Interim Analysis from the ADAPT Registry: Real-World Patient Reported Outcomes Using SF-12 and Emphasis-10 in Patients Receiving Oral Treprostinil

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PURPOSE

- Oral treprostinil (ORE) is approved to delay disease progression and improve exercise capacity in pulmonary arterial hypertension (PAH)[1]
  - In the FREEDOM-EV study, achievement of ≥ 3 mg TID by week 24 resulted in greater improvements in 6MWD and WHO functional class[2]
- ADAPT is an active, observational registry following Group 1 PAH patients up to 78 weeks from ORE initiation and was initiated in February 2017
  - The primary objective is to observe and assess real-world use and tolerability of oral treprostinil in patients with WHO Group 1 PAH
- Patient-reported outcomes measuring patients' perceptions of their health status and quality of life are playing an increasingly important role in treatment practices with the FDA encouraging PRO endpoints to be included in clinical trials
  - This analysis explores the effect of ORE on health-related quality of life (HRQoL) from baseline to month 6 and correlates HRQoL scores with risk status

METHODS

- Patient demographics, disease characteristics, and clinical parameters are investigator-reported and collected from routine standard-of-care clinic visits
- Patient-reported quality of life (QoL) and ORE dosing are collected prospectively through the EmpiraMed™ Patient Portal
- HRQoL was assessed using the emPHasis-10 (e10) and Short-Form 12 (SF-12) health surveys
  - Lower e10 and higher SF-12 scores indicate improved QoL
- Risk assessment was performed using COMPERA and REVEAL Lite 2 calculators in patients with available data
  - Patients missing up to one highly important variable (WHO FC, 6MWD, BNP/NT-proBNP) were excluded from REVEAL Lite 2 risk calculations
- Polyserial correlations were used to correlate ordinal risk status with continuous SF-12 and e10 scores at baseline
- Protocol is IRB approved at each center

Key Registry Inclusion

- Patients who are newly prescribed oral treprostinil or have been receiving oral treprostinil for < 182 days per FDA-labeled indication
- ≥18 years of age or older

RESULTS

- At the time of analysis (data cut-off March 1, 2021), 154 patients were enrolled. Analyses were conducted in patients with available HRQoL data at baseline (n=109) and month 6 (n=73)
- The median (IQR) time since diagnosis was 1.7 (0.6,4.3) years and 33%, 30% and 36% were receiving 0, 1 or 2 PAH background therapies, respectively. Baseline patient and disease characteristics are summarized in Table 1, Figure 1, and Figure 2
- Median ORE total daily dose (TDD) at month 6 was 11.3 mg

Table 1. Patient and Disease Characteristics

Characteristic	All subjects (n=109)
Gender, n (%)	
Female	84 (77.1)
Age, y	
Median (IQR)	61 (49, 68)
Race, n (%)	
White	91 (83.5)
Black or African American	12 (11)
American Indian or Alaska Native	3 (2.8)
Asian	3 (2.8)
PAH etiology at diagnosis, n (%)	n=108
Idiopathic	61 (56.5)
Heritable	3 (2.8)
Associated	
Connective tissue disease	24 (22.2)
Congenital heart disease	2 (1.9)
Appetite suppressant/toxin use	7 (6.5)
Portal hypertension	1 (0.9)
Other	10 (9.3)
Transition status, n (%)	
De novo	67 (61.5)
Transition	42 (38.5)
Time since PAH diagnosis	
Median (IQR) years	1.7 (0.6, 4.3)
Time on ORE	
Median (IQR) years	1 (0.64, 1.45)
WHO/NYHA functional class at baseline, n	n=95
I / II / III / IV	9 / 44 / 39 / 3
6MWD, m	
Median (IQR)	329 (206, 420)
PAH-specific background therapy, n (%)	
No PAH background therapy	36 (33)
PAH monotherapy	33 (30.3)
PAH dual therapy	39 (35.8)
PAH triple therapy	1 (0.9)

Figure 1. PAH-Specific Background Therapy – n, %

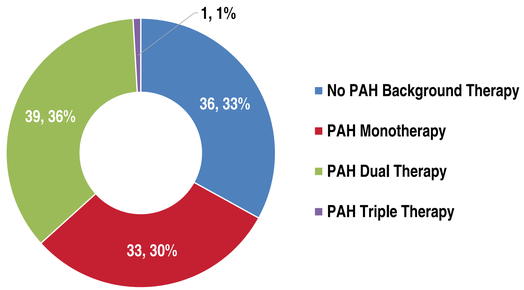
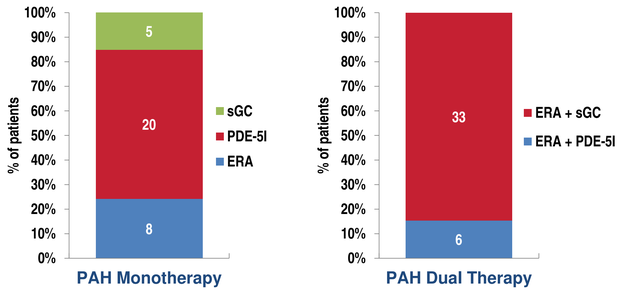


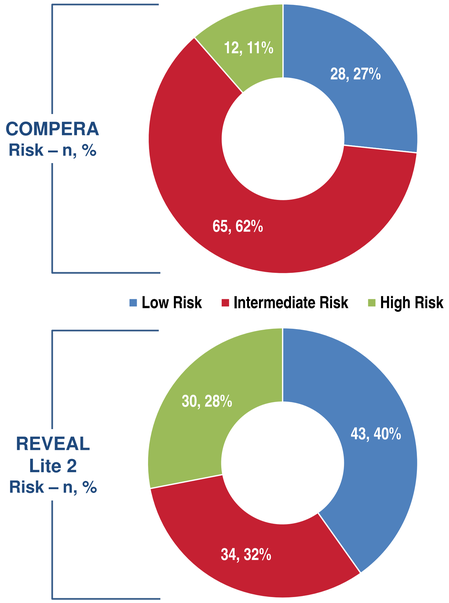
Figure 2: PAH Monotherapy and Dual Therapy by Medication Class



Risk Stratification

- The proportion of patients categorized as low, intermediate, and high risk at baseline were 27%, 62% and 11% with COMPERA (n=105) and 40%, 30%, and 30% with REVEAL Lite 2 (n=95) (Figure 3)

Figure 3: Patient Risk Stratification at Baseline



SF-12 and e10 Scores

- At baseline, the mean (SD) SF-12 physical component summary (PCS) and mental component summary (MCS) scores were 32.5 ± 9.84 and 51.3 ± 10.42, respectively (Figures 4 and 5)
- Both COMPERA and REVEAL Lite 2 showed significant correlations between higher risk patients and worse PCS scores at baseline (r=-0.40, p<0.001; r=-0.37, p<0.001, respectively)
- Higher risk by COMPERA was also significantly correlated with worse e10 scores (r=0.38, p<0.001)
- At month 6, improvement in all 8 domains of the SF-12 were noted with PCS and MCS scores increasing to 35.7 ± 9.58 and 52.4 ± 10.71, respectively (Figures 4 and 5)
- e10 also suggested improvement with a decline from 26.4±12.42 at baseline to 22.2±12.33 at month 6) (Figure 6)

Figure 4. SF-12 PCS Score

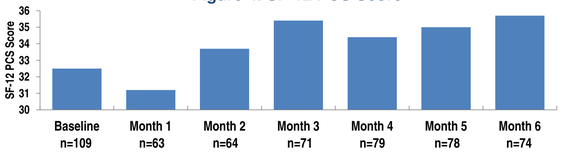


Figure 5. SF-12 MCS Score

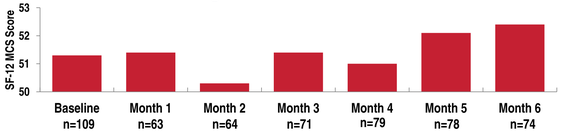
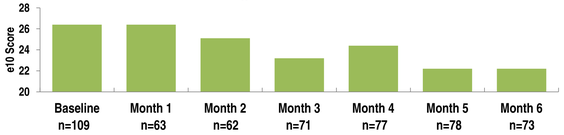


Figure 6. e10 Score



CONCLUSIONS

- **Patient-reported data from the ADAPT registry indicate risk status is correlated with HRQoL as measured with e10 and SF-12**
- **Treatment with oral treprostinil improved health related quality of life at month 6**

CLINICAL IMPLICATIONS

- **The use of HRQoL measurement tools is important in the assessment of treatment efficacy and overall health status**
- **Treatment considerations impacting patient quality of life improve patient satisfaction and clinically meaningful outcomes**

REFERENCES

1. Orenitram (treprostinil) extended release tablets. US package insert. United Therapeutics Corporation, Research Triangle Park, NC. October 2019.
2. White RJ, Grünig E, Jerjes-Sanchez C, Meyer GM, Pulida T, Sepulveda P, et al. Dose-response relationship of oral treprostinil for secondary endpoints in the FREEDOM-EV study. *European Respiratory Journal.* 2019; 54: Suppl. 63, PA5462

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