# Durability of Response to Avatrombopag Among Patients with Primary Immune Thrombocytopenia: The REAL-AVA 2.0 Real-World Study

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## CONCLUSIONS

- In the REAL AVA 2.0 study, treatment with AVA was associated with high rates of durable response across PC response thresholds, with a median response durability of 95.7% at PC≥30k/µL, 93.2% at PC ≥50k/µL and 75.5% at PC ≥100k/µL.
- Most patients who achieved or maintained response across thresholds did not experience any loss of response while on AVA treatment.
- Taken together, these results provide real-world evidence of robust, stable response to AVA in adult patients with primary ITP.

## INTRODUCTION

- Immune thrombocytopenia (ITP) is an autoimmune disorder characterized by reduced platelet counts (PCs), which puts patients at an elevated risk of serious bleeding events.[1]
- Many ITP treatments, including thrombopoietin receptor agonists (TPO-RA) such as avatrombopag (AVA), aim to raise PCs above target levels.[2,3]
- As duration and durability of platelet response are key indicators of sustained ITP control and long-term treatment effectiveness, they are critical outcomes in clinical assessments of ITP treatments such as TPO-RAs.
- A post-hoc analysis of a phase 3 clinical trial found that adult patients with ITP treated with AVA achieved a PC response ≥50k/µL for an average of 12.4 cumulative weeks during the 26-week core phase. Patients responding to AVA maintained a response level PC for 84.5% of the remaining time in the study after their initial response.[4]
- However, there is limited real-world evidence on the duration and durability of patients' response to AVA. The REAL-AVA 2.0 study assessed duration and durability of response with AVA treatment in real-world clinical practice.

## AIM

- Describe the duration and durability of response to AVA at different PC response thresholds among adult patients with primary ITP in real-world clinical practice within the US.

## METHODS

### Study Design and Population

- REAL-AVA 2.0 was a retrospective multisite chart review study of adult patients with primary ITP who initiated AVA treatment between July 1, 2019 and June 30, 2024.
- Data were collected in the US using a secure electronic chart review form (eCRF).
- Abstractors entered de-identified patient data directly into the eCRF, and the study team cleaned and analyzed the aggregated data.
- The index date was the date of AVA initiation. The baseline period was the 3 months prior to the index date and the follow-up period was from the index date until the earliest of end of data availability, patient death, or study end (December 31, 2024).
- Patients included in the study were required to meet the following additional criteria: ≥1 diagnosis of primary ITP prior to AVA initiation, ≥1 PC observation during the 3-month baseline period prior to AVA initiation, and complete medical records during baseline and ≥6 months post-index (unless the patient died).
  - Patients who participated in a prior AVA clinical trial were excluded.

### Study Outcomes and Analyses

- The primary outcome was PC response to AVA, defined as achievement or maintenance of response at PC thresholds of ≥30k, ≥50k and ≥100k/µL.
  - PCs measured during rescue therapy use were excluded from AVA response assessments. Specifically, PCs taken within 8 weeks of steroid escalation or immunosuppressant use, 4 weeks of intravenous immunoglobin (IVIG) or anti-D immunoglobulin, or 1 week of platelet transfusion were not eligible to be considered as a response.
- Duration of response was assessed among patients who achieved or maintained response and calculated as the total number of days during AVA treatment achieving a platelet response.
  - The days between platelet count draws were categorized as response or nonresponse based on the most recent preceding PC measurement.
- Loss of response was defined as having ≥2 consecutive PC values below the response threshold ≥1 week apart.
- Durability of response was calculated among patients who achieved or maintained response and was defined as the proportion of all time on AVA treatment that the patient experienced response.
- Counts and proportions were calculated for binary variables, and medians and interquartile ranges (IQR) were calculated for continuous variables.

## RESULTS:

### Patient Characteristics (Table 1)

- A total of 177 patients from 11 US-based medical centers (6 academic institutions and 5 community practice centers) participated in the study.
- The mean ± SD age at index was 56.4 ± 18.9 years and 54% of patients were female.
- Median [IQR] time from ITP diagnosis to index date was 2.2 [0.3-6.8] years.
- Prior to the index date, 90 patients (50.8%) had received eltrombopag and 66 (37.3%) had received romiplostim; 42 patients (23.7%) had been treated with both agents prior to initiating AVA.
- The median [IQR] number of ITP treatments received prior to AVA initiation was 3.0 [2.0–4.0].
- At AVA initiation, 40 (22.6%) patients had a baseline PC < 30k/µL, 84 (47.5%) had PC < 50k/µL, and 137 (77.4%) had PC < 100k/µL.

**Table 1. Patient baseline characteristics**

| | All Patients N = 177 |
|---|---|
| **Demographic Characteristics** | |
| Age at index date, Mean ± SD years | 56.4 ± 18.9 |
| Female, n (%) | 96 (54.2%) |
| Race/ethnicity[1], n (%) | |
| White | 132 (74.6%) |
| Hispanic, Latino or Spanish origin | 20 (11.3%) |
| Black or African American | 17 (9.6%) |
| Other/Unknown | 14 (7.9%) |
| Geographic region, n (%) | |
| South | 67 (37.9%) |
| West | 60 (33.9%) |
| Northeast | 33 (18.6%) |
| Midwest | 17 (9.6%) |
| Insurance type[1], n (%) | |
| Commercial/private insurance | 89 (50.3%) |
| Medicare | 65 (36.7%) |
| Medicaid | 42 (23.7%) |
| None | 5 (2.8%) |
| Other/Unknown | 14 (7.9%) |
| **Clinical Characteristics** | |
| Time from ITP diagnosis to index date, Median [IQR] years | 2.2 [0.3-6.8] |
| Number of ITP treatments ever used prior to AVA initiation, Median [IQR] | 3.0 [2.0-4.0] |
| History of TPO-RA treatments ever used, n (%) | |
| Any TPO-RA[1,2] | 117 (66.1%) |
| Eltrombopag | 90 (50.8%) |
| Romiplostim | 66 (37.3%) |
| Both eltrombopag and romiplostim | 42 (23.7%) |
| Baseline PC[3], Median [IQR] | 52.0 [31.0-89.0] |
| Baseline PC[3], n (%) | |
| Less than 30k/µL | 40 (22.6%) |
| Less than 50k/µL | 84 (47.5%) |
| Less than 100k/µL | 137 (77.4%) |

**Notes:**
[1] Categories are not mutually exclusive.
[2] The "Any TPO-RA" category includes prior use of eltrombopag, romiplostim, and/or lusutrombopag.
[3] Baseline PCs were calculated as the median value among the three PC observations closest to the index date and within 3 months before. If fewer than 3 PCs were available, the mean was used. PCs obtained during or immediately after rescue therapy use were not considered in the baseline PC assessment.

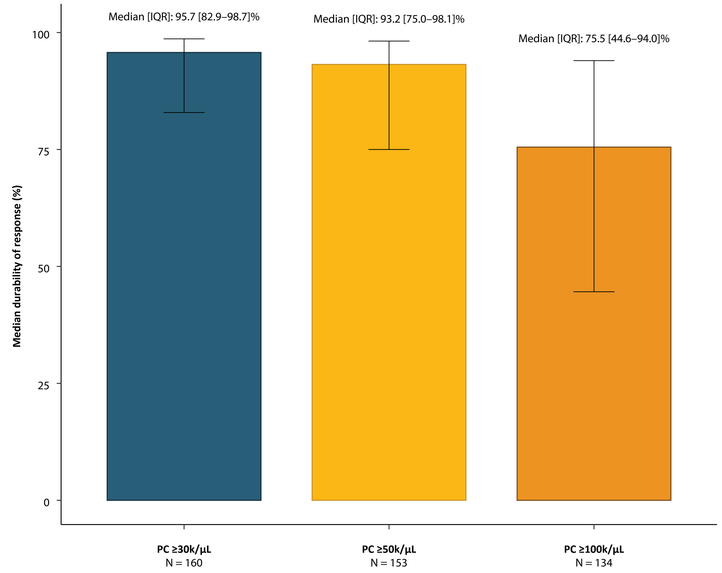
### Duration and Durability of Response to AVA

- The median [IQR] duration of follow-up was 19.9 [11.0-34.3] months and the median [IQR] duration of AVA treatment was 12.8 [5.9-23.2] months (**Table 2**)
- PC response was achieved or maintained by 160 (90.4%) patients at the ≥30k/µL threshold, 153 (86.4%) patients at the ≥50k/µL threshold, and 134 (75.7%) patients at the ≥100k/µL threshold.
- Patients who responded spent the majority of their time on AVA treatment in response, with a median [IQR] proportion of time spent in response of 95.7% [82.9–98.7%] at the ≥30k/µL threshold, 93.2% [75.0–98.1%] at the ≥50k/µL threshold, and 75.5% [44.6–94.0%] at the ≥100k/µL threshold. (**Figure 1**)
  - Among responders, duration of follow-up ranged from 19.2-20.7 months, and duration of AVA treatment ranged from 13.5-17.2 months across response thresholds (**Table 2**)
- Among responders, response was maintained for a median [IQR] of 12.0 [5.2-22.7], 12.1 [5.2-22.4], and 9.7 [4.3-18.8] months at the ≥30k/µL, ≥50k/µL, and ≥100k/µL thresholds, respectively. (**Figure 2**)
- Most patients who achieved or maintained PC response at each threshold did not experience any loss of response: 86.3% at 30k/µL, 77.1% at 50k/µL, and 52.2% at 100k/µL. (**Figure 3**)
- Duration and durability of response to AVA treatment were also high when evaluated by baseline PC below each response threshold. (**Table 3**)

**Table 2. Duration of follow-up and AVA treatment, overall and among patients who achieved or maintained response to AVA across PC response thresholds**

| | All Patients N = 177 | Responders at PC≥30k/µL N = 160 | Responders at PC≥50k/µL N = 153 | Responders at PC≥100k/µL N = 134 |
|---|---|---|---|---|
| Duration of follow-up, Median [IQR] months | 19.9 [11.0-34.3] | 19.2 [10.9-33.4] | 19.2 [12.1-33.3] | 20.7 [12.2-33.5] |
| Duration of AVA treatment, Median [IQR] months | 12.8 [5.9-23.2] | 13.5 [6.5–24.1] | 14.1 [7.1–25.5] | 17.2 [7.4–29.2] |

**Figure 1. Durability of response to AVA across PC response thresholds[1]**




**Note:** The error bars represent the IQR of durability.
[1] Durability was calculated among patients with response to AVA at the given PC threshold and was defined as the proportion of all time on AVA treatment that the patient experienced response.

**Figure 2. Duration of response to AVA across PC response thresholds**

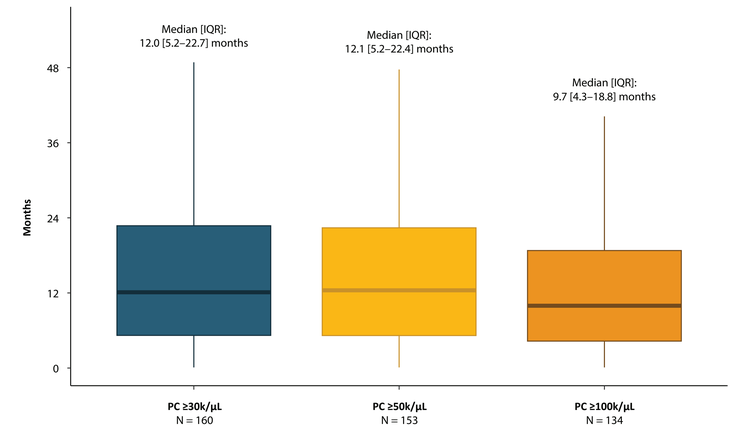
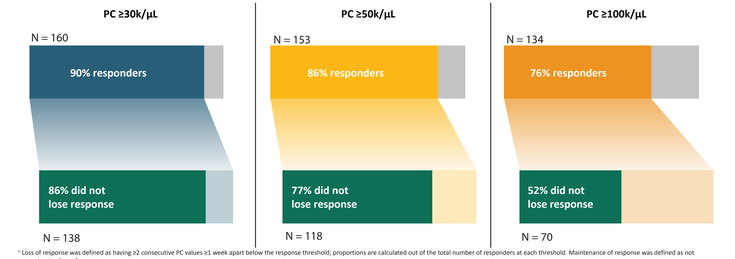



**Figure 3. Maintenance of response[1] to AVA across PC response thresholds**




[1] Loss of response was defined as having ≥2 consecutive PC values ≥1 week apart below the response threshold; proportions are calculated out of the total number of responders at each threshold. Maintenance of response was defined as not experiencing loss of response.

**Table 3. AVA treatment and response characteristics by baseline PC below each response threshold**

| PC Threshold | 30k/µL | 50k/µL | 100k/µL |
|---|---|---|---|
| *Patients with baseline PC < threshold, n* | *N = 40* | *N = 84* | *N = 137* |
| Duration of follow-up, median [IQR] months | 19.9 [11.6–32.6] | 22.5 [14.1–34.4] | 19.9 [10.6–33.9] |
| Duration of AVA treatment, median [IQR] months | 12.8 [4.8- 24.9] | 17.4 [5.8-30.0] | 12.0 [5.1-23.2] |
| Responders at PC ≥ threshold, n (%) | 34 (85.0%) | 67 (79.8%) | 99 (72.3%) |
| Duration of response, median [IQR] months | 8.3 [3.5-22.3] | 15.2 [4.9-22.6] | 8.0 [3.4-18.7] |
| Durability of response, median [IQR] % | 94.2 [40.5-98.5] | 87.8 [64.4-98.1] | 68.6 [35.8-92.7] |
| Duration of follow-up, median [IQR] months | 22.2 [12.2-32.6] | 22.6 [14.8-33.4] | 20.9 [10.7-33.3] |
| Duration of AVA treatment, median [IQR] months | 16.0 [6.8-28.2] | 19.2 [7.5-30.7] | 17.4 [6.5-29.2] |

## LIMITATIONS

- This analysis utilized real-world data derived from routine clinical practice at multiple medical centers. Data on PCs may not have have been uniformly available for all patients included in the study.
- To be eligible for inclusion, patients were required to have at least six months of follow-up data from initiation of AVA, unless the patient died within that time. Patients lost to follow-up after initiating AVA may differ systematically from those who remained in care for a longer duration.
- The study cohort included a nearly equal distribution of male and female participants, while, U.S. epidemiological data on ITP typically show a female predominance, with approximately twice as many females as males. This difference may limit the representativeness of the sample.
- Although efforts were made to ensure data accuracy, data entry errors may have occurred during data abstraction. To mitigate the potential for error, all participating centers underwent standardized training for data collection procedures.

## REFERENCES

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## ABBREVIATIONS

AVA, avatrombopag; CI, confidence interval; IQR, interquartile range; ITP, immune thrombocytopenia; IVIG, Intravenous immunoglobulin; k/µL, thousand per microliter; PC, platelet count; SD, standard deviation; TPO-RA, thrombopoietin receptor agonists.

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## DISCLOSURES

Authors SN, ML, SC, ES, DG, AG, LO, and SS are consultants of Sobi, Inc. Authors SK, AO, CB, and MV are employees of Sobi, Inc.

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