LINEAGE CELL THERAPEUTICS

The future of cell therapy.

Corporate Overview

September 30, 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"

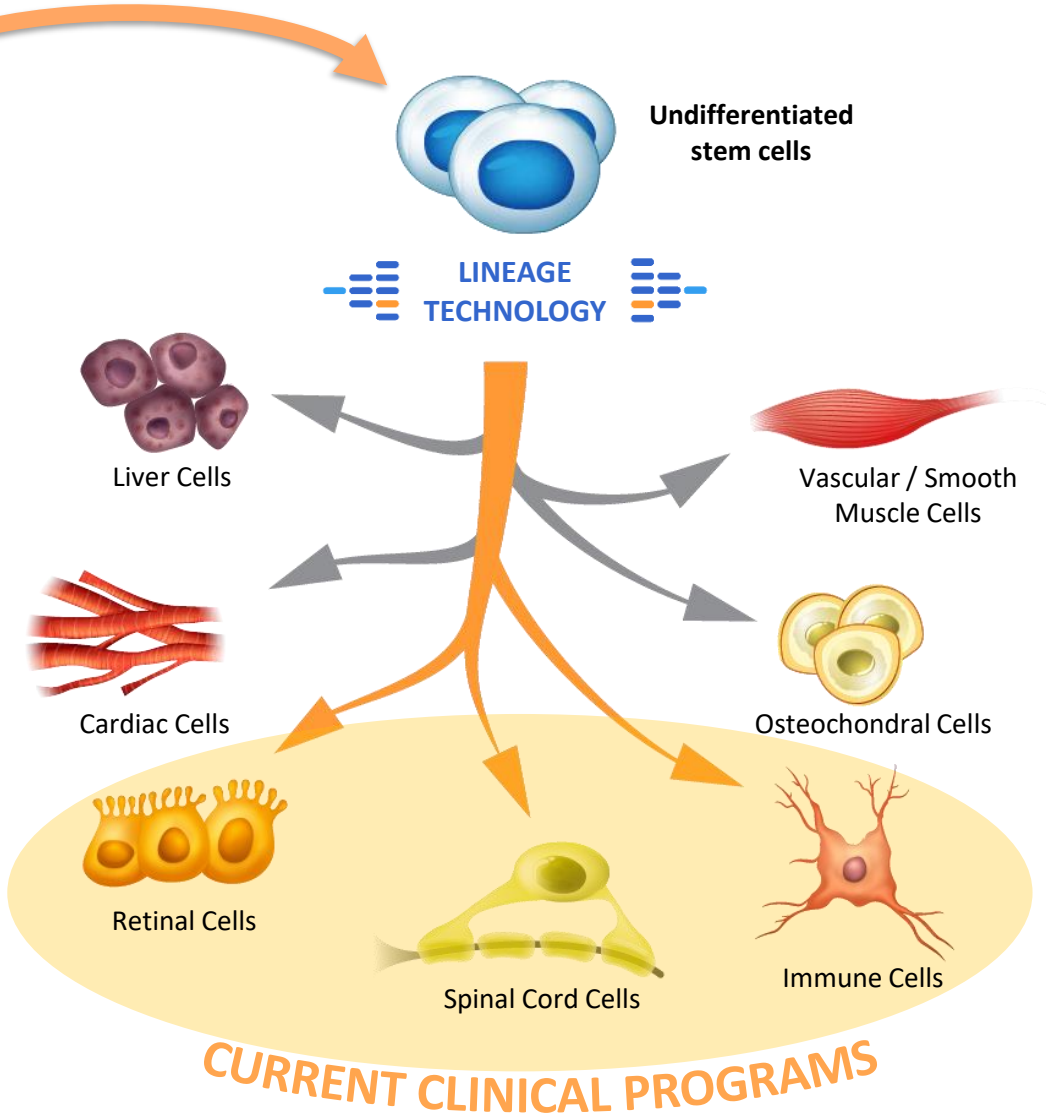
Business Overview

Lineage Cell Therapeutics – Investor's Overview

Innovative Approach	- Transplanting "off the shelf" cells to treat serious medical conditions
Unique Advantage	- Can manufacture an unlimited supply of specialized cell types from established pluripotent cell lines
Three Clinical Programs	**- OpRegen**: Phase 1/2a in Dry Age-Related Macular Degeneration with GA **- OPC1**: Phase 1/2a in Cervical Spinal Cord Injury **- VAC2**: Phase 1 in Non-small Cell Lung Cancer (oncology platform)
Differentiated Clinical Data	- Three cases of retinal tissue *restoration* observed in dry AMD patients - One-third of spinal cord patients gained *2 levels* of motor function - Potent *induction of immune responses* observed in cancer patients
Market Opportunity	- Billion-dollar commercial potential for each program
Financial Position	- ~$68.7 million in cash and marketable securities as of June 30, 2021
Market Capitalization	- ~$434 million as of August 12, 2021

Lineage Technology Platform – Allogeneic Cell Transplants

- **The Lineage Platform starts with a frozen vial of *self-renewing stem cells***
- **These pluripotent cells can become *any* cell type in the body**
- **Lineage's proprietary processes create *only* the cell type which is desired**
- **No alterations are made to the cell's DNA**
- **Commercial-scale production occurs from a single vial of cells**



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Competitive Advantage: In-House Manufacturing and Know-How

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

Capabilities

- Cell banking and handling
- Process development
- Manufacture of clinical trial material
- Scale-up in multi-liter bioreactors
- Multiple clean rooms for parallel GMP production runs

Facilities

Cell Cure Neurosciences
(Subsidiary)

Backed by hundreds of cell therapy-related patents and patent applications

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Pipeline and Validating Partnerships

Clinical Programs	Financial Support Received	Phase 1	Phase 2a	Next Steps
OpRegen® (RPE Cells) Dry AMD with Geographic Atrophy (GA)	רשות החדשנות Israel Innovation Authority **$16M**	→		Enrollment completed
OPC1 (Oligodendrocytes) Spinal Cord Injury (SCI)	CIRM CALIFORNIA'S STEM CELL AGENCY **$14M**	→		Data collected; planning for Phase 2b/3
VAC2 (Dendritic Cells) Non-Small Cell Lung Cancer (NSCLC)	CANCER RESEARCH UK **$10M**	→		1 patient left to enroll

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

Source: aao.org

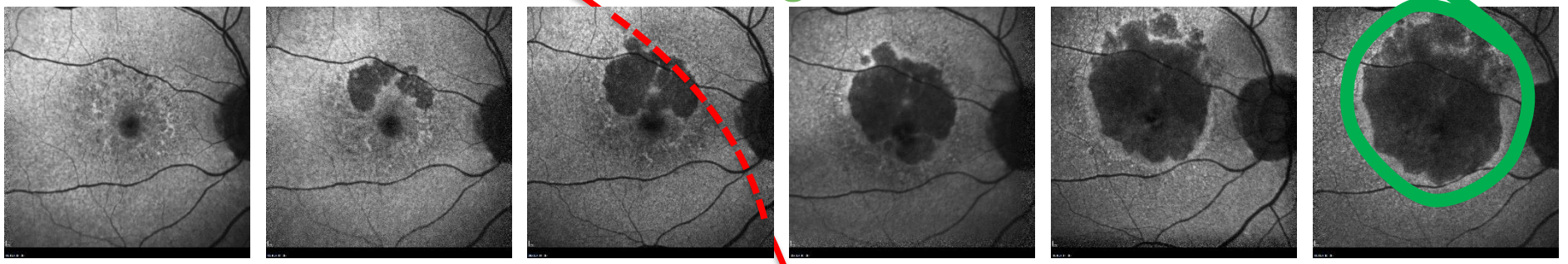
OpRegen®: RPE Cell Transplants to Treat Dry AMD

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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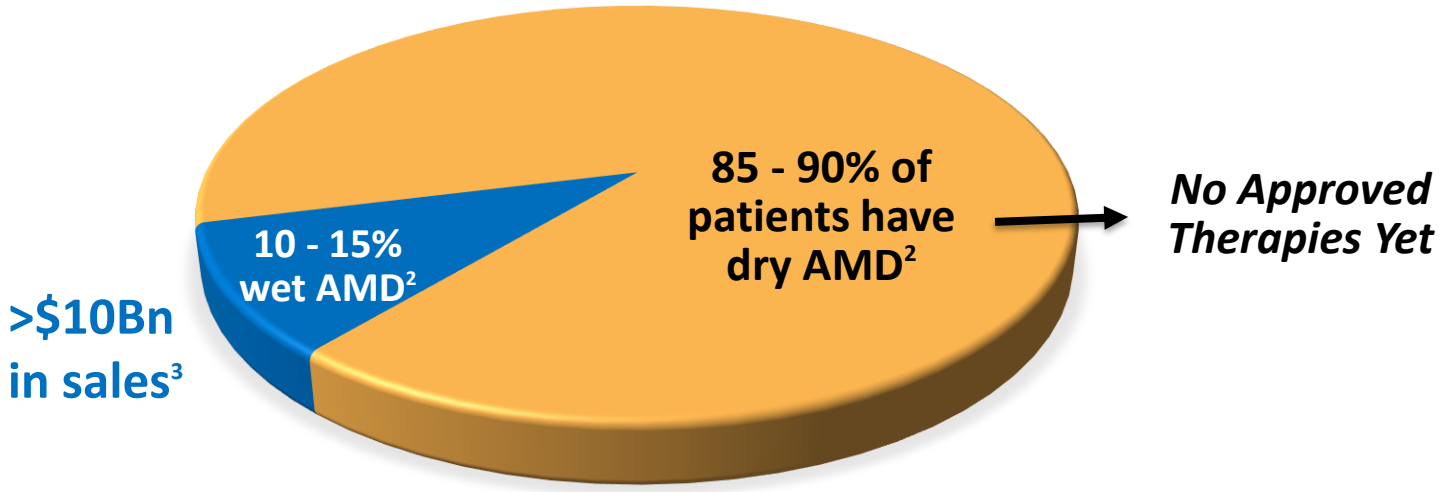
Image courtesy of Jordi Monés, MD, PhD

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

Age-related Macular Degeneration (AMD) (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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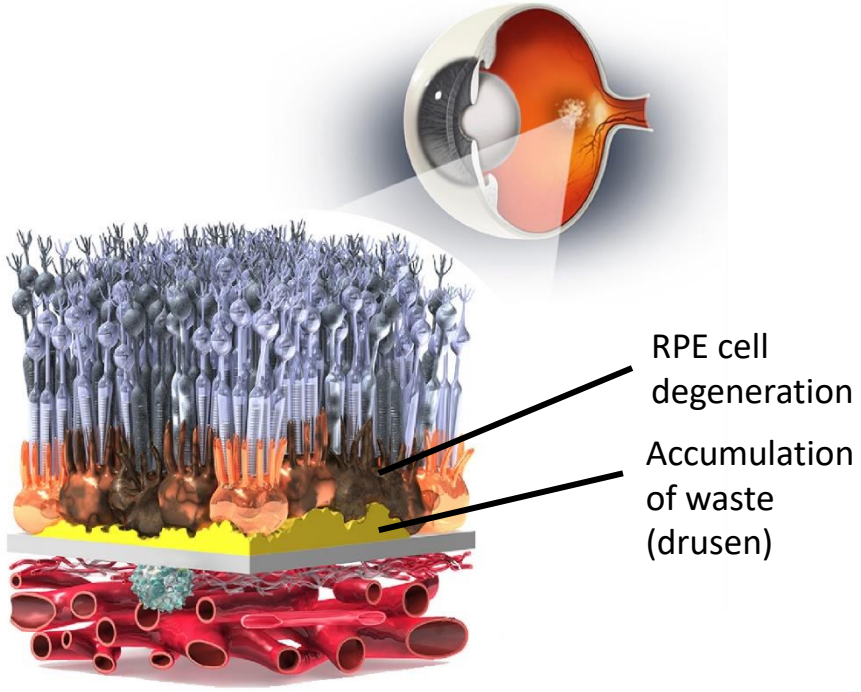
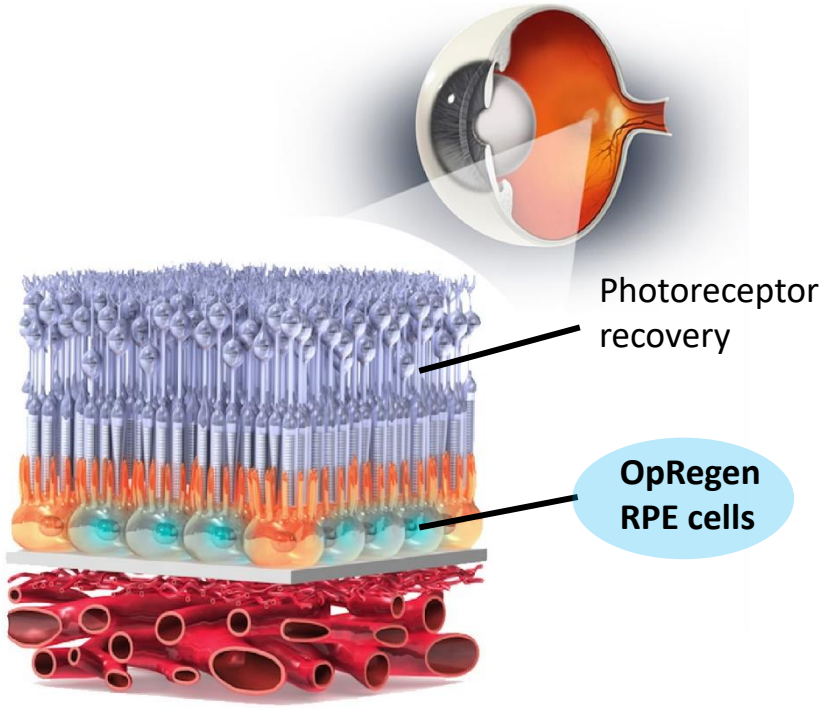
Lineage Approach – OpRegen, an RPE Cell Transplant

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



Pre-Transplant

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



Post-Transplant

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Image adapted from scienceofamd.org

Commercial-Scale Manufacturing Capabilities

- **OpRegen consists of >99% pure RPE cells**
  - Uses NIH-approved line was established >20 years ago
  - Extensive functional and identity characterization performed on each batch
  - No genetic modifications are made to the cells
  - No residual pluripotent cells detectable in clinical material

- **Immediate-use "thaw and inject" formulation**
  - No dose preparation is required
  - From frozen cells to injection device in 5 minutes

- **Current production scale is 5 billion 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

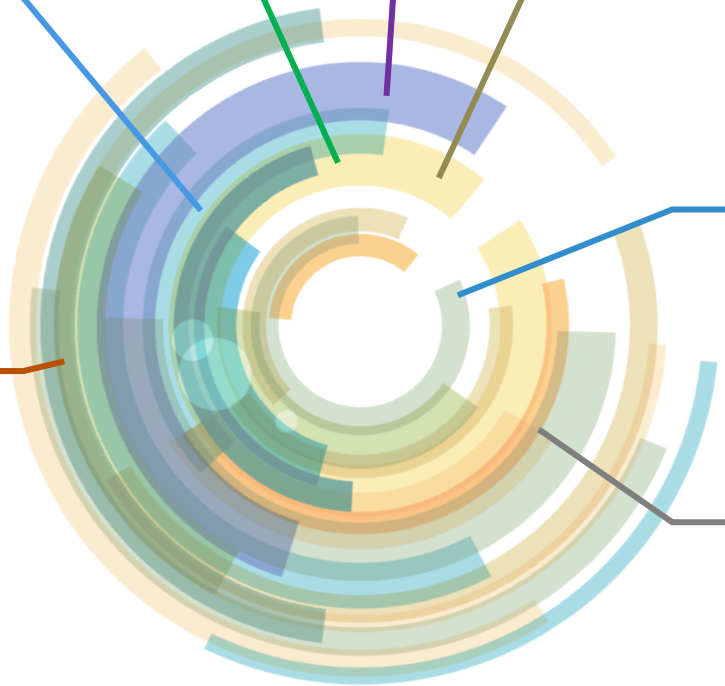
ALK-001 (Ph. 3, Alkeus)
FAILED
fenretinide (Sytera)
emixustat (Acucela)
OT-551 (Othera)

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 OpRegen Clinical Trial - Promising Interim Results Continue

STRUCTURE:

- **3 OpRegen treated patients have shown evidence of retinal tissue restoration**
  - First-known clinical report of restoration showed zero growth of atrophy at 33 months
  - Second clinical report of restoration exhibited a 10% reduction in atrophy size at 8 months
  - Third clinical report of restoration is 18 letters above baseline at last available timepoint

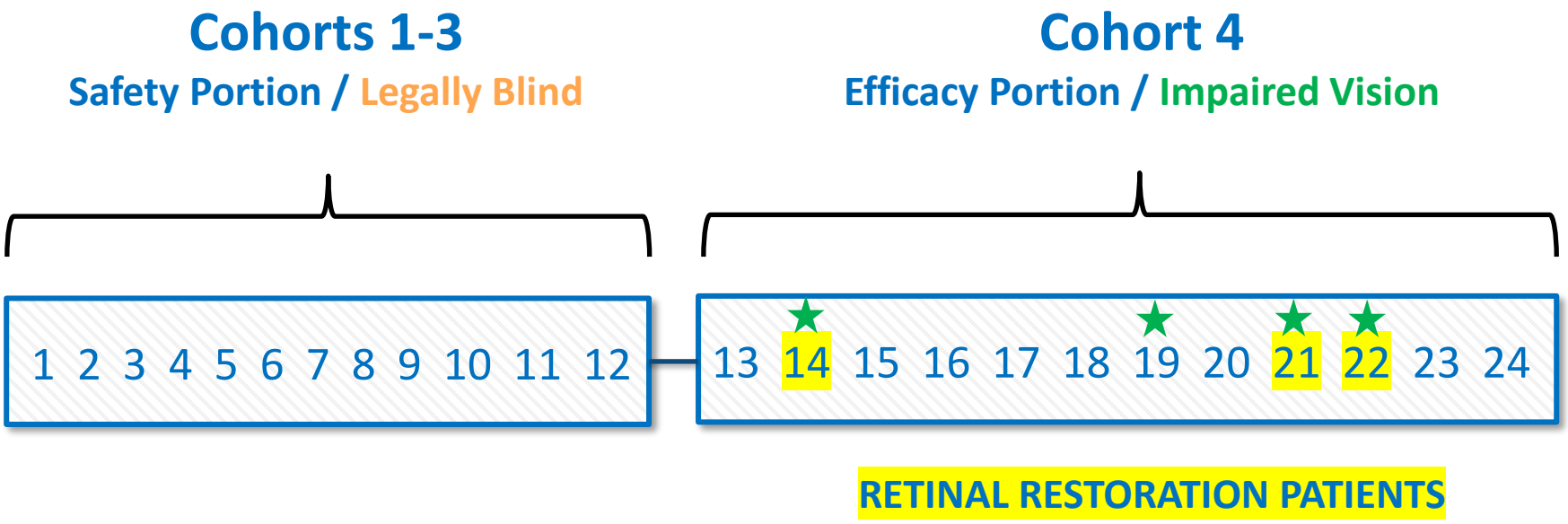
FUNCTION:

- **67% of all Cohort 4 patients' treated eyes were at or above baseline visual acuity (9mo to ~3y post-treatment)**
  - Visual acuity continued to decline in the majority (75%) of untreated eyes
- **Average difference in BCVA between treated/untreated eyes was more than 2 ETDRS lines (10.8 letters read) in Cohort 4 patients (9-12 months post treatment)**

SAFETY, TOLERABILITY, DURABILITY:

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

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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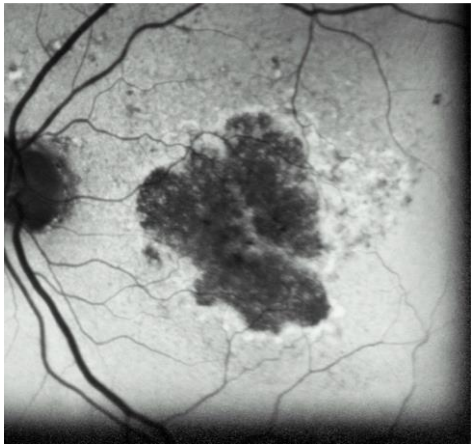
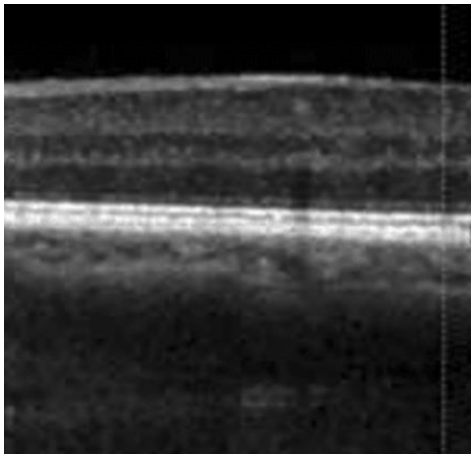
★ = OpRegen placed across area of atrophy

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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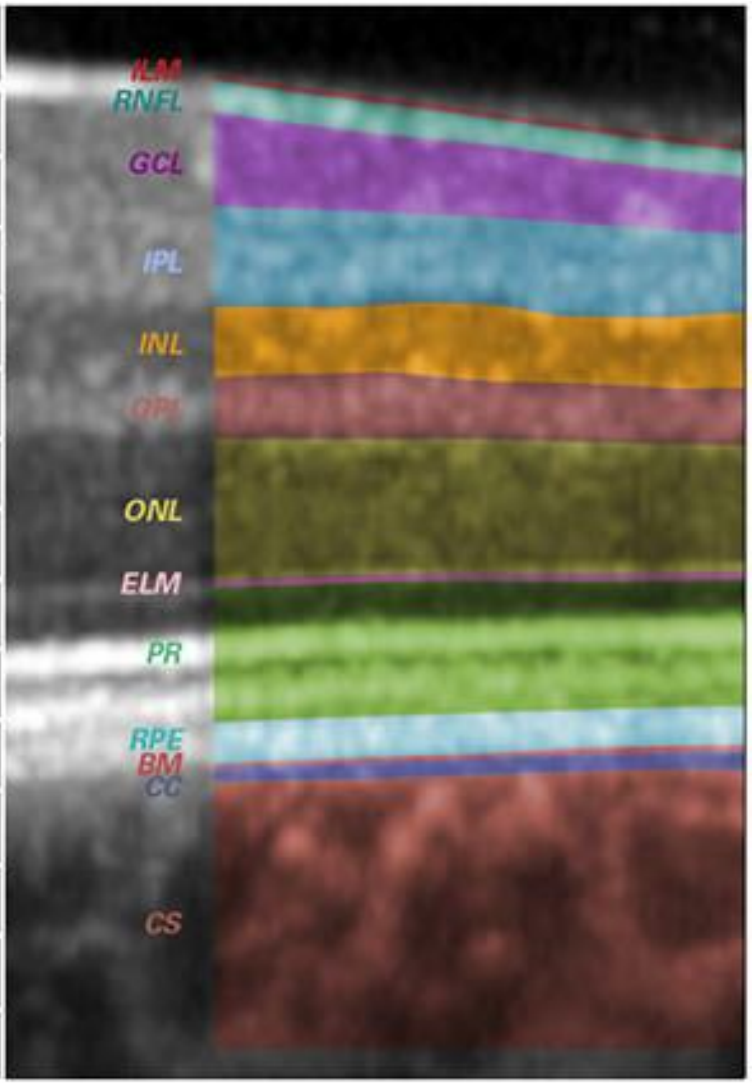
High Resolution OCT Provides Resolution Close to Histology

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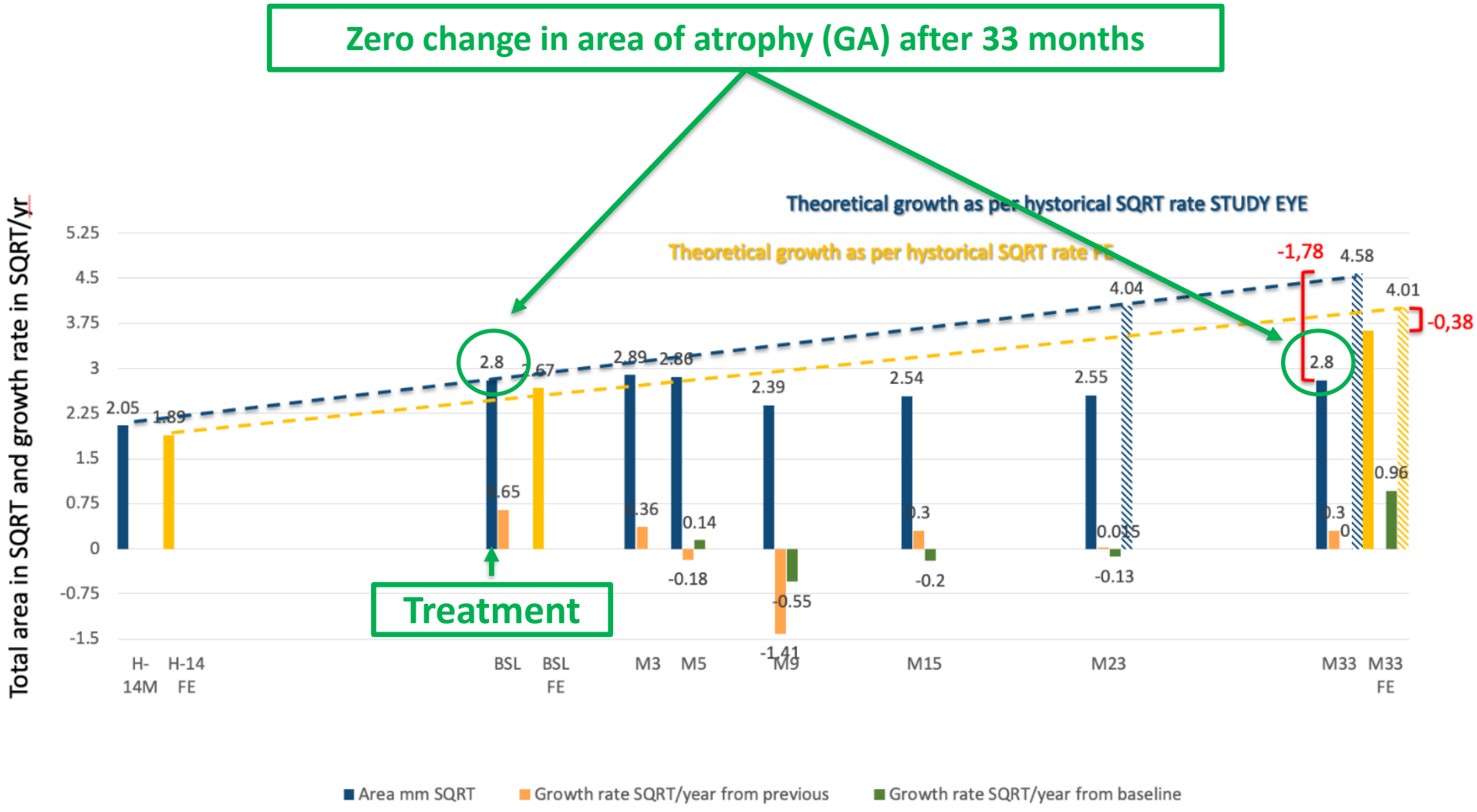
Source: https://www.heidelbergengineering.com/int/news/know-your-retinal-layers-33401465/

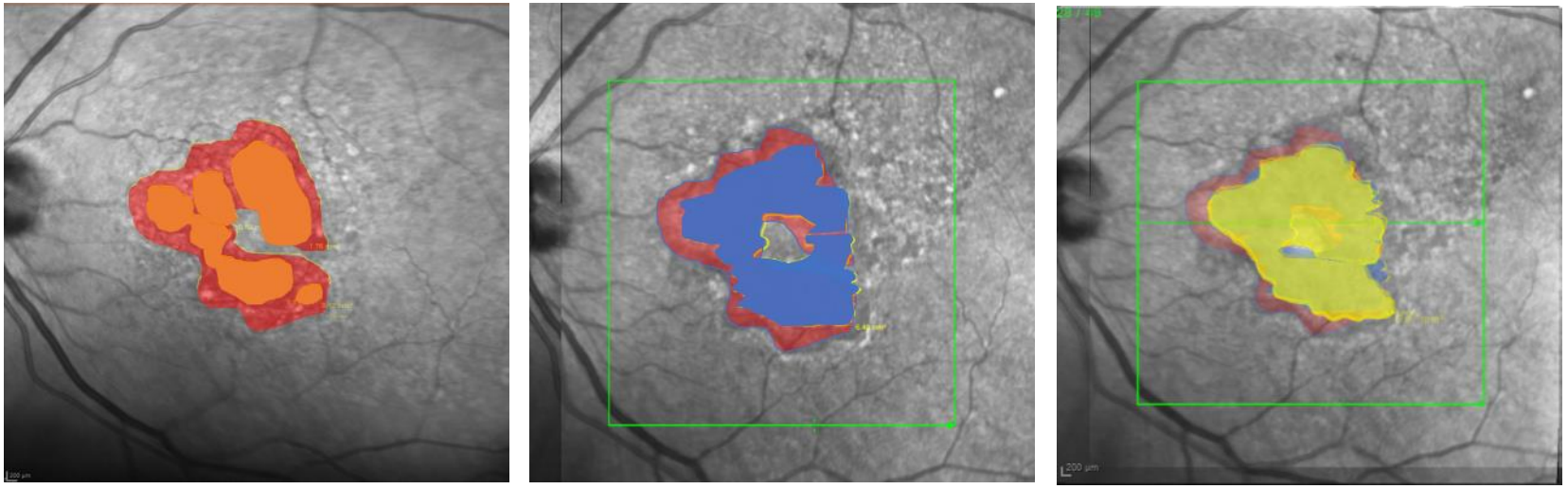
First Case of Retinal Restoration – Assessing GA Progression Using FAF Alone or OCT and Multimodality Imaging



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)***

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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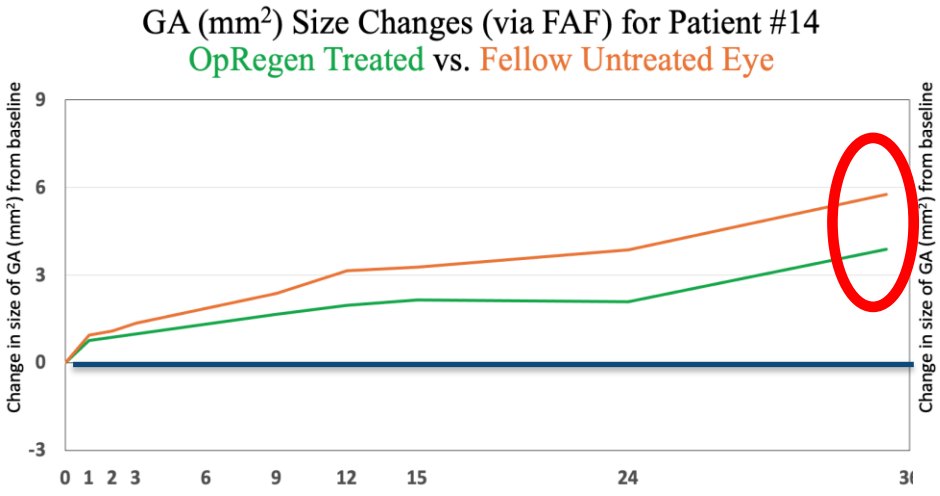
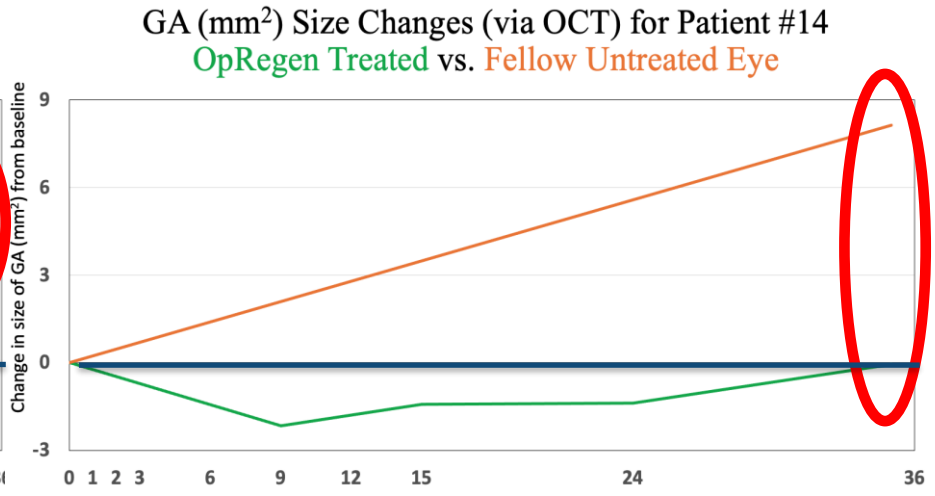
Data presented at 2020 AAO Virtual Meeting

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

FAF



OCT



Treated Fellow

Time Post-Implantation (months)

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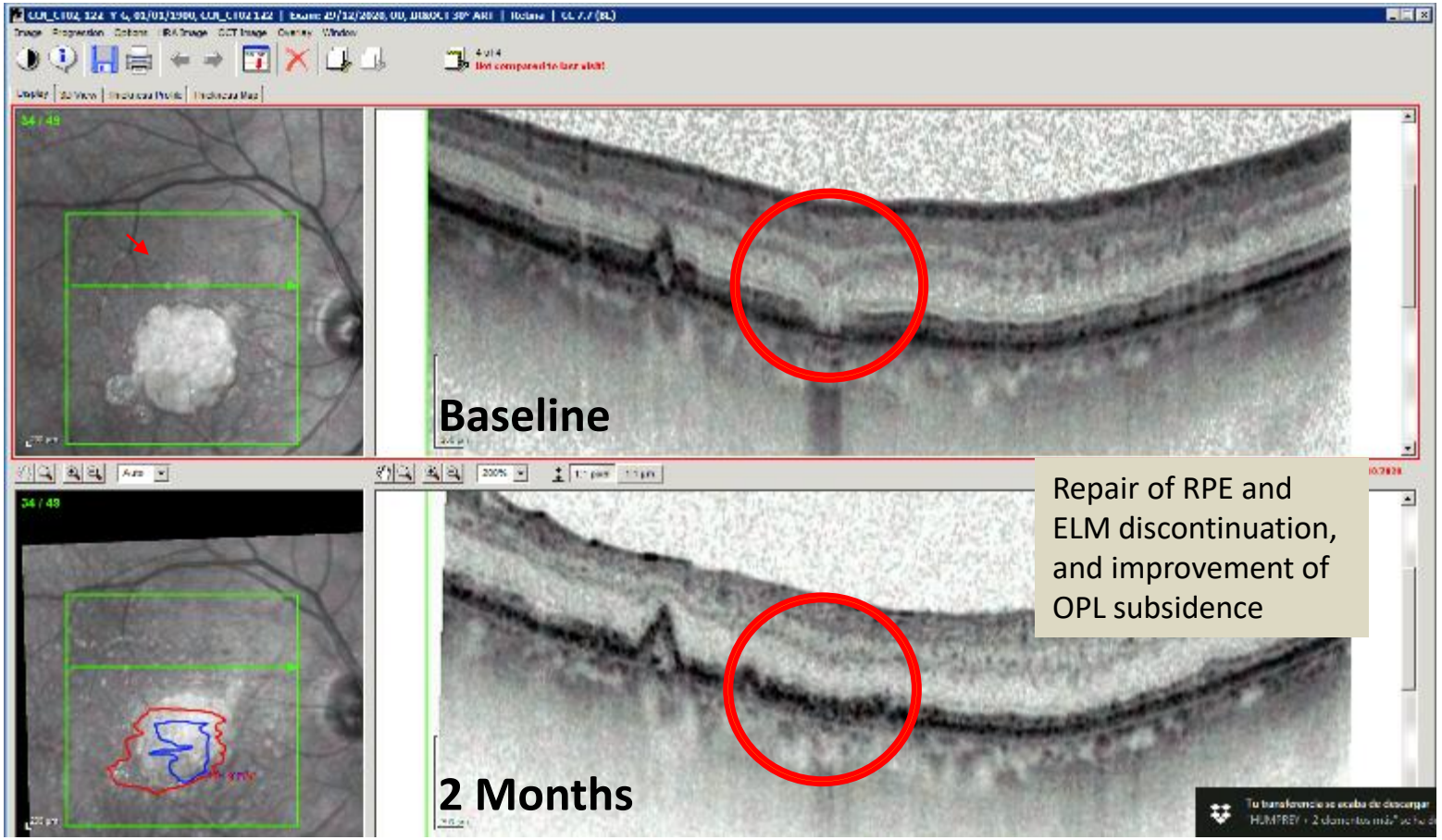
Second Case of Retinal Restoration – Evident at 2 Months

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



iRORA = Incomplete Retinal Pigment Epithelial and Outer Retinal Atrophy

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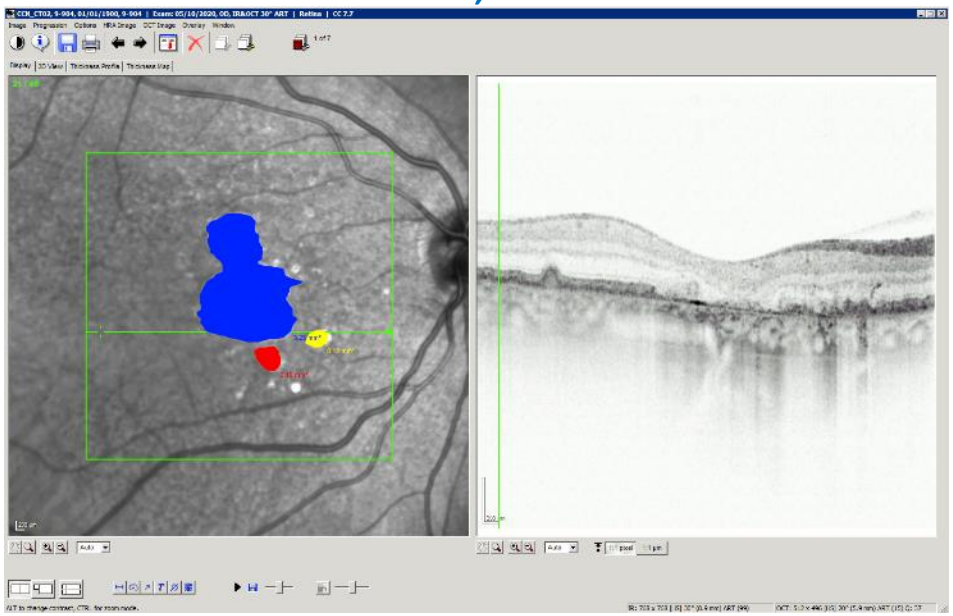
Image courtesy of Jordi Monés, MD, PhD

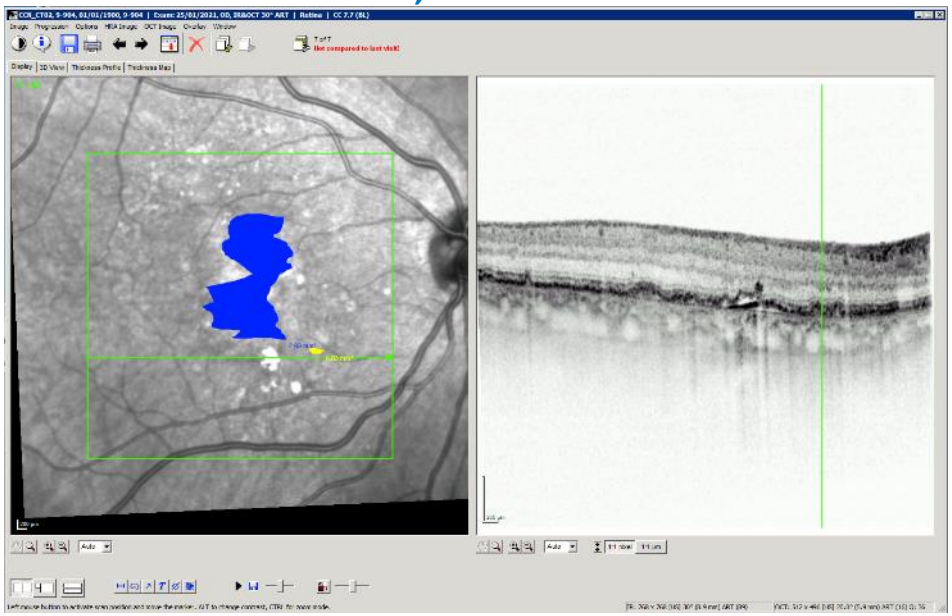
Third Case of Retinal Restoration – Evident at 3 Months

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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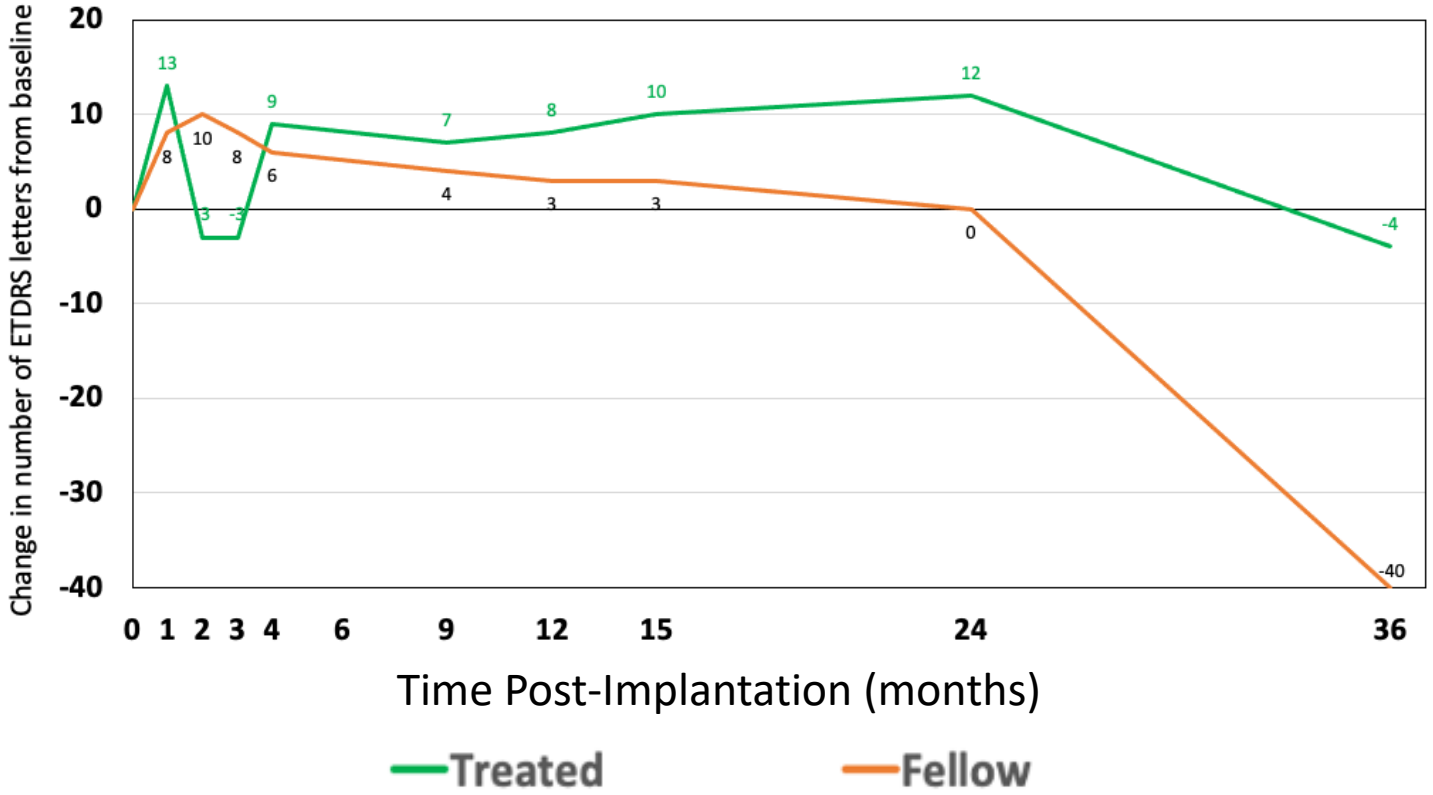
Image courtesy of Jordi Monés, MD, PhD

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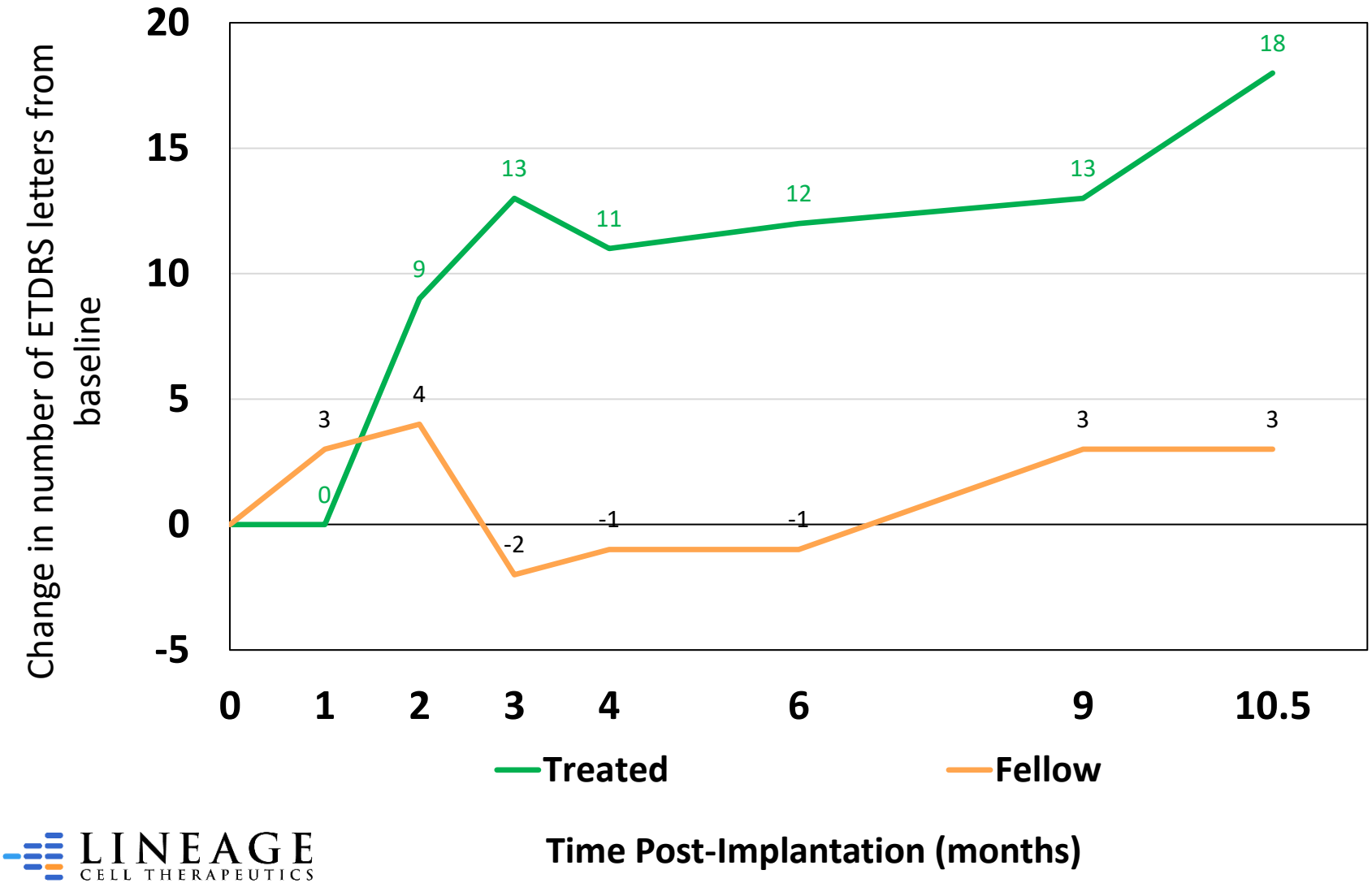
Third Case of Retinal Restoration - Vision in Treated Eye Dramatically Improved

BCVA Changes Treated vs. Fellow Eye



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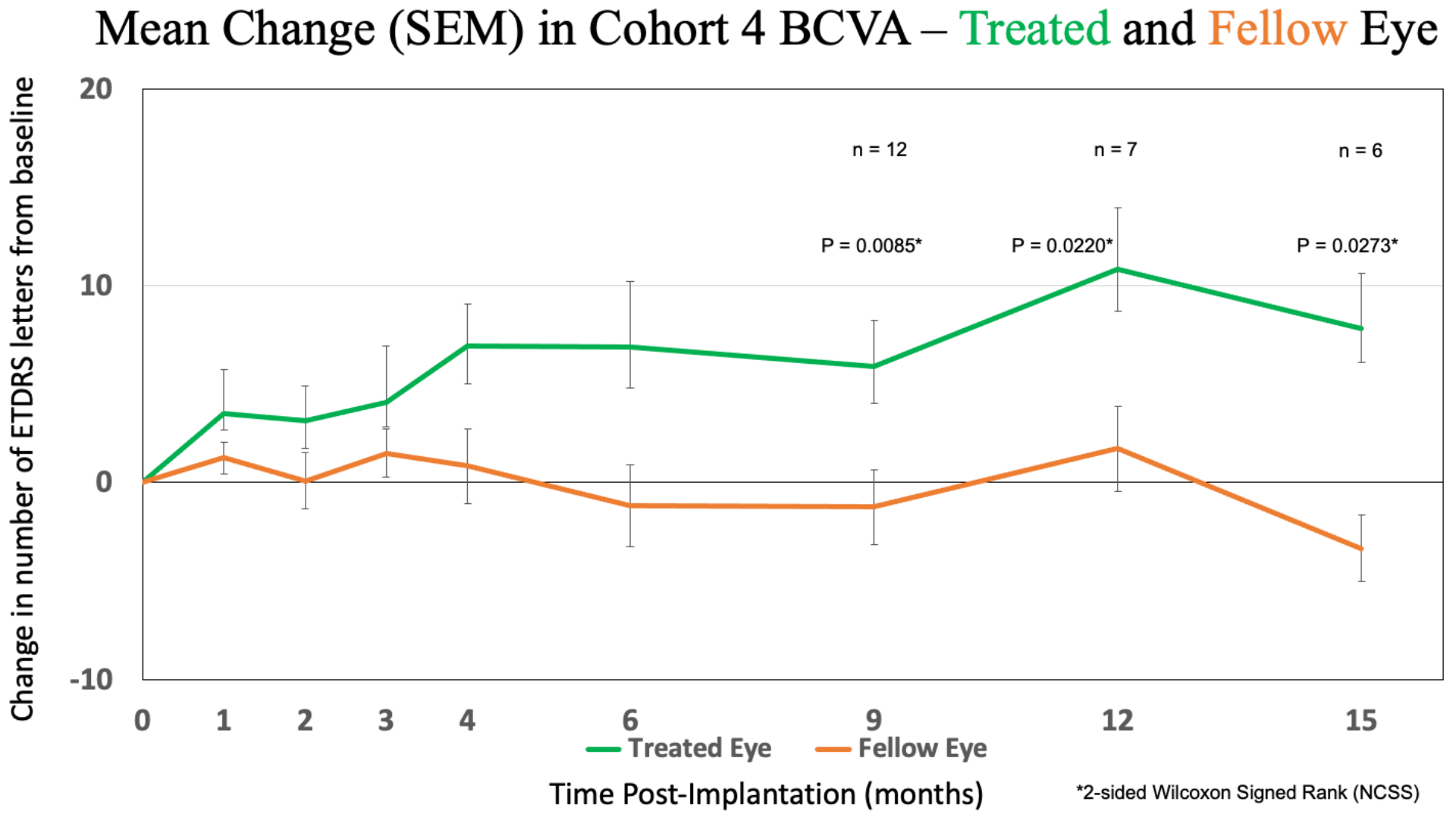
Statistically Significant Evidence of Treatment Effect with OpRegen RPE Transplant Over Time



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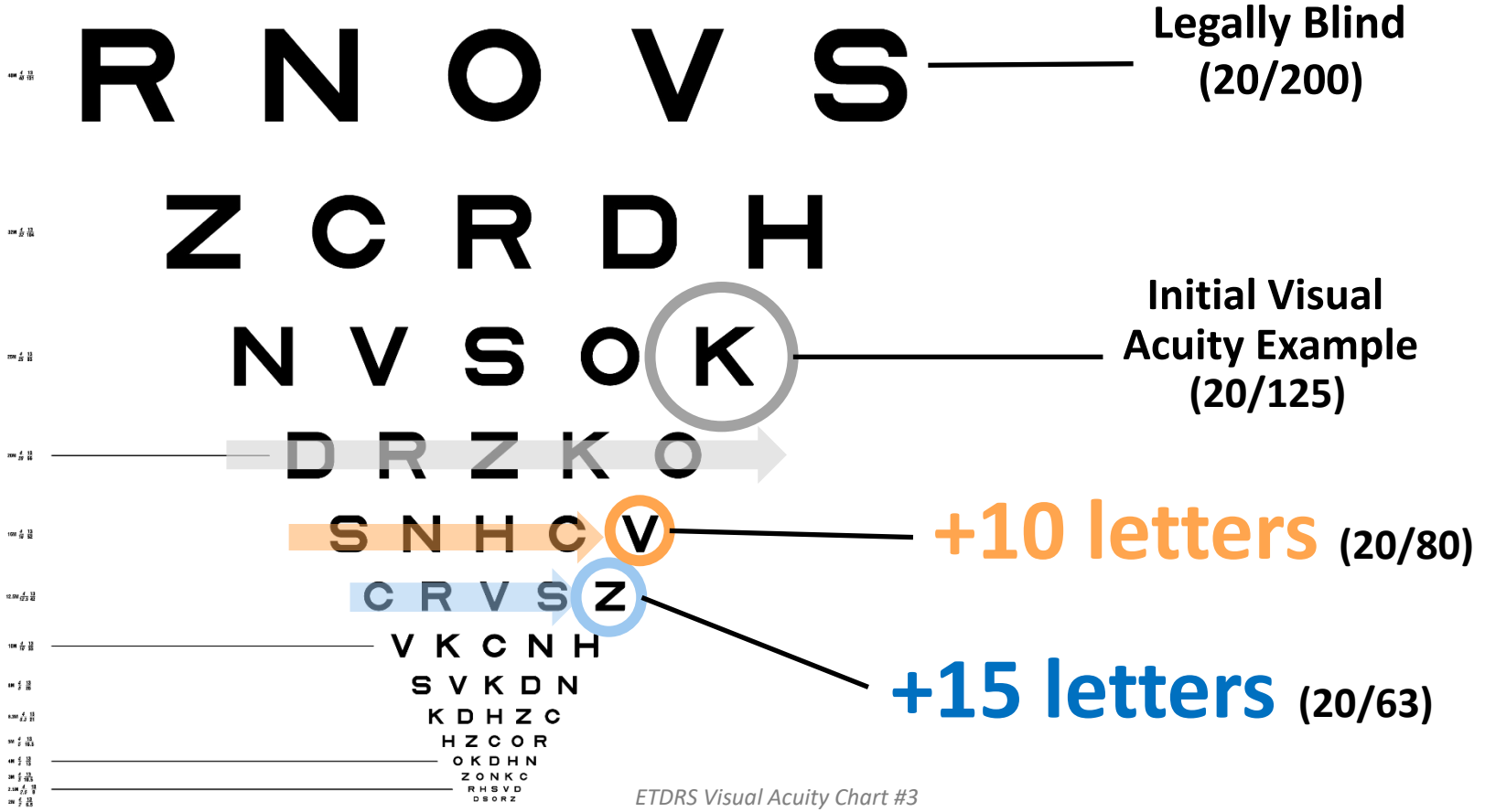
Real-World “Letters of Improvement”



ETDRS Visual Acuity Chart #3

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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 9 of 11 categories and remained unchanged in one category in Cohort 4 patients**

	Category	N (%) Change from Screening to Year 1 (n=5 available to date)
1.	General Vision	4/5 (80%) patients reported improvement
2.	Ocular Pain	2/5 (40%) patients reported improvement
3.	Near Activities	5/5 (100%) patients reported improvement
4.	Distance Activities	3/5 (60%) patients reported improvement
5.	Vision Specific: Social Functioning	3/5 (60%) patients reported improvement
6.	Vision Specific: Mental Health	5/5 (100%) patients reported improvement
7.	Vision Specific: Role Difficulties	4/5 (80%) patients reported improvement
8.	Vision Specific: Dependency	3/5 (60%) patients reported improvement
9.	Driving	0/5 (0%) patients reported improvement (only 2 subjects were driving at screening)
10.	Color Vision	0/5 (0%) no change from screening (all patients previously reported highest possible score, no improvement possible)
11.	Peripheral Vision	2/5 (40%) patients reported improvement

OpRegen – Positioned for Commercial Success

OpRegen has the potential to capture a multi billion-dollar opportunity

- **Transplanting RPE cells may provide benefits other approaches cannot**
- **Market opportunity is not limited to monogenic deficiencies (e.g. gene therapy)**
- **Three clinical cases of retinal restoration reported**
- **Treatment to date has been well-tolerated**
  - Some patients have exhibited clinically 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**
- **May have application in other retinal diseases (example: Stargardt's Disease)**
- **Issued patents cover aspects of production, characterization, and formulation**
- **Fast Track designation from FDA**
- **Opportunities for strategic partnerships for late-stage development**

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

Source: christopherreeve.org

OPC1: A 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.

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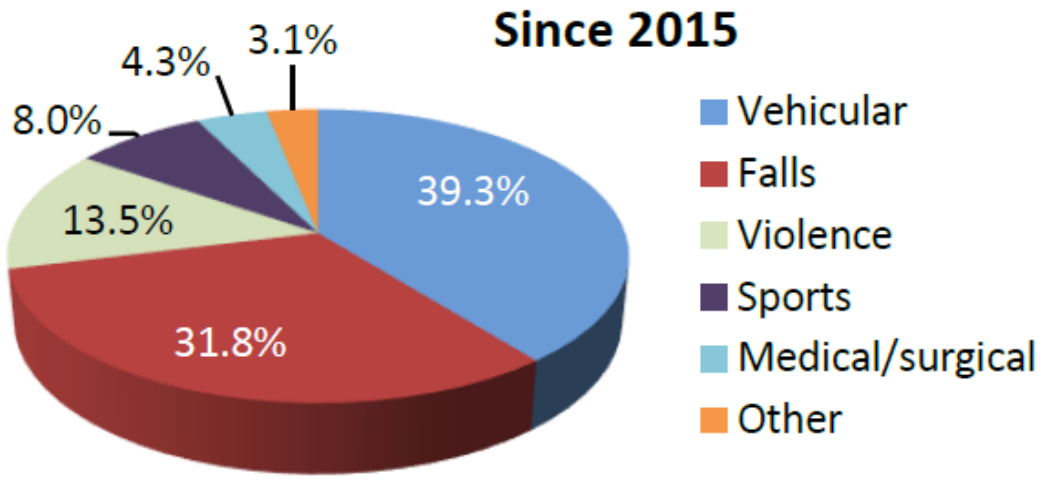
Spinal Cord Injury (SCI) Overview

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

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



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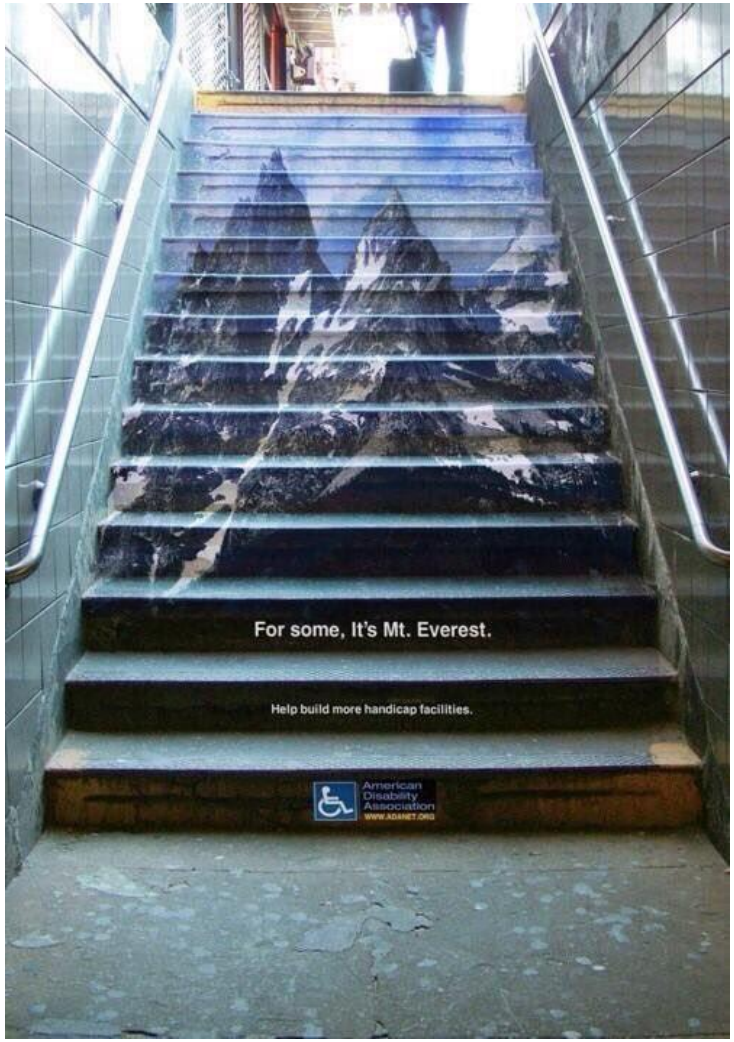
Source: National Spinal Cord Injury Statistical Center

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



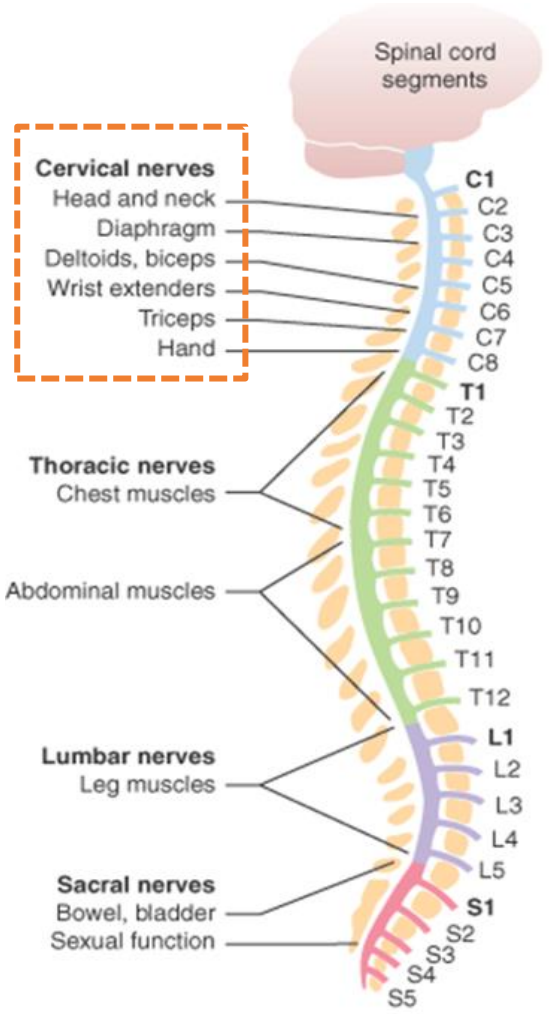
LINEAGE CELL THERAPEUTICS

(*) 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**

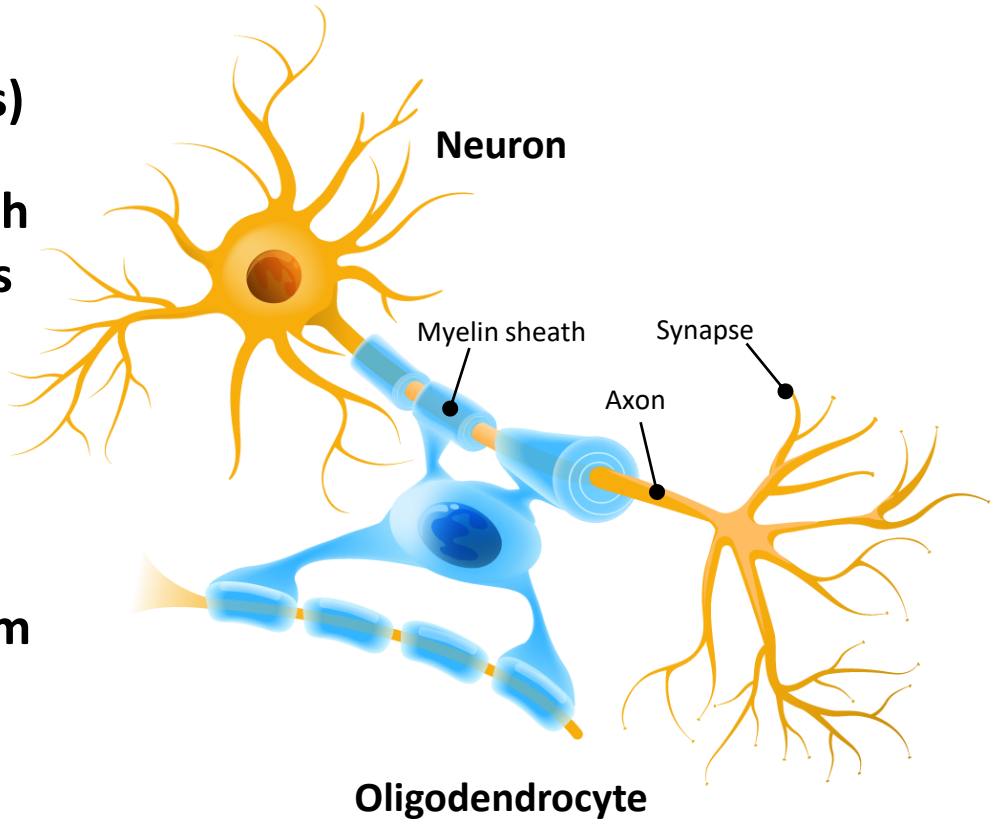


(*) National SCI Statistical Center, 2019 SCI Data Sheet.

Lineage's **OPC1 cells** for Spinal Cord Injury

Replacing oligodendrocytes may provide additional upper limb and finger function and improve the quality of life for patients

- **OPC1 is comprised of OPCs (oligodendrocyte progenitor cells)**
- **OPCs are precursors to cells which provide insulation to nerve axons in the form of a myelin sheath**
- **Myelin is necessary for proper function of neurons**
- **OPC1 cells are manufactured from a cell line and injected into the spinal cord at the injury site**



LINEAGE CELL THERAPEUTICS

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

OPC1 Asset Overview

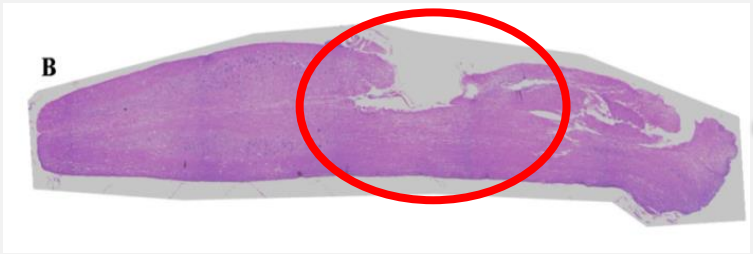
- **OPC1 is covered by multiple issued patents**
- **OPC1 has RMAT Designation**
- **OPC1 has Orphan Drug Designation**
- **OPC1 has received >$14M in support from CIRM (California Institute for Regenerative Medicine)**
- **OPC1 could have application to other demyelinating conditions**

OPC1 Transplant Procedure

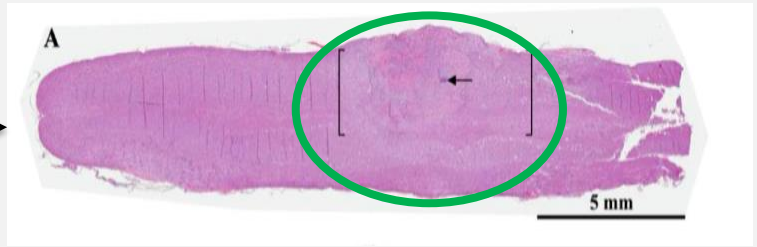
OPC1 Mechanisms of Action

Prevention of Cavitation

Control

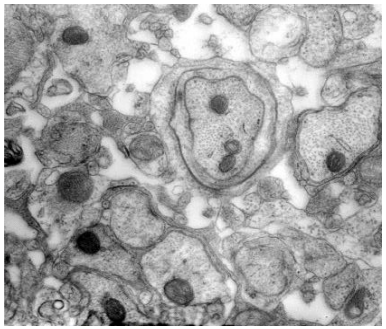


OPC1

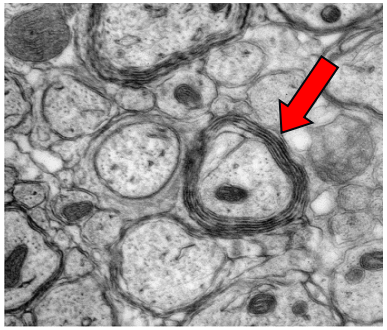


Myelination of axons

shiverer mouse

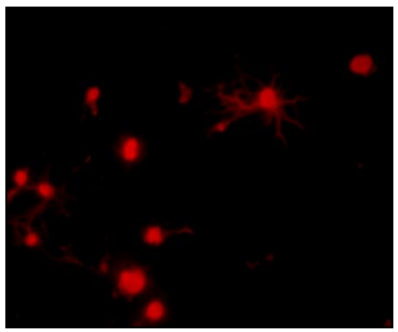


***shi* mouse + OPC1**

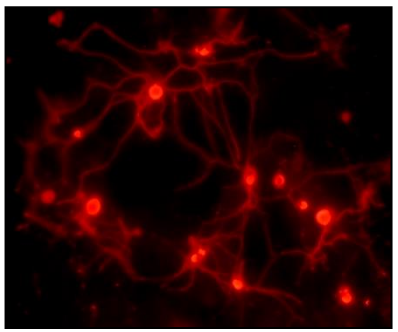


Secretion of neurotrophic factors

Control Media



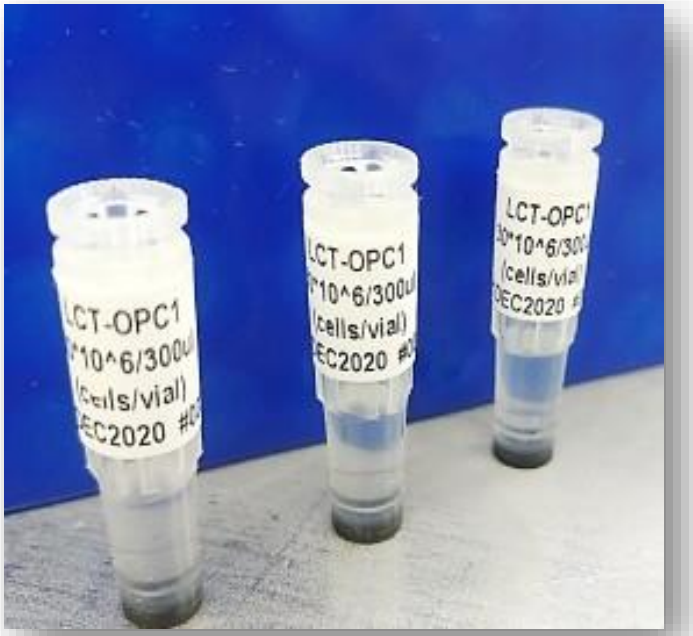
OPC1



LINEAGE CELL THERAPEUTICS

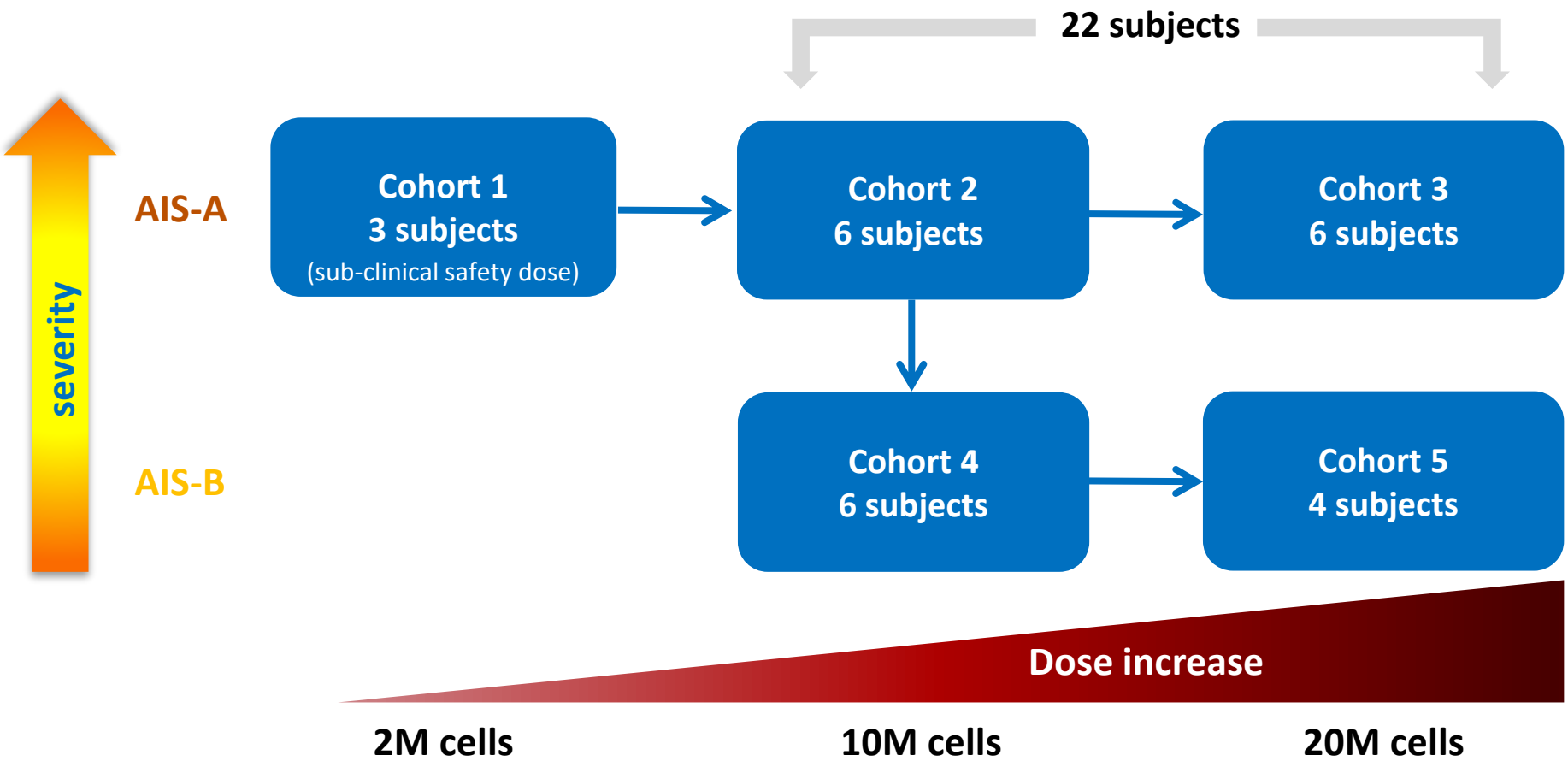
OPC1 for Spinal Cord Injury

- **Lineage's cells are derived from an NIH-registered cell line**
- **The cells are allogeneic ("off the shelf") and not taken from the patient**
- **Treatment for SCI occurs 3-6 weeks post-injury and includes short-course (60-day) immunosuppression**
- **The cells 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

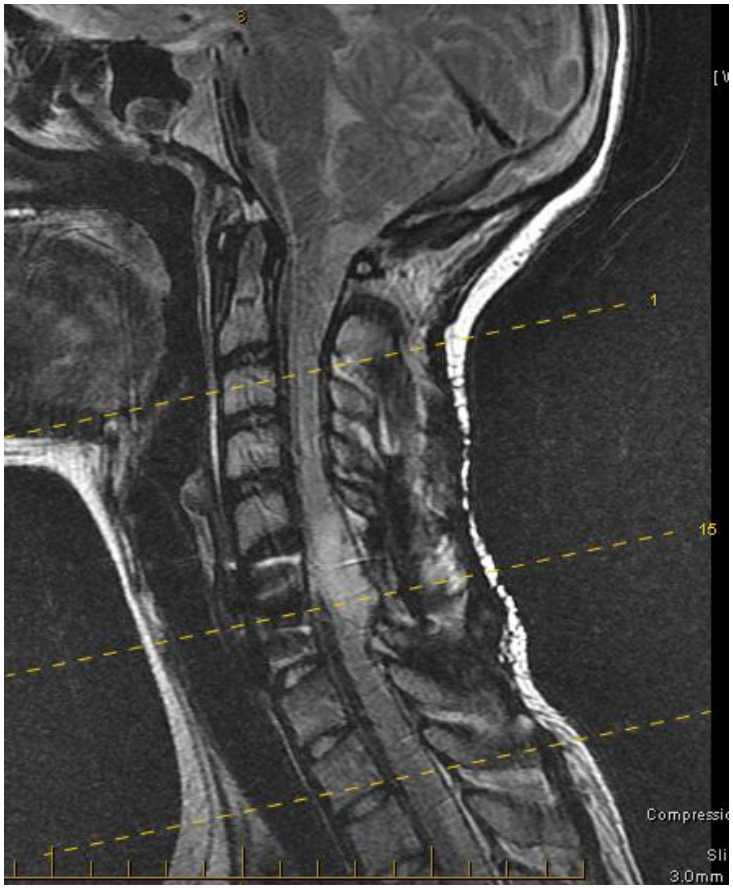
LINEAGE CELL THERAPEUTICS

**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*

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 cavitation**
- **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)**

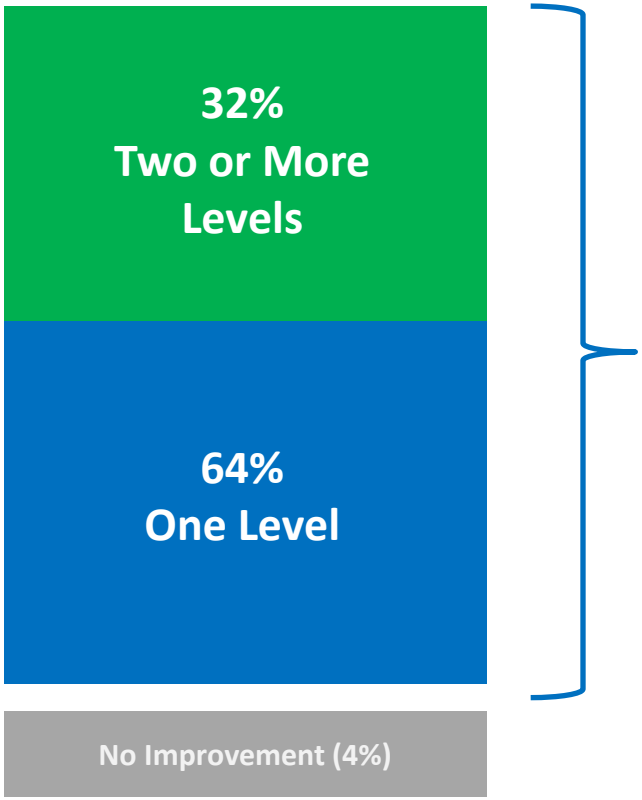


Weighted sagittal MRI

LINEAGE CELL THERAPEUTICS

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

LEFT

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

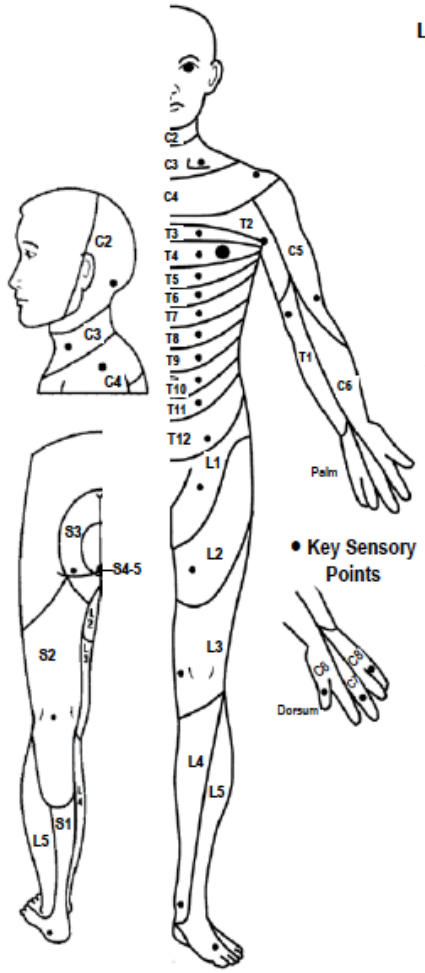
UER (Upper Extremity Right)

UEL (Upper Extremity Left)

LER (Lower Extremity Right)

LEL (Lower Extremity Left)

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



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

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

(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

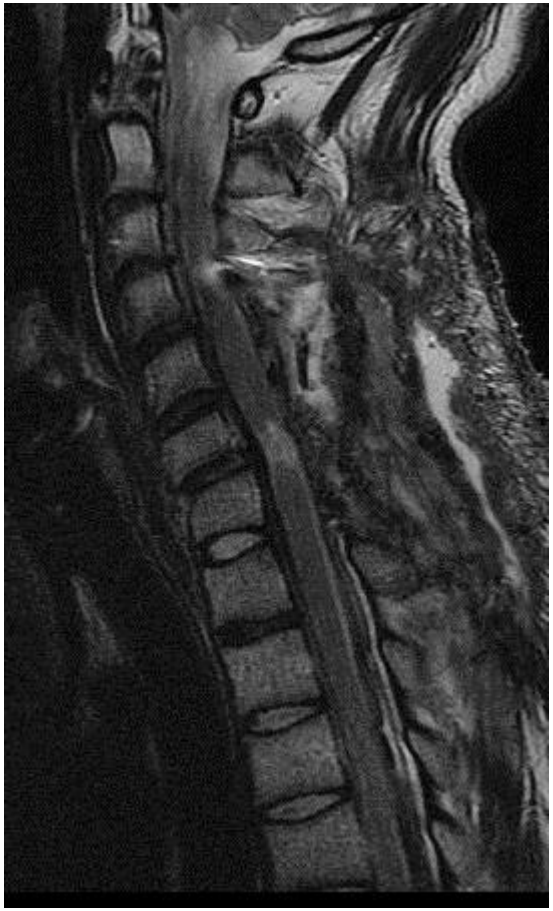
- **Two patients had cord compression after OPC1 injection (2303 and 2307 at Day 30 and Day 7)**
- **Patients 2105, 2207, 2007 had a C4 (highest/most severe) injury level at baseline**
- **Patient 2105 also had a hematoma in the spinal cord at baseline & a failed graft**

LINEAGE CELL THERAPEUTICS

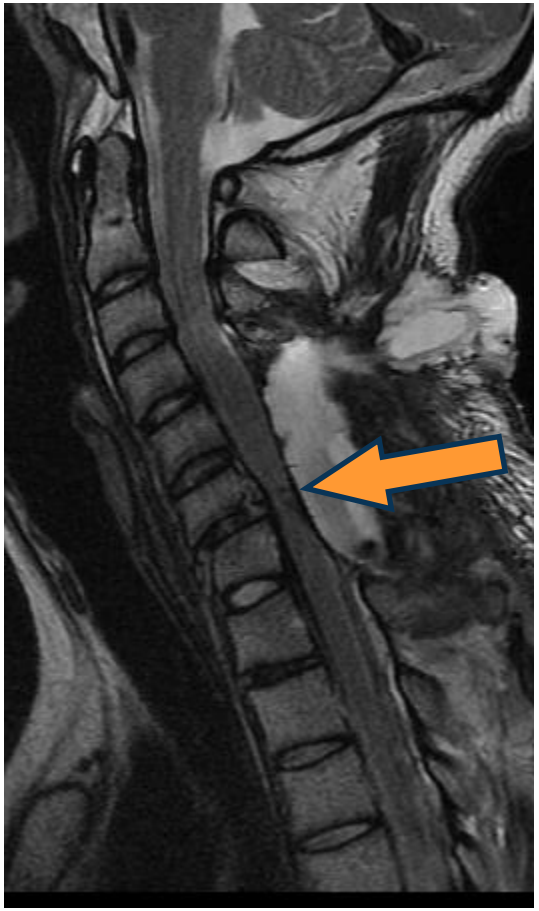
SCiStar Clinical Trial – Cord Compression

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

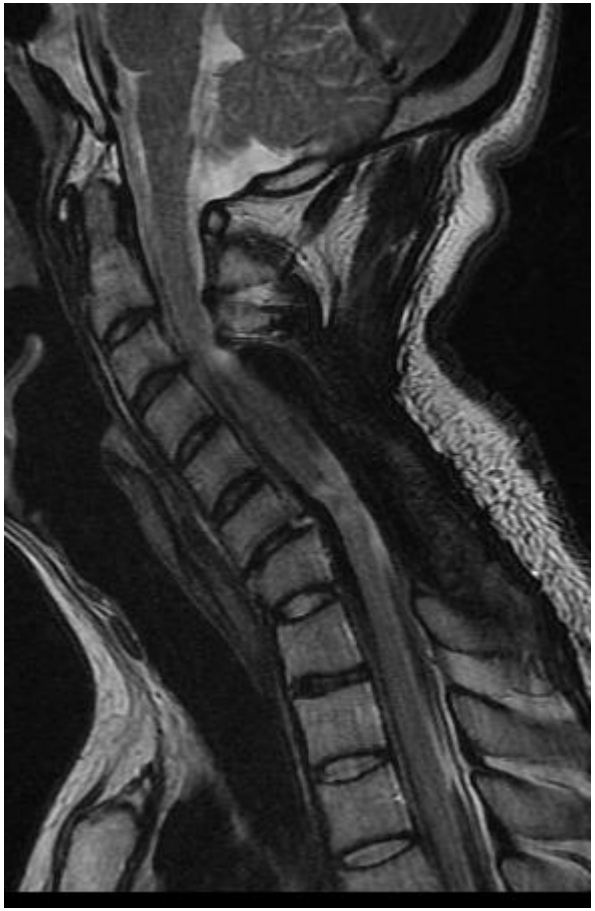
Baseline



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)**
- **Results support further testing in a randomized, controlled clinical trial**

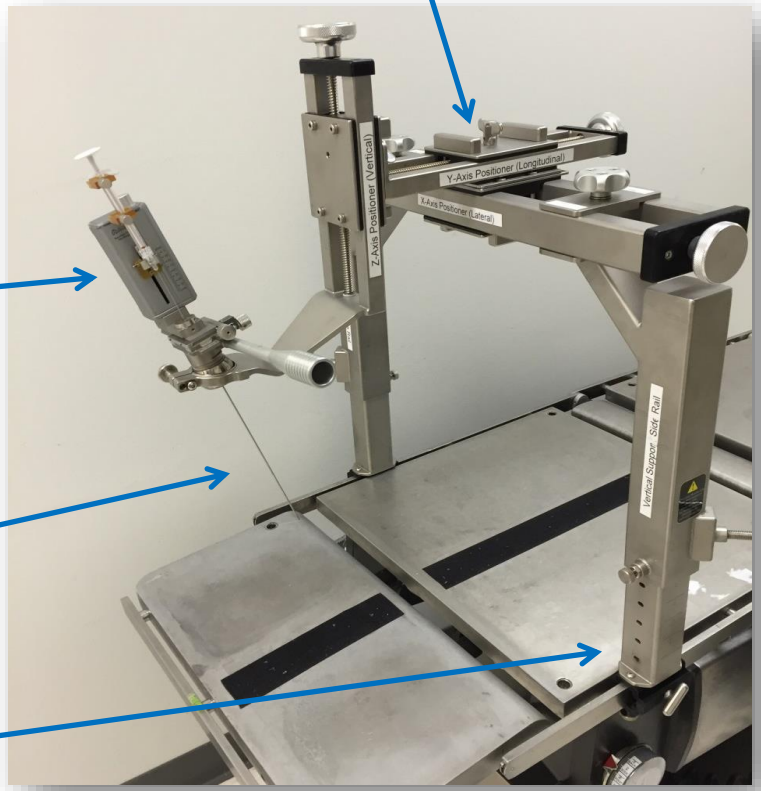
SCiStar Clinical Trial - Original Syringe Positioning Device

XYZ manipulator

Syringe & Microdrive assembly

Outer cannula and needle

Table-attached support frame

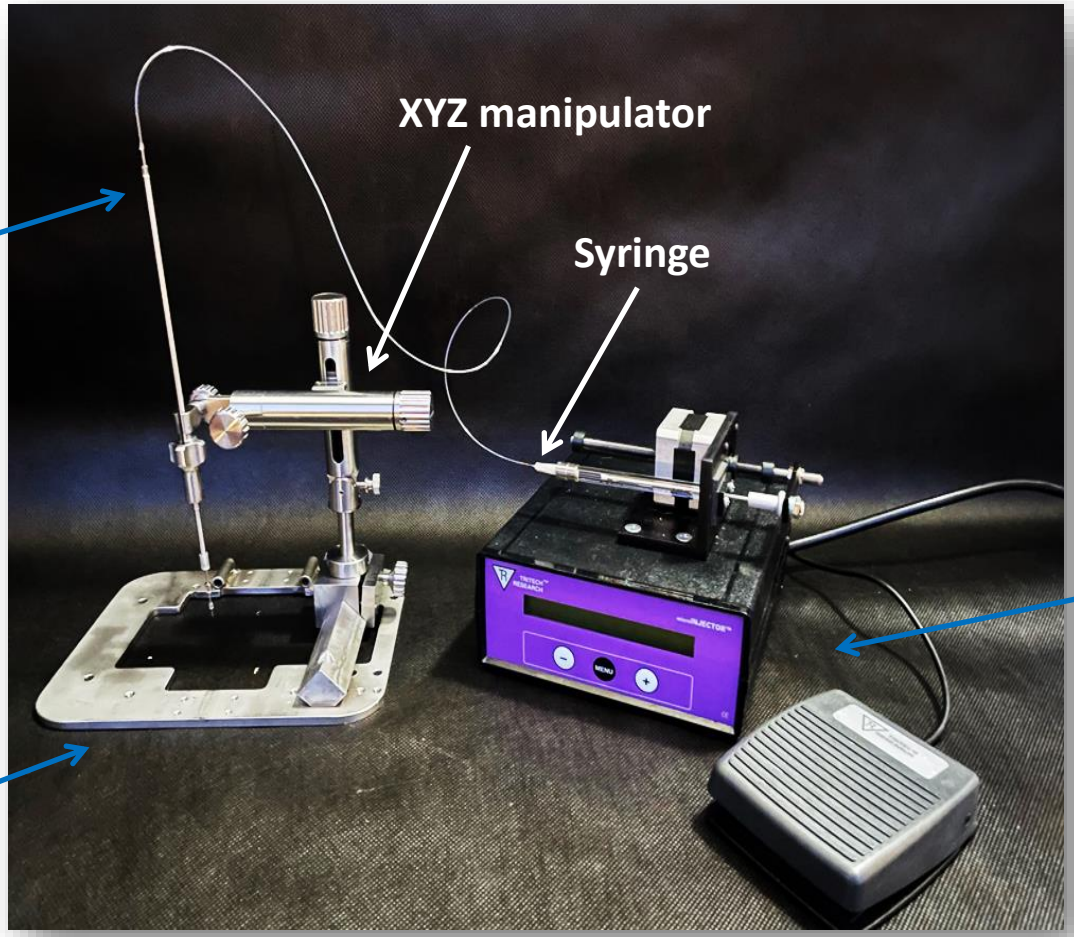


Storage trays

Supply Kits

LINEAGE CELL THERAPEUTICS

Overview of Novel Parenchymal Spinal Delivery (PSD) System



LINEAGE CELL THERAPEUTICS

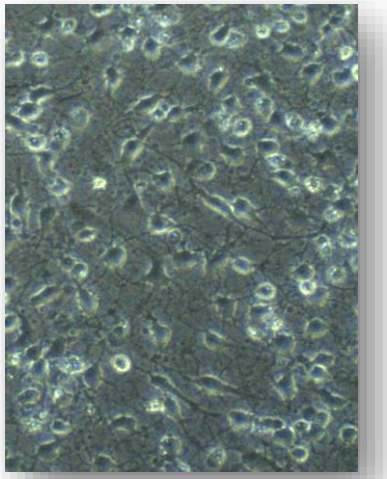
Benefits of New Parenchymal Spinal Delivery (PSD) System

- **Device offers stability and control**
  - Eliminates motion between platform/XYZ manipulator/injection needle
  - Pump and syringe not in sterile field: programmed accurate dose rate
- **Device requires no cessation of ventilation**
  - Attaches directly to the patient, syncs with patient breathing motion
  - Magnetic needle provides stabilization from micromotion due to heartbeats
- **Device is easier to use in clinical setting**
  - Smaller and uses fewer components
  - Easily assembled prior to surgery
  - Single hand operation for XYZ positioning
  - Accurate needle depth insertion
  - Straightforward cleaning and sterilization
  - Compatible with OPC1 TAI formulation; eliminates prior-day dose prep
- **Device manufacturing and testing compatibility with OPC1 is ongoing**

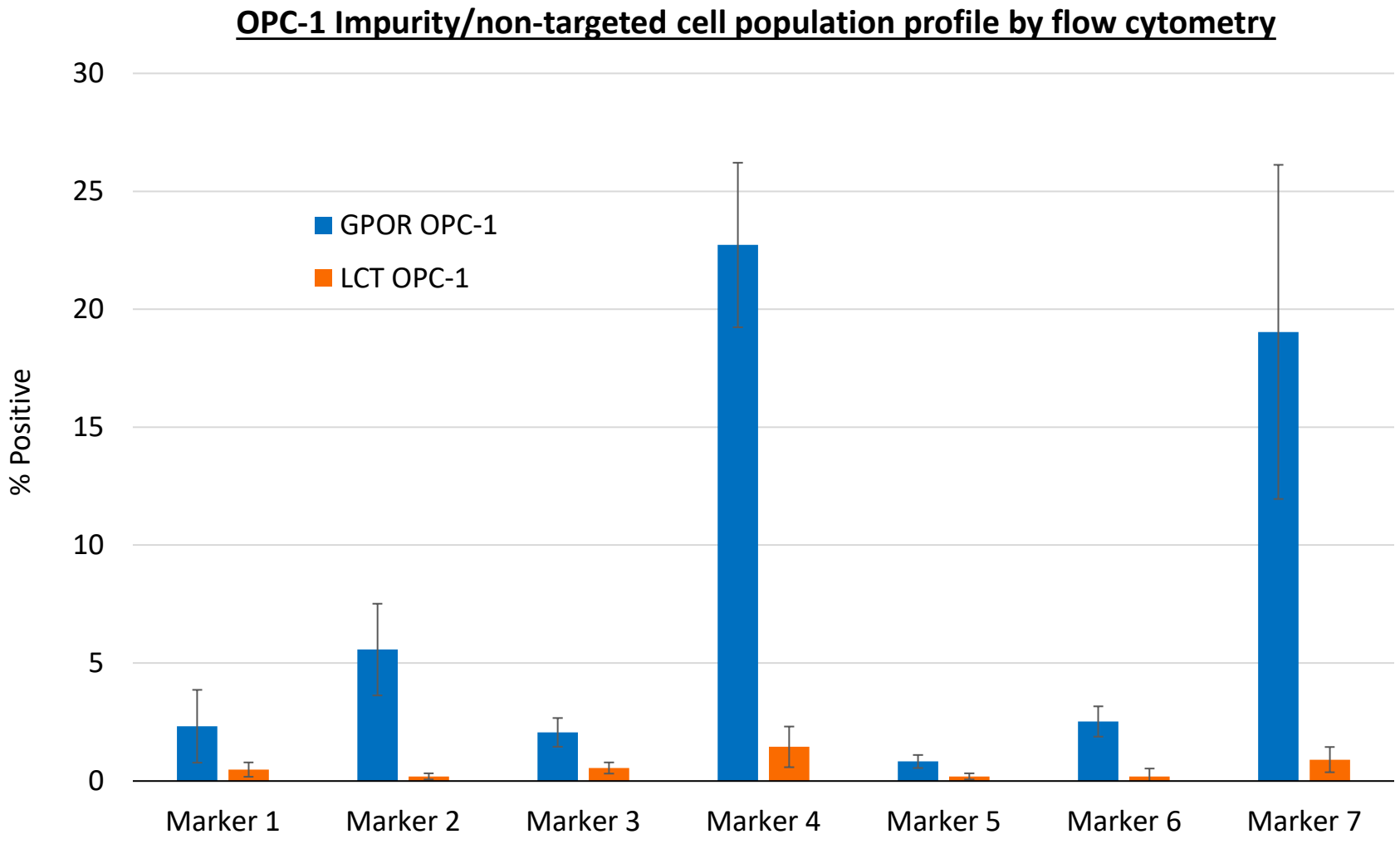
OPC1 Manufacturing (December 2020 Update)

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 product impurities**
- **Improvements in functional activity**
- **12 new analytical and functional methods developed**
- **Elimination of all animal-based production reagents**
- **Patent applications recently filed on the process and product which if allowed, will have expiration dates of 2039 and 2040**



OPC1 Manufacturing Improvements: Lower Impurities



LINEAGE CELL THERAPEUTICS

OPC1 Program Key Considerations

- **OPC1 offers a compelling opportunity to deploy next-generation cell transplant technology against a high unmet need with low competition**
  - Clinical data supports moving to later-stage clinical development
  - Manufacturing issues: being addressed by Lineage in-house
  - Delivery issues: being addressed by Lineage through device alliance
- **Phase 1 clinical study to evaluate the Neurgain PSD will include treatment of chronic SCI patients, intended to validate the delivery system for use in a late-stage clinical study**
- **New opportunities for additional settings of demyelination**

LINEAGE
CELL THERAPEUTICS

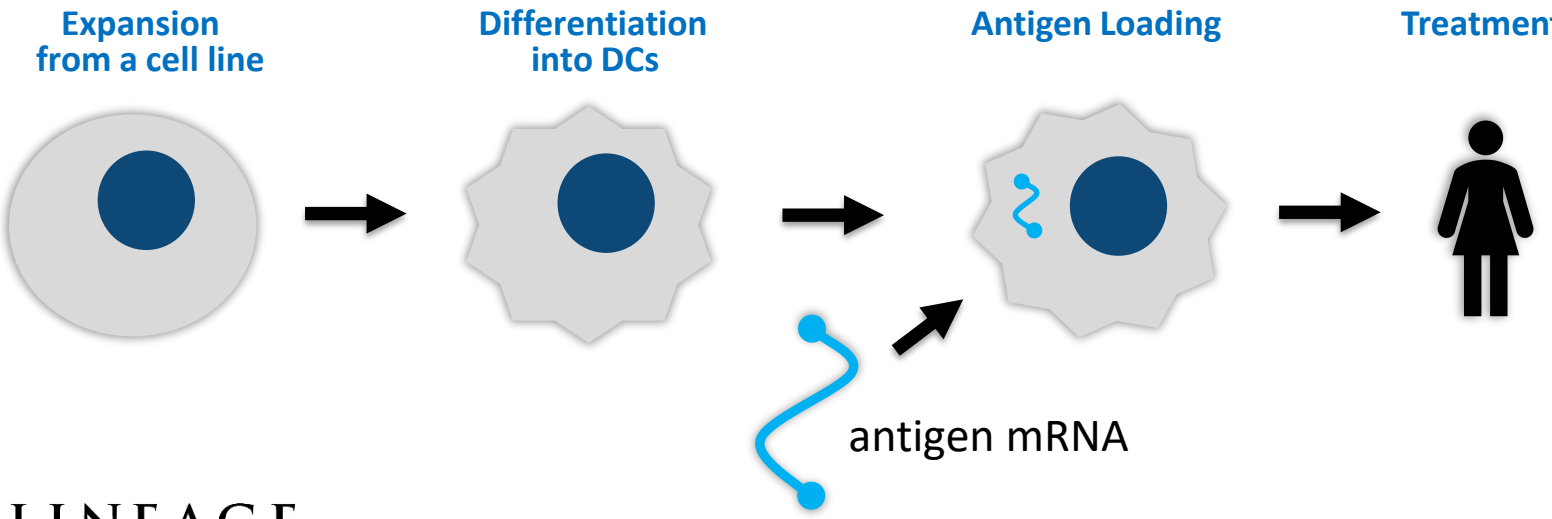
Immunotherapy is "poised to revolutionize treatment for all types of cancer"

Source: cancerresearch.org

VAC: A Cell Therapy Platform for Cancer and Infectious Diseases

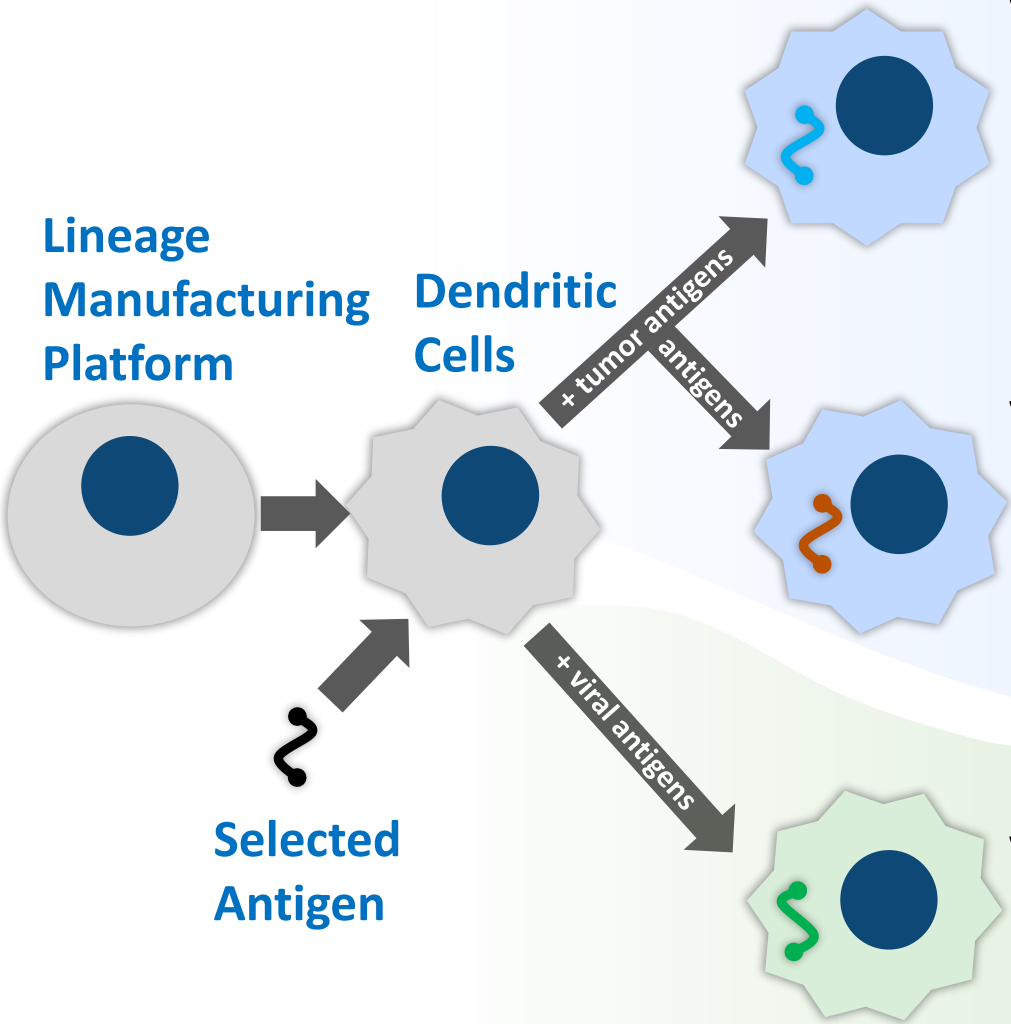
The VAC Platform: On demand cell therapy for cancer

- **The VAC platform consists of large-scale "off the shelf" production of mature immune cells called dendritic cells (DCs). No lead time or undue lead time between diagnosis and administration**
- **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 viral 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 seen

VAC3, VAC4, VAC5…Opportunities

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

VAC-Infectious Diseases

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

LINEAGE CELL THERAPEUTICS

VAC Platform Next Steps

Upcoming Events and Key Considerations:

- **Complete dosing in ongoing clinical trial (1 patient remaining)**
- **Design new products (i.e. VAC3, 4, 5, 6…) with newly discovered antigens**
- **Introduce improvements to the manufacturing process**
- **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

3 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

Funded well into 2023 with cost-efficient business model

Leader in the emerging field of regenerative medicine

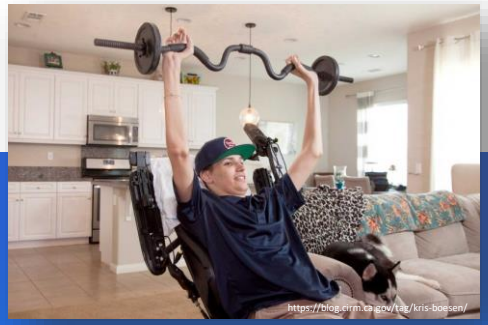
LINEAGE CELL THERAPEUTICS

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

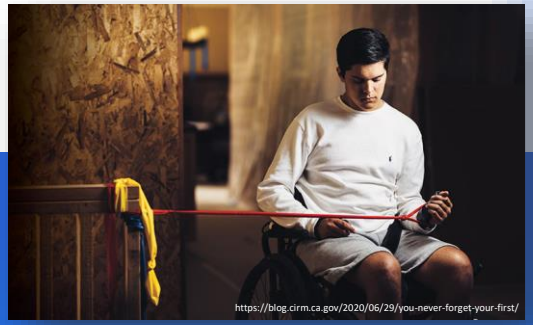
OPC1 SCiStar Study Participants

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."



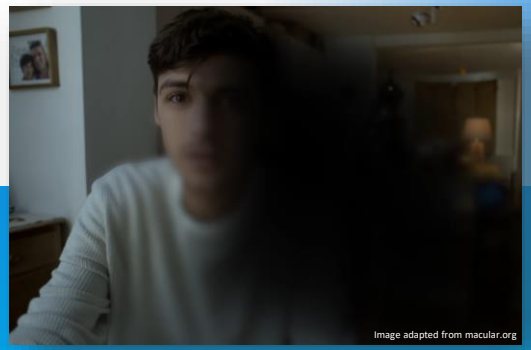
Kris Boesen
"I couldn't drink, couldn't feed myself, couldn't text or pretty much do anything, I was basically just existing. I wasn't living my life, I was existing."



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