Abeona® THERAPEUTICS

Corporate Overview

Note regarding forward-looking statements

This presentation of Abeona Therapeutics Inc. (the "Company") contains certain statements that are forward-looking within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and that involve risks and uncertainties. Such forward looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. We have attempted to identify forward-looking statements by such terminology as "may," "will," "believe," "anticipate," "expect," "intend," "potential," and similar words and expressions (as well as other words or expressions referencing future events, conditions or circumstances), which constitute and are intended to identify forward-looking statements. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, numerous risks and uncertainties, including but not limited to, our ability to successfully commercialize and market ZEVASKYN, including manufacturing sufficient batches of ZEVASKYN to meet demand; the therapeutic potential of ZEVASKYN; whether the unmet need and market opportunity for ZEVASKYN are consistent with the Company's expectations; continued interest in our rare disease portfolio; our ability to enroll patients in clinical trials; the outcome of future meetings with and inspections by the FDA or other regulatory agencies, including those relating to preclinical programs and to the cGMP manufacturing of ZEVASKYN; the ability to achieve or obtain necessary regulatory approvals for our pre-clinical programs; the impact of any changes in the financial markets and global economic conditions, including those resulting from changes to U.S. trade policy, such as current or future tariffs; risks associated with data analysis and reporting; and other risks disclosed in the Company's most recent Annual Report on Form 10-K and subsequent periodic reports filed with the Securities and Exchange Commission. The Company undertakes no obligation to revise these forward-looking statements or to update them to reflect events or circumstances occurring after the date of this press release, whether as a result of new information, future developments or otherwise, except as required by the federal securities laws.

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Abeona is poised for growth with ZEVASKYN commercial launch

Significant interest in ZEVASKYN from the RDEB community

- ZEVASKYN now available at multiple **qualified treatment centers (QTCs)**; additional QTC activations ongoing
- Identified eligible patients is growing across QTCs and referring HCPs and **demand expected to grow** with additional QTC activations
- **Positive insurance coverage** established with multiple national and regional payers

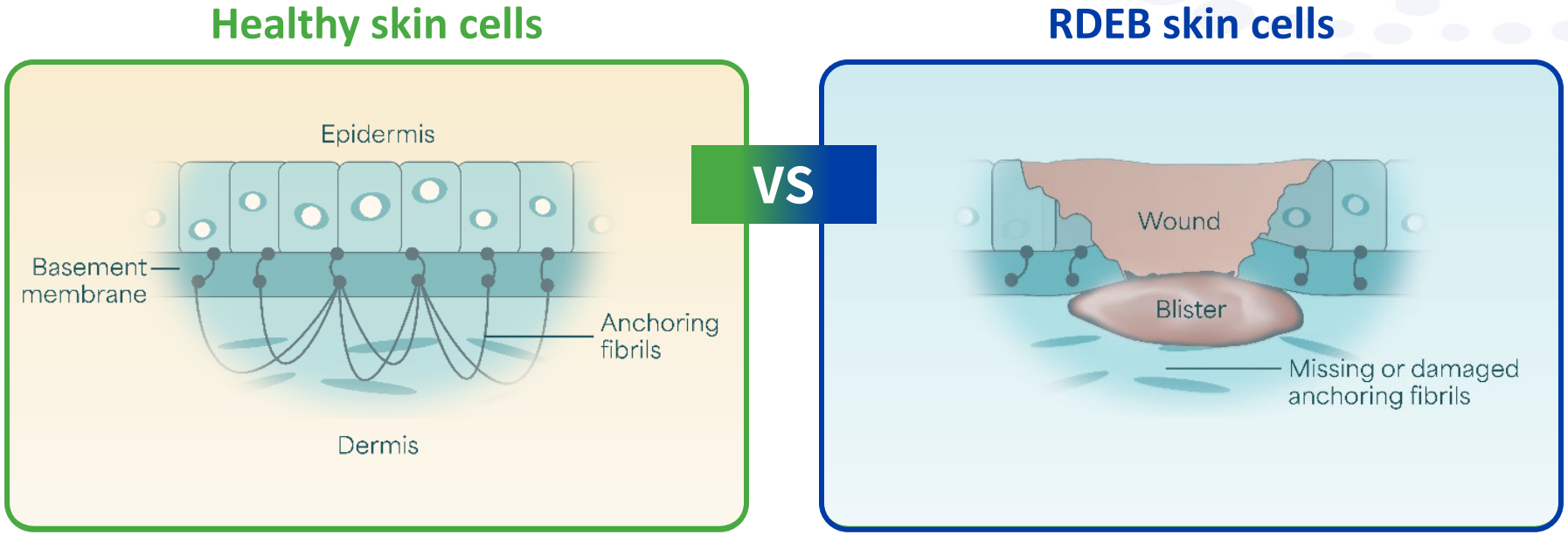
zevaskyn®
(prademagene zamikeracel)
gene-modified cellular sheets

Strong balance sheet with $191.4M in cash, cash equivalents and short -term investments*

Monthly profitability upon treating >3 patients a month anticipated to be reached starting in Q2 2026

* As of December 31, 2025

RDEB is caused by the lack of functional C7 protein, which results in the development of large, chronic wounds



- Type VII collagen (C7) helps form **anchoring fibrils**, structures that bond the epidermis to dermis
- *COL7A1* gene mutations and the resulting **lack of C7** causes a delay in cutaneous wound healing, increased risk of infection, inflammation, and **development of large, painful, chronic open wounds**

Tang JY, et al. Orphanet J Rare Dis. 2021; RDEB = Recessive Dystrophic Epidermolysis Bullosa

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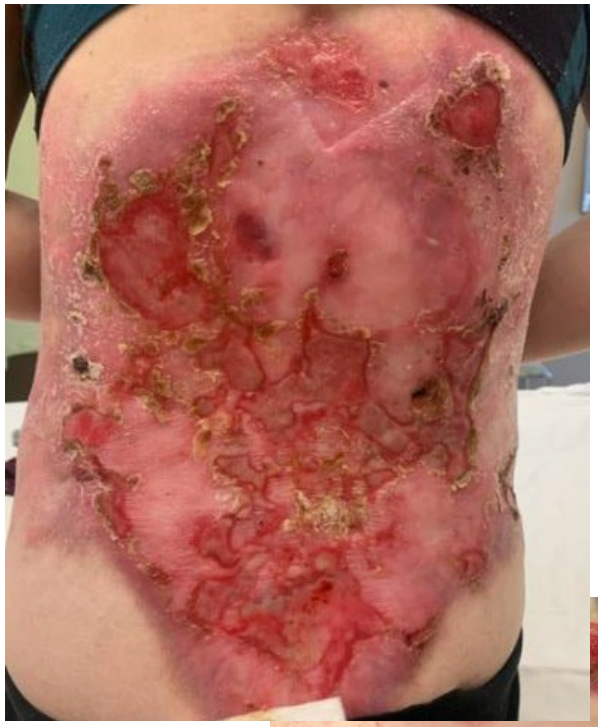
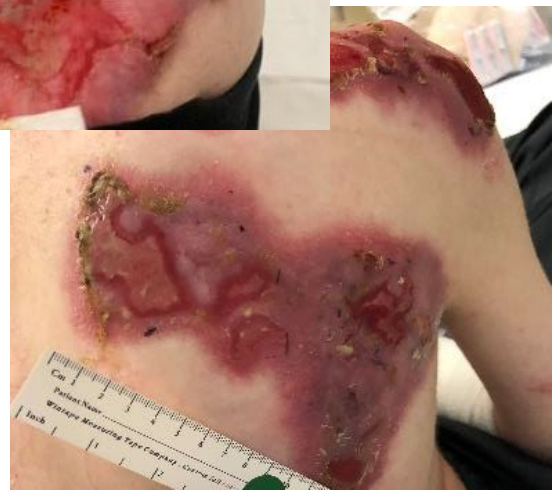
RDEB significantly minimizes length and quality of life





Clinical

- **>30% of patient's body wounded**
- **Large, painful chronic wounds**; risk of infection
- 90% risk of developing SCC by age 55
- 76% likelihood of death by age 40

Economic

- **High HCRU, ongoing economic burden (up to $15M potential lifetime cost)** associated with current disease management approaches
- **Up to $245,000 annual bandage costs** for a 10-year-old with more than 4 hours of care required daily

Humanistic

- **Significant impact on quality of life**
- Chronic pain and persistent wounds from RDEB causes significant physical suffering, emotional distress, high suicide rates, and frequent opioid use

HCRU=Healthcare resource utilization

Tang, et al. SPD 2020 Poster; Tang JY, et al. Orphanet J Rare Dis. 2021; Raymakers, et al. JAMA Dermatol. 2024; Optum Claims Analysis (Feinstein, et al. Orphanet J Rare Dis. 2022); Bruckner, et al. Orphanet J Rare Dis. 2020.

zevaskyn®

(prademagene zamikeracel)

gene-modified cellular sheets

First and only gene therapy made from patient's own skin cells to treat wounds in children & adults with RDEB

- **Single treatment application**
- **Covers large wound areas**
- **Provides years of healing & pain relief**

Geovanna, a ZEVASKYN™ patient at age 8

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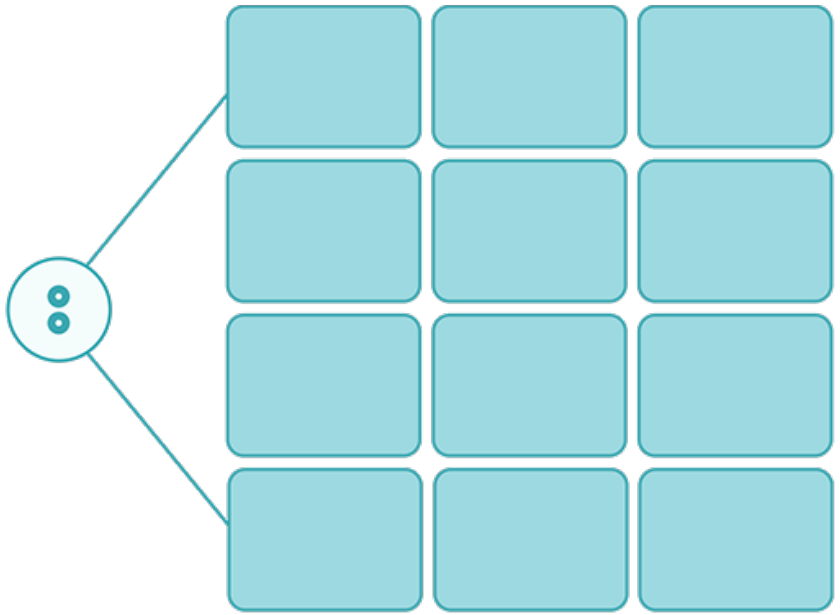
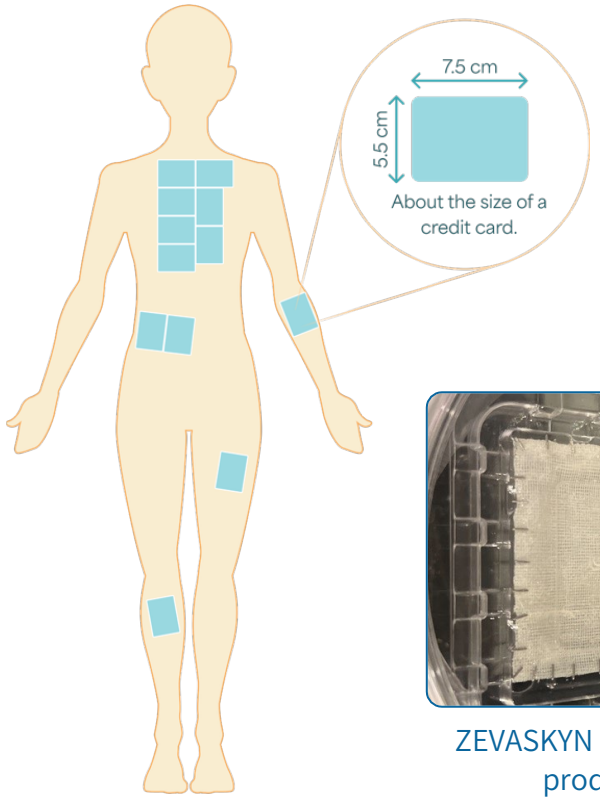
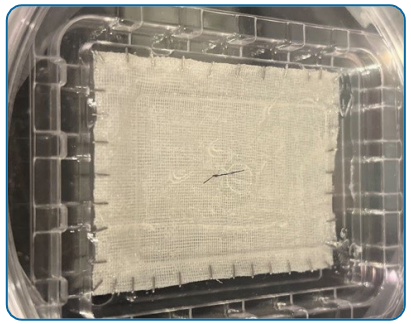
Up to 12 ZEVASKYN sheets can be applied in one surgical session

Two 0.8 cm punch biopsies → **up to 12 ZEVASKYN sheets**



ZEVASKYN sheets can be **joined together to treat larger wounds** on your front, back, or sides, or used **individually for smaller wounds**





ZEVASKYN cellular sheet production

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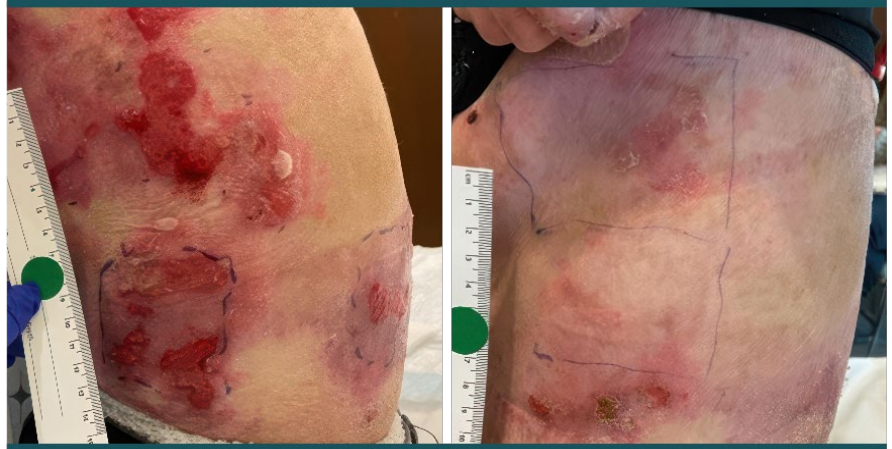
Example RDEB wounds before & after ZEVASKYN treatment

BEFORE **AFTER ZEVASKYN**

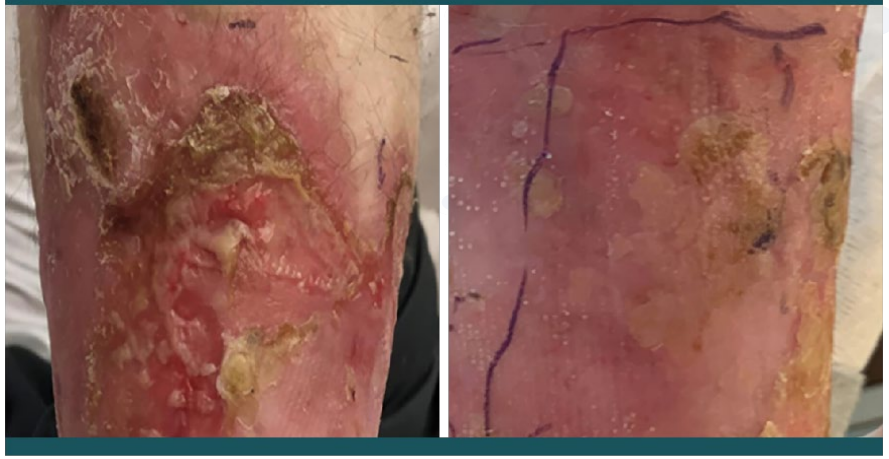
Left thigh

Left torso

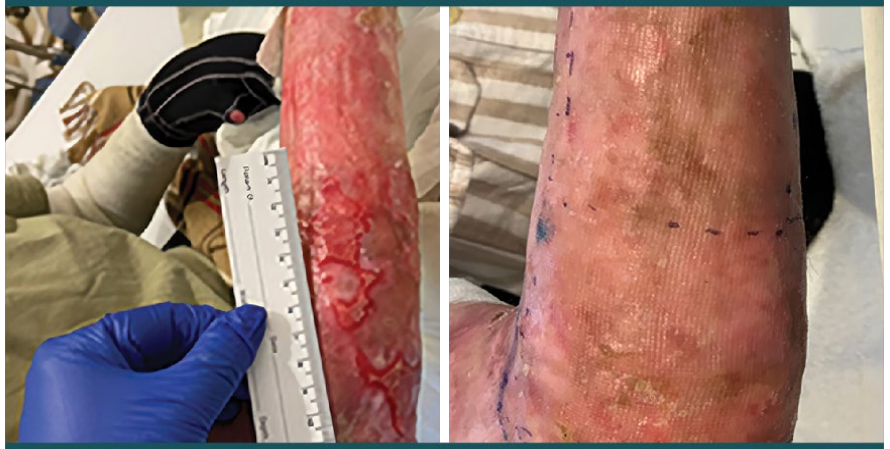


BEFORE **AFTER ZEVASKYN**

Left leg



Right arm



Source: Phase 3 VIITAL study patient; wounds scored as at least 75% healing at week 24; individual results vary
Wound healing scoring was Investigator-assessed per predefined criteria.

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Phase 3 VIITAL study clinical experience[1]

Wound healing and pain reduction with a single surgical application – even in tough RDEB wounds

- **81% (35/43) of treated wounds** achieved 50% or more healing vs **16% (7/43) of controls** at week 24
- **Mean pain reduction was -3.1 in treated wounds** and **-0.9 in controls** from baseline to week 24

Established safety profile

- Most common adverse reactions (incidence ≥5%) were procedural pain and pruritus
- No grade 3 adverse reactions were reported

- Wounds assessed at baseline had been **open for a median of 5 years** (range of 0.5 to 21 years) prior to study enrollment
- **Multiple, different anatomical positions and locations** were treated
- **Large wound areas** (up to 240 cm^2) were treated

1. Phase 3 VIITAL study : 43 treated wounds vs matched control wounds in 11 patients with RDEB in a multicenter, randomized, intrapatient-controlled study.
Healed wounds at Week 24 were confirmed ≥2 weeks later to be included. Complete wound healing defined as re-epithelialization with no drainage or erosion and presence of only minor crusting.
Pain assessed using Wong-Baker FACES rating scale (0-10). Pain reduction calculated as difference between baseline and postbaseline pain scores.

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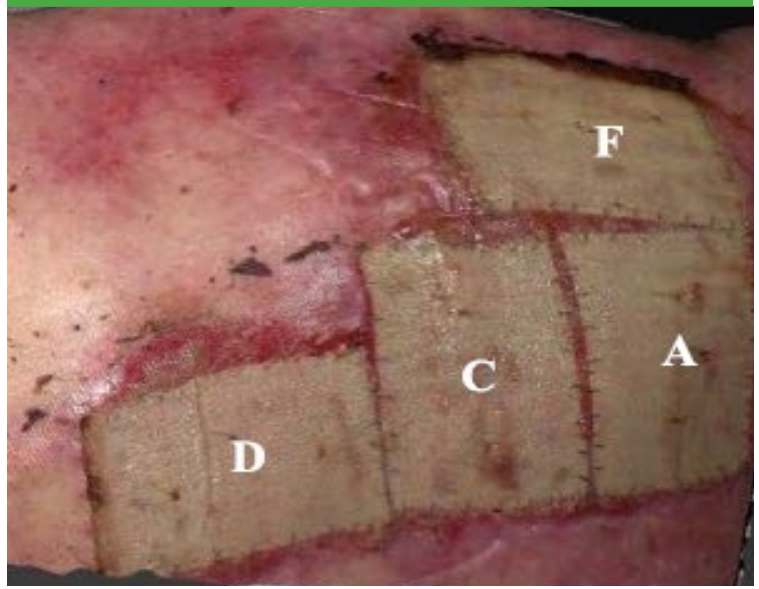
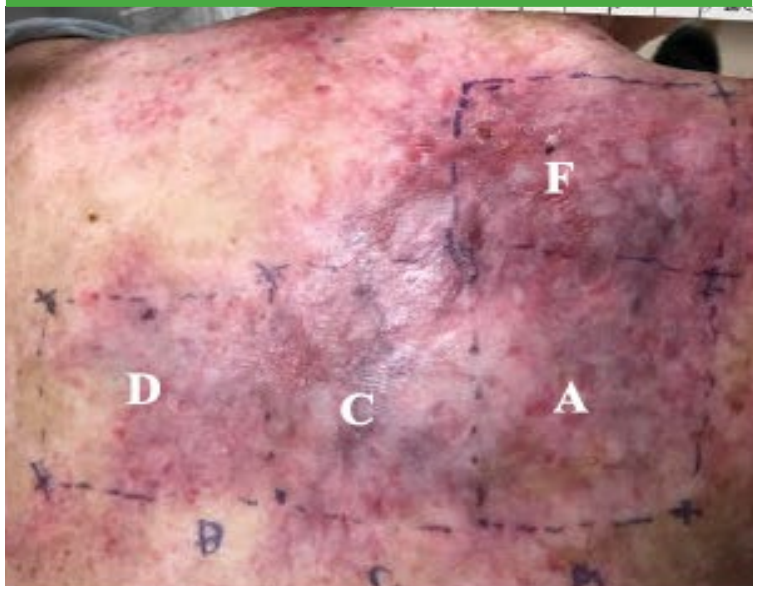
Example of multi-year wound healing after single ZEVASKYN application

- Separate study of 7 patients with RDEB (38 chronic wounds)
- Patients followed for a median of 6.9 years (range 4-8 years), with planned follow-up of 15 years*†
- Study did not evaluate treated wounds vs control wounds or placebo

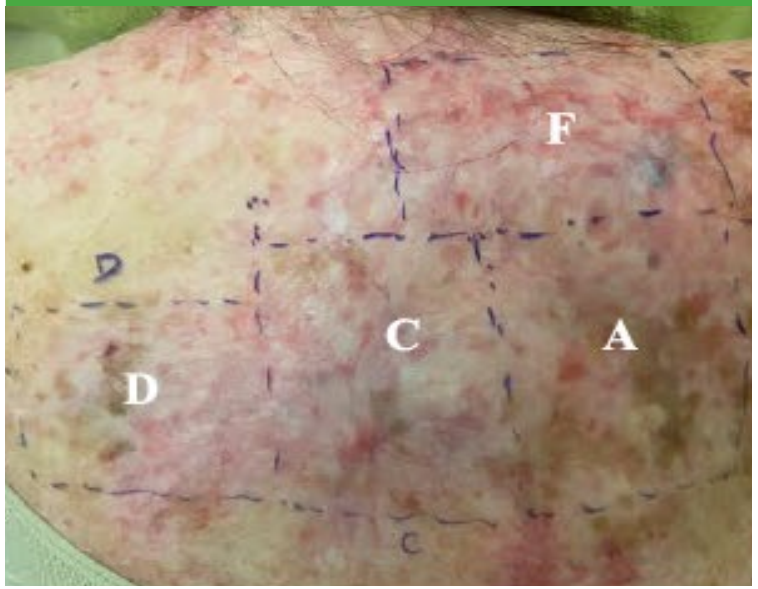
Treated wound area



Patient during long term follow up – year 2



Patient at end of in-person long term follow up – year 5



Individual results may vary

*So JY, et al. Orphanet J Rare Dis. 2022.
†Because the study did not include a control group or placebo for comparison, it was not designed to determine whether the observed effects were due to ZEVASKYN.

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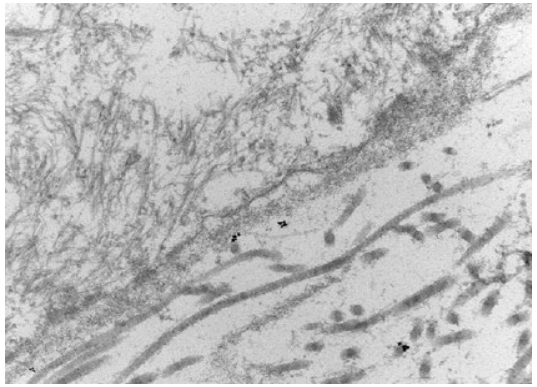
Collagen VII protein expression observed for 24 months at ZEVASKYN treated site

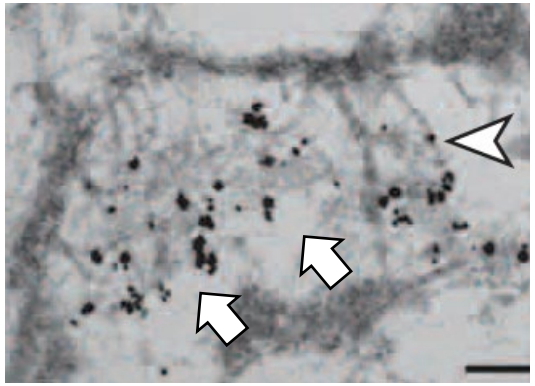
No anchoring fibrils

Baseline

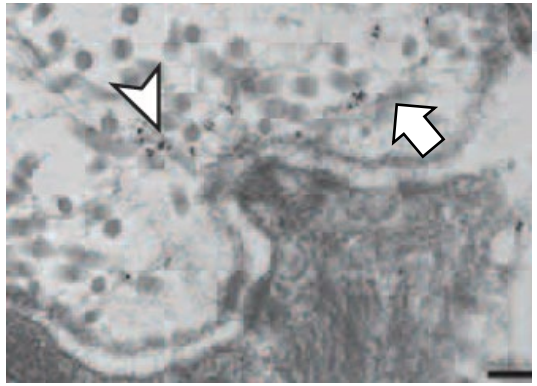


Anchoring fibril expression after treatment

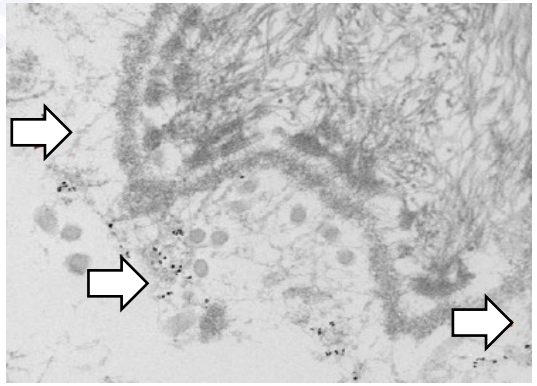
3 months



Year 1



Year 2

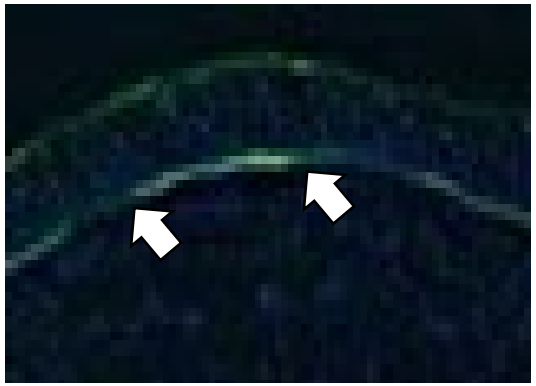


No collagen VII expression

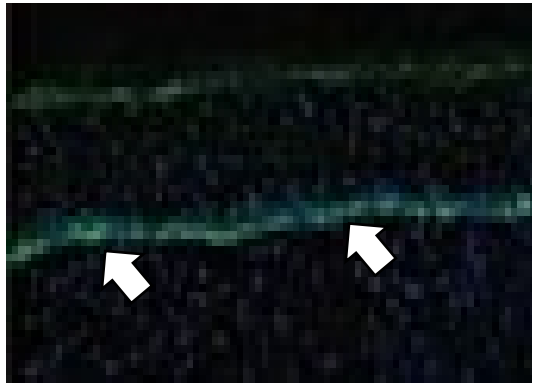
Baseline

Collagen VII expression after treatment

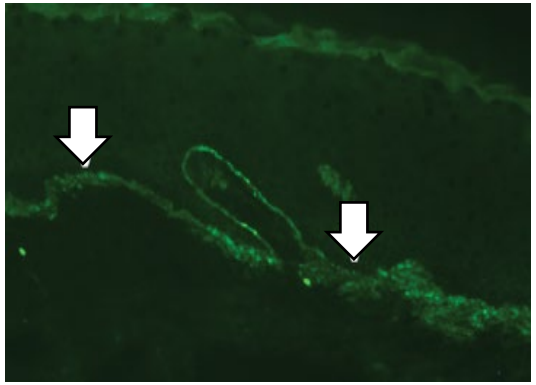
3 months



Year 1



Year 2



Phase 1/2a study patient
Siprashvili 2016, Eichstadt 2019

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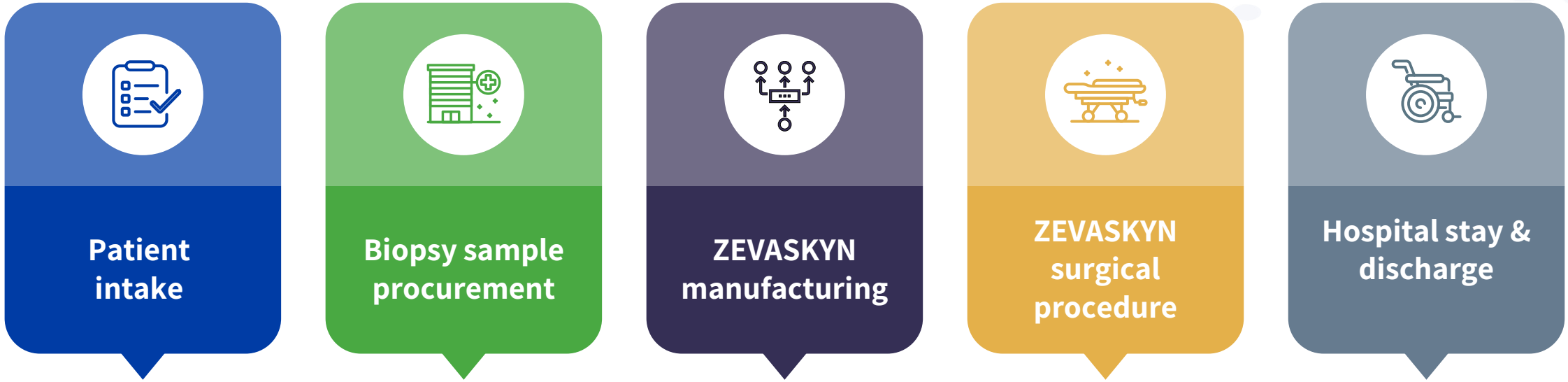
ZEVASKYN patient journey



- Prior authorization
- Site reimbursement agreement
- Scheduling biopsy

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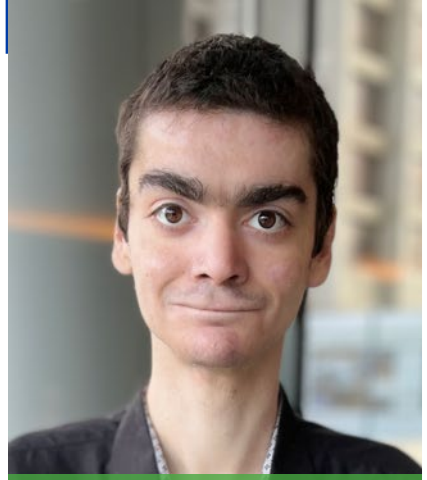
"I am very happy. This trial changed my life completely."

Guadalupe, living with RDEB

"The benefit is I saw healing, compared to other treatment, where I didn't see healing before."

Mohamed, living with RDEB

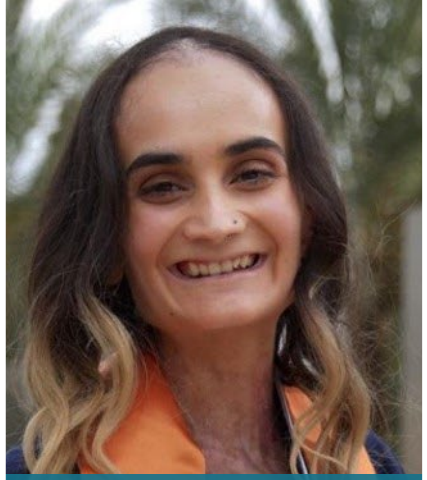


"It was the first time I saw pink skin. Beautifully, beautifully healed skin like I've never seen before in my life. It was totally life changing to see."

Antonio, living with RDEB

"My kids know it was a life altering moment, because then their mom was more available. Their mom was now able to do more things and their mom was there more."

Lara, living with RDEB



"I still would definitely do it again. It gets so many wounds closed and it's been amazing… The amount of time it saves, not having open wounds, not having to do bandages, not having to worry about infections… it makes such a difference."

Noelle, living with RDEB

"I think that the thing that people don't understand with EB is it's all the time... 24/7... and we take for granted so much that our skin stays on our body. But someone with EB does not take that for granted."

Noelle's mother

Strong Together Network of ZEVASKYN patients and caregivers

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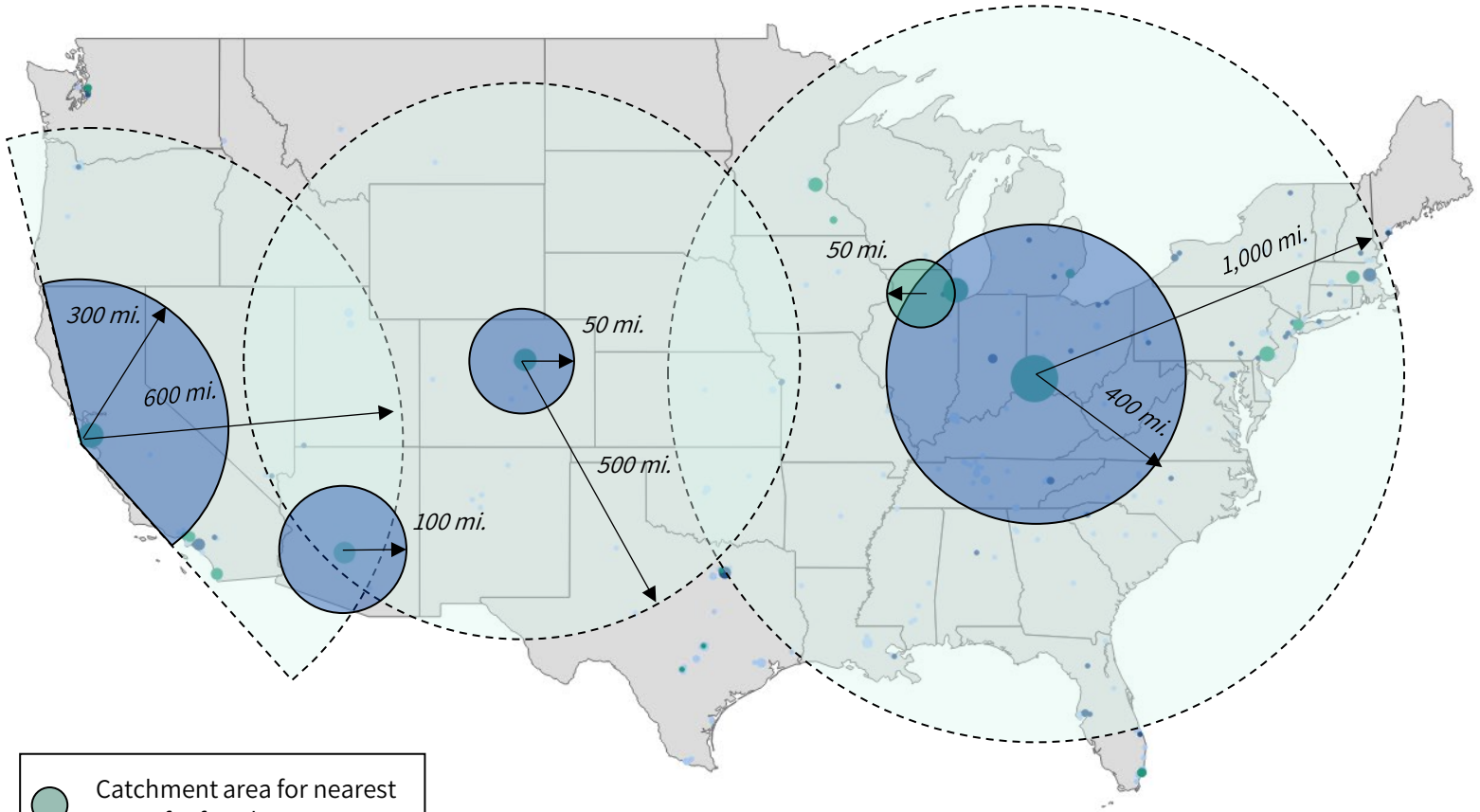
EB patients already travel significant distances for specialized care and have indicated willingness to travel for ZEVASKYN

Referral Catchment Areas For Key EB COEs *(2022-2023)*



- ~40% of patients managed at EB COEs live out of state
- 70% of referrals come from 300 – 400 miles away

Patient support hub

Abeona Assist™
Your partner in navigation and support

Personalized support when you need it
(**1-855-ABEONA-1**)

Note: Based on captured referral dynamics for patients affiliated with COEs between 2022 and 2023. 2022 – 2023 referral is available for ~50% of phenotypical pz-cel patients associated with COEs. Source: 2017 – 2023 Compile Claims; Abeona EB COE List, ClearView Analysis.

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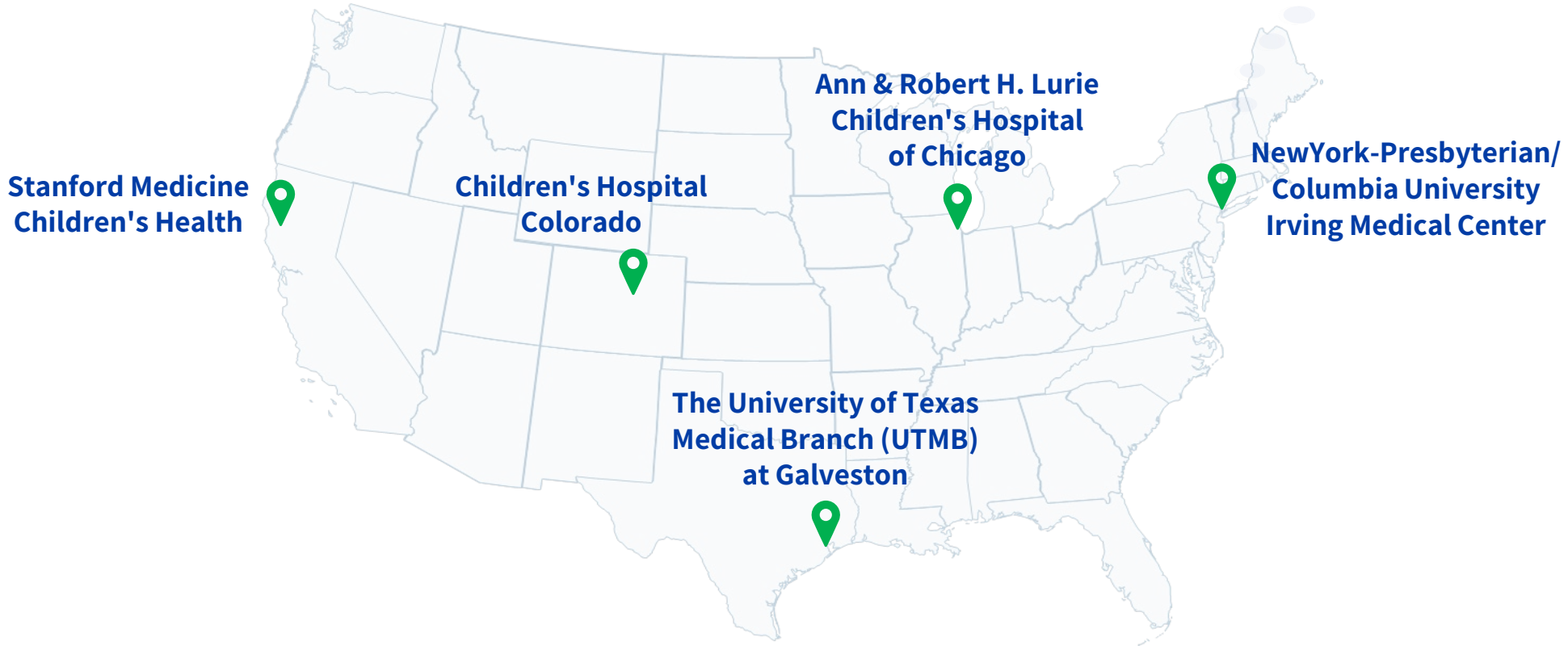
ZEVASKYN may only be administered at a Qualified Treatment Center

Currently available at 5 QTC's



Additional ZEVASKYN Qualified Treatment Centers will be activated in 2026+

ZEVASKYN Qualified Treatment Centers are independently owned and operated. Abeona Therapeutics does not oversee any treatment centers or the medical care they provide.

Please see full Prescribing Information at zevaskyn.com.

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Significant US commercial opportunity for ZEVASKYN

~1,300 US DEB patients[1];
~750 RDEB ZEVASKYN-eligible patients

Anticipate average **2 treatment cycles** per patient
to cover impacted body areas (**~1500 treatment opportunities**)

$3.1M WAC per each treatment;
>$4B cumulative revenue opportunity in the US

Strong early payer coverage and reimbursement

Profitability upon treating >3 patients per month

1. Claims Analysis 2024

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Strong payer coverage and reimbursement

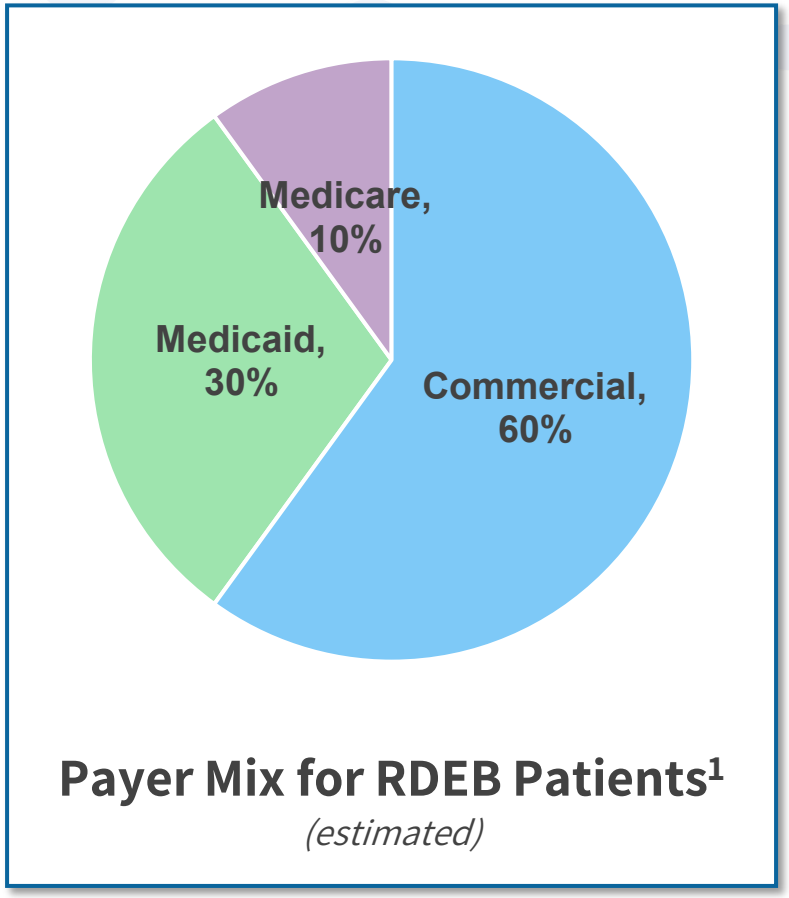
Payer engagement continues to reinforce awareness

Positive coverage for ZEVASKYN established with multiple large national and regional payers

To date, 100% of submitted **prior authorization requests have been approved**

National Drug Rebate Agreement (NDRA) executed with the CMS to facilitate expedited coverage & reimbursement for ZEVASKYN across all 51 state Medicaid programs & Puerto Rico

Permanent product J-code for ZEVASKYN effective January 1, 2026, possibly simplifying claims and reimbursement processing between QTCs and payers, further supporting hospital adoption.



Payer Mix for RDEB Patients[1]

(estimated)

* Currently, 6 states carve out cell therapy and/or GTx (AZ, IN, MA, MO, NY, VT)

[1] RDEB Claims analysis, Sept.2024, Clearview.

Commercial manufacturing for ZEVASKYN

GMP Commitment

Annual maintenance of equipment and facility for quality assurance and compliance

Near Term Ramp-Up

Supply ramp-up at current GMP facility to match projected initial demand

Long Term Expansion

Production capacity expansion for ZEVASKYN growth

Focused on delivering exceptional ZEVASKYN treatment experience

Patient support hub

Abeona Assist™
Your partner in navigation and support

Personalized support when you need it (**1-855-ABEONA-1**)

Abeona Assist

Patient-to-patient communication and engagement

Talk to ZEVASKYN patients and caregivers about their experience

Strong Together Network

Learn more about ZEVASKYN

zevaskyn™
(prademagene zamikeracel)
gene-modified cellular sheets

www.ZEVASKYN.com

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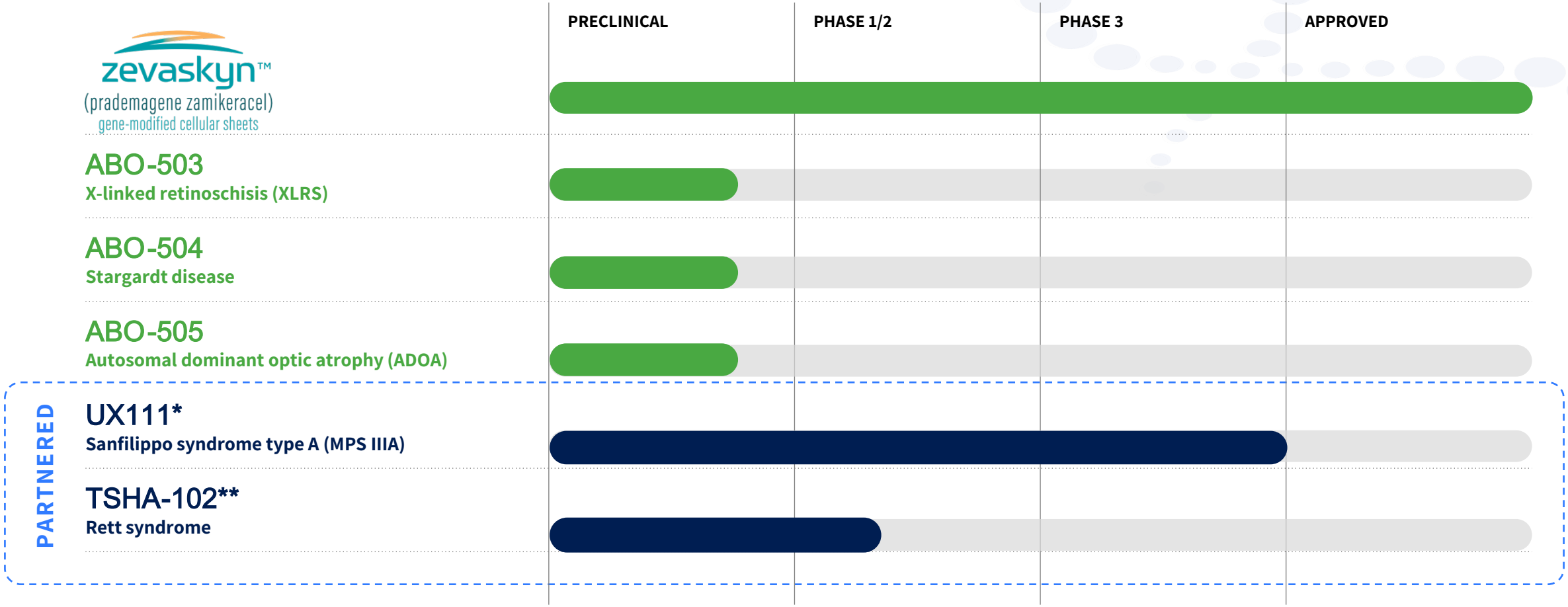
Pipeline of differentiated cell and gene therapies



Partnered with *Ultragenyx Pharmaceutical Inc, **Taysha Gene Therapies, Inc.

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Summary

- **Significant interest in ZEVASKYN** from the RDEB community
- **ZEVASKYN commercial launch underway** with multiple qualified treatment centers activated, and more activations ongoing
- **$191.4M** in cash, cash equivalents and short-term investments as of December 31, 2025
- **Monthly profitability upon treating >3 patients a month anticipated to be reached starting in Q2 2026**