

EVALUATING EPOETIN ALFA 40,000 U SUBCUTANEOUSLY EVERY 2 WEEKS TO MAINTAIN HEMOGLOBIN LEVELS IN ANEMIC HIV-INFECTED PATIENTS

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ABSTRACT

Background: Previous studies have shown that initial dosing of epoetin alfa 40,000 U subcutaneously (SC) once weekly (QW) is safe and effective at increasing hemoglobin (Hb) levels and improving quality of life (QOL) in anemic, HIV-infected patients (pts). However, in a population already burdened with complex medication regimens, the efficacy, safety, and convenience of epoetin alfa 40,000 U SC every 2 weeks (Q2W) to maintain Hb needs further exploration.

Methods: In a 24-week, multicenter, open-label study, HIV-infected pts with Hb ≤ 12 g/dL were administered epoetin alfa 40,000 U SC QW until target Hb (≥ 13 g/dL) was achieved. Patients were then switched to a maintenance phase during which epoetin alfa was given at a dosage of 40,000 U SC Q2W. If, during Q2W dosing, Hb measured ≤ 11 g/dL, pts were switched back to QW dosing; if Hb was ≥ 14 g/dL, dosing was temporarily withheld until Hb reached < 14 g/dL, when previous maintenance dose resumed.

Results: At the time of this preliminary analysis, 63 pts were enrolled. Baseline characteristics are: median age 43 y (range, 25-74 y); 57% men; 62% on HAART; median CD4⁺, 233 cells/ μ L (range, 3-1308); median HIV-RNA, 770 copies/mL (range, 49-533,000); median Hb, 11.2 g/dL (range, 7.2-12.8 g/dL). Fifty pts entered maintenance phase, having reached target Hb (≥ 13 g/dL) in a median of 3.1 wk (range, 1-7 wk). During maintenance, median dosing interval of epoetin alfa 40,000 U SC was Q2.1 wk (range, 1.1-9.5 wk). Target Hb (≥ 13 g/dL) was maintained in 6 pts with QW dosing, 25 (50%) with Q2W, 10 (20%) with Q3W, 4 (8%) with Q4W, and 2 (4%) with $>Q4W$. In 3 pts with only a few days in maintenance, dosing interval was not assessed. Median weekly dose of epoetin alfa was 18,667 U (range, 4211-37,333 U).

Conclusions: These preliminary data suggest that the majority of anemic, HIV-infected pts in this study can maintain a target Hb level of ≥ 13 g/dL with the more convenient Q2W or Q3W dosing regimens.

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Management Protocol Sites 2 (CHAMPS 2) Study Group

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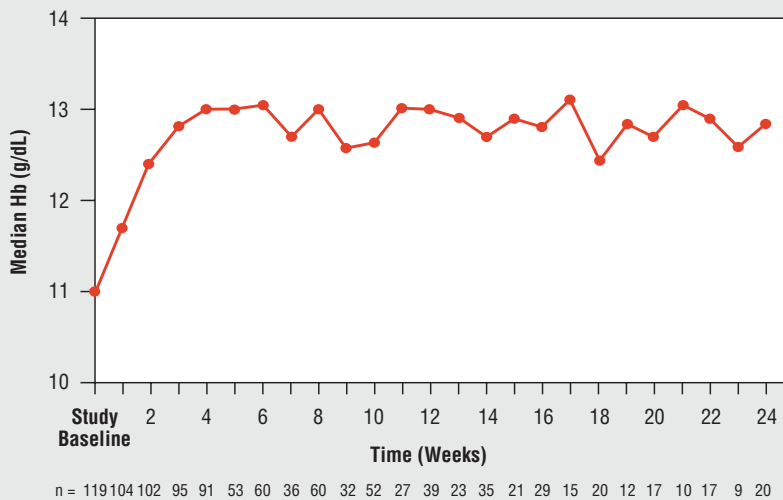
RESULTS (cont'd)

Hematologic Assessments

Initiation phase

- 87% of patients had a ≥ 1 -g/dL increase in Hb by Week 8
- Hb level increased from a median BL value of 11.0 g/dL (range 7.2-12.8 g/dL) to a median of 13.4 g/dL (range 13.0-17.7 g/dL) upon reaching target (≥ 13 g/dL)
 - Mean Hb change was 2.7 g/dL
 - Median time to achieve target Hb level was 3.1 weeks (range: 1.0-15.7 weeks)
- Change in median Hb level during the study is shown in Figure 2

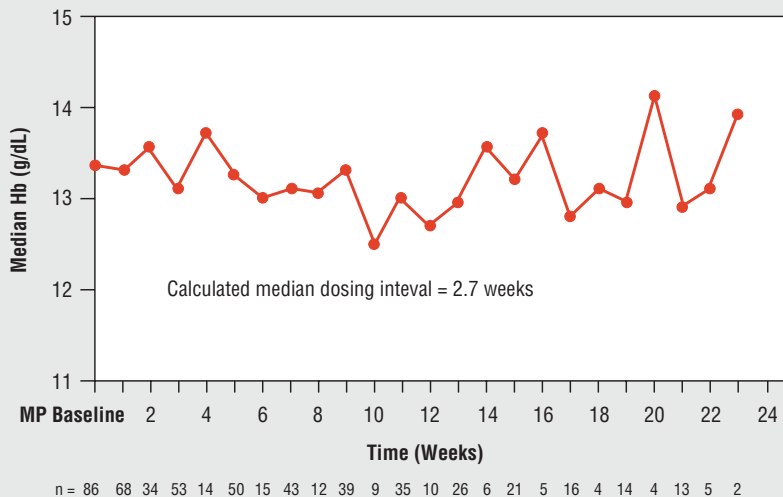
FIGURE 2. Initiation phase plus maintenance phase.



Maintenance phase

- 79% (94/119) of patients reached target Hb level (≥ 13 g/dL)
 - 77% (92/119) with epoetin alfa 40,000 U QW
 - 2% (2/119) after epoetin alfa dose escalation to 60,000 U QW
- 85% (73/86) of patients maintained target Hb level (≈ 13 g/dL). Median Hb values are displayed in Figure 3.
- Of the 73 patients who maintained target Hb, the following calculated dosing intervals were used:
 - 2 patients (2%) with QW dosing
 - 23 patients (27%) with Q2W dosing
 - 29 patients (34%) with Q3W dosing
 - 9 patients (10%) with Q4W dosing
 - 10 patients (12%) with >Q4W dosing
- For evaluable patients in the MP (n = 86):
 - Median time in the MP was 12.4 weeks (range: 1.1-24.1 weeks)
 - Median epoetin alfa dosing interval in the MP was 2.7 weeks (range: 1.1-12.3 weeks)
 - Median weekly epoetin alfa dose in the MP was 14,737 U (range: 3,256-35,000 U)

FIGURE 3. Maintenance phase.



RESULTS (cont'd)

Safety

- A total of 227 adverse events were reported; most were mild to moderate in severity and not related to epoetin alfa
 - Only 1 adverse event (mild muscle spasms in lower back) was considered possibly related to epoetin alfa
- 13 patients experienced serious adverse events, including 1 death—none were related to epoetin alfa
 - 74 year old admitted to hospital with fractured hip requiring surgery; expired probably due to pulmonary embolism

CONCLUSIONS

- In this preliminary analysis of 120 patients, 87% had Hb increases of ≥ 1 g/dL; 77% achieved target Hb ≥ 13 g/dL with epoetin alfa 40,000 U QW
- Once patients reached target Hb, 83% were able to maintain Hb levels at ≈ 13 g/dL, using epoetin alfa once every 2 weeks to once every 4+ weeks
- The calculated median dosing interval for efficacious epoetin alfa maintenance was on average 40,000 U every 2.7 weeks
- The longer dosing intervals of epoetin alfa in maintenance provide greater patient and provider ease, while potentially increasing compliance
- Epoetin alfa was well tolerated

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