Understanding the real-world effectiveness of pegcetacoplan for the treatment of paroxysmal nocturnal hemoglobinuria (PNH) in the United States

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CONCLUSIONS

- ✓ These findings demonstrate the real-world effectiveness of PEG, through improvement across multiple clinical endpoints from PEG initiation to the time of survey completion.
- ✓ Noticeable increases in hemoglobin (3.4 g/dL) from PEG initiation to the time of survey completion were reported.
- ✓ Congruence between physician and patient reported satisfaction with PEG was reported. Both reported favorable satisfaction with PEG, highlighting the potential for PEG to improve outcomes for current PNH patients.
- ✓ Further research is required to understand the long-term effectiveness of PEG in the real-world.

INTRODUCTION

- PNH is a rare, chronic, and potentially fatal disease. It is caused by uncontrolled complement activation[3] resulting in hemolysis, which clinically manifests as anemia, fatigue, and in severe cases, thrombosis[4] .
- Patients with PNH have negatively impacted daily living and quality of life (QoL)[5] as a result of their symptoms.
- Current treatments (e.g., C3/C5 inhibitors) inhibit complement activation to manage complement-driven hemolysis and its associated symptoms.
- Symptoms associated with low hemoglobin (<12 g/dL) including fatigue[6] and LDH values above the upper limit of normal[7] have been reported to persist in patients receiving C5 inhibitor treatment.
- This highlights a need for a treatment that can prevent breakthrough symptoms and improve the QoL of PNH patients.

OBJECTIVE

- **In this analysis, we assessed the clinical effectiveness of pegcetacoplan (PEG) for real-world PNH patients in the USA.**

METHODS

- Data were drawn from the Adelphi PNH Disease Specific Programme™ (DSP), a real-world, cross-sectional survey in the USA ran between January-November 2022. The DSP methodology has been previously published[8] and was conducted according to the relevant regulations.
- Hematologists and oncologists were asked to complete questionnaires for their consulting patients with PNH. Physicians reported data on patient demographics, clinical markers, treatment satisfaction, disease control and health-related QoL (HR-QoL).
- The same patients were invited to provide self-reported data regarding treatment satisfaction and HR-QoL measures including the FACIT fatigue[1] and EQ-5D-5L[2] . Matched data was reported from the physician and the patient where available.
- Patients were eligible for inclusion if currently prescribed PEG for ≥6 months. Descriptive statistics were reported.

RESULTS

- 5 hematologists recorded data for 22 patients with PNH treated with PEG. 59.1% were male, with a median age of 35.0 years, and two-thirds remained in full/part time employment at the time of survey completion. Median time since diagnosis was 2.4 years. (**Table 1**)
- Patients had been receiving PEG for a median of 10.3 months and 90.9% of patients had switched from a previous C5 inhibitor treatment.
- All patients received a dose of 1080 mg every 3-4 days, which is in line with the label indication. **(Table1)**

Table 1: Demographics for physician reported patient data

	All patients (n=22)
Age (years), median (range)	35.0 (20.0-67.0)
Sex (Male), n (%)	13 (59.1)
BMI, median (range)	24.9 (22.1-27.8)
Employed (full or part time), n (%)	14 (63.6)
Co-morbidities, median (range)	0.5 (0.0-4.0)
Time since diagnosis (years), median (range)	2.4 (0.8-10.7)
Switched from C5 inhibitors* (%)	20 (90.9)
Time receiving PEG (months), median (range)	10.3 (6.2-14.9)
Dose (mg), median (range)	1080.0 (1080.0-1080.0)
	(n=20)
Frequency of PEG administration (days), mean (SD)	3.0 (0.0)
PEG administered every 3 days, n (%)	20 (100.0)

Median was displayed where data was not normally distributed, BMI: Body Mass Index
*Includes eculizumab (ECU) and ravulizumab (RAVU).
All (16) ECU patients were receiving the recommended dose. 2 RAVU patients were receiving a dose of 2700mg and 2 were receiving 2400mg which is below the recommended maintenance dose.

- 15 patients provided self reported data. Of these patients, 53.3% were male with a median age of 35.0. They had been receiving PEG for slightly longer time than the overall patient group (12.4 vs 10.3 months). **(Table 2)**

Table 2: Demographics for patients with self-reported data at time of survey

	All patients (n=15)
Age (years), median (range)	35.0 (20.0-48.0)
Sex (Male), n (%)	8 (53.3)
Employed (full or part time), n (%)	8 (53.3)
Time since diagnosis (years), median (range)	3.2 (0.9-10.7)
Time receiving PEG (months), median (range)	12.4 (6.6-14.9)
EQ-5D Utility score, mean (SD)	0.94 (0.1)
FACIT-Fatigue score, mean (SD)	40.8 (7.7)
	(n=14)
EQ-5D VAS score, mean (SD)	87.4 (7.0)

- From PEG initiation to the point of the survey, physicians reported a 3.4 g/dL improvement in hemoglobin on average (8.2 g/dL vs. 11.6 g/dL) **(Figure 2a).**
- Improvements in lactate dehydrogenase (LDH) were also reported from PEG initiation to the time of survey time (27.3% vs. 68.2% reporting LDH <1.5x upper limit of normal (ULN), respectively) **(Figure 2b).**
- The proportion of patients reported to experience no fatigue also increased from PEG initiation to the time of survey completion (0.0% vs. 59.1%, respectively) **(Figure 2c).**
- Mean FACIT score was 40.8 for PEG patients indicating slightly worse fatigue in comparison with the US general population who scored, 43.5[1]. **(Table 2)**

Figure 2a: Clinical improvements: Hemoglobin

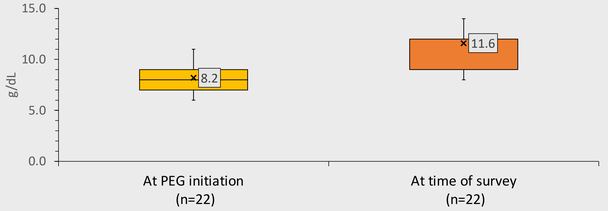


Figure 2b: Clinical improvements: LDH

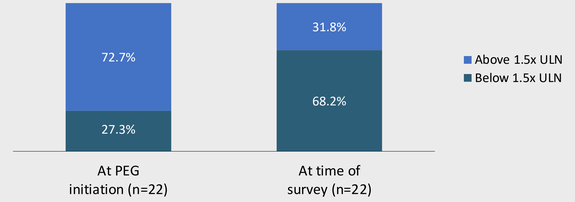


Figure 2c: Clinical improvements: Fatigue

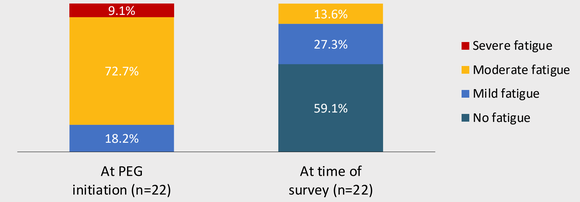
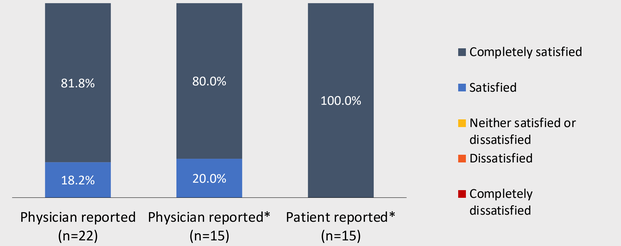
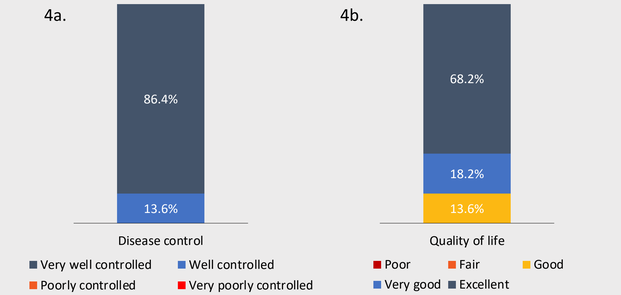


Figure 3: PEG satisfaction at the time of survey



*Matched data for the same n=15 patients from the physician and patient

Figure 4: Physician reported control of PNH (a) and QoL (b) at time of survey



- For all 22 patients, their physician reported to be 'completely satisfied/ satisfied' with PEG treatment at the time of survey completion. **(Figure 3)**
- For the patients with matched physician reported data, all patients and 80% of physicians reported to be 'completely satisfied' with PEG. **(Figure 3)**
- All patients were considered by their physicians to have 'well/very well controlled' disease at time of survey completion **(Figure 4a).**
- Physicians reported 86.4% of patients had 'excellent/very good' overall QoL **(Figure 4b).** The mean EQ-5D-5L Utility score[2] was 0.94 which is comparable with the US population norm of 0.83[9]. **(Table 2)**

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