Interim TORREY OLE Update and PROSERA Phase 3 Design

July 2023

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I. TORREY 24 Week Data

Selected Baseline Disease Characteristics

(ITT Population)

Characteristic	Placebo (N=42)	Seralutinib (N=44)	Total (N=86)
Number of PAH background therapies – n (%)			
1	2 (4.8)	1 (2.3)	3 (3.5)
2	16 (38.1)	18 (40.9)	34 (39.5)
3	24 (57.1)	25 (56.8)	49 (57.0)
WHO FC – n (%)			
Class II	20 (47.6)	**30 (68.2)**	50 (58.1)
Class III	**22 (52.4)**	14 (31.8)	36 (41.9)
PVR (dyne*s/cm^5) – mean (SD)	661.3 (164.91)	675.8 (240.35)	**668.7 (205.90)**
6MWD (m) – mean (SD)	407.1 (107.02)	408.6 (75.11)	**407.9 (91.54)**
NT-proBNP (ng/L) – mean (SD)	645.6 (1158.75)	611.0 (714.58)	**628.3 (956.83)**

Heavily pre-treated patient population

Hit Primary Endpoint Despite **FC Imbalance in Drug & Pbo Arms**

Mildest baseline PAH disease to see treatment effect*

STELLAR Trial Phase 3 NT-proBNP mean baseline was 1,121.1ng/L; PVR was 763.7 dyne*s/cm^5 (1)

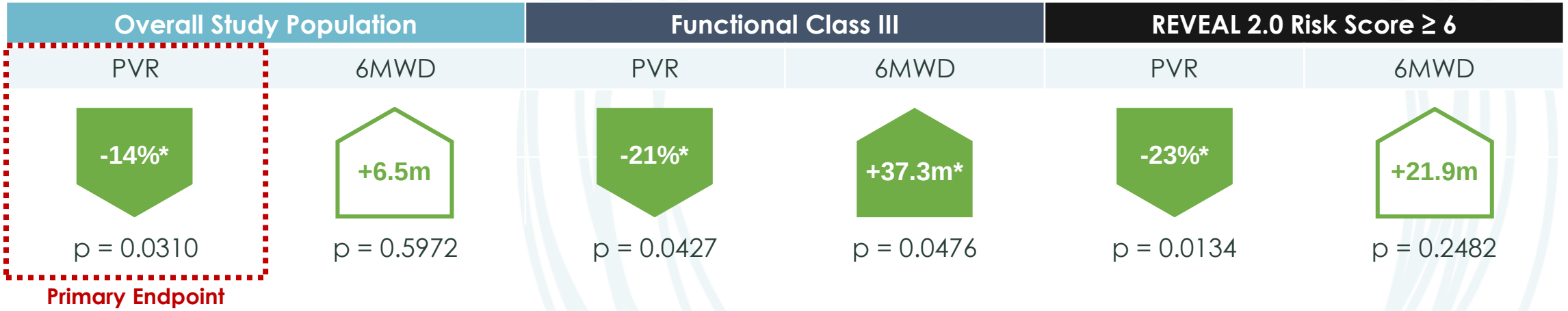
1) Source: https://doi.org/10.1056/NEJMoa2213558.

*As determined by baseline PVR & 6MWD, we believe that TORREY enrolled the most well-controlled PAH patient trial population to meet its primary efficacy endpoint.

6MWD = six-minute walk distance; FC = Functional Class; NT-proBNP = N-terminal pro B-type natriuretic peptide; PVR = pulmonary vascular resistance; WHO = World Health Organization; ITT = intention-to-treat; SD = standard deviation; Pbo = placebo.

TORREY Study Phase 2 Topline Results

- **Met Primary Endpoint:** Statistically significant reduction in PVR in heavily-treated study population
- **Consistent, favorable PVR benefit seen in all pre-specified sub-groups** in favor of seralutinib with **enhanced effects in patients with more severe disease** at baseline§



- Consistently favorable results for hemodynamic and ECHO endpoints
- **Well tolerated**, avoiding side effect profile associated with systemic imatinib in PAH

***** = p-value ≤ 0.05. All p-values in this presentation are nominal, aside from primary endpoint (overall study population delta in PVR).
§ At baseline, as determined by Functional Class and REVEAL 2.0 Risk Score (pre-specified subgroups).
Functional Class II patients showed a placebo adjusted PVR improvement of -66.9 dynes*sec*cm^{-5} (p = 0.2601) from baseline.

II. New Developments

New Developments in the Seralutinib Program

- **Summary of OLE findings to date:** Differentiated efficacy and safety profile emerging
  - Continued improvement in reduction of PVR
    - 30 patients with Week 72 PVR data
    - Early enrollers; milder disease baseline than overall population
  - Continual improvement seen in ∆6MWD & ∆NT-proBNP
    - Increased magnitude of effect in Phase 3 target population
  - Attractive safety profile for chronic treatment
- **Regulatory feedback supportive of single registrational study evaluating 90mg BID dose**
  - FDA and EMA aligned on all key components of study; protocol finalized
- **Phase 3 trial incorporating learnings from TORREY targeted to initiate in August**
  - Use of REVEAL Lite and NT-proBNP as enrichment factors for 6MWD success
    - **Use of PPD as CRO helps to de-risk execution of enrollment and 6MWT conduct**
  - Anticoagulants allowed with important patient safety guardrails

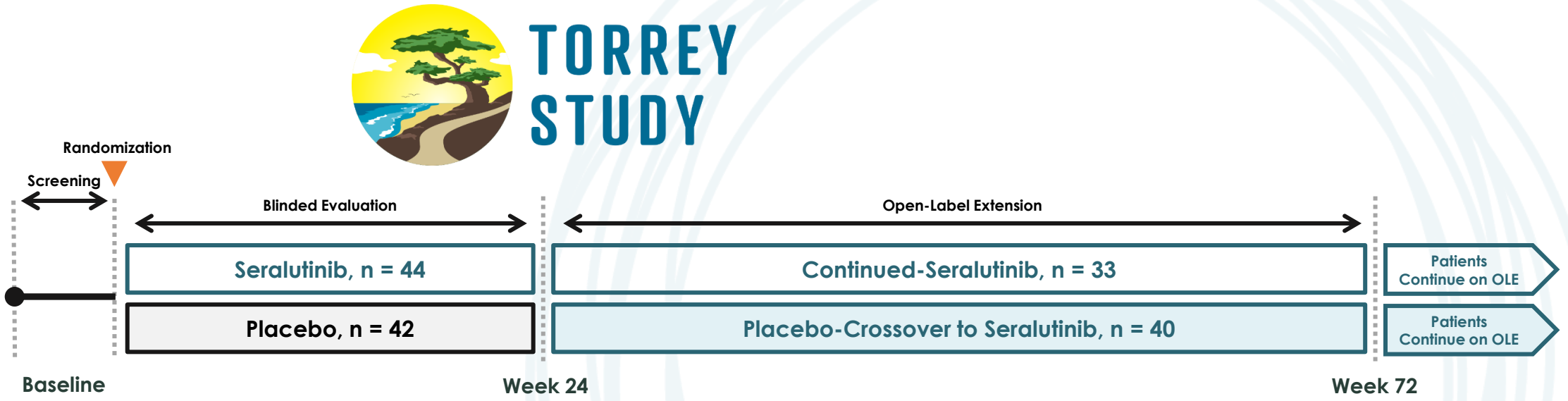
OLE = open-label extension; PVR = pulmonary vascular resistance; 6MWD = six-minute walk distance; NT-proBNP = N-terminal pro B-type natriuretic peptide; BID = twice daily dosing; CRO = contract research organization; 6MWT = six-minute walk test.

III. Interim TORREY OLE Extension Results

Data available to date –
Subject to change –
Study is ongoing

Data as of June 23, 2023.

TORREY Open-Label Extension Interim Update



- Of 80 TORREY completers (38 seralutinib arm, 42 placebo arm), 73 (91.3%) elected to rollover into the open-label extension
- PVR measured via right heart catheterization at Baseline, Week 24, and Week 72 (approximately 1 year into OLE)
- **As of interim data cutoff date, Week 72 PVR data available for 30 patients**
  - **16 continued-seralutinib, 14 placebo-crossover**

OLE = open-label extension; PVR = pulmonary vascular resistance.

Seralutinib Profile Emerging From OLE

- ✓ Seralutinib treatment leads to hemodynamic improvement in ~60-70% of patients
  - ✓ Almost all patients who have short-term benefit (at 6 months) continue to improve with long-term treatment
- ✓ The continued improvement in PVR, along with the ECHO and FRI data gathered in TORREY, is supportive of a reverse remodeling mechanism of action
- ✓ Safety and tolerability remain relatively benign, with no safety signals emerging or worsening with long-term use
- ✓ Drug delivery via DPI twice daily well-accepted and easy to incorporate into a patient's daily routine
- **Seralutinib has the potential to be used prior to more invasive / inconveniently delivered therapies and / or those with challenging safety / tolerability profiles (e.g., prostacyclins)**

OLE = open-label extension; PVR = pulmonary vascular resistance; ECHO = echocardiogram; FRI = functional resonance imaging; DPI = dry powder inhaler

Interim Analysis Shows Deepening PVR Improvement in Continued-Seralutinib Group

Baseline

Median Baseline PVR:

541

dyne*s/cm^5

- 10 WHO Functional Class II, 6 WHO Functional Class III
- 50% on dual background therapy, 50% on triple background therapy

End of TORREY

Week 24

Median Change in PVR vs. Baseline:

-70.5

dyne*s/cm^5

- 11 / 16 had improvement in PVR
  - Mean improvement of PVR responders at week 24 = 24%

OLE PVR Data Point

Week 72

Median Change in PVR vs. Baseline:

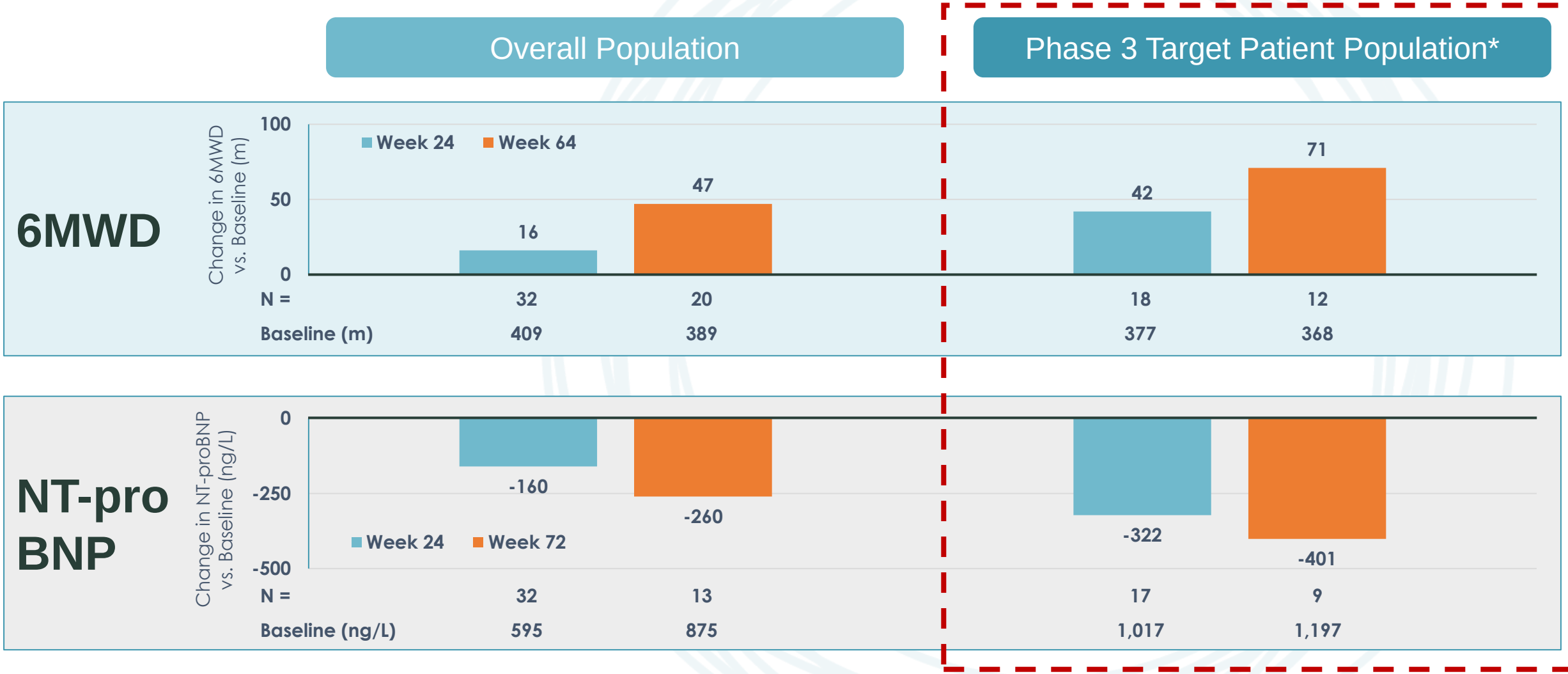
-142.5

dyne*s/cm^5

- All 11 initial responders maintained PVR below baseline
- 9 / 11 continued to improve
  - Mean improvement of 9 PVR dual responders = 39%
  - 3 patients reached a PVR below 200 dyne*s/cm^5

* Interim update for first 16 continued-seralutinib patients to reach Week 72
PVR = pulmonary vascular resistance; WHO = World Health Organization; OLE = open-label extension

Further Improvements Seen in 6MWD and NT-proBNP for Phase 3 Target Population in Continued-Seralutinib Group

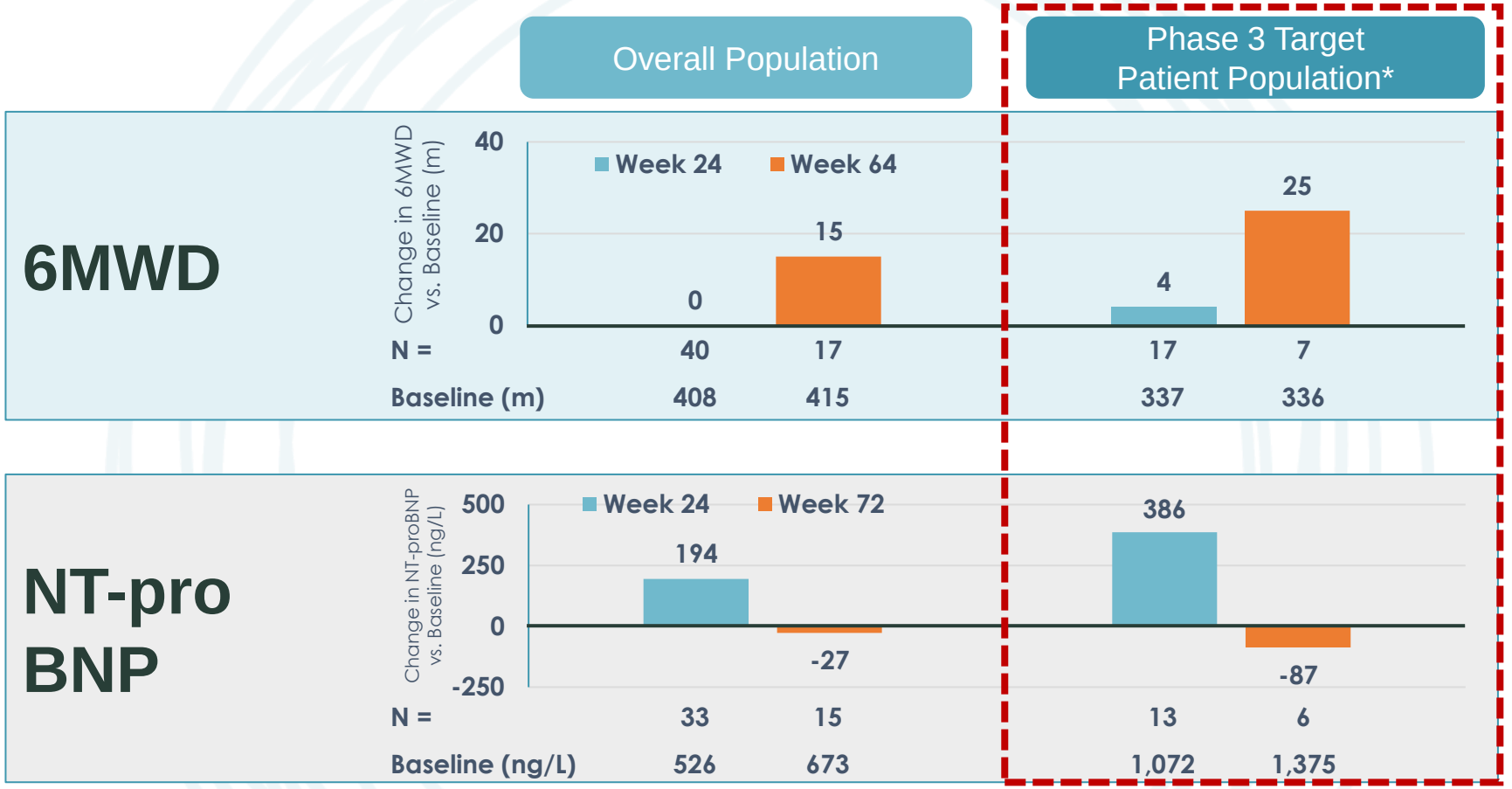


* REVEAL Lite 2 Risk Score ≥ 5 at TORREY baseline.
6MWD = six-minute walk distance; NT-proBNP = N-terminal pro B-type natriuretic peptide.

Encouraging Early Trends Observed in Placebo-Crossover Group

PVR at Week 72

- 7 / 14 patients had improvement in PVR after beginning seralutinib treatment in OLE
- 11 / 14 patients had improved PVR vs. baseline



- 6MWD improvement in OLE driven by Phase 3 target population
- NT-proBNP increase while on placebo during TORREY reversed after patients started on seralutinib treatment

* REVEAL Lite 2 Risk Score ≥ 5 at TORREY baseline.
PVR = pulmonary vascular resistance; OLE = open-label extension; 6MWD = six-minute walk distance; NT-proBNP = N-terminal pro B-type natriuretic peptide.

TORREY OLE Safety To Date

- Safety results consistent with controlled period – seralutinib generally well tolerated with no new safety concerns
  - Results support chronic treatment in PAH patients
- Reports of cough diminish as patients get used to DPI
- Vast majority of patients have reached and maintained 90mg BID dose
  - Limited dose reductions to date
- Limited liver enzyme elevations observed in OLE in similar pattern as TORREY (~5-10% ≥ 3x ULN, similar to placebo rate in TORREY), suggesting potential signal arises early in treatment course and easily monitorable
- Safety tables available in appendix

OLE = open-label extension; DPI = dry powder inhaler; BID = twice-daily dosing; ULN = upper limit of normal.

IV. PROSERA Phase 3 Overview

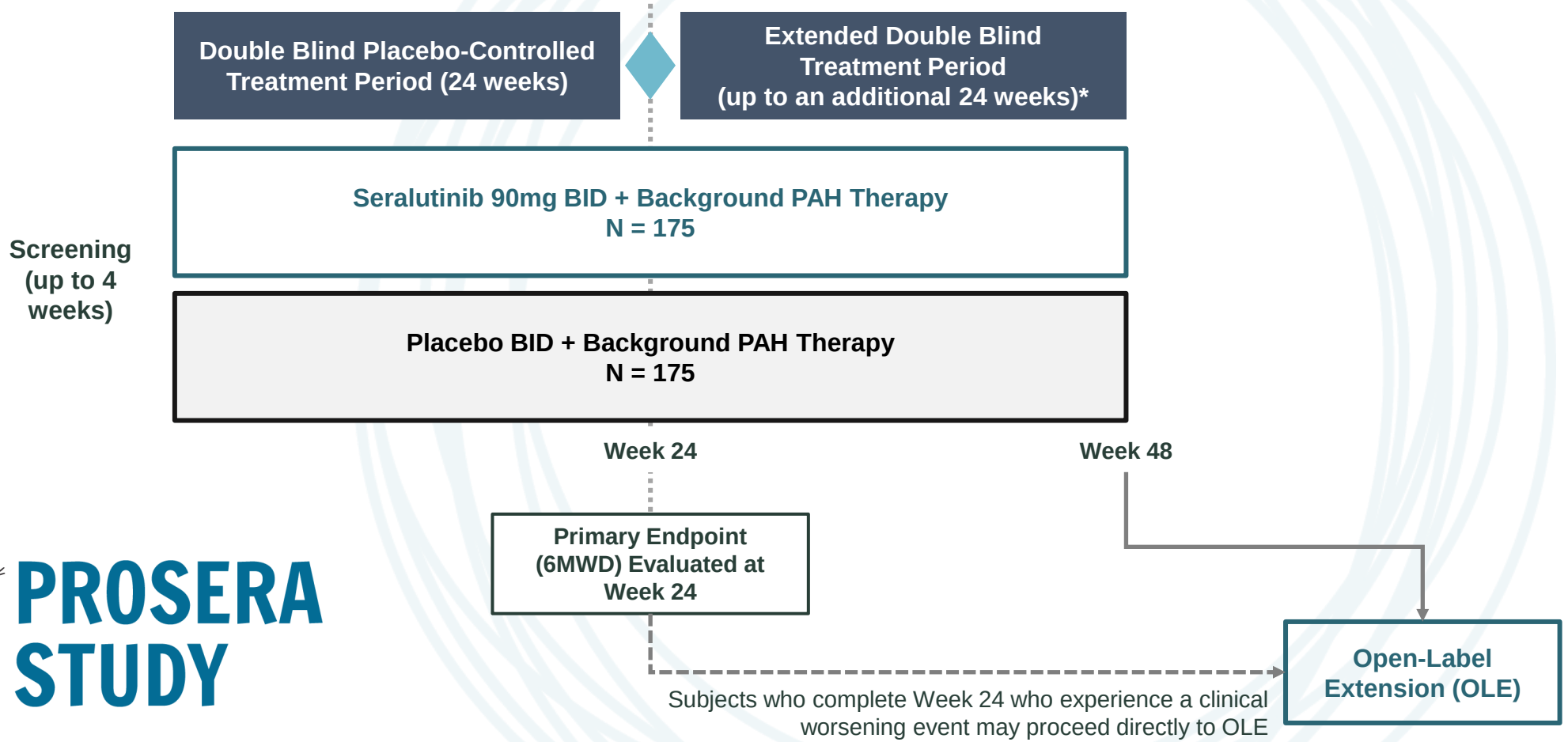
Regulatory Feedback

- **FDA & EMA - Alignment on the following key design elements of Phase 3 protocol:**
  - **One Dose:** Single dose of seralutinib (90 mg BID); 2-arm study, with ~175 patients per arm
  - **Enriched Population:** Eligibility criteria for a target PAH population based on prespecified subgroup in TORREY with more severe disease and/or who are at higher risk of disease progression, defined by risk score assessment, functional class, PVR and exercise capacity at baseline
  - **Primary Endpoint:** 6MWD at Week 24
- **Additional Comments:**
  - FDA recommended consideration of a Phase 2 study to evaluate disease remodeling (withdrawal)
  - EMA recommended TTCW as key secondary
  - No safety concerns raised

BID = twice-daily dosing; PVR = pulmonary vascular resistance; 6MWD = six-minute walk distance; TTCW = time to clinical worsening.

PROSERA Phase 3 Study Design Schema

PROSERA STUDY



*Patients to remain blinded until week 48, until the last patient completes 24-week primary endpoint, after which time the study will be unblinded.
BID = twice daily dosing; 6MWD = six-minute walk distance.

PROSERA Study Overview

Design	• Randomized, double-blind, placebo-controlled, parallel group • Up to 48-week double-blinded treatment period; primary endpoint assessed at Week 24 • Open-label extension option under separate protocol
Primary Endpoint	• Change in 6MWD at Week 24 from Baseline

Key Secondary Endpoints	• Time from 1st dose to 1st event of clinical worsening (TTCW)
	• Proportion of subjects who achieve all components of a composite endpoint of clinical improvement at Week 24 in the absence of clinical worsening:
	  − Decrease in WHO FC or maintenance of WHO FC II
	  − Decrease in NT-proBNP ≥ 30% or maintenance at <300 ng/L
	  − Increase in 6MWD ≥ 10% or ≥ 30 m
	• Change vs. Baseline in NT-proBNP at Week 24
	• Proportion of subjects with ≥ 1 point decrease in REVEAL Lite 2 Risk Score vs. Baseline at Week 24

Stratification at Randomization	• WHO FC at screening: II vs III • Receiving parenteral prostacyclin therapy at Screening (yes vs. no) • CTD-APAH (yes vs. no) • Participation in CT sub-study (yes vs. no)

6MWD = six-minute walk distance; FC = functional class; NT-proBNP = N-terminal pro B-type natriuretic peptide; WHO = World Health Organization; CTD-APAH = connective tissue disease-associated PAH; CT = computerized tomography.

PROSERA Phase 3 Study Population

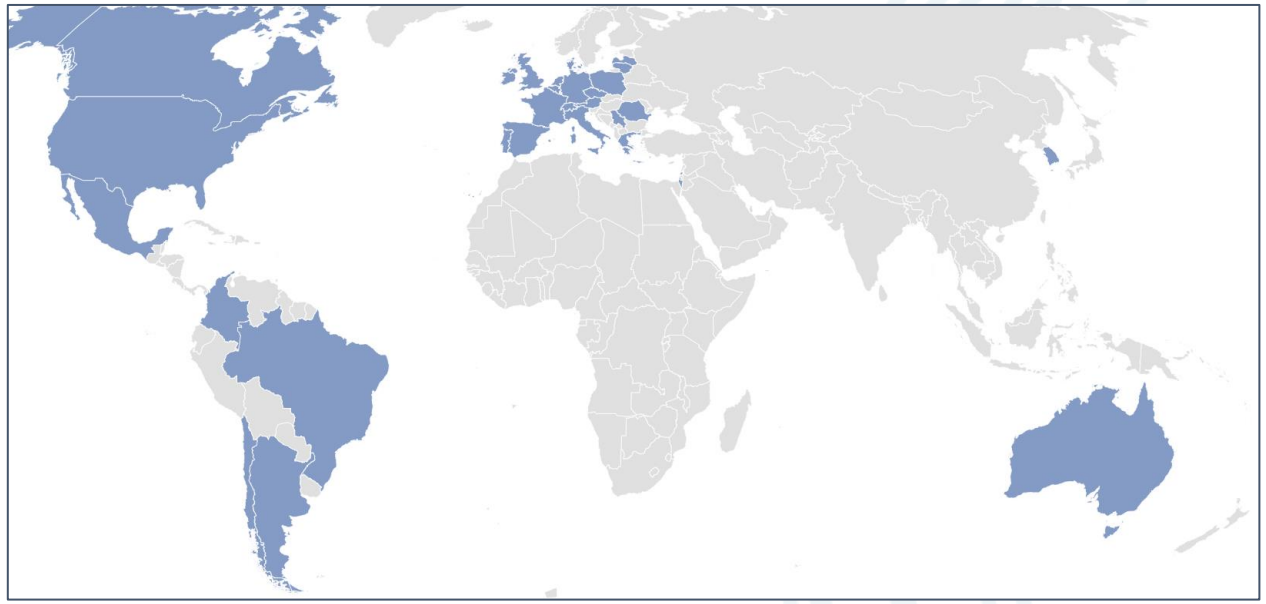
PROSERA STUDY

Key Inclusion Criteria

- Adults ≥ 18 and ≤ 75 years old
- WHO Group 1 PAH
- WHO Functional Class II or III
- PVR ≥ 400 dyne•s/cm^5
- Baseline 6MWD 150 - 450m*
- Either REVEAL Lite 2 Risk Score ≥ 5 **or** NT-proBNP ≥ 300 ng/L*
- Stable treatment with at least one SOC background therapy

* Key enrichment criteria.
WHO = World Health Organization; PVR = pulmonary vascular resistance; 6MWD = six-minute walk distance; NT-proBNP = N-terminal pro B-type natriuretic peptide; SOC = standard of care

Broad Global Footprint with Trusted Sites and Clinical Partners



Country with Study Site

US and Canada: 50+ Sites

Latin America: ~25 Sites

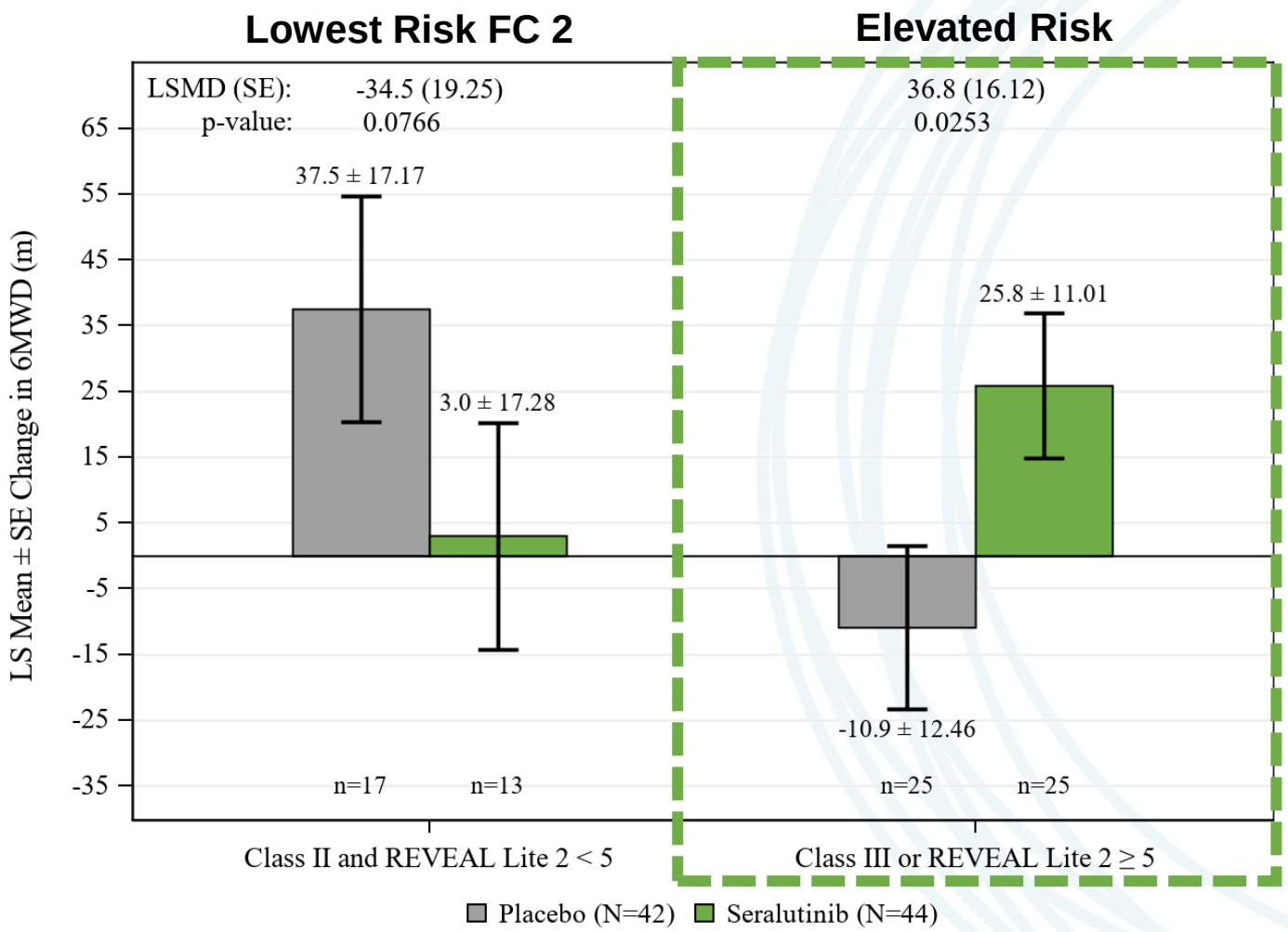
Europe: 75+ Sites

Asia Pacific: 10+ Sites

- Broad global footprint planned: > 160 sites across ~30 countries
- Experienced global Gossamer team to support sites, educate, and drive enrollment
- **Strong CRO partner (PPD) with deep experience in PAH**
- Enrollment target: 18 months

CRO = contract research organization.

Further Validation of REVEAL Lite 2 Enrichment for Phase 3
TORREY Week 24 Δ6MWD with REVEAL Lite 2 Score Incorporated



- Right side consists of patients who are
  - Class II (n=15)
  - Class III (n=35)
- Treatment effect in this population used as a basis for powering phase 3 with a conservative adjustment (Δ = 30 m, SD=70, α=0.025)
  - >95% power with 175 patient / arm

6MWD = six-minute walk distance; FC = functional class LS = least squares; LSMD = least squares mean difference; MMRM = mixed-effects model with repeated measures; WHO = World Health Organization.
Based on MMRM modelling. Source: Data on file.

Appendix I – OLE Safety

gossamerbio

Incidence of TEAEs by preferred term: ≥ 5% in total column (Safety Population)

Preferred term[a]	Placebo Switch (N=40)	Seralutinib Cont. (N=34*)	Total (N=74)
Number of subjects with a TEAE	38 (95.0)	32 (94.1)	70 (94.6)
Headache	9 (22.5)	8 (23.5)	17 (23.0)
Cough	9 (22.5)	7 (20.6)	16 (21.6)
COVID-19	6 (15.0)	7 (20.6)	13 (17.6)
Diarrhoea	8 (20.0)	3 (8.8)	11 (14.9)
Nausea	6 (15.0)	5 (14.7)	11 (14.9)
Dyspnoea	7 (17.5)	2 (5.9)	9 (12.2)
Pyrexia	3 (7.5)	4 (11.8)	7 (9.5)
Rash	3 (7.5)	4 (11.8)	7 (9.5)
Dizziness	2 (5.0)	4 (11.8)	6 (8.1)
Influenza	2 (5.0)	4 (11.8)	6 (8.1)
Nasopharyngitis	4 (10.0)	2 (5.9)	6 (8.1)
Vomiting	4 (10.0)	2 (5.9)	6 (8.1)
Abdominal pain	4 (10.0)	1 (2.9)	5 (6.8)
Epistaxis	1 (2.5)	4 (11.8)	5 (6.8)
Fatigue	4 (10.0)	1 (2.9)	5 (6.8)
Hypokalaemia	3 (7.5)	2 (5.9)	5 (6.8)

*One patient from the Phase 1b clinical trial, who remains on drug, is included.
Abbreviations: MedDRA, Medical Dictionary for Regulatory Activities; TEAE, treatment-emergent adverse event.
[a] Coded using MedDRA v 24.0

Incidence of TEAEs by preferred term: ≥ 5% in total column (Safety Population) - Continued

Preferred term[a]	Placebo Switch (N=40)	Seralutinib Cont. (N=34*)	Total (N=74)
Number of subjects with a TEAE	38 (95.0)	32 (94.1)	70 (94.6)
Pneumonia	3 (7.5)	2 (5.9)	5 (6.8)
Pulmonary arterial hypertension	3 (7.5)	2 (5.9)	5 (6.8)
Alanine aminotransferase increased	4 (10.0)	0	4 (5.4)
Arthralgia	3 (7.5)	1 (2.9)	4 (5.4)
Aspartate aminotransferase increased	4 (10.0)	0	4 (5.4)
Back pain	3 (7.5)	1 (2.9)	4 (5.4)
Complication associated with device	2 (5.0)	2 (5.9)	4 (5.4)
Flushing	3 (7.5)	1 (2.9)	4 (5.4)
Iron deficiency	2 (5.0)	2 (5.9)	4 (5.4)
Nasal congestion	2 (5.0)	2 (5.9)	4 (5.4)
Pain	1 (2.5)	3 (8.8)	4 (5.4)
Pain in extremity	2 (5.0)	2 (5.9)	4 (5.4)
Palpitations	3 (7.5)	1 (2.9)	4 (5.4)
Throat irritation	3 (7.5)	1 (2.9)	4 (5.4)
Upper respiratory tract infection	2 (5.0)	2 (5.9)	4 (5.4)
Vascular device infection	0	4 (11.8)	4 (5.4)

*One patient from the Phase 1b clinical trial, who remains on drug, is included in this group.
Abbreviations: MedDRA, Medical Dictionary for Regulatory Activities; TEAE, treatment-emergent adverse event.
[a] Coded using MedDRA v 24.0

Incidence of Related TEAEs in 2 or More Patients (Safety Population)

Preferred term[a]	Placebo Switch (N=40)	Seralutinib Cont. (N=34*)	Total (N=74)
Number of subjects with a related adverse event	16 (40.0)	11 (32.4)	27 (36.5)
Cough	7 (17.5)	3 (8.8)	10 (13.5)
Headache	2 (5.0)	3 (8.8)	5 (6.8)
Throat irritation	3 (7.5)	1 (2.9)	4 (5.4)
Alanine aminotransferase increased	2 (5.0)	0	2 (2.7)
Aspartate aminotransferase increased	2 (5.0)	0	2 (2.7)
Fatigue	1 (2.5)	1 (2.9)	2 (2.7)
Thrombocytopenia	0	2 (5.9)	2 (2.7)

*One patient from the Phase 1b clinical trial, who remains on drug, is included in this group.
Abbreviations: MedDRA, Medical Dictionary for Regulatory Activities; TEAE, treatment-emergent adverse event.
[a] Coded using MedDRA v 24.0

Incidence of TEAEs Leading to Study Drug Discontinuation (Safety Population)

Preferred term[a]	Placebo Switch (N=40)	Seralutinib Cont. (N=34*)	Total (N=74)
No. with a TEAE leading to d/c of study drug	9 (22.5)	3 (8.8)	12 (16.2)
Cough	4 (10.0)	1 (2.9)	5 (6.8)
Alanine aminotransferase increased	2 (5.0)	0	2 (2.7)
Throat irritation	1 (2.5)	1 (2.9)	2 (2.7)
Abdominal pain	1 (2.5)	0	1 (1.4)
Acute respiratory failure	1 (2.5)	0	1 (1.4)
Aspartate aminotransferase increased	1 (2.5)	0	1 (1.4)
Blood bilirubin increased	1 (2.5)	0	1 (1.4)
Confusional state	1 (2.5)	0	1 (1.4)
Liver function test abnormal	0	1 (2.9)	1 (1.4)
Nausea	0	1 (2.9)	1 (1.4)
Vomiting	0	1 (2.9)	1 (1.4)

*One patient from the Phase 1b clinical trial, who remains on drug, is included in this group.
Abbreviations: d/c, discontinuation; MedDRA, Medical Dictionary for Regulatory Activities; TEAE, treatment-emergent adverse event.
[a] Coded using MedDRA v 24.0