Real-World Treatment Patterns & Clinical Outcomes in Thrombopoietin Receptor Agonist Naive Patients with Immune Thrombocytopenia Treated with Avatrombopag: Interim Results from the REAL-AVA 3.0 Study

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SUMMARY

- In this real-world (RW) study evaluating the effectiveness of avatrombopag (AVA) as the first thrombopoietin receptor agonist (TPO-RA) in primary immune thrombocytopenia (ITP), interim results demonstrate a high response rate in adult patients with low platelet counts (PCs) at AVA initiation, with all patients achieving a clinically meaningful PC threshold. Response-level PCs were maintained throughout the majority of the follow-up period, demonstrating AVA's durability
- These results are consistent with other RW studies among patients who were not TPO-RA naïve [1-3], further supporting AVA as a treatment for adult patients with primary ITP regardless of prior treatment
- All patients on concomitant medications were able to reduce or discontinue them, and few patients required rescue treatment while receiving AVA, supporting the effectiveness of AVA treatment
- Additional longitudinal follow-up is warranted to better understand the long-term durability of AVA

BACKGROUND

- ITP is an autoimmune disorder characterized by low PCs and increased bleeding risk
- AVA is an orally administered TPO-RA that received FDA approval in June 2019 and EMA approval in December 2020 to treat chronic ITP in adults who had an insufficient response to prior treatments
- AVA does not bind to polyvalent cations thus no food type restrictions are required with administration, has no hepatotoxicity warning, and does not require in-office administration
- While prior RW studies support AVA's effectiveness in patients with chronic ITP [1-3], limited robust RW data exist on the use of AVA in TPO-RA naïve adult patients

AIMS

- To describe RW treatment patterns and outcomes in TPO-RA naive adult patients with primary ITP treated with AVA in predominantly community settings within the United States (U.S.)

METHODS

Patient Inclusion Criteria

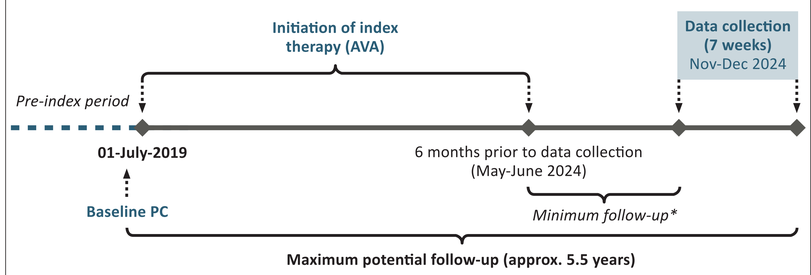
- Healthcare provider-confirmed diagnosis of primary ITP
- Initiated AVA as their first TPO-RA for primary ITP on or after 01 Jul 2019 (index)
- ≥18 years of age at time of initiation of AVA for primary ITP
- A minimum of 6 months of follow-up since initiation of AVA (patients were not required to have 6 months of AVA treatment for inclusion; patients deceased before 6 months were study eligible)

Patient Exclusion Criteria

- Diagnosis of secondary ITP
- Received AVA for treatment of a non-primary ITP condition
- Participation in a clinical trial for ITP while receiving AVA

- This retrospective chart review study used the Cardinal Health Oncology Provider Extended Network (OPEN); results are presented from interim analyses (data collection: 12 Nov 2024 to 31 Dec 2024 [database lock])
- Patients were followed from AVA initiation until the end of data availability, death or study end (31 Dec 2024), whichever occurred first (**Figure 1**)
- Hematologists/oncologists abstracted data on patient demographics, clinical characteristics, treatment patterns, and PC response, which were analyzed descriptively; PC response results were stratified by PC closest to but prior to initiation of index treatment (baseline PC)
- Response to AVA was defined as achieving the following PC response thresholds at least once: ≥30x10^9/L, ≥50x10^9/L, ≥75x10^9/L, or ≥100x10^9/L. See **Figure 2** for durability of response definition
- PCs obtained during or directly after rescue therapy (medication to facilitate a swift PC increase) were not eligible to be considered a response. PCs were not considered as a response if measured within 1-8 weeks during or after the stop of rescue therapy use, depending on the therapy administered
- All analyses were performed using SAS v9.4 (SAS Institute, Cary, NC, USA)

Figure 1. Study schema for retrospective chart review study



*Patients who died or discontinued AVA during this interval were still eligible; follow-up was defined as the management of the patient by the provider completing the chart abstraction

RESULTS

Demographics and clinical characteristics (Table 1)

- Medical charts were abstracted by 32 physicians for 147 patients treated with AVA
- The majority of patients (99.3%) were alive at the time of data collection; median (IQR) follow-up was 8.6 (7.1-13.3) months and 124 patients (84.4%) were still receiving AVA at last follow-up
- Baseline PCs were <30x10^9/L in 124 patients (84.4%) and <50x10^9/L in 145 patients (98.0%)

Table 1. Patient Characteristics

	All Patients N=147
Age at primary ITP diagnosis in years, mean (SD)	**57.3 (13.3)**
Age at AVA initiation in years, mean (SD)	**58.7 (13.2)**
Female sex, n (%)	**88 (59.9)**
Race/ethnicity, n (%)*	
White	**104 (70.7)**
Black or African-American	**24 (16.3)**
Other	**13 (7.5)**
Unknown race	**8 (5.4)**
Ethnicity, n (%)	
Not Hispanic or Latino	**113 (76.9)**
Hispanic or Latino	**27 (18.4)**
Unknown ethnicity	**7 (4.8)**
U.S. region, n (%)	
South (AL, AR, DC, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV)	**61 (41.5)**
West (AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY)	**38 (25.9)**
Northeast (CT, DE, MA, ME, MD, NH, NJ, NY, PA, RI, VT)	**26 (17.7)**
Midwest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI)	**22 (15.0)**
Baseline PC, n (%)	
<30×10^9/L	**124 (84.4)**
≥30×10^9/L to <50×10^9/L	**20 (13.6)**
≥50×10^9/L	**3 (2.0)**
Follow-up since AVA initiation in months, median (IQR)	**8.6 (7.1-13.3)**
Patient was alive at data collection, n (%)	**146 (99.3)**

*Categories of response not mutually exclusive, total may sum to more than column total

Treatment Patterns (Table 2a and 2b)

- Overall, median (IQR) duration of AVA treatment as of last follow-up was 8.1 (6.7-11.1) months
- While on AVA, 44 patients (29.9%) underwent a dose modification, with those patients reporting a median (IQR) of 1.0 (1.0-2.0) modification
- Twelve patients (8.2%) received concomitant medication while on AVA (10/12 steroids, 2/12 intravenous immunoglobulin [IVIG]), and all were able to discontinue (9/12) or reduce (3/12) their concomitant medication
- Few patients (8/147; 5.4%) received rescue therapy while on AVA, with steroids (5/147; 3.4%), IVIG (2/147; 1.4%), and platelet transfusions (1/147; 0.7%) reported
- Among patients who discontinued AVA (23/147; 15.6%), median AVA duration was 4.9 months (IQR: 1.8-9.0). Thirteen patients (13/23; 57.5%) discontinued AVA due to achieving target PC; none discontinued due to adverse events

Table 2a. Treatment Patterns

	All Patients N=147
AVA dosing at initiation, n (%)	
20 mg PO, QD	**142 (96.6)**
Other	**5 (3.4)**
Patient had at least one dose modification while on AVA, n (%)	**44 (29.9)**
Dose modifications while on AVA, n (%)*	
Dose reduction	**17 (11.6)**
Dose increase	**26 (17.7)**
Treatment interruption	**4 (2.7)**
Concomitant medications received while on AVA, n (%)	
Steroids	**10 (6.8)**
IVIG	**2 (1.4)**
Concomitant medication status while on AVA, among patients who received those concomitant medications, n (%)	
Reduced steroid	**3 (30.0)**
Discontinued steroid	**7 (70.0)**
Discontinued IVIG	**2 (100.0)**
Patient received rescue therapy while on AVA, n (%)	**8 (5.4)**
Rescue therapy received while on AVA, n (%)	
Steroid	**5 (3.4)**
IVIG	**2 (1.4)**
Platelet transfusion	**1 (0.7)**
AVA dosing at last follow-up (if still on therapy) or discontinuation, n (%)	
<20 mg PO, QD	**15 (10.2)**
20 mg PO, QD	**102 (69.4)**
>20 mg PO, QD	**30 (20.4)**
Duration of AVA therapy in months among all patients as of last follow-up, median (IQR)	**8.1 (6.7-11.1)**

*Categories of response not mutually exclusive, total may sum to more than column total

Table 2b. Treatment Patterns

	All Patients n=23
Patient had discontinued AVA at last follow-up, n (%)	**23 (100)**
Reason(s) for AVA discontinuation, among patients who discontinued, n (%)*	
Achieved target platelet count	**13 (56.5)**
Patient preference	**4 (17.4)**
Lack of efficacy	**4 (17.4)**
Adverse event/toxicity	**0 (0.0)**
Other	**5 (21.8)**
Duration of AVA therapy in months among patients who discontinued AVA, median (IQR)	**4.9 (1.8-9.0)**

*Categories of response not mutually exclusive, total may sum to more than column total

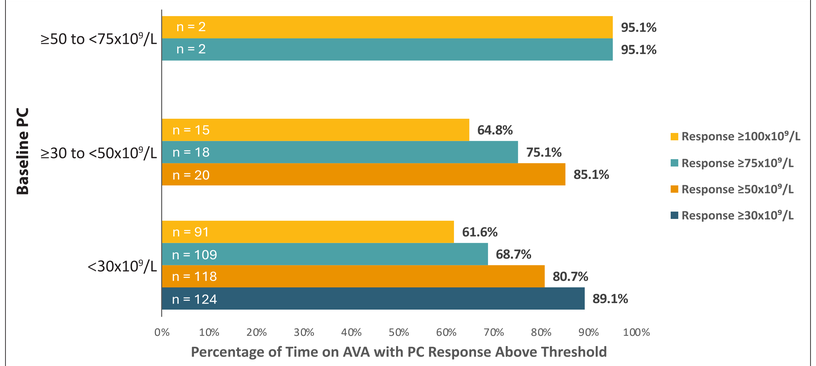
Response Outcomes (Table 3 and Figure 2)

- For patients with baseline PC <30x10^9/L (n=124), all patients (100.0%) achieved a response ≥30x10^9/L on AVA, and 118 (95.2%), 109 (87.9%), and 91 (73.4%) achieved a PC response ≥50x10^9/L, ≥75x10^9/L, and ≥100x10^9/L on AVA, respectively (**Table 3**)
- For patients with baseline PC levels <30x10^9/L who achieved a response ≥30x10^9/L on AVA (n=124), durability of response was 89.1% (SD: 11.7%; **Figure 2**)

Table 3. Patient PC response achieved while on AVA, stratified by baseline PC

	Baseline PC <30x10^9/L n=124	Baseline PC ≥30 to <50x10^9/L n=20	Baseline PC ≥50 to <75x10^9/L n=2
PC response achieved while receiving AVA, n (%)			
Response ≥30x10^9/L	**124 (100.0)**	***NA***	***NA***
Response ≥50x10^9/L	**118 (95.2)**	**20 (100.0)**	***NA***
Response ≥75x10^9/L	**109 (87.9)**	**18 (90.0)**	**2 (100.0)**
Response ≥100x10^9/L	**91 (73.4)**	**15 (75.0)**	**2 (100.0)**

Figure 2. Durability of response on AVA*



*Calculated as the percentage of total time on AVA where a patient had a PC response above each response threshold, among patients whose baseline PC was below that threshold and achieved a PC response above the threshold while receiving AVA

Limitations

- These results represent only patients abstracted by hematologists/oncologists included in the survey, which may not be representative of the broader patient population with primary ITP who receive AVA as 1st TPO-RA. Additionally, events occurring outside of the treating physician's practice or that were not captured in the medical record may have been missing
- PCs were collected as part of routine medical care and not at standardized time intervals, which may lead to misestimation of response duration and durability
- As six months of follow-up was required, except in cases when patients died within that time to mitigate immortal time and survivorship bias, patients lost to follow-up may differ from those who continued their care at the same practice for 6 months or longer

References

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3. Al-Samkari, H., et al., *Adults with immune thrombocytopenia who switched to avatrombopag following prior treatment with eltrombopag or romiplostim: A multicentre US study.* Br J Haematol, 2022. **197**(3): p. 359-366.

Disclosures

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