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POSTER ABSTRACTS

634.MYELOPROLIFERATIVE SYNDROMES: CLINICAL AND EPIDEMIOLOGICAL

Estimating Transfusion-Related Medical Costs and Associated Time Burden in Patients with Myelofibrosis: A Comparison of Momelotinib Vs Ruxolitinib Based on Simplify-1

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Introduction:

Myelofibrosis (MF) is a myeloproliferative neoplasm characterized by splenomegaly, debilitating symptoms, and bone marrow fibrosis. Transfusion-dependent (TD) anemia is present in one-quarter of patients (pts) with MF at diagnosis and becomes more common over time. Transfusion dependence imposes a high cost burden on healthcare systems, with annual total medical costs up to 9 times higher for TD pts than for non-TD pts (Gerds A, et al. ASH 2022. Abstract 1729).

Momelotinib (MMB) is a Janus kinase (JAK) 1/JAK2/activin A receptor type 1 inhibitor that has demonstrated symptom, spleen, and anemia benefits in pts with MF across 3 phase 3 trials. Evidence in JAK inhibitor-naïve pts comes from SIMPLIFY-1 (NCT01969838), a randomized, double-blind, phase 3 trial of MMB vs ruxolitinib (RUX). Eligible pts had International Prognostic Scoring System high-risk or intermediate-2-risk MF, or intermediate-1-risk MF associated with symptomatic splenomegaly, hepatomegaly, or anemia (hemoglobin <10 g/dL) and/or unresponsiveness to available non-JAK inhibitor therapy. MMB was associated with higher red blood cell (RBC) transfusion independence rates (66.5% vs 49.3%), lower transfusion dependence rates (30.2% vs 40.1%), and fewer RBC units transfused (median of zero units/month vs 0.4 units/month) compared with RUX by week 24.

This study estimated the projected differences between MMB and RUX in total medical costs as well as cost and time burden associated with outpatient transfusion visits, based on results from SIMPLIFY-1, in all pts with MF and separately in those aged ≥65 years.

Methods:

Analyses were based on transfusion status (TD, transfusion independent [TI], or transfusion requiring [TR]) and mean rates of outpatient transfusion visits over 24 weeks in SIMPLIFY-1. TD was defined as ≥4 RBC units transfused or hemoglobin <8 g/dL in the prior 8 weeks, TI was defined as no RBC transfusions and all hemoglobin ≥8 g/dL in the prior 12 weeks, and TR was defined as being neither TD nor TI. Projected cost offsets for MMB relative to RUX were calculated based on observed transfusion status and rates over 24 weeks from SIMPLIFY-1 combined with cost estimates for TD vs TI/TR from the IBM MarketScan Database used to inform commercial health plans. Projected time savings were calculated similarly using transfusion rates from SIMPLIFY-1 and previously reported time burden estimates for transfusion visits in pts with TD β-thalassemia (Knoth RL, et al. EHA2022. Poster P1741). For pts aged ≥65 years, individual pt data from SIMPLIFY-1 and cost estimates from the Medicare fee-for-service database were used instead.

Results:

Based on the IBM MarketScan Commercial Database, projected average annual total medical cost savings based on week 24 transfusion status with MMB vs RUX were \$20,215 per pt with baseline TD status and \$23,991 per pt with baseline TI/TR status. Fewer outpatient transfusion visits with MMB vs RUX resulted in projected annual savings of \$25,704 per pt with baseline TD status and \$12,083 per pt with baseline TI/TR status. Among pts with baseline TD status, projected annual time savings in transfusion visits for MMB vs RUX (147 vs 253 hours) totaled 106 hours per pt (42 hours, preparation and waiting; 50 hours, transfusion and recovery; 15 hours, travel), a 42% reduction for MMB vs RUX.

In the subgroup analysis that focused on pts aged ≥65 years, based on the Medicare fee-for-service database, projected average annual total medical cost savings with MMB vs RUX were \$11,102 per pt with baseline TD status and \$17,373 per pt with baseline TI/TR status. Fewer outpatient transfusion visits with MMB vs RUX resulted in projected annual savings of \$28,826

per pt with baseline TD status and \$18,255 per pt with baseline TI/TR status. Among pts aged ≥65 years with baseline TD status, projected annual time savings in transfusion visits accounted for MMB vs RUX (160 vs 279 hours) totaled 119 hours per pt (47 hours, preparation and waiting; 56 hours, transfusion and recovery; 16 hours, travel), a 43% reduction for MMB vs RUX.

Conclusions:

Reductions in transfusion dependence and transfusion visits for MMB vs RUX were associated with projected healthcare system savings in transfusion costs and transfusion-related time burden in JAK inhibitor-naive pts with MF, including in subgroup analyses of pts aged ≥65 years.

Disclosures Masarova: MorphoSys US: Membership on an entity's Board of Directors or advisory committees. **Liu:** GSK: Current Employment. **Rao:** GSK: Current Employment, Other: Stock or stock options. **Gorsh:** GSK: Ended employment in the past 24 months, Other: stock shareholder.

Table. Annual Per-Patient Cost and Time Burden of TD Status Associated with MMB vs RUX

	IBM MarketScan Commercial Database	Medicare Fee-for-Service Database
	Difference ^{a,b} (MMB vs RUX)	Difference ^{a,b} (MMB vs RUX)
Total PPPY medical costs based on transfusion status at week 24, US \$		
Baseline TD	-20,215 (169,378 vs 189,594)	-11,102 (116,097 vs 127,199)
Baseline TI/TR	-23,991 (72,708 vs 96,698)	-17,373 (87,036 vs 104,410)
PPPY outpatient transfusion cost, US \$		
Baseline TD	-25,704 (35,578 vs 61,282)	-28,826 (38,907 vs 67,733)
Baseline TI/TR	-12,083 (2389 vs 14,472)	-18,255 (3100 vs 21,355)
PPPY outpatient transfusion time burden, hours		
Baseline TD	-106 (147 vs 253)	-119 (160 vs 279)
Baseline TI/TR	-50 (10 vs 60)	-75 (13 vs 88)

MMB, momelotinib; PPPY, per person per year; RUX, ruxolitinib; TD, transfusion dependent; TI, transfusion independent; TR, transfusion requiring.

^a Differences <0 indicate cost or time savings for MMB relative to RUX; differences >0 indicate cost or time savings for RUX relative to MMB.

^b Differences shown between arms may slightly differ from base values due to rounding.

Figure 1

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