

United Therapeutics Corporation Second Quarter 2025 Corporate Update

JULY 30, 2025



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INTRODUCTION

Today's Speakers



Dr. Martine Rothblatt

Chairperson and Chief Executive Officer



Michael Benkowitz

President and Chief Operating Officer

INTRODUCTION

Other Executives Present Today

**James Edgemond**

Chief Financial Officer and Treasurer

**C.Q. Deng**

Senior Vice President, Biostatistics, Statistical Programming & Data Management

**Dr. Leigh Peterson**

Executive Vice President,
Product Development and
Xenotransplantation

**Dr. Gil Golden**

Executive Vice President, Chief Medical Officer

**Pat Poisson**

Executive Vice President,
Technical Operations

INTRODUCTION

Upcoming Investor Conferences



Morgan Stanley Global Healthcare Conference

September 8, 2025



Bernstein's Second Annual Healthcare Forum

September 23, 2025

INTRODUCTION

Upcoming Medical Conferences



World Transplant Congress 2025

August 2-6, 2025



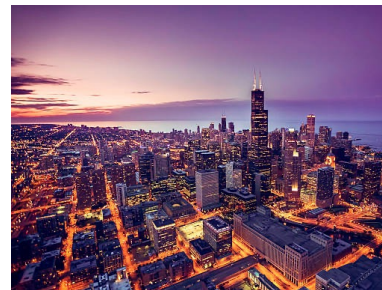
18th Congress of the International Xenotransplantation Association

September 30 - October 3, 2025



European Respiratory Society Congress

September 27 - October 1, 2025



American College of Chest Physicians CHEST 2025 Annual Meeting

October 19-22, 2025

Dr. Martine Rothblatt

CHAIRPERSON AND CHIEF EXECUTIVE OFFICER



2Q 2025 Performance Summary

Product	Product Revenue	Percent Change ¹
Tyvaso DPI®/ Nebulized Tyvaso®	\$470 M	▲ 18%
Remodulin®	\$135 M	▼ 9%
Orenitram®	\$124 M	▲ 16%
Unituxin®	\$58 M	▲ 13%
Other + Adcirca®	\$12 M	NM ²
Total Revenue	\$799 M	▲ 12%

\$1.4 B

TTM Operating Cash Flow

\$5.0 B

Cash, Cash Equivalents, &
Marketable Investments

**Highest Quarterly
Tyvaso³, Orenitram,
and Total Revenue**

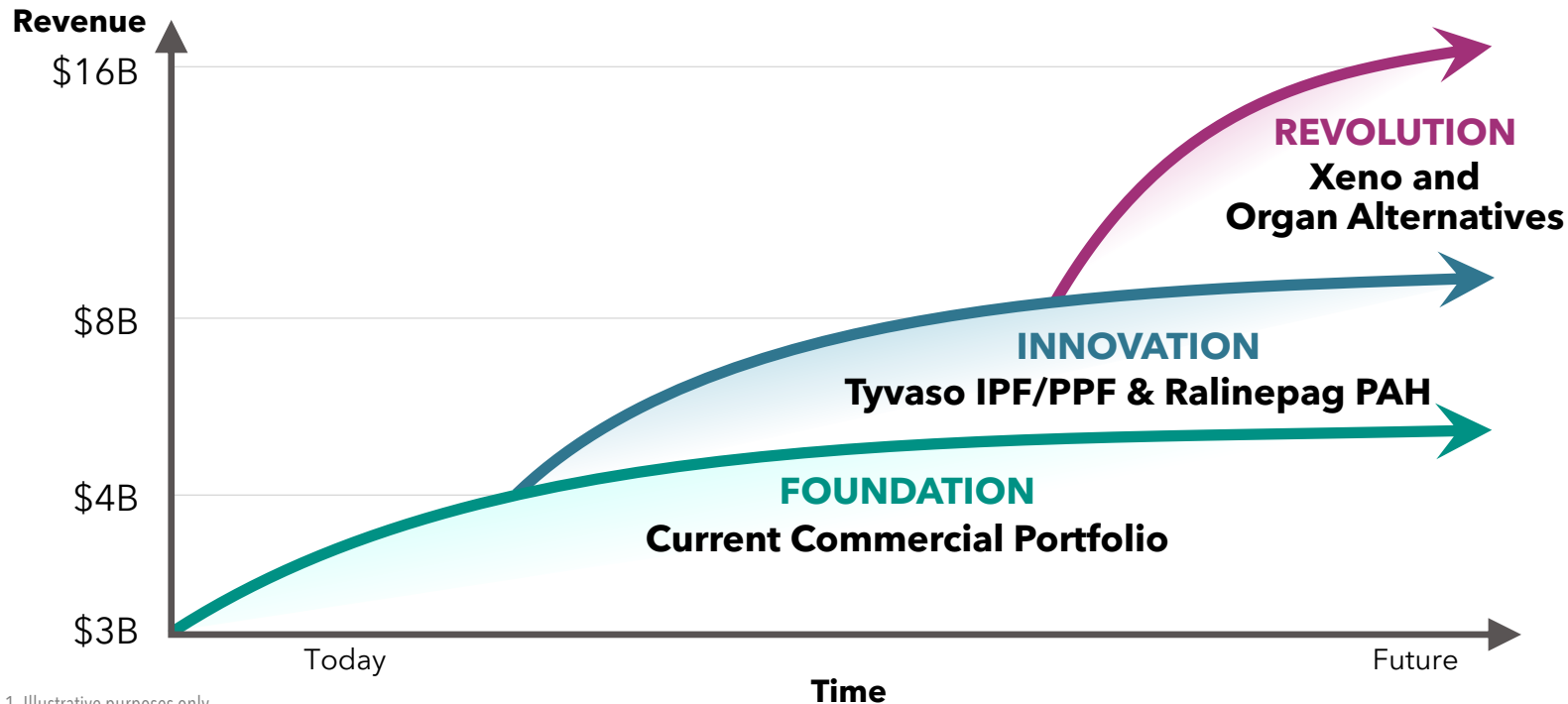
1. Change vs. 2Q 2024.

2. Not meaningful.

3. Tyvaso DPI + nebulized Tyvaso

HOW WE OPERATE

Positioned for Multiple Waves of Growth¹



1. Illustrative purposes only.

PIPELINE

Development Engine Addressing Unmet Needs

NON-REGISTRATION

REGISTRATION

FILED

APPROVED

Tyvaso®

TETON 1 - Idiopathic Pulmonary Fibrosis - U.S. and Canada

TETON 2 - Idiopathic Pulmonary Fibrosis - ROW¹

TETON PPF - Progressive Pulmonary Fibrosis

Ralinepag

ADVANCE OUTCOMES - PAH²

Xeno, Organs, and Organ Alternatives

EVLP³/CLES⁴ - Lung Transplant

EXPAND - UKidney™ - End Stage Renal Disease⁶

miroliverELAP⁵ - Acute Liver Failure

**VISIT THE NEW
pipeline.unither.com
FOR MORE DETAILS**

Pre-clinical Xeno and Organ Alternative Programs

EXTEND - UThymoKidney™

EXPRESS - UHeart™

ULung™

miroliver®

ULobe™

IVIVA Kidney

mirokidney®

1. ROW = rest of world outside the U.S. and Canada. 2. PAH = pulmonary arterial hypertension. 3. EVLP = ex-vivo lung perfusion. 4. CLES = centralized lung evaluation system.

5. ELAP = external liver assist product. 6. Registrational status pending agreement with the FDA.

CAPITAL ALLOCATION

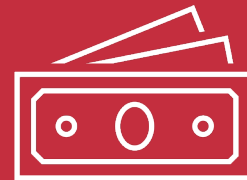
Repurchase Authorization Demonstrates Our Commitment to Balanced Capital Allocation

Strong financial position and **robust** balance sheet

Confidence in upcoming catalysts and **undervalued** share price

Ample remaining capital to meet mid- and long-term goals

Continued belief in our core business and **cash flow potential**



\$1.0 billion

*Repurchase Authorization
through March 31, 2026*

FOUNDATION

Tyvaso DPI
Nebulized Tyvaso
Orenitram
Remodulin
Unituxin

PAH¹
PH-ILD²

INNOVATION

Tyvaso DPI
Nebulized Tyvaso
Ralinepag
EVL⁵

PAH
PH-ILD
IPF³
PPF⁴
LUNG TRANSPLANT

REVOLUTION

Xenotransplantation
Regenerative Medicine
3D Printed Organ
Alternatives
Bio-Artificial Organ
Alternatives

XENO AND
ORGAN ALTERNATIVES



Michael Benkowitz

PRESIDENT AND CHIEF OPERATING OFFICER



COMMERCIAL EXECUTION

Continued Strong Revenue Growth in 2Q/25

Tyvaso³, worldwide

▲ 18% y/y¹ to \$470M

Remodulin, worldwide

▼ 9% y/y to \$135M

Orenitram

▲ 16% y/y to \$124M

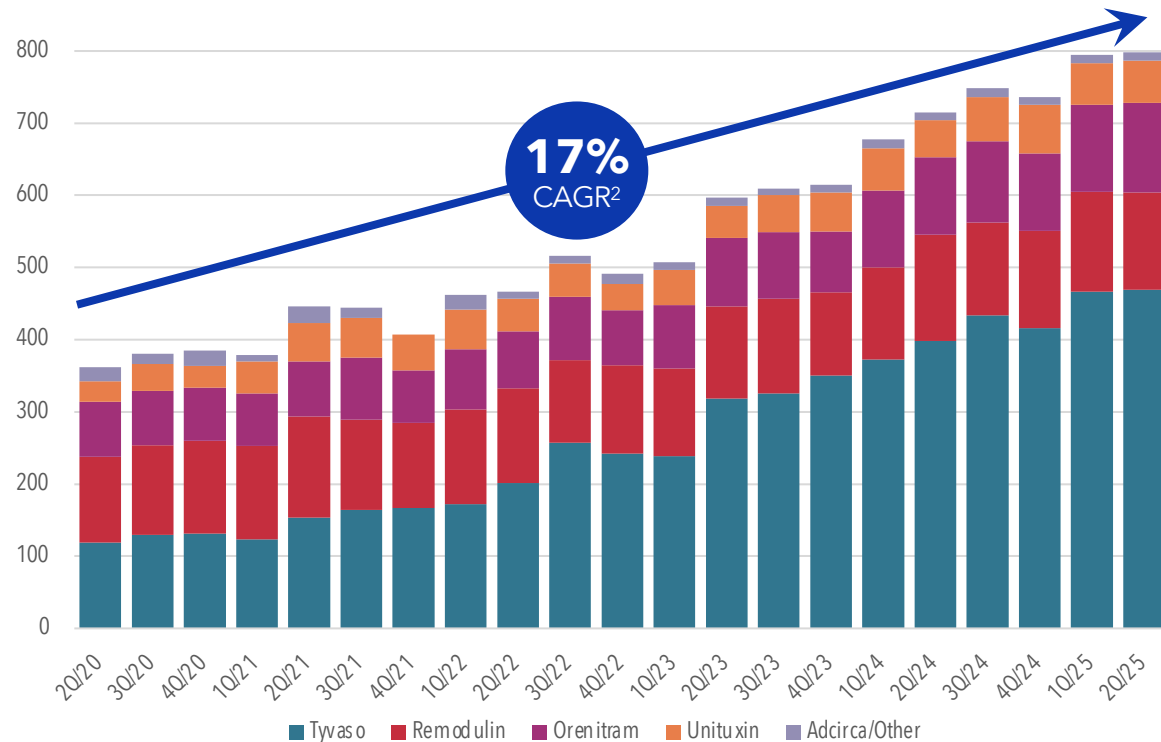
Unituxin, worldwide

▲ 13% y/y to \$58M

Total Revenue

▲ 12% y/y to \$799M

Quarterly revenue, millions USD



1. y/y = year over year.

2. CAGR = compound annual growth rate calculated from 2Q/20 to 2Q/25.

3. Tyvaso DPI + nebulized Tyvaso.

TYVASO DPI

Tyvaso DPI is the Best Positioned Inhaled Prostacyclin

DOSING

No commercially available treprostinil DPI has published data at **higher doses** than Tyvaso DPI

TOLERABILITY

Tolerability of Tyvaso DPI has been shown to increase over time¹

PARTICLE DEPOSITION

Tyvaso DPI's low flow rate and optimized particle size allows for **deep deposition in the lung**

EASE OF USE

Tyvaso DPI requires just **one breath per cartridge** and **low inspiratory effort**

1. Spikes, L. A., et al. (2022). BREEZE: Open-label clinical study to evaluate the safety and tolerability of treprostinil inhalation powder as Tyvaso DPI™ in patients with pulmonary arterial hypertension. Pulmonary Circulation, 12(2), e12063. <https://doi.org/10.1002/pul2.12063>.

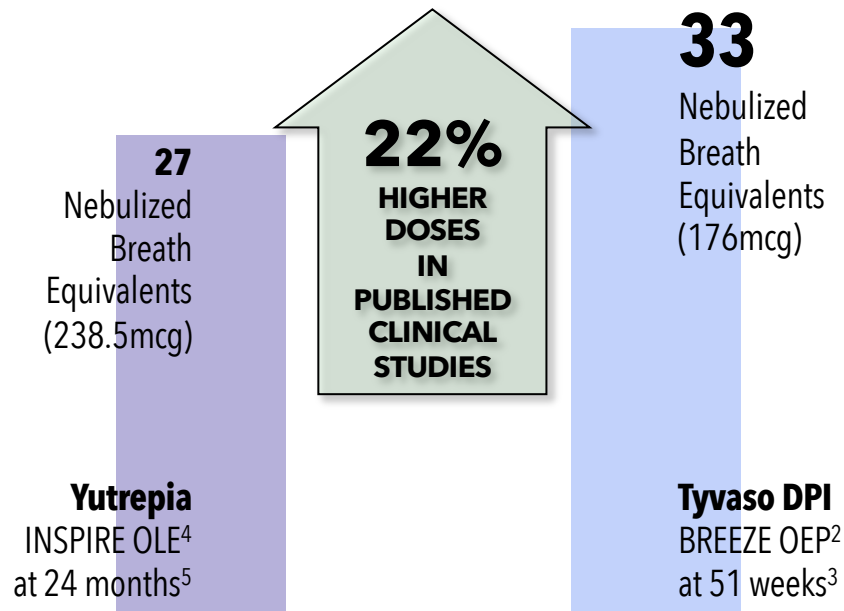
TYVASO DPI DOSING

Dosing for Tyvaso DPI is not Limited

**THERE IS NO
MAXIMUM
LABELED DOSE
WITH
TYVASO DPI.¹**

1. Tyvaso DPI prescribing information. 2. OEP = optional extension phase. 3. Spikes, L. A., et al. (2024, October). Long-term outcomes and dosing in the BREEZE study optional extension phase. CHEST, 166(4, Suppl), A6061-A6063. <https://doi.org/10.1016/j.chest.2024.06.385>. 4. OLE = open label extension. 5. <https://liquidia.com/static-files/d5275811-d1af-4ac5-80d4-9bb4b7262d74>.

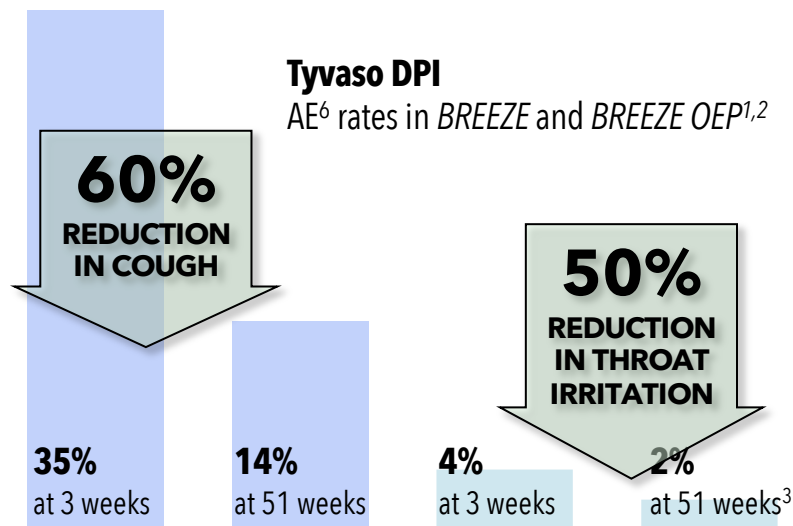
**TYVASO DPI HAS BEEN STUDIED AND PUBLISHED AT
HIGHER DOSES THAN YUTREPIA**



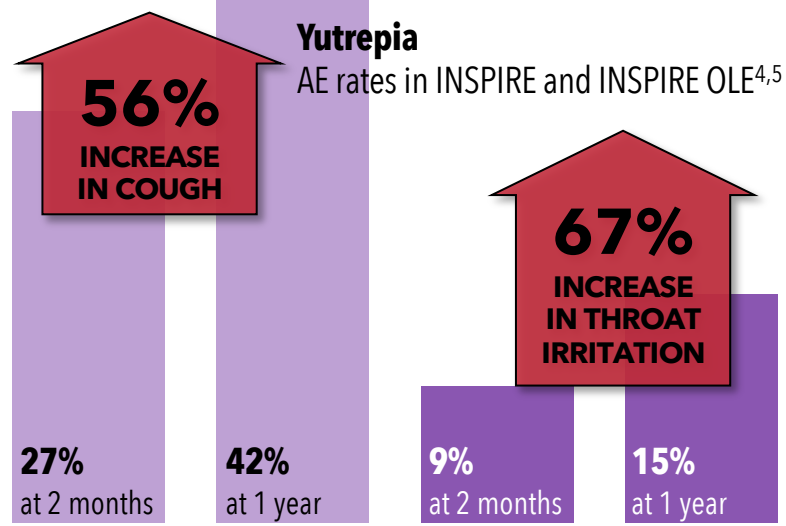
TYVASO DPI TOLERABILITY

Tyvaso DPI Tolerability Increases Over Time

The *BREEZE* study and its Optional Extension Phase demonstrated that key tolerability issues like **cough** and **throat irritation decrease over time**



The *INSPIRE* study and its open label extension showed a **worsening over time** of these key tolerability components



1. OEP = optional extension phase. 2. Spikes, L. A., et al. (2022). *BREEZE*: Open-label clinical study to evaluate the safety and tolerability of treprostinil inhalation powder as Tyvaso DPI™ in patients with pulmonary arterial hypertension. *Pulmonary Circulation*, 12(2), e12063. <https://doi.org/10.1002/pul2.12063>. 3. Throat irritation in the *BREEZE OEP* study was not published due to the low rate of occurrence; data is from United Therapeutics records. 4. OLE = open label extension.

5. <https://www.yutrepiahcp.com/pah/safety/>. 6. AE = adverse event.

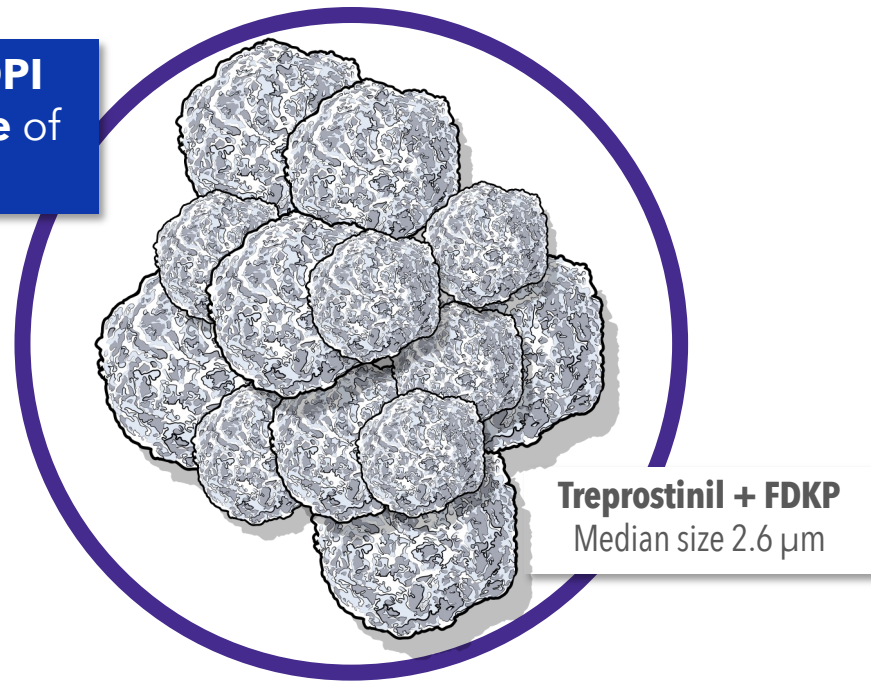
TYVASO DPI ADMINISTRATION

Tyvaso DPI is the Optimal Particle Size

With a median size of 2.6 μm , **Tyvaso DPI particles** are in the optimal size range of 1-5 μm for pulmonary deposition¹

FDKP² microparticles rapidly dissolve in the neutral pH of the lungs and promote¹:

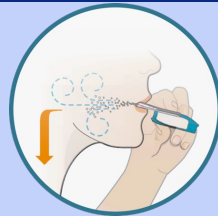

- Exposure to treprostinil
- Deposition of medication in the distal lungs
- Consistent, high rates of drug delivery



1. McEvoy, C., et al. Tyvaso DPI: Drug-device characteristics and patient clinical considerations. *Pulmonary Pharmacology & Therapeutics*, 83, 102266. <https://doi.org/10.1016/j.pupt.2023.102266>. 2. FDKP = Fumaryl diketopiperazine.

TYVASO DPI USE

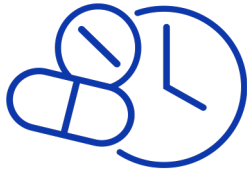
Tyvaso DPI is Easy to Use

	Tyvaso DPI ¹	Yutrepia ²
Head positioning		
Breaths per cartridge/capsule	1	2
Flow rate required to dispense powder	20 L/min	99 L/min ³
Daily cleaning required	No	Yes
Refrigeration required by patient	No	No

1. Tyvaso DPI prescribing information. 2. Yutrepia prescribing information. 3. Based on the delivered dose chart presented in the Yutrepia prescribing information.

TYVASO DPI

Tyvaso DPI is the Best Positioned Inhaled Prostacyclin

**DOSING****TOLERABILITY****PARTICLE
DEPOSITION****EASE OF USE**

Dr. Leigh Peterson

EVP, PRODUCT DEVELOPMENT AND XENOTRANSPLANTATION



TETON MARKET

IPF¹ is a Large Corridor of Indifference

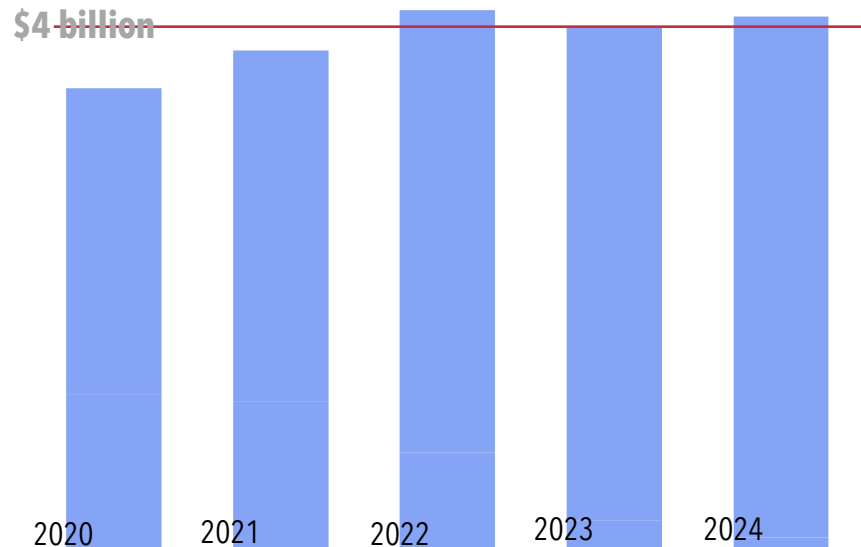
100,000
PATIENTS AFFECTED IN THE U.S.¹

30,000 TO 40,000
NEW CASES EACH YEAR IN THE U.S.¹

ONLY 30% OF PATIENTS
ARE ON IPF THERAPY DUE TO AE² PROFILE³

\$4 BILLION +
WORLDWIDE SALES OF PIRFENIDONE & NINTEDANIB⁴

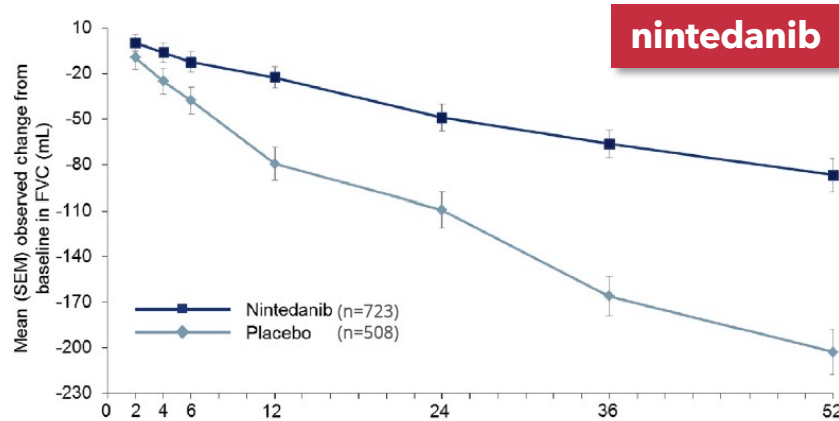
Worldwide sales of branded pirfenidone and nintedanib⁴



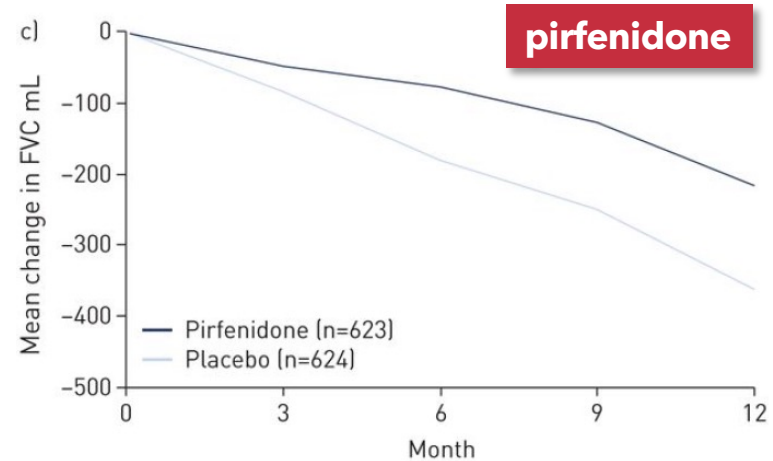
1. National Library of Medicine, National Institutes of Health, Genetics Home Reference 2020; <https://ghr.nlm.nih.gov/condition/idiopathic-pulmonary-fibrosis#statistics>. 2. AE = adverse event. 3. Dempsey, T. et al. (2021). Adoption of the antifibrotic medications pirfenidone and nintedanib for patients with idiopathic pulmonary fibrosis. *Annals of the American Thoracic Society*, 18(7), 1191–1199. <https://doi.org/10.1513/AnnalsATS.202007-901OC>. 4. TD Cowen estimates, July 15, 2025.

TETON MARKET

Approved Therapies Only Slow the Rate of FVC Decline



Adjusted annual rate of decline in FVC was -112.4 mL/year with nintedanib and -223.3 mL/year with placebo (difference: 110.9 mL/year; $p < 0.0001$)¹



Mean change from baseline to month 12, -216 mL in the pirfenidone group and -363 mL in the placebo group (absolute difference: 148 mL, $p < 0.001$)²

TETON MECHANISM OF ACTION

Treprostinil Has Antifibrotic Properties

TREPROSTINIL ANTI-FIBROTIC PATHWAYS¹

EP₂ activation²

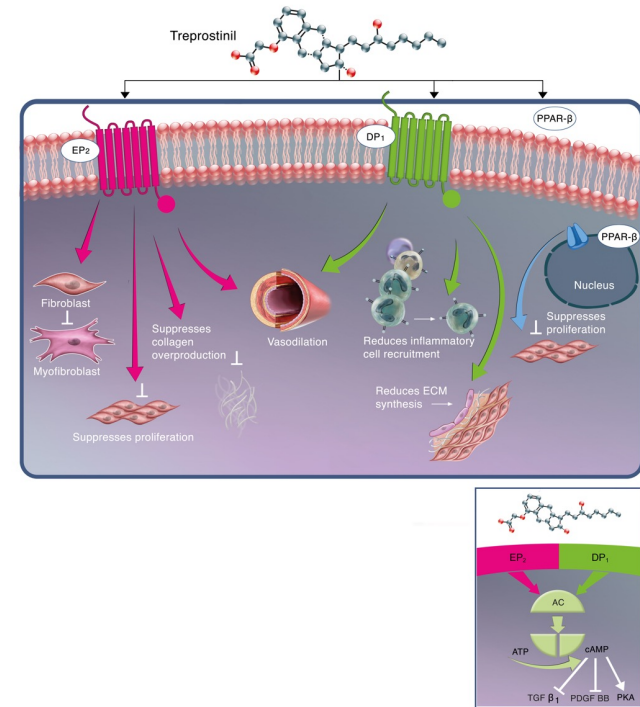
- ▼ fibroblast to myfibroblast differentiation
- ▼ fibroblast proliferation
- ▼ collagen overproduction

DP₁ activation³

- ▼ inflammatory cell recruitment
- ▼ extracellular matrix synthesis

PPAR-β activation⁴

- ▼ fibroblast proliferation



1. Kolb, M., Orfanos, S.E., Lambers, C. et al. The Antifibrotic Effects of Inhaled Treprostinil: An Emerging Option for ILD. *Adv Ther* 39, 3881–3895 (2022). <https://doi.org/10.1007/s12325-022-02229-8>. 2. EP₂ = prostaglandin E receptor 2. 3. DP₁ = prostaglandin D receptor 1. 4. PPAR-β = peroxisome proliferator-activated receptors.



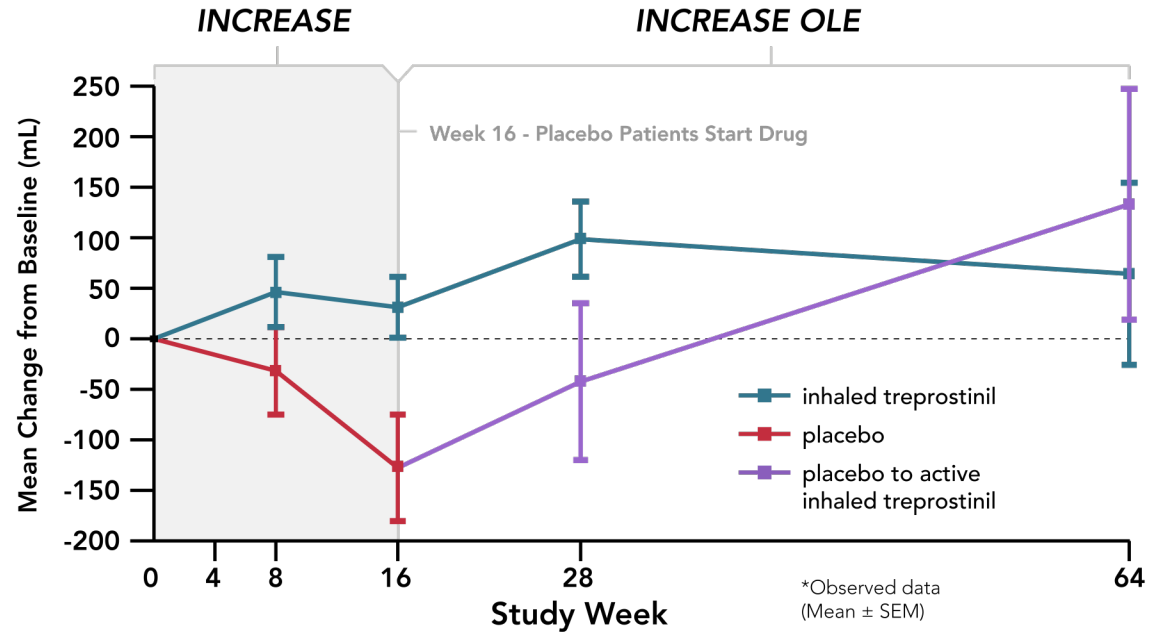
TETON RATIONALE

Tyvaso for IPF^{1,2}

The *TETON* studies evolved from UT-sponsored in vitro studies and FVC³ observations in *INCREASE*⁴ and *INCREASE OLE*⁵

IPF safety subgroup⁶ showed meaningful and sustained FVC improvement, including when placebo patients were crossed over in the open-label extension

MEANINGFUL, SUSTAINED FVC IMPROVEMENT



*Observed data
(Mean \pm SEM)

1. IPF = idiopathic pulmonary fibrosis. 2. Tyvaso is not approved to treat IPF. 3. FVC = forced vital capacity. 4. N Engl J Med 2021; 384:325-334 DOI: 10.1056/NEJMoa2008470.

5. The Lancet Respiratory Medicine, Volume 9, Issue 11, 1266 – 1274 DOI: 10.1016/S2213-2600(21)00165-X. 6. FVC data was derived from a post hoc analysis of a safety endpoint. Data from post hoc analyses should always be interpreted with caution.

TETON PROGRAM

The *TETON* Program Consists of Three Studies

*TETON 1*¹

U.S. and Canada
598 patients⁴

**IDIOPATHIC PULMONARY
FIBROSIS**

*TETON 2*²

Argentina	Italy
Australia	Mexico
Belgium	Netherlands
Chile	New Zealand
Denmark	Peru
France	South Korea
Germany	Taiwan
Israel	

597 patients⁵

**IDIOPATHIC PULMONARY
FIBROSIS**

*TETON PPF*³

United States	Germany
Canada	Israel
Argentina	New Zealand
Australia	South Korea
Belgium	Taiwan
Chile	
France	

~698 patients³

**PROGRESSIVE
PULMONARY FIBROSIS**

1. <https://clinicaltrials.gov/study/NCT04708782>, 2. <https://clinicaltrials.gov/study/NCT05255991>, 3. <https://clinicaltrials.gov/study/NCT05943535>, 4. <https://ir.unither.com/press-releases/2025/02-04-2025-120131472>,

5. <https://ir.unither.com/press-releases/2024/07-10-2024-120022959>.

TETON DESIGN

TETON 2 Study Design¹

PRIMARY ENDPOINT

Change in absolute FVC² from baseline to week 52

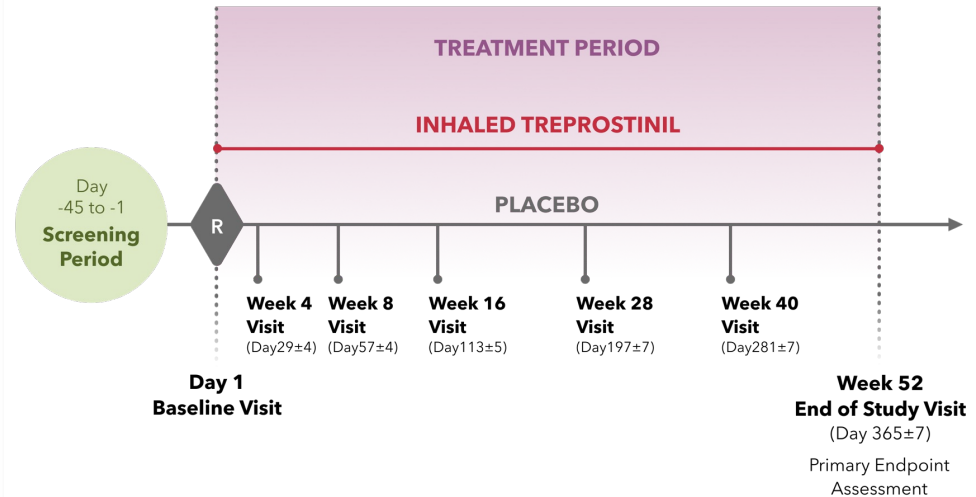
SECONDARY ENDPOINTS

Time to clinical worsening³
 Time to first acute exacerbation of IPF⁴
 Overall survival at week 52
 Predicted FVC at week 52
 K-BILD⁵ score at week 52
 DLCO⁶ at week 52

SAFETY ENDPOINTS

Adverse events & serious adverse events
 Clinical laboratory parameters
 Vital signs⁷

STUDY VISIT SCHEDULE



1. <https://clinicaltrials.gov/study/NCT05255991>. 2. FVC = forced vital capacity. 3. Time to clinical worsening is determined to be the first occurrence of any of the following: death (all causes); respiratory-related hospitalization; or $\geq 10\%$ relative decline in % predicted FVC. 4. IPF = idiopathic pulmonary fibrosis. 5. K-BILD = the King's Brief Interstitial Lung Disease (KBILD) questionnaire, Sinha, A., et al. (2019). The King's Brief Interstitial Lung Disease (KBILD) questionnaire: an updated minimal clinically important difference. *BMJ Open Respiratory Research*, 6(1), e000363. <https://doi.org/10.1136/bmjresp-2018-000363>. 6. DLCO = diffusing capacity of the lung for carbon monoxide. 7. Vital signs include saturation of peripheral capillary oxygenation (SpO2) and 12-lead electrocardiograms (ECGs).

TETON DESIGN

TETON 2 Study Design¹

SELECTED KEY INCLUSION CRITERIA

Age 40+

FVC² ≥ 45% predicted

If on pirfenidone or nintedanib:

stable dose for ≥ 40 days prior to baseline

Diagnosis of IPF^{3,4}

HRCT⁵ within the last 12 months⁶

SELECTED KEY EXCLUSION CRITERIA

Primary obstructive disease, FEV₁⁷/FVC < 0.70

>10 L/min of supplemental oxygen use at baseline

Use of PAH⁸ agents 60 days prior to baseline⁹

IPF exacerbations or infections¹⁰

1. <https://clinicaltrials.gov/study/NCT05255991>. 2. FVC = forced vital capacity. 3. IPF = idiopathic pulmonary fibrosis. 4. diagnosis must be based on the 2018 ATS/ERS/JRS/ALAT Clinical Practice Guidelines, Raghu, G., et al. (2018). Diagnosis of idiopathic pulmonary fibrosis. An official ATS/ERS/JRS/ALAT clinical practice guideline. American Journal of Respiratory and Critical Care Medicine, 198 (5), e44–e68. <https://doi.org/10.1164/rccm.201807-1255ST>. 5. HRCT = high-resolution computed tomography. 6. HRCT must be consistent with usual interstitial pneumonia and confirmed by a central reader. 7. FEV₁ = forced expiratory volume in one second, a key metric from spirometry that measures how much air a person can forcefully exhale in the first second after taking a deep breath. 8. PAH = pulmonary arterial hypertension. 9. The subject must not receive any PAH-approved therapy, including prostacyclin therapy (epoprostenol, treprostinil, iloprost, or beraprost; except for acute vasoreactivity testing), IP receptor agonists (selexipag), endothelin receptor antagonists, phosphodiesterase type 5 inhibitors (PDE5-Is), or soluble guanylate cyclase stimulators within 60 days prior to baseline. 10. Any IPF exacerbation, active pulmonary infection, or upper respiratory infection ≤30 days prior to baseline.

TETON DESIGN

2024 *TETON 1* and *TETON 2* Resizing

KEY CONSIDERATIONS

Blinded standard deviation observed to date

Use of background therapy

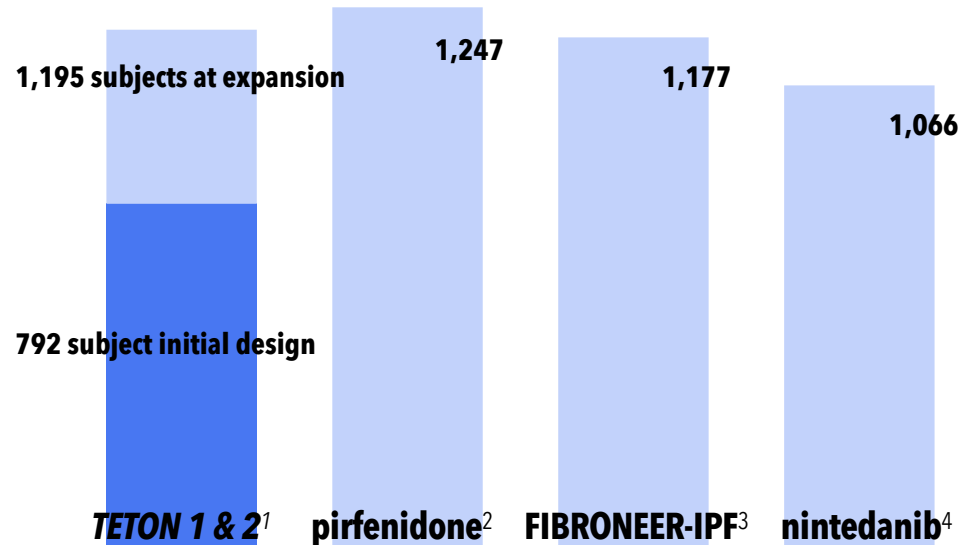
Patient retention

Regulatory feedback on sample size

Regulatory feedback on statistical analysis

Recent IPF¹ clinical challenges

Alignment with sizing for major successful IPF programs



1. United Therapeutics company reports. 2. pirfenidone prescribing information. 3. Richeldi, L., et al. (2025). Nerandomilast in patients with idiopathic pulmonary fibrosis. *New England Journal of Medicine*, 392(22), 2193–2202. <https://doi.org/10.1056/NEJMoa2414108>. 4. Richeldi, L., et al. (2014). Efficacy and safety of nintedanib in idiopathic pulmonary fibrosis. *New England Journal of Medicine*, 370(22), 2071–2082. <https://doi.org/10.1056/NEJMoa1402584>.

TETON BASELINE

TETON Baseline Characteristics Compare Favorably to Recent IPF¹ Studies

	TETON 2³	TETON 1³	FIBRONEER-IPF⁴	pirfenidone^{5,6}	nintedanib⁷
Age	72	73	70	67	67
Gender (male)	80%	77%	83%	74%	79%
Time since diagnosis	3.6	3.8	3.5	1.5	1.6
Baseline FVC ² (mL)	2,696	2,724	2,842	N/A	2,719
% predicted FVC	77%	75%	78%	72%	79%
Use of background therapy ⁸	75%	77%	78%	N/A	N/A

1. IPF = idiopathic pulmonary fibrosis. 2. FVC = forced vital capacity. 3. Nathan, S. D., et al. (2025, May). Preliminary baseline data from the TETON Phase 3 clinical trials of inhaled treprostinil in the treatment of idiopathic pulmonary fibrosis. Poster presented at the American Thoracic Society International Conference, San Francisco, CA. United Therapeutics Corporation. 4. Richeldi, L., et al. (2025). Nerandomilast in patients with idiopathic pulmonary fibrosis. The New England Journal of Medicine, 392(22), 2193-2202. <https://doi.org/10.1056/NEJMoa2414108>. 5. pirfenidone prescribing information. 6. King, T. E., Jr., et al. (2014). A phase 3 trial of pirfenidone in patients with idiopathic pulmonary fibrosis. The New England Journal of Medicine, 370(22), 2083-2092. <https://doi.org/10.1056/NEJMoa1402582>. 7. Richeldi, L., et al. (2014). Efficacy and safety of nintedanib in idiopathic pulmonary fibrosis. The New England Journal of Medicine, 370(22), 2071-2082. <https://doi.org/10.1056/NEJMoa1402584>. 8. Background therapy of pirfenidone or nintedanib.

TETON STATS

Key Statistical Protocols¹

STUDY POWERING

80% to detect an 80 mL change in FVC²
FIBRONEER-IPF was 90% powered to detect a 74 mL change in FVC³

DEATHS IN STUDY

FVC data replaced as the 2.5th percentile of observed values across treatment arms⁴
FIBRONEER-IPF used a less conservative 10th percentile penalty³

DROPOUTS/DISCONTINUATIONS

MMRM³ where the missing values will be implicitly imputed, or through multiple imputation

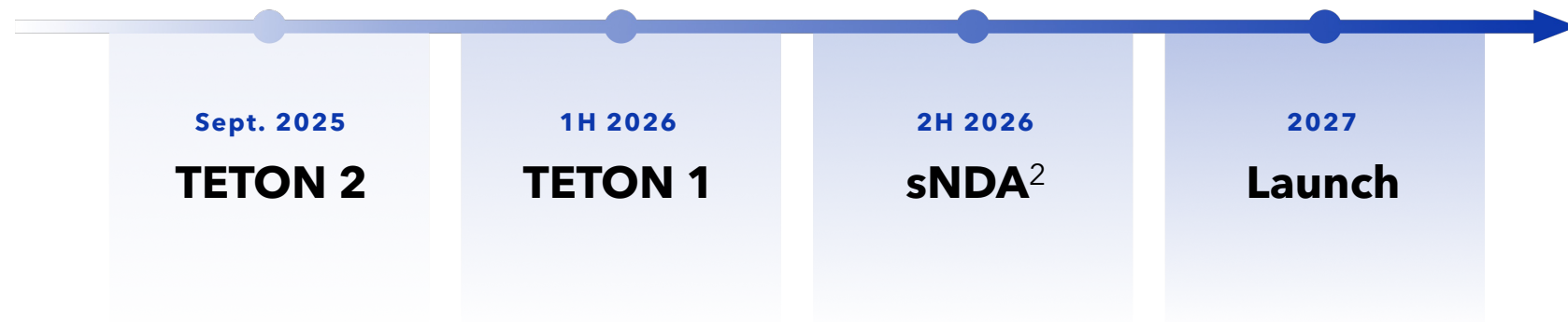
DMC⁵ REVIEWS

5 DMC reviews through the course of the study evaluated safety but did not evaluate futility

1. TETON 2 Statistical Analysis Plan, United Therapeutics Corporation. 2. FVC = forced vital capacity. 3. Richeldi, L., et al. (2025). Nerandomilast in patients with idiopathic pulmonary fibrosis. *New England Journal of Medicine*, 392(22), 2193-2202. <https://doi.org/10.1056/NEJMoa2414108>. 4. MMRM = mixed model repeated measurement. 5. United Therapeutics prior statistical analysis plan contemplated a death penalty of zero imputed for FVC data. In late July, FDA correspondence will allow a less conservative approach, but not to the level used in the FIBRONEER-IPF study. 5. DMC = data monitoring committee

TETON TIMELINE

Anticipated IPF Timeline¹



1. Timeline reflects UT's current expectation but is subject in all respect to clinical trial outcomes and the outcomes of FDA interactions. 2. sNDA = supplemental new drug application.

C.Q. Deng

SVP, BIOSTATISTICS, STATISTICAL PROGRAMMING &
DATA MANAGEMENT



TPIP PHASE 2 DATA

TPIP¹ Data May Overstate Its True Potential

IMBALANCED PATIENT POPULATION

Baseline characteristics not well balanced and may favor active drug; baseline 6MWD² not characteristic of current PAH³ studies

AGGRESSIVE STATISTICAL ANALYSIS

Dropouts remarkably higher in the active arm that impact imputation method for 6MWD improvement; statistical methodology may not be appropriate for a confirmatory phase 3 study

LACK OF CLARITY IN PH-ILD

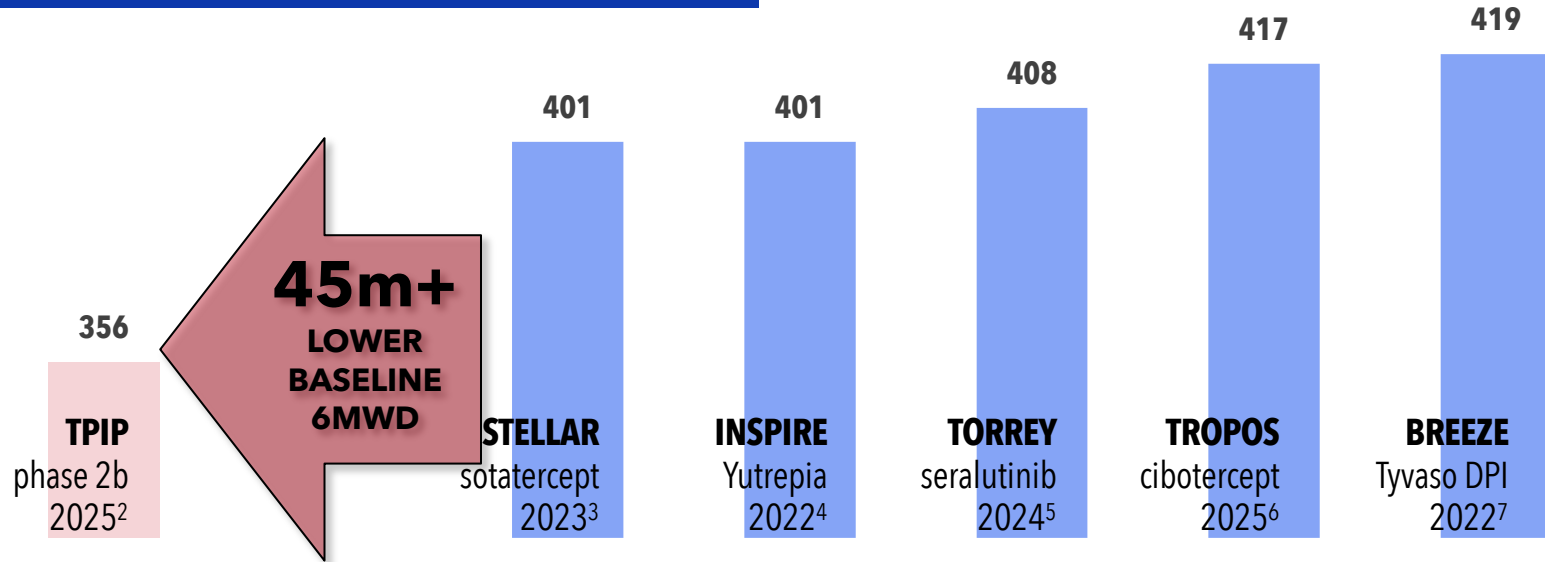
The phase 2a PH-ILD⁴ study did not present compelling safety or efficacy results

1. TPIP = treprostinil palmitil inhalation powder. 2. 6MWD = six-minute walk distance. 3. PAH = pulmonary arterial hypertension. 4. PH-ILD = pulmonary hypertension associated with interstitial lung disease.

TPIP - IMBALANCED PATIENT POPULATION

Baseline 6MWD¹ Was Not Reflective of Recent Studies

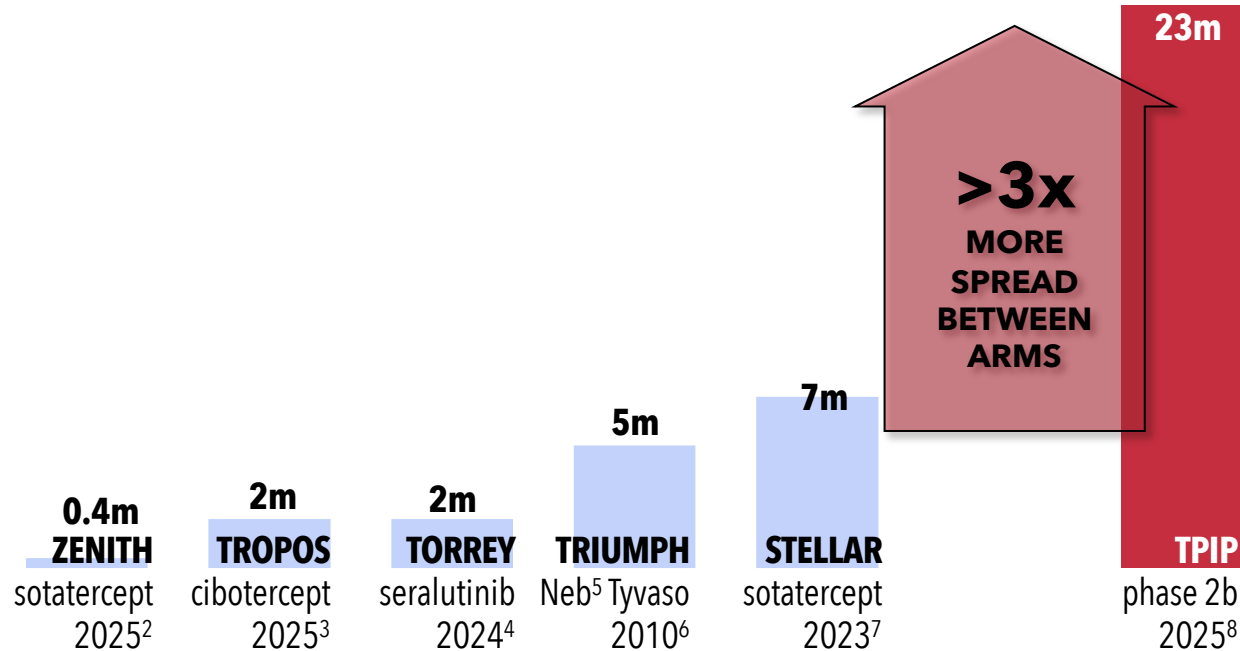
BASELINE 6MWD IN RECENT PAH STUDIES (in m)



1. 6MWD = six-minute walk distance. 2. INSM Topline Results of Phase 2b Study of TIIP in PAH patients, June 10, 2025. 3. Hoeper, M. M., et al. (2023). Phase 3 trial of sotatercept for treatment of pulmonary arterial hypertension. *The New England Journal of Medicine*, 388(16), 1478–1490. <https://doi.org/10.1056/NEJMoa2213558>. 4. Hill, N. S., et al. (2022). INSPIRE: Safety and tolerability of inhaled Yutrepia (treprostinil) in pulmonary arterial hypertension (PAH). *Pulmonary Circulation*, 12(3), e12119. <https://doi.org/10.1002/pul2.12119>. 5. Frantz, R. P., et al. (2024). Seralutinib in adults with pulmonary arterial hypertension (TORREY): A randomised, double-blind, placebo-controlled phase 2 trial. *The Lancet Respiratory Medicine*, 12(7), 523–534. [https://doi.org/10.1016/S2213-2600\(24\)00072-9](https://doi.org/10.1016/S2213-2600(24)00072-9). 6. Keros Results from the Ciboterccept TROPOS PAH Phase 2 Trial, May 29, 2005. 7. Spikes, L. A., et al. (2022). BREEZE: Open-label clinical study to evaluate the safety and tolerability of treprostinil inhalation powder as Tyvaso DPI™ in patients with pulmonary arterial hypertension. *Pulmonary Circulation*, 12(2), e12063. <https://doi.org/10.1002/pul2.12063>.

TPIP - IMBALANCED PATIENT POPULATION

Baseline 6MWD¹ Was Not Balanced Between Arms



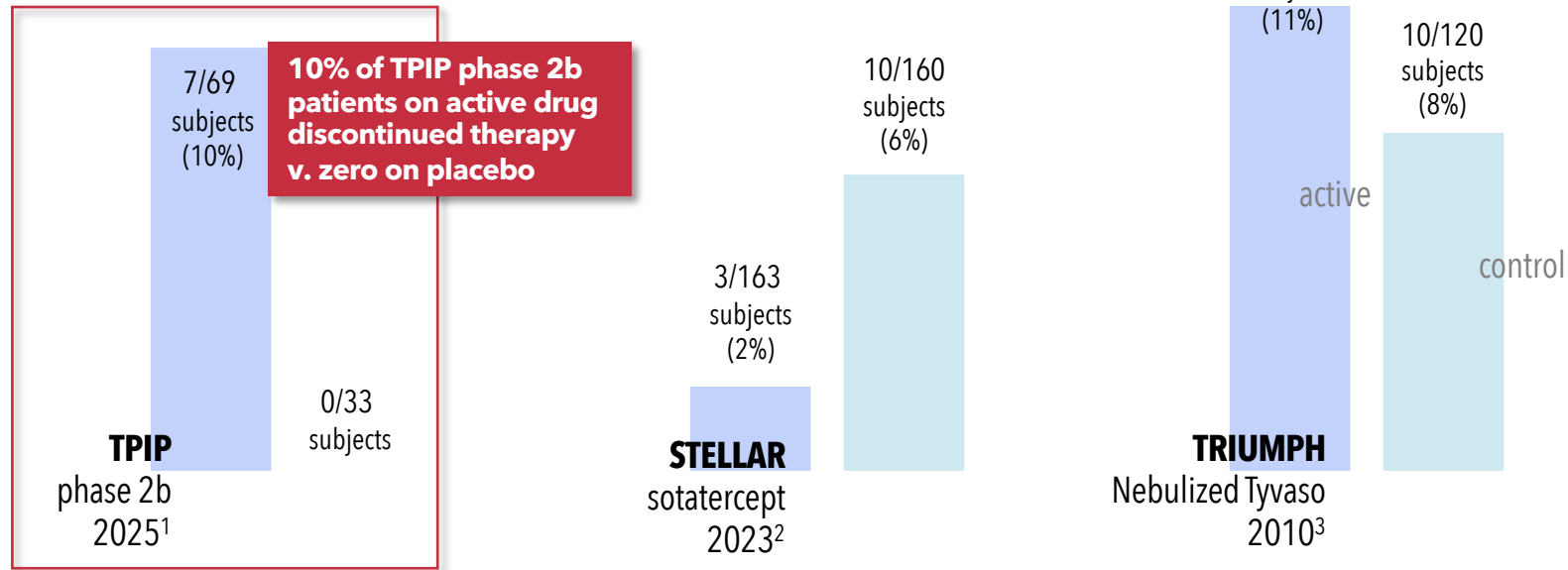
The 6MWD spread between active and placebo arms was more than 3x higher for the TPIP PAH⁹ phase 2b study compared to other recent PAH exercise capacity studies

1. 6MWD = six-minute walk distance. 2. Humbert, M., et al. (2025). Sotatercept in patients with pulmonary arterial hypertension at high risk for death. *The New England Journal of Medicine*, 392(20), 1987–2000. <https://doi.org/10.1056/NEJMoa2415160>. 3. Keros Results from the Ciboterccept TROPOS PAH Phase 2 Trial, May 29, 2005. 4. Frantz, R. P., et al. (2024). Seralutinib in adults with pulmonary arterial hypertension (TORREY): A randomised, double-blind, placebo-controlled phase 2 trial. *The Lancet Respiratory Medicine*, 12(7), 523–534. [https://doi.org/10.1016/S2213-2600\(24\)00072-9](https://doi.org/10.1016/S2213-2600(24)00072-9). 5. Addition of inhaled treprostinil to oral therapy for pulmonary arterial hypertension: A randomized controlled clinical trial. *Journal of the American College of Cardiology*, 55(18), 1915–1922. <https://doi.org/10.1016/j.jacc.2010.01.027>. 6. Hoepfer, M. M., et al. (2023). Phase 3 trial of sotatercept for treatment of pulmonary arterial hypertension. *The New England Journal of Medicine*, 388(16), 1478–1490. <https://doi.org/10.1056/NEJMoa2213558>. 7. INSM Topline Results of Phase 2b Study of TPIP in PAH patients, June 10, 2025. 8. PAH = pulmonary arterial hypertension.

TPIP - IMBALANCED PATIENT POPULATION

Dropouts Were Remarkably Higher in the Active Arm

DROPOUT PERCENT BY ARM (ACTIVE/CONTROL)



1. INSM Topline Results of Phase 2b Study of TPIP in PAH patients, June 10, 2025. 2. Hoeper, M. M., et al. (2023). Phase 3 trial of sotatercept for treatment of pulmonary arterial hypertension. *The New England Journal of Medicine*, 388(16), 1478–1490. <https://doi.org/10.1056/NEJMoa2213558>. 3. Addition of inhaled treprostinil to oral therapy for pulmonary arterial hypertension: A randomized controlled clinical trial. *Journal of the American College of Cardiology*, 55(18), 1915–1922. <https://doi.org/10.1016/j.jacc.2010.01.027>.

TPIP - AGGRESSIVE STATISTICAL ANALYSIS

TPIP Phase 2b 6MWD¹ Data May Be Positively Skewed

MEDIAN V. MEAN IMPLY DATA SKEW

This data skew could lead to the **over-estimation of the treatment effect**²

DATA IMPUTATION

There were 8 subjects (12%) with missing data at week 16 in the active group and ZERO in the control group. This **may overestimate the treatment effect**

	TPIP (N=69)		Placebo (N=33)	
	Week 16	n	Week 16	n
Secondary Endpoint				
6-Minute Walk Distance				
6MWD at Baseline (m): Mean (SD)	348.48 (79.791)	69	371.06 (66.148)	33
6MWD at Week 16 (m): Mean (SD)	405.13 (98.497)	61	382.61 (91.148)	33
Absolute Change from Baseline 6MWD (m): Mean (SD) Median	49.71 (66.197) 41.50	61	11.55 (65.167) 20.50	33
Placebo-Adjusted Improvement from Baseline 6MWD† (m): [95% Confidence Interval] P-value*	35.49 [11.23, 60.73] 0.003	69		

Mean ~20% higher than median in active and ~40% lower in placebo

8 patients excluded from endpoint

TPIP: Treprostinil Palmitate Inhalation Powder | 6MWD: 6-minute walk distance | * Nominal p-value not adjusted for multiplicity
† Covariate-adjusted estimate of location shift. Analysis performed using a rank ANCOVA model, adjusting for treatment group, baseline 6-minute walk distance (6MWD), and randomization stratification factors

1. 6MWD = six-minute walk distance. 2. INSM Topline Results of Phase 2b Study of TPIP in PAH patients, June 10, 2025.

Weak Phase 2a in PH-ILD¹; No Evidence TPIP Will Succeed in a Confirmatory PH-ILD Study

Small study with 3:1 randomization² designed as a safety study, so efficacy conclusions cannot be made

No 6MWD³ baseline was given so relative health of participants can't be fully determined

Imbalanced ILD⁴ subcategories with 20% of control subjects with CPFE³ zero in the active arm⁵; Tyvaso is less effective in CPFE patients⁶

Study did not show a statistically significant change in 6MWD

Questionable safety data with dyspnea present in 17% of active subjects and 10% in the control arm⁵

1. PH-ILD = pulmonary hypertension associated with interstitial lung disease. 2. 29 active and 10 control. 3. 6MWD = six minute walk distance. 4. ILD = interstitial lung disease. 5. Molina-Molina, M., et al. (2025, January 29–February 1). Safety and tolerability of TPIP in PH-ILD: Results from a phase 2, double-blind, placebo-controlled trial [Poster presentation]. Pulmonary Vascular Research Institute Annual Congress (PVRI 2025), Rio de Janeiro, Brazil. Insmed Incorporated. 6. Waxman, A., et al. (2021). Inhaled treprostinil in pulmonary hypertension due to interstitial lung disease. New England Journal of Medicine, 384(4), 325–334. <https://doi.org/10.1056/NEJMoa2008470>.

TPIP DATA ANALYSIS

TPIP¹ Data May Overstate Its True Potential



**IMBALANCED
PATIENT
POPULATION**



**AGGRESSIVE
STATISTICAL
ANALYSIS**



**LACK OF CLARITY
IN PH-ILD**

1. TPIP = treprostinil palmitil inhalation powder.

Dr. Gil Golden

EVP AND CHIEF MEDICAL OFFICER



TPIP MARKET

TPIP¹ Faces a Challenging Path to Potential Approval

NO NEAR-TERM PATH TO MARKET IN IPF⁵

Lack of clear safety and efficacy in PH-ILD would carry over to IPF and no clear path to market entry before 2034⁶

UNPROVEN SAFETY

Long term safety has not been proven

MANY YEARS FROM MARKET

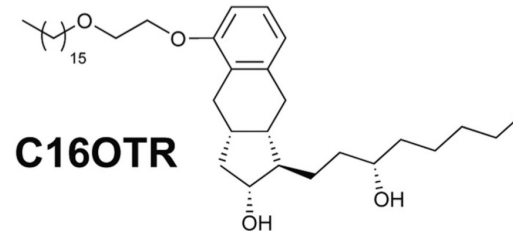
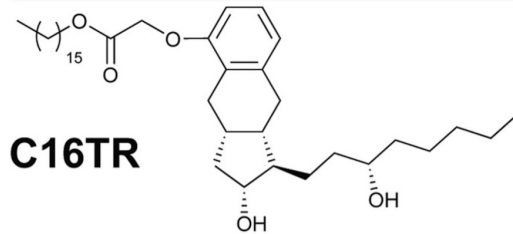
TPIP may not be available until 2029 or 2030 at the earliest

1. TPIP = treprostinil palmitil inhalation powder. 2. 6MWD = six-minute walk distance. 3. PAH = pulmonary arterial hypertension. 4. PH-ILD = pulmonary hypertension associated with interstitial lung disease. 5. IPF = idiopathic pulmonary fibrosis. 6. Assuming Tyvaso is approved for IPF in 2027, United Therapeutics anticipates that FDA orphan drug exclusivity will prevent TPIP label from including IPF for 7 years from approval -- i.e. 2034.

No Near-Term Path to Market for TPIP in IPF¹

TPIP is an **ester prodrug** in a lipid nanoparticle²

Ester prodrugs are considered to be a **"same drug"** under 21 C.F.R. § 316.3³



Clinical superiority or a **major contribution in patient care** would be required to bring an ester prodrug to market during a potential Tyvaso ODE⁴ in IPF

Reduction of dosing frequency in the same dosage form has been considered "clinical superiority" or "major contribution to patient care" **only once** by FDA since 2017^{5,6}

1. IPF = idiopathic pulmonary fibrosis. 2. Corboz, M. R., et al. (2024). Preclinical pharmacology and pharmacokinetics of inhaled hexadecyl-treprostinil (C16TR), a pulmonary vasodilator prodrug. *The Journal of Pharmacology and Experimental Therapeutics*, 388(3), 348-357. <https://doi.org/10.1124/jpet.117.242099>. 3. Food and Drug Administration. (2025). Definitions (21 C.F.R. § 316.3). Electronic Code of Federal Regulations. <https://www.ecfr.gov/current/title-21/chapter-I/subchapter-D/part-316/subpart-A/section-316.3>. 4. ODE = orphan drug exclusivity. 5. <https://www.fda.gov/industry/designating-orphan-product-drugs-and-biological-products/clinical-superiority-findings>. 6. <https://investors.avadel.com/news-releases/news-release-details/avadel-pharmaceuticals-announces-final-fda-approval-lumryztm>.

TPIP Long-Term Safety Has Not Been Proven

ONLY MODEST SHORT-TERM SAFETY DATA

Only 16-week safety data has been presented; long-term data from phase 2 OLE¹ not expected until 2027²

IMBALANCED DROPOUTS IN PHASE 2b

10% dropout rate in active arm v. zero in control arm

UNKNOWN LONG-TERM EFFECTS OF RESIDENT TPIP

What is the long-term effect of an ester prodrug in a lipid nanoparticle in the lung, especially in PH-ILD³-affected lungs?

LONG-TERM SAFETY ISSUES EMERGING IN PAH

Reports of severe hypoxemia emerging from long-term sotatercept use⁴

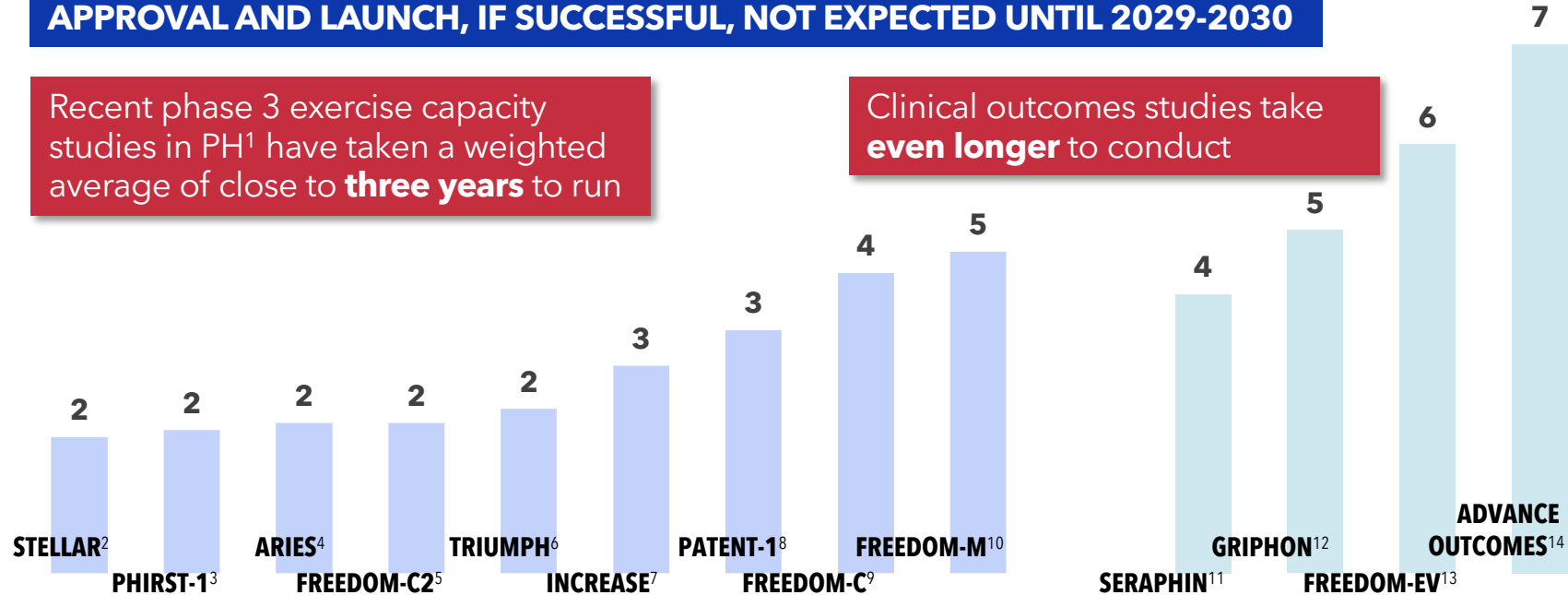
1. OLE = open label extension. 2. Estimated completion data of 12/31/2026 from <https://clinicaltrials.gov/study/NCT05649748>. 3. PH-ILD = pulmonary hypertension due to interstitial lung disease. 4. Olsson, K. M., et al. (2025). Severe hypoxemia and pulmonary capillary dilatations in pulmonary arterial hypertension patients treated with sotatercept. *American Journal of Respiratory and Critical Care Medicine*, 211(7), 1303-1305. <https://doi.org/10.1164/rccm.202502-0344RL>.

A Potential TPIP Launch Is Many Years Away

APPROVAL AND LAUNCH, IF SUCCESSFUL, NOT EXPECTED UNTIL 2029-2030

Recent phase 3 exercise capacity studies in PH¹ have taken a weighted average of close to **three years** to run

Clinical outcomes studies take **even longer** to conduct



1. PH = pulmonary hypertension, inclusive of pulmonary arterial hypertension and PH associated with interstitial lung disease (PH-ILD). 2. <https://clinicaltrials.gov/study/NCT04576988>. 3. <https://clinicaltrials.gov/study/NCT00125918?term=NCT00125918>. 4. <https://clinicaltrials.gov/study/NCT00091598?term=NCT00091598>. 5. <https://clinicaltrials.gov/study/NCT00887978>. 6. <https://clinicaltrials.gov/study/NCT00147199>. 7. <https://clinicaltrials.gov/study/NCT02630316>. 8. <https://clinicaltrials.gov/study/NCT00810693>. 9. <https://clinicaltrials.gov/study/NCT00325442>. 10. <https://clinicaltrials.gov/study/NCT00325403>. 11. <https://clinicaltrials.gov/study/NCT00660179>. 12. <https://clinicaltrials.gov/study/NCT01106014>. 13. <https://clinicaltrials.gov/study/NCT01560624>. 14. <https://clinicaltrials.gov/study/NCT03626688>.

What Could UTHR Look Like in 2030?¹

ONCE-DAILY ORAL RALINEPAG

Potentially paradigm-shifting in PAH, reducing the need for inhaled therapy

ONCE-DAILY NCE² INHALED PROSTACYCLIN

Likely a similar timeline as TPIP

NOVEL TYVASO DEVICES ON MARKET

New devices could increase convenience for PAH, PH-ILD, and potentially IPF patients

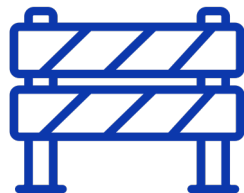
REVOLUTION IN ORGANS

Opportunity to more than double our revenue potential in the next decade

1. Assuming regulatory approvals.. 2. NCE = new chemical entity.

TPIP MARKET

TPIP¹ Faces a Challenging Path to Potential Approval



**NO NEAR-TERM
PATH TO MARKET
IN IPF²**



**MANY YEARS
FROM MARKET**



**UNPROVEN
SAFETY**

1. TPIP = treprostinil palmitil inhalation powder. 2. IPF = idiopathic pulmonary fibrosis.

Q&A

Dr. Martine Rothblatt

Chairperson and Chief Executive Officer

Michael Benkowitz

President and Chief Operating Officer

James Edgmond

Chief Financial Officer and Treasurer

Dr. Leigh Peterson

EVP, Product Development and Xenotransplantation

Patrick Poisson

EVP, Technical Operations

Dr. Gil Golden

EVP, Chief Medical Officer

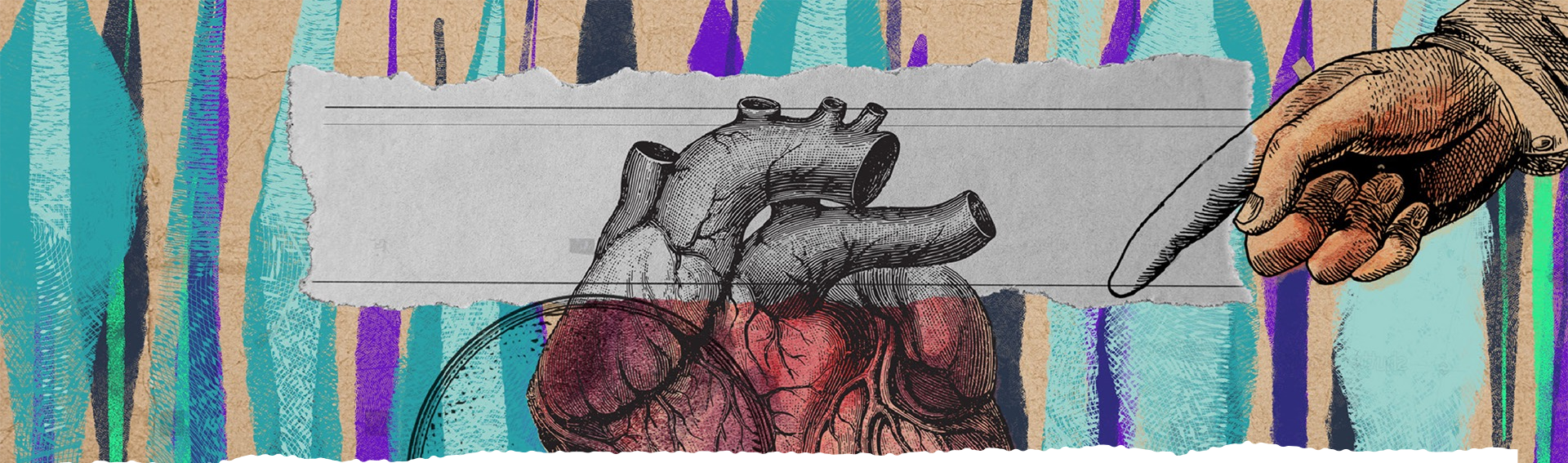
C.Q. Deng

SVP, Biostatistics, Statistical Programming & Data Management

Dewey Steadman

Head of Investor & Media Relations





Appendix



INNOVATION

Tyvaso *TETON* 1 and 2 Studies

	<i>TETON</i> 1	<i>TETON</i> 2
Indication	Idiopathic pulmonary fibrosis	
U.S. Addressable Population	100,000 patients	
Study Size	598 ³	597 ⁴
Study Geography	U.S./Canada	ROW ¹
Primary Endpoint	Change in absolute FVC ² from baseline to week 52	
Enrollment Progress	100%	100%

1. ROW = rest of world outside the United States and Canada. 2. FVC = forced vital capacity, or the amount of air that can be forcibly exhaled from your lungs after taking the deepest breath possible. 3. *TETON* 1 targeted 576 patients for full enrollment and ultimately enrolled 598 patients. 4. *TETON* 2 targeted 576 patients for full enrollment and ultimately enrolled 597 patients.

***TETON* 2 data expected
2H/25**

***TETON* 1 data expected
1H/26**

INNOVATION

Tyvaso *TETON* PPF Study

Indication	Progressive pulmonary fibrosis
Study Size	698 patients
Study Geography	Global
Primary Endpoint	Change in absolute FVC ¹ from baseline to week 52
Enrollment Progress	Currently enrolling

**Currently Enrolling
Patients**

1. FVC = forced vital capacity, or the amount of air that can be forcibly exhaled from your lungs after taking the deepest breath possible.

INNOVATION

Ralinepag

ADVANCE OUTCOMES Study

Indication	Group 1 PAH ¹
U.S. Addressable Population	50,000 patients
Study Size	~700 patients
Study Geography	Global
Primary Endpoint	Time from randomization to the first adjudicated protocol-defined clinical worsening event
Enrollment Progress ²	Fully enrolled; 728 patients

1. PAH = pulmonary arterial hypertension. 2. As of June 23, 2025. 3. Enrollment is closed and we plan to accrue clinical worsening events through the end of 2025, data is expected to be available in 2026. Our timing estimates may change.

4. https://posters.unithermedaffairs.com/ralinepag_XRIR_ISHLT2019.pdf.



Data expected in 2026³

One pill, once a day, with a ~24-hour half-life that can approximate IV prostacyclin blood levels⁴

Potential to develop a triple combo of ralinepag, macitentan, and a PDE-5 inhibitor, bringing a once-a-day oral option to PAH patients

INNOVATION

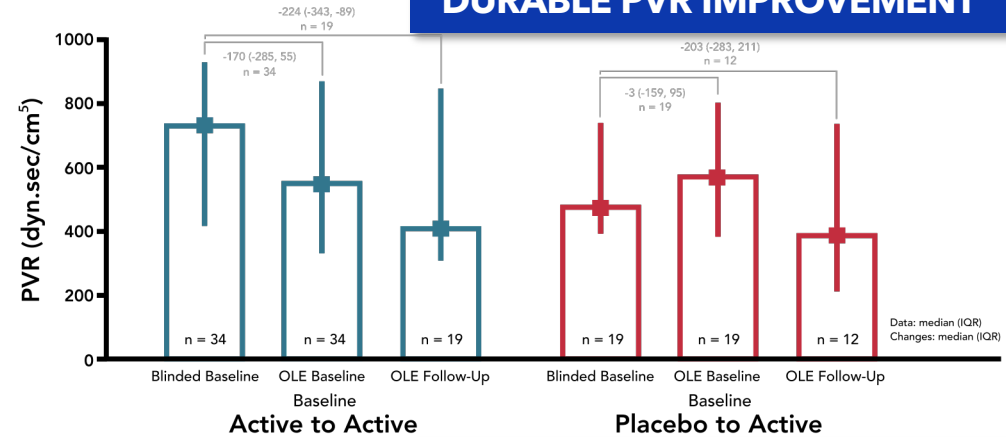
Ralinepag for PAH^{1,2}

Phase 2 OLE³ data demonstrate long-term treatment with ralinepag produces durable and clinically-relevant responses for PVR⁴ and 6MWD⁶ with a manageable adverse event profile⁷

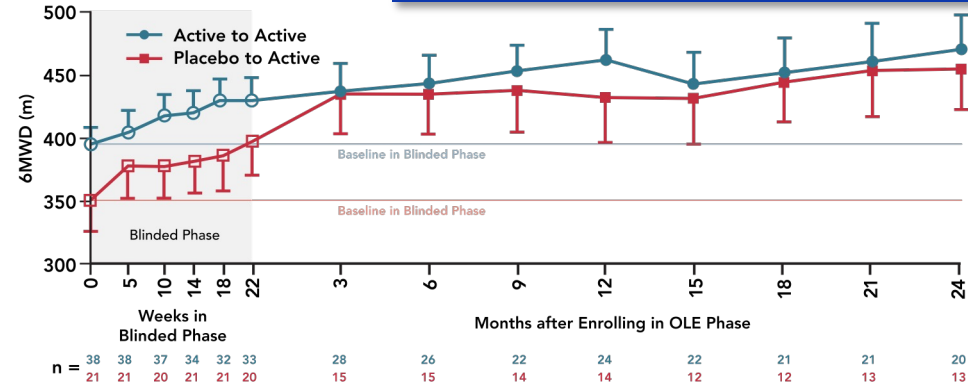
In 24-month open-label data, a 52 dyn.s/cm⁵ reduction in PVR and a 36m 6MWD increase was observed on top of improvements from the blinded phase of the study.

1. PAH = pulmonary arterial hypertension. 2. Ralinepag is an investigational drug and is not approved to treat PAH. 3. OLE = open label extension. 4. PVR = pulmonary vascular resistance. 6. 6MWD = six-minute walk distance. 7. Barberà, et al. Ralinepag Phase II Open-Label Extension Study in Patients with Pulmonary Arterial Hypertension. *J. Adv Ther.* 2023. <https://doi.org/10.1007/s12325-023-02769-7>.

DURABLE PVR IMPROVEMENT



SUSTAINED 6MWD INCREASE



Three Platforms with Four Organs & Organ Alternatives

XENOTRANSPLANTATION



FIRST
TRANSPLANT
SHORTLY
EXPAND STUDY

UKidney



IND¹
SUBMITTED
EXTEND STUDY

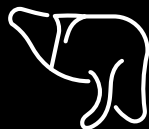
UThymoKidney



IND
EXPECTED
EXPRESS STUDY

UHeart

ALLOGENEIC REGENERATIVE MEDICINE



PHASE 1
STUDY OPEN

miroliverELAP²



mirokidney



miroliver

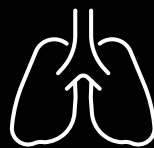


ULung

AUTOLOGOUS REGENERATIVE MEDICINE



IVIVA Kidney



ULobe

1. IND = Investigational New Drug Application. 2. ELAP = external liver assist product.



Rapidly Progressing Toward a Revolution

EXPAND UKIDNEY CLINICAL STUDY HIGHLIGHTS¹

- ~50 patients: six in initial cohort; ~44 in expanded cohort
- ESRD/dialysis patients age 55-70
- Ineligible for a kidney transplant or significantly waitlisted
- Endpoints at 24 weeks: survival, function, quality of life
- Monitoring for lifetime of participants



FIRST EXPAND TRANSPLANT EXPECTED SHORTLY

1. These trial highlights do not cover all aspects of inclusion, exclusion, and conduct of the study. Please see the clinical trial description at <https://clinicaltrials.gov/study/NCT06878560> for full trial details.



COMMERCIAL EXECUTION

Tyvaso

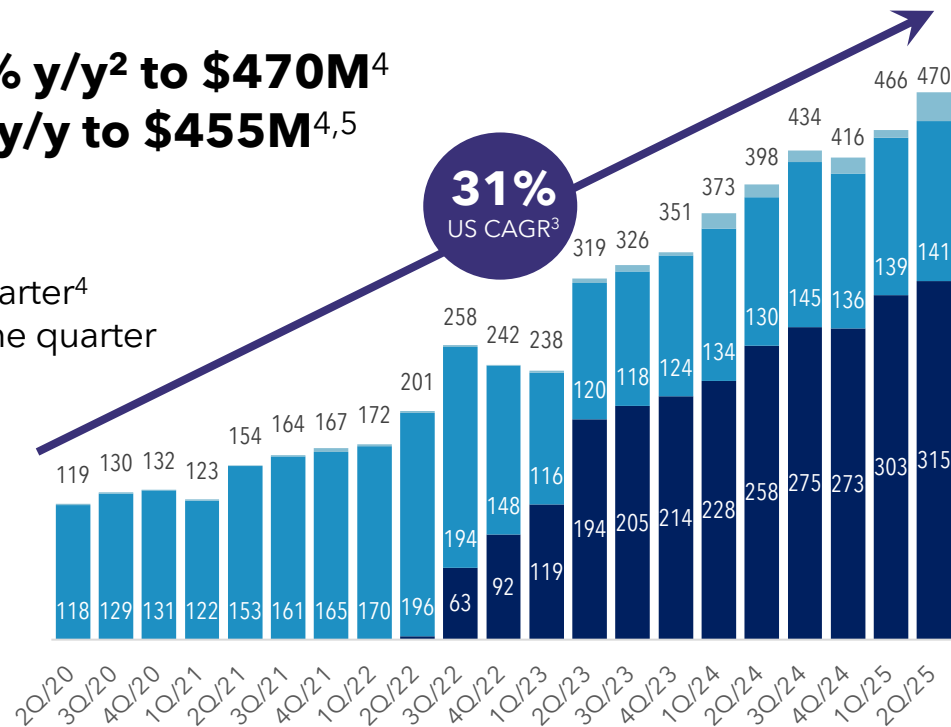
W/W¹ Combined Revenue ▲ 18% y/y² to \$470M⁴

U.S. Combined Revenue ▲ 17% y/y to \$455M^{4,5}

- **Most prescribed** prostacyclin in the U.S.⁴
- **Highest** revenue quarter⁴
- **Record patient shipments** during the quarter⁴
- **Record DPI referrals and starts** during the quarter

TYVASO DPI[®]
(treprostinil) INHALATION POWDER

TYVASO[®]
(treprostinil) INHALATION SOLUTION



1. w/w = worldwide. 2. y/y = year over year. 3. CAGR = compound annual growth rate calculated from 2Q/20 to 2Q/25.

4. Data reflective of combined Tyvaso DPI + nebulized Tyvaso. 5. Totals may not add due to rounding.

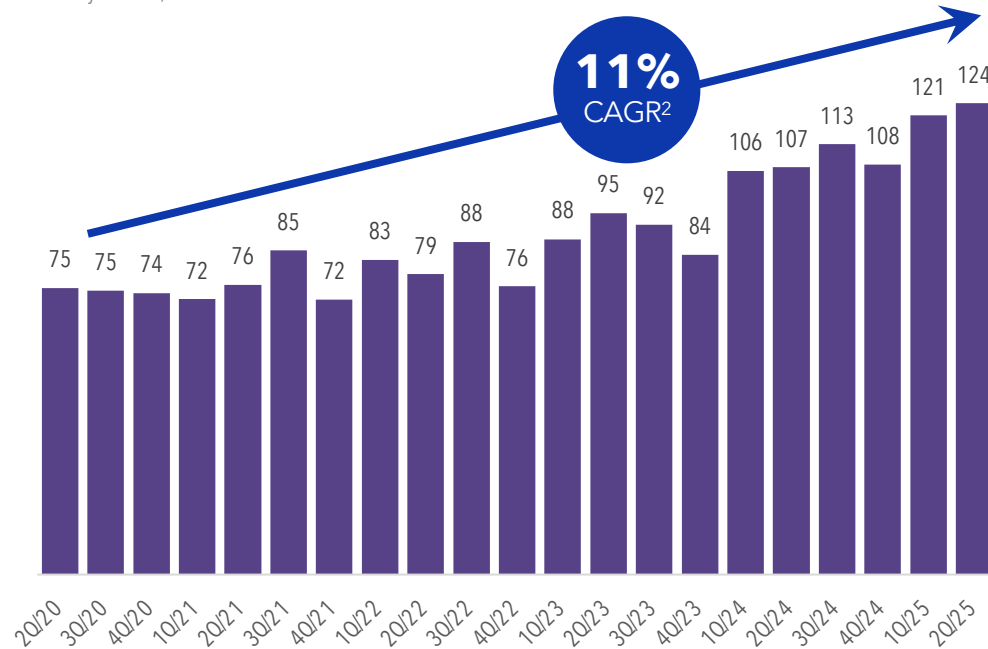
■ Tyvaso DPI ■ U.S. Nebulized Tyvaso ■ ex-U.S. Nebulized Tyvaso

Quarterly revenue, millions USD

COMMERCIAL EXECUTION

Orenitram

Quarterly revenue, millions USD



Revenue ▲ 16% y/y¹ to \$124M

- **Record** patient shipments
- **Highest** revenue quarter
- **14th** sequential quarter of y/y quarterly revenue growth



orenitram[®]
treprostinil

EXTENDED-RELEASE TABLETS

1. y/y = year over year.

2. CAGR = compound annual growth rate calculated from 2Q/20 to 2Q/25.

COMMERCIAL EXECUTION

Remodulin

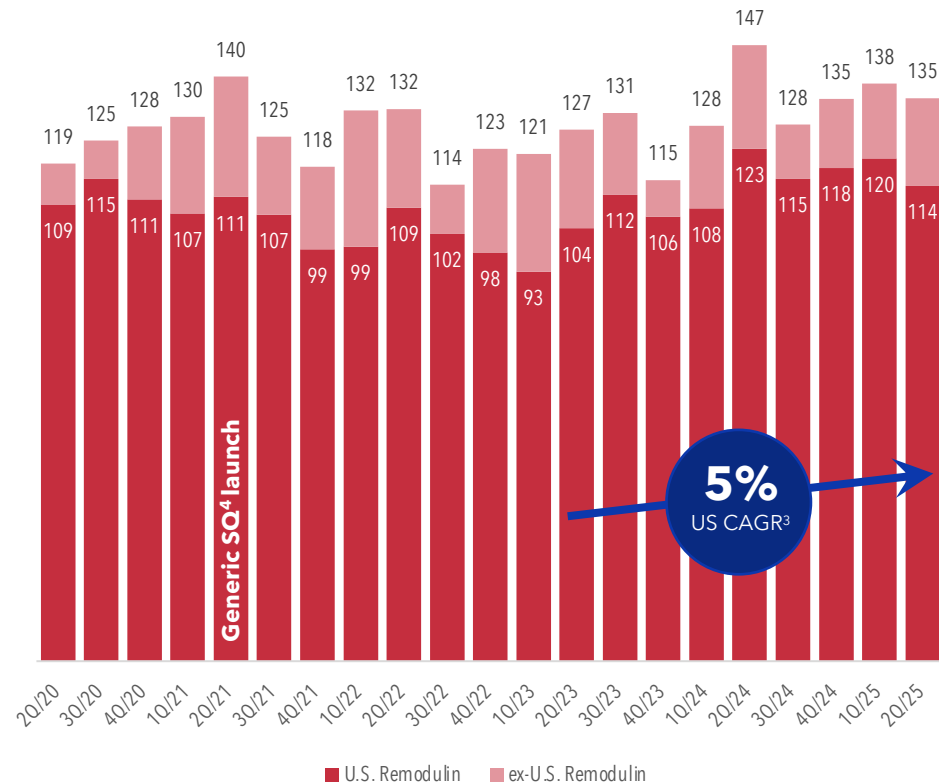
W/W¹ revenue ▼ 9% y/y² to \$135M

U.S. revenue ▼ 7% y/y to \$114M

- **Most prescribed** U.S. parenteral prostacyclin
- **RemunityPRO™** next-gen subcutaneous pump to launch later this year



Quarterly revenue, millions USD

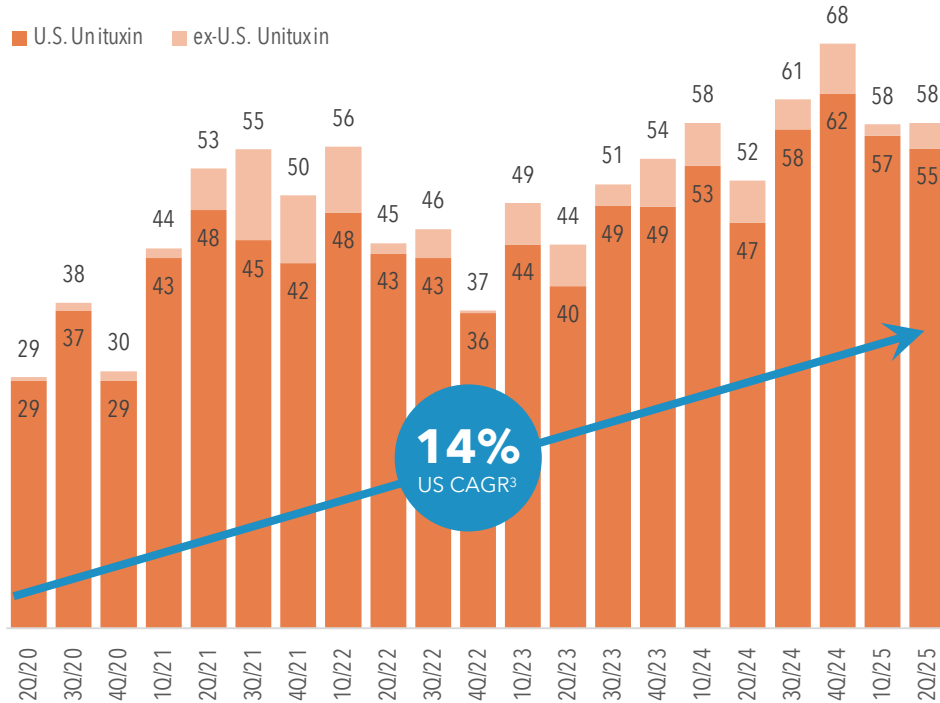


1. w/w = worldwide. 2. y/y = year over year. 3. CAGR = compound annual growth rate calculated from 20/23 to 20/25. 4. SQ = subcutaneous.

COMMERCIAL EXECUTION

Unituxin

Quarterly revenue, millions USD

■ U.S. Unituxin ■ ex-U.S. Unituxin


W/W¹ revenue ▲ 13% y/y² to \$58M
U.S. revenue ▲ 18% y/y to \$55M⁴

- The **most prescribed** antibody therapy for high-risk neuroblastoma in the U.S.


Unituxin[®]
 (dinutuximab)
 Injection

1. w/w = worldwide. 2. y/y = year over year. 3. CAGR = compound annual growth rate calculated from 2Q/20 to 2Q/25. 4. Percentages may not align due to rounding.



A PUBLIC BENEFIT CORPORATION

19th consecutive quarter of
y/y¹ revenue growth

1. y/y = year over year.

TYVASO DPI[®]
(treprostinil) INHALATION
POWDER

TYVASO[®]
(treprostinil) INHALATION
SOLUTION

Most prescribed U.S. prostacyclin
Record patient shipments
Highest revenue quarter

REMODULIN[®]
(treprostinil) Injection

Most prescribed
parenteral prostacyclin in the U.S.



orenitram[®]
treprostinil

EXTENDED-RELEASE TABLETS

14th sequential quarter of
quarterly y/y revenue growth
Highest revenue quarter

Unituxin[®]
(dinutuximab)
Injection

The **most prescribed**
antibody therapy for
high-risk neuroblastoma in the U.S.

