
# Investor & Analyst Day

September 20, 2024

MARINUS

# Safe Harbor Statement

To the extent that statements contained in this presentation are not descriptions of historical facts regarding Marinus, they are forward-looking statements reflecting the current beliefs and expectations of management made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Words such as “may”, “will”, “expect”, “anticipate”, “estimate”, “intend”, “believe”, and simi lar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements. Examples of forward-looking statements contained in this presentation include, among others, statements regarding our expected revenue and expenses; our commercialization plans for ZTALMY® and clinical development plans and opportunities for ganaxolone, and the expected timing thereof; our anticipated and potential financing plans; the clinical development schedule and milestones; interpretation of scientific basis for ganaxolone use; timing for availability and release of data; the potential safety and efficacy and therapeutic potential of ganaxolone; timing and expectations regarding the potential benefits ZTALMY will provide for patients and physicians; timing and expectations regarding regulatory communications and submissions; expectations regarding our current and contemplated collaborations with ex-US partners, including the potential benefits and timing thereof; expectations regarding market expertise with respect to ZTALMY; expectations regarding the potential market opportunities for our product candidates; expectations regarding patient populations; expectations regarding potential commercial alliances; expectations regarding our cash flow, cash projections and cash runway; expectations regarding our current and anticipated intellectual property portfolio; expectations regarding the continued uptake of ZTALMY; expectations regarding the impact of on-going scientific and clinical research investments on our product candidates; estimated net patient pricing of ZTALMY and related market access and payer coverage; expectations regarding long-term patient response and retention for ZTALMY; plans and expectations to optimize costs and expenses; expectations regarding operating margins; plans for commercial investments; plans to leverage our existing infrastructure and knowledge; and our expectations regarding future opportunities of oral and IV ganaxolone. Forward-looking statements in this presentation involve substantial risks and uncertainties that could cause our clinical development programs, future results, performance or achievements to differ significantly from those expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, uncertainties and delays relating to patient and physician acceptance of ZTALMY; our ability to obtain adequate market access for ZTALMY; our ability to comply with the U.S. Food and Drug Administration’s (“FDA”) requirement for additional post-market studies in the required timeframes; the timing of regulatory filings; the potential that regulatory authorities, including the FDA and the European Medicines Agency (“EMA”), may not grant or may delay approval for our product candidates; uncertainties and delays relating to the design, enrollment, completion, and results of clinical trials; unanticipated costs and expenses; early clinical trials may not be indicative of the results in later clinical trials; clinical trial results may not support regulatory approval or further development in a specified indication or at all; actions or advice of the FDA or EMA may affect the design, initiation, timing, continuation and/or progress of clinical trials or result in the need for additional clinical trials; our ability to obtain and maintain regulatory approval for our product candidates; our ability to obtain, maintain, protect and defend intellectual property for our product candidates; the potential negative impact of third party patents on our collaborators’ or our ability to commercialize ganaxolone; delays, interruptions or failures in the manufacture and supply of our product candidates; the size and growth potential of the markets for our product candidates, and our ability to service those markets; our cash and cash equivalents may not be sufficient to support our operating plan for as long as anticipated; our expectations, projections and estimates regarding expenses, future revenue, capital requirements, and the availability of and the need for additional financing; our ability to obtain additional funding to support our commercial and clinical development programs; our dependence on ex-US partners to commercialize ZTALMY outside of the US; the potential for our ex-US partners to breach our collaboration agreements or terminate the agreements; the effect of the COVID-19 pandemic on our business, the medical community, regulators and the global economy; and the availability or potential availability of alternative products or treatments for conditions targeted by us that could affect the availability or commercial potential of our product candidates. Marinus undertakes no obligation to update or revise any forward-looking statements. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to our business in general, see filings we have made with the Securities and Exchange Commission. You may access these documents for free by visiting EDGAR on the SEC web site at www.sec.gov.

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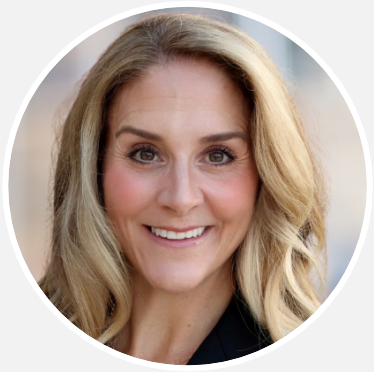
# Marinus Speakers

**Scott Braunstein, M.D.**
Chairman and Chief Executive Officer

**Steven Pfanstiel**
Chief Financial Officer & Chief Operating Officer

**Joseph Hulihan, M.D.**
Chief Medical Officer



**Christy Shafer**
Chief Commercial Officer

**Sonya Weigle**
Chief People and Investor Relations Officer

**Lisa Lejuwaan**
SVP & Business Unit Lead – Rare Genetic Epilepsy

**Alex Aimetti, Ph.D.**
Chief Scientific Officer

# Guest Speakers

**Mary Kay Koenig, M.D.**
University of Texas McGovern Medical School

**Rajsekar R. Rajaraman, M.D., M.S.**
UCLA Mattel Children's Hospital

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# Agenda

**Welcome & Kick-off**
Sonya Weigle

**Introduction**
Scott Braunstein, M.D.

**Ganaxolone Science and Rationale for Use in Refractory Epilepsies**
Alex Aimetti, Ph.D.

**TSC Overview & TSC Phase 2 Trial: Long-term Extension Follow-up Data**
Mary Kay Koenig, M.D.

**TSC Unmet Need, Treatment Landscape & TrustTSC Titration**
Rajsekar R. Rajaraman, M.D., M.S.

**Q&A**

**TSC Clinical Development**
Joe Hulihan, M.D.

**Commercial Overview**
Christy Shafer

**TSC Commercial Expansion**
Lisa Lejuwaan

**Future Ganaxolone Development**
Joe Hulihan, M.D.

**Financial Overview**
Steve Pfanstiel

**Q&A**

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# Introduction

**Scott Braunstein, M.D.**
Chairman & Chief Executive Officer

# Dedicated to improving the lives of patients with rare genetic epilepsies and refractory seizure disorders

**Gigi and mom Yasmin**
ZTALMY® patient living with CDKL5 deficiency disorder

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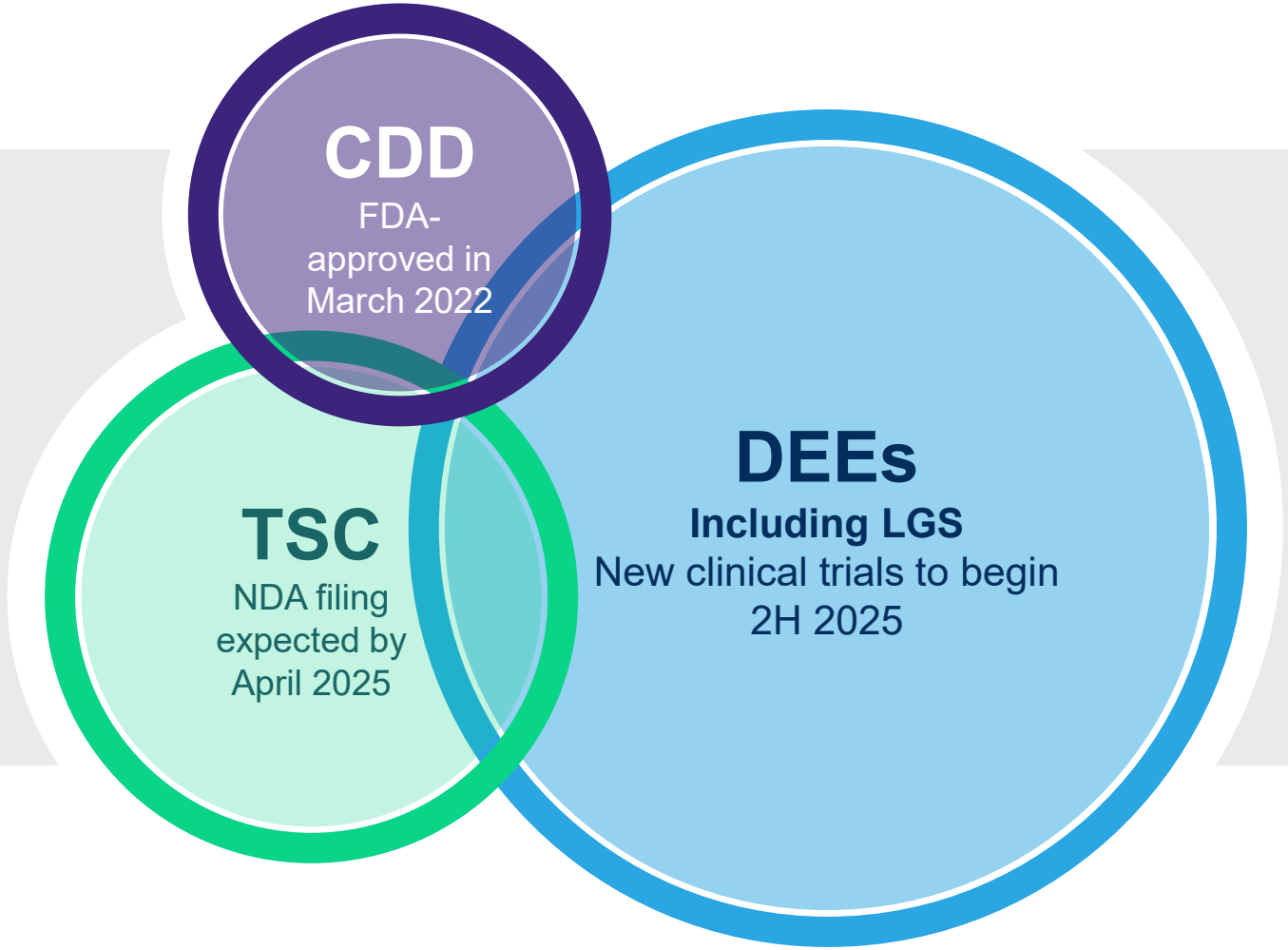
TSC Alliance®

**Deep patient advocacy engagement informs our work**

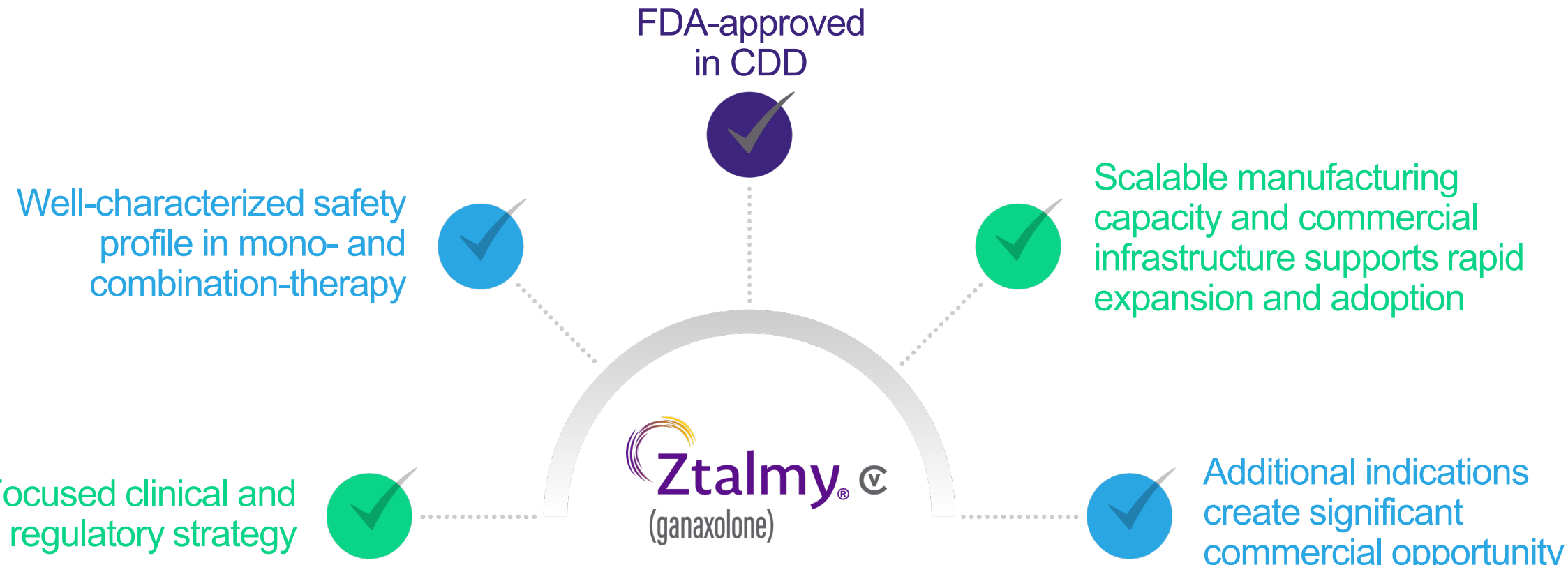
# Rare Genetic Epilepsy Research Areas of Focus




CDD: CDKL5 deficiency disorder
TSC: tuberous sclerosis complex

LGS: Lennox-Gastaut syndrome
DEE: developmental and epileptic encephalopathies

# ZTALMY® Has the Potential to Significantly Advance Epilepsy Treatment




CDD: CDKL5 deficiency disorder; MOA: mechanism of action

# Leading the Rare Genetic Epilepsy Market

## GROWTH & EXPANSION 01

TSC opportunity: established commercial infrastructure supports a rapid and efficient launch

Substantial market for epilepsy treatments with growing patient populations and unmet needs (ZTALMY or prodrug)

Strategic agreements help advance development programs and expand global commercialization capabilities

## MARKET EXPERTISE 02

Experienced management team with deep epilepsy and rare disease expertise

Understanding of what matters most to patients when considering new treatment options:

- Proven efficacy and safety to minimize risks & adverse effects
- Favorable drug-drug interaction profile

## PATIENT ACCESS 03

Nearly 100% of on-label CDD ZTALMY patients have been reimbursed

Strong payer awareness of unmet need in refractory epilepsy patients

Antiseizure medications are one of the protected classes under Medicare Part D

Growing awareness of rare epilepsy signs and symptoms among providers

## BUSINESS DEVELOPMENT 04

Explore new treatments for rare genetic epilepsies

Opportunistically acquire innovative products that are complimentary or synergistic with ZTALMY

Consider partnering IV ganaxolone to continue rapid development

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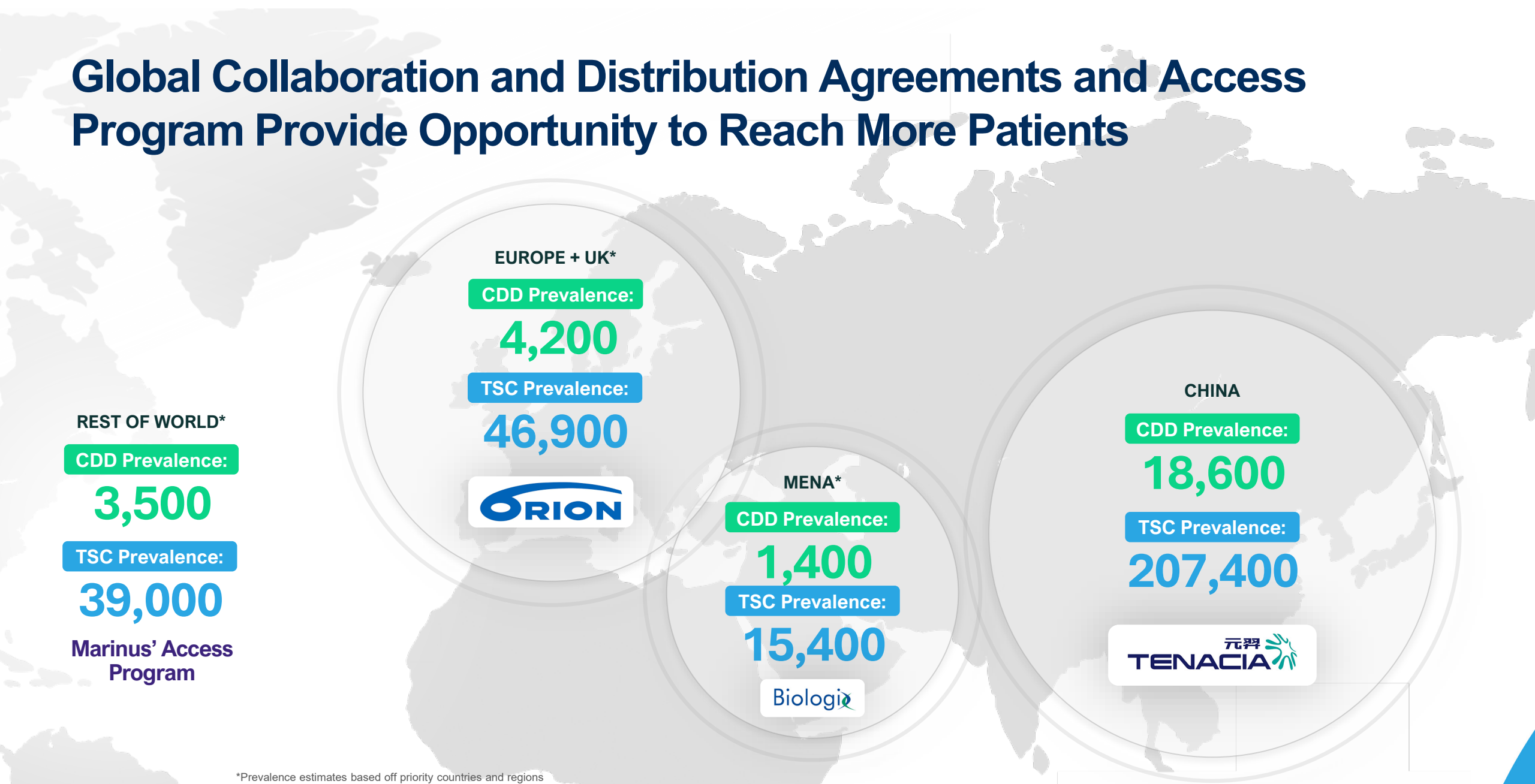
# Global Collaboration and Distribution Agreements and Access Program Provide Opportunity to Reach More Patients




*Prevalence estimates based off priority countries and regions
CDD prevalence estimated from Symonds et al. Incidence and phenotypes of childhood-onset genetic epilepsies: a prospective population-based national cohort. Brain. 2019 Aug 1;142(8):2303-2318
TSC prevalence estimated from Hasbani DM & Crino PB 2018 Hand. Clin. Neurol; TSC Alliance
Regional populations derived from World Bank Group

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# Ganaxolone Science and Rationale for Use in Refractory Epilepsies

**Alex Aimetti, Ph.D.**
Chief Scientific Officer

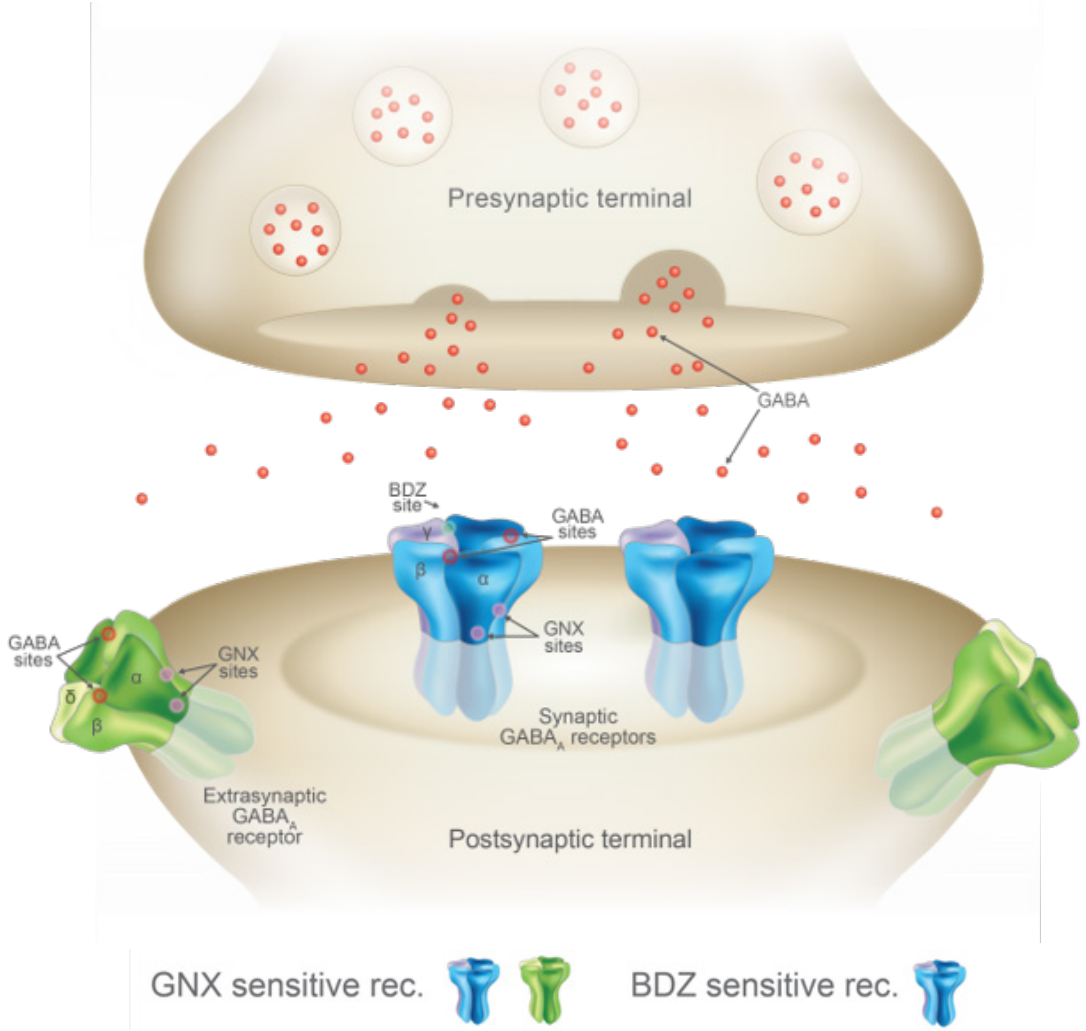
# Ganaxolone is a Neuroactive Steroid with a Differentiated GABAergic MOA

## Neuroactive Steroids

- **do not** act on classical steroid hormone receptors that regulate gene transcription
- alter neuronal excitability through modulation of membrane-bound receptors, including $GABA_A$ receptors

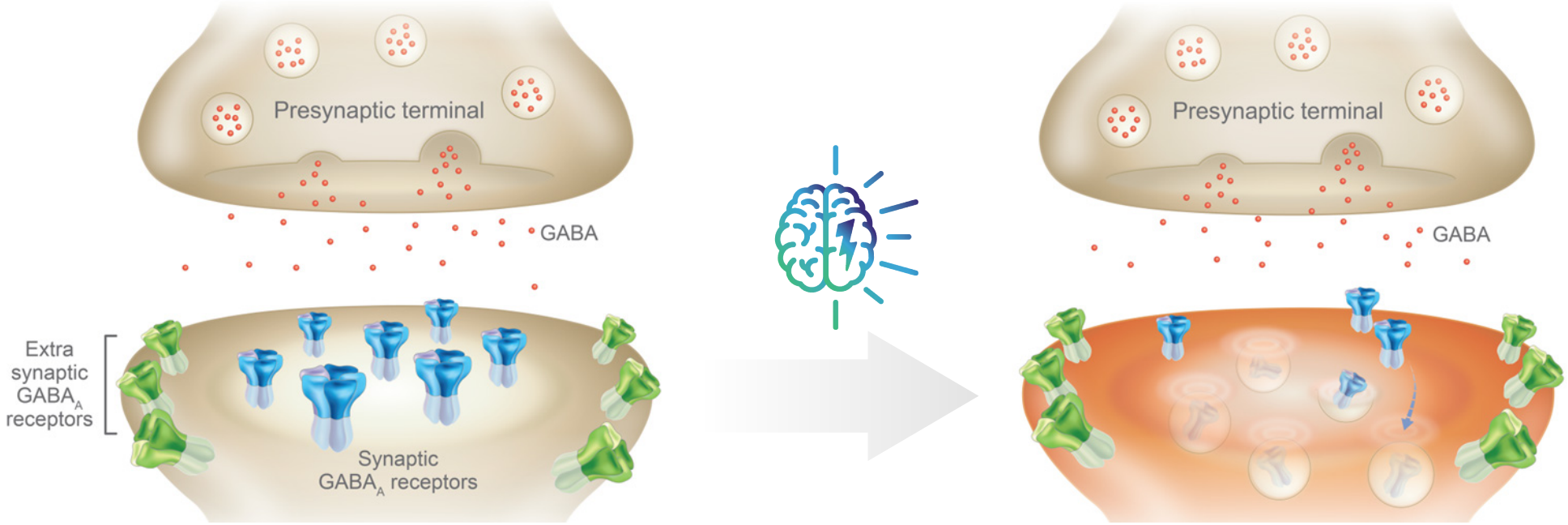
## Ganaxolone

- targets binding sites on $GABA_A$ receptors that are distinct from the benzodiazepine site and other GABAergic molecules
- modulates both **synaptic** and **extrasynaptic** $GABA_A$ receptors to maximize inhibitory tone




BZD, benzodiazepine; GNX, ganaxolone

# Ganaxolone's Potential Role in the Treatment of Refractory Seizures




Neuronal synapse

…as a result of chronic or prolonged seizures[1]

**Action at both synaptic and extrasynaptic $GABA_A$ receptors may play a critical role in the treatment of refractory seizures**

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[1]Brooks-Kayal AR 1999 Nat. Med.

# Ganaxolone is Well-Suited for Use in Refractory Epilepsies

## Broad-spectrum antiseizure activity relevant in DEE's where multiple seizure types are often present

Broad activity demonstrated across diverse non-clinical seizure models

Patients with DEE's commonly exhibit multiple seizure types, including generalized and focal seizures

## Lack of clinically-relevant drug-drug interactions allows for polypharmacy

Not a perpetrator in the presence of other relevant enzyme substrates

No clinically-significant changes in the presence of enzyme inhibitors/inducers

## Generally well-tolerated with a well-defined safety profile based on >2,200 exposures in children and adults

Somnolence-related adverse events most commonly reported aligning with GABAergic MOA

Does not require additional clinical monitoring (e.g., cardiac, drug levels, etc)

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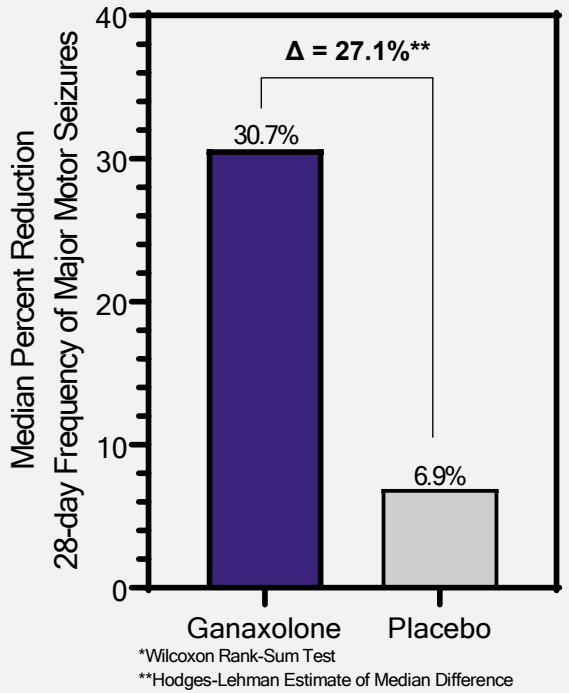
DEE: developmental and epileptic encephalopathies

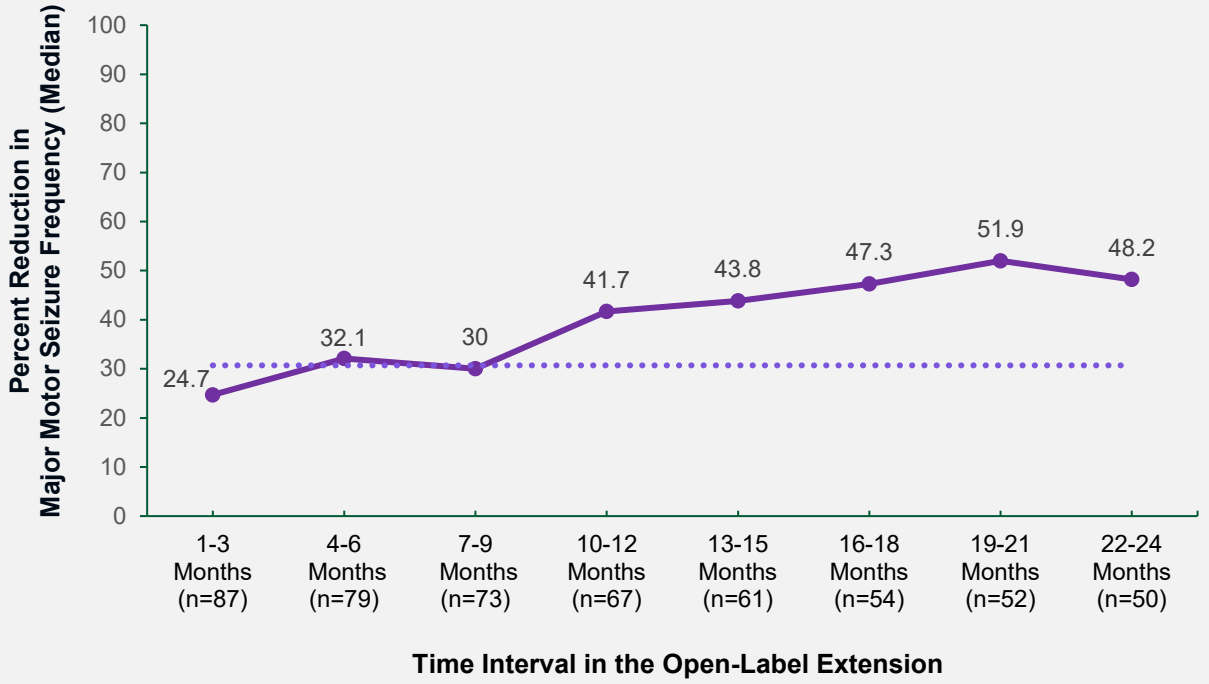
# Phase 3 CDD Marigold Trial and Open Label Extension Data

## Placebo-adjusted Reduction in Generalized Motor Seizure Frequency[1]




**Patients taking ganaxolone experienced a significant reduction in seizure frequency**

## Long-term Seizure Frequency Reduction in Open-Label[2]




**Patients who remained in the clinical trial at 2 years experienced sustained reduction in generalized motor seizure frequency**

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Pestana Knight EM, et al. Lancet Neurol.
Olson et al. Epilepsia. 2023;00:1-9.;

# TSC Clinical Development

## Phase 2 TSC data provided critical information to guide Phase 3 TrustTSC trial design

## These data, plus insights about ganaxolone pharmacokinetics, formed the basis for a revised titration schedule, with the objective of:

- Improving tolerability allowing achievement of target dose
- Enhancing efficacy

## The Phase 3 TrustTSC is on target for topline data in the first half of Q4 2024

- Low discontinuation rate due to adverse events (<3%) in double-blind trial
- High rates of patient retention (>90%) in the open-label extension

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# TSC Guest Speaker

## Mary Kay Koenig, M.D.

**University of Texas McGovern Medical School**

- Professor & Associate Vice-Chair for Clinical Research
- Endowed Chair of Mitochondrial Medicine
- Director, Center for the Treatment of Pediatric Neurodegenerative Disease
- Co-Director, Tuberous Sclerosis Center
- Department of Pediatrics, Division of Child and Adolescent Neurology

**Investigator in the TrustTSC trial and consultant to Marinus**

UTHealth Houston
McGovern Medical School

# Tuberous Sclerosis Complex

**Mary Kay Koenig, M.D.**

**The University of Texas McGovern Medical School**

Professor, Department of Pediatrics
Division of Child and Adolescent Neurology
Tuberous Sclerosis Center Co-Director

# Tuberous Sclerosis Complex (TSC)

- Autosomal dominant genetic disorder
- The leading cause of genetic epilepsy & autism
- Causes abnormal skin pigmentations and tumor formation in multiple organs
- Affects 1 in 6000 individuals
  - >1.5 million worldwide
  - >50,000 people in the United States
- Affects people of all races & ethnicities equally

# Tuberous Sclerosis Complex (TSC)

| | | |
|---|---|---|
| CAUSE |  | • Defect or mutation of *TSC1* and/or *TSC2* genes |
| INCIDENCE |  | • ~1 in 6,000 live births[1] |
| COMMON SYMPTOMS |  | • Seizures, cognitive impairment, behavioral difficulties, skin/kidney/lung abnormalities, etc |
| EPILEPSY IN TSC |  | • Occurs in ~80-90% of those with TSC[2]<br>• Two-thirds refractory to existing therapies[2]<br>• Seizures typically begin within first year of life (infantile spasms and/or focal seizures)[3] |

TSC is one of the most common genetic epilepsies often exhibiting highly refractory seizures despite existing therapies

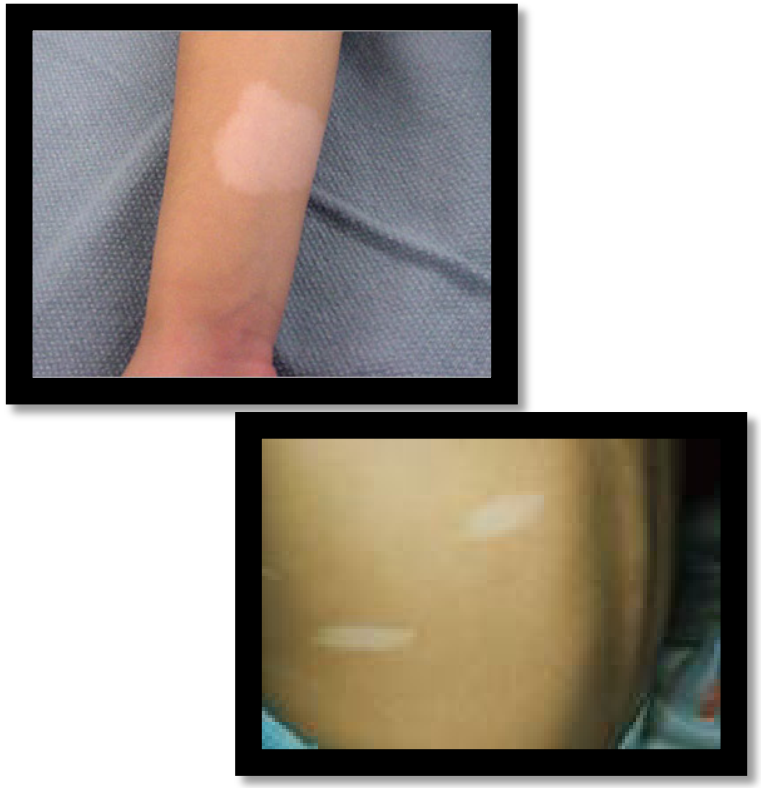
1. Hasbani DM & Crino PB 2018 Hand. Clin. Neurol.
2. Henske EP *et al.* 2016 Nat. Rev. Dis. Primers.
3. Chu-Shore CJ *et al.* 2010 Epilepsia

# Tuberous Sclerosis Complex (TSC)

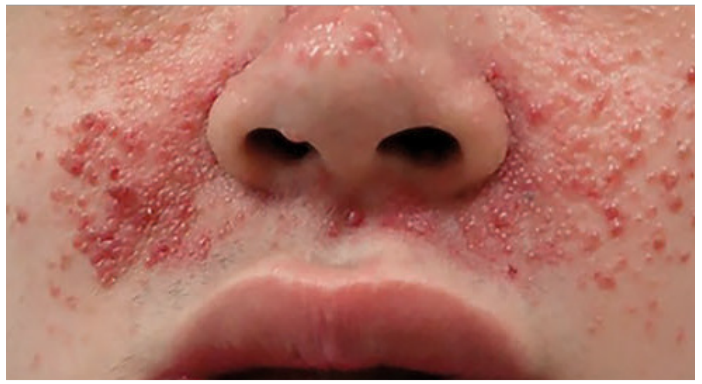
- Two known genes
  - TSC1 gene (protein: hamartin)
  - TSC2 gene (protein: tuberin)
- 10-15% of people genetically negative
- 1/3 of cases are inherited & 2/3 are sporadic
- There is no cure for TSC
- Manifestations are treated as they arise and patients are typically on multiple drug therapies for their disease

# Clinical Manifestations: Skin

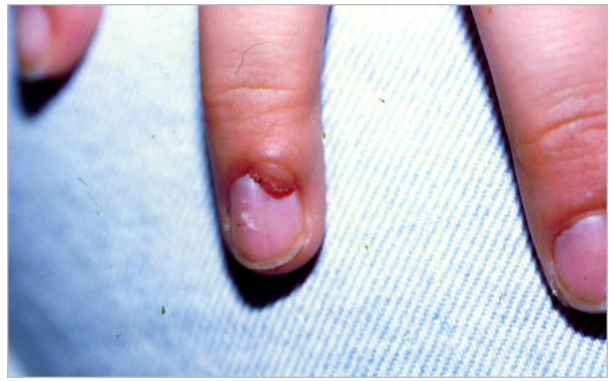
Hypomelanotic macules



Facial Angiofibromas

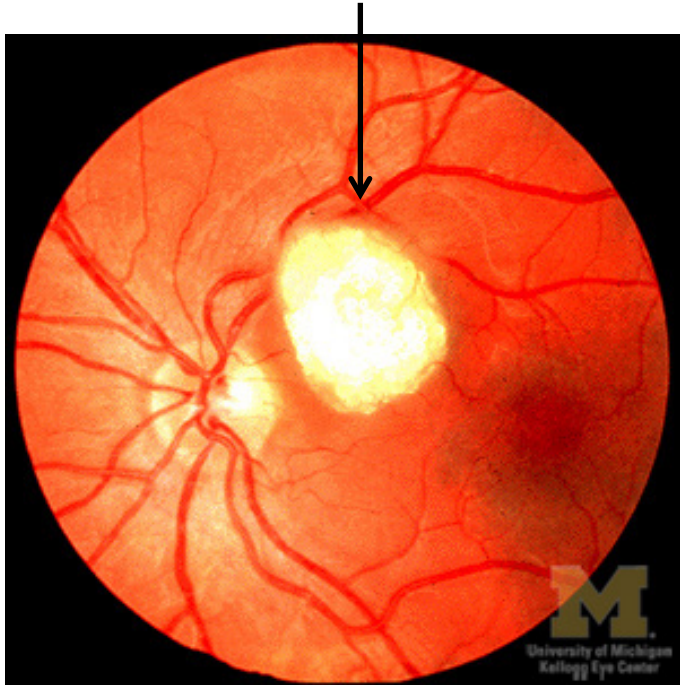


Ungual Fibromas

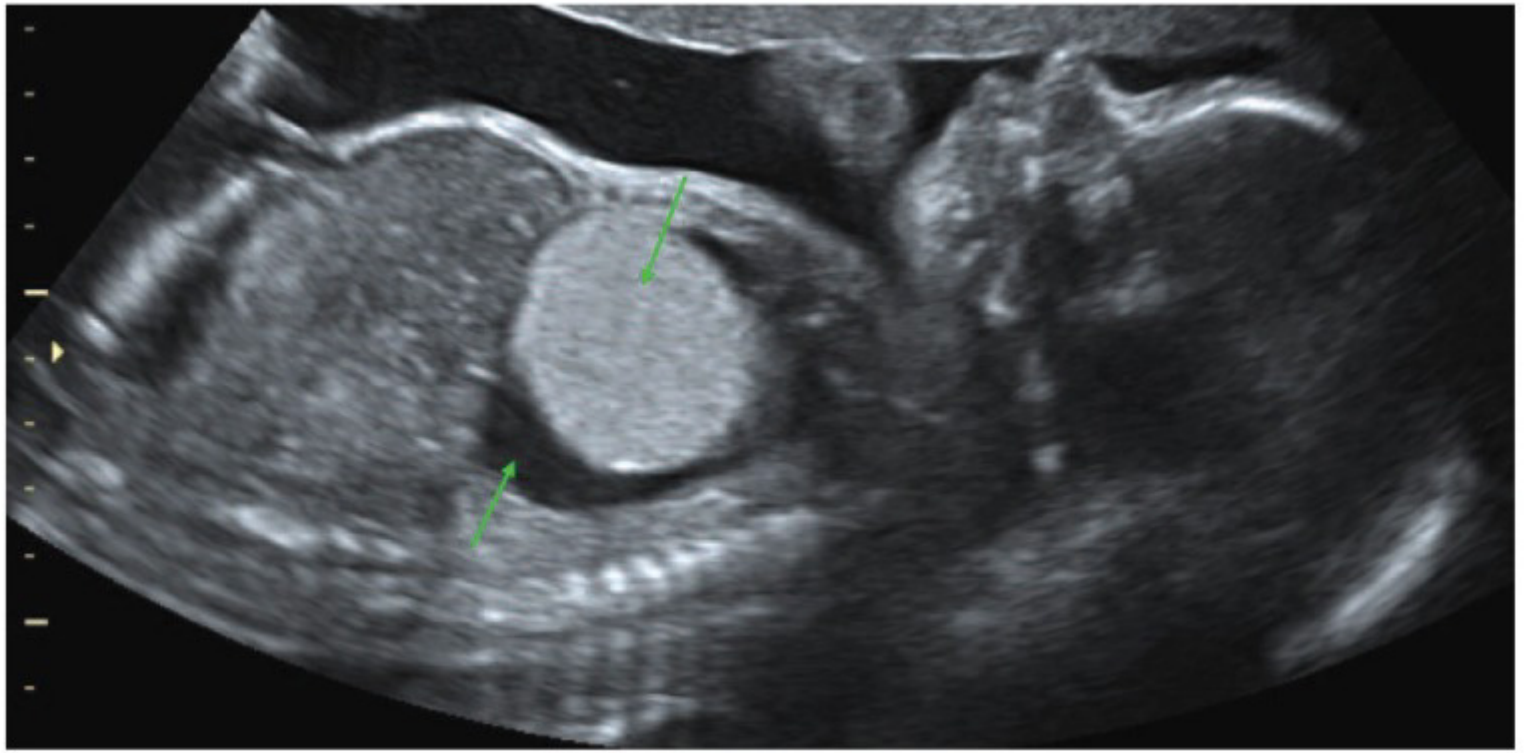


# Clinical Manifestations: Hamaratoma Formation

Retinal
hamartoma

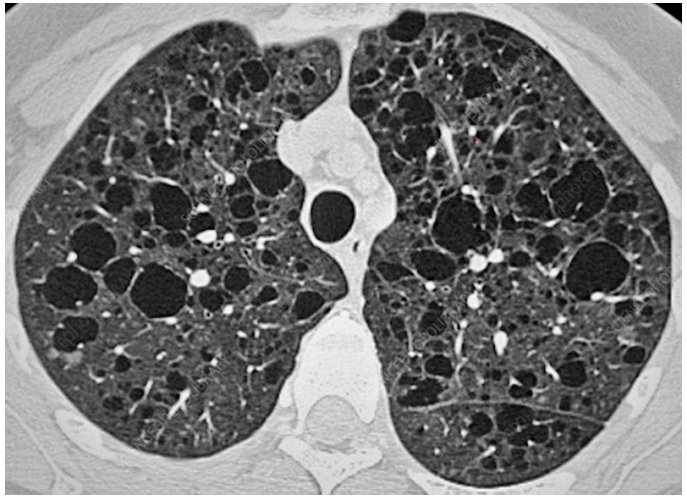



Cardiac
Rhabdomyoma

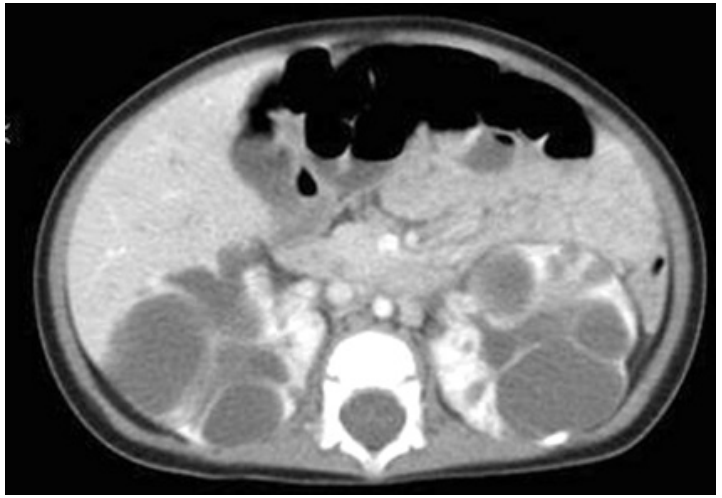


# Clinical Manifestations: Hamaratoma Formation

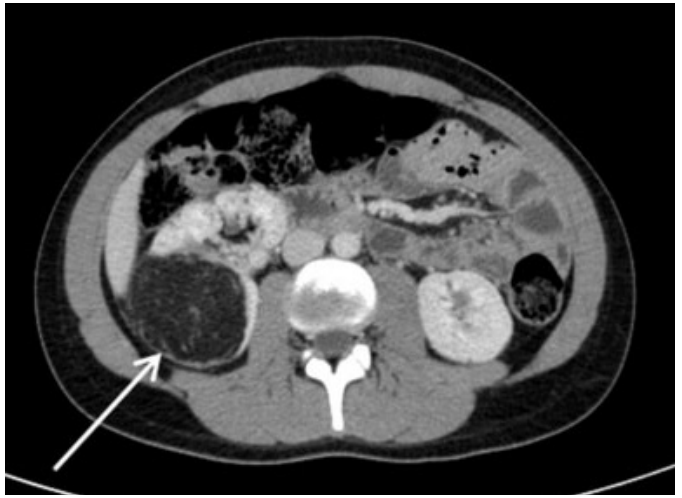
Lymphangioleiomyomatosis (LAM)

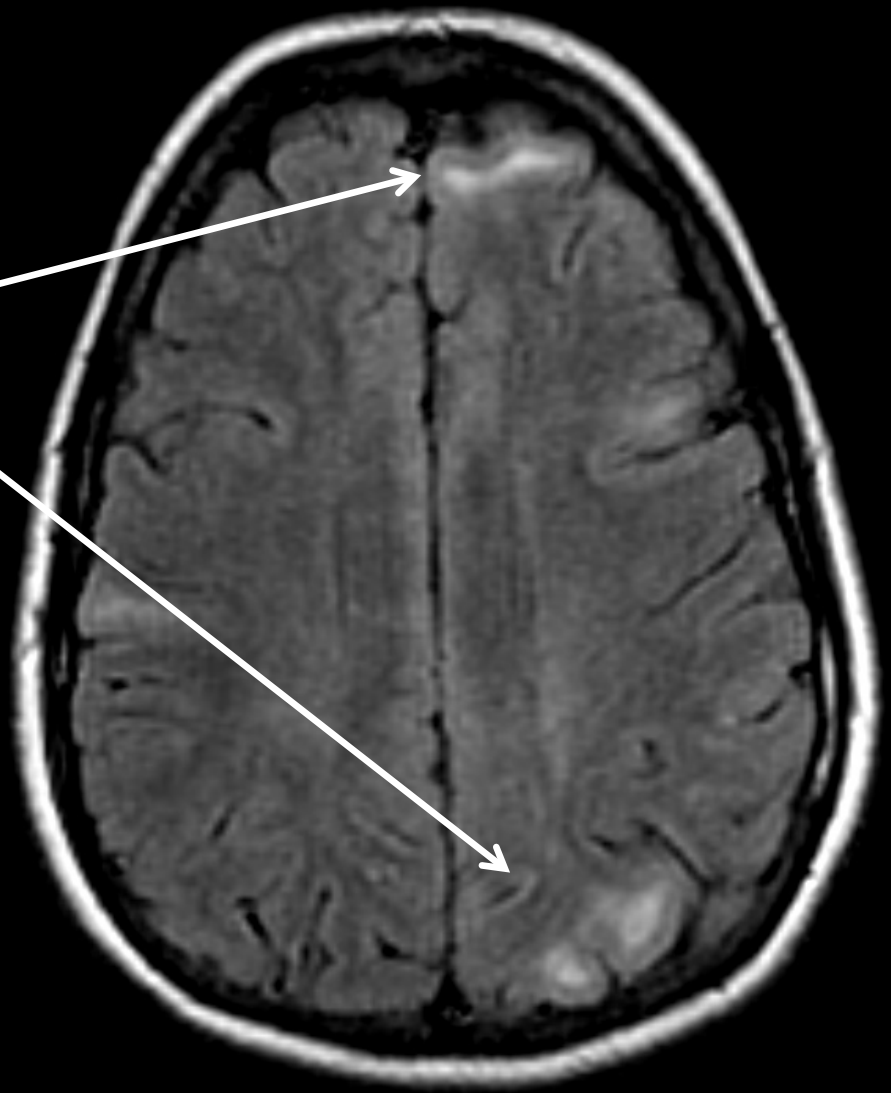


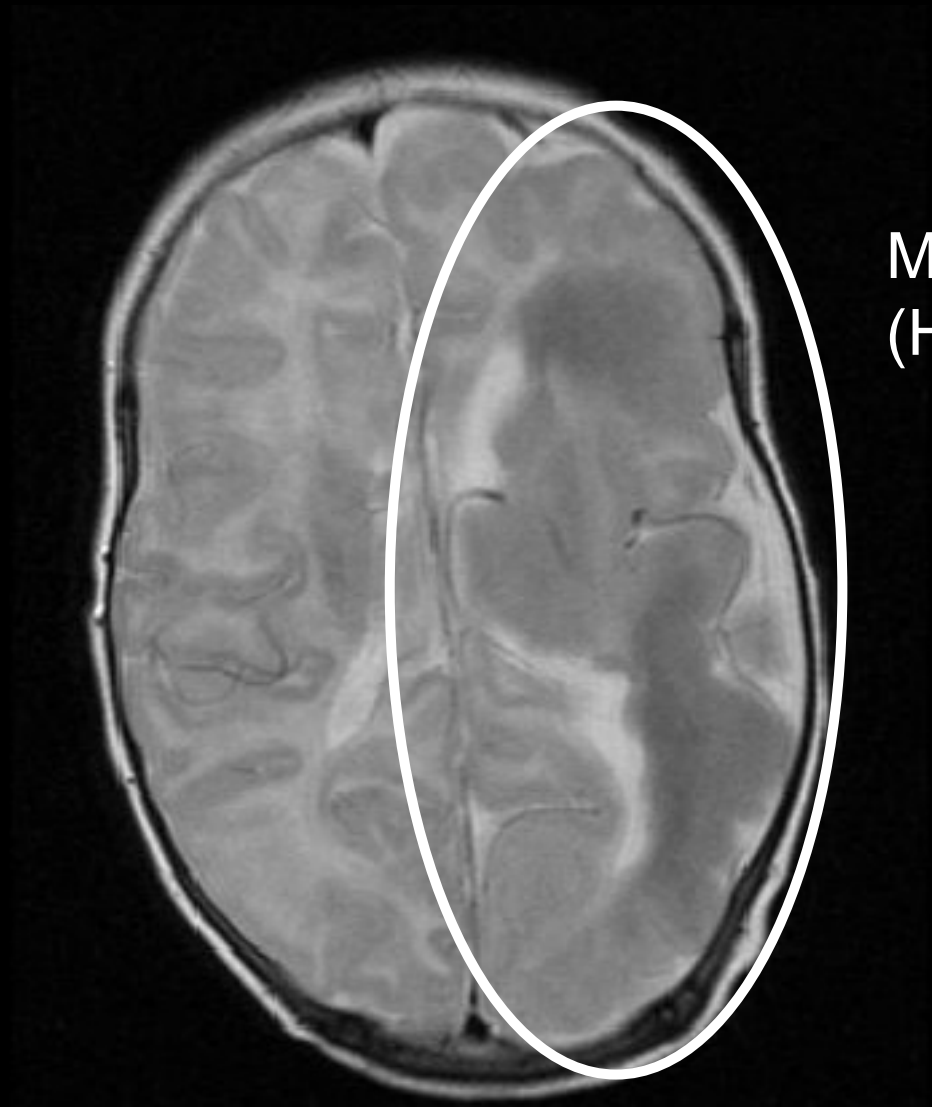
Renal Cysts



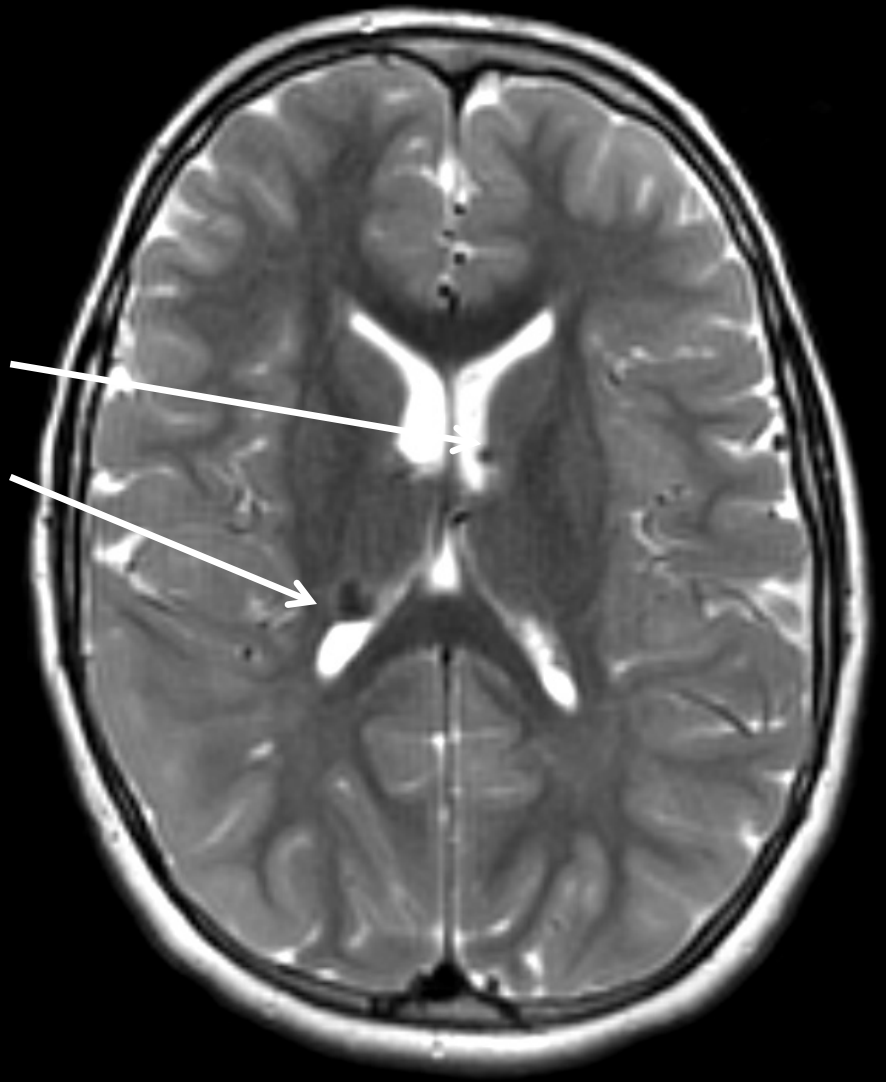
Renal Angiomyolipomas (AMLS)

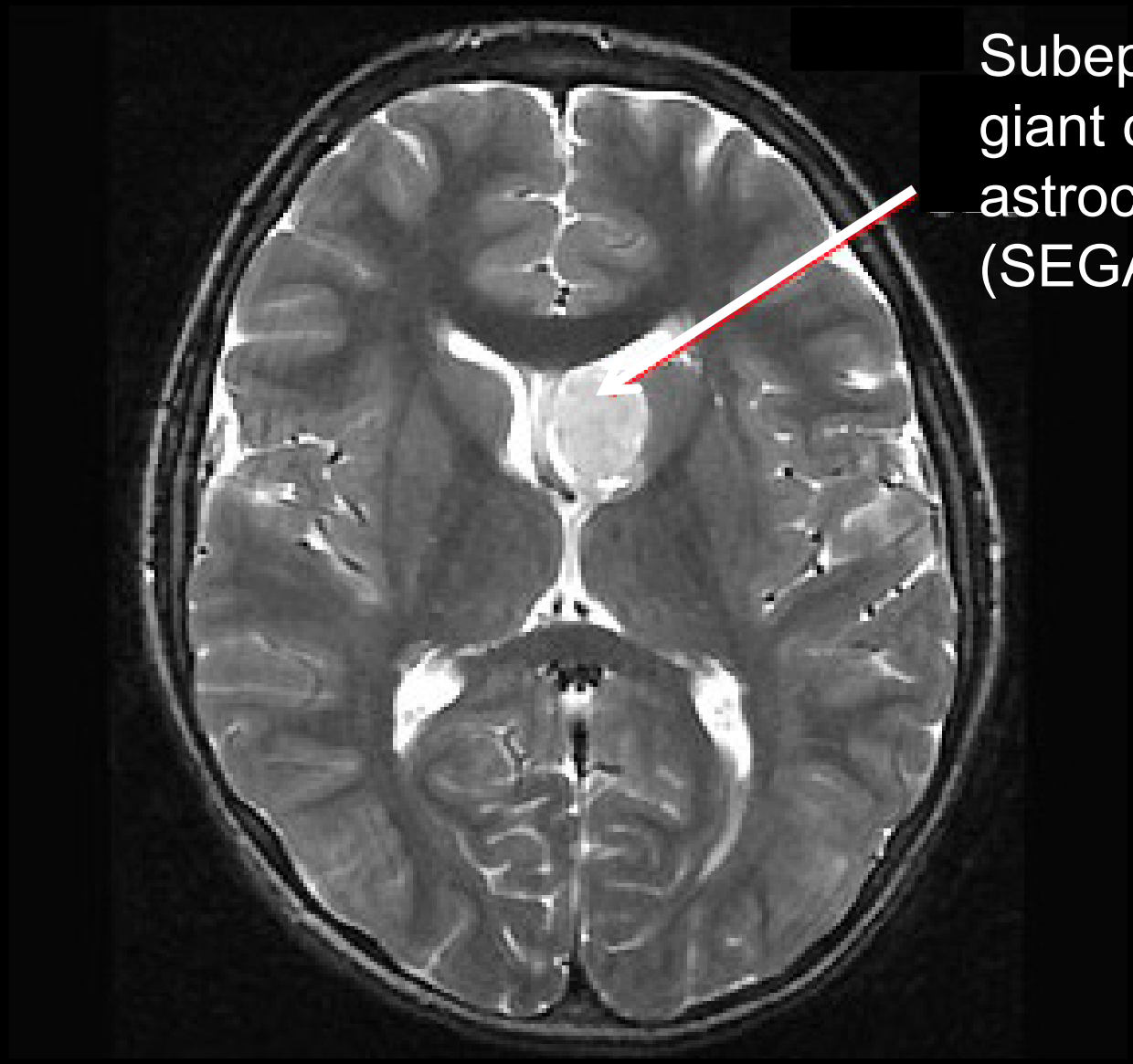



Cortical
tubers



Malformations
(Hemimegalencephaly)


Subependymal
nodules
(SENs)


Subependymal giant cell astrocytomas (SEGA)

# TSC and Seizures

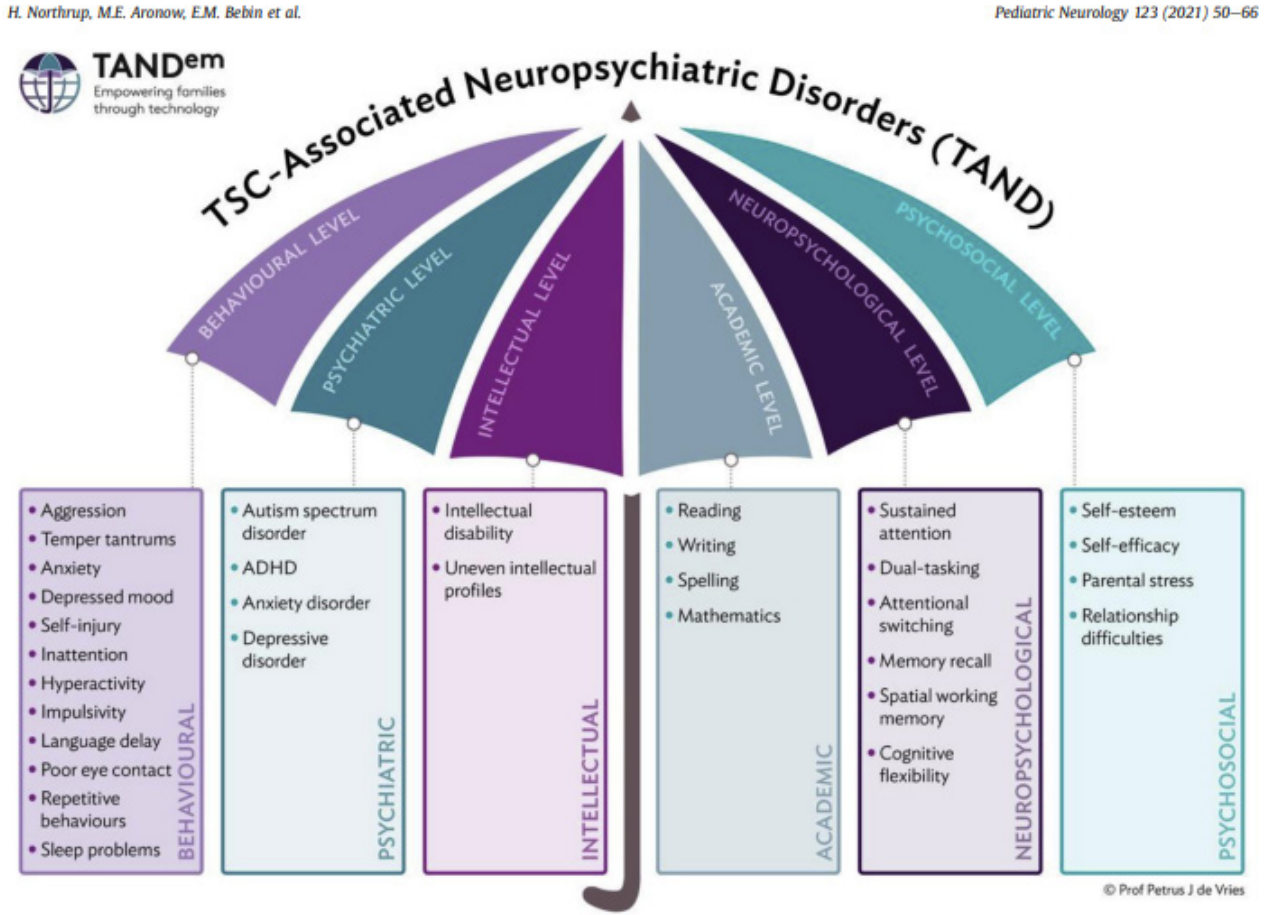
- TSC is most commonly diagnosed in early childhood after the onset of seizures
- The majority of infants with TSC will experience their first seizure before the age of one year
- Refractory epilepsy is strongly correlated with poor developmental and cognitive outcomes making earlier recognition and seizure control an urgent concern in children with TSC

# TSC and Seizures

- Other than for infantile spasms, antiseizure medication selection in TSC should generally follow that of other epilepsies
- No comparative effectiveness data exists to recommend any specific ASM in any particular TSC patient
  - Everolimus and Epidiolex have been specifically evaluated in clinical trials to treat seizures in TSC and found to be effective and well-tolerated
  - Epidiolex & Everolimus have significant drug interactions with other ASMs, including with each other
- Epilepsy surgery is considered for patients with refractory TSC, particularly after failing 3 medications
- Two-thirds of TSC patients will exhibit highly refractory seizures despite existing therapies

# TSC & TSC-Associated Neurocognitive Disorders (TAND)

- Apart from the physical manifestation of TSC, nearly all TSC patients are affected in some way by a broad range of behavioral, psychiatric, intellectual, academic, neuropsychological, and psychosocial difficulties




801 Roeder Road, Suite 750, Silver Spring, Maryland

# The Voice of the Patient

## *A Report from the Tuberous Sclerosis Alliance's Externally-Led Patient-Focused Drug Development Meeting*

Public Meeting: June 21, 2017
Report Date: October 26, 2017

# TSC Survey

- In 2017 the TSC Alliance conducted an international survey to understand the perspectives of patients with TSC & their caregivers
- Epilepsy and TAND were the TSC manifestations found to be **most disruptive to daily living** in children and were **least likely to be controlled** by existing treatment modalities

# TSC Survey

- 82.6% of caregivers reported their ward suffered from epilepsy & 72% of those replied that they had **made moderate to large changes** in their lifestyle to care for the patient's epilepsy

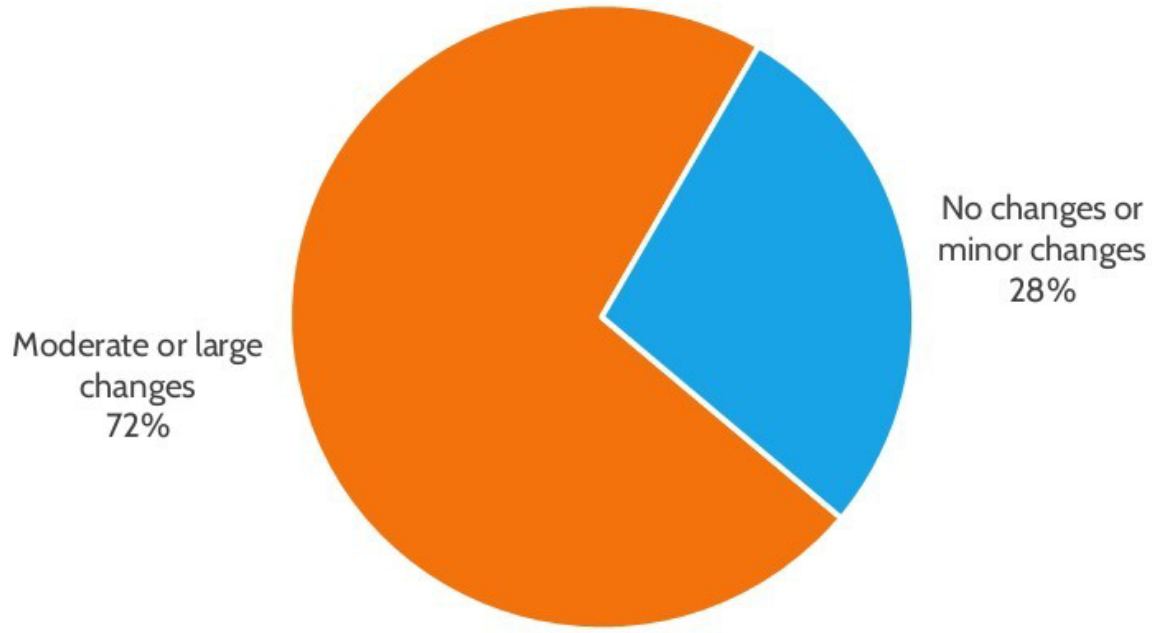



*Figure 2 - Changes in caregiver's lifestyle due to patient's epilepsy.*

# TSC and Seizure Impact

- Many participants indicated their definition of seizure control was different than that of physicians or pharmaceutical companies

**For a TSC patient who has hundreds of seizures per day, a drug that reduced the frequency of seizures to 2 or 3 times a day would be welcomed even if it does not meet the conventional concept of “seizure control”**

# In Their Own Words

**Caregivers of TSC patients emphasized that**
**“although the complete elimination of seizures would be ideal, a more realistic but still valuable outcome would be reduction of seizures”**

# Cortny's Story

- When I was 20, I had my first child, a baby girl with beautiful blond hair, and blue eyes. I named her Mary-sue. Like me, she was diagnosed with TSC before birth
- She was learning, picking up on things, Perfect. All the things a healthy 15-month-old should be **until the seizures came**
- she's been on many medications; Keppra, Phenobarbital, Topomax, Trileptal, Onfi, ClozaPAM, and emergency medication called Diastat
- She's two now and has seizures almost every day even with three medications that she takes twice a day, and they are only getting worse

# Cortny's Story

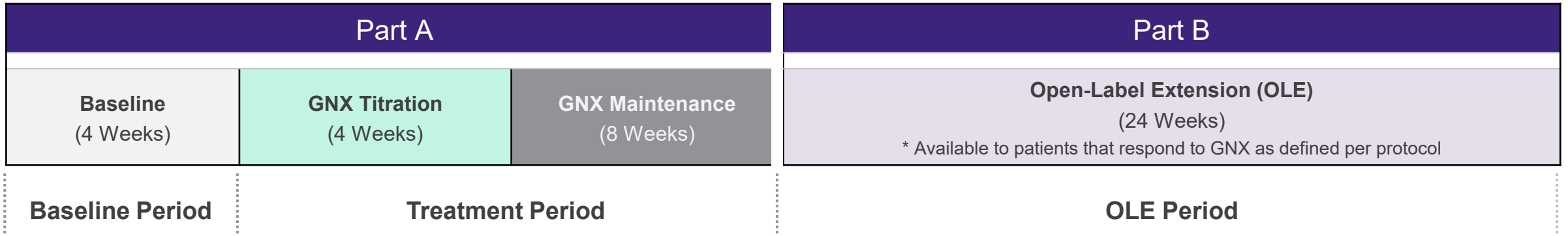
- In January we gathered with the baby's Neuro to talk about possibly plucking out the active tumors that were firing off seizures. It would be a long process that included an external EEG that lasted 3-5 days and then an internal EEG that would last about 10-15 days
- So we go in for EEG and they told us nine months ago they were firing on the right side. They are now firing all over and they can't do surgery because they don't know what tumor was causing seizures
- Now we are stuck**, giving medication that won't work and a little girl fighting through seizures** almost every day

https://www.rarediseaseday.org/heroes/my-journey-through-tsc-tuberous-sclerosis-complex/

# Marinus' Phase 2 TSC Open-label Clinical Trial

CALM STUDY
TSC-Related Epilepsy (ganaxolone)

## Trial Design




## Topline Results

**Overall result (N=23)**

**16.6%** median reduction in TSC-associated seizures

**Focal-onset seizures (N=19)**

**25.2%** median reduction

**50% Response Rates**

**30.4%** overall

- **25%** Concomitant **cannabidiol** (N=12)
- **36%** Concomitant **everolimus** (N=11)

***Safety Summary:*** *Ganaxolone was generally well-tolerated with somnolence, sedation and fatigue reported as the most common adverse events; in addition, one treatment-related serious adverse event of seizure was reported in the trial*

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# TSC Phase 2 Trial: Long-term Extension Follow Up

CALM STUDY
TSC-Related Epilepsy (ganaxolone)

## Nine patients (39%) qualified* for and entered the long-term extension

- Median age 22 years
- Median baseline seizure frequency = 28
- Seven patients completed 2 years of follow up

As of May 2024, two patients had discontinued treatment (1 lack of efficacy, 1 for adverse event)

**Cumulative median seizure reduction within two years (N=9):**

**56%**

**Median seizure reduction during months 22-24 (N=6**):**

**87%**

**Safety Summary:**

Safety findings were consistent with the double-blind phase; no new safety findings had emerged at the time of analysis

*Patients with >35% reduction in TSC-associated seizures could enter extension phase
**7th patient still on therapy but data not available

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# TSC Guest Speaker

## Rajsekar R. Rajaraman, M.D., M.S.

**UCLA Mattel Children's Hospital**

- Associate Professor in Pediatric Neurology
- Director of the UCLA CDKL5 Center of Excellence
- Director of the UCLA Tuberous Sclerosis Center of Excellence

**Investigator in the TrustTSC trial, member of Marinus Scientific Advisory Board, and a consultant to Marinus**


UCLA Health

Approximately

**75%**

**of my patients have a rare genetic epilepsy (RGE) disorder.**

**~50%**
**have TSC**

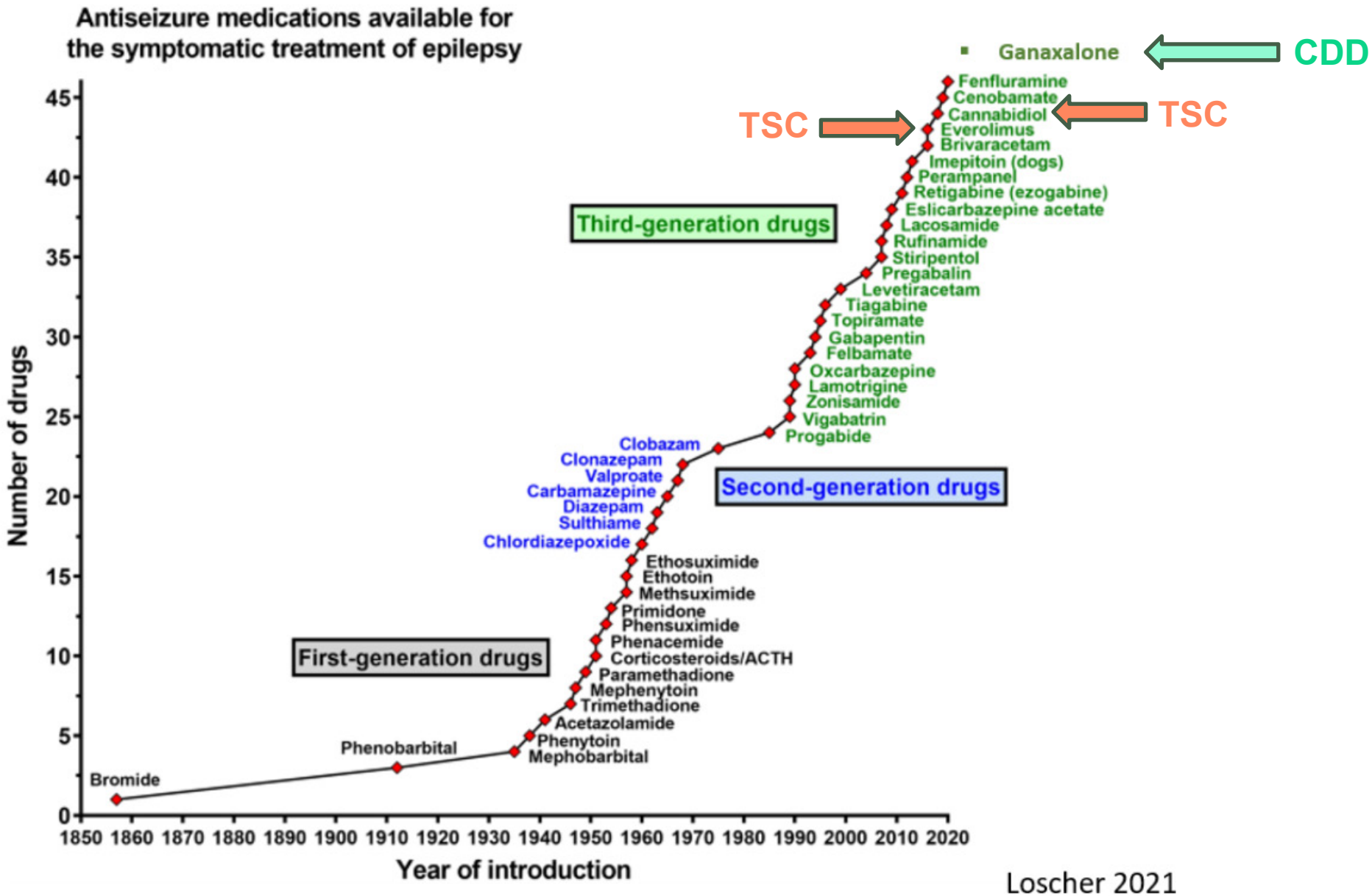
**~5%**
**have CDD**


**TSC Step Forward to Cure Walk 2024**
Irwindale, CA


**CDKL5 Family LA Meet-up 2023**
Disneyland

# Comparison between TSC and CDD

| | CDKL5 Deficiency Disorder (CDD) | Tuberous Sclerosis Complex (TSC) |
|---|---|---|
| Frequency | 1 in 40,000 live births | 1 in 6,000 live births |
| Inheritance | X-linked | Autosomal Dominant |
| Sex | Mainly female | Both |
| Seizures | >90% (earlier than TSC) | >90% |
| Infantile Spasms | Yes | Yes |
| Epilepsy Surgery | Rare | Common |
| Walking | 25% | Majority |
| Cortical Visual Impairment | Common | Rare |
| Feeding G-tube | 25% | Rare |




Loscher 2021

# Significant Unmet Need for Safe and Effective Medications for Seizure Management

## Limitations of current therapies[1-3]

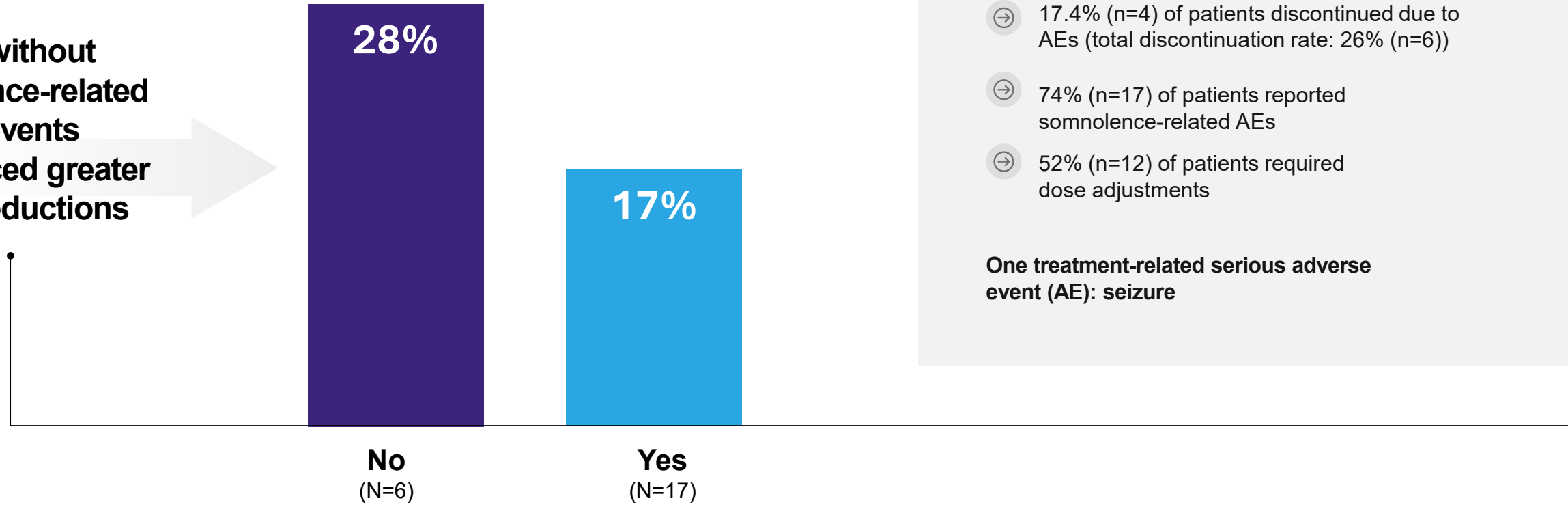
- Drug interactions that affect patient dosing and/or safety[1-3]
- Non-CNS tolerability issues (gastrointestinal, blood)[1,2]
- Skin, Heart, Liver, or Infection serious adverse event risks[1-3]
- Require routine lab monitoring[1,2]
- Not studied in TSC[3]
- Not studied with concomitant mTOR inhibitor[1,3]
- Studied only in adults[3]

1. Cannabidiol Prescribing Information 2024. Jazz Pharmaceuticals, Inc.
2. Everolimus Prescribing Information 2022. Novartis Pharmaceuticals Corporation
3. Cenobamate Prescribing Information 2024. SK Life Science, Inc.

# Phase 2 TSC Trial and Somnolence

**Median percent reduction in TSC-associated seizures**

**Patients without somnolence-related adverse events experienced greater seizure reductions**



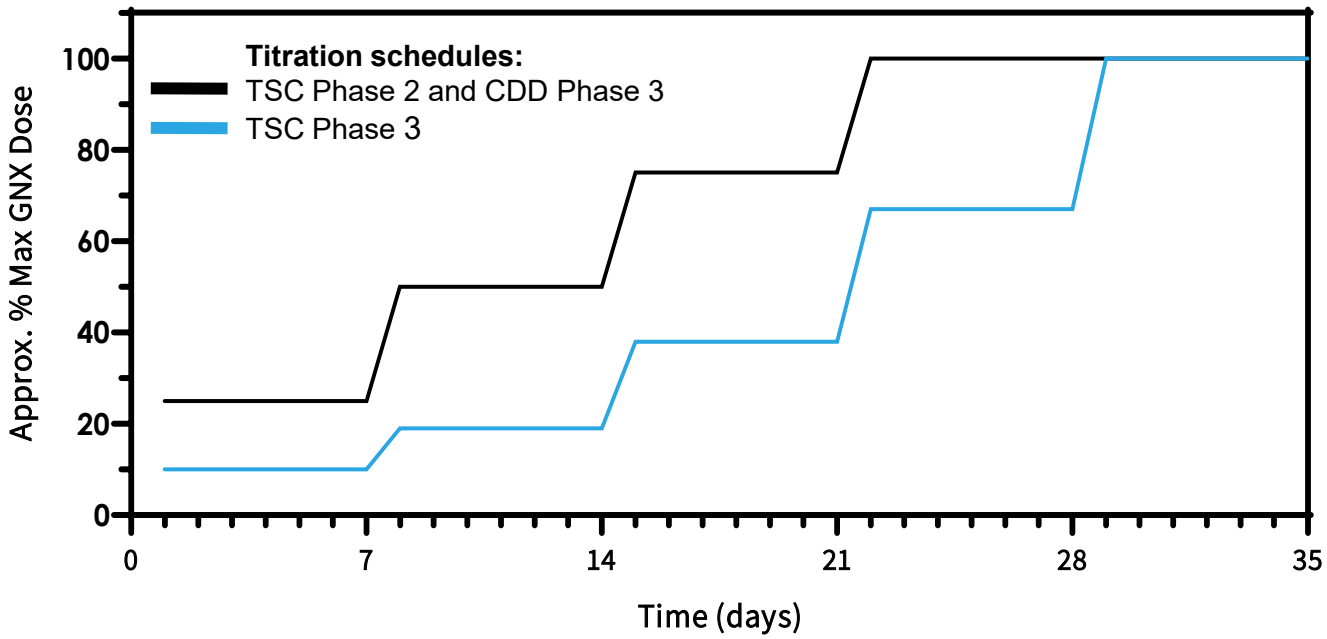

**Most common adverse events:**
Somnolence, sedation and fatigue

- 17.4% (n=4) of patients discontinued due to AEs (total discontinuation rate: 26% (n=6))
- 74% (n=17) of patients reported somnolence-related AEs
- 52% (n=12) of patients required dose adjustments

**One treatment-related serious adverse event (AE): seizure**

# Titration Schedule Modified for Phase 3 TrustTSC Trial

Slower titration initially, designed to optimize tolerability and improve efficacy




| Discontinuation rate due to AEs: | |
|---|---|
| **PHASE 2** | **PHASE 3** (BLINDED) |
| **17.4%** | **<3%** |

| Total discontinuation rate: | |
|---|---|
| **PHASE 2** | **PHASE 3** (BLINDED) |
| **26.1%** | **6.2%** |

# Q&A

**Mary Kay Koenig, M.D.**
University of Texas McGovern Medical School

**Rajsekar R. Rajaraman, M.D., M.S.**
UCLA Mattel Children's Hospital

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# Tuberous Sclerosis Complex Clinical Development

**Joe Hulihan, M.D.**
Chief Medical Officer

TrustTSC

# TSC Clinical Development

## Phase 2 TSC data provided critical information to guide Phase 3 (TrustTSC trial) design

## These data, plus insights about ganaxolone pharmacokinetics, formed the basis for a revised titration schedule, with the objective of:

- Optimizing tolerability and achieving target dose
- Enhancing efficacy

## The Phase 3 TrustTSC trial is on target for topline data in the first half of Q4 2024

- The study has 90% power to detect a 25% difference from placebo in percent seizure reduction
- There are high rates of patient retention in the double-blind trial and transition to open-label extension
- The study incorporates measures to capture and classify seizures and reduce placebo response

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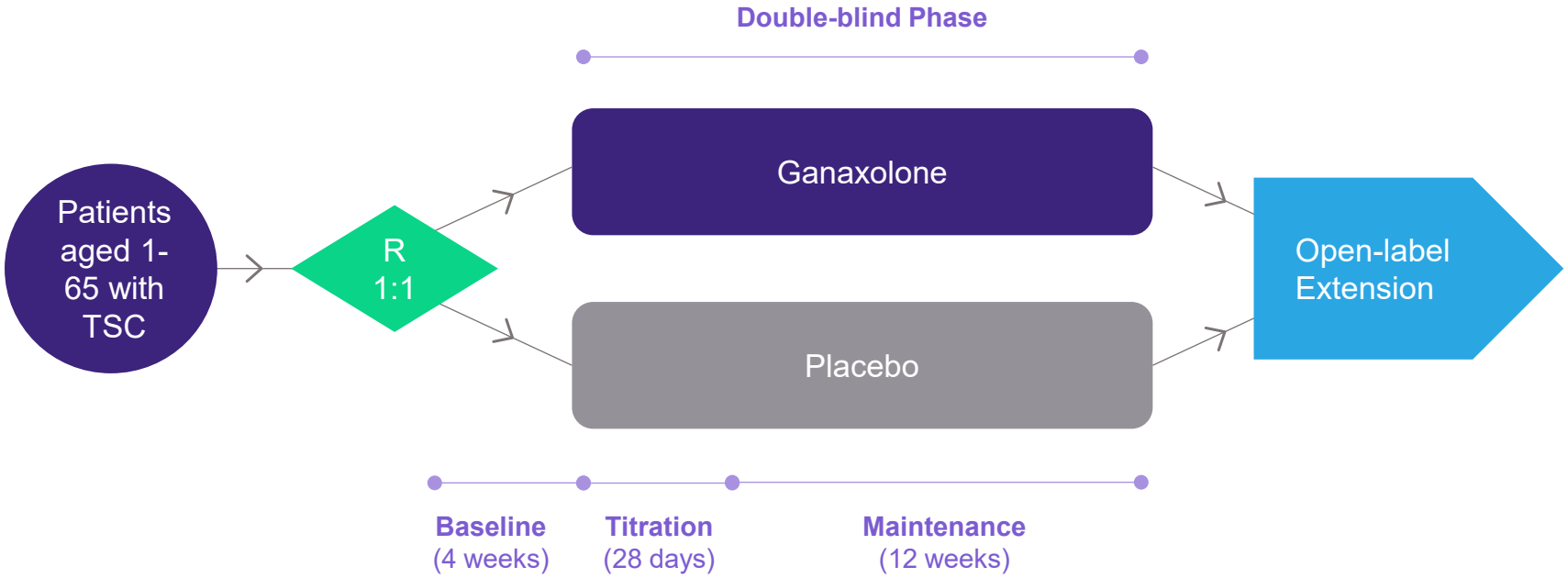
TrustTSC

# Phase 3 Trial Overview




## PRIMARY ENDPOINT

Percent reduction in TSC-associated seizures

## KEY SECONDARY ENDPOINTS

- Percent reduction in seizures - maintenance phase
- 50% responder rate - DB and maintenance phases
- CGI at the end of the double-blind phase

## OTHER SECONDARY ENDPOINTS

- Seizure-free days
- Response by seizure type
- CGI-seizure intensity and duration
- Behavioral/neuropsychiatric measures: ADAMS, ELDQOL, others

## PRIMARY ENDPOINT SEIZURE TYPES

- Focal seizures with motor features – with or without impairment of awareness
- Focal to bilateral tonic-clonic seizures
- Atonic seizures
- Generalized tonic-clonic seizures
- Clonic seizures
- Tonic seizures

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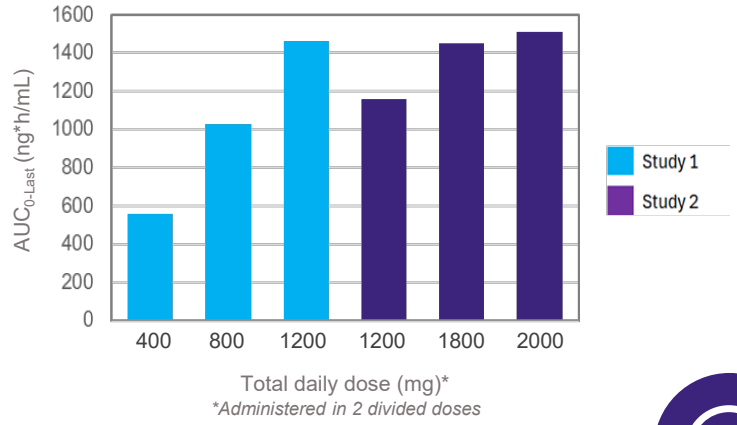
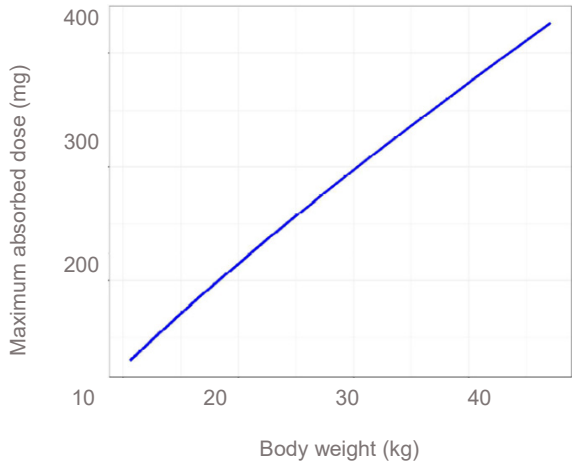
# Phase 3 Titration Schedule Modified Based on Insights About Ganaxolone Pharmacokinetics

**Phase 1 multiple dose studies demonstrated maximum exposure at daily doses of ~ 1200 mg**

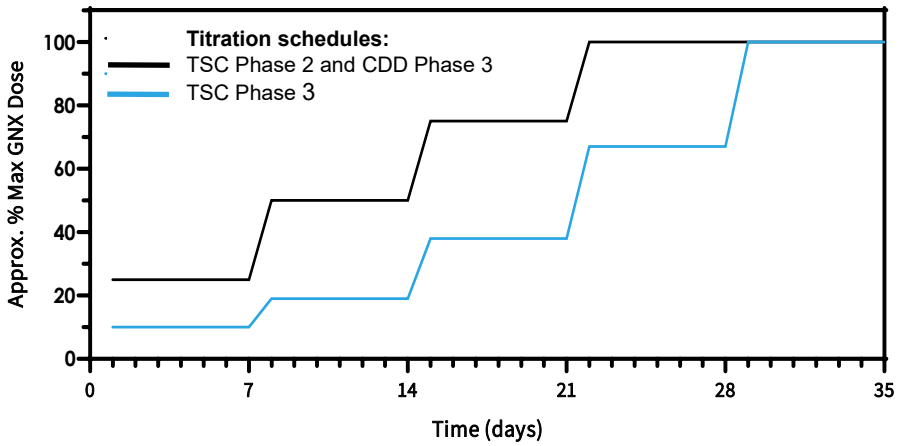



**Population PK modeling supports a similar dose-exposure profile for pediatric patients**




## Phase 3 vs. Phase 2 titration schedule

Slower initial titration with the objective to optimize tolerability and improve efficacy




| Titration schedule | Total daily dose (mg)* | | | | |
|---|---|---|---|---|---|
| Time (days) | 1 | 7 | 14 | 21 | 28 |
| TSC Phase 2 | 450 | 900 | 1200 | 1800 | → |
| TSC Phase 3 | 150 | 300 | 600 | 1200 | 1800 → |

*Administered in 3 divided doses; doses represent total daily dose for patient weighing ≥ 28 kg.*

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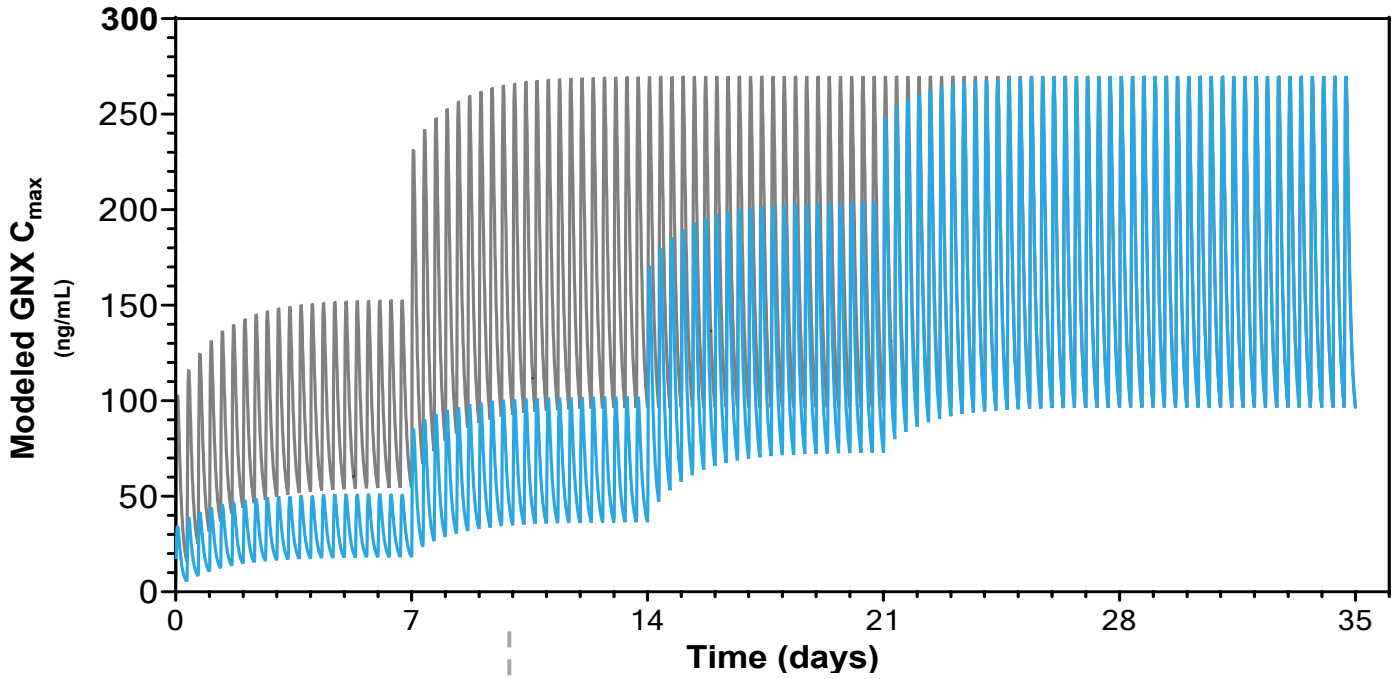
# PK Model Demonstrates Estimated Attainment of Maximum Plasma Concentration

## Modeled plasma concentration during titration




**Plasma concentrations modeled based on:**

- TSC Phase 2 and CDD Phase 3
- TSC Phase 3
- Median onset of somnolence-related adverse events** in Marigold Phase 3 CDD study

**Majority of somnolence-related adverse evets in Marigold study began during titration (median = day 10)†**

| Titration | | | Total daily dose (mg)* | | |
|---|---|---|---|---|---|
| Time (days) | 0 | 7 | 14 | 21 | 28 |
| Phase 2 | 450 | 900 | 1200 | 1800 | → |
| Phase 3 | 150 | 300 | 600 | 1200 | 1800 → |

*Administered in 3 divided doses; doses represent total daily dose for patient weighing ≥ 28 kg
**Somnolence-related adverse events include somnolence, hypersomnia, sedation, lethargy
† Ganaxolone arm only

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# Key Trial Design Features

TrustTSC

## Trial Design & Patients

- Genetically or clinically confirmed diagnosis of TSC
  - Pathogenic mutation of TSC1 or TSC2 genes, OR
  - Clinical diagnosis of definite TSC according to accepted diagnostic criteria
- Seizures uncontrolled despite adequate treatment with >2 ASMs
- At least 8 primary endpoint seizures per months in previous 2 months <1 week seizure-free / month
- At least 8 primary endpoint seizures/ 28 days during the prospective baseline phase
- Primary endpoint seizures were required to have a motor component

## Key features

- First TSC trial to include patients receiving concomitant Epidiolex or Afinitor
- Revised titration schedule with objective to foster tolerability and efficacy
- Electronic seizure diaries with daily entry attestation
- Adjudication of seizures by Epilepsy Study Consortium
- Minimum seizure frequency of 8/month
- Stability of pre-study seizure frequency to reduce “regression to the mean”

**Trial design and execution focused on accurate seizure assessment and optimized tolerability, designed to have an adequate effect size to achieve statistical significance**

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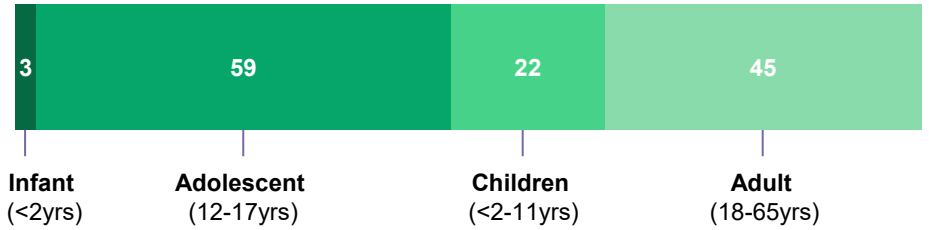
# TrustTSC Patient Characteristics

TrustTSC

**Enrollment by Age**

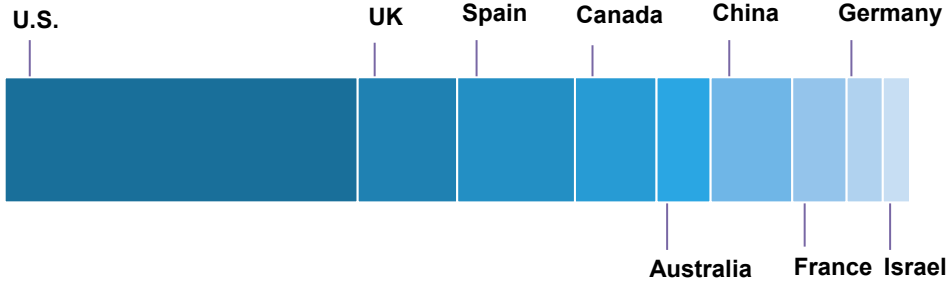
Mean: 15yrs




N = 129
**Range:** 1-50yrs

**Enrollment by Gender**


**Enrollment by Country**



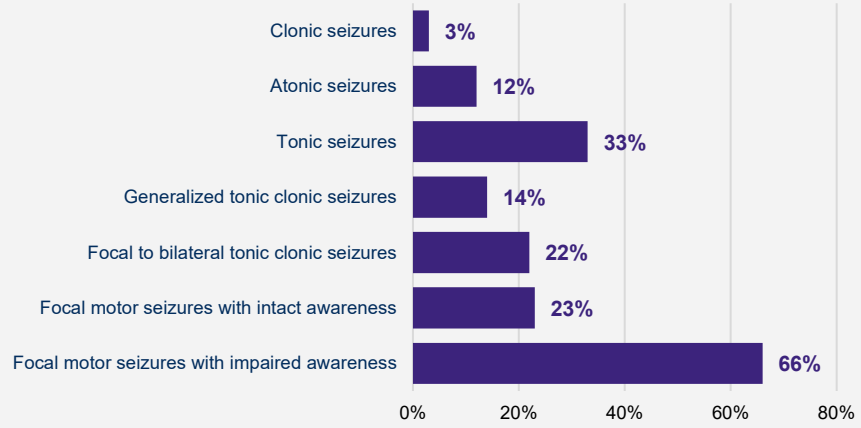

## Seizure characteristics

**Baseline Seizure Rate**
(median, per 28 days)

**~40**

### Baseline Seizure Types

**Patients with each seizure type at study entry (%)**

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# Key Concomitant Seizure Medications

## Prior Treatments & Concomitant Medications

**Failed Therapies*** (mean) **4.8**

**Patients with prior or current exposure:**

| mTORs (Everolimus/ Sirolimus)* | Cannabidiol* | Vigabatrin* | Cenobamate* |
|---|---|---|---|
| 76 | 38 | 43 | 15 |

## Phase 3 TrustTSC Insights

**Total Double-blind Discontinuation Rate** **6.2%**

Due to somnolence-related AEs: **<2%**

**~93%** of patients continued to the open-label extension

**Study Drug Compliance** **94%**

**Modal Dose**
as % of target dose**

Mean: **88%** Median: **100%**

**Patients >90% of target dose****

**81%**

Preliminary data as of September 3
*Failed therapies include prior and concomitant treatment
**Target dose is 1800 mg/day for patients weighing ≥ 28 kg; 63 mg/kg/day for patients weighing < 28 kg

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# Trial Sample Size and Milestones

TrustTSC

## TrustTSC Powering

With 129 patients, the trial has 90% power to detect a 25% difference in seizure reduction for ganaxolone vs. placebo

Powering assumptions based on recent trials in rare epilepsies, including Epidiolex TSC trial

- Anticipate lower placebo response than Epidiolex trial:
  - High expectations and excitement around CBD efficacy
  - TRUST-TSC site and country selection
  - Trial design features to minimize placebo response

## Trial Milestones

Last patient visit completed in September (N=129)

Topline data anticipated first half of 4Q2024

Data to be presented at upcoming medical meetings

Targeting primary manuscript publication in 2025

## Regulatory Strategy

FDA indicated that with the approval of CDD, a single trial could serve as necessary support for regulatory approval of TSC in the U.S.

Targeting U.S. sNDA submission in April 2025

Priority review will be requested

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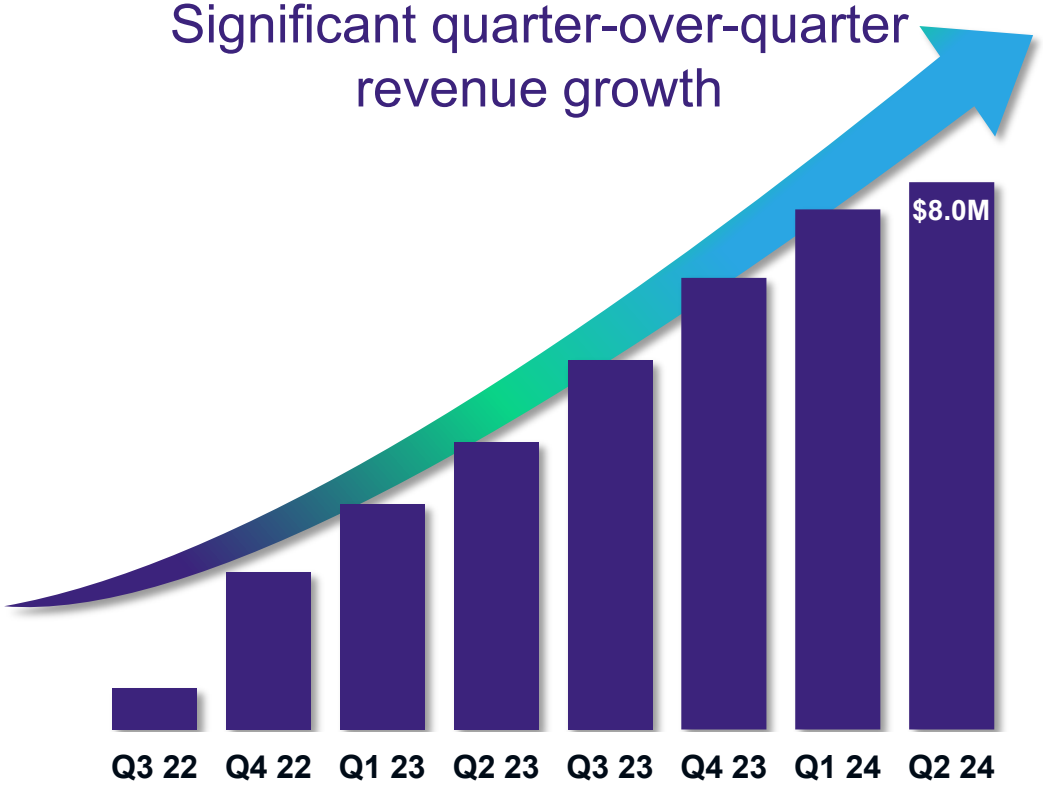
# Commercial Overview

**Christy Shafer**
Chief Commercial Officer

# Continued Growth of ZTALMY®




87% growth in revenue since Q2’23

~200 patients on active therapy

200+ prescribers

Payer coverage
83% commercial + 100% Medicaid

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# Meet Evie

*11 years old,*
*2 years on ZTALMY®*

> We were in a **pretty low spot** [before] we started her on ZTALMY. Evie was **seizing and sleeping most of the day**. – *Chris, Evie's dad*

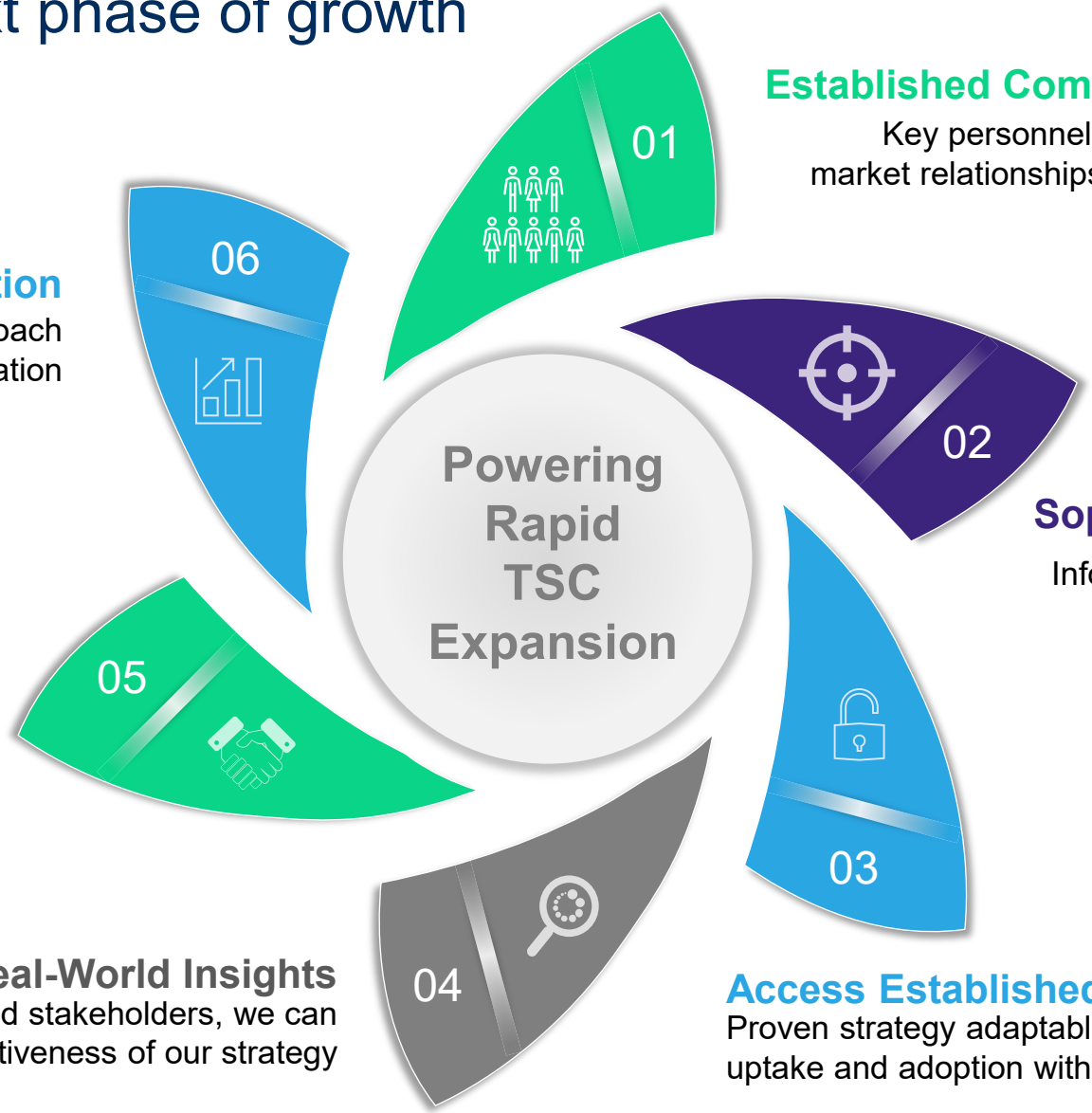
> **Evie needed to have fewer seizures.** That's always the focus of everything. And while we were hesitant to start anything new, we had **heard such great things about ZTALMY from our neurologist**… and after talking that through together, we came to the decision. OK, let's give this a try. – *Kelly, Evie's mom*

> The **seizures are less frequent and that's made all the difference**. We went to our first movie the other day and sat in the theater, all of us together. Simple things like that that were **never an option before**. – *Chris*

> **ZTALMY was the right choice for our child.** It was the right choice for our family. It has **given Evie fewer seizures** that we can measure in weeks and in months… and I'm so glad we made the choice for her. In the last 18 months or so, it's **like getting to know your kid all over again.** – *Kelly*

# Leveraging Early Commercial Success to Propel TSC Market Breakthrough

## Delivering on our next phase of growth




### Established Commercial Framework

Key personnel in place, with established market relationships for next phase of growth

### Sophisticated Data & Analytics

Informed decisions at every stage, from patient identification to market segmentation and targeting

### Access Established

Proven strategy adaptable to TSC, enabling rapid uptake and adoption with minimal delays or barriers

### Real-World Insights

In tune with the market and stakeholders, we can also assess the effectiveness of our strategy

### Stakeholder Confidence

Proven ability to mobilize key stakeholders to drive commercial success

### High Impact Execution

Synthesized, comprehensive approach ensures continued growth and value creation

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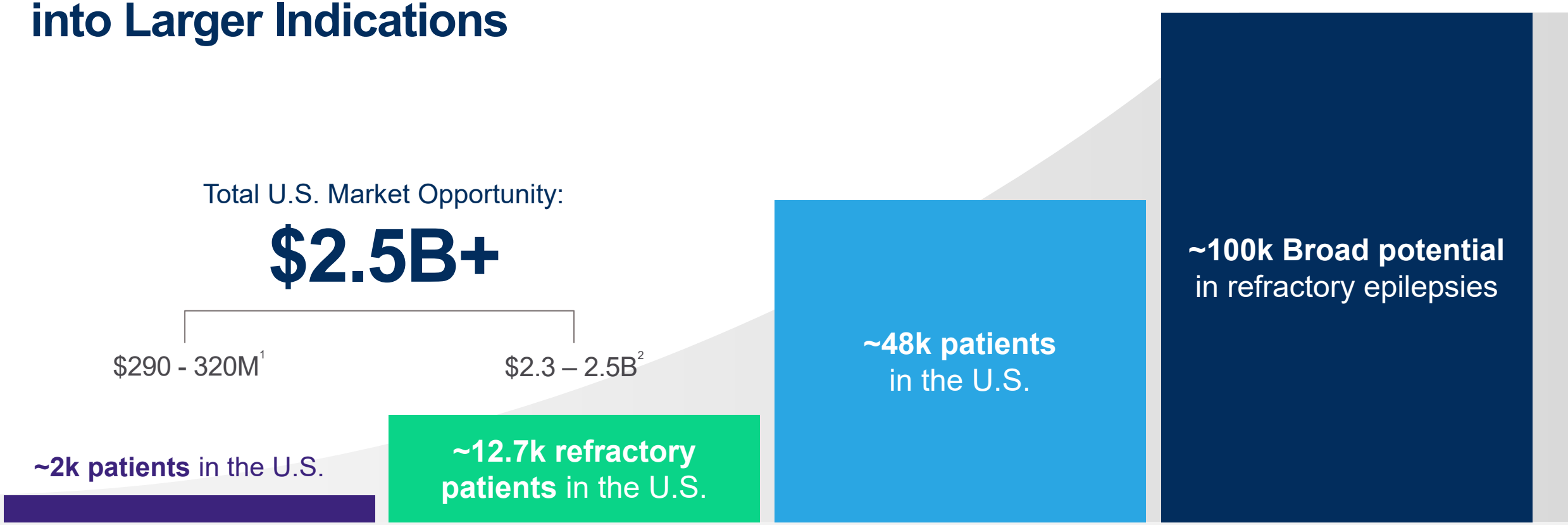
# Significant Growth Potential with Expansion into Larger Indications

Total U.S. Market Opportunity:

**$2.5B+**

$290 - 320M[1]

$2.3 – 2.5B[2]




**CDKL5 Deficiency Disorder**
Approved in U.S. in 2022

**Tuberous Sclerosis Complex**
Potential U.S. Approval 2025

**Lennox-Gastaut Syndrome**

**Developmental and Epileptic Encephalopathies**

1. Based on an average Ztalmy daily dose of approximately 1,150 - 1,200 mg/day (internal estimate based on 1H 2024 actual results)
2. Assumes average TSC patient dosed at ~15 - 20% higher than CDD (based on Phase 2 trial data)

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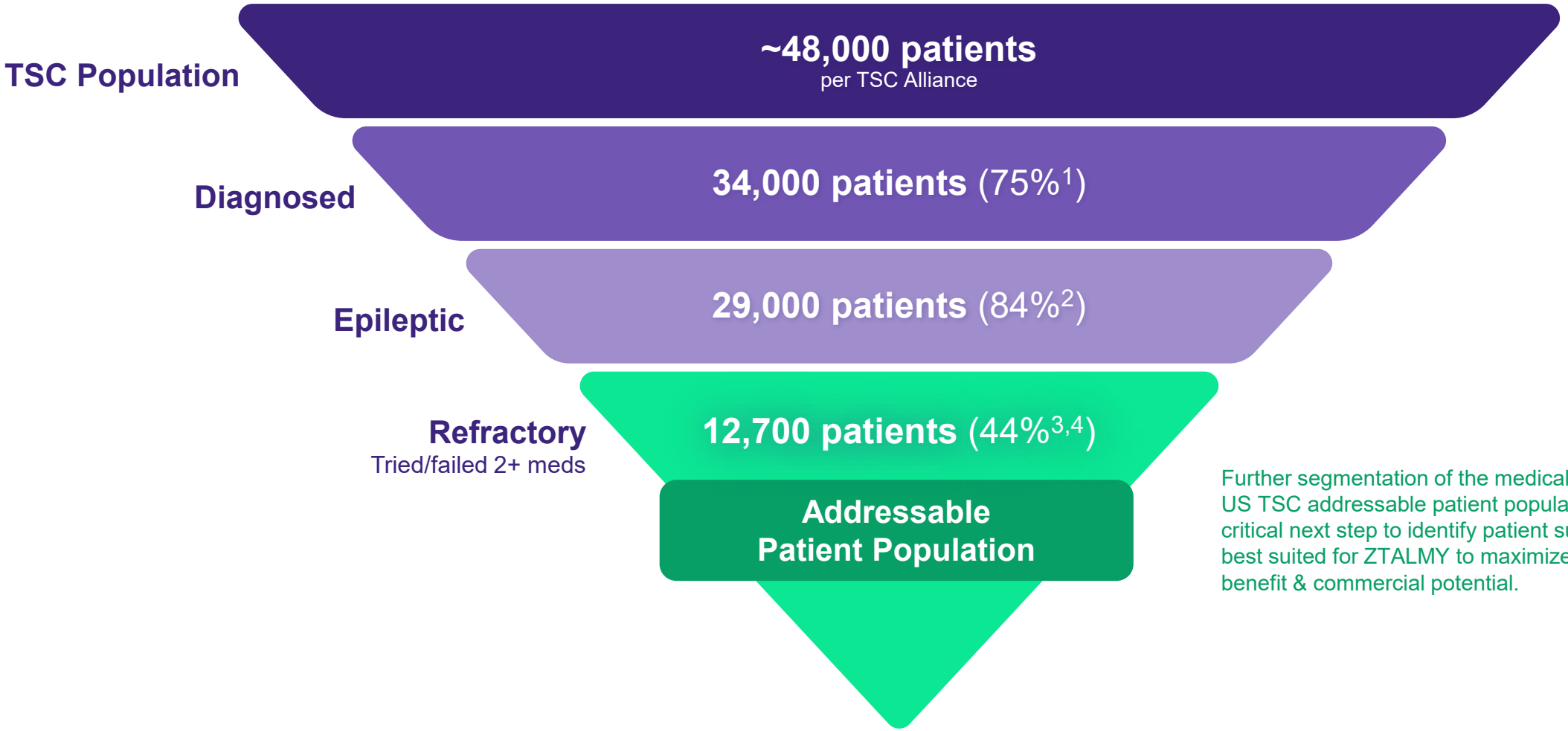
# TSC Commercial Expansion

**Lisa Lejuwaan**
SVP & Business Unit Lead, Rare Genetic Epilepsy

# U.S. TSC Addressable Patient Population




Further segmentation of the medically-refractory US TSC addressable patient population is a critical next step to identify patient subtypes best suited for ZTALMY to maximize patient benefit & commercial potential.

1. Marinus ZS Opportunity Assessment, 2020 Market Research
2. Curatolo P - Epilepsy in TSC: Findings from the TOSCA Study
3. Chu-Shore CJ et al.The natural history of epilepsy in tuberous sclerosis complex. Epilepsia.
4. 63% (Chu-Shore) adjust -19% for Epidiolex & Afinitor Utilization 2010

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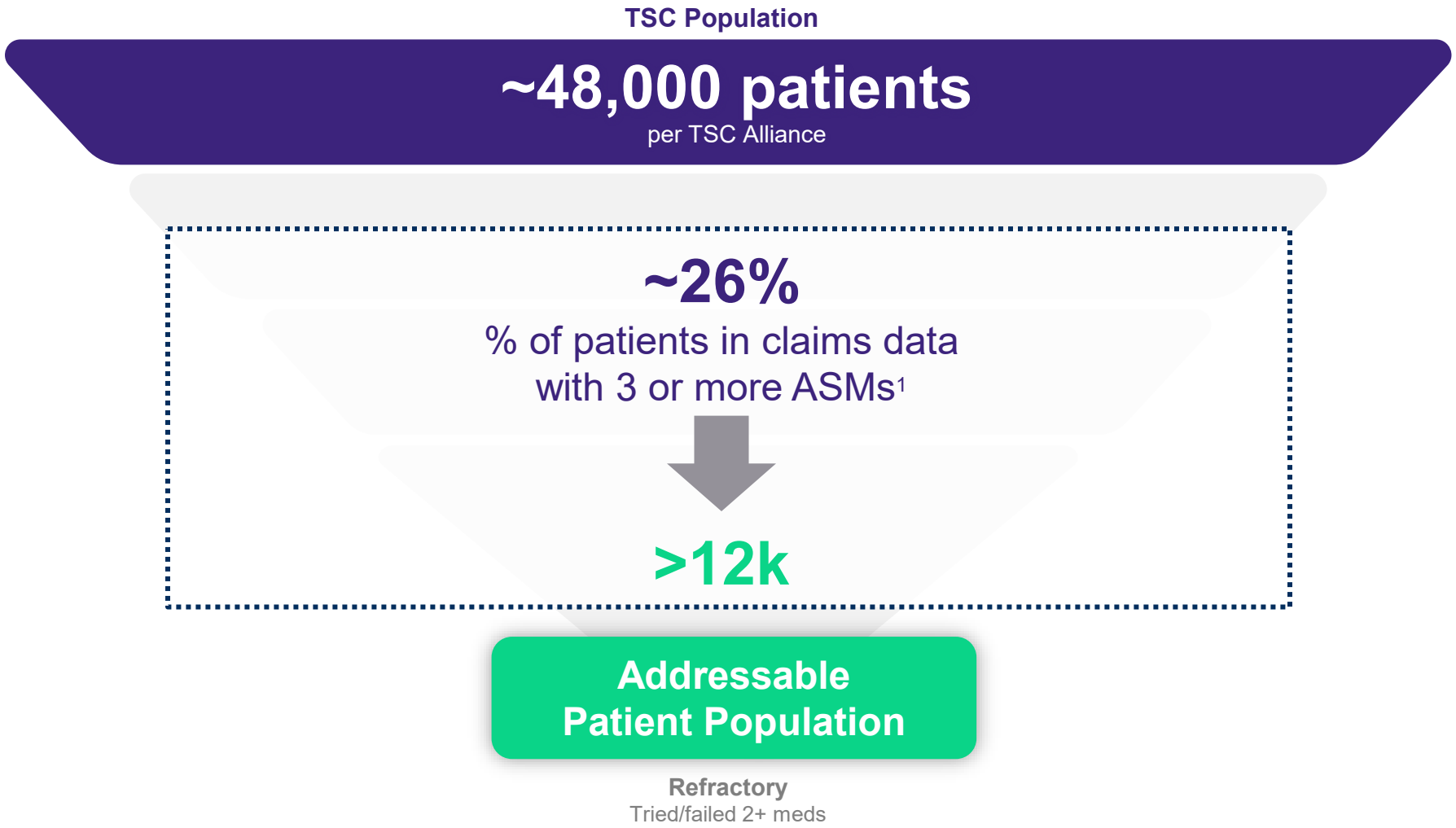
# Claims Data Validates Our Addressable Patient Population Assumptions




1. Internal Analysis, using Veeva Compass claims data

# There is a Significant Unmet Need in Patients Who Continue to Suffer from Refractory TSC-associated Epilepsy

**~84% of patients experience seizures, with 63-75% deemed medically refractory[1]**

TSC-associated **epilepsy carries highest risk of morbidity & mortality**, and has the highest impact on patients' & families' quality of life[2,3]

**Epilepsy** puts patients at **increased risk of developing neuro comorbidities**

Those with severe symptoms (lung & kidney disease) **more likely to have reduced life expectancy**, though majority of patients have normal lifespans[4]

HCPs, caregivers, patients consider **seizures to be the most burdensome TSC symptom**

> **Until you get the seizures under control, not much else can be worked on actively.**
>
> *– Lilian, mom to 15-year-old with TSC*

> **That's a catastrophic word: 'seizure'; and it completely changed the trajectory of his development.**
>
> *– LaCracha, mom to 17-year-old with TSC*

> **He's got the stuff on his face, he's got the other stuff, but [the hardest has] been the seizure activity because it's daily.**
>
> *– Joseph, dad to 8-year-old with TSC*

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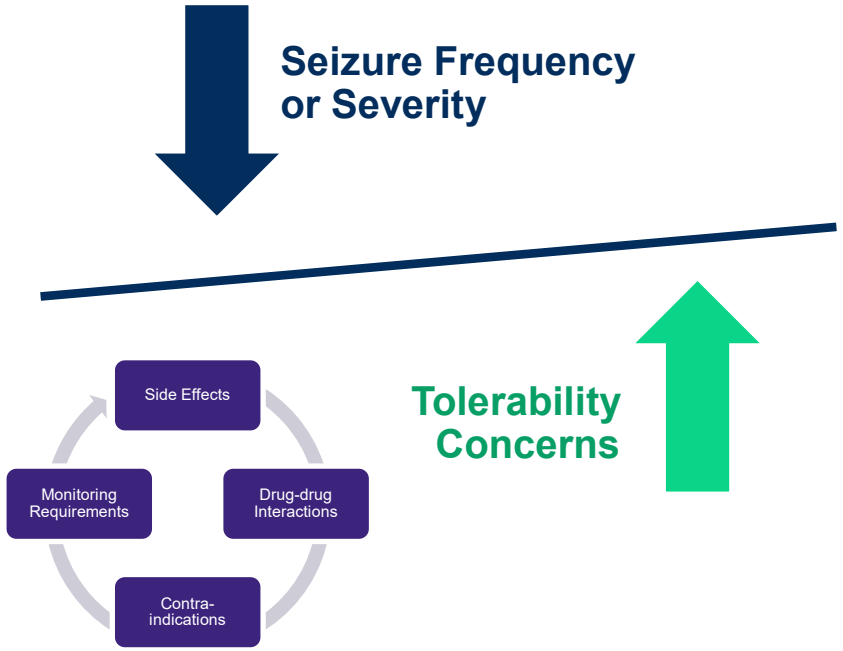
1. Nouri et al, Pediatric Neurology, 2021
2. Singh, Neuropsychiatric Disease & Treatment, 2023
3. Chu-Shore, Epilepsia, 2010
4. Caban, Applied Clinical Genetics, 2017

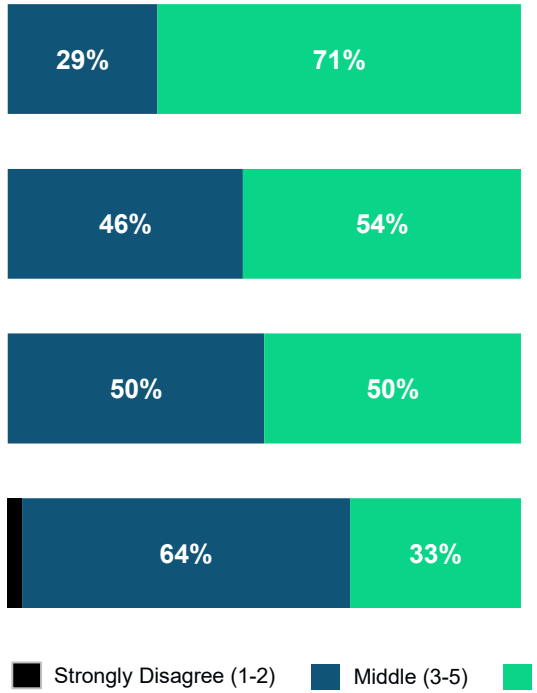
# HCPs & Caregivers Believe There is Significant Opportunity for Improvement in ASM Options Given Tolerability Concerns with In-market Options (DDI, AE, lab monitoring)

## Triggers for Treatment Change[1]




## TSC Treatment Beliefs: Managing Seizures[2]

% of Overall Physicians, n=72 HCPs




**Managing seizures is critical** to the successful **management of** other **comorbid TSC features**

**Seizures are the most important** TSC symptom **to manage to improve** overall patient **QOL**

**Incremental seizure control improves symptoms of TAND**

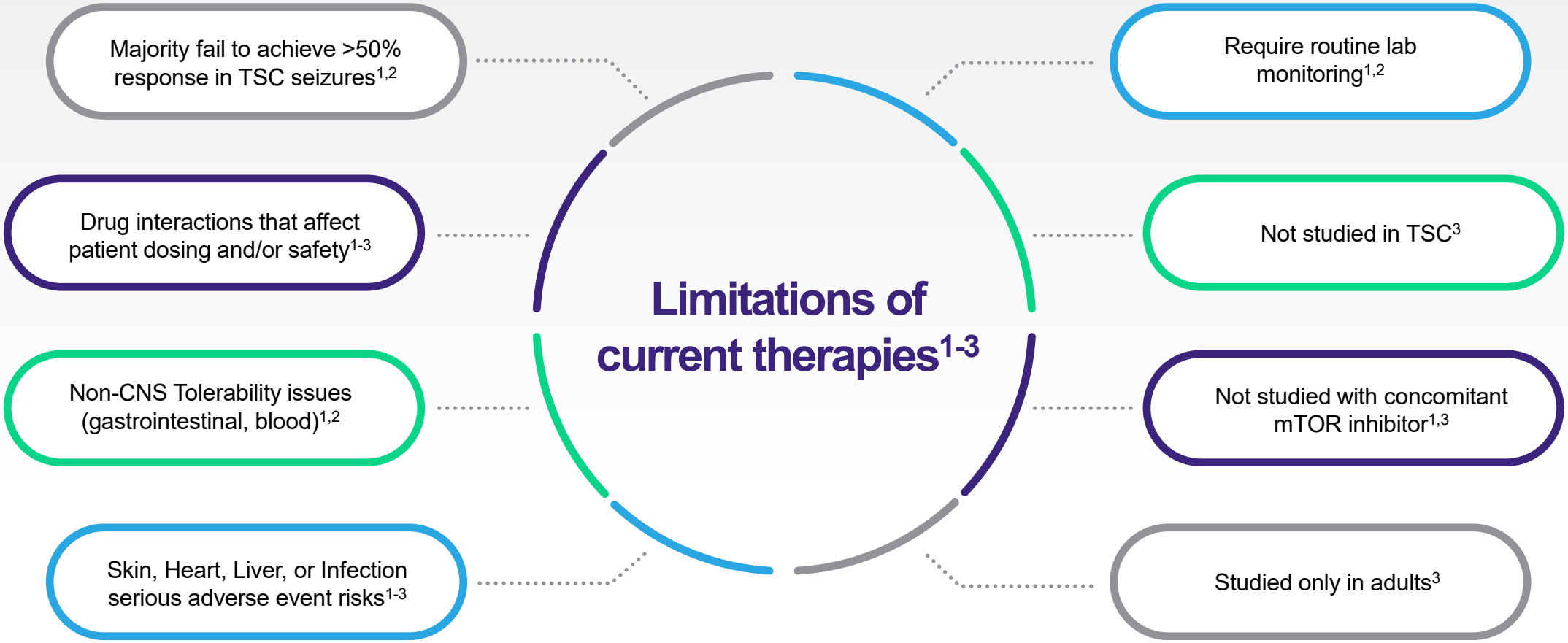
Currently available **ASMs are insufficient for controlling seizures** in TSC patients

1. Marinus primary market research
2. Marinus ATU Wave 3 Market Research

ASM: antiseizure medication
TAND: TSC-associated neuropsychiatric disorders

# Current ASM Treatment Options are Insufficient in TSC

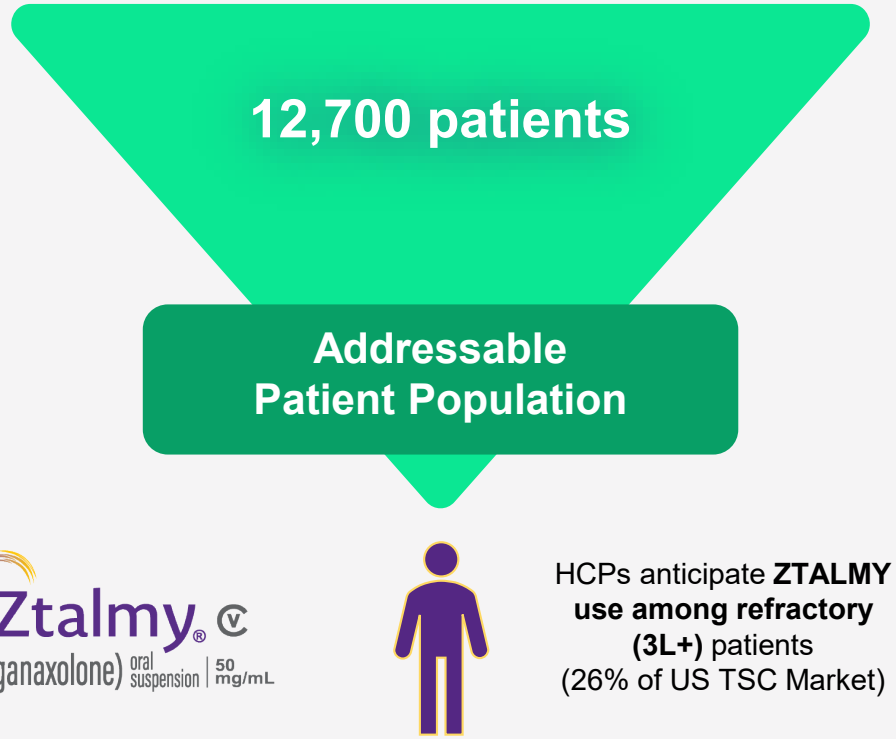
Significant unmet need for safe and effective medications for seizure management





1. Cannabidiol Prescribing Information 2024. Jazz Pharmaceuticals, Inc.
2. Everolimus Prescribing Information 2022. Novartis Pharmaceuticals Corporation
3. Cenobamate Prescribing Information 2024. SK Life Science, Inc.

# Market Research Indicates TSC-Specific Label and Favorable Safety Profile Make ZTALMY a Strong Alternative to Existing Options




## Key Ztalmy Attributes Viewed as Differentiating[1]

- GABA-ergic mechanism perceived as more directly related to seizure control
- No drug-drug interactions with other ASMs requiring dose adjustment and/or monitoring
- Favorable safety and tolerability profile

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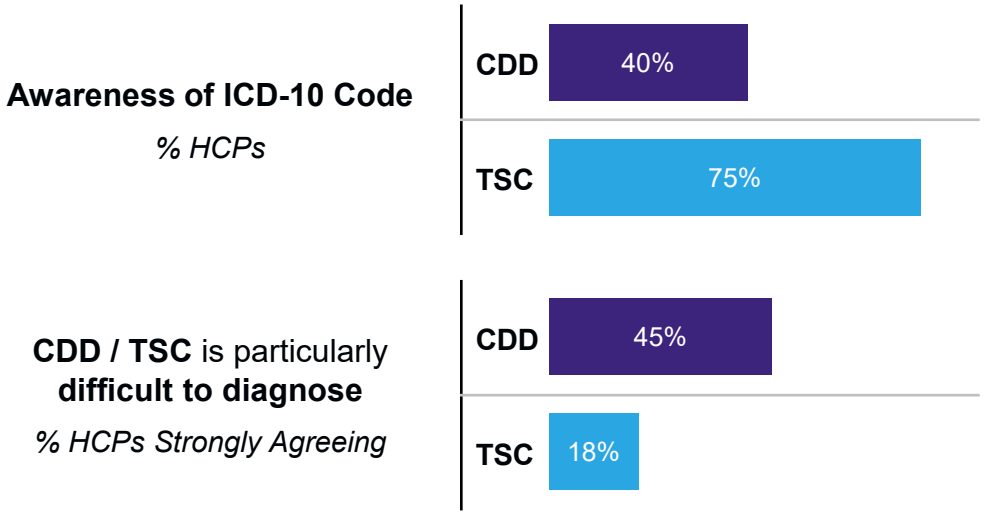
1. Marinus primary market research

# Refractory TSC Patients are Likely to be Diagnosed Early and Quickly

**TSC is perceived as easier to diagnose vs. CDD[1]**




**MDs most often use MRI (86%) & clinical exam (74%) to diagnose** TSC patients.[1]

**To confirm diagnosis >3 symptoms must be present**
Most common are seizures, skin lesions, tumors/cysts[2]

**Strong foundational advocacy support** for patients and families

**Patient ID not anticipated to pose launch barrier; epilepsy TSC patients actively seek care early in treatment journey**

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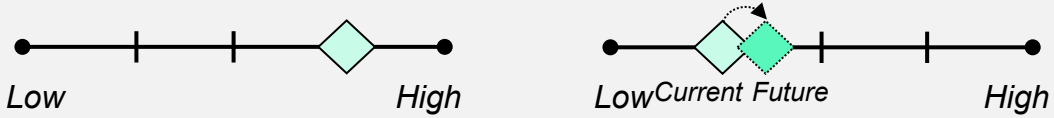
1. Marinus ATU Wave 3 Market Research; 2. Marinus Market Research Patient Journey, 2024.
3. GNX Opportunity Assessment, Jul 2020 (N=20 HCPs); 4.TSC HCP Baseline ATU, Jan 2024 (N=72 HCPs)

# Pathway to Broad and Predictable Access for ZTALMY in TSC

**Payer research shows reluctance to significantly increase restrictions for a novel TSC therapy given high disease burden and need for therapy options**

- Expect prompt and broad payer access given reimbursement dynamics across all payers in CDD, of which all patients have been approved
- ZTALMY is an ASM, which falls into one of the protected classes of therapies under Medicare Part D
- Payer channels are similar (Medicaid 45%, Medicare 20%, Commercial 35%)
- Specialty pharmacy process delivers rapid and consistent fulfillment and will efficiently evolve to meet new patient needs

**Payer Perspectives on TSC-Associated Seizures**




Stakeholders perceive TSC to be a **high unmet need, low budget impact** indication, with limited treatment options to adequately control the 40 – 60% of patients who do not respond to AEDs

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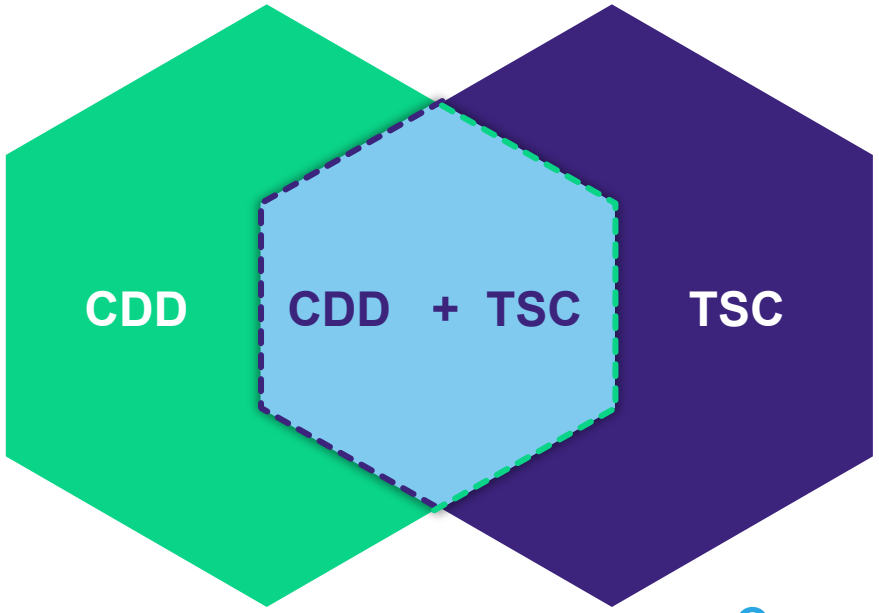
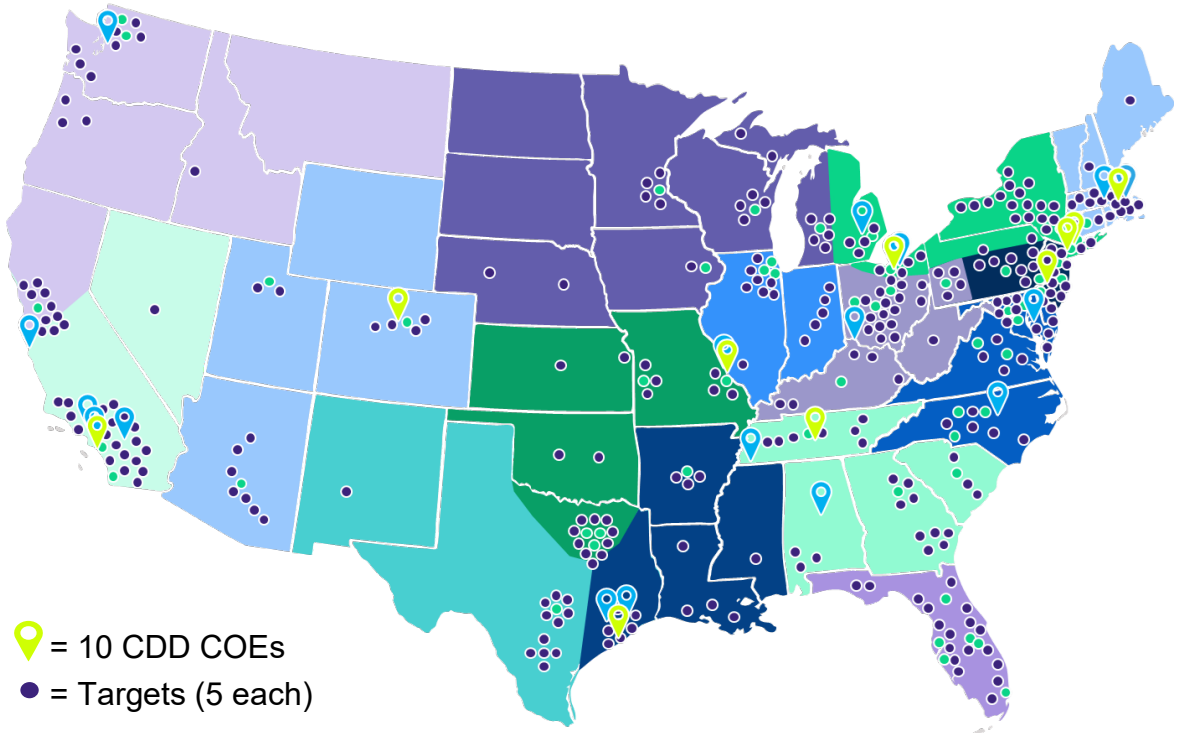
# Significant Target Overlap Allows for Efficient Growth

## TSC will add an additional 3,200 targets




**TSC will add 14-16 RAMs, totaling ~32**

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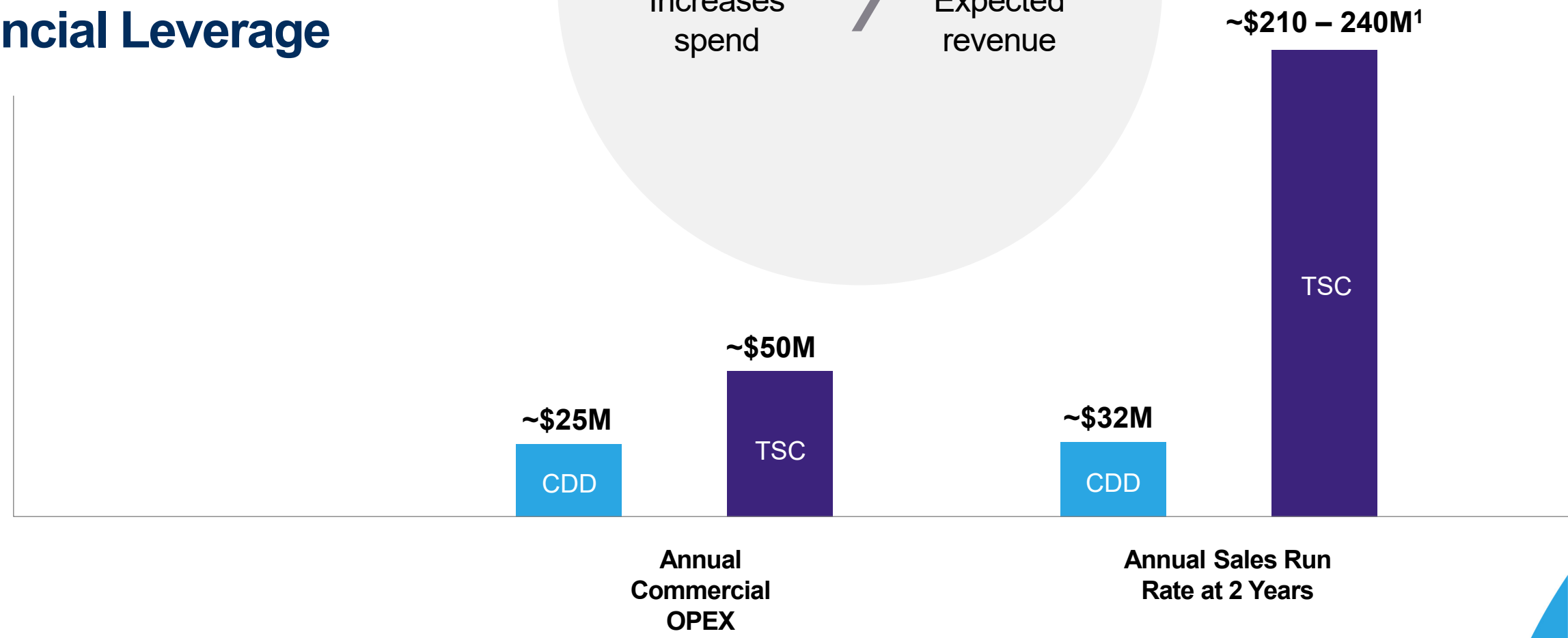
# Focused Oral Epilepsy Franchise Plan Anticipated to Drive Significant Financial Leverage

**2x**
Increases spend

**7x**
Expected revenue




1. Internal estimate based on addressable TSC patient population of 6-7x addressable CDD patient population and expected TSC dosing of 1.1 – 1.2x CDD dosing

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# Poised for a Successful Launch in TSC, if Approved

## PROVEN FOUNDATION

Commercial infrastructure and expertise from CDD launch provides a strong foundation for franchise growth.

## UNMET NEED PERSISTS

A significant unmet need for treatment in refractory TSC still exists.

## CURRENT Tx LIMITATIONS

Current ASMs have significant limitations, and a better treatment option is needed.


## PATIENTS ARE WAITING

We have learned through primary market research that physicians believe ZTALMY will be the next ASM.

## CLEAR ACCESS PATHWAY

We expect minimal changes to our current market access strategy.

## LIMITED INVESTMENT

Efficient increase in spend expected to yield 7x revenue in 2 years.

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# Future Ganaxolone Development

**Joe Hulihan, M.D.**
Chief Medical Officer

# Expanding the Potential for Ganaxolone in the Treatment of Rare Epilepsies

The clinical development strategy for ZTALMY and our prodrug provides several options for future indications in development epileptic encephalopathies.

Intellectual property supports continued clinical development of ZTALMY.

Marinus is developing a ganaxolone prodrug designed to optimize its pharmacokinetic properties with the goal of achieving a target profile that reduces dosing frequency and improves efficacy.

Current development programs encompass expansion within a range of neurodevelopmental epilepsies.

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# Second Generation Ganaxolone Profile

## Goals

**Reduce peak trough variability**
Achieve greater daily exposure above minimally effective concentration

**Lower $C_{max}$/AUC ratio**
Optimize exposure without concomitant increase in Cmax-related adverse events

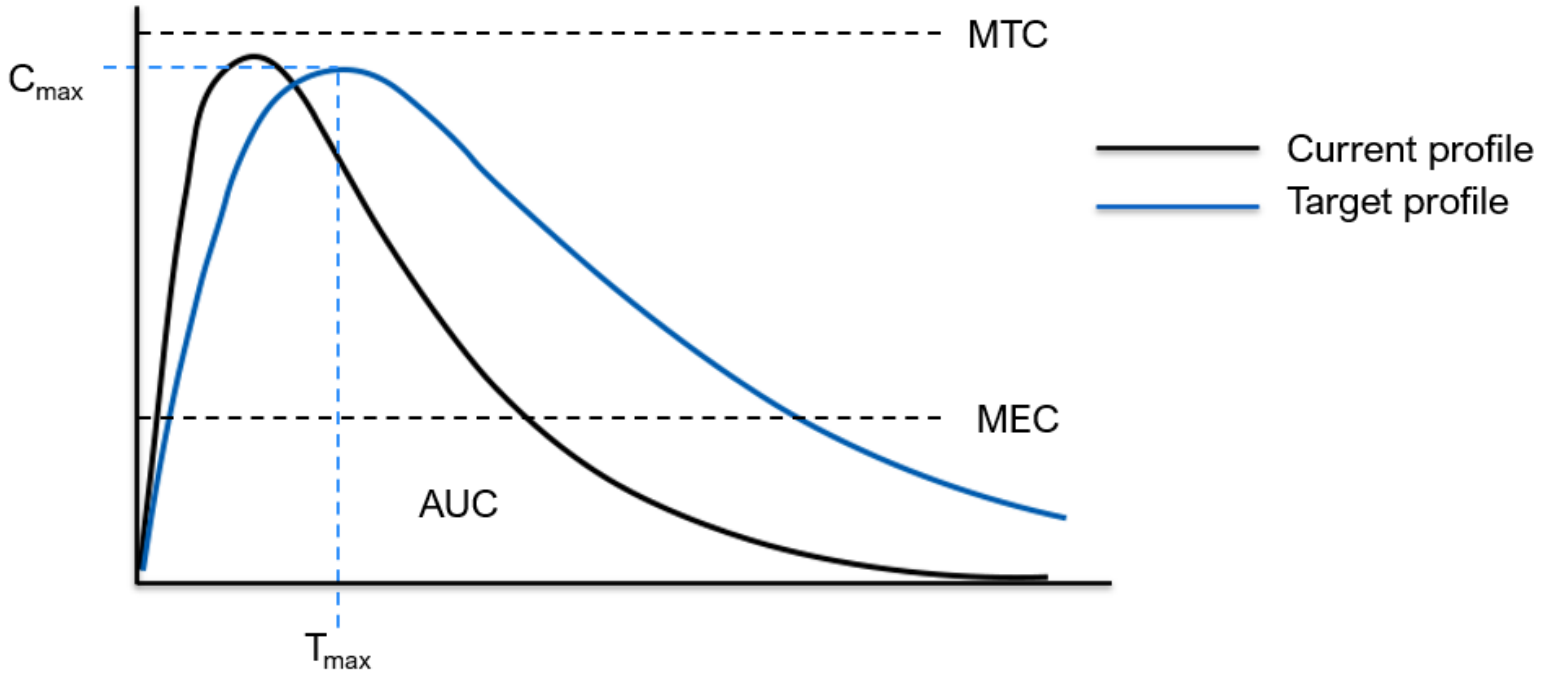
**Reduced dosing frequency**
More sustained exposure to allow once- or twice-daily dosing

**Consistent dose-exposure**
Linear kinetics throughout the range of clinical doses

**Reduced cost of goods**
Improved absorption will reduce API requirements

**Enhanced IP protection**
Differentiated product characteristics will provide opportunity for new IP

## Target Pharmacokinetic Profile




Cmax, maximum concentration; Tmax, time to maximum concentration; AUC, area under the curve; MTC, maximum tolerated concentration; MEC, minimally effective concentration

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# A Ganaxolone Prodrug for Oral Administration

## Target compound properties

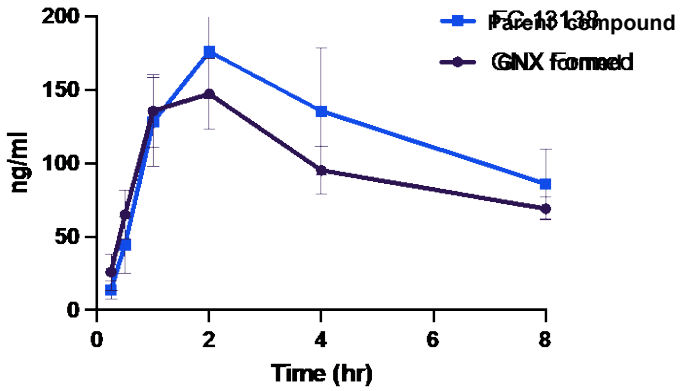
Greater solubility to increase oral bioavailability

Cleanly convert from prodrug to ganaxolone molecule for optimized PK

**Prodrug Candidate Identification Completed**

Analog Synthesis → Determine stability/ solubility in simulated gastric/ intestinal fluid → Test in human liver microsomes and human plasma → Test in animal liver microsomes → In vivo testing in appropriate species → Establish suitable drug-like properties → **Nominate for development**

**PRECLINICAL DATA: PK PROFILE AFTER A SINGLE ORAL DOSE**




IND-enabling studies → **IND**
Targeted YE 2025 → Proceed to full clinical development

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# Future Clinical Development Opportunities

## 22% of children with epilepsy have intellectual disability

### Developmental and epileptic encephalopathies (DEEs)

- Frequent seizures / EEG epileptiform activity that causes developmental slowing or regression

### Intellectual disability plus epilepsy (ID+E)

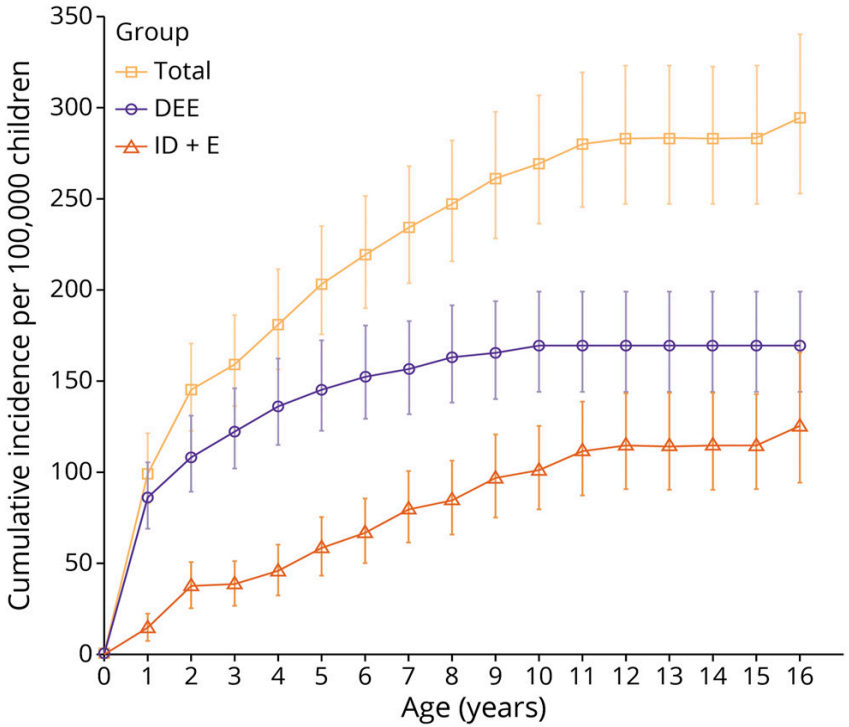
- Coexisting developmental delay and epilepsy, in which the seizures do not contribute to cognitive/functional decline ("static encephalopathies")

### Lennox-Gastaut syndrome

- Refractory seizures
- Developmental disability
- EEG: Slow spike-and-wave

**For DEEs with a presumed genetic cause, the responsible gene can be established in ~50%**

### Cumulative Incidence of DEEs and Intellectual Disability + Epilepsy




Poke G, Stanley J, Scheffer I, Sadleir L. Neurology 2023; 100:e1363-e1375.
Guerrini et al. Physiological Reviews 2023; 103:433-513.
Scheffer et al. Nature Reviews Disease Primers 2024; 10:61.

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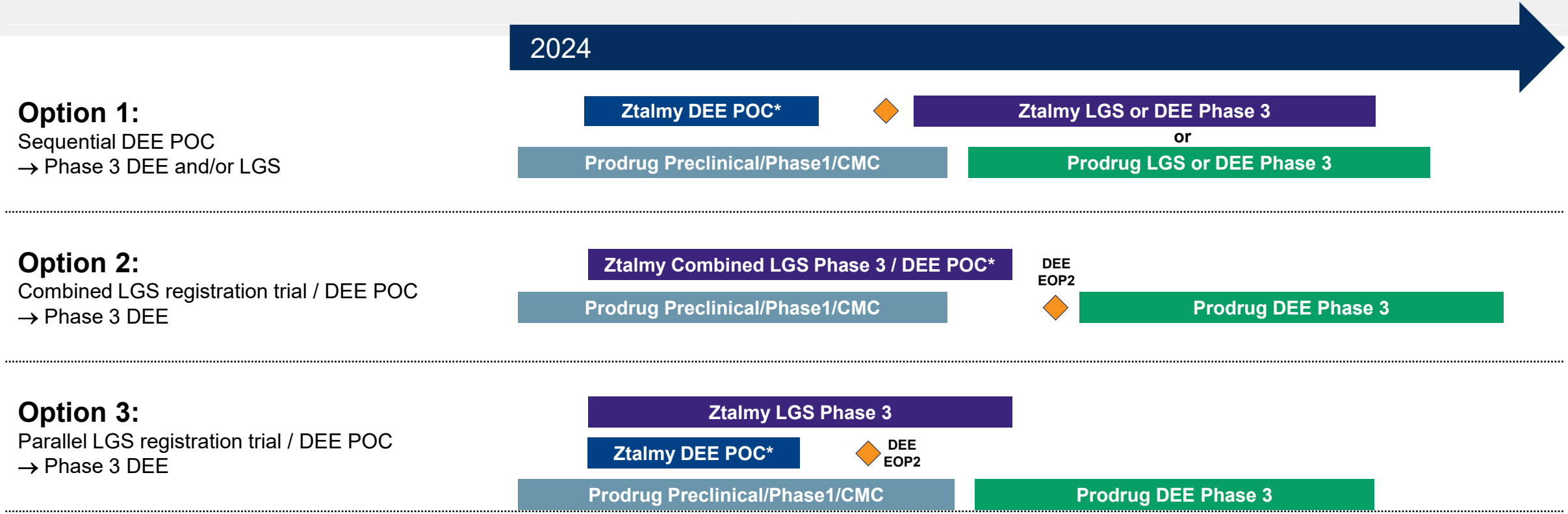
# Future Ganaxolone Clinical Development Opportunities

## Neurodevelopmental epilepsies (DEEs, ID+E, LGS)

**Clinical Development Framework**

- Optimize ganaxolone clinical utility in DEEs/LGS
- Opportunity for parallel and/or sequential development of Ztalmy and ganaxolone prodrug




* DEE POC could also include patients with intellectual disability + epilepsy ("static encephalopathies") in addition to those with DEEs

# Upcoming Meeting Presentations: 2024-2025

## TSC

- TRUST-TSC topline data
- Modified titration schedule
- Phase 2 open label 3-year follow up
- Effect of concomitant medications
- Non-seizure outcomes

## CDD

- LGS subtype analysis
- Effect of concomitant medications
- Ztalmy use in clinical practice

## IV ganaxolone

- RAISE RSE study primary data
- Continuous EEG findings in RAISE

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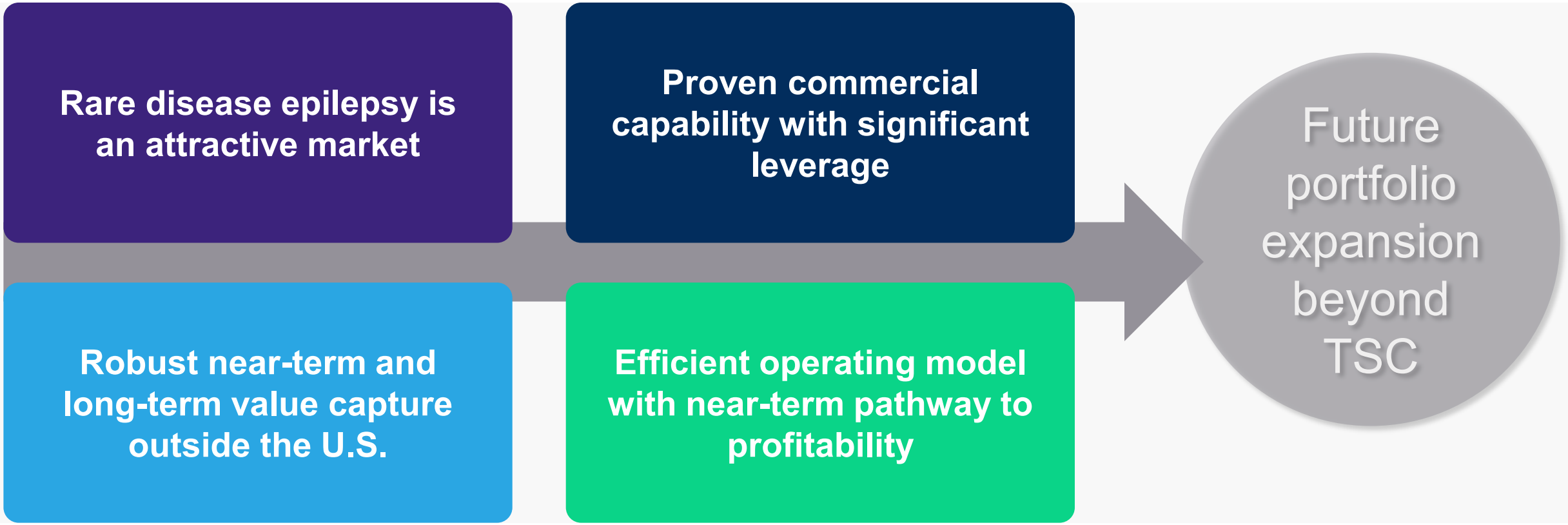
# Financial Overview

**Steven Pfanstiel**
Chief Financial Officer & Chief Operating Officer

# Well Positioned to Drive Significant Value Creation

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# Rare Disease Epilepsy Is an Attractive Market

- Large and identified refractory epilepsy patient populations with clear unmet need
- Needs of refractory epilepsy patients recognized by insurer and payer communities

**CDD**

- ZTALMY® is first drug specifically approved for treatment of seizures with CDKL5 deficiency disorder
- Nearly 100% reimbursement from all commercial and government payors for CDD-diagnosed patients
- ~200 patients active on therapy within ~2 years of launch despite limited ICD-10 code usage (~1,000 patients)

**TSC**

- Targeting ~12,700 refractory TSC patients; >6x addressable CDD population
- Refractory patients readily identified with clear need for additional seizure control
- Patient treatment for refractory patients typically involves polypharmacy approach

**LGS / Other DEE's**

Additional ~150k patient opportunity

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# Proven Commercial Capability with Significant Leverage

## U.S. CDD Launch (Q3 2022)

- Annual commercial investment of ~$25 million
- Achieved profitability on commercial investment (Q1 2024)
- 2024 Revenue Guidance (2nd full year) $33-$35 million
- Projected long-term annual revenue potential of >$100 million

## Potential U.S. TSC Launch (Q4 2025)

- Refractory TSC patient population represents **>6x opportunity vs. addressable CDD market**
  - Long-term TSC **revenue potential of >$700 million** at modest market share capture
- Established CDD commercial organization enables **significant leverage and efficiency for TSC launch**
  - Considerable overlap in call points between CDD and TSC targets
  - Incremental commercial investment of ~$25 million (~$50 million total between CDD and TSC)
- Expected **expedited launch ramp** vs. CDD
  - Patients readily identified without genetic testing hurdles
  - Market access established with CDD
- **Positive reimbursement** and payer dynamics
  - Refractory patient focus within TSC population
  - Government payors expected to represent >50% of total patients

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# Robust Near-term and Long-term Value Capture Outside the U.S.

- CDD and TSC milestones provide opportunity for near-term value from commercialization outside the U.S.
- Eligible for double-digit royalties from Europe and China; Opportunities remain in other markets

**>$25M near-term milestones**

- ~$11M CDD commercialization milestone (Orion)
- ~$16M TSC approval/commercialization milestones (Orion, Tenacia)

**Long-term royalty value capture**

- Increasing partner excitement approaching Ztalmy launch outside the U.S.
- Tiered double-digit royalties in both Europe (Orion) and China (Tenacia)
- >$300M of revenue-driven milestones

**Further expansion globally**

- Commercial distribution agreements active in MENA and Russia
- Managed-access launch in non-partnered markets
- Japan opportunity under assessment

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# Expansion into TSC Drives an Efficient Operating Model

## Pricing

- **Projected TSC dosing of +10% to 20% vs. current CDD**
  - CDD dosing of between 1,150 and1,200 mg/day
- **Expected stable GTN deduction of ~20%**
  - Similar payer profile between CDD and TSC
  - Payer pricing acceptance for refractory therapies

## Product Cost & Supply

- **Current COGS ~10% of net revenue (based on U.S. pricing)**
- **Expansion of Ztalmy supply capacity in process**
- **Active cost savings opportunities underway**
  - 2nd source of API active with potential for >20% API savings
  - Future savings anticipated with manufacturing scale

## SG&A expense

- **Limited commercial investment increase of ~$25 million required for TSC launch**
  - Significant leverage between CDD and TSC efforts
- **Expected total company SG&A expense of <$100 million projected with CDD and TSC launch**
  - Limited incremental non-commercial investment required for TSC launch

## R&D expense

- **Reduced near-term portfolio investment**
  - Limited future IV investment
  - Completion of Phase 3 RSE and TSC trial investments in 2024
- **Disciplined future portfolio investment**
  - Increased investment pending outcome of Phase 3 TSC data

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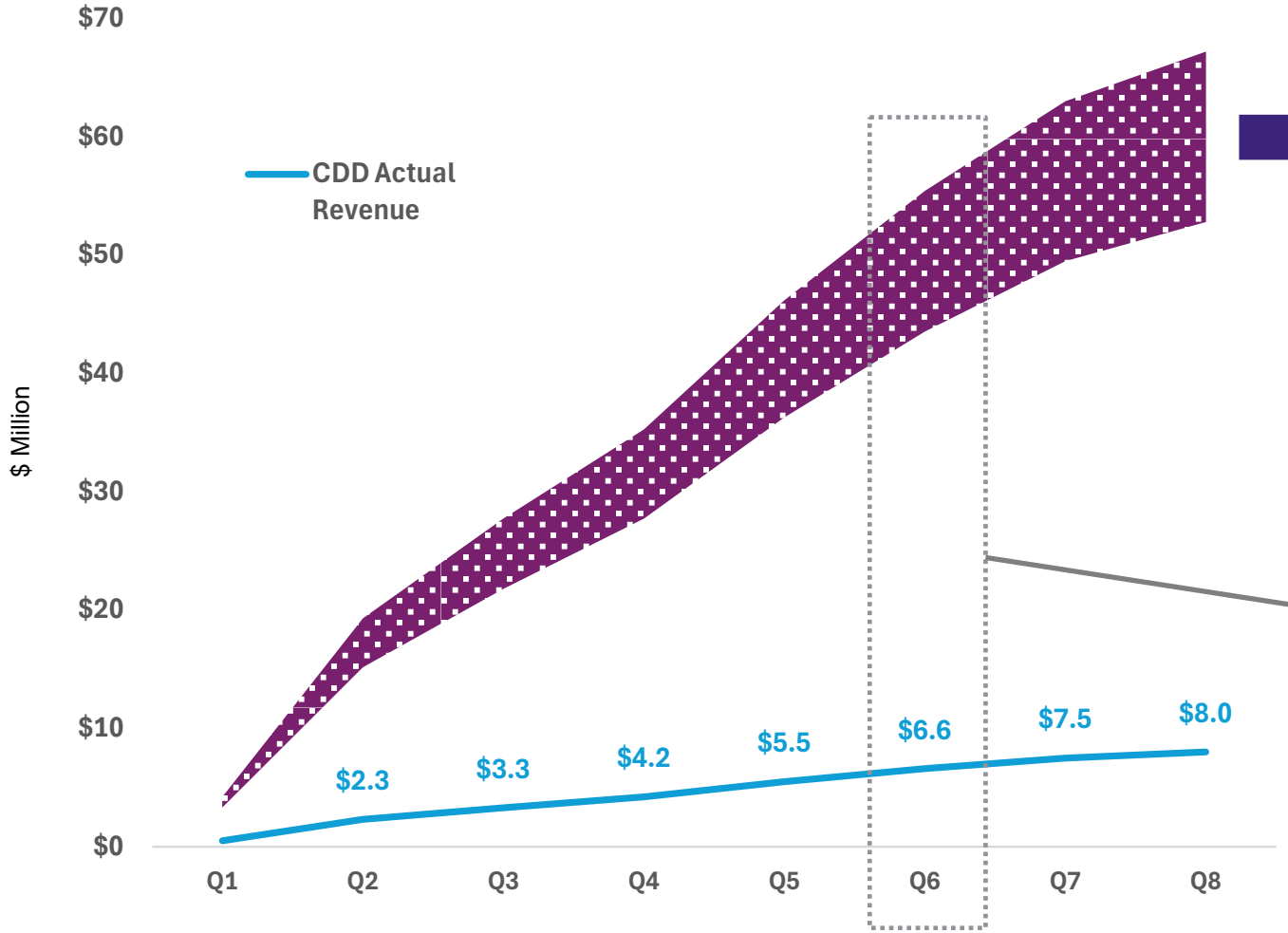
# Annualized TSC Revenue Potential of ~$200M within 18 Mo. of Launch

## CDD Quarterly Revenue Ramp (Q3 2022 Launch)




### Potential ZTALMY TSC Revenue Ramp Based on CDD Launch

- TSC Patient Population at 6-7x CDD
- TSC Dosing at 1.1–1.2x CDD
- Excludes potential for accelerated TSC ramp vs. CDD due to patient identification dynamics

**At 18 months** (in millions):

| | |
|---|---|
| **CDD** | **$6.6** |
| +6-7x ptn pop. | |
| +1.1-1.2x dosing | |
| **TSC Potential** | **$43 - 55** |
| **TSC Annualized (x4)** | **$170 - 220** |

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# Near-term Pathway to Profitability

**Corporate Target:**

Total company profitability anticipated within 18 months of U.S. TSC launch

- **Break-even P&L and positive cash flow projected to occur at <$200 million of annualized Ztalmy revenue**
- **Key assumptions:**
  - ~$200 million net sales drives ~$180 million of Gross Profit, assuming 10% Cost of Goods
  - Estimated annual total SG&A expense of <$100 million
    - Includes ~$50 million of commercial investment for CDD and TSC
    - Includes ~$15 million of non-cash stock-based compensation expense
  - Assumed modest level of annual R&D innovation expense ~$50 million
  - Projected annualized cash royalty financing impact (Sagard) of ~$22.5 million (at $200 million of U.S. revenue)
    - Full repayment of existing Oaktree debt by June 2026

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# Financial Foundation

## 2024 Full-Year Guidance

| | Actual | Guidance |
|---|---|---|
| | 1H 2024 | 2H 2024 |
| ZTALMY Net Revenue | $15.5M | $17.5 - $19.5M |
| SG&A & R&D[1] | $80.3M | $55 - $60M |
| SBC[2] | $9.8M | ~$10M |

## Financial Summary (at June 30, 2024):

- $64.7 million in cash and cash equivalents
- $58 million in debt[3], matures in June 2026
- 55.0 million shares outstanding; 68.4 million shares outstanding on a fully dilutive basis[4]

## Financing Overview

- **Current cash runway into Q2 2025**
  - Fully executed on cost reduction activities as of Q3 2024
- **Current Oaktree debt balance of ~$58 million[3]**
  - Quarterly amortization payments of <$2m in 2024 and <$4m in 2025 with full maturity in June 2026
- **On-going Sagard royalty financing includes a 7.5% royalty rate on U.S. sales only through June 2026**
  - Total Sagard investment of $32.5 million (in Q4 2022)
  - Buyout cap of 1.6x into Q4 2025; cap increases to 1.8x in 4Q 2025 and 1.9x in 4Q 2026
- **Outside the U.S. partnerships expected to bring in additional capital**
  - CDD and TSC approval/commercial milestones of >$25 million
  - Double-digit royalty rates in Europe and China

[1] Reflects combined SG&A and R&D expenses.
[2] Non-cash Stock-Based Compensation (SBC) expense, included in note (1).
[3] Aggregate notes payable outstanding under Oaktree agreement
[4] Fully dilutive total includes impact of pre-funded warrants and outstanding stock options and RSU's

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# Ganaxolone Patent Estate

| U.S. Patents/ Patent Applications | | Expiration Date |
|---|---|---|
| **Status Epilepticus** | | |
| Method of Use | Patent granted on clinical regimen | 2040 |
| | Patent granted on clinical regimen using broader ganaxolone dosing | 2040 |
| | Applications pending on dosing regimens for SRSE and ESE | 2041/2042 |
| Formulation | Licensed Captisol® patents | Through 2033 |
| | Applications pending on IV formulation | 2036 |
| **CDKL5 Deficiency Disorder** | | |
| Method of Use | Patent granted (licensed) for method of treating CDKL5 deficiency disorder | 2037 |
| | Application pending on dosing regimen | 2038/2041/2042 |
| Formulation | Patents granted (oral suspension) | 2031 (if PTE granted) |
| **Tuberous Sclerosis Complex** | | |
| Method of Use | Two patents granted for method of treating TSC-related epilepsy | 2040 |
| | Application pending on new dosing regimens | 2041/2042 |
| Formulation | Patents granted (oral suspension) | 2031 (if PTE granted) |
| **Second Generation Ganaxolone** | | |
| Formulation | Application pending on second generation formulations | 2042/2043 |

**Notice of allowance received for patent application claiming oral titration regimens for a broad range of epilepsies - term through September 2042.**

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Orphan drug designations for CDD and PCDH19 provide 7 and 10 years regulatory exclusivity in U.S. and EU, respectively.
Orphan drug designation for SE provides 7 years regulatory exclusivity in U.S.

# Conclusion

**Scott Braunstein, M.D.**
Chairman & Chief Executive Officer

Marinus is operating in an attractive market

Established business model with strong commercial foundation to be leveraged by TSC and beyond

Efficient operating model provides clear path to near-term profitability

## Multiple and Expanding Layers of Patent Protection Across Portfolio

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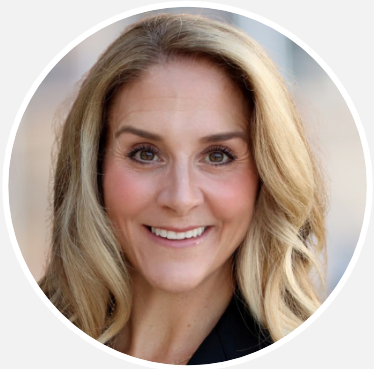
# Q&A

**Scott Braunstein, M.D.**
Chairman and Chief Executive Officer

**Steven Pfanstiel**
Chief Financial Officer & Chief Operating Officer

**Joseph Hulihan, M.D.**
Chief Medical Officer



**Christy Shafer**
Chief Commercial Officer

**Sonya Weigle**
Chief People and Investor Relations Officer

**Lisa Lejuwaan**
SVP & Business Unit Lead – Rare Genetic Epilepsy

**Alex Aimetti, Ph.D.**
Chief Scientific Officer

# Guest Speakers

**Mary Kay Koenig, M.D.**
University of Texas McGovern Medical School

**Rajsekar R. Rajaraman, M.D., M.S.**
UCLA Mattel Children's Hospital

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