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42nd Annual Meeting & Scientific Sessions
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Risk Assessment in Pulmonary Arterial Hypertension (PAH): Insights From the INSPIRE Study With LIQ861

Presented by: Sandeep Sahay, MD

Relevant Financial Relationship Disclosure Statement

Risk Assessment in Pulmonary Arterial Hypertension (PAH): Insights From the INSPIRE Study With LIQ861

Sandeep Sahay, MD

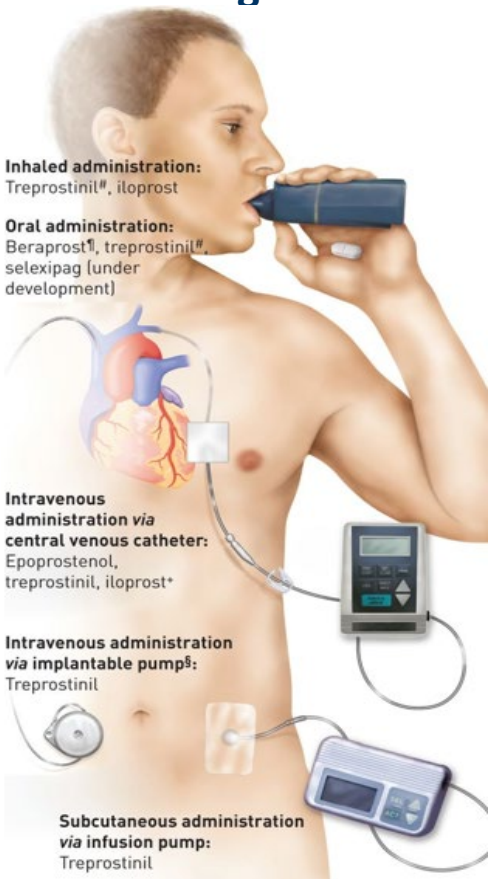
I have the following relationships with ACCME defined ineligible companies:

Consultant - Altavant Sciences, Liquidia Technologies, Bayer Pharmaceuticals, Actelion Pharmaceuticals, United Therapeutics.

Grant/Research Support - Liquidia Technologies, ACCP CHEST Foundation.

Speaker's Bureau - Bayer Pharmaceuticals, United Therapeutics, Actelion Pharmaceuticals.

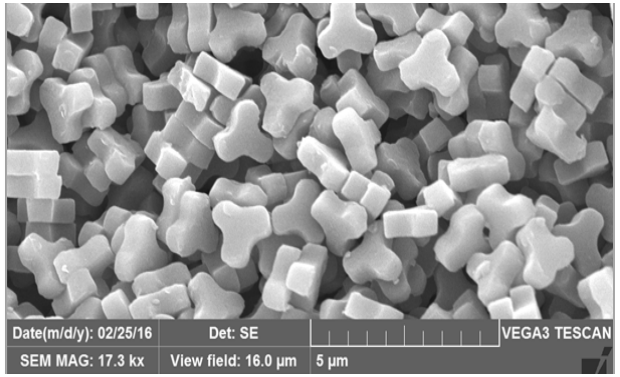
In PAH, Prostacyclin Therapy (PGI2) Improves Symptoms and Limitations by Replacing Deficient Prostacyclin at the Highest Tolerable Level of Drug[1]



Novel PRINT® Technology Results in a Uniform Size, Shape, and Chemical Composition of Treprostinil Particles[2]

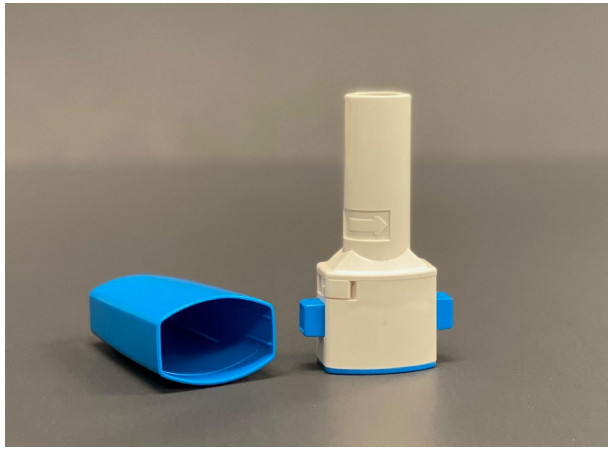
LIQ861 Dry-Powder Formulation

LIQ861 particles are between 1-2 µm wide with trefoil shape



RS00 Model 8 Dry-Powder Inhaler

Compact, disposable inhaler previously approved by FDA and EMEA



Source: 1. Decision Resources, Pulmonary Hypertension Disease Landscape & Forecast, November 2018; Recent advances in targeting the prostacyclin pathway in pulmonary arterial hypertension, November 2015.
2. Liquidia Data on file.

Purpose

Assess for risk status improvement in PAH patients receiving inhaled dry powder treprostinil (LIQ 861) in the INSPIRE study[1]

The French Non-invasive method for risk assessment discriminates prognosis for survival and clinical worsening-free survival. The method includes 3 criteria: New York Heart Association functional class (NYHA FC) I-II; 6-minute walk distance (6MWD); N-terminal pro-brain natriuretic peptide (NT-pro BNP).[2]

	Low-Risk Criteria[1]
NYHA FC	I-II
6MWD	>440m
NT-pro BNP	<300ng/liter

In the study, percent of patients who achieved low-risk were assessed at Baseline, Month 2, Month 4, and Month 8 in Transition, Prostanoid (PCY) Naïve, and Overall Groups.[1]

Source: 1. Liquidia Data on file. 2. Humbert M, Farber HW, Ghofrani HA, et al. Risk assessment in pulmonary arterial hypertension and chronic thromboembolic pulmonary hypertension. *Eur Respir J*. 2019;53(6):1802004. doi:10.1183/13993003.02004-2018

INSPIRE Study Design

Treatment Phase for Primary Endpoint Was Followed by Evaluation for Safety and Tolerability	
Subjects Overview	• WHO Group I (PAH) NYHA Class II, III, and IV; N≥100 • Divided into two groups
Prostanoid (PCY) Naïve ≤2 non-PGI oral PAH Rx	• Initiate LIQ861 26.5 mcg capsule strength dose • Increase in 26.5 mcg increments weekly to tolerance and symptom relief
Transitions from Tyvaso® Stable doses ≥3 mo.	• Initiate with comparable dose of LIQ861 • Titrate in 26.5 mcg incremental doses to tolerance and symptom relief
Primary Endpoint	• Incidence of TEAEs and SAEs at 2 months
Exploratory Endpoints	• Sustained use after transition (Tyvaso® transitions) • 6-minute walk distance • NT-proBNP • NYHA functional class • Quality of life questionnaire/patient satisfaction with LIQ861 • Risk assessment (French Non-invasive)

PGI = prostacyclin; SAE = serious adverse event; TEAE = treatment-emergent adverse event.
Source: https://clinicaltrials.gov/ct2/show/NCT03399604. Tyvaso® is a registered trademark of United Therapeutics Corp.

Demographics and Baseline Characteristics

		Transitions (n=55)	PCY Naïve (n=66)	Overall (n=121)
Sex	Female	47 (85.5%)	52 (78.8%)	99 (81.8%)
Age (years)	Mean ± SD	53 ± 14.1	55 ± 14.6	54 ± 14.3
BMI (kg/m²)	Mean ± SD	30.07 ± 7.9	29.31 ± 7.8	29.66 ± 7.8
NYHA Functional Class at Screening	Class II	43 (78.2%)	37 (56.1%)	80 (66.1%)
	Class III	12 (21.8%)	29 (43.9%)	41 (33.9%)
PAH Duration (years)	Mean ± SD	7.25 ± 5.1	4.71 ± 5.1	5.87 ± 5.2
PAH Therapy at Screening	PDE5i alone	8 (14.5%)	12 (18.2%)	20 (16.5%)
	PGI2 alone	6 (10.9%)	-	6 (10.9%)
	ERA alone	5 (9.1%)	3 (4.5%)	8 (6.6%)
	sGC alone	-	2 (3%)	2 (3%)
	ERA + PDE5i	35 (63.6%)	46 (69.7%)	81 (66.9%)
	ERA + sGC	1 (1.8%)	3 (4.5%)	4 (3.3%)

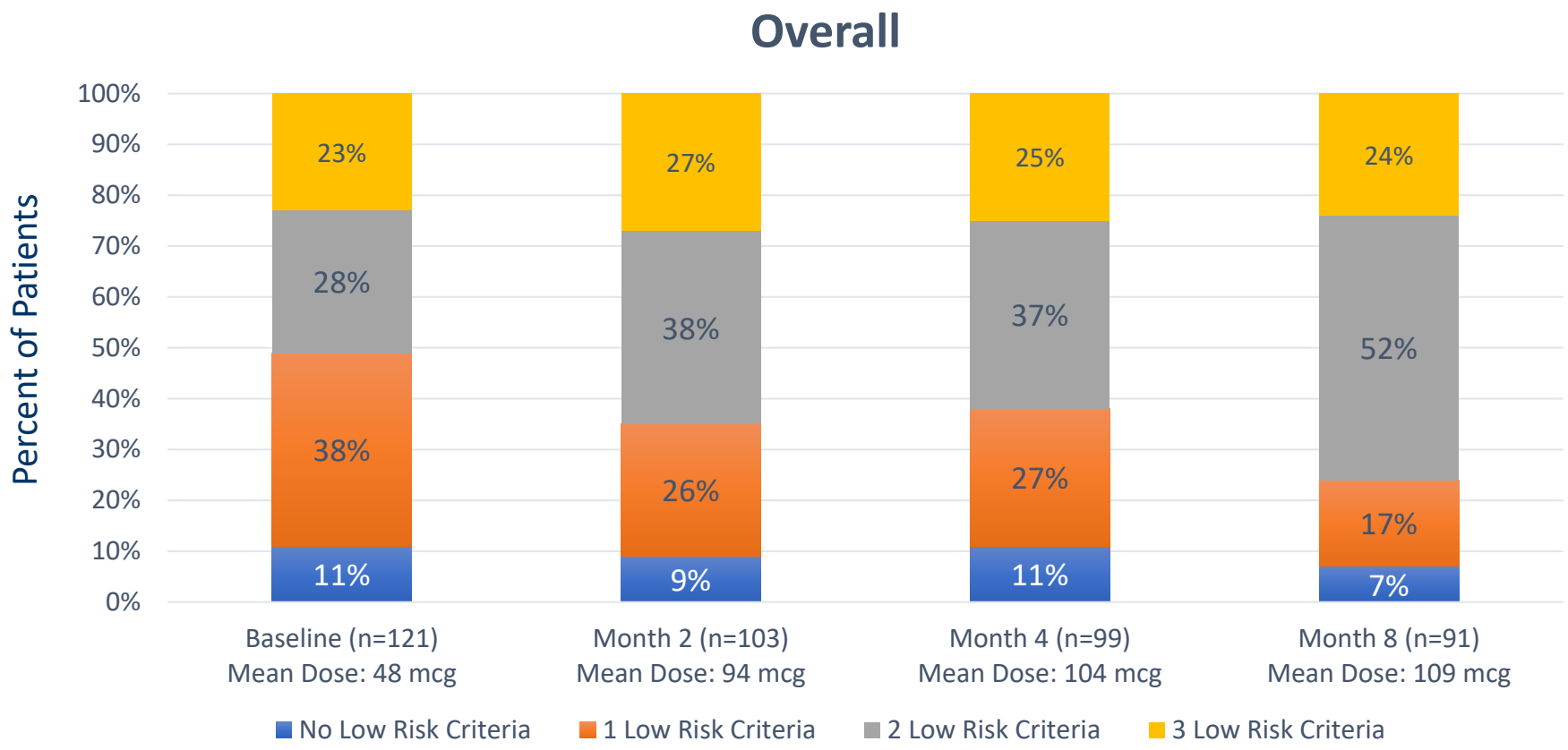
Most Common AEs Were Consistent With Inhaled Prostacyclins and Were Generally Mild to Moderate in Severity

Most Common AEs Experienced During the Trial	Overall N=121			
	No. (%) Subjects	No. of Events		
		Mild	Moderate	Severe
Cough	64 (53%)	51	13	0
Headache	41 (34%)	29	10	2
Upper Respiratory Tract Infection	28 (23%)	22	6	0
Dyspnea	23 (19%)	10	11	2
Dizziness	23 (19%)	20	3	0
Throat Irritation	22 (18%)	21	1	0
Diarrhea	22 (18%)	14	8	0
Chest Discomfort	18 (15%)	15	3	0
Fatigue	14 (12%)	8	4	2
Nasopharyngitis	12 (10%)	10	2	0
Nausea	12 (10%)	8	2	2

Adverse Events in ≥10% of patients were all **mild to moderate** and consistent with inhaled prostacyclins

NC = no change.
Source: Liquidia Data on file.

Percent of Patients who Achieved Low-Risk for 6MWD, NYHA FC, NT-pro BNP at Baseline through Month 8 with LIQ861 Treatment



Low-risk: NYHA FC: I-II; 6MWD >440m; NT-pro BNP <300ng/liter.
Percent of Patients are shown within each column. Only patients with data for all 3 endpoints (6MWD, NYHA FC, and NT-proBNP) at the relevant visit are included in the denominator for percentages.
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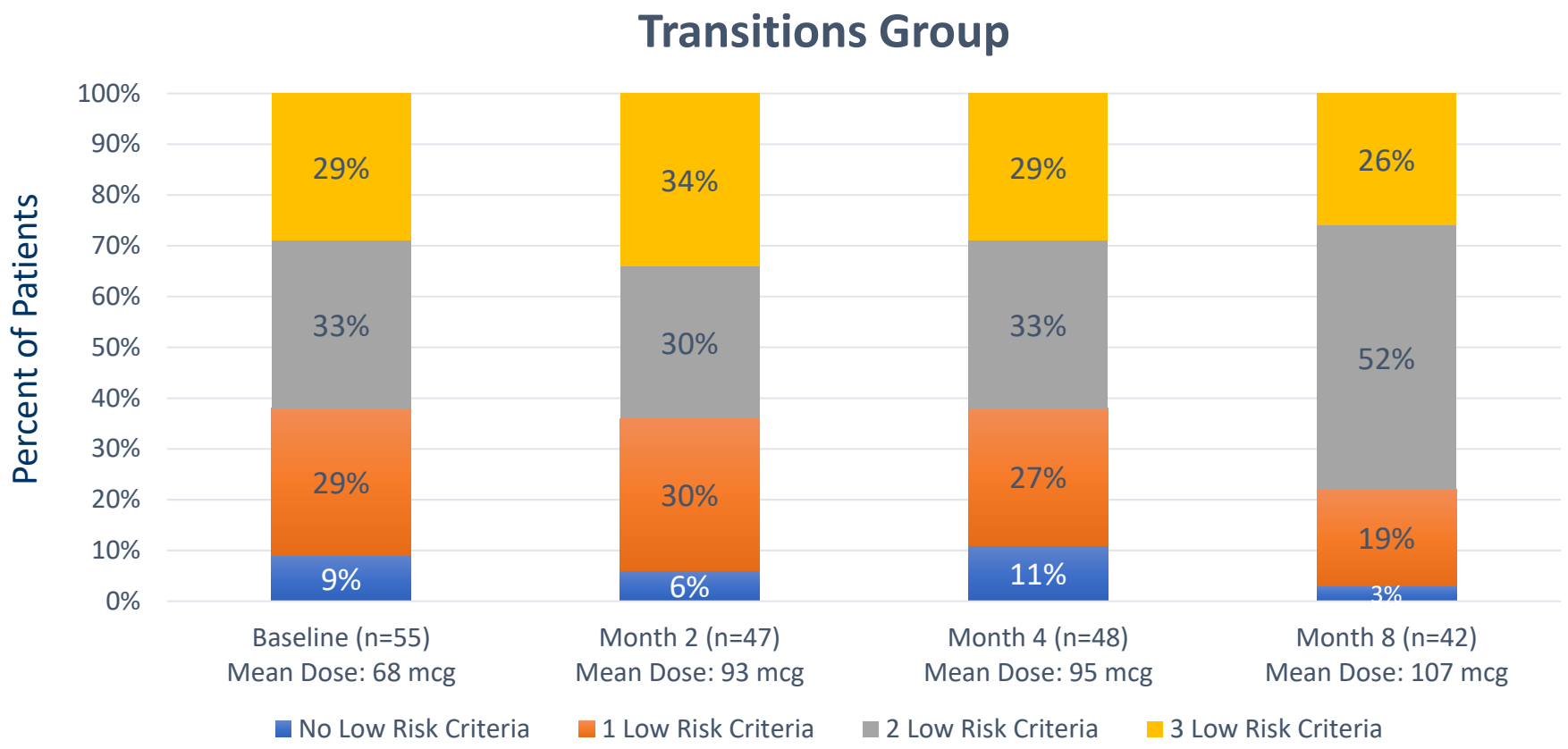

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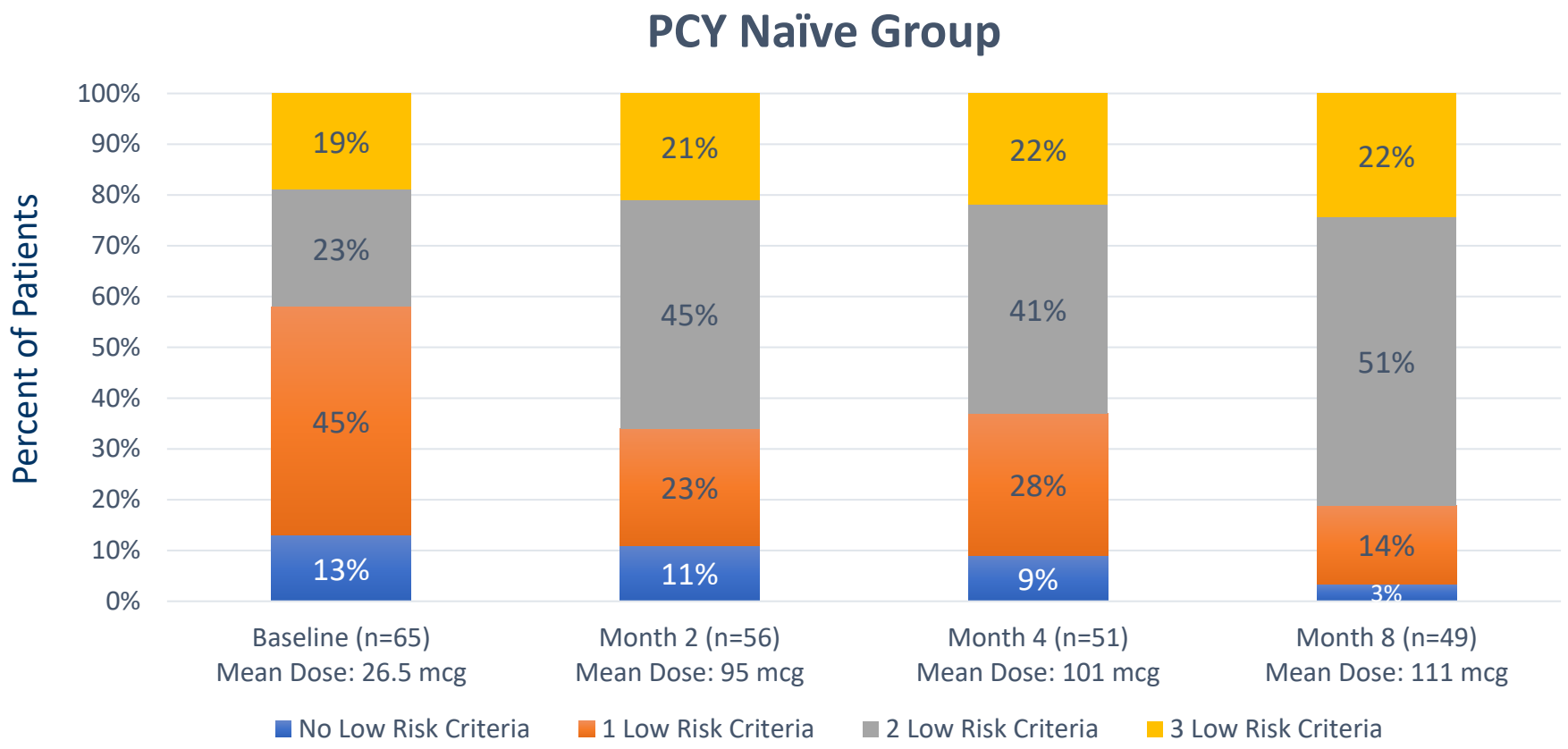

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Source: Liquidia Data on file.

In WHO group 1 PAH patients, LIQ861 was shown to improve risk stratification using the French non-invasive criteria.

- Overall, 51% of patients met 2 or 3 low-risk variables at Baseline (n=120)

Overall, a larger percentage of patients met 2 or 3 PAH low-risk variables at Month 8 than at Baseline.

- The percentage of patients that met 2 or 3 PAH low-risk variables increased from 51% at Baseline to 76% overall
- The shift was more pronounced in the PCY Naïve Group (from 42% to 73%) than the Transitions Group (62% to 79%)
- Change in Risk is noteworthy given that overall, 71% of patients were receiving dual oral therapy

TEAE = treatment-emergent adverse event.
Source: Liquidia Data on file.

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Thank You to Patients and Principal Investigators

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