



First-in-disease therapies for patients
with rare diseases



Corporate Presentation
May 2026

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PALVELLA (paluel:a, Finnish): *TO SERVE*

***Building the **leading rare disease biopharma company**
focused on developing and commercializing
first-in-disease therapies for serious, rare skin diseases and
vascular malformations***

What Makes Palvella Stand Apart



**Repeatably
unlocking multi-
billion dollar market
opportunities in
previously untreated
orphan diseases**



1 First-in-Disease Focus



2 Rare Diseases with Clear Disease Biology



**3 Leveraging Existing Human Proof-of-Concept
and Safety Data**

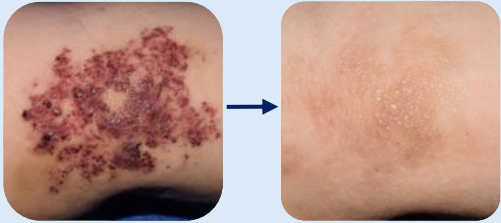


**4 Innovative QTORIN™ Platform: Durable IP
Generation**

Veteran team executing rare disease model designed to reduce time and capital to FDA approval

Q1 2026 Achievements Position Company for First Potential Approval and Launch of QTORIN™ Rapamycin

Microcystic Lymphatic Malformations: Advancing Towards Potential 1H 2027 Approval



Phase 3 results exceeded upside case profile

NDA remains *on track* for 2H 2026

Exceptional veteran commercial leadership recruited; launch planning accelerating

Cutaneous VMs



Phase 3 initiation on track for 2H 2026

Angiokeratomas



First patients dosed in Phase 2 ahead of schedule

DSAP



>40 patient inbounds for clinical trial

Review published in *Clinical and Experimental Dermatology*

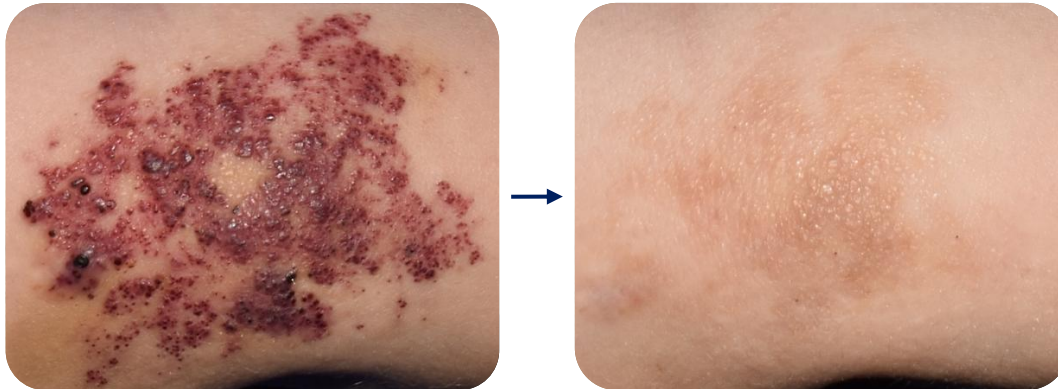
\$230mm raised in gross proceeds in upsized equity financing

Microcystic Lymphatic Malformations: NDA Submission on Track for 2H 2026 with Anticipated U.S. Commercialization in 1H 2027

1

Microcystic Lymphatic Malformations

- ✓ Positive Phase 3 SELVA data
- ✓ In-person pre-NDA meeting granted by FDA, to occur in Q2 2026
- ✓ Findings presented at ISSVA World Congress, May 2026
- NDA submission on track for 2H 2026



Potential FDA approval and U.S. launch 1H 2027

Multiple High-Impact Pipeline Milestones in 2026: Density of Catalyst Creation Driven by QTORIN™

2

Cutaneous Venous Malformations

- ✓ Positive Phase 2 data
- ✓ BTD application submitted Q2 2026
- P3 initiation expected 2H 2026



3

Clinically Significant Angiokeratomas

- ✓ Fast Track Designated
- ✓ Phase 2 initiated May 2026, ahead of schedule
- Phase 2 data expected 2H 2027



4

Disseminated Superficial Actinic Porokeratosis

- ✓ QTORIN™ pitavastatin formulation developed, IP filed
- Phase 2 initiation expected 2H 2026



5

QTORIN™ Third Program

- Announcement expected 2H 2026
- Potential pipeline-in-a-product



DAVID OSBORNE, PhD
Chief Innovation Officer

6

QTORIN™ Rapamycin Fourth Indication

- QTORIN™ rapamycin fourth indication announcement expected 2H 2026





OUR LEAD PRODUCT CANDIDATE

QTORIN™ 3.9%
RAPAMYCIN
ANHYDROUS GEL

QTORIN™: Reproducible Platform for Generating Novel, Topical Product Candidates in a Capital Efficient Manner



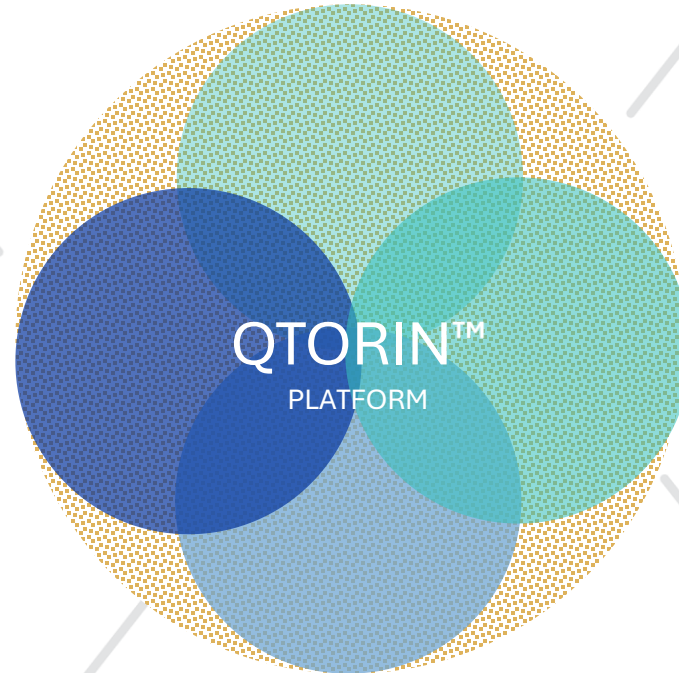
HIGH DRUG LOADING CAPACITY

High solubility → high concentrations → potential for rapid onset and large magnitude treatment effect



TOLERABILITY

Retaining active drug in the skin while minimizing systemic absorption



DERMAL ENGAGEMENT

Delivery to deeper layers of skin, often the site of disease pathophysiology



IP

Each QTORIN™ product candidate eligible for composition IP on formulation

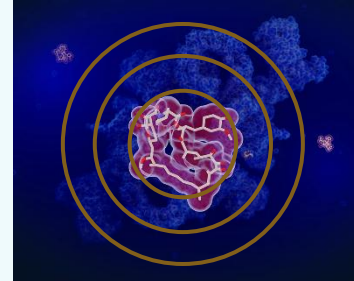
Our Breakthrough Innovation: QTORIN™ 3.9% Rapamycin Anhydrous Gel

Oral rapamycin is not a viable therapeutic option in skin diseases:

Systemic toxicities & low biodistribution to the skin

OPTIMIZED CONCENTRATION

QTORIN™ synergistic solubility results in 3.9% concentration



DERMAL ENGAGEMENT

Rapamycin concentration in dermis exceeds IC90 for mTOR inhibition¹



TOLERABILITY

No traditional penetration enhancers; limited systemic absorption²



Intended for once daily at-home self-administration

QTORIN™ 3.9% rapamycin anhydrous gel is for investigational use only and has not been approved or cleared by the FDA or by any other regulatory agency.

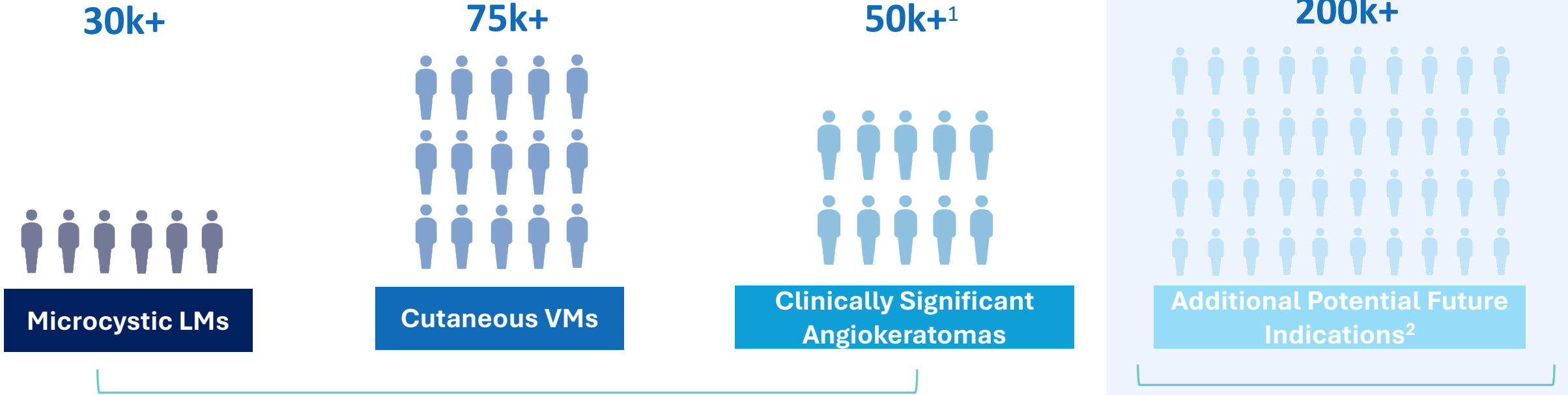
The safety or efficacy has not been established for any use.

1. Data on file. 2. Clinical Study Report PALV-0609.

QTORIN™ Rapamycin: Fourth Indication Announcement in 2H 2026

Pipeline-in-a-product strategy expands addressable U.S. patient pool by 10x beyond initial indication


 = 5k



Estimated timeline for potential regulatory approval



1. Clarity Pharma research (July 2025), n=643 physicians surveyed. 2. Lapa et al., *Journal of Cutaneous Medicine and Surgery*, (2025).



QTORIN™ 3.9% RAPAMYCIN

FOR

Microcystic Lymphatic Malformations

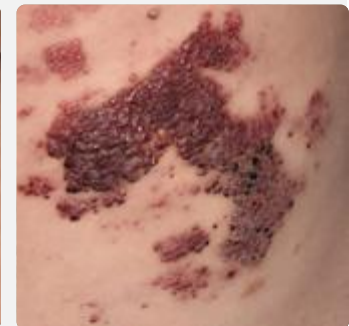
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Microcystic Lymphatic Malformations: *Serious, Debilitating, and Lifelong*

> 30k patients

ESTIMATED DIAGNOSED IN THE U.S.¹

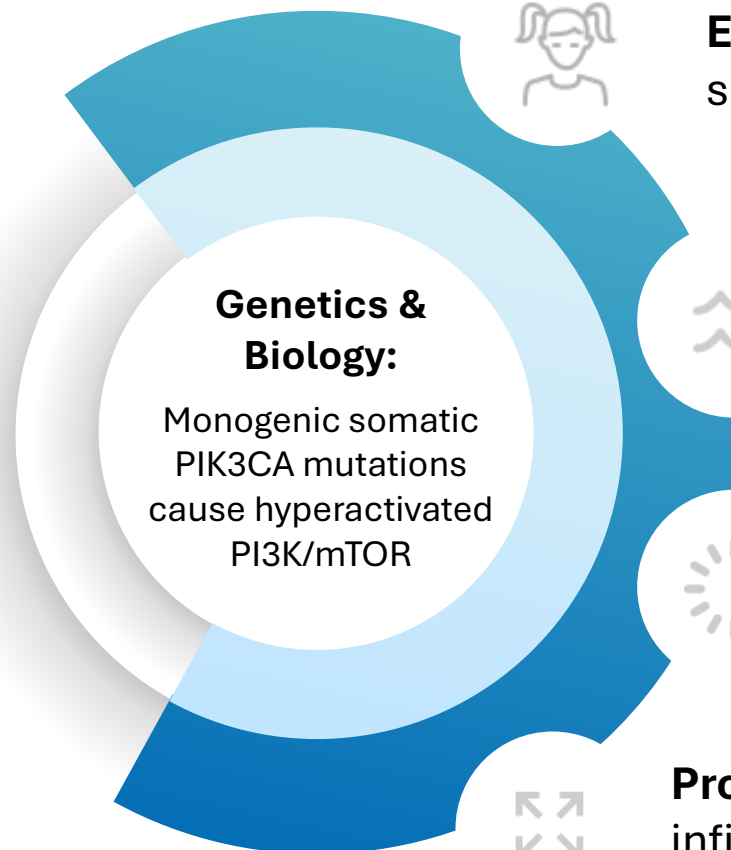
No FDA-approved
therapies



Breakthrough
Therapy
Designation

Fast
Track
Designation

Orphan
Drug
Designation



Genetics & Biology:

Monogenic somatic
PIK3CA mutations
cause hyperactivated
PI3K/mTOR



Early onset: Present at birth and significant impact to adolescents



Lymphorrhea: Persistent discharge of lymphatic fluid through skin layers



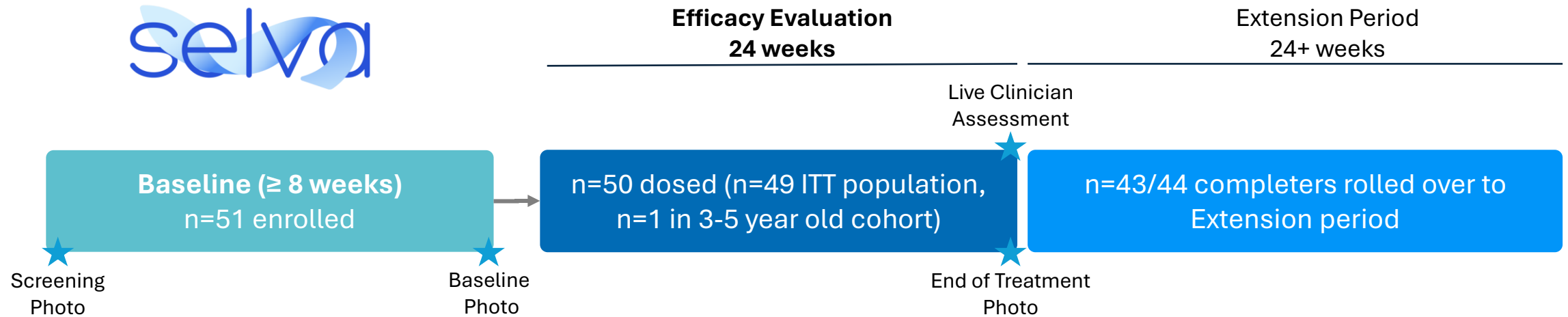
Deep infections: Recurrent cellulitis and serious soft tissue infections, resulting in hospitalizations



Proliferative, progressive disease with infiltrative lesions and no spontaneous regression

Phase 3 SELVA Trial Design

Single-arm, baseline-controlled, QD dose



Primary Endpoint: mLM-IGA (Investigator Global Assessment)

Key Secondary Endpoint: Blinded mLM Multi-Component Static Scale (mLM-MCSS): independent, blinded review of randomized Baseline and Week 24 photos evaluating three key signs of disease: Vesicle Appearance, Height, Leaking/Bleeding

Secondary Endpoints: Live mLM-MCSS, Patient Global Impression of Change (PGI-C), Clinician and Patient Global Impression of Severity (CGI-S, PGI-S), and Incidence and Severity of Adverse Events

Supported by FDA Orphan Products Grant:

Two tranches of non-dilutive funding received (most recent in Oct '25)

selvq : A Clear Path Forward for Patients

**QTORIN™ Rapamycin
at Week 24:**

**Highly statistically
significant across
primary, key
secondary, and all four
secondary endpoints
(all $p < 0.001$)**

+2.13

Mean improvement on mLM-IGA primary endpoint ($p < 0.001$)

**Participants aged ≥ 6 who completed the efficacy
evaluation period:**

95%

Improved on mLM-IGA

86%

“Much Improved” (+2) or “Very Much Improved” (+3) on mLM-IGA

**Potential to be first and only FDA-approved therapy for
>30,000 diagnosed U.S. patients**

selva: QTORIN™ Rapamycin Exceeded Upside Case Profile

Upside Target Clinical Profile

Statistically significant primary endpoint with mean mLM-IGA of $\geq +1.5$ at Week 24

Statistical significance on independent, blinded key secondary endpoint

Rollover into extension period in line with best-in-class drugs for rare diseases

Safety profile: well-tolerated and similar to previous clinical trials

SELVA Outcome



Highly statistically significant with mean mLM-IGA of +2.13 at Week 24 ($p < 0.001$)



Highly statistically significant ($p < 0.001$), including on all three clinical signs: vesicle appearance, height, leaking/bleeding



98% of Week 24 completers (43/44) rolled over to Extension period



Well-tolerated across both adult and pediatric patients, supporting chronic administration

Note: Data analyzed per statistical analysis plan; non-completer data handled via multiple imputation per statistical analysis plan; endpoints tested sequentially according to pre-specified hierarchical testing; statistical significance ($p < 0.05$). Week 24 completers included 43 participants ≥ 6 years old and 1 participant 3-5 years old.

SELVA: Primary and Key Secondary Endpoints Achieved

	Mean Change at Week 24 (95% CI)	p-value
Primary Endpoint: Microcystic Lymphatic Malformation Investigator Global Assessment (mLM-IGA)*	+2.13 (1.88, 2.38)	p<0.001
Key Secondary Endpoint: Blinded Microcystic Lymphatic Malformation Multi-Component Static Scale**	-3.36 (-4.34, -2.38)	p<0.001

*Dynamic change scales (7-point scales ranging from "Very Much Worse" (-3) to "Very Much Improved" (+3); positive values indicate improvements from baseline)

**mLM-MCSS (Sum of three static severity scales: Height, Leaking/Bleeding, Vesicle Appearance: Each scale rated "Clear or Almost Clear" (1) to "Very Severe" (5); total score 3-15. Test baseline to Week 24 change; negative values indicate improvements from baseline)

**Highly statistically significant across primary, key secondary,
and all four secondary endpoints (all p<0.001)**

Phase 3 Results: Well-Tolerated and Favorable Safety Profile

	Number of Participants (%)
Any Treatment-Emergent Adverse Event	35 (70%)
Severe (not related to study drug)	1 (2%)
Serious (not related to study drug)	4 (8%)
Any Treatment-Related ¹ Adverse Event	17 (34%)
Severe	0 (0%)
Serious	0 (0%)
Treatment-Related ¹ AEs with \geq 5% Incidence	
Application site acne	3 (6%)
Application site discoloration	3 (6%)
Application site pruritus	3 (6%)
Possibly Treatment-Related AE Leading to Discontinuation	1 (2%)

Rapamycin levels were below 2 ng/mL in systemic circulation on for all participants at all timepoints in the study

Phase 3 Results: Age 10, Male, mLM-IGA: +2 “Much Improved”

Baseline



Week 24



Phase 3 Results: Age 7, Female, mLM-IGA: +3 “Very Much Improved”

Baseline



Week 24



Regulatory: NDA Submission On Track for 2H 2026

Breakthrough, Fast Track, and Orphan Designations granted

**Pre-NDA meeting
granted by FDA**

- 1 Phase 3 SELVA data highly statistically significant and clinically meaningful, confirming positive Phase 2 results
- 2 Seeking **traditional approval** (not accelerated) **based on clinical endpoints**; intent to seek broad label age 3 and above
- 3 Previously granted Breakthrough, Fast Track, and Orphan Designations; 505(b)(2) submission
- 4 Collaborating with FDA Office of Orphan Products Development, which is providing non-dilutive funding, to participate in Pre-NDA meeting

Since April 2025, there have been at least 10 drug approvals based on one or more single-arm studies, of which 8 were orphan-designated¹

Strong Barriers Through Multi-Layered Exclusivity Strategy

IP portfolio, trade secrets, and regulatory exclusivities through at least 2038

Granted U.S. Patents

6 issued U.S. patents with claims through at least 2038

Including protection against 0.1% to 20% anhydrous gel compositions of rapamycin and other mTOR inhibitors

Trade Secrets

Multiple trade secrets related to proprietary formulation processes and manufacturing know-how

Regulatory

Orphan drug designation and 7-year data exclusivity from anticipated FDA approval

QTORIN™ 3.9% RAPAMYCIN

U.S. Commercial Launch Planning

Microcystic LMs: Multi-billion Dollar, Uncontested U.S. Market Opportunity with Commercial Build-Out Underway

- 1 Large orphan market:** Claims analysis presented at 2025 Society for Investigative Dermatology (SID) Meeting verified > 30k estimated diagnosed U.S. patients, with >1,500 incident patients annually
- 2** Positioned to be **first and only FDA-approved therapy**; market research indicates **strong intent to prescribe, including in pediatric population**
- 3** Payor testing and orphan analogues validate **expected orphan pricing corridor above \$100k per patient per year**
- 4 Concentrated prescriber base** in vascular anomaly centers (VACs) & other clinics

QTORIN™ Rapamycin: >\$1bn U.S. Peak Sales Potential in Microcystic LMs



Microcystic Lymphatic Malformations

>30k diagnosed U.S. patients,
with concentration in vascular
anomaly centers

Recent field checks, annual
incidence estimates, published
claims analysis

Annual ~\$100k-\$200k pricing range
per patient

Supported by Phase 3 SELVA data,
payor testing, analogues

QTORIN™ Rapamycin Potential to Achieve >\$1bn Peak Sales

QTORIN™ Rapamycin Physician Market Research: Potential to be First Line, Standard of Care Therapy for Microcystic LMs

Product X: Topical 3.9% rapamycin gel, including results from Phase 2 study of QTORIN™ rapamycin

Core Intent to Prescribe Insights

Would consider Product X as a **first-line** therapy

98%
of physicians

Percent of my microcystic LM patients I would prescribe Product X:

75%
of patients

"[Product X] would be an excellent safe option that I would readily prescribe"

Additional Insights into Pediatric Population

96%
of physicians

See **advantages to targeted, localized delivery of Product X for pediatric patients** compared to oral mTOR or PI3K inhibitor

"Most parents would not like a young child treated with a systemic drug with so many potential long-term and serious side effects"

Physician Segmentation Insights

VAC* Physicians
(n=21)

73%
of patients

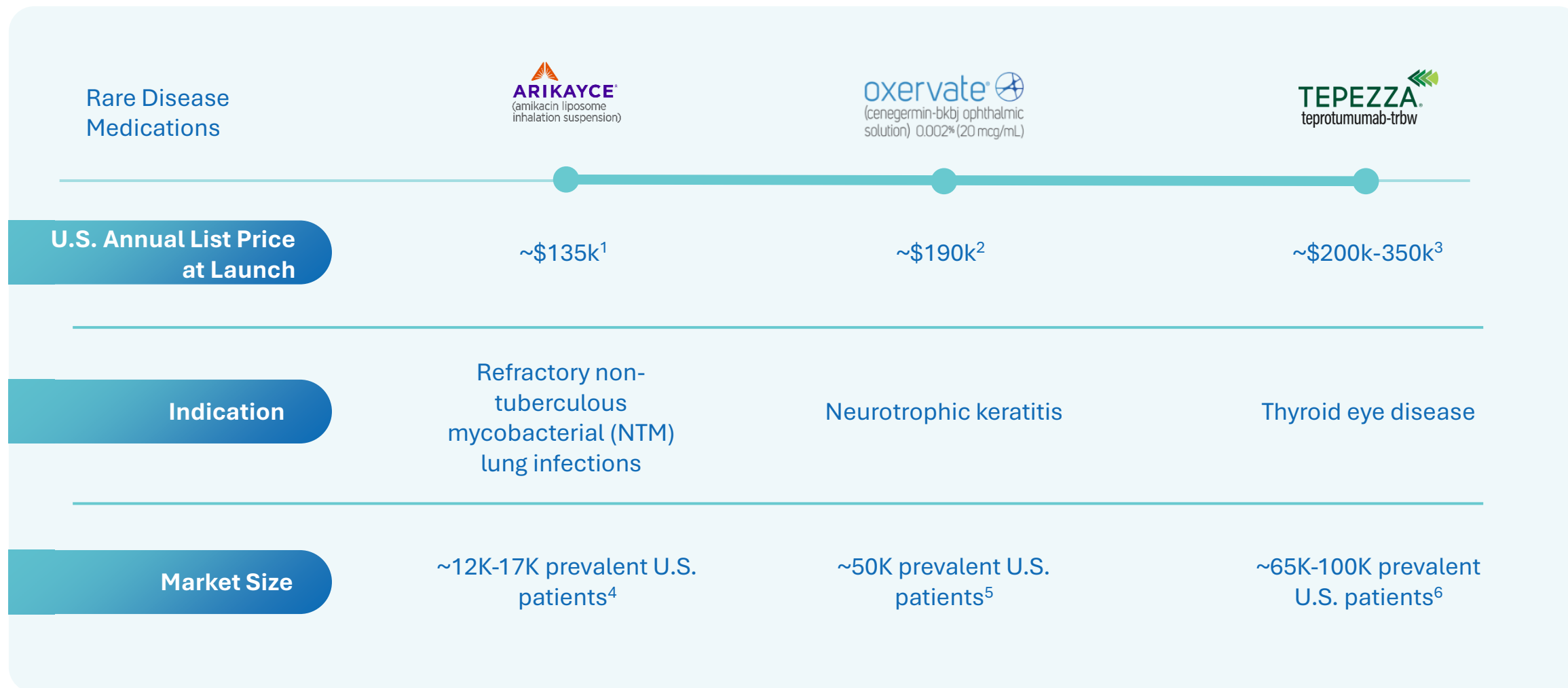
Non-VAC Physicians
(n=31)

77%
of patients

17 of 52 physicians stated they would **prescribe to 100%** of patients

*Vascular Anomaly Centers

QTORIN™ Rapamycin Pricing: Prior First-in-Disease Launches and Recent Topical Orphan Launches Support Potential Orphan Drug Pricing



1. Medscape Medical News interview with Mandy Fahey, Insmad Director of Corporate Communications (2018). 2. Assumes one course of 8-week therapy for both eyes. 3. Horizon Therapeutics Management guidance and Wall Street research. Price dependent on weight-based dosing. 4. Insmad corporate presentation (2025). 5. Sacchetti et al., *Clin Opth* (2014). 6. Stan et al., *Clin Endocrinol (Oxf)* (2024), Horizon Therapeutics investor presentation (2023).

Highly Concentrated Patient Population: ~400 Established High Volume Centers for Treating Vascular Malformations Comprise ~50% of Market

CLAIMS ANALYSIS SUPPORTS THREE SEGMENTS



**Highly Concentrated Patients:
~50% of market at ~400 centers**

- **Already established** Centers of Excellence for mLM
- **~96% of VACs today prescribe oral mTOR inhibitors¹**: familiarity with class & mechanism of drug

**Secondary Targets
at Launch**


Omni-channel approach

Inside sales can provide a high ROI

Apply additional learnings from Oxervate and other orphan launches

Long-tail Targets

All three market segments to be covered by orphan sales force of ~30-40 reps



QTORIN™ 3.9% RAPAMYCIN

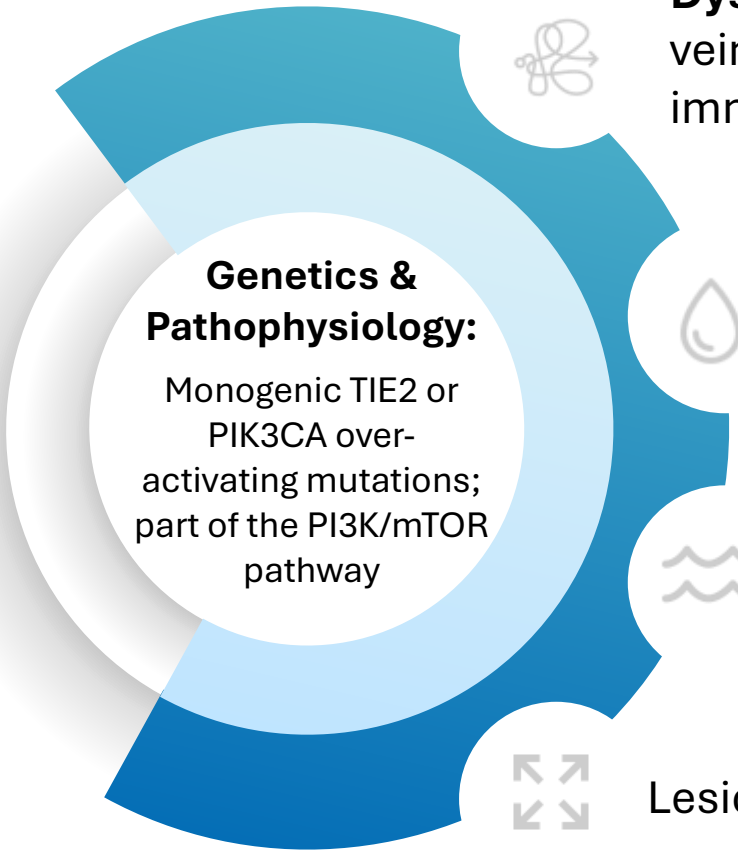
FOR

Cutaneous Venous Malformations

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Cutaneous Venous Malformations: Serious, High Unmet Need

> 75k patients
ESTIMATED DIAGNOSED IN THE U.S.¹

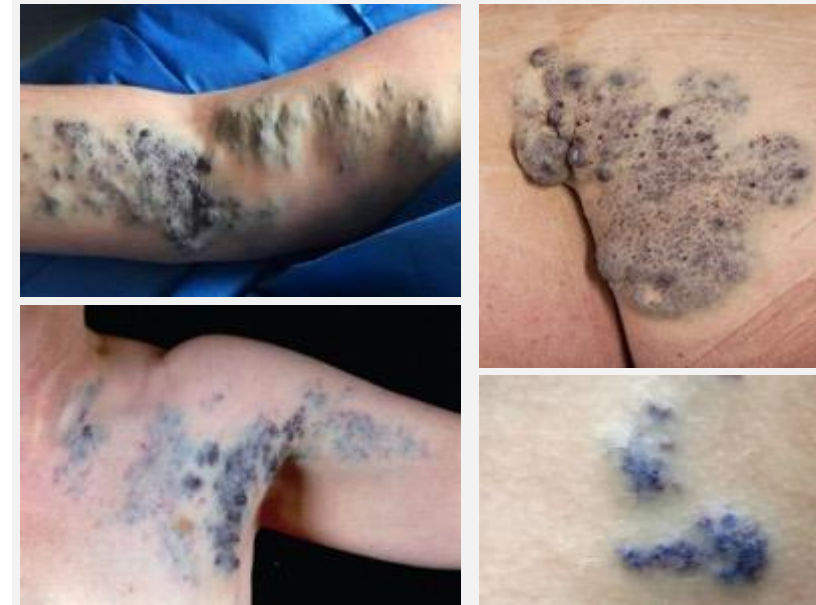


Dysregulated growth of malformed veins and **hyperproliferation** of immature venous endothelial cells

Dysfunctional venous architecture leads to bleeding, thrombosis, ulceration

Skin involvement in ~50-80% of venous malformations patients²

Lesions do not resolve spontaneously³

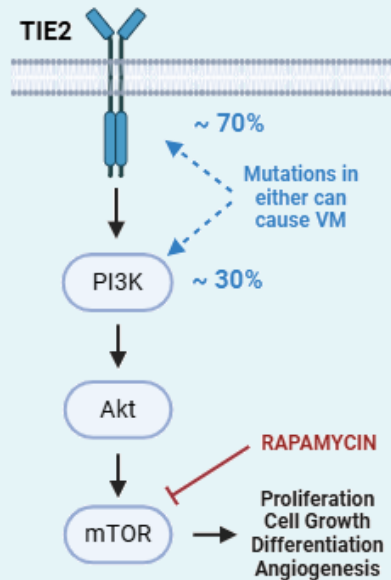


Leads to physical & functional impairment, psychological distress, with no FDA-approved therapies

**Pipeline-in-a-product:
sNDA planned**

Venous Malformations: Progress Towards the Potential First Targeted Therapy for Unaddressed Cutaneous Disease

Known Genetics / Clear Biology



Plausible mechanism

Limaye et al (2009, 2015)

Real-world Evidence

LYMPHATIC RESEARCH AND BIOLOGY
Volume 00, Number 00, 2025
© Mary Ann Liebert, Inc.
DOI: 10.1177/15578585251377562

Sirolimus for Venous Malformations: A Systematic Review of Efficacy and Safety

Joyce Teng, MD, PhD,¹ Jeff Martini, PhD,² Michael Kelly, MD, PhD,³ Megha Tollefson, MD,⁴ and Alexander Greer⁵

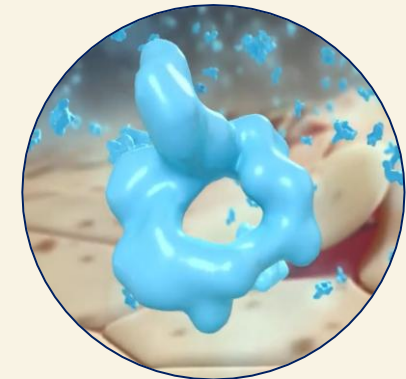
Real-world evidence supports rapamycin's off-label use in primarily internal manifestations of VMs...

...however, poor patient outcomes persist in cutaneous disease

Teng et al (2025)

On Target, In Tissue

QTORIN™
RAPAMYCIN

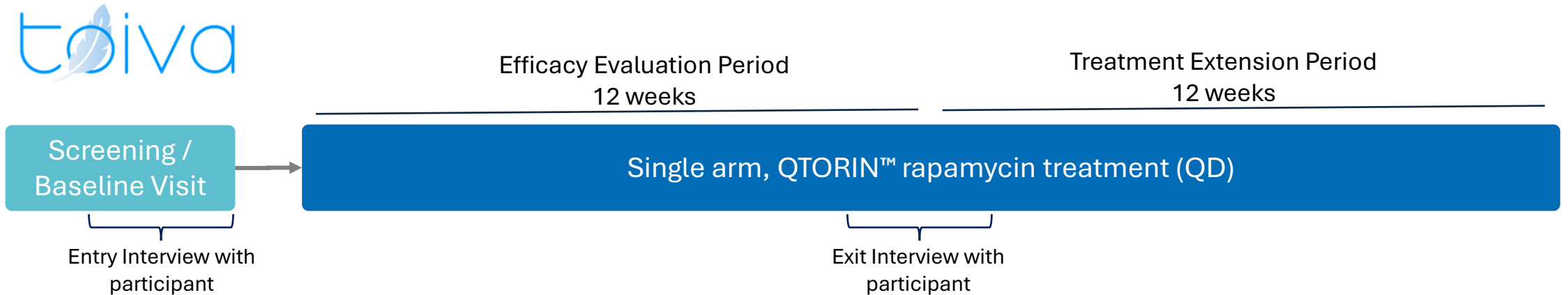


3.9% concentration
Dermal penetration
Extensive CMC package

Phase 2 TOIVA Data (2025)

Phase 2 TOIVA Study in cVMs: 24-Week Study

Single-arm, baseline-controlled, QD dose, age 6+



Safety and Tolerability

Efficacy (no pre-specified primary endpoint): cVM-IGA (7-point clinician change scale), cutaneous VM multi-component static scale (cVM-MCSS), other clinician- and patient-reported outcomes

Statistics: Intent-to-Treat (ITT) population, based on available data at each time point and analyzed per statistical analysis plan

Key Entry Criteria: Enriched for patients with cutaneous disease and confirmed by third party eligibility consult team; genetics not required

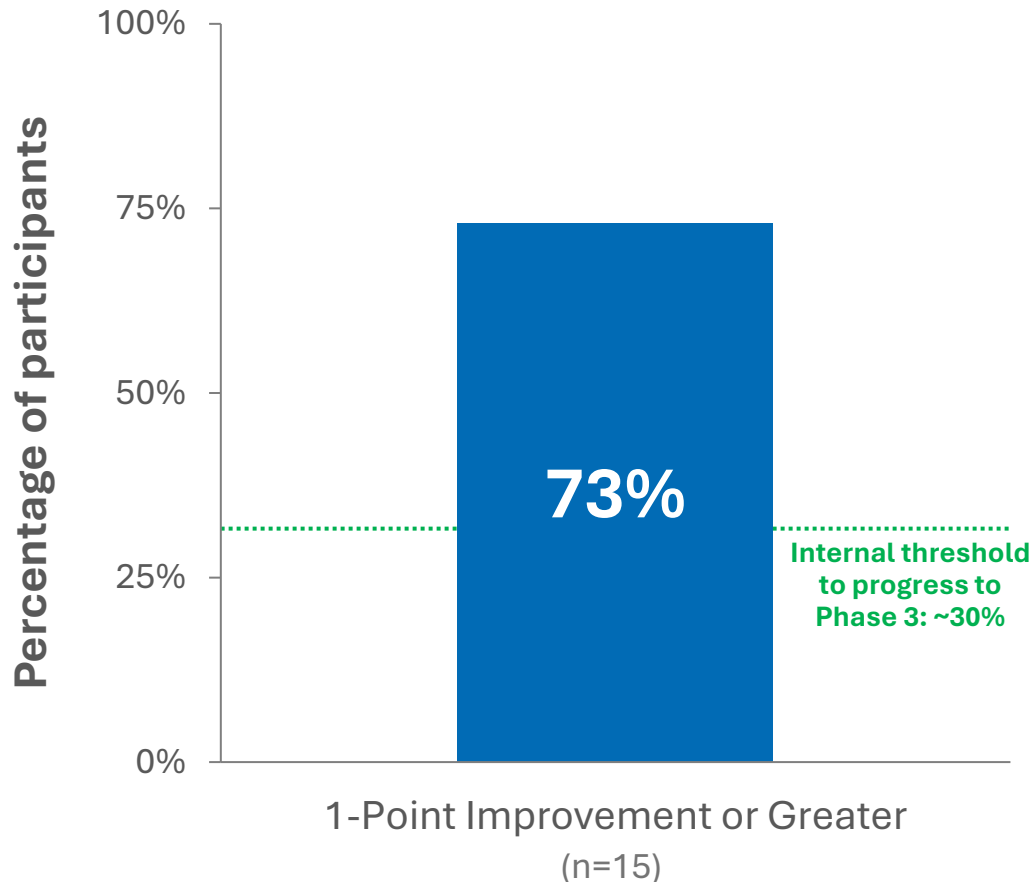
Enrollment: 16 participants enrolled and dosed

Sites: MAYO CLINIC, Cleveland Clinic, Children's Hospital of Philadelphia, Stanford MEDICINE, UCI, Children's Hospital Colorado, Children's Healthcare of Atlanta, JOHNS HOPKINS MEDICINE, HEALTH UNIVERSITY OF UTAH, UNC HEALTH, MINNESOTA CLINICAL STUDY CENTER

Overall cVM-IGA: 73% of Participants Demonstrated Improvement at Week 12

Single-arm, baseline-controlled, QD dose, age 6+

Overall cVM-IGA at Week 12



- **Overall cVM-IGA:** 7-point clinician-assessed dynamic change scale ranging from “Very Much Worse” (-3) to “Very Much Improved” (+3)
 - Mean effect size at week 12: **+1.5 (p<0.001)**
 - Median effect size at week 12: **+2.0**
- **73%** of participants (11/15 participants) demonstrated at least a 1-point improvement on the Overall cVM-IGA at Week 12
- **67%** of participants (10/15 participants) were rated as either “Much Improved” (+2) or “Very Much Improved” (+3) on the Overall cVM-IGA at Week 12

Note: Statistical significance (p<0.05) is nominal as there was no adjustment for multiplicity amongst efficacy endpoints. Data analyzed per statistical analysis plan; ITT analyzed with no imputation of values for missing data.

1. Genetic testing was not required as part of the protocol; Palvella is continuing efforts to collect genetic data on trial participants.

Phase 2 Results: Meaningful Improvement in Patient QoL



Site: CHOP

Investigator: Dr. Denise Adams

Participant Age: 17

Mutation: TEK

cVM-IGA at Week 12:

Very Much Improved (+3)

Baseline



Week 12




Participant Qualitative Interview: *“I’ve definitely noticed some improvements...it’s definitely had a positive effect...It’s more comfortable to wear a bra now...I’ve had less pain in that specific area”*

Phase 2 Results: Safety and Tolerability

- QTORIN™ rapamycin was generally well-tolerated, similar to previous clinical trials
- Most common Treatment-Emergent Adverse Events were application site reactions (erythema, 25%)
- All Treatment-Related Adverse Events were moderate or mild (no severe events)
 - Majority of AEs were mild
 - No SAEs related to study drug
 - No unexpected AEs

Rapamycin levels were below the lower limit of quantification (2 ng/mL) in systemic circulation on a standard lab assay for all participants at all timepoints in the study

Significantly below 5 ng/mL which is the lower boundary where rapamycin begins to exert immunosuppressive effects



QTORIN™ 3.9% RAPAMYCIN

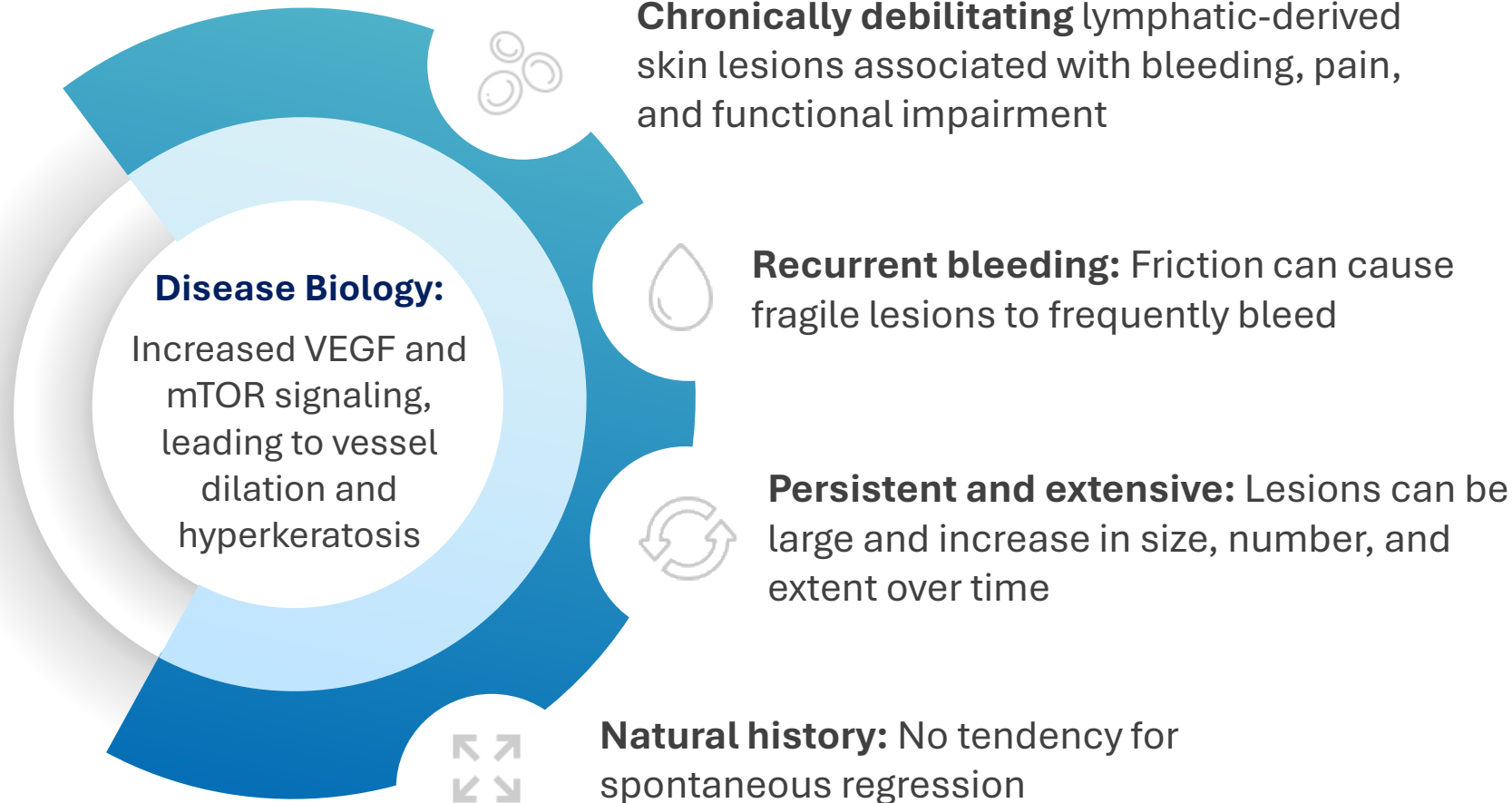
FOR

Clinically Significant Angiokeratomas

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Clinically Significant Angiokeratomas: Superficial Lymphatic Malformations

Palvella's focus to include Fordyce, Solitary, Mibelli, and Circumscriptum subtypes



> 50k patients

ESTIMATED DIAGNOSED IN THE U.S.¹



No FDA-approved therapies

***Pipeline-in-a-product:
sNDA planned***

**Phase 2 trial initiated May 2026
ahead of schedule**

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Wang et al., *Journal of Cutaneous Pathology*, (2014); Trindade et al., *Am J Dermatopathol*, (2014); Prindaville et al., *Pediatric Dermatology*, (2017); Singh et al, *Indian Journal of Dermatology*, (2023); Caraffa et al, *International Journal of Infection*, (2025); Molla, *Clinical, Cosmetic and Investigative Dermatology*, (2024). Ivy H, Julian CA. Angiokeratoma Circumscriptum. Treasure Island (FL): StatPearls Publishing; 2025 Jan; Lapa et al., *Journal of Cutaneous Medicine and Surgery*, (2025).

1. Clarity Pharma research (July 2025), n=643 physicians surveyed.



QTORIN™ PITAVASTATIN

FOR

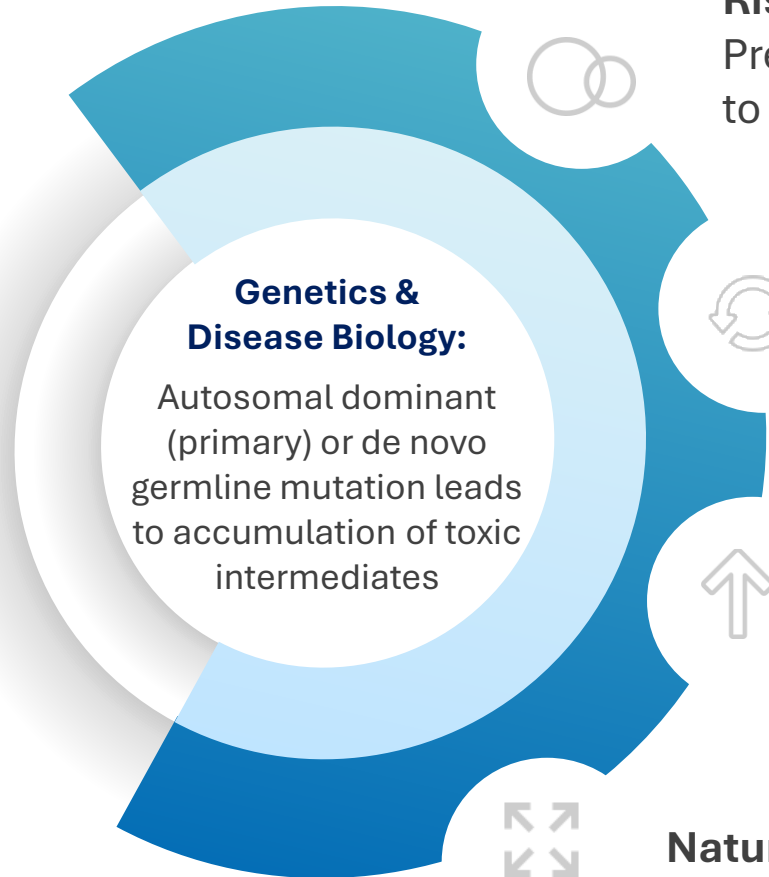
Disseminated Superficial Actinic Porokeratosis

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Disseminated Superficial Actinic Porokeratosis (DSAP): Chronic, Pre-Cancerous, and Progressive

> 50k patients

ESTIMATED DIAGNOSED IN THE U.S.¹



Genetics & Disease Biology:

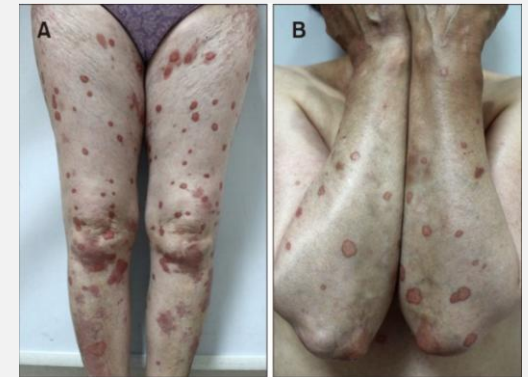
Autosomal dominant (primary) or de novo germline mutation leads to accumulation of toxic intermediates

Risk of malignant transformation:
Premalignant disease with transformation to non-melanoma skin cancers²

Significant impact to quality of life:
clinical signs include skin disfigurement, burning, and persistent itch

Persistent and extensive: Clonal proliferation of abnormal keratinocytes leads to increased number and size of lesions

Natural history: Spontaneous regression is extremely rare²



No FDA-approved therapies

**Phase 2 trial initiation expected
2H 2026**

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Unmet Need for First FDA-approved Topical Mevalonate Pathway Inhibitor for DSAP

Oral statins are not a viable therapeutic option in DSAP:

High first pass metabolism and/or sub-therapeutic biodistribution to the skin

Topical cholesterol/lovastatin for the treatment of porokeratosis: A pathogenesis-directed therapy

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New Haven, Connecticut; Tel Aviv, Israel; and Chicago, Illinois

Proof-of-concept study, demonstrating a plausible mechanistic approach

Recently published systematic review in *Clinical and Experimental Dermatology* (Martini et al, 2026) included **24 case studies** of off-label use of topical statin therapy in porokeratosis...

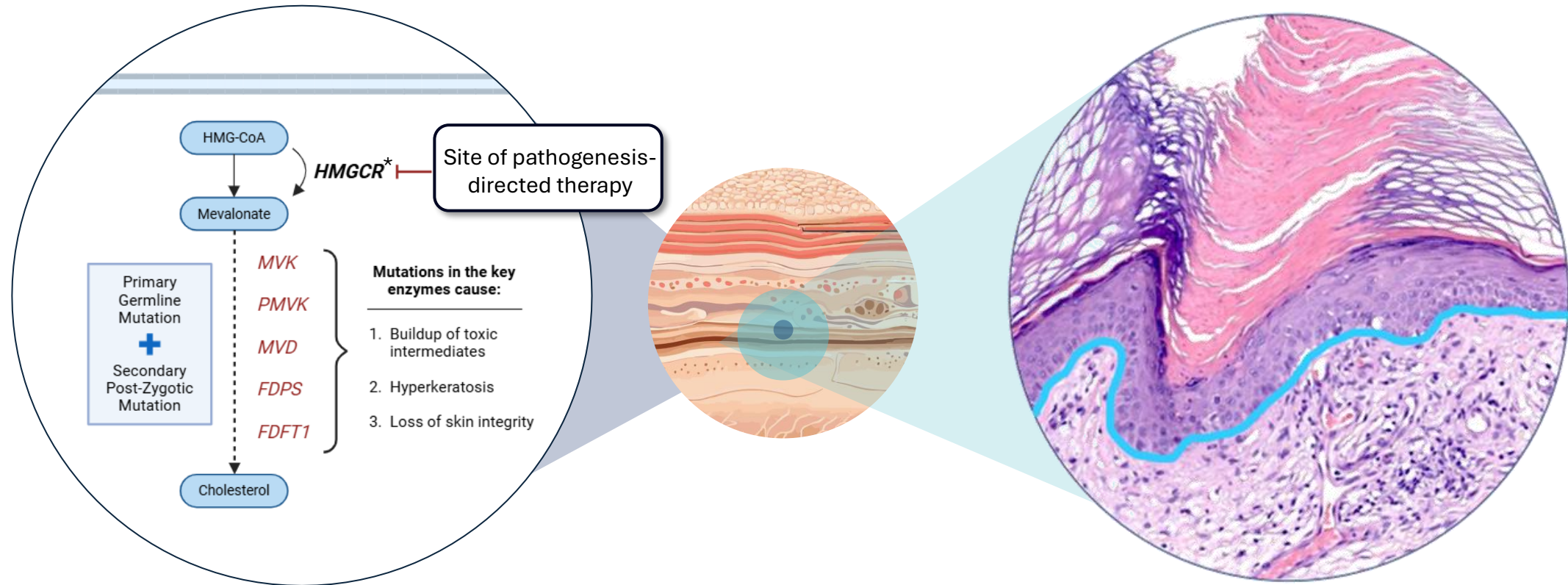
...however, today **poor patient outcomes persist** due to lack of access and known variability in unapproved formulations which can limit safety, efficacy, and quality

Significant need for an FDA-approved topical mevalonate pathway inhibitor

Clear Biology: Targeting the Causal Mevalonate Pathway

Target: Mevalonate Pathway

Tissue: Epidermis & Dermis



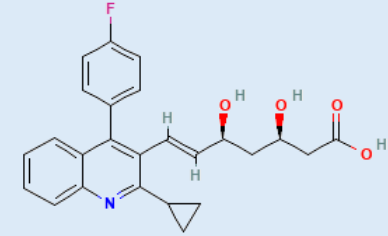
An on-target, in-tissue approach could result in significant clinical improvement

QTORIN™ Pitavastatin: On Target, In Tissue

Using QTORIN™, we considered and tested a wide range of mevalonate pathway inhibitors

Molecule	Potency	Optimal Skin PK	Stability
Pitavastatin	✓	✓	✓
Mev. Inhibitor 2	Did not meet some or all pre-defined target product attributes		
Mev. Inhibitor 3			
Mev. Inhibitor 4			
Mev. Inhibitor 5			
Mev. Inhibitor 6			
Mev. Inhibitor 7			

QTORIN™
PITAVASTATIN



- **Pitavastatin is an FDA-approved next-generation oral statin** for patients with primary hyperlipidemia and mixed dyslipidemia
- **Superior inhibition of the mevalonate pathway compared to all molecules evaluated**
- **Key characteristics:**
 - Payload: > 2% concentration achieved
 - Dermal penetration: *in vitro* penetration test confirms > IC90
 - Low systemic absorption
 - Encouraging preliminary drug stability
 - IP: Filed formulation & method of use IP and licensed Yale IP



QTORIN™

Platform

palvella
THERAPEUTICS

QTORIN™: New Product Development Engine



DAVID OSBORNE, PhD
Chief Innovation Officer

- **VALIDATION OF QTORIN™ PLATFORM**

Two positive clinical study readouts (Phase 3 SELVA trial and Phase 2 TOIVA trial results)

- **SCALING OF PIPELINE WITH NEW QTORIN™ PROGRAMS**

Rapidly advancing and testing multiple molecules through QTORIN™ platform in capital- and time-efficient manner

- **PLANNING TO PURSUE PLATFORM DESIGNATION**

We expect to apply for FDA's Platform Technology Designation Program following QTORIN™ rapamycin's targeted approval in 2027

We plan to announce one new QTORIN™ program and one new QTORIN™ rapamycin indication later this year

Finance

Well-Capitalized with High-Quality Investor Participation in \$230mm Oversubscribed Feb. 2026 Financing Following Positive SELVA Data

\$262 million

3/31/26 cash

Potential to Fund Through:

- NDA filing, FDA approval, and, if approved, U.S. launch for QTORIN™ rapamycin in microcystic LMs
- NDA filing for QTORIN™ rapamycin in cutaneous VMs
- Multiple Phase 2 data readouts from pipeline programs

QTORIN™ + 505(b)(2) + rare disease focus offers potential for attractive ROI

What Sets Palvella Apart: Building The Leader in Rare Skin Diseases and Vascular Malformations

Positive Phase 3 data in microcystic lymphatic malformations, focused on NDA submission and potential U.S. commercial launch

QTORIN™ rapamycin: potential to be first approved therapy and SOC in U.S. for microcystic LMs, cutaneous VMs, and angiokeratomas

U.S. commercial opportunity: multi-billion dollar TAM in mLMs, with potential to expand addressable pool of patients by 10x

Deep pipeline of rare disease therapies: six diseases anticipated by year end 2026

palvella
THERAPEUTICS

**Striving to be
first for rare
disease patients**



Thank You

Striving to be first for rare disease patients

palvella
THERAPEUTICS

No Spontaneous Regression Well-Established in Microcystic LMs

A 34-year, 28-subject study confirmed no spontaneous regression

Types	Microcystic
Subtotal	28
Sex (F:M)	14:14
Age (y), mean ± SD	0.89 ± 1.4
Maximum diameter (cm), mean ± SD	—
Spontaneous regression	
Positive	0
Negative	28

OPEN PRS ORIGINAL ARTICLE
GLOBAL OPEN Reconstructive

Spontaneous Regression of Lymphangiomas in a Single Center Over 34 Years

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Reiko Kato, MD,*
Hiroshi Kawahima, MD, PhD,*
Takuya Ieda, MD, PhD,*
Azusa Watanabe, MD, PhD,*

Background: A lymphangioma, also called a lymphatic malformation, is a congenital condition that frequently occurs in young children. It is classified into 3 groups depending on the size of the cysts (macrocytic, microcystic, and mixed). Spontaneous regression occurs in some cases; however, the characteristics of patients who show regression have not been studied previously. Furthermore, the types and the timing of the initial treatment are still controversial. Therefore, we statistically analyzed the occurrence of spontaneous regression, patient age at original occurrence, cyst types, cyst sizes, and cyst locations in patients diagnosed with peripheral localized lymphangiomas in a single children center over 34 years.

Methods: We retrospectively collected the data of 153 patients and reviewed the medical charts.

Results: Spontaneous regression occurred only in macrocystic or mixed type; regression was most frequent in patients who, at the time of onset, were more than 2 years old.

Conclusions: We concluded that elderly patients with macrocystic or mixed type lymphangiomas may have to wait for treatment for over 3 months from the initial onset. Conversely, microcystic type could not be expected to show regression in a short period, and prompt initiation of the treatments may be required. The difference of the regression or not may depend on the characteristics of the lymph flow. (*Plast Reconstr Surg Glob Open* 2017;5:e1501; doi: 10.1097/GOX.0000000000001501; Published online 25 September 2017.)

MATERIALS AND METHODS

We retrospectively reviewed the medical charts of 1501 patients who were diagnosed with lymphangiomas or lymphatic malformations in our hospital over 34 years (April 1983 to December 2016). Lymphangioma cases that showed peripheral localization and were observed for more than 3 months without medical or surgical intervention were included. The diagnosis was reconfirmed on the basis of radiological findings and the clinical course according to the vascular anomalies classification of the International Society for the Study of Vascular Anomalies.¹

Patients diagnosed with lymphangiomatosis, Gorham disease, combined vascular anomalies (Klippel-Trenaunay syndrome, Proteus syndrome, and Maffucci syndrome), intraabdominal lesions, and/or intrathoracic lymphangiomas were excluded from this study. Additionally, patients who were misdiagnosed, those who did not undergo radiological assessments (ultrasound, computed tomography, or magnetic resonance imaging), those who were not followed for 6 months after onset, and those who were administered treatments for the lesions (medication, aspiration, sclerotherapy, and/or surgery) within 3 months after the original onset were excluded (Table 1; Fig. 1). Patients who were prescribed acetaminophen and/or antibiotics for pain and/or infection and those with peripheral lesions that connected to the intrapleural region were included.

Spontaneous regression was considered as an over 20% decrease in the lesion size over 3 months when compared with the size at the original onset. We analyzed the patient age at the original onset, original lesion size, and lesion location retrospectively. Congenital lesions were considered as having an onset at 0 years of age, even when diagnosed prenatally.

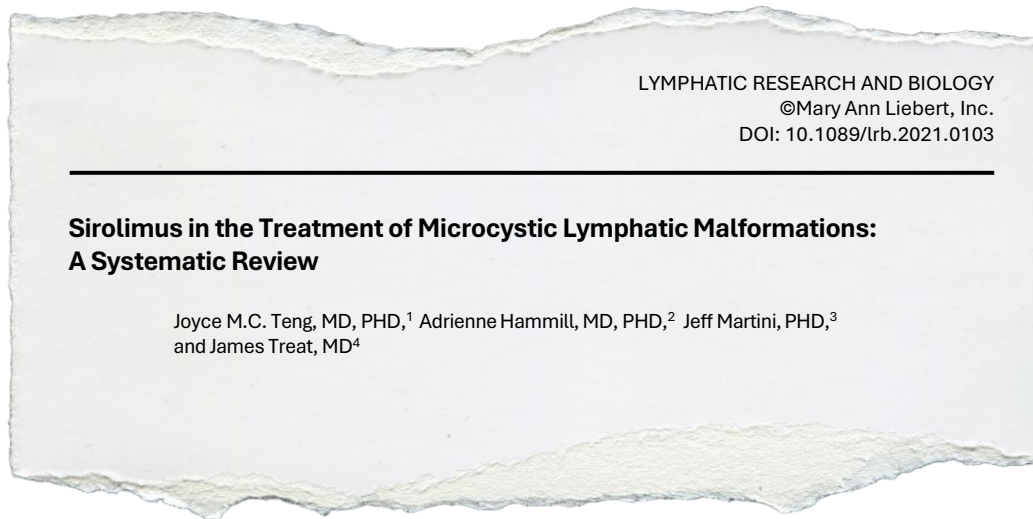
Statistical analyses involved the 2-sided *t* test for normally distributed data and the *F*-test for assessment of less than 5 patients. A receiver operating characteristic (ROC) curve was drawn using the SPSS software (IBM Corp., Ar-

Disclosure: The authors have no financial interest to declare in relation to the content of this article. The Article Processing Charge was paid for by the authors.

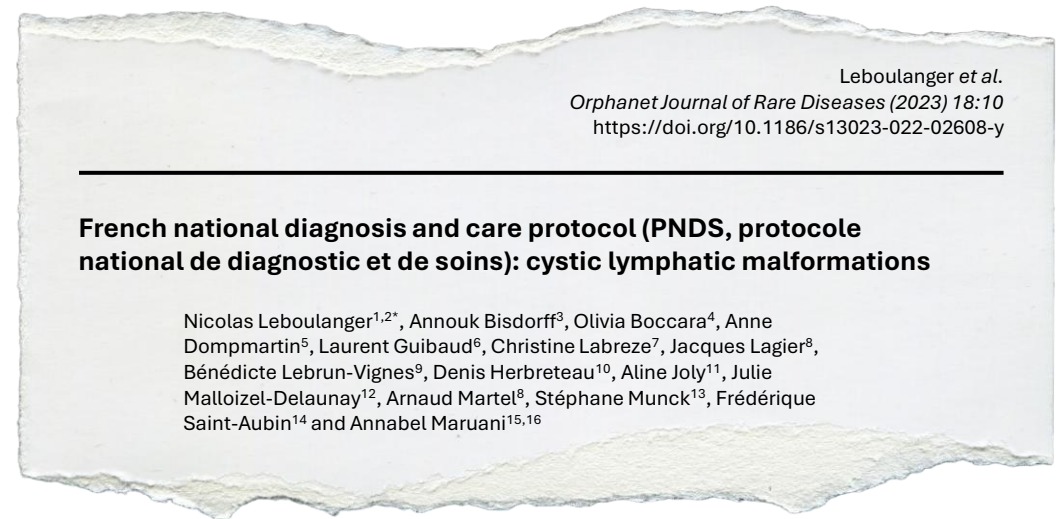
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Regulatory: Real-world Evidence to Support NDA Submission



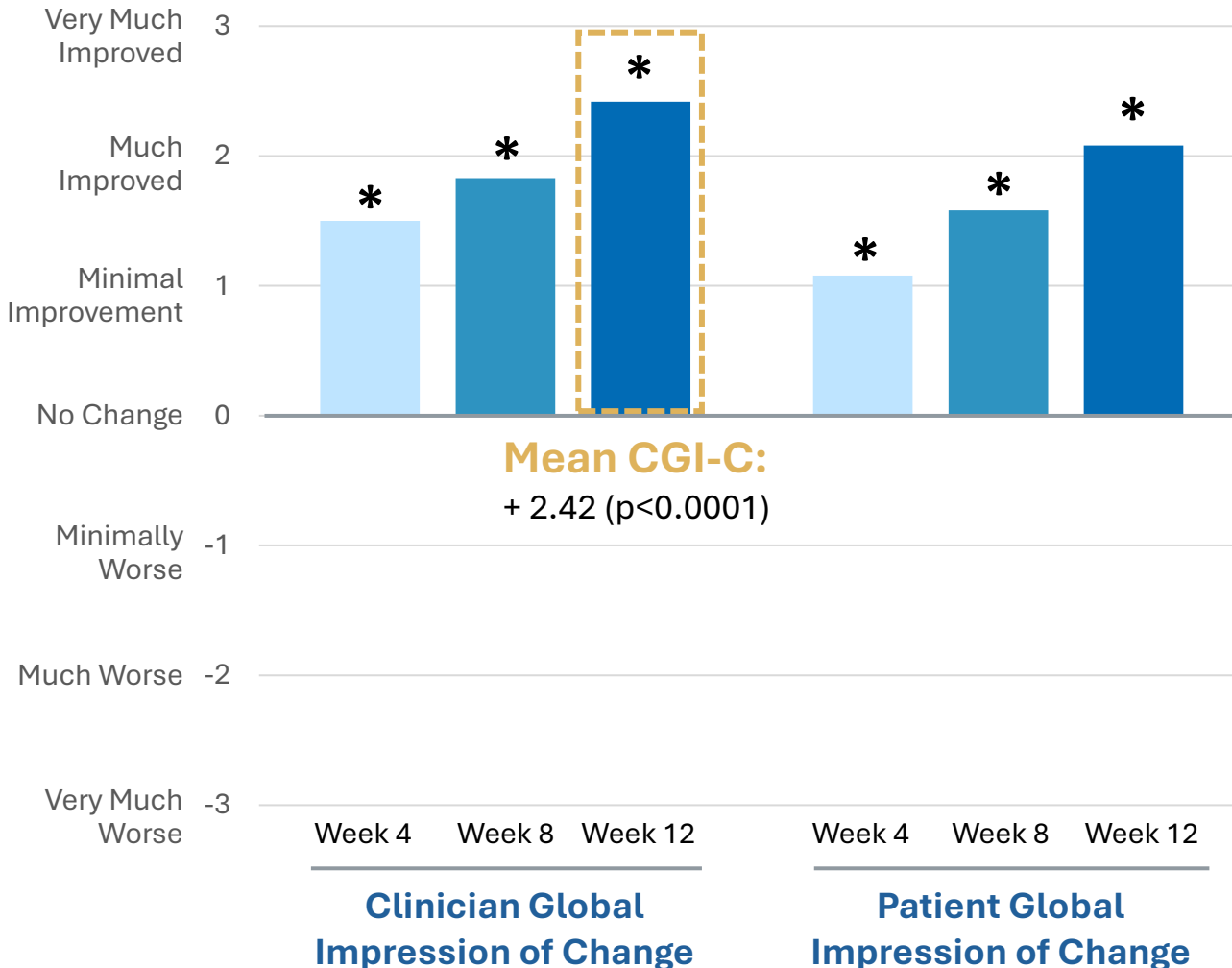
“Micro LMs represent therapeutically challenging congenital vascular lesions. There is no universally accepted gold standard of care and there are no FDA approved therapies...this review examines clinical data over the last 10 years on the role of sirolimus [rapamycin]...a total of 16 studies were identified...clinically meaningful, long-term improvement (up to 3 years) was noted...however, developing a commercial topical sirolimus formulation faces important challenges.”



“Sirolimus [rapamycin] is the disease-modifying treatment of choice. It should be started early in life (early childhood) to prevent the increase in volume of the LM.”

Phase 2: Clinically Meaningful, Statistically Significant Improvements

n=12; QD dose



Statistically significant across key clinician-assessed individual signs of microcystic LM at week 12

- Height (p<0.0001)
- Leaking (p<0.005)
- Bleeding (p<0.05)
- Erythema (p<0.005)
- Hyperkeratosis (p<0.005)

→ **100% of participants were either “Much Improved” or “Very Much Improved”** on CGI-C after 12 weeks of treatment

→ **Palvella was subsequently granted FDA Breakthrough Therapy Designation** based on this data

Phase 3 SELVA: Baseline Characteristics

	ITT Population (n=49) ¹
Age, Mean [Range]	19.4 [6-57]
Sex M:F	24:25
Prior Medical Interventions for mLM ²	34 (69%)
Laser	17 (35%)
Sclerotherapy	14 (29%)
Surgery	13 (27%)
Topical Sirolimus [Rapamycin]	13 (27%)
Oral Sirolimus [Rapamycin]	2 (4%)

SELVA: All Additional Secondary Endpoints Achieved

	Mean Change at Week 24 (95% CI)	p-value
Patient Global Impression of Change*	+1.9 (1.66, 2.16)	p<0.001
Live mLM-MCSS**	-4.6 (-5.20, -3.92)	p<0.001
Clinician Global Impression of Severity***	-1.7 (-1.91, -1.39)	p<0.001
Patient Global Impression of Severity***	-1.0 (-1.26, -0.74)	p<0.001

*Dynamic change scales (7-point scales ranging from "Very Much Worse" (-3) to "Very Much Improved" (+3); positive values indicate improvements from baseline)

**mLM-MCSS (Sum of three static severity scales: Height, Leaking/Bleeding, Vesicle Appearance: Each scale rated "Clear or Almost Clear" (1) to "Very Severe" (5); total score 3-15. Test baseline to Week 24 change; negative values indicate improvements from baseline)

***Static severity scales (5-point scales ranging from 1 to 5; negative values indicate improvements from baseline)

Multiple Studies Indicate At Least Half of Venous Malformation Cases Have Cutaneous Involvement

Percentage of venous malformation cases with cutaneous involvement

Evaluation of pain incidence due to venous malformation based on data from 85 institutions in Japan

 Check for updates

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~47% of 2,075 cases

STUDY

Glomuvenous Malformation (Glomangioma) and Venous Malformation

Distinct Clinicopathologic and Genetic Entities

Laurence M. Boon, MD, PhD; John B. Mulliken, MD; Odile Enjolras, MD; Miikka Vakkula, MD, PhD



~80% of 1,517 cases

STUDY

Coagulation Disorders in Patients With Venous Malformation of the Limbs and Trunk

A Case Series of 118 Patients

Elisabeth Mazoyer, MD; Odile Enjolras, MD; Annouk Bisdorff, MD; Jérôme Perdu, MD; Michel Wassef, MD; Ludovic Drouet, MD



~65% of 118 cases

Commercial Opportunity for Clinically Significant Angiokeratomas

Estimated Diagnosed U.S. Prevalence

>50k clinically significant angiokeratomas in the U.S. based on nationally representative, blinded, real-world observational study conducted July 2025 (n=643 physicians)¹

Pricing

Anticipate drug pricing similar to QTORIN™ rapamycin for Microcystic LMs and Cutaneous VMs based on disease severity and lack of FDA-approved therapies

Market Research² (n=50 physicians)

96% would incorporate Product X (topical 3.9% rapamycin gel) into their practice
85% believe there is unmet need for a novel treatment across all subtypes
“A topical application that was basically asymptomatic in terms of its application...would be ideal for these intractable cases”

Attractive U.S. Commercial Opportunity for DSAP

>50k

diagnosed DSAP patients in the U.S. based on two sources (Clarity Pharma, n=277 physicians; Zagoras et al, 2023) and confirmed by KOL calls

Orphan
Pricing

anticipated based on disease severity and lack of FDA-approved therapies

100%

96%

Market research (n=55 physicians)¹:

of physicians would incorporate Product X (topical mevalonate pathway inhibitor) into their practice

of physicians would consider Product X as a first line therapy for DSAP patients