Presentation Number： PS1-03-01

# Secondary prevention of cancer therapy-induced thrombocytopenia with hetrombopag in breast cancer: a prospective, multi-center, self-controlled exploratory trial.

Huihui Sun[1], Huimin Lv[1], Wenyan Chen[2], Yanxia Zhao[3], Mengwei Zhang[1], Limin Niu[1], Zhenzhen Liu[1], Xuhui Guo[1], Xiuchun Chen[1], Yajing Feng[1], Lu Wang[1], Huiai Zeng[1], Jing Wang[1], Yaowen Cui[1], Min Yan[1]*;
1. Breast Cancer Center, The Affiliated Cancer Hospital of Zhengzhou University & Henan Cancer Hospital, Zhengzhou, China; 2. Breast Medicine, The Third Hospital of Nanchang, Nanchang, China; 3. Breast Medicine, Tongji Medical College& Huazhong University of Science and Technology, Wuhan, China

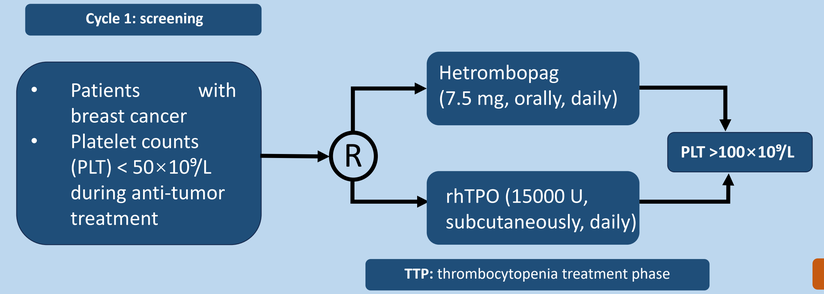
## BACKGROUND

- Cancer therapy–induced thrombocytopenia (CTIT) is a frequent adverse effect of anti-cancer treatments, often leading to dose reductions, treatment delays, or discontinuation, as well as an increased risk of bleeding and poorer clinical outcomes.
- Hetrombopag is an oral, nonpeptide thrombopoietin receptor agonist (TPO-RA) currently under development for the management of thrombocytopenia.

## METHODS

- This was a multicenter, prospective exploratory trial (NCT05394285).
- Patients with breast cancer whose platelet counts (PLT) < $50\times10^9$/L during anti-tumor treatment were included.
- The treatment contains the thrombocytopenia treatment phase (TTP) and the secondary prevention phase (SPP).
- In the TTP, eligible pts were randomized to receive either hetrombopag (7.5 mg, daily) or subcutaneous recombinant human thrombopoietin (rhTPO, 15000 U, daily) for CTIT treatment until PLT reached > $100\times10^9$/L.
- In the SPP, all patients received hetrombopag (7.5 mg, daily, for 14 days) beginning one day after the start of Cycle 2.
- The response rate during the SPP was the primary endpoint, and that during the TTP was key secondary endpoint.

## STUDY DESIGN




Response rate during SPP was defined as the proportion of patients achieving all of the following until the subsequent treatment cycle:

1. no platelet transfusion requirement;
2. no anti-tumor treatment modification (≥20% dose cut, ≥5 days delay, or discontinuation) ;
3. absence of severe thrombocytopenia (PLT <25×10⁹/L, or 25×10⁹/L ≤PLT <50×10⁹/L for > 7 days).

## RESULTS

### Baseline

Between Sep 2022 and May 2025, 67 breast cancer patients were enrolled in the study. After excluding 1 patient who withdrew informed consent, 66 patients comprised the full analysis set (FAS). During the trial, 6 patients discontinued participation in the SPP, the remaining 60 patients forming the per-protocol (PP) population.

| | Hetrombopag (N=33) | rhTPO (N=33) | Total (N=66) |
|---|---|---|---|
| **Age (median, range)** | 55.6 (32, 69) | 52.5 (29, 73) | 54.4 (29, 73) |
| **Sex (female, %)** | 33 (100.0) | 33 (100.0) | 66 (100.0) |
| **ECOG (median, range)** | 1.0 (0, 1) | 1.0 (1, 1) | 1.0 (0, 1) |
| **Stage (n, %)** | | | |
| **Early-Stage** | 8 (24.2) | 11 (33.3) | 19 (28.8) |
| **Metastic** | 25 (75.8) | 22 (66.7) | 47 (71.2) |
| **Treatment lines (median, range)** | 3.0 (0, 10) | 3.0 (0, 11) | 3.0 (0, 11) |
| **≤3, n (%)** | 13 (39.4) | 11 (33.3) | 24 (36.4) |
| **>3, n (%)** | 12 (36.4) | 11 (33.3) | 23 (34.8) |
| **PLT ($\times10^9$/L) (median, range)** | 39.0 (23, 49) | 36.0 (15, 49) | 37.5 (15, 49) |
| **Regimens (n, %)** | | | |
| **ADCs** | 23 (69.7) | 28 (84.8) | 51 (77.3) |
| **RCC** | 10 (30.3) | 4 (12.1) | 14 (21.2) |
| **TWC** | 0 | 1 (3.0) | 1 (1.5) |

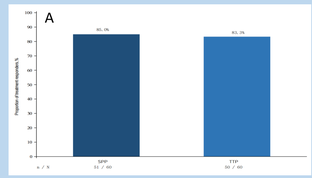
**Table 1** Baseline characteristics

### Efficacy

- Among the PP population, response rates were 85.0% (51/60) in the SPP and 83.3% (50/60) in the TTP (Figure A).
- During the SPP, a higher response rate was observed with antibody-drug conjugates (ADCs) at 89.4% versus 75.0% with chemotherapy-containing regimens (RCC) (Figure B).
- Other related results during the SPP were presented in Table 2.

### Safety

In the FAS population, all treatment-emergent adverse events were predominantly associated with the anti-tumor agents. Six patients (9.1%) experienced bleeding, all classified as WHO grade 1 (hemoptysis, epistaxis, or skin petechiae and ecchymosis). There were no arterial or venous thrombosis events during the study.



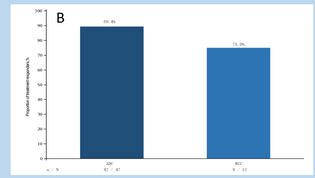




Figure A: Response rates of PP population during the SPP and TTP.
Figure B: Response rates of patients who received ADCs and patients who received RCC during the SPP.

| Per-protocol Population (N=60) | | | |
|---|---|---|---|
| | Hetrombopag (N=30) | rhTPO (N=30) | All (N=60) |
| **Anti-tumor treatment modification (n, %)** | 2 (6.7) | 4 (13.3) | 6 (10.0) |
| **PLT <25 ×10⁹/L (n, %)** | 2 (6.7) | 4 (13.3) | 6 (10.0) |
| **PLT <50 ×10⁹/L (n, %)** | 10 (33.3) | 13 (43.3) | 23 (38.3) |
| **PLT <25×10⁹/L median duration (d)** | 3.5 | 2.0 | 2.0 |
| **PLT <50×10⁹/L median duration (d)** | 2.5 | 3.0 | 3.0 |

**Table 2** Other related results in the SPP.

### Conclusion

**Hetrombopag may be a promising option for the secondary prevention of CTIT, especially in patients who received ADC. Large-scale evaluation of hetrombopag for preventing CTIT across multiple anti-tumor cycles is warranted.**

**Disclosure statement:** no conflicts of interest to declare. **Correspondence:** ym200678@126.com