Real-world adherence with pegcetacoplan in paroxysmal nocturnal hemoglobinuria compared with previously reported oral medication adherence rates

David Dingli[1]; Brian Mulherin[2,3]; Peter Hillmen[4]; Jinny Min[4]; Barbara Czech[5]; Jens Panse[6,7]

[1]Mayo Clinic, Rochester, MN, USA; [2]Hematology Oncology of Indiana, Indianapolis, IN, USA; [3]Ascension St. Vincent Carmel, Carmel, IN, USA; [4]Apellis Pharmaceuticals, Inc., Waltham, MA, USA; [5]Swedish Orphan Biovitrum AB, Stockholm, Sweden; [6]Center for Integrated Oncology Aachen Bonn Cologne Düsseldorf (CIO ABCD), Aachen, Germany; [7]Department of Hematology, Oncology, Hemostaseology and Stem Cell Transplantation, University Hospital RWTH Aachen, Aachen, Germany

CONCLUSIONS

- ✔ Real-world patients with PNH who self-administer SC pegcetacoplan have adherence rates exceeding the reported real-world adherence rates for oral medications in other chronic conditions, especially those with high dosing frequencies
- ✔ Postmarketing data in PNH show a 97% adherence rate for pegcetacoplan
- ✔ Reported real-world data for adult patients with PNH demonstrate improved outcomes with pegcetacoplan
- ✔ Future studies should explore adherence with alternative administration methods, such as wearable injectors, as a solution to improve patient experience, adherence, and outcomes in chronic diseases, such as PNH

INTRODUCTION

- PNH is a rare, severe, and chronic disease characterized by complement-mediated hemolysis, thrombosis, bone marrow failure, and fatigue[1,2]
- Median survival is 10 to 20 years in untreated PNH[3]
- Current standard of care has changed patient outcomes, with available therapies improving survival[3]
- Several complement inhibitors are approved for PNH, including the IV or SC C5 inhibitors eculizumab, ravulizumab, and crovalimab; the SC self-administered C3/C3b inhibitor pegcetacoplan; and the oral factor B inhibitor iptacopan and factor D inhibitor danicopan (as add-on therapy to an IV C5 inhibitor)[4]
- Pegcetacoplan provides comprehensive hemolysis control, with increased hemoglobin concentrations, lower absolute reticulocyte counts, and decreased fatigue[5-7]
- There are issues related to absorption of oral agents, adherence concerns with frequent dosing regimens, and risk of uncontrolled complement activation[8-13]
- Adherence to anticomplement therapies is essential to maintain stable hematologic response[14]

OBJECTIVE

To evaluate real-world adherence to the SC self-administered C3/C3b inhibitor pegcetacoplan in patients with PNH compared with reported real-world adherence to long-term oral therapies for other chronic conditions

METHODS

- A descriptive review of medical literature was conducted in 2024 to analyze oral medication adherence rates in other chronic conditions
  - Medical subject headings "compliance, medication" and "administration, oral" were applied in PubMed to assess observational, real-world studies reporting medication adherence rates for OADs in T2D, OACs in AF, and oral oncolytics in hematologic cancers
- US postmarketing adherence to pegcetacoplan therapy among patients with PNH was calculated using central pharmacy refill data
  - Calculated as the percentage of patients taking pegcetacoplan as prescribed (adherence definition) based on the number of days patients had pegcetacoplan vials in their possession (dispensed) divided by the total number of days in a dispensing period (proportion of days covered)

RESULTS

Oral therapy adherence for chronic conditions

- In most studies adherence is defined as taking ≥80% of prescribed doses[15]
- Reported adherence rates to therapies for other chronic conditions are typically 50% to 60% but vary greatly[15] (**Table 1**)
- An inverse relationship between oral medication adherence and dosing frequency is observed in other chronic diseases, with progressively decreasing adherence rates from a once-daily regimen to 2-, 3-, and 4-times-daily dosing regimens (decreases of −6.7%, −13.5%, and −19.2%, respectively)[16]

RESULTS *(cont.)*

Oral therapy adherence for chronic conditions

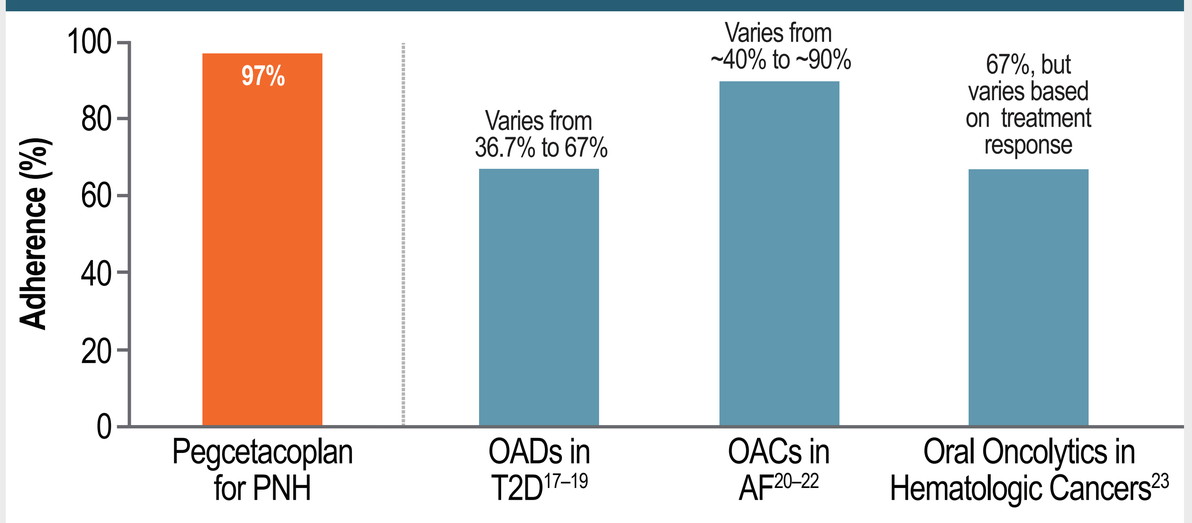
Table 1. Oral Therapy Adherence for Chronic Conditions

Therapy and Condition	Real-World Adherence Information From Literature Search
OADs in T2D	▪ Adherence varies by country (ie, 42% in Switzerland[17] to 67% in Canada[18]) and medication type (ie, 47.3% of dipeptidyl peptidase-4 inhibitors, 41.2% of sulfonylureas, and 36.7% of thiazolidinediones)[19] ▪ A 7% reduction in the hospitalization risk and 10% reduction in mortality risk in adherent versus nonadherent patients[17]
OACs in AF	▪ Adherence ranges widely (~40% to ~90%), differing across countries, patient populations (ie, incident AF versus post cardiovascular event), OAC types (ie, warfarin or direct OACs), and patient/geographical characteristics[20] ▪ Inverse relationship between oral medication adherence and dosing frequency observed (~26% increased adherence with once- compared with twice-daily dosing regimens)[21,22]
Oral oncolytics in hematologic cancers	▪ Nonadherence prevalent (32.7% patients nonadherent)[23] ▪ Nonadherence associated with poor clinical response (ie, patients treated with imatinib with complete cytogenetic response had significantly lower mean percentage of imatinib not taken [9.0% (SD 18.6%)] versus patients with incomplete response [26.0% (SD 24.4%)])[23] ▪ Adherent patients incurred lower medical costs, with significantly lower odds of all-cause health care resource utilization (ie, outpatient and inpatient/emergency utilization)[24]

Pegcetacoplan adherence for PNH

- Postmarketing pegcetacoplan adherence for PNH in the US from launch (2021) to 2024 was estimated at 97%, well above the reported rates of adherence to long-term therapies for chronic conditions (see **Figure 1**)
- Reported real-world data for adult patients with PNH demonstrate improved mean hemoglobin levels, greater transfusion avoidance, reduced fatigue, and improved cognitive function with pegcetacoplan, with low rates of health care resource utilization[25,26]

Figure 1. Real-world Adherence to Pegcetacoplan in PNH Compared with Long-term Oral Therapies for Other Chronic Conditions



REFERENCES: 1. Brodsky RA. *Blood*. 2021;137(10):1304–9. **2.** Risitano AM, et al. *Front Immunol*. 2019;10:1157. **3.** Waheed A, et al. *Blood Rev*. 2024;64:101158. **4.** Hillmen P, et al. *Int J Mol Sci*. 2024;25(17):9477. **5.** Hillmen P, et al. *N Engl J Med*. 2021;384(11):1028–37. 6. Wong RS, et al. *Blood Adv*. 2023;7:2468–78. **7.** de Latour RP, et al. *Lancet Haematol*. 2022;9:e648–59. **8.** Oliver M, et al. *J Blood Med*. 2023;14:613–28. **9.** Notaro R, et al. *N Engl J Med*. 2022;387:160–6. **10.** Risitano AM, et al. *Front Immunol*. 2019;10:1157. **11.** Waheed A, et al. *Blood Rev*. 2024;64:101158. **12.** VandenBerg CJ, et al. *Hosp Pediatr*. 2023;13:e123–32. **13.** Higano CS, et al. *J Urol*. 2023;209:485–93. **14.** Religioni U, et al. *Medicina (Kaunas)*. 2025;61:153. **15.** Kleinsinger F. *Perm J*. 2018;22:18–033. **16.** Coleman CI, et al. *J Manag Care Pharm*. 2012;18:527–39. **17.** Huber CA, et al. *Medicine (Baltimore)*. 2016;95:e3994. **18.** Simard P, et al. *Acta Diabetol*. 2015;52:547–56. **19.** Farr AM, et al. *Adv Ther*. 2014;31(12):1287–305. **20.** Hernandez I, et al. *J Am Heart Assoc*. 2019;8:e011427. **21.** Laliberté F, et al. *Adv Ther*. 2012;29(8):675–90. **22.** Vrijens B, et al. *Europace*. 2015;17:514–23. **23.** Noens L, et al. *Blood*. 2009;113:5401–11. **24.** Dashputre AA, et al. *J Manag Care Spec Pharm*. 2020;26:186–96. **25.** Mulherin B, et al. *Hematology Reports*. 2024;16(4):669–81. **26.** Fishman J, et al. *Value Health*. 2023;26:S20.

2nd International PNH Interest Group (IPIG) Conference
May 15–16, 2025 | Paris, France

Data previously published: David Dingli, Brian Mulherin, Peter Hillmen, Barbara Czech, Jens Panse; Real-World Adherence with Pegcetacoplan in Paroxysmal Nocturnal Hemoglobinuria Compared with Previously Reported Oral Medication Adherence Rates. *Blood* 2024; 144 (Supplement 1): 5680. doi: https://doi.org/10.1182/blood-2024-203541

Abbreviations: AF, atrial fibrillation; IV, intravenous; OACs, oral anticoagulants; OADs, oral antidiabetic medications; PNH, paroxysmal nocturnal hemoglobinuria; SC, subcutaneous; T2D, type 2 diabetes

Disclosures: **DD** serves as consultant and receives honoraria from Alexion, Apellis, BMS, Janssen, MSD, Novartis, Sanofi, Sorrento, and Regeneron; serves as consultant for Genentech; and receives research funding from Apellis and K-36 Therapeutics. **BM** serves as consultant for Apellis, Daiichi Sankyo, and Novartis; receives research funding from Apellis and Novartis; receives honoraria from Apellis and Pharmacosmos; and serves on the speakers' bureau for Apellis. **PH** and **JM** are employees of Apellis and hold stock or stock options. **BC** is an employee of Sobi and holds stock or stock options. **JP** serves as consultant and receives honoraria from Blueprint Medicines, Amgen, MSD, F Hoffmann-La Roche, Bristol Myers Squibb, Alexion, AstraZeneca, Novartis, Gilead, Pfizer, Boehringer Ingelheim, Sobi, and Apellis; and honoraria from Swiss Biopharma.

Acknowledgments: This study was funded by Apellis Pharmaceuticals, Inc and Sobi (Swedish Orphan Biovitrum AB). Writing assistance was provided by Kay Square Scientific, Newtown Square, PA, USA, and was funded by Apellis Pharmaceuticals, Inc. and Sobi (Swedish Orphan Biovitrum AB).