Response to Avatrombopag Among Patients with Chronic, Persistent, and Acute Primary Immune Thrombocytopenia: the REAL-AVA 2.0 Real-World Study

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CONCLUSIONS

- The majority of patients with acute, persistent or chronic immune thrombocytopenia (ITP) achieved treatment response across all platelet count (PC) thresholds.
- Among responders, avatrombopag (AVA) treatment was associated with high response durability, with patients maintaining response for almost all of their time on AVA therapy.
- The results of this study provide evidence that AVA is an effective treatment option for primary ITP regardless of ITP disease duration.

INTRODUCTION

- ITP is an autoimmune disorder characterized by low platelet counts, which increases the risk of severe bleeding.[1]
- ITP is often classified into three categories based on disease duration: acute (< 3 months), persistent (3-12 months), and chronic (≥12 month
- Thrombopoietin receptor agonists (TPO-RAs) are a class of treatments designed to increase PC levels and reduce bleeding risk.[2]
- AVA, a TPO-RA, is approved for the treatment of adults with chronic ITP in the US (2019) and Europe (2021).[3, 4]
- Real-world data has shown that AVA is also being used to treat patients with shorter ITP disease duration, including patients with acute and persistent ITP.[5]
- The REAL-AVA 2.0 study, a US-based chart review study, evaluated AVA treatment outcomes in patients with acute, persistent, and chronic ITP in routine clinical practice.

OBJECTIVE

- Describe response to AVA among patients with acute, persistent, and chronic ITP in the real world.

METHODS

Study Design and Population

- REAL-AVA 2.0 was a retrospective multi-site chart review study of adult patients with primary ITP who initiated AVA between July 1, 2019 and June 30, 2024 across medical centers in the US.
- Abstractors entered patient data directly into a secure electronic chart review form. The study team cleaned the de-identified data and summarized results.
- The index date was defined as the date of AVA initiation. The baseline period was the 3 months before the index date and the follow-up period spanned from index to the earliest of end of data availability, death, or study end (December 31, 2024).
- Patients were classified into cohorts based on ITP disease duration at index, calculated as the time from initial primary ITP diagnosis to the index date:
  - Acute ITP: <3 months
  - Persistent ITP: 3 to <12 months
  - Chronic ITP: ≥12 months
- Except for patient comorbidities, which were assessed in the 6 months pre-index, all patient baseline characteristics were assessed in the 3 months pre-index.

Study Outcomes

- Response to AVA was defined as achieving or maintaining PC levels above three PC thresholds: ≥30k/μL, ≥50k/μL, and ≥100k/μL.
- Durability of AVA response, defined as the proportion of time on AVA treatment above the response threshold, was calculated among patients who achieved or maintained response at each PC threshold.
- Loss of response (LOR) was defined as having ≥2 consecutive PC values below the response threshold ≥1 week apart.

Statistical Analyses

- Due to the potential influence of rescue therapy, PCs measured during or soon after rescue therapy were not eligible to be considered as a response to AVA.
- Rescue therapies and the respective timeframes were: steroid dose increase or initiation of a new steroid (8 weeks), immunosuppressant use (8 weeks), intravenous immunoglobin (4 weeks), anti-D immunoglobulin treatment (4 weeks), and platelet transfusion (1 week).
- Each day between PC measurements was categorized as response or nonresponse based on the most recent prior PC value after the index date.
- Time to first PC response at each threshold was assessing using Kaplan-Meier analyses, excluding PCs obtained during or soon after rescue therapy use. Patients were censored at the earliest event of AVA discontinuation or end of follow-up.

RESULTS:

Patient Characteristics (Table 1)

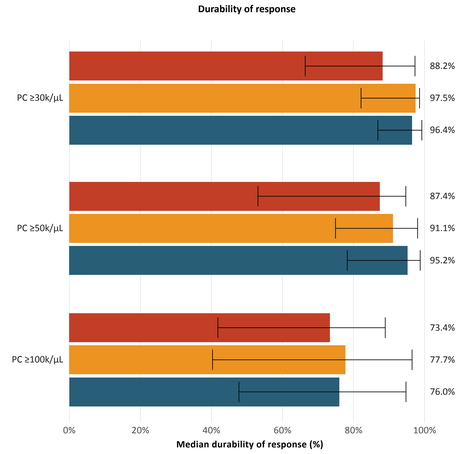
- A total of 171 patient charts from 11 US-based medical centers, including 6 academic institutions and 5 community practice centers, met the inclusion criteria for this analysis.
- These analyses included 39 patients with acute ITP, 29 with persistent ITP and 103 with chronic ITP.
  - Patients with missing or incomplete information on primary ITP diagnosis date were not included in this analysis.
- The mean ± standard deviation (SD) age at index was 58.4 ± 17.5 years, 61.3 ± 18.6 years, and 54.6 ± 19.5 years for patients with acute, persistent and chronic ITP respectively.
- In each group, about half of the patients were female and over two-thirds were white.
- The median number of prior ITP treatments was 2 for patients with acute and persistent ITP and 4 for patients with chronic ITP.

Table 1. Patient demographic and clinical characteristics

Patient characteristics	Acute ITP N = 39	Persistent ITP N = 29	Chronic ITP N = 103
Demographic Characteristics			
Age at index date, mean ± SD years	58.4 ± 17.5	61.3 ± 18.6	54.6 ± 19.5
Female, n (%)	18 (46.2%)	16 (55.2%)	60 (58.3%)
Race/ethnicity, n (%)[1]			
White	27 (69.2%)	22 (75.9%)	78 (75.7%)
Hispanic, Latino or Spanish origin	5 (12.8%)	7 (24.1%)	8 (7.8%)
Black or African American	2 (5.1%)	2 (6.9%)	12 (11.7%)
Other/Unknown	7 (17.9%)	1 (3.4%)	6 (5.8%)
Insurance type, n (%)[1]			
Commercial/private insurance	15 (38.5%)	16 (55.2%)	56 (54.4%)
Medicare	17 (43.6%)	11 (37.9%)	35 (34.0%)
Medicaid	11 (28.2%)	7 (24.1%)	21 (20.4%)
None	3 (7.7%)	0 (0.0%)	2 (1.9%)
Other/Unknown	2 (5.2%)	1 (3.4%)	10 (10.3%)
Clinical Characteristics			
ITP disease duration, median [IQR] years	0.1 [0.1-0.2]	0.5 [0.4, 0.6]	5.3 [2.7-10.6]
Number of ITP treatments ever used prior to AVA initiation, median [IQR]	2.0 [1.0-3.0]	2.0 [2.0-4.0]	4.0 [2.0-5.0]
Any rescue therapy used in the 3 months prior to AVA initiation, n (%)	22 (56.4%)	8 (27.6%)	23 (22.3%)
Most common comorbidities in the 6 months prior to AVA initiation, n (%)[1]			
Other hematological disorders besides ITP	12 (30.8%)	6 (20.7%)	33 (32.0%)
Any malignancy	12 (30.8%)	7 (24.1%)	12 (11.7%)
Diabetes	13 (33.3%)	5 (17.2%)	11 (10.7%)
Vascular events	8 (20.5%)	6 (20.7%)	14 (13.6%)
Baseline PC[2], median [IQR] k/μL	57.0 [29.0, 75.5]	63.3 [42.4, 120.8]	48.0 [30.3, 96.5]
Baseline PC[2] < 30 k/μL, n (%)	10 (25.6%)	5 (17.2%)	25 (24.3%)
Baseline PC[2] < 50 k/μL, n (%)	18 (46.2%)	9 (31.0%)	53 (51.5%)
Baseline PC[2] < 100 k/μL, n (%)	35 (89.7%)	19 (65.5%)	77 (74.8%)
AVA Treatment Characteristics During Follow-Up			
Duration of follow-up, median [IQR] months	17.0 [7.4-22.9]	15.0 [9.4-24.3]	22.4 [13.7-37.3]
Duration of AVA treatment, median [IQR] months	6.2 [2.9, 15.5]	12.8 [6.5, 21.3]	17.1 [7.3, 30.0]

Notes:
[1] Categories are not mutually exclusive.
[2] Baseline PC was defined as the median PC value among the three PC observations closest to the index date and within 3 months prior to the index date. PCs obtained during or immediately after rescue therapy use were not considered in the baseline PC assessment.

Figure 1. Response to AVA across PC thresholds

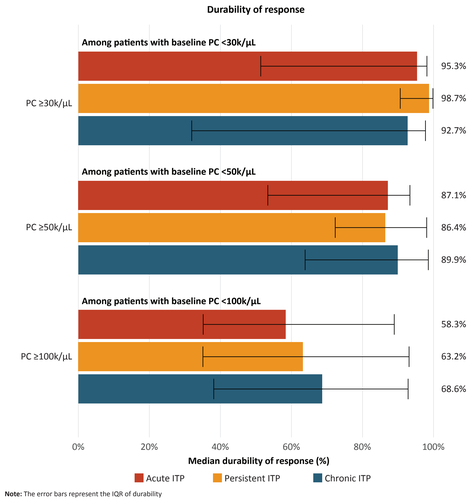


Note: The error bars represent the IQR of durability

	Acute ITP N = 39	Persistent ITP N = 29	Chronic ITP N = 103
Response characteristics			
Response at PC≥30k/μL, n (%)	36 (92.3%)	27 (93.1%)	92 (89.3%)
Time to response, Median (95% CI) days	22.0 (10.0, 34.0)	8.0 (6.0, 15.0)	14.0 (9.0, 20.0)
Duration, median [IQR] months	6.1 [2.4, 13.9]	9.7 [5.3, 20.5]	15.0 [6.7, 29.5]
Durability, median [IQR] %	88.2 [66.4-97.3]	97.4 [82.1-98.6]	96.4 [86.9-99.2]
Did not experience any LOR, n (%)	34 (94.4%)	21 (77.8%)	78 (84.8%)
Response at ≥50k/μL, n (%)	34 (87.2%)	26 (89.7%)	88 (85.4%)
Time to response, Median (95% CI) days	32.0 (16.0, 54.0)	13.0 (6.0, 25.0)	16.0 (13.0, 26.0)
Duration, median [IQR] months	5.8 [2.5, 15.1]	10.7 [5.2, 19.2]	16.0 [6.9, 28.6]
Durability, median [IQR] %	87.4 [53.1-94.7]	91.1 [74.9-97.9]	95.2 [78.2-98.8]
Did not experience any LOR, n (%)	32 (94.1%)	18 (69.2%)	64 (72.7%)
Response at ≥100k/μL, n (%)	31 (79.5%)	22 (75.9%)	76 (73.8%)
Time to response, Median (95% CI) days	34.0 (23.0, 62.0)	21.0 (12.0, 58.0)	30.0 (18.0, 57.0)
Duration, median [IQR] months	5.2 [2.0, 12.3]	9.3 [2.4, 17.7]	11.6 [5.0, 22.7]
Durability, median [IQR] %	73.4 [41.8-88.9]	77.7 [40.3-96.5]	76.0 [47.7-94.8]
Did not experience any LOR, n (%)	24 (77.4%)	11 (50.0%)	32 (42.1%)

$$\textit{Durability of response}\ (\%) = \frac{\textit{Time on AVA with PC response}}{\textit{Total time on AVA}}$$

Figure 2. Durability of response to AVA across PC thresholds, by baseline PC below each response threshold



Note: The error bars represent the IQR of durability

	Acute ITP	Persistent ITP	Chronic ITP
Patients with PC < 30k/μL	**N = 10**	**N = 5**	**N = 25**
Response at PC≥30k/μL, n (%)	9 (90.0%)	5 (100.0%)	20 (80.0%)
Time to response, Median (95% CI) days	18.0 (2.0, 54.0)	8.0 (1.0, -)	28.0 (9.0, 42.0)
Duration, median [IQR] months	3.7 [1.9-6.4]	23.2 [19.3-31.1]	11.8 [5.6-24.5]
Durability. median [IQR] %	95.3 [51.4-98.1]	98.7 [90.6- 99.8]	92.7 [31.9-97.7]
Patients with baseline PC < 50k/μL	**N = 18**	**N = 9**	**N = 53**
Response at PC≥50k/μL, n (%)	14 (77.8%)	8 (88.9%)	42 (79.2%)
Time to response, Median (95% CI) days	32.0 (18.0, 96.0)	20.0 (1.0, -)	42.0 (15.0, 71.0)
Duration, median [IQR] months	6.2 [3.7-11.0]	20.9 [3.1-23.6]	18.6 [5.4-29.2]
Durability. median [IQR] %	87.1 [53.3-93.3]	86.4 [72.3- 98.1]	89.9 [63.8-98.5]
Patients with baseline PC < 100k/μL	**N = 35**	**N = 19**	**N = 77**
Response at PC≥100k/μL, n (%)	27 (77.1%)	14 (73.7%)	53 (68.8%)
Time to response, Median (95% CI) days	32.0 (21.0, 67.0)	27.0 (13.0, 257.0)	57.0 (26.0, 91.0)
Duration, median [IQR] months	4.9 [1.9-12.3]	8.6 [1.9-16.8]	10.3 [4.7-21.0]
Durability. median [IQR] %	58.3 [35.2-88.9]	63.2 [35.1-93.1]	68.6 [38.1-92.8]

Clinical Outcomes

- The median [IQR] duration of follow-up from AVA initiation among patients with acute, persistent and chronic ITP was 17.0 [7.4-22.9], 15.0 [9.4-24.3], and 22.4 [13.7-37.3] months, respectively. (**Table 1**)
- The median [IQR] duration of AVA treatment in patients with acute, persistent and chronic ITP was 6.2 [2.9-15.5], 12.8 [6.5-21.3], and 17.1 [7.3-30.0] months, respectively. (**Table 1**)
- PC response rates to AVA were similar across ITP disease duration, with majority of patients achieving or maintaining PC response above the respective PC thresholds (>89% [PC ≥30k/μL), >85% [PC ≥50k/μL], >74% [PC ≥100k/μL]).
- Response durability was similar among patients with acute, persistent, and chronic ITP. Among responders, the median percentage of time spent in response while on AVA was over 87% at the 30k/μL and 50k/μL thresholds, and over 73% at the 100k/μL threshold. (**Figure 1**)
  - Over two-thirds of patients who achieved response at the 30k/μL and 50k/μL thresholds did not experience any subsequent loss of response while receiving AVA.
- Time to response at each threshold was also similar across ITP duration cohorts, with medians of 8-34 days. (**Figure 1**)
- PC response rates and durability were high when evaluated by baseline PC below each threshold. (**Figure 2**)

LIMITATIONS

- The analysis used real-world data from multiple centers. PC data may not have been uniformly available for all patients.
- Inclusion required at least 6 months of post-AVA treatment data, unless the patient died. Patients lost to follow-up after treatment initiation may differ from study patients.
- The sample had a roughly equal gender distribution, which may not reflect the higher prevalence of ITP among females in the U.S.
- Despite standardized training for data abstraction, there is risk for data entry errors.

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ABBREVIATIONS

AVA, avatrombopag; CI, confidence interval; IQR, interquartile range; ITP, immune thrombocytopenia; LOR, loss of response; PC, platelet count; SD, standard deviation; k/μL, thousand per microliter.

DISCLOSURES

Authors SN, ML, SC, ES, DG, AG, LO, and SS are consultants of Sobi, Inc. Authors AO, CB, and MV are employees of Sobi, Inc. Author SK was an employee of Sobi, Inc. at the time of study. This is an encore presentation of a poster first presented at EHA 2025 Congress, held June 12-15 in Milan, Italy.

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