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# PB2185 EFFECT OF NEW OR WORSENING ANEMIA ON CLINICAL OUTCOMES IN PATIENTS WITH MYELOFIBROSIS (MF) TREATED WITH RUXOLITINIB (RUX): A POST HOC ANALYSIS OF THE COMFORT-I AND -II TRIALS

**Topic:** 16. Myeloproliferative neoplasms - Clinical

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**Background:**

RUX is a Janus kinase (JAK)1/JAK2 inhibitor approved for the treatment of patients with intermediate- or high-risk MF. In the phase 3 COMFORT trials, RUX reduced spleen volume, improved MF-related symptoms, and prolonged overall survival compared with either placebo (COMFORT-I) or best available treatment (COMFORT-II). Transient dose-dependent anemia is a known consequence of RUX treatment.

**Aims:**

The objective of this analysis was to assess the impact of new or worsening anemia induced by RUX treatment on spleen volume response (SVR) and total symptom score (TSS) in patients with MF.

**Methods:**

In this post hoc analysis of COMFORT-I and -II, patients received RUX twice daily (initial dose per platelet count: $100–200\times10^9$/L, 15 mg; $>200\times10^9$/L, 20 mg) and were stratified based on baseline anemia status (anemia defined as hemoglobin [Hb] <100 g/L) and transfusion status at baseline (transfusion dependent [TD; received ≥2 units of red blood cells over 8–12 weeks before first RUX dose] or nontransfusion dependent [NTD]). Outcomes were stratified by presence or absence of new or worsening anemia postbaseline (defined as a decrease in Hb of ≥15 g/L or new transfusion requirement at Wk 4, 8, or 12). The proportion of patients with SVR35 (reduction in spleen volume of ≥35% from baseline; analyzed with pooled COMFORT-I/II data at Wk 24 and 48) and with a ≥50% reduction in modified MF Symptom Assessment Form TSS at Wk 24 (analyzed with COMFORT-I data) was assessed.

**Results:**

A total of 277 patients were included in the analysis (baseline nonanemic, n=154 [55.6%]; anemic-NTD, n=55 [19.9%]; anemic-TD, n=68 [24.5%]). Across groups, median age ranged from 65.0 to 71.0 y and 47% to 56% were men. Rates of SVR35 at Wk 24 among patients with new or worsening anemia up to Wk 12 were, by baseline anemia/transfusion status, 48.8% for nonanemic patients, 33.3% for anemic-NTD patients, and 41.4% for anemic-TD patients. The corresponding rates among patients with no new or worsening anemia up to Wk 12 were 43.2%, 23.1%, and 28.2%, respectively. Similar SVR35 rates were observed at Wk 48 (**Table**). The proportions of patients with ≥50% reduction in TSS at Wk 24 among those with new or worsening anemia up to Wk 12 were, by baseline anemia/transfusion status, 51.1% for nonanemic patients, 42.1% for anemic-NTD patients, and 46.7% for anemic-TD patients. The corresponding rates among patients with no new or worsening anemia up to Wk 12 were 42.9%, 40.0% and 54.2%, respectively.

**Summary/Conclusion:**

RUX was associated with improvement in spleen volume and TSS in patients with MF regardless of baseline anemia and transfusion status. In addition, occurrence of new or worsening anemia postbaseline did not diminish clinical benefit with ruxolitinib compared with patients without new or worsening anemia.

**Table. SVR and TSS Stratified by Baseline Anemia and Transfusion Status and New or Worsening Anemia.**

| | Baseline Anemia and Transfusion Status | | |
|---|---|---|---|
| **Endpoint by anemia status up to Wk 12, n/N (%)** | **Nonanemic (n=154)** | **Anemic-NTD (n=55)** | **Anemic-TD (n=68)** |
| SVR35 at Wk 24 | | | |
| New or worsening anemia | 39/80 (48.8) | 14/42 (33.3) | 12/29 (41.4) |
| No new or worsening anemia | 32/74 (43.2) | 3/13 (23.1) | 11/39 (28.2) |
| | **Nonanemic (n=142)** | **Anemic/NTD (n=43)** | **Anemic/TD (n=59)** |
| SVR35 at Wk 48 | | | |
| New or worsening anemia | 32/76 (42.1) | 15/34 (44.1) | 9/26 (34.6) |
| No new or worsening anemia | 28/66 (42.4) | 2/9 (22.2) | 9/33 (27.3) |
| | **Nonanemic (n=80)** | **Anemic/NTD (n=24)** | **Anemic/TD (n=39)** |
| ≥50% TSS reduction from baseline at Wk 24 | | | |
| New or worsening anemia | 23/45 (51.1) | 8/19 (42.1) | 7/15 (46.7) |
| No new or worsening anemia | 15/35 (42.9) | 2/5 (40.0) | 13/24 (54.2) |

n/N, number of patients achieving endpoint / number of evaluable patients (in both the baseline anemia and transfusion status category and anemia status up to Wk 12 category); NTD, nontransfusion dependent; SVR35, ≥35% reduction in spleen volume from baseline; TD, transfusion dependent; TSS, total symptom score.