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METER: A Multicountry, Real-World Chart Review Study to Explore Treatment Patterns, Effectiveness and Healthcare Resource Utilization for Patients With Myelofibrosis

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OBJECTIVE

To report data from a retrospective chart review of real-world treatment patterns, overall survival (OS), and healthcare resource utilization (HCRU) in patients diagnosed with primary or secondary myelofibrosis (MF)

CONCLUSIONS

In patients with MF, ruxolitinib (RUX) was the most commonly used agent in all lines of therapy (LOT)

The greatest reduction in duration of MF treatment occurred from first-line (1L) to second-line (2L), when compared with the transition to later lines; 98% of patients remained on 1L therapy through week 24 and 66% did not initiate 2L therapy until week 156

There was a high degree of advanced bone marrow fibrosis as well as transfusion dependence among this real-world patient population; HCRU was similar for patients who received RUX and patients who received non-RUX medications

The median OS time from index date to death was numerically longer for patients who received 1 LOT versus ≥2 LOT

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INTRODUCTION

- MF is a rare myeloproliferative disorder associated with significant morbidity and mortality[1–3]
- Hydroxyurea was one of the most commonly used 1L treatments in patients with MF prior to the approval of RUX, a first-in-class Janus kinase 1/2 inhibitor (JAKi) that is widely approved for the treatment of symptomatic patients with MF[4]
- In addition to RUX, 3 further JAKis have been approved by the US Food and Drug Administration; fedratinib, pacritinib, and more recently, momelotinib[5–7]
- Real-world treatment patterns and the impact of currently available JAKis on patients with MF are not well understood

METHODS

Study and patient population

- The METER study (NCT05444972) is an ongoing multicountry noninterventional retrospective chart review assessing treatment patterns, effectiveness, and HCRU in patients diagnosed with MF
- Data from adult patients (aged ≥18 years) with primary or secondary MF treated on or after the local first date of RUX approval until December 31, 2021 were assessed
  - Patients who received treatment for MF in a clinical trial were excluded

Outcomes

- The primary objective was to describe real-world MF treatment patterns, including patient characteristics, time from MF diagnosis to 1L therapy, choice, duration and reason for change/discontinuation of initial and subsequent treatments for MF, and treatment procedures
  - Secondary objectives were MF treatment effectiveness (included assessment of OS) and HCRU (days hospitalized, days in intensive care unit, and the number of times patient received transfusions)

RESULTS

Patient population and characteristics

- As of September 29, 2023, 941 patient charts were included, met eligibility criteria, and had initial treatment information available
- Most patients were male (54%) and White (65%), and the median (range) age for patients ≤89 years was age 66 (58–73) years
- Of patients with available bone marrow fibrosis data, 82% (562/689) had grade ≥2 bone marrow fibrosis at diagnosis

Real-world MF treatment patterns

- The mean (SD) time from MF diagnosis to start of initial treatment (index date) was 270 (692) days
- RUX was the most commonly used 1L therapy (47%; 444/941) followed by hydroxyurea (41%; 385/941)
  - RUX was also the most common therapy used in 2L+ (>58% for 2L+)
- Mean (SD) time from index date to procedural intervention was 573 (536) days
  - The most common procedure was stem cell transplant (n=74) followed by splenectomy (n=20)

Of assessed patients at baseline, 66% were patients with primary MF, 10% were transfusion dependent, and 51% had a high molecular-risk mutation

Baseline characteristic	All patients (N=941)
Sex	
Female	402 (42.7)
Male	511 (54.3)
Undifferentiated	28 (3.0)
Age (year), *Median (Q1–Q3)*	66.0 (58.0–73.0)
Race	
White	614 (65.2)
Black	16 (1.7)
Asian	61 (6.5)
Unknown	249 (26.5)
Multiple	1 (0.1)
Geographic region	
North America	130 (13.8)
Latin America	216 (23.0)
Asia	50 (5.3)
Oceania	53 (5.6)
Europe	492 (52.3)
Type of cancer	
Primary MF	625 (66.4)
Secondary MF	316 (33.6)
Transfusion dependency	
Yes	98 (10.4)
No	773 (82.1)
Unknown	70 (7.4)
Risk classification at diagnosis*	
Low	73 (12.5)
Intermediate 1	187 (32.0)
Intermediate 2	214 (36.6)
High	106 (18.1)
Unknown	5 (0.9)
Missing	356

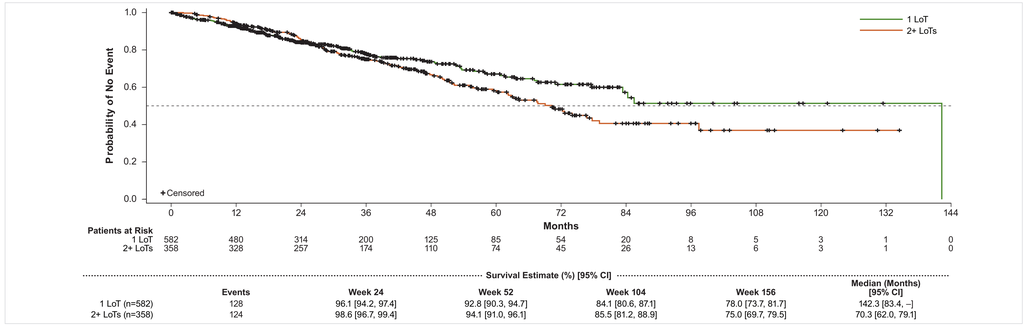
*Risk classification methods: IPSS (33%), DIPSS (42%), DIPSS+ (23%), MIPSS (1%), other (1%).
Data are displayed as n (%) unless stated otherwise.
MF, myelofibrosis.

- Of the 941 patients who received 1L therapy, 98% remained on 1L therapy through Week 24, and 66% did not initiate 2L therapy until Week 156
- Median (95% confidence interval [CI]) duration of 1L therapy was 48 (45–52) months

MF treatment effectiveness

- Median (95% CI) survival from start of 1L therapy was 83 (71–NR) months; the estimated survival rate (95% CI) at Week 156 was 77% (73–80)

Median OS time from index date to death for patients who received 1 LOT or ≥2 LOT

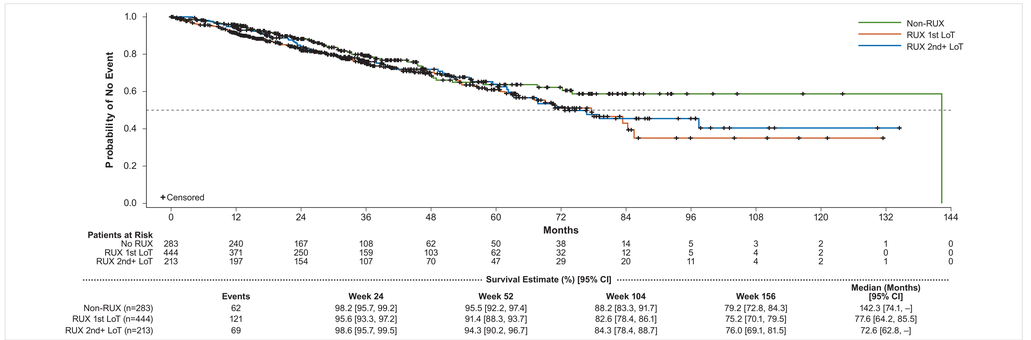


Survival Estimate (%) [95% CI]

	Events	Week 24	Week 52	Week 104	Week 156	Median (Months) [95% CI]
1 LoT (n=582)	128	96.1 [94.2, 97.4]	92.8 [90.3, 94.7]	84.1 [80.6, 87.1]	78.0 [73.7, 81.7]	142.3 [83.4, –]
2+ LoTs (n=358)	124	98.6 [96.7, 99.4]	94.1 [91.0, 96.1]	85.5 [81.2, 88.9]	75.0 [69.7, 79.5]	70.3 [62.0, 79.1]

Only patients with nonmissing survival time are included. No statistical comparisons were made between the 2 groups shown on the plot.
CI, confidence interval; LOT, line(s) of therapy; OS, overall survival.

Median OS time from index date to death for patients who received no RUX, RUX in 1L, or RUX in 2L+[a]



Survival Estimate (%) [95% CI]

	Events	Week 24	Week 52	Week 104	Week 156	Median (Months) [95% CI]
Non-RUX (n=283)	62	98.2 [95.7, 99.2]	95.5 [92.2, 97.4]	88.2 [83.3, 91.7]	79.2 [72.6, 84.3]	142.3 [74.1, –]
RUX 1st LoT (n=444)	121	95.6 [93.3, 97.2]	91.4 [88.3, 93.7]	82.6 [78.4, 86.1]	75.2 [70.1, 79.5]	77.6 [64.2, 85.5]
RUX 2nd+ LoT (n=213)	69	98.6 [95.7, 99.5]	94.3 [90.2, 96.7]	84.3 [78.4, 88.7]	76.0 [69.1, 81.5]	72.6 [62.8, –]

[a]Further analysis on the demographic and clinical characteristic of this patient group (non-RUX) are needed to better understand the more favorable outcome. Only patients with nonmissing survival time are included. No statistical comparisons were made between the 3 groups shown on the plot.
1L, first-line; 2L, second-line; CI, confidence interval; LOT, line(s) of therapy; OS, overall survival; RUX, ruxolitinib.

HCRU among patients requiring healthcare resources

	RUX (n=384)	Non-RUX (n=102)	All patients (n=486)
Total number of days hospitalized for the hospitalized patients, Median (Q1–Q3)	20.0 (9.0–42.0)	11.0 (6.0–30.0)	17.5 (8.0–39.0)
Total numbers of days in ICU for patients requiring ICU admission, Median (Q1–Q3)	5.0 (2.0–10.0)	4.5 (1.0–11.5)	5.0 (2.0–10.0)
Total number of times patients received transfusions for the patients needing transfusion, Median (Q1–Q3)	13.0 (5.0–28.5)	6.0 (3.0–19.0)	12.0 (4.0–26.0)

HCRU, healthcare resource utilization; ICU, intensive care unit, RUX, ruxolitinib.