Abstract: P785

Title: CLINICAL BENEFIT OF LUSPATERCEPT IN TRANSFUSION-DEPENDENT, ERYTHROPOIESIS-STIMULATING AGENT-NAIVE PATIENTS WITH VERY LOW-, LOW- OR INTERMEDIATE-RISK MYELODYSPLASTIC SYNDROMES IN THE COMMANDS TRIAL

Abstract Type: Poster Presentation

Topic: Myelodysplastic syndromes - Clinical

Background:

There is an unmet need for an effective treatment (tx) that provides durable benefit for patients (pts) with anemia due to lower-risk myelodysplastic syndromes (LR-MDS).

Aims:

To report clinically meaningful responses to luspatercept tx in transfusion-dependent (TD), erythropoiesis-stimulating agent (ESA)-naive pts with LRMDS in the COMMANDS trial (NCT03682536).

Methods:

Eligible pts were ≥ 18 years of age, had LR-MDS with or without ring sideroblasts and < 5% bone marrow blasts, endogenous serum erythropoietin < 500 U/L, required red blood cell (RBC) transfusions (defined as 2−6 RBC units/8 weeks [wk] for ≥ 8 wk prior to randomization), and were ESAnaive. Pts were randomized 1:1 to subcutaneous administration of luspatercept (1.0–1.75 mg/kg) once every 3 wk or epoetin alfa (450–1050 IU/kg) once weekly for ≥ 24 wk. New assessments of clinical benefit reported here include achievement and duration of ≥ 50% reduction in RBC units transfused over ≥ 12 wk and ≥ 24 wk (wk 1–end of tx [EOT]), transfusion burden (TB) on tx (wk 1–24), time to first transfusion, achievement and cumulative duration of all separate RBC transfusion independence (RBC-TI) ≥ 12 wk response episodes (wk 1–EOT), and mean hemoglobin (Hb) increase ≥ 1.5 g/dL over wk 1–24.

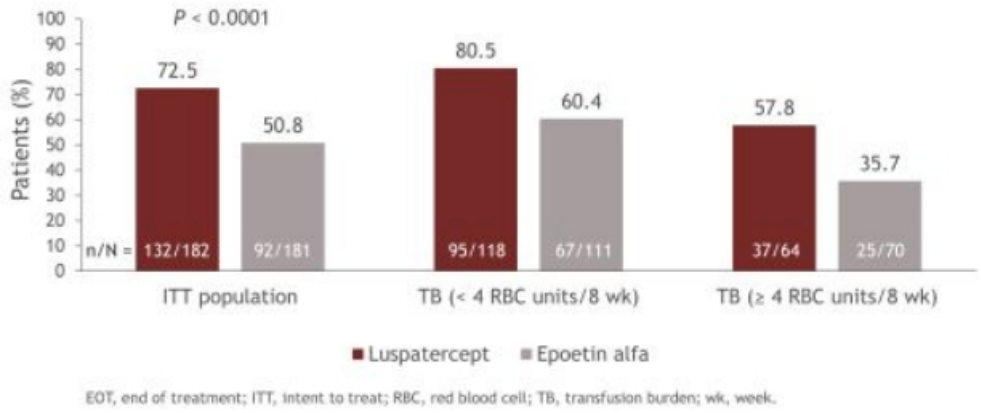
Results:

As of March 31, 2023, 151/182 (83.0%) pts treated with luspatercept and 121/181 (66.9%) pts treated with epoetin alfa achieved ≥ 50% reduction in RBC units transfused over ≥ 12 wk (wk 1–EOT; $P = 0.0002$), with median (95% confidence interval [CI]) durations of 130.0 (120.6–not evaluable [NE]) and 77.0 (54.9–123.1) wk, respectively ($P = 0.0004$). A greater proportion of luspatercept versus epoetin alfa pts achieved ≥ 50% reduction in RBC units transfused over ≥ 12 wk (wk 1–EOT), regardless of baseline (BL) TB: 105/118 (89.0%) pts treated with luspatercept versus 82/111 (73.9%) pts treated with epoetin alfa with BL TB < 4 RBC units/8 wk and 46/64 (71.9%) pts receiving luspatercept versus 39/70 (55.7%) pts receiving epoetin alfa with TB ≥ 4 RBC units/8 wk. Similarly, achievement of ≥ 50% reduction in RBC units transfused over ≥ 24 wk (wk 1–EOT) favored luspatercept over epoetin alfa ($P < 0.0001$; Figure), with median (95% CI) duration of 160.0 (135.0–NE) wk in the luspatercept arm and 117.4 (80.1–NE) wk in the epoetin alfa arm ($P = 0.0011$). The median (interquartile range) number of RBC units transfused during wk 1–24 of tx was 1.0 (0–5.0) in the luspatercept arm and 3.0 (0–8.0) in the epoetin alfa arm. The median (95% CI) time to first transfusion was 155.0 (80.0–266.0) days for luspatercept versus 42.0 (23.0–55.0) days for epoetin alfa pts ($P < 0.0001$). Among pts who achieved RBC-TI ≥ 12 wk (wk 1–24), 22/124 (17.7%) luspatercept pts versus 12/88 (13.6%) epoetin alfa pts achieved ≥ 2 separate RBC-TI ≥ 12 wk response episodes (ie, achieved RBC-TI ≥ 12 wk response, lost RBC-TI response, then later achieved RBC-TI again) during the entire tx period. The cumulative median (95% CI) duration of all response episodes (wk 1–EOT) was 147.9 (122.0–NE) wk in the luspatercept arm and 95.1 (73.1–NE) wk in the epoetin alfa arm ($P = 0.0067$). Mean Hb increase ≥ 1.5 g/dL over wk 1–24 was achieved by 135/182 (74.2%) luspatercept pts and 95/181 (52.5%) epoetin alfa pts ($P < 0.0001$).

Summary/Conclusion: Significantly greater proportions of pts treated with luspatercept than with epoetin alfa

achieved improvements in Hb levels, reduction in TB and RBC units transfused, and had durable RBC-TI responses. Luspatercept provided clinically meaningful outcomes, supporting its use as the preferred tx for ESA-naive pts with LR-MDS-associated anemia.

Figure. Achievement of ≥ 50% reduction in RBC units transfused over ≥ 24 wk (wk 1-EOT)



EOT, end of treatment; ITT, intent to treat; RBC, red blood cell; TB, transfusion burden; wk, week.

Keywords: Myelodysplastic syndrome, MDS, Clinical trial, Clinical data