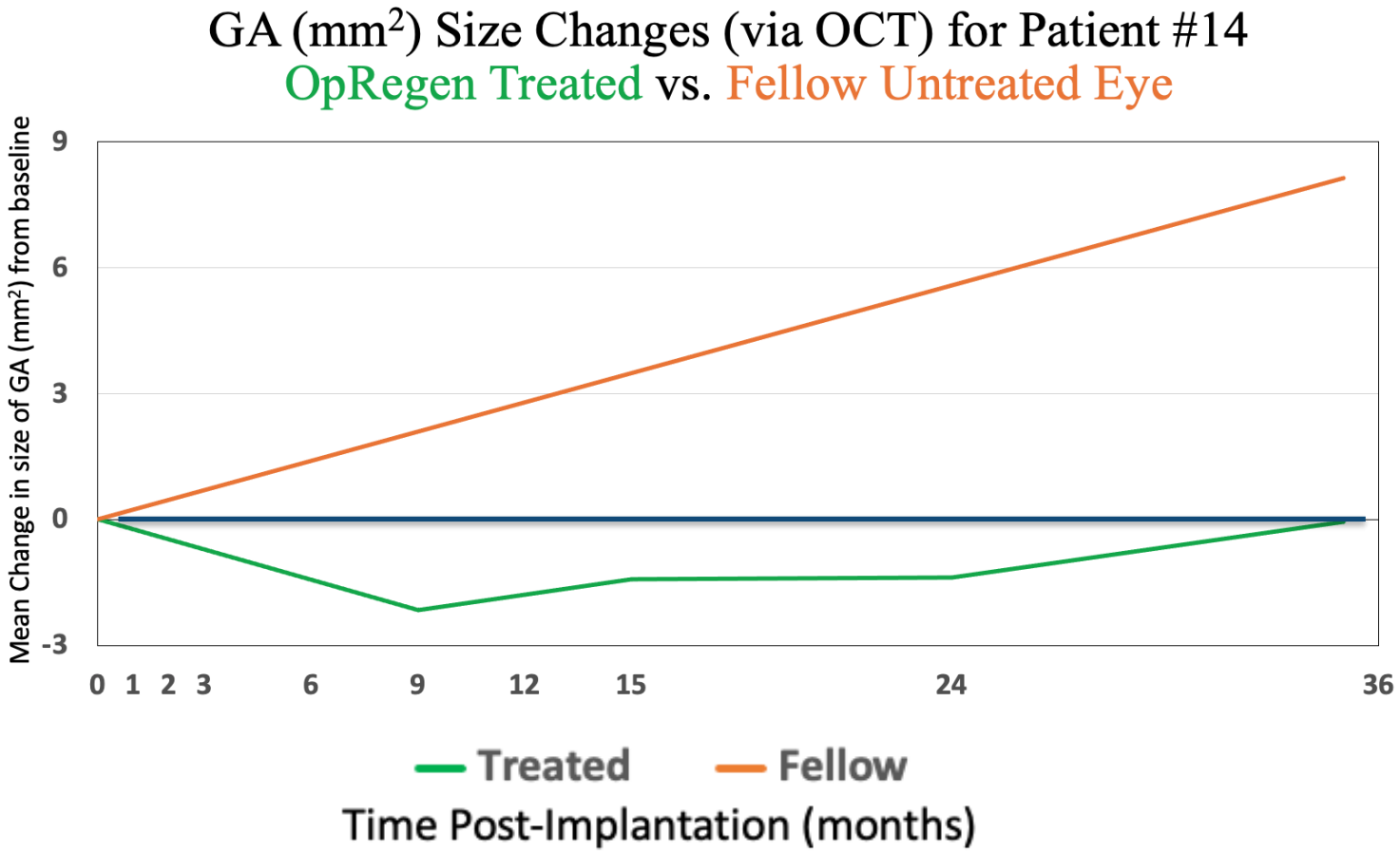
Data presented at 2020 AAO Virtual Meeting

First Reported Case of Retinal Restoration – GA Measurements



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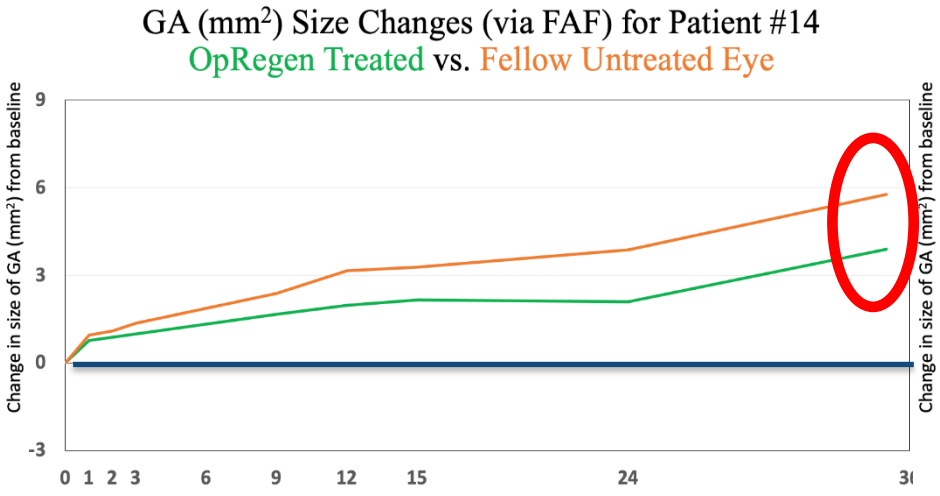
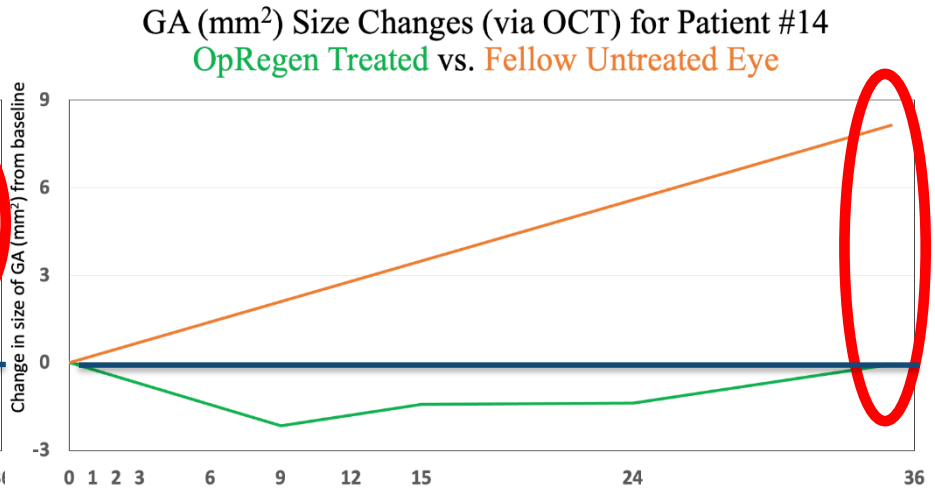
First Case of Retinal Restoration - Utilizing OCT to Collect GA Measurements

FAF



OCT



Treated Fellow

Time Post-Implantation (months)

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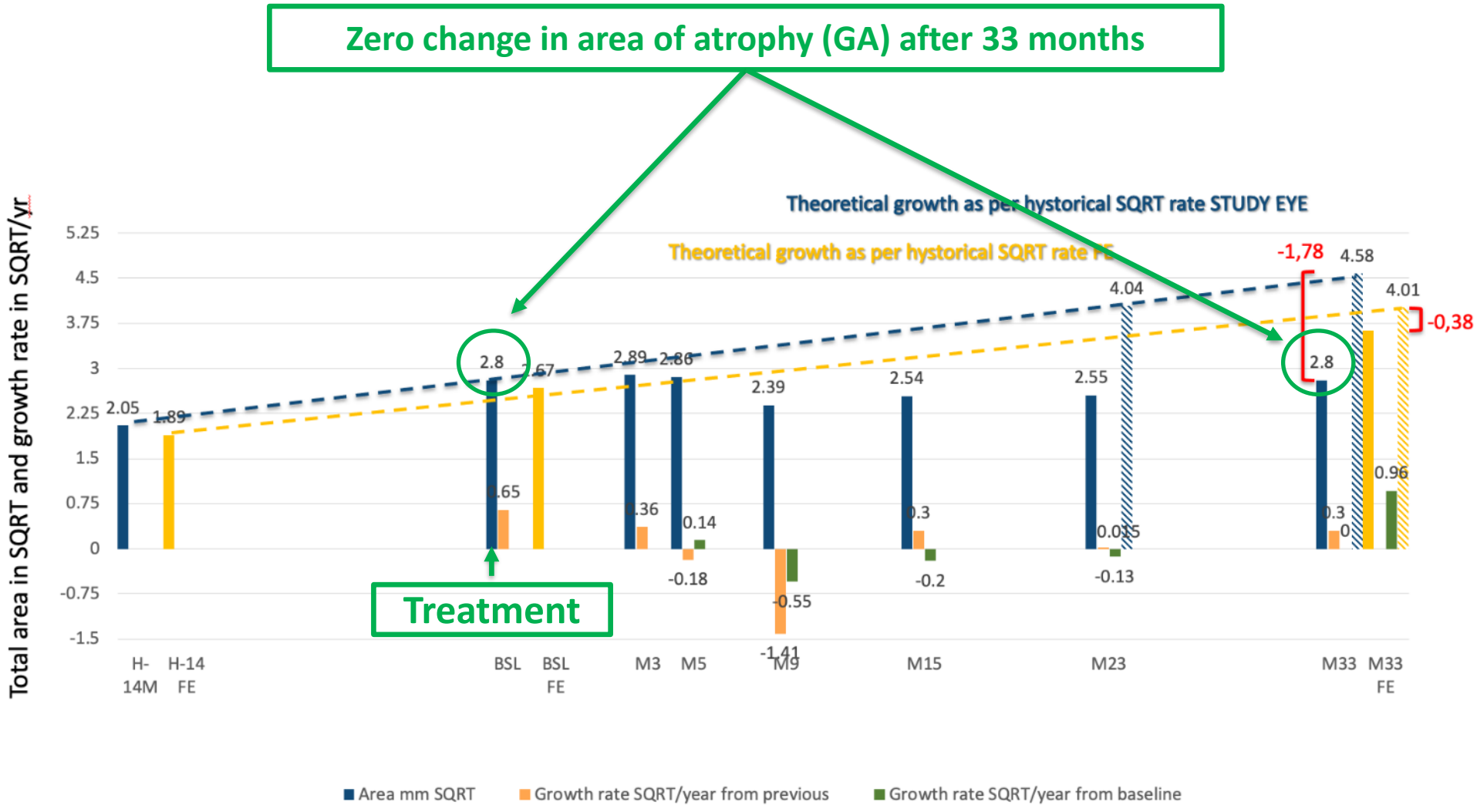
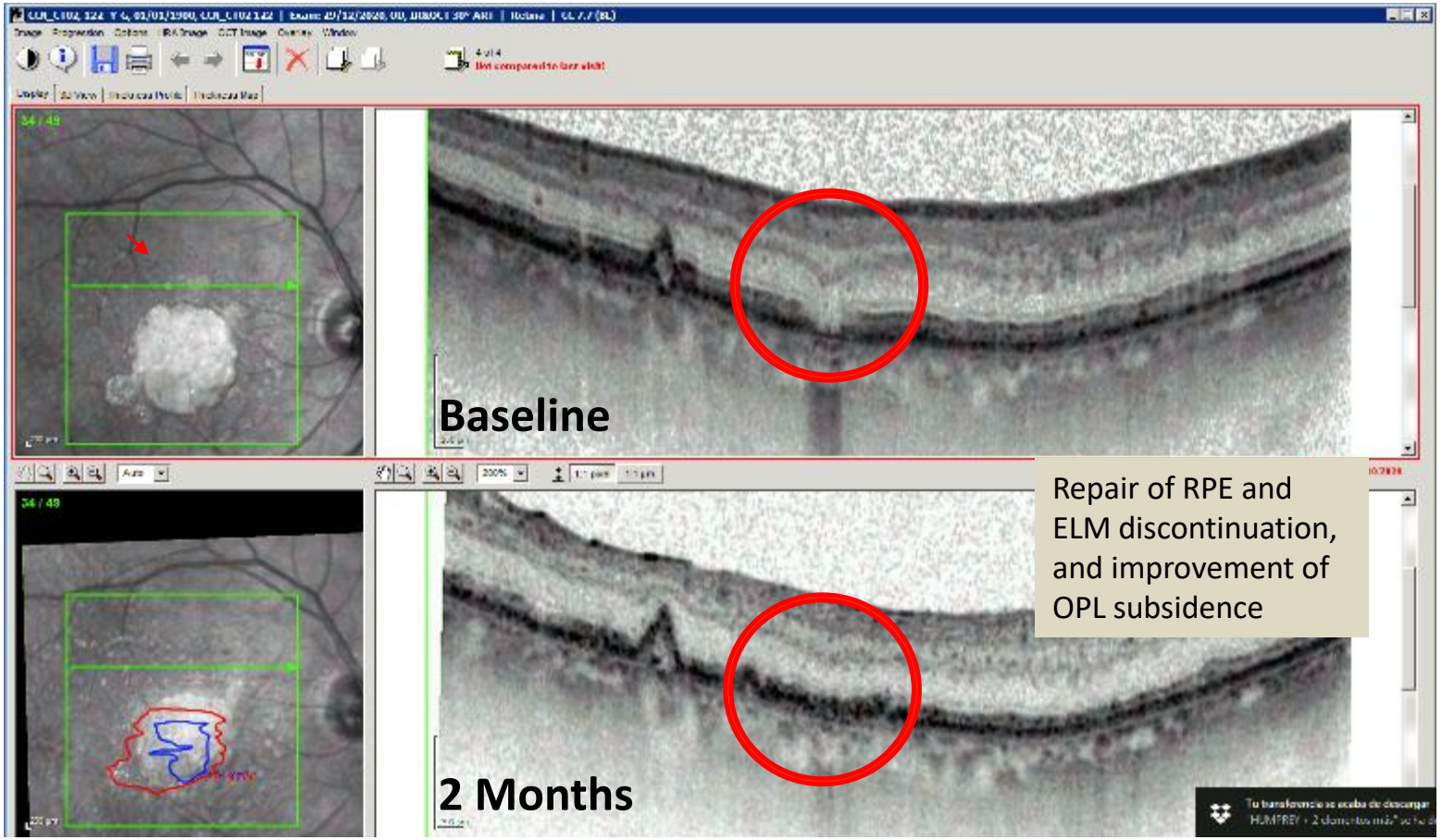
First Case of Retinal Restoration – Assessing GA Progression Using FAF Alone or OCT and Multimodality Imaging



Note: Theoretical growth is based on the rate of change (squared root, SQRT) between the historical (H) image 14 Months prior to the Baseline (BSL) assessment. That rate of change is applied over the duration of the patient's follow-up (the dashed lines) at the various time points indicated. ***(FE = Fellow Eye)***

Second Case of Retinal Restoration – Evident at 2 Months

Evidence of outer retinal regeneration and *complete resolution* of iRORA lesion



iRORA = Incomplete Retinal Pigment Epithelial and Outer Retinal Atrophy

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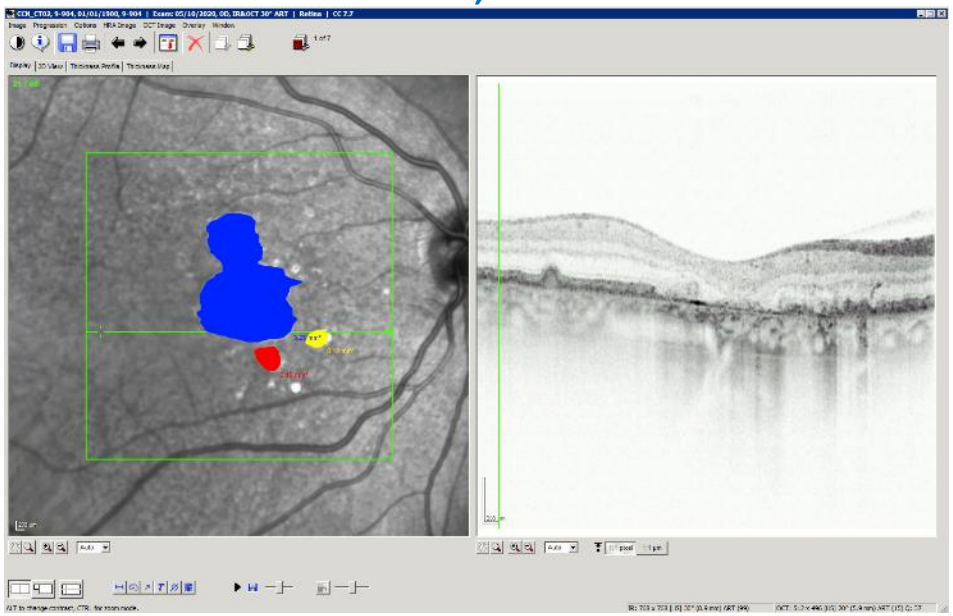
Image courtesy of Jordi Monés, MD, PhD

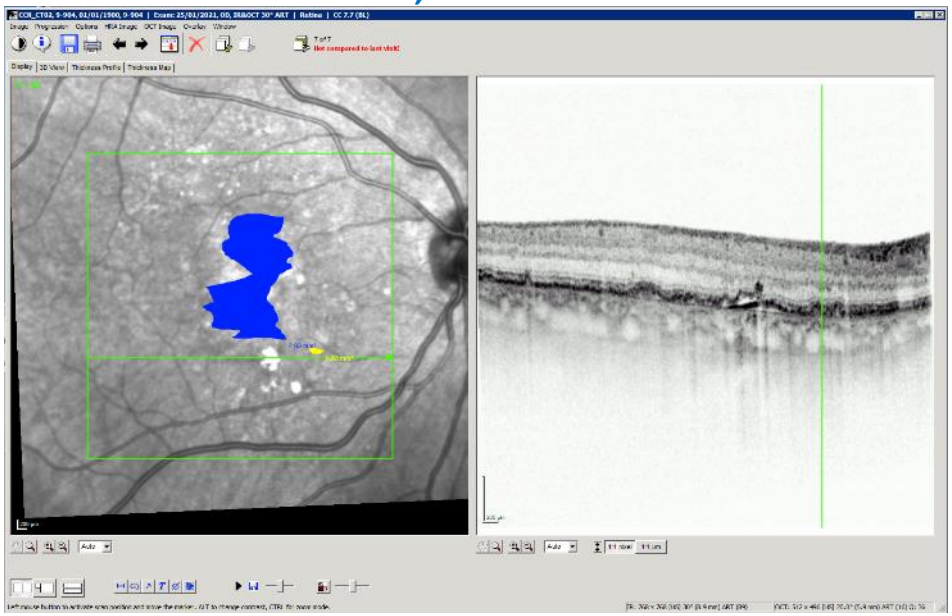
Third Case of Retinal Restoration – Evident at 3 Months

ELM-based Area of Atrophy (Baseline to 3 Months)

OCT 5, 2020



JAN 21, 2021



TOTAL AREA: 3.56 mm²

TOTAL AREA: 2.69 mm²

Total area	**3M GROWTH RATE:**	**– 0.87 mm²**	**(ANNUAL RATE – 3.48 mm²)**
SQRT transformation	**3M GROWTH RATE:**	**– 0.23 mm**	**(ANNUAL RATE – 0.92 mm)**

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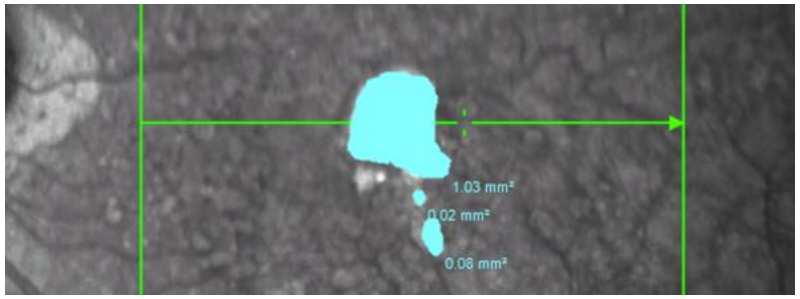
Image courtesy of Jordi Monés, MD, PhD

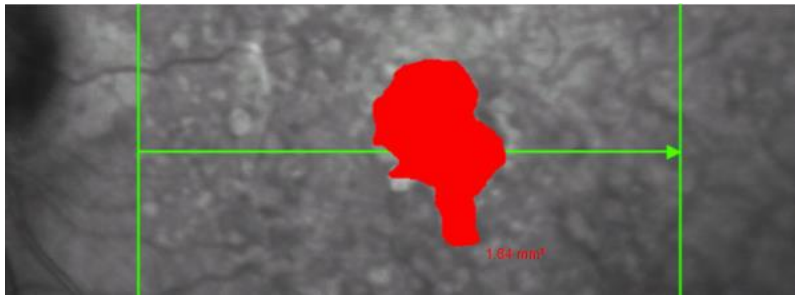
Fourth Case of Retinal Restoration – No GA progression after >1 year



1.06 mm SQRT (1.13 mm^2)

Historical Image

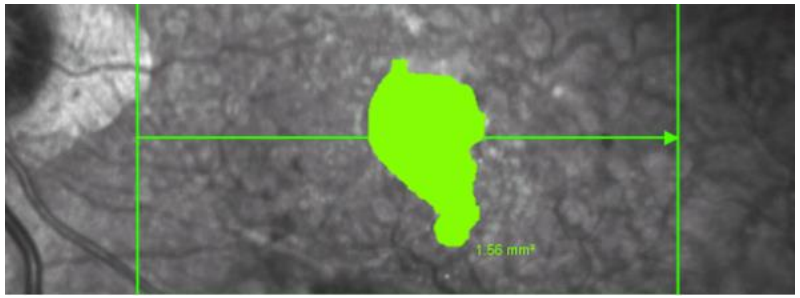
Obtained 16 Months before Baseline Visit



1.28 mm SQRT (1.64 mm^2)

Baseline Image

Rate of Growth from Historical Image = +0.165 mm/yr



1.25 mm SQRT (1.56 mm^2)

13.5 Months post-OpRegen

Rate of Growth from Baseline Image = - 0.026 mm/yr

The SQRT area of atrophy decreased by 2.34% 13.5 Months post-OpRegen from the size of the GA observed at Baseline

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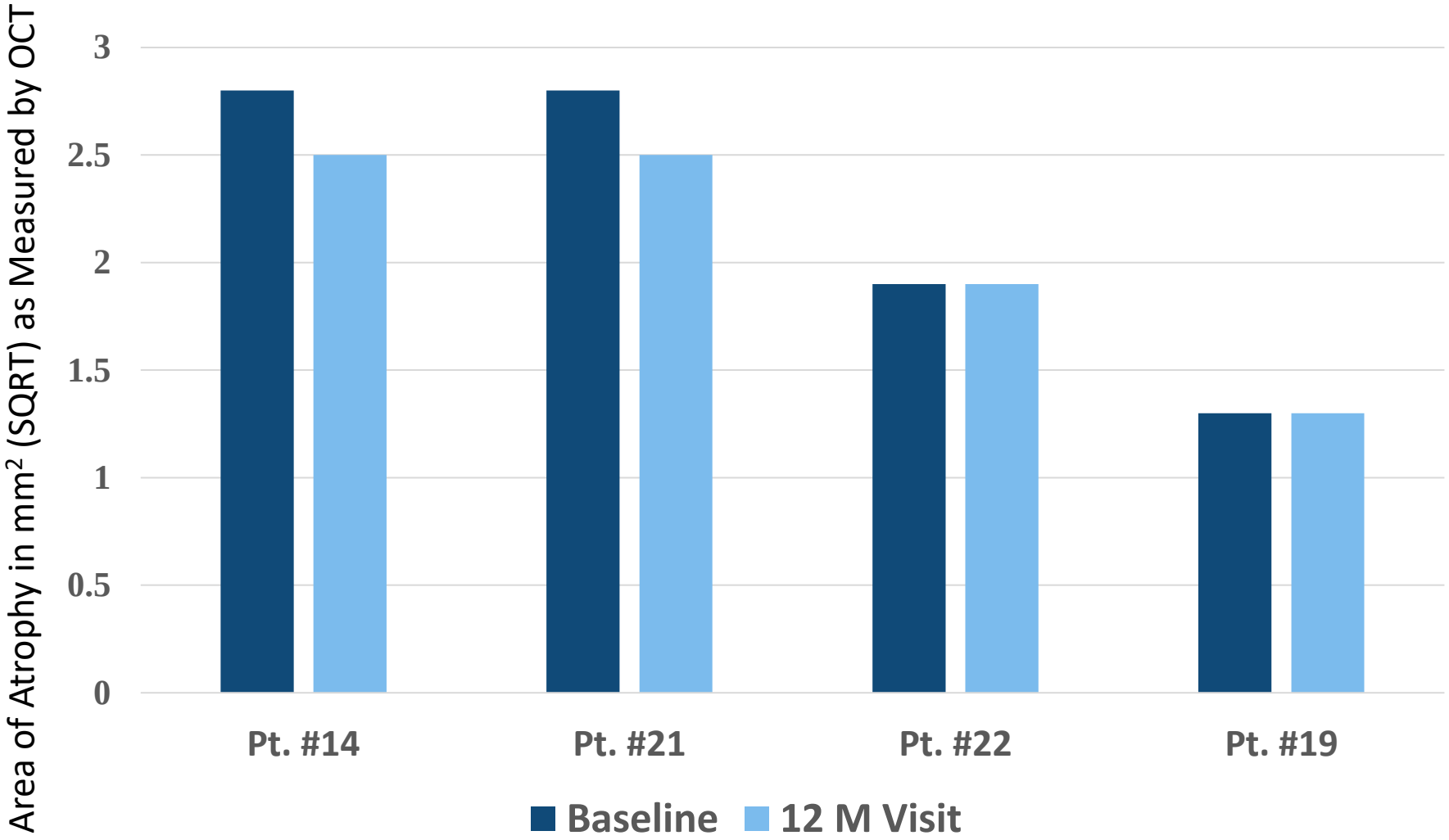
Four Cases of Retinal Restoration – No GA progression after 1 year



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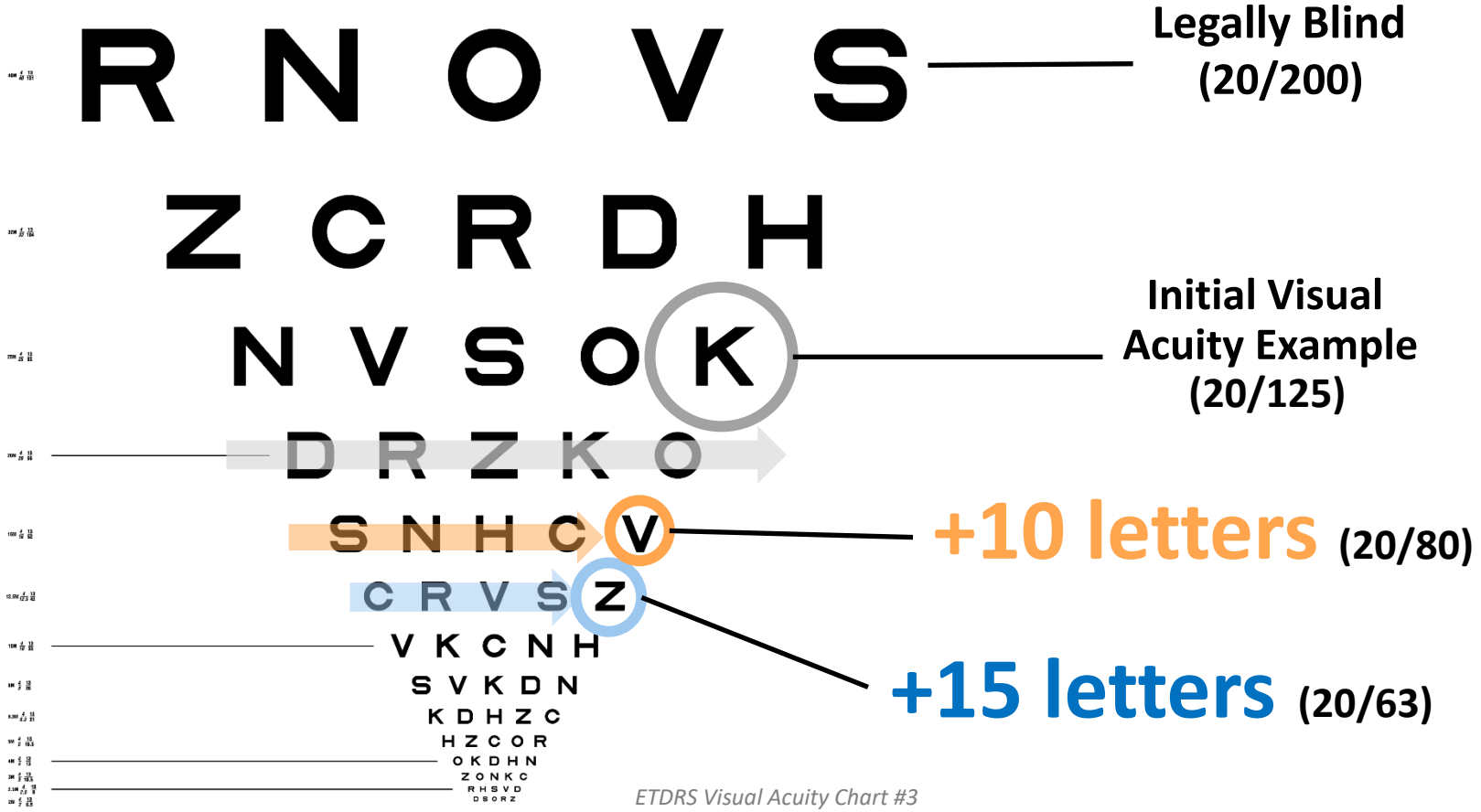
Real-World “Letters of Improvement”



ETDRS Visual Acuity Chart #3

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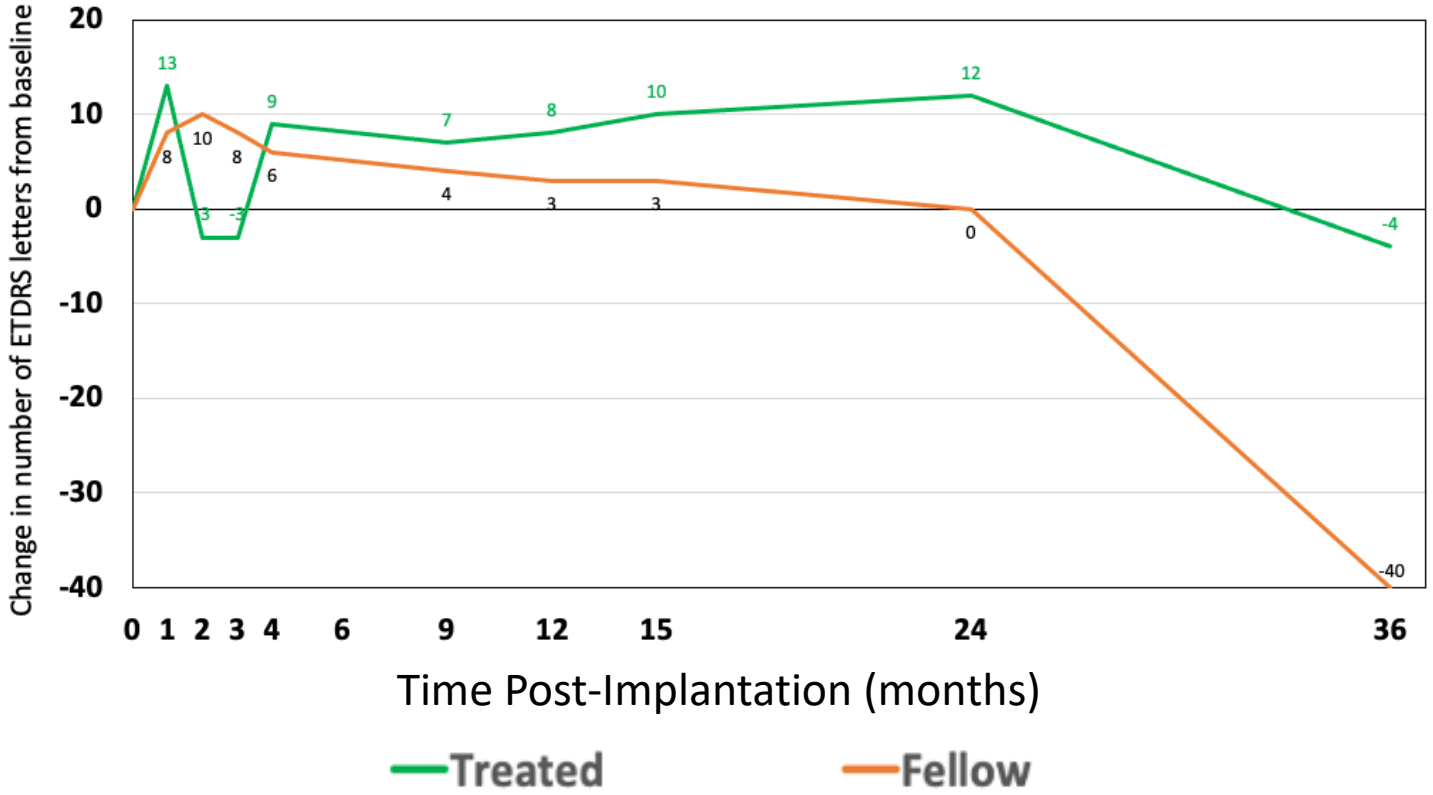
First Case of Retinal Restoration - Durable Improvements

BCVA Changes for Patient #14 – Treated vs. Fellow Eye



Time point	Fellow (OD)	Treated (OS)
Baseline	61 letters read (20/63)	54 letters read (20/80)
3 years post-op	21 letters read (20/400)	50 letters read (20/100)

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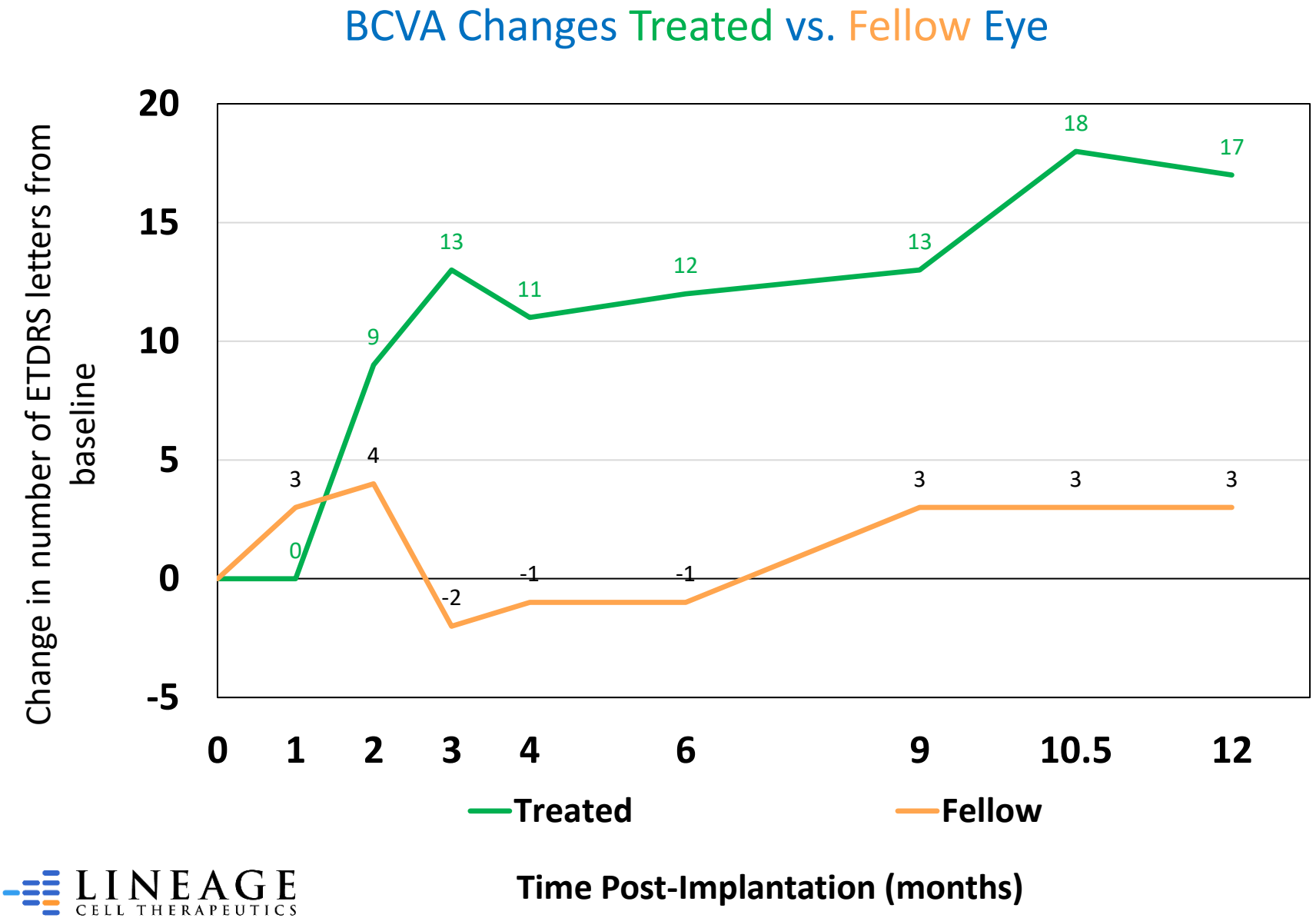
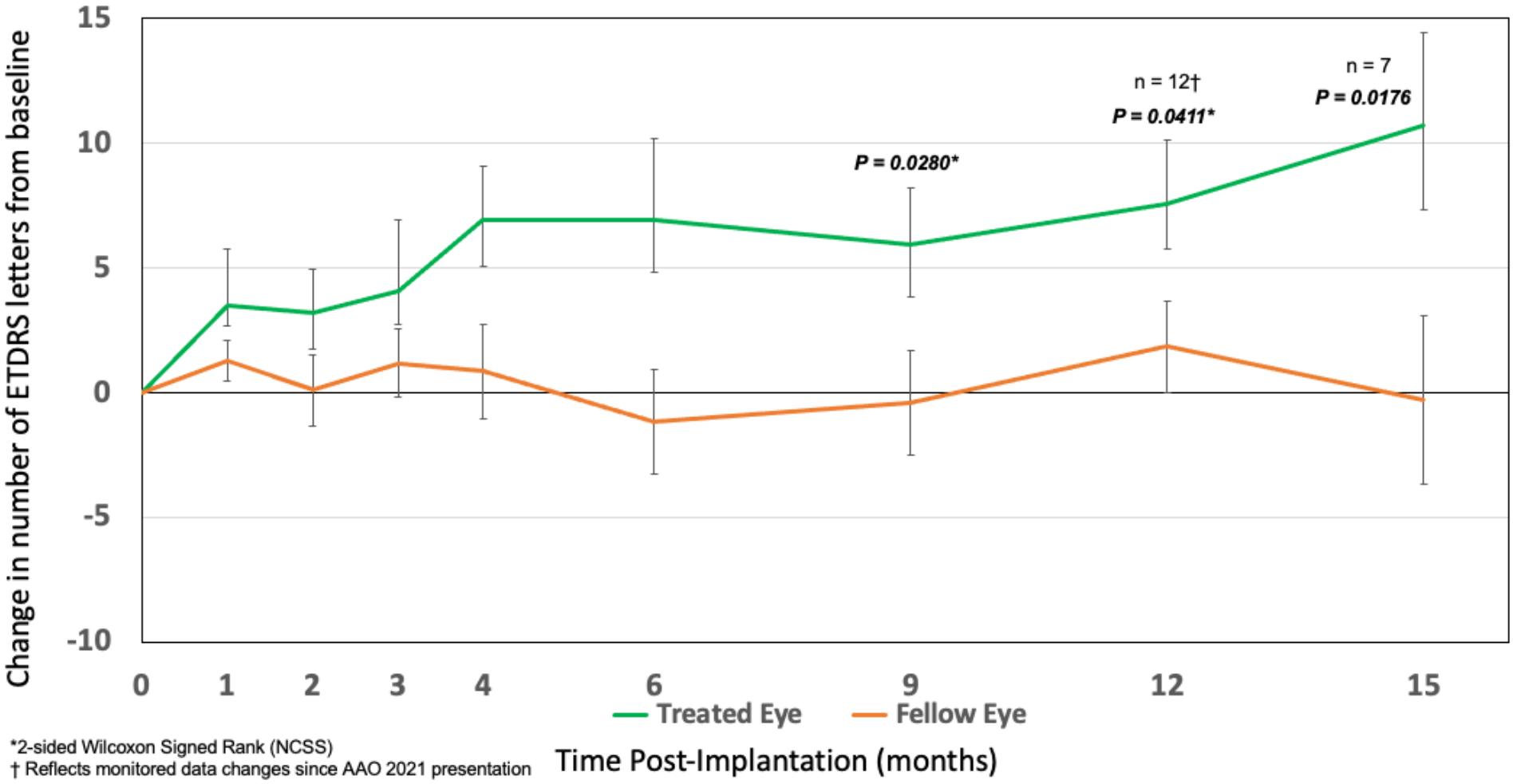
Third Case of Retinal Restoration - Vision in Treated Eye Dramatically Improved



LINEAGE CELL THERAPEUTICS

Mean Change (SEM) in Cohort 4 BCVA – Treated and Fellow Eye



*2-sided Wilcoxon Signed Rank (NCSS)
† Reflects monitored data changes since AAO 2021 presentation

LINEAGE CELL THERAPEUTICS

Positive Patient-Reported Outcomes (Quality of Life Questionnaire)

- **National Eye Institute (NEI) Visual Function Questionnaire (VFQ-25)**
  - 25 vision-related questions reported across 11 constructs
- **Improvement occurred in 10 of 11 categories and remained unchanged in one category in Cohort 4 patients**

Category	n (%) Change from Screening to 1 Year post-Treatment (n = 11 available to date)
General Vision	8/11 (73%) of patients reported improvement
Ocular Pain	1/11 (9%) of patients reported improvement
Near Activities	8/11 (73%) of patients reported improvement
Distance Activities	4/11 (36%) of patients reported improvement
Vision Specific: Social Functioning	5/11 (45%) of patients reported improvement
Vision Specific: Mental Health	7/11 (64%) of patients reported improvement
Vision Specific: Role Difficulties	4/11 (36%) of patients reported improvement
Vision Specific: Dependency	4/11 (36%) of patients reported improvement
Driving	0/11 (0%) of patients reported improvement (most patients were not driving at screening)
Color Vision	1/11 (9%) of patients reported improvement (most patients reported highest possible score, so no improvement was possible)
Peripheral Vision	2/11 (18%) of patients reported improvement

OpRegen Represents a Multi Billion-Dollar Commercial Opportunity

- **Transplanting RPE cells may provide transformational benefits beyond the reach of other approaches**
- **Market opportunity is not limited by monogenic deficiencies (e.g. gene therapy)**
- **Four clinical cases of retinal restoration reported (first known clinical cases)**
- **Treatment to date has been well-tolerated**
  - Some patients have exhibited functional meaningful improvements in clinically-relevant metrics such as visual acuity, GA growth, and reading speed
- **Potential for recurring revenues, but with multiple treatments years apart**
- **Potential application in other retinal diseases (example: Stargardt's Disease)**
- **Issued patents cover aspects of production, product characterization, and formulation**
- **Fast Track designation from FDA**
- **Validating development partnership with global ophthalmology leader, Genentech**

LINEAGE
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Lifetime care for an SCI patient can cost nearly $5 million

Source: christopherreeve.org

OPC1: Cell Therapy for Spinal Cord Injuries

Why Spinal Cord Injury (SCI) Matters

Lucas Linder, an OPC1 clinical trial participant, was paralyzed from the neck down.

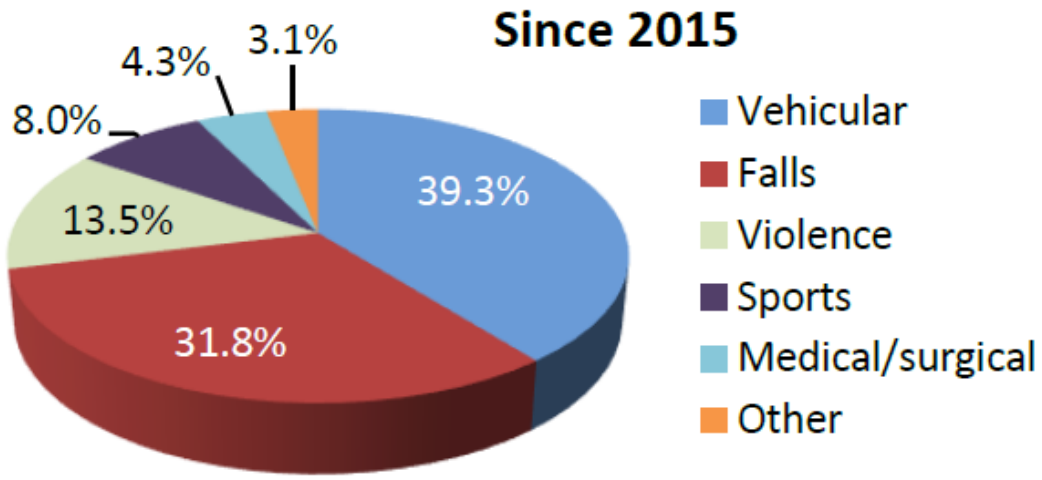
The next year, he threw out the first pitch at a Major League Baseball game.

LINEAGE CELL THERAPEUTICS

Spinal Cord Injury (SCI) Overview

Lifetime care for an SCI patient can cost nearly $5 million

- **Incidence**
  - Approximately 18,000 new cases in the U.S. each year
- **Prevalence**
  - Between 249,000 and 363,000 people in the US
- **Causes**

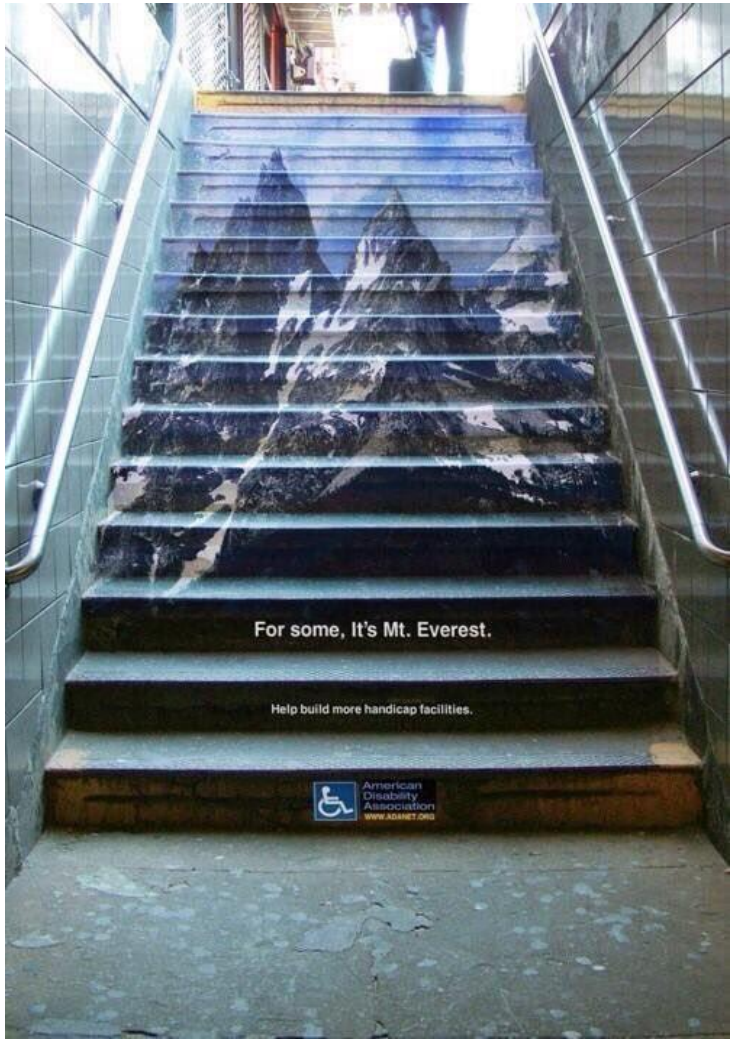


LINEAGE CELL THERAPEUTICS

Source: National Spinal Cord Injury Statistical Center

SCI Burden and Unmet Needs

- **A significant burden for patients and caregivers***
  - 67% of patients are unemployed 10 years post-injury
  - Lifetime healthcare costs can reach $5M for one patient
- **Potential lifelong impairments**
  - Mobility (wheelchair)
  - Pain
  - Re-hospitalizations
  - Infections
  - Ventilator dependency
  - Depression
  - Shortened life expectancy



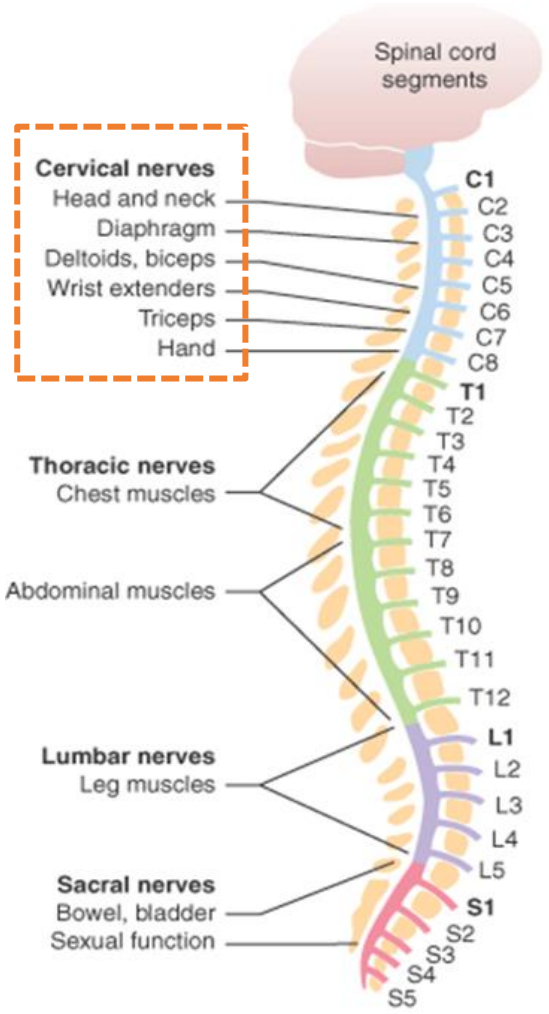
LINEAGE CELL THERAPEUTICS

(*) National SCI Statistical Center, 2019 SCI Data Sheet.

SCI Treatment Objectives

Loss of movement is the primary feature of a spinal cord injury

- **Higher-level injuries result in more extensive impairments**
- **Gains in motor function, particularly in the upper extremities, can provide significant benefits in self-care and lower costs of care**
- **The goal of Lineage's cell therapy is to provide additional arm, hand, and finger function, increasing independence and quality of life**

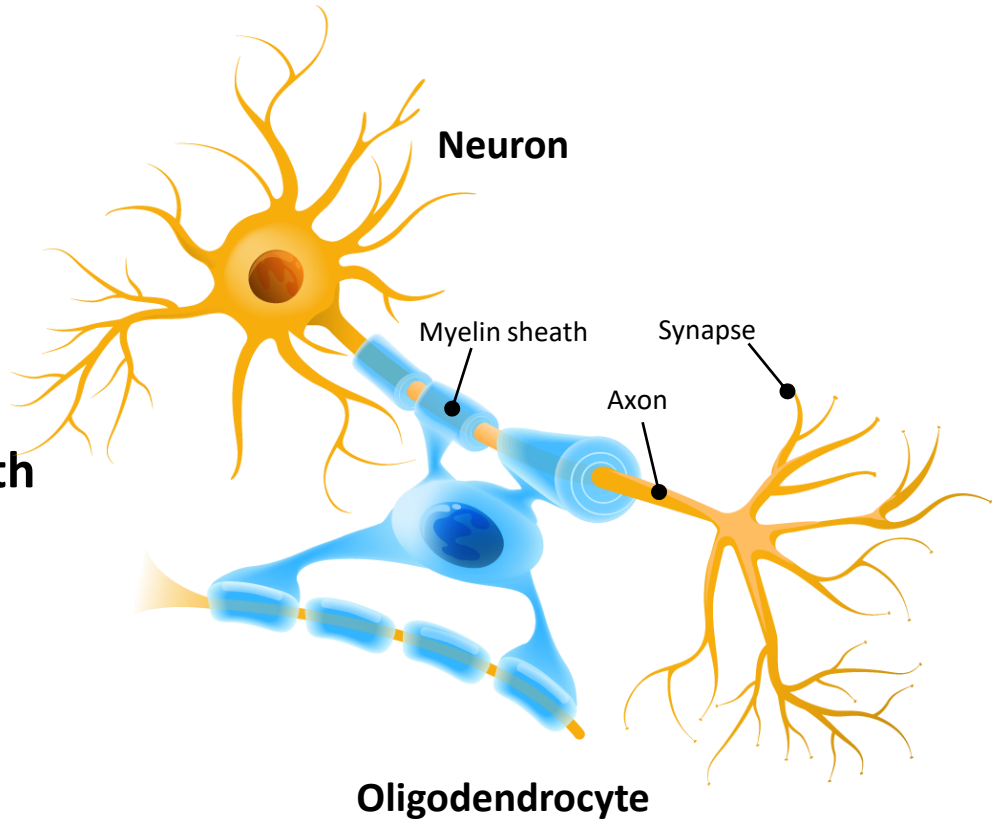


(*) National SCI Statistical Center, 2019 SCI Data Sheet.

OPC1 cells for Spinal Cord Injury

Transplanting oligodendrocytes may provide additional upper extremities function (arms and fingers) and improve quality of life

- **OPC1 is comprised of OPCs (oligodendrocyte progenitor cells)**
- **OPCs are precursors to Oligodendrocytes, the myelinating cells of the central nervous system which provide insulation to nerve axons in the form of a myelin sheath**
- **Myelin is essential for proper function of neurons**
- **OPC1 cells are implanted into the spinal cord at the injury site**



LINEAGE CELL THERAPEUTICS

(*) National SCI Statistical Center, 2019 SCI Data Sheet.

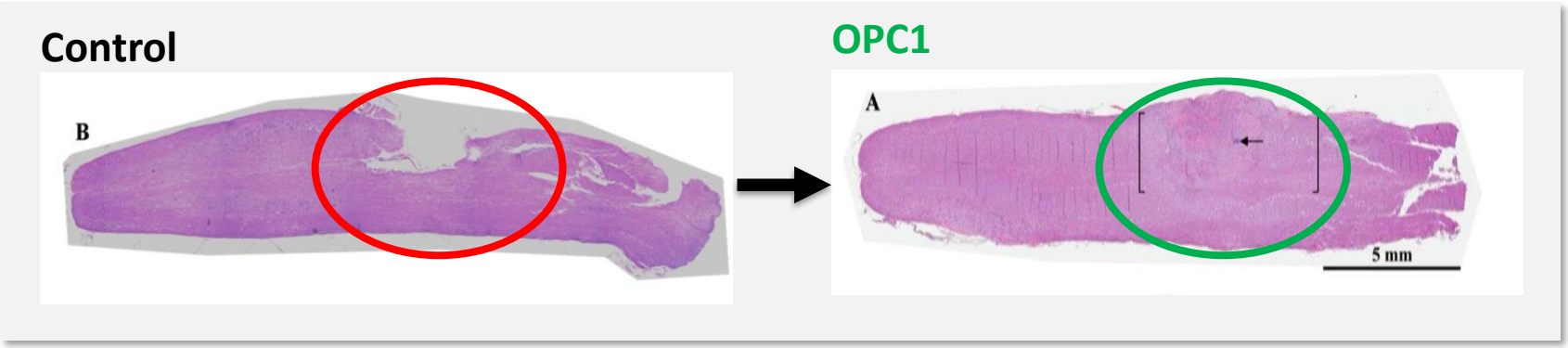
OPC1 Asset Overview

- **OPC1 utilizes targeted cell replacement (similar approach as OpRegen)**
- **OPC1 is covered by multiple issued patents**
- **OPC1 has RMAT Designation**
- **OPC1 has Orphan Drug Designation**
- **OPC1 has received >$14M in support from CIRM (California Institute for Regenerative Medicine)**
- **OPC1 has application to other demyelinating conditions**

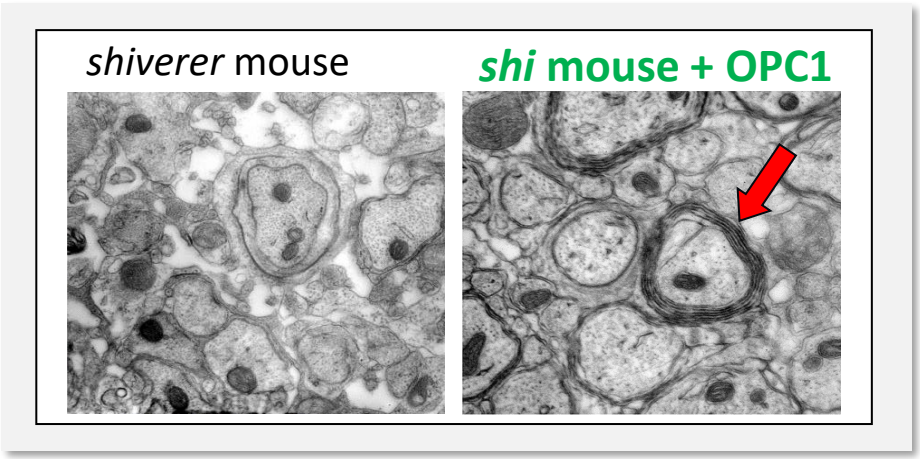
OPC1 Transplant Procedure

OPC1 Mechanisms of Action

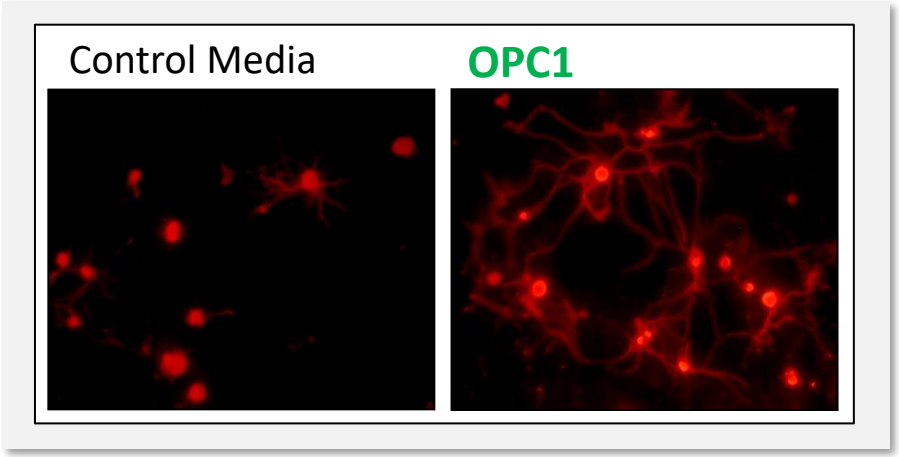
Suppression of Cavitation



Myelination of axons



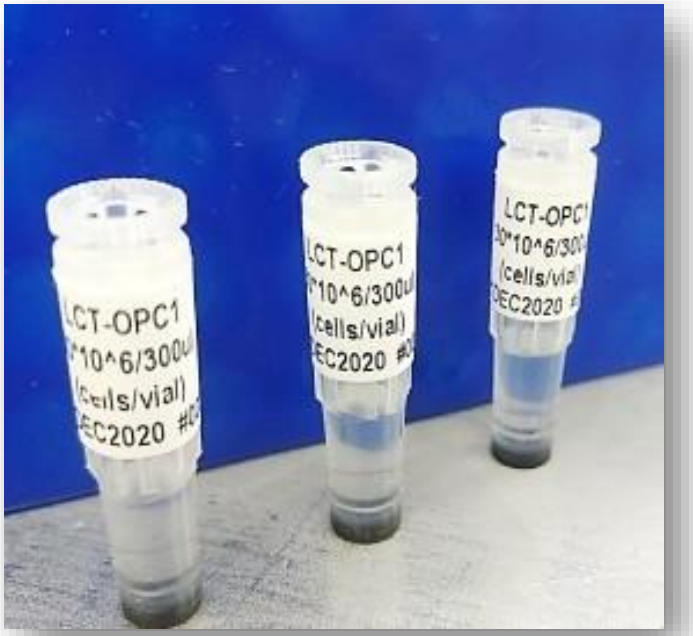
Secretion of neurotrophic factors



LINEAGE CELL THERAPEUTICS

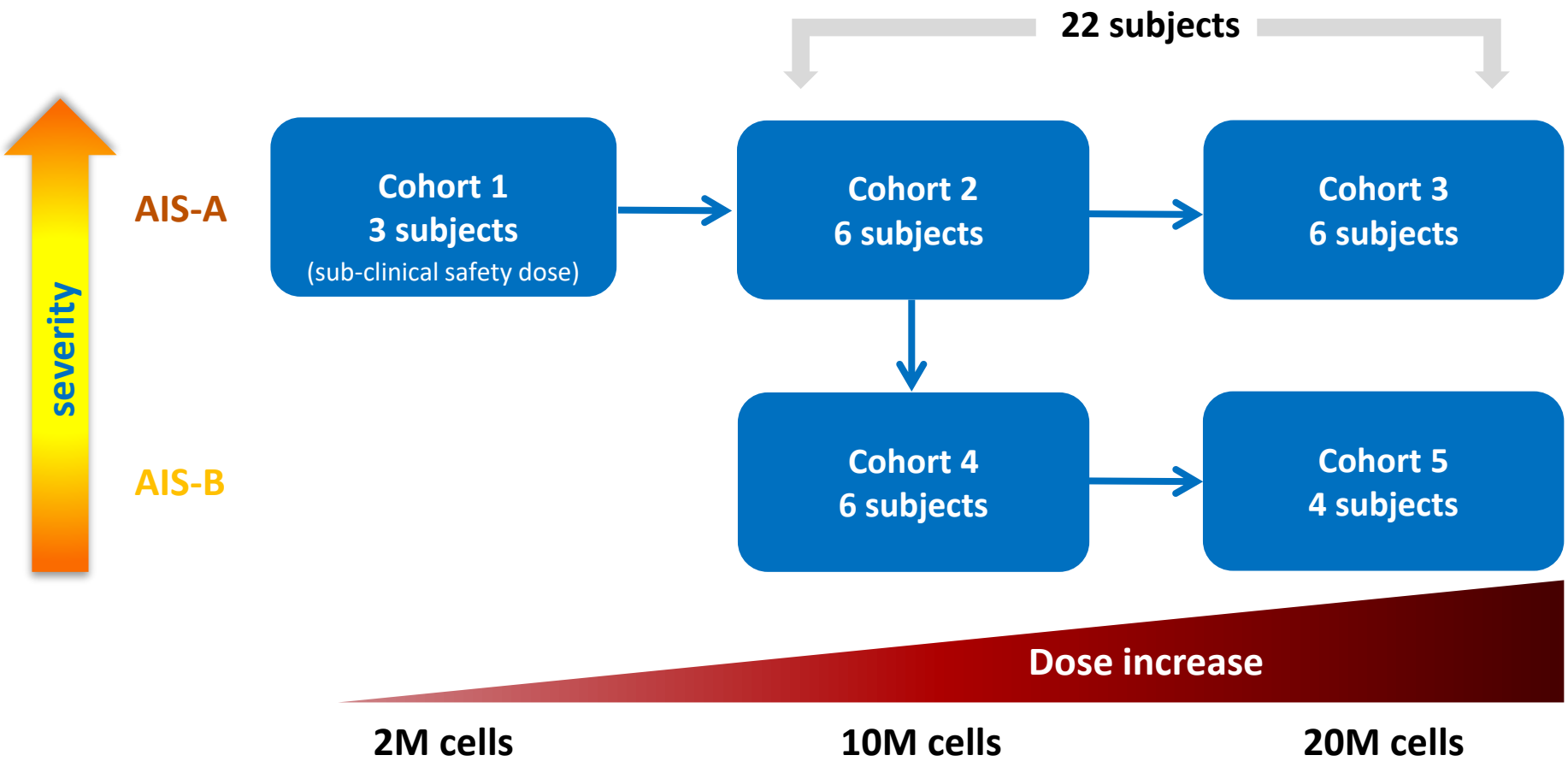
OPC1 for Spinal Cord Injury

- **Lineage's OPCs are derived from an NIH-registered cell line**
- **The OPCs are allogeneic ("off the shelf"), and not taken from the patient**
- **Treatment of SCI occurs 3-6 weeks post-injury and includes short-course (60-day) immunosuppression**
- **The OPCs are "ready to use" in a cryopreserved thaw-and-inject formulation**



LINEAGE CELL THERAPEUTICS

SCiStar Clinical Trial Study Design



LINEAGE CELL THERAPEUTICS

SCiStar Clinical Trial - Summary of Adverse Events

Majority of adverse events were mild to moderate in severity

All Treated Subjects (n=25)	AEs	SAEs
Total	534	29
Related to OPC1	1*	0
Related to Injection Procedure	20	1
Related to Tacrolimus	11	1

To date, there have been no serious adverse events related to the OPC1 cells
Safety data is available for 2 to 5 years on all 25 patients

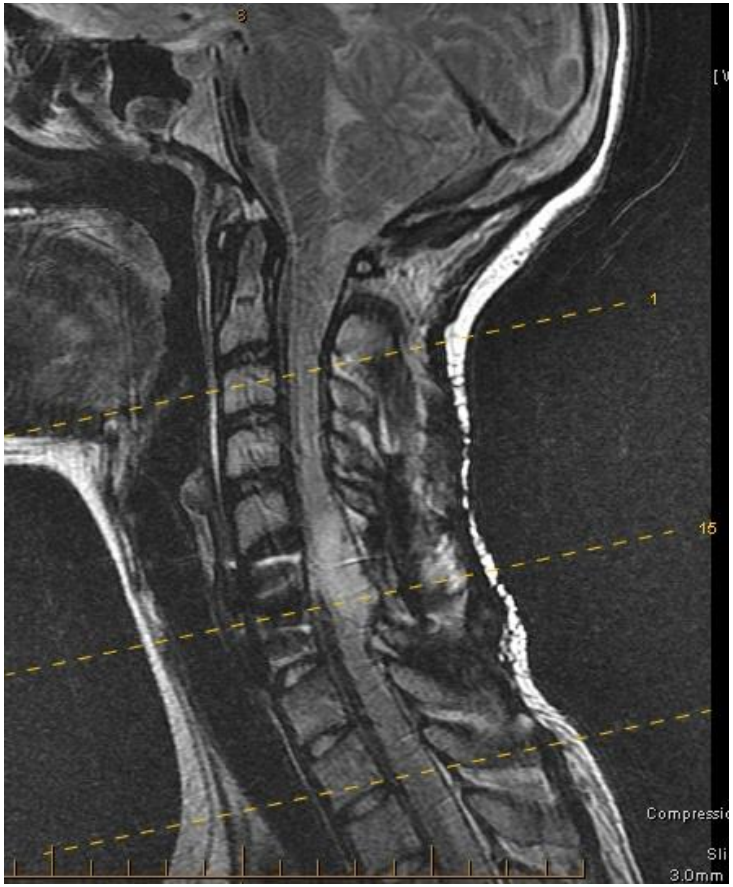
**One AE possibly related to OPC1 was a Grade 2 dysesthesia that began 47 days post-injection but had resolved by the Year 2 follow-up visit*

LINEAGE CELL THERAPEUTICS

SCiStar Clinical Trial - Cell Engraftment

12- and 24-Month MRI Scans Indicate Durable Engraftment

- **Cystic cavitation (syringomyelia) occurs in ~80% of SCI cases**
- **MRI results suggest formation of a tissue matrix at the injury site, indicating that OPC1 cells have durably engrafted and helped prevent syringomyelia**
- **96% (24/25) of OPC1 patients had serial MRI scans that indicated no sign of a lesion cavity at 12 months (or 24 months for 22 scans available)**



Weighted sagittal MRI

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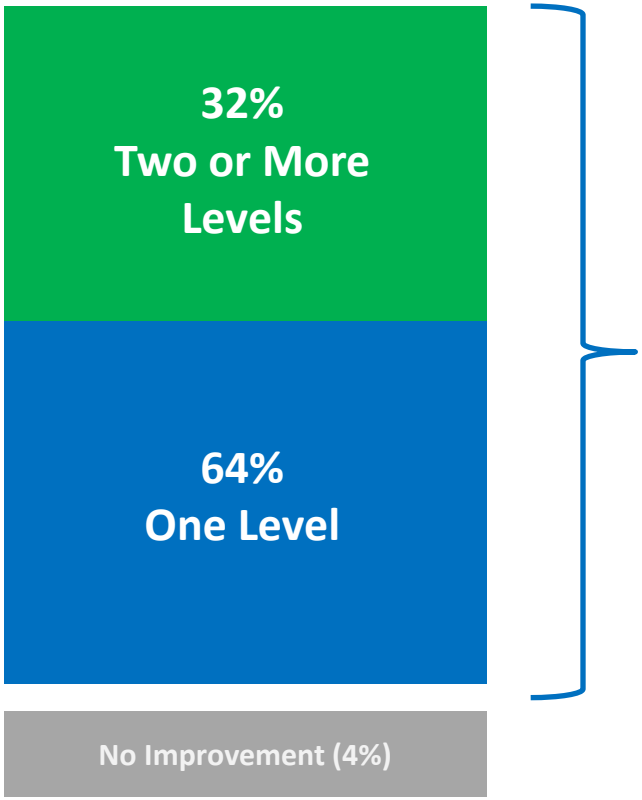
SCiStar Clinical Trial - Motor Function Gains

22 Patients at 12 months



96% of Subjects Reported Improved Motor Function

LINEAGE CELL THERAPEUTICS

N=22 because 3 patients from Cohort 1 received a sub-clinical "safety" dose of only 2M cells (the clinical dose is 10-20M cells)

INTERNATIONAL STANDARDS FOR NEUROLOGICAL CLASSIFICATION OF SPINAL CORD INJURY (ISNCSCI)

ASIA American Spinal Injury Association — ISCOS International Spinal Cord Society

Patient Name _____ Date/Time of Exam _____

Examiner Name _____ Signature _____

RIGHT

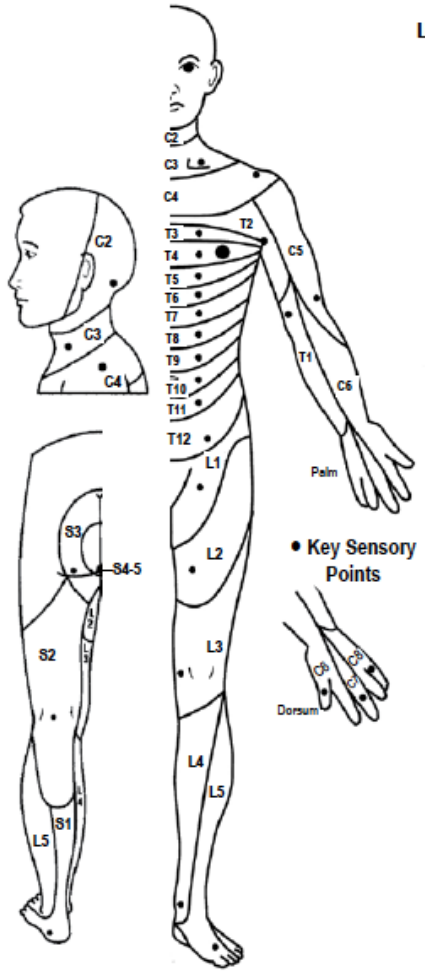
MOTOR KEY MUSCLES		SENSORY KEY SENSORY POINTS Light Touch (LT)	Pin Prick (PP)
		C2	
		C3	
		C4	
Elbow flexors	C5		
Wrist extensors	C6		
Elbow extensors	C7		
Finger flexors	C8		
Finger abductors (little finger)	T1		
		T2	
		T3	
		T4	
		T5	
		T6	
		T7	
		T8	
		T9	
		T10	
		T11	
		T12	
		L1	
Hip flexors	L2		
Knee extensors	L3		
Ankle dorsiflexors	L4		
Long toe extensors	L5		
Ankle plantar flexors	S1		
		S2	
		S3	
		S4-5	
		RIGHT TOTALS	
		(MAXIMUM)	(50) (56) (56)

UER (Upper Extremity Right)

Comments (Non-key Muscle? Reason for NT? Pain?):

LER (Lower Extremity Right)

(VAC) Voluntary anal contraction (Yes/No) ☐



LEFT

SENSORY KEY SENSORY POINTS Light Touch (LT)	Pin Prick (PP)	MOTOR KEY MUSCLES	
		C2	
		C3	
		C4	
		C5	Elbow flexors
		C6	Wrist extensors
		C7	Elbow extensors
		C8	Finger flexors
		T1	Finger abductors (little finger)
		T2	
		T3	
		T4	
		T5	
		T6	
		T7	
		T8	
		T9	
		T10	
		T11	
		T12	
		L1	
		L2	Hip flexors
		L3	Knee extensors
		L4	Ankle dorsiflexors
		L5	Long toe extensors
		S1	Ankle plantar flexors
		S2	
		S3	
		S4-5	
		LEFT TOTALS	
(56)	(56)	(50)	(MAXIMUM)

UEL (Upper Extremity Left)

LEL (Lower Extremity Left)

MOTOR *(SCORING ON REVERSE SIDE)*

0 = total paralysis
1 = palpable or visible contraction
2 = active movement, gravity eliminated
3 = active movement, against gravity
4 = active movement, against some resistance
5 = active movement, against full resistance
5 = normal corrected for pain/disuse*
NT = not testable

SENSORY *(SCORING ON REVERSE SIDE)*

0 = absent *2 = normal*
1= altered *NT = not testable*

(DAP) Deep anal pressure (Yes/No) ☐

MOTOR SUBSCORES

UER ☐ + UEL ☐ = *UEMS TOTAL* ☐ — *MAX (25) (25) (50)*

LER ☐ + LEL ☐ = *LEMS TOTAL* ☐ — *MAX (25) (25) (50)*

SENSORY SUBSCORES

RLT ☐ + LLT ☐ = *LT TOTAL* ☐ — *MAX (56) (56) (112)*

RPP ☐ + LPP ☐ = *PP TOTAL* ☐ — *MAX (56) (56) (112)*

NEUROLOGICAL LEVELS
Steps 1-5 for classification as on reverse

	R	L
1. SENSORY	☐	☐
2. MOTOR	☐	☐

3. NEUROLOGICAL LEVEL OF INJURY (NLI) ☐

4. COMPLETE OR INCOMPLETE? ☐
Incomplete = Any sensory or motor function in S4-5

5. ASIA IMPAIRMENT SCALE (AIS) ☐

(In complete injuries only)
ZONE OF PARTIAL PRESERVATION
Most caudal level with any innervation

	R	L
SENSORY	☐	☐
MOTOR	☐	☐

REV 02/13

Real-World Benefit from a 2 Motor Level Improvement

Motor level gains translate into clinically meaningful improvements in self-care and reductions in cost of care

32% had +2 Level Improvement

Function	Cervical Injury Level				
	C1-C3	C4	C5	C6	C7-C8
Bowel					
Bladder					
Bed Mobility					
Transfers					
Pressure Relief					
Eating					
Dressing					
Grooming					
Bathing					
Wheelchair					
Car transport					
Daily Home Care	24 hr attendant	18-24 hr attendant	6-12 hr assistance	4 hr housework	1 hr housework

Total Assist | Partial Assist | Independent

Activities of Daily Living across different levels of motor function after cervical complete SCI Modified from Whiteneck et al. 1999)

LINEAGE CELL THERAPEUTICS

SCiStar Clinical Trial - Analysis of Patients with Least UEMS Recovery

C4 or cord compressions occurred in 5 of the 7 worst patient outcomes and both issues can be addressed in the next trial

Subject	UEMS Change at 12 mo.	Cord Compression After OPC1 Injection?	NLI Baseline	Baseline AIS	Cohort	Dose	Age	Injection Days Post Injury
2207	7	N	C4	B	5	20 M	62	37
2203	6	N	C6	A	3	20 M	45	31
2105	6	N	C4	A	3	10 M	19	20
2004	5	N	C6	B	4	10 M	21	25
2007	4	N	C4	B	4	10 M	55	38
2307	4	Y	C5	B	5	10 M	19	38
2303	3	Y	C6	B	4	10 M	22	35

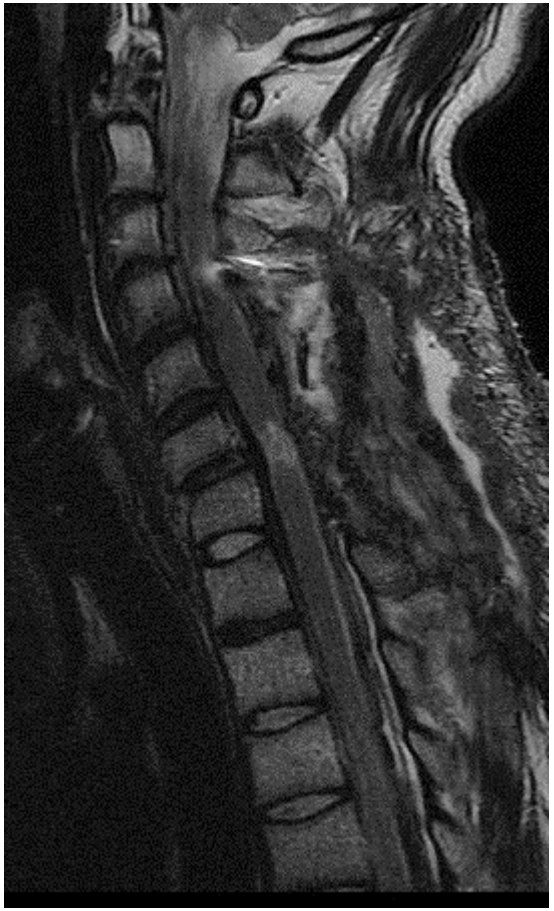
- **Two patients had cord compression after OPC1 injection (2303 and 2307 at Day 30 and Day 7)**
- **Patients 2105, 2207, 2007 had a C4 (highest/most severe) injury level at baseline**
- **Patient 2105 also had a hematoma in the spinal cord at baseline & a failed graft**

LINEAGE CELL THERAPEUTICS

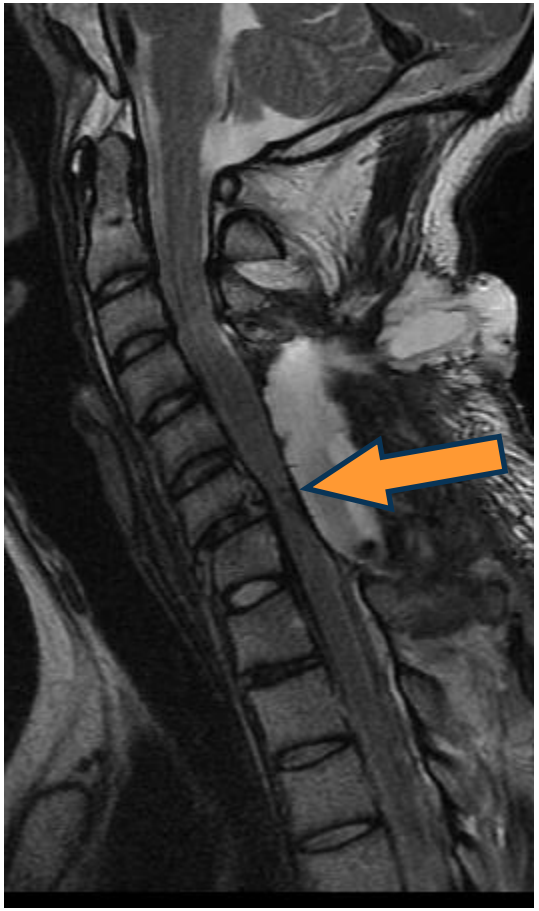
SCiStar Clinical Trial – Cord Compression

Subject 2303 (Cohort 4): Cord Compression at Day 30

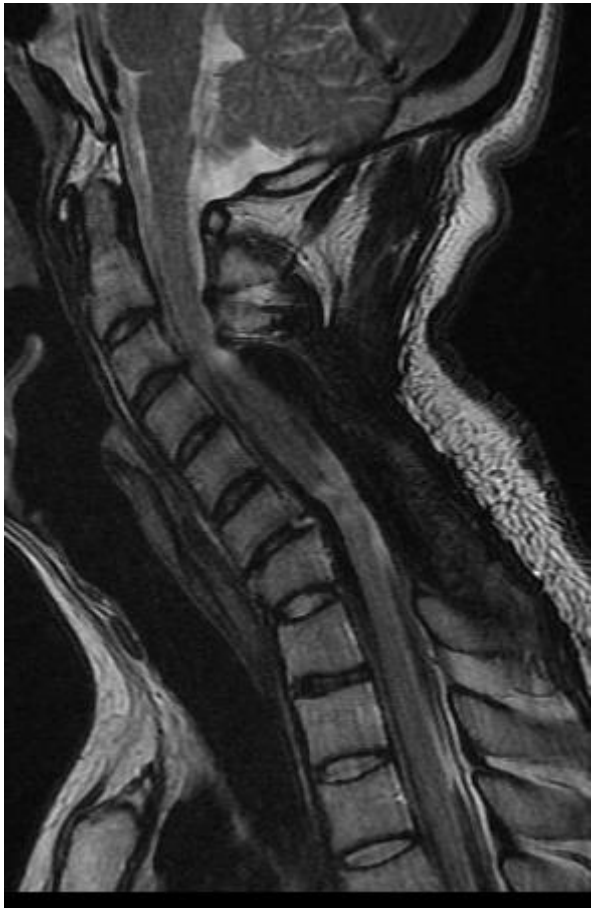
Baseline



Day 30



Day 365



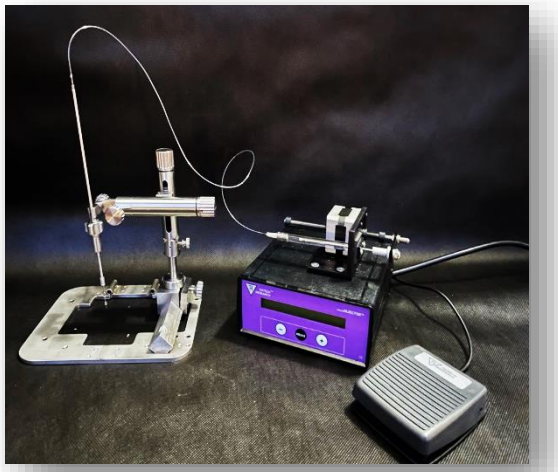
LINEAGE CELL THERAPEUTICS

SCiStar Clinical Trial – Takeaways

- **Excellent overall safety profile**
- **96% durable engraftment confirmed via MRI**
- **MRI scans through 24 months show no evidence of adverse changes**
- **No subjects had a decline in motor function from Year 1 to Year 2**
- **95% of patients exhibited motor recovery in the upper extremities at 12 months (requires at least 1 motor level gain on at least 1 side)**
- **Significant motor improvements achieved in five of six Cohort 2 subjects**
- **The two worst performing subjects had spinal cord compression (can be addressed in next trial)**

New Parenchymal Spinal Delivery (PSD) System

- **Better performance: Greater stability and control**
  - Eliminates motion between platform/XYZ manipulator/injection needle
  - Pump and syringe not in sterile field: programmed (accurate) dose rate
- **Enhanced clinical usability and safety: no cessation of ventilation**
  - Attaches directly to the patient, compatible with breathing motion
  - Magnetic needle provides stabilization of micromotion from heartbeats
- **Enhanced end user experience:**
  - Smaller and fewer components
  - Easily assembled
  - Single hand operation
  - Accurate needle depth insertion
  - Compatible with OPC1 TAI formulation
- **Animal testing with OPC1 ongoing**

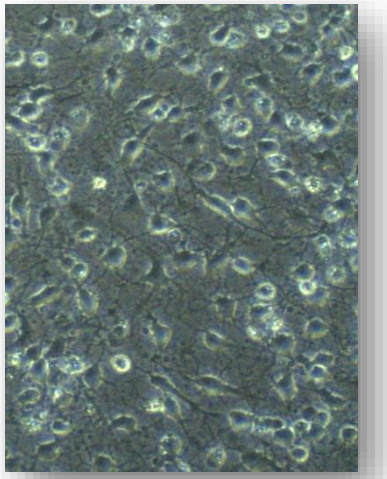


- **Clinical trial in sub-acute and chronic patients planned for 2022**

OPC1 Manufacturing Improvements Following FIM Study

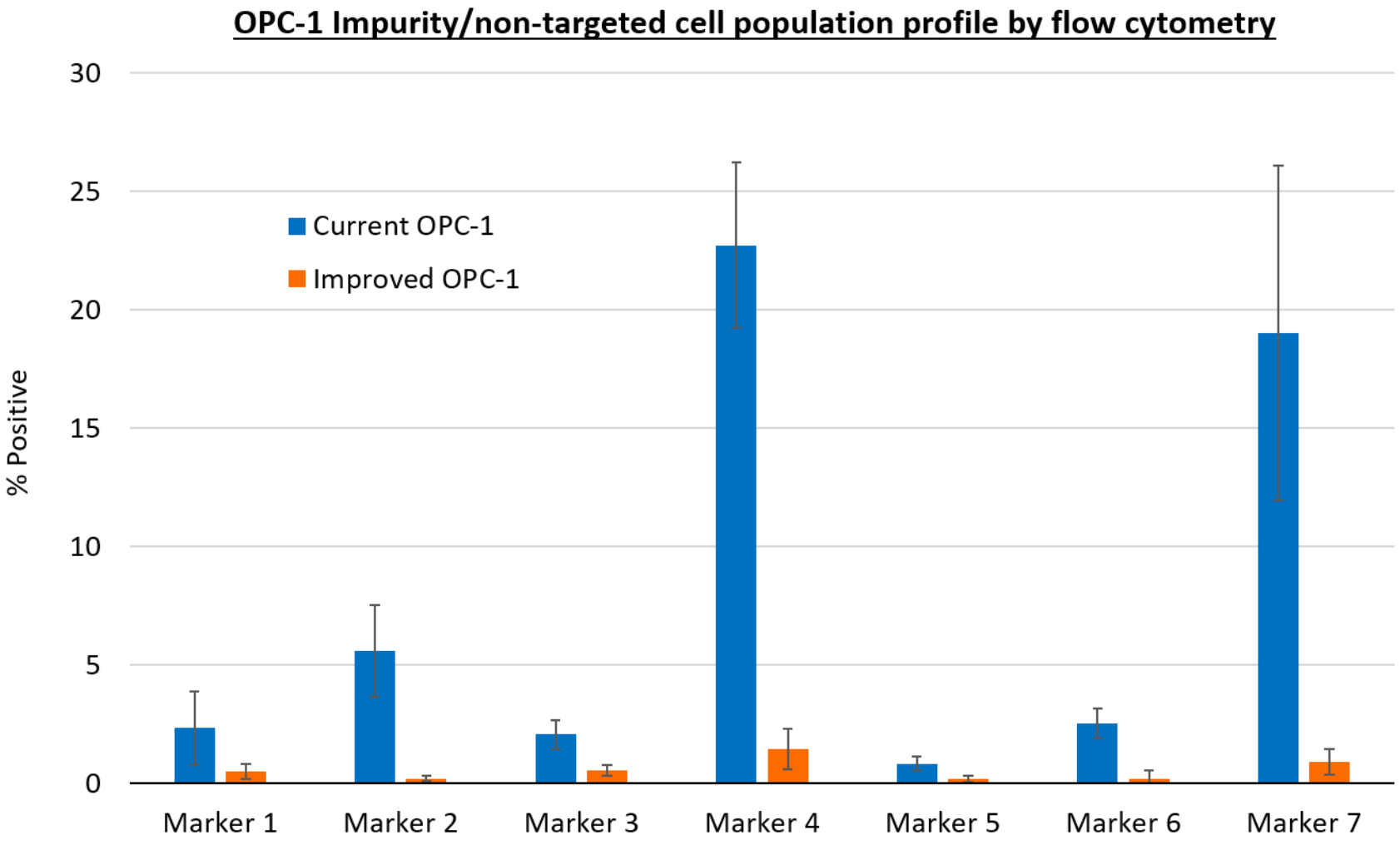
Lineage has made major improvements in production and quality of OPC1

- **A new ready-to-inject formulation was developed**
- **Elimination of dose preparation achieved**
- **10- to 20-fold increase in production scale**
- **Significant reduction in impurities**
- **No reduction in functional activity**
- **12 new analytical and functional methods developed**
- **Elimination of all animal-based production reagents**
- **Patent applications on the process and product, if allowed, will have expiration dates of 2039 and 2040**



LINEAGE CELL THERAPEUTICS

OPC1 Manufacturing Improvements: Lower Impurities



LINEAGE CELL THERAPEUTICS

OPC1 Program – Key Takeaways

- **Excellent overall safety profile**
- **96% durable engraftment confirmed via MRI**
- **95% of patients exhibited motor recovery in the upper extremities at 12 months (requires at least 1 motor level gain on at least 1 side)**
- **5/6 patients in cohort 2 achieved significant (2 level) motor improvements**
- **The two worst-performing patients had spinal cord compression, which can be addressed in the next trial**
- **Greatly improved product purity and scale**
- **Superior delivery device is entering clinical testing (safety trial to include chronic patients)**
- **Planning underway for a randomized, controlled and potentially registrational clinical trial**

LINEAGE
CELL THERAPEUTICS

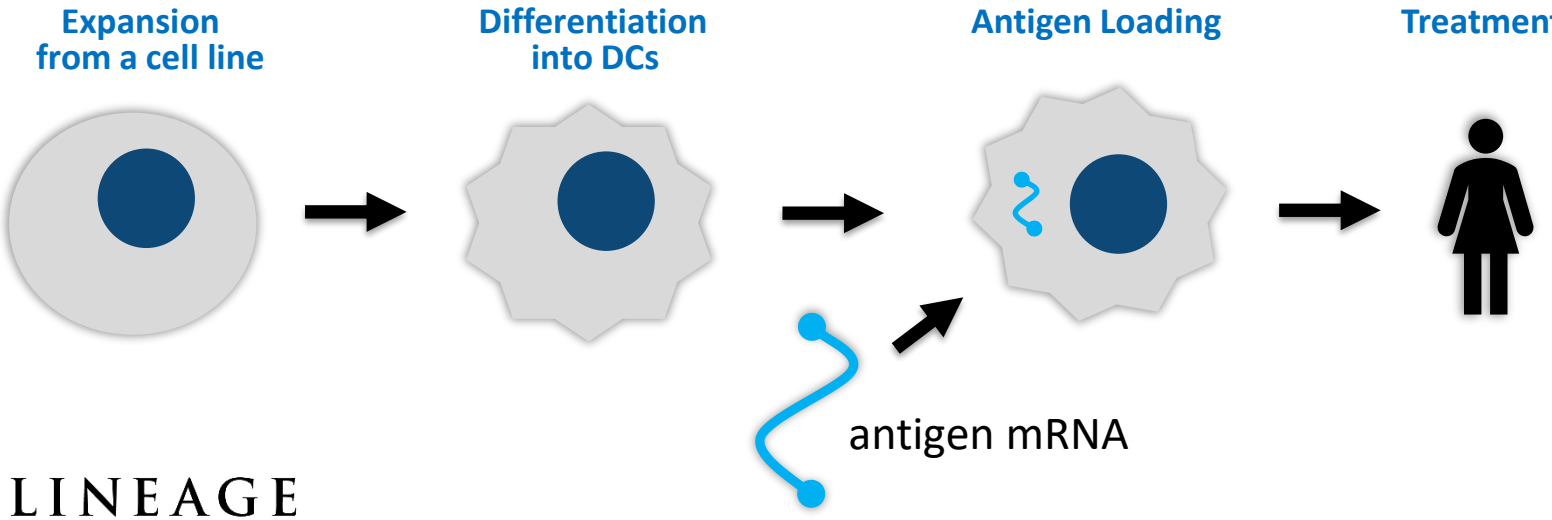
Immunotherapy is "poised to revolutionize treatment for all types of cancer"

Source: cancerresearch.org

VAC: A Cell Therapy Platform for Cancer and Infectious Diseases

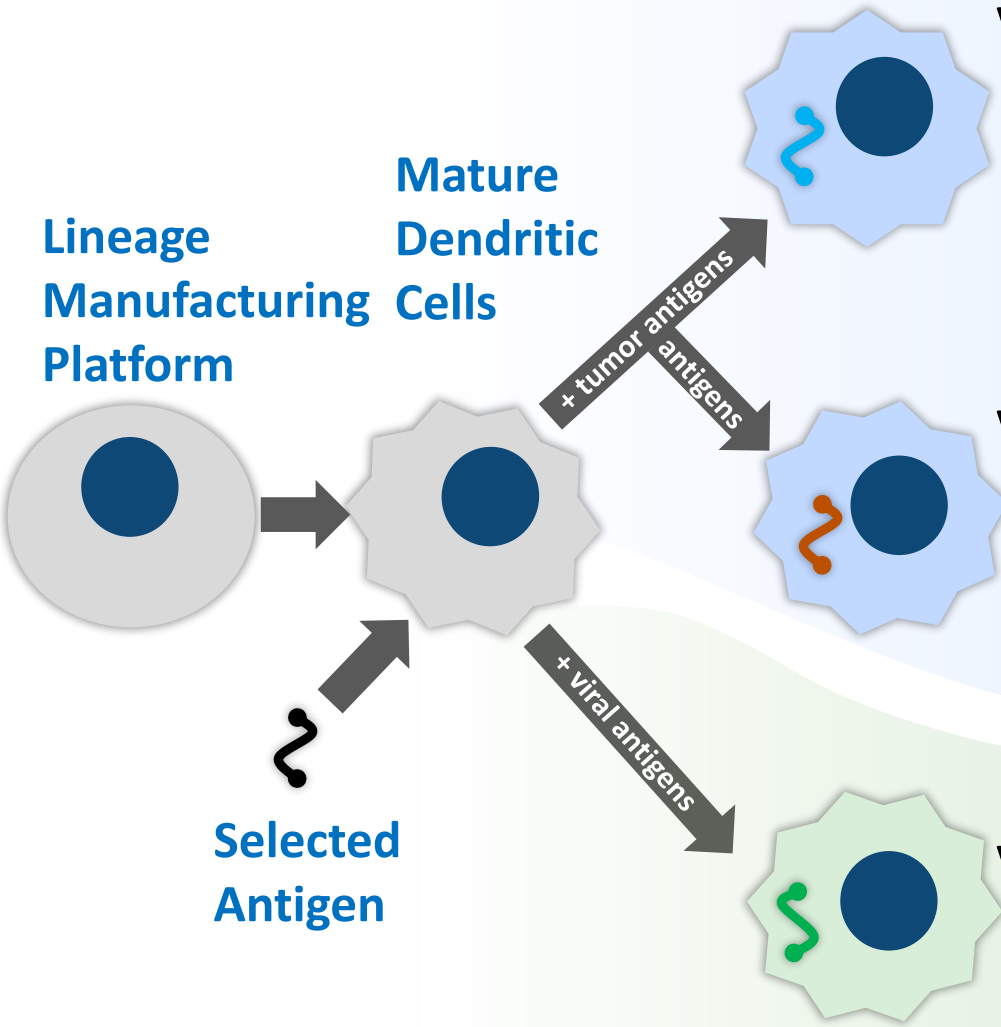
The VAC Platform: On demand cell therapy for cancer

- **The VAC platform consists of large-scale, allogeneic ("off the shelf") production of mature dendritic cells (DCs). No production delay between diagnosis and treatment, as with autologous or patient-specific therapies.**
- **DCs are manufactured and loaded with either a tumor antigen (to treat cancer) or a viral antigen (as a vaccine for infectious diseases)**
- **Antigen presentation to the patient's T cells creates a *targeted* and robust immune response (up to 3%), aiding tumor cell destruction or pathogen clearance**



LINEAGE CELL THERAPEUTICS

VAC Development – A Platform for Multiple Product Candidates



VAC1 and VAC2 Highlights

- Positive phase 1 data in AML
- Positive ongoing phase 1 trial in lung cancer (NSCLC)
- Cancer Research UK alliance
- High T cell responses in clinical trials

VAC3, VAC4, VAC5…Opportunities

- Partnerships based on new products
- Retain highest value candidates
- Currently evaluating new antigens

VAC-Infectious Diseases

- Designed to provide long-term protection via memory T cells
- Leverages VAC clinical data

LINEAGE CELL THERAPEUTICS

VAC2 - Phase 1 Clinical Trial (Ongoing, Conducted by CRUK)

- **Enrollment ongoing (7/8 patients treated to date)**
- **VAC2 has been well tolerated in all patients dosed; no treatment delays due to adverse events attributable to VAC2**
- **Directionally positive Phase 1 data**
  - Induction of durable, antigen-specific linked T cell help
  - Magnitude of T cell induction 40-400 times higher than that witnessed with other approaches (DNA / RNA vaccines)
  - Adverse events suggestive of induction of an adaptive immune response
  - Injection site reactions, flu-like symptoms (all grade 1 or 2)
- **Major radiological response reported in 1 patient > chemotherapy > VAC2**
- **Safety & preliminary immunogenicity data obtained in Q1 2020 formed basis for Lineage to exercise option to re-acquire asset and advance internally**

VAC Platform Next Steps

Upcoming Events and Key Considerations:

- **Complete dosing in ongoing clinical trial (1 patient remaining)**
- **Introduce improvements to the manufacturing process**
- **Design new products (i.e. VAC3, 4, 5, 6…) with newly discovered antigens**
- **Identify potential partnership and grant opportunities for more rapid expansion of the VAC platform**
  - First strategic alliance (with Immunomic Therapeutics) announced April 2021

Our Goal is to Provide Life-Changing Cell Therapies to Patients

Lineage Cell Therapeutics: Bringing the Promises of Cell Therapy into Clinical Reality

Clinical-stage programs with billion-dollar potential and partnership opportunities

World class in-house process development and GMP manufacturing

One of the largest patent portfolios in cell therapy

Multiple validating corporate partnerships

Leader in the field of regenerative medicine

LINEAGE CELL THERAPEUTICS

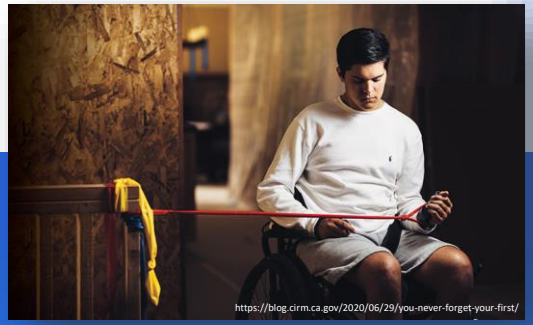
The Patients Are Our Inspiration.
View their stories at **lineagecell.com/media/#patients**

OPC1 SCiStar Study Participants

CIRM
CALIFORNIA'S STEM CELL AGENCY

Lucas Lindner
"There's no reason to not look forward in the same way now that I had before all of this happened. I'm looking forward to driving again… it's a bright future."

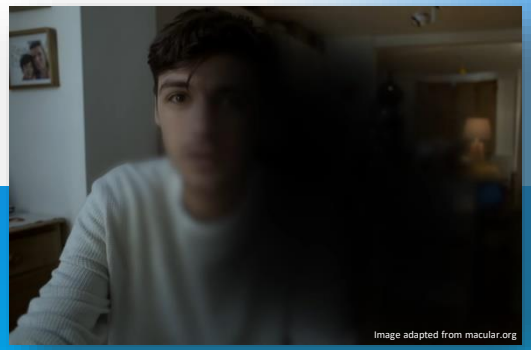
Kris Boesen
"I couldn't drink, couldn't feed myself, couldn't text or pretty much do anything, I was basically just existing. I wasn't living my life, I was existing."



Jake Javier
"Even though it's a completely different perspective, I can still lead that way. I can just try to be the best I can and to persevere the best I can."
Diablo Magazine, Feb. 16, 2017

The Millions Worldwide Suffering from Dry AMD Vision Loss

"Macular degeneration is a very frustrating condition which can greatly affect your day-to-day life."
- Macular Society



Courtesy of CIRM, American Macular Degeneration Foundation, and Macular Society