

Additional information for: Cost effectiveness of momelotinib vs other treatments for myelofibrosis from a US payer perspective

Tom Liu,¹ Molly Purser,¹ Cynthia L. Gong,² David Elsea,² Nicole Niehoff,¹ Ewa Dlotko,³ Kristen Migliaccio-Walle,² Yevgeniy Samyshkin⁴

¹GSK plc, Philadelphia, PA, USA; ²Curta, Seattle, WA, USA; ³FIECON, St Albans, UK; ⁴GSK plc, Brentford, Middlesex, UK

Corresponding author email address: tom.x.liu@gsk.com

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Model Assumptions

- **Model calculations**
 - Unique subsequent treatment costs were applied to cycle 1 vs cycle 2+ based on the number of individuals (probability) entering each model cycle as the probability of individuals receiving subsequent treatment is >0 beginning cycle 1
 - Discount rate was applied in cycle 1+ vs in cycle 2+, as the model initiates in cycle 0 and thus a discount rate should be applied in subsequent cycles
 - Terminal care costs were applied to begin in cycle 1 as the probability of mortality is >0% beginning in cycle 1
 - Dose-rounding for drug administration were done on a per-day basis, rather than on a per-cycle basis as it is not possible to round individual dose administration at the end of a cycle
- **Costs not applicable in the US were set to \$0**
 - Thalidomide administration costs: no special administration costs
 - Registered nurse training time for subcutaneous injections
 - Social care cost (under costs of terminal care): healthcare costs are the only relevant terminal care costs from the US payer perspective
- **US-specific parameters**
 - Background mortality rate from US life tables
 - Medical consumer price index multiplier (when applicable)
 - Drug acquisition costs obtained from US sources
 - Health state and adverse event costs from US sources
 - Utility values for the US patient population

Model Inputs

Table. AE Odds Ratios

AE	Odds ratio (95% CI): momelotinib vs pacritinib
Anemia	0.41 (0.20-0.87)
Thrombocytopenia	0.48 (0.25-0.93)
Asthenia	0.89 (0.36-2.09)
Neutropenia	Assumed equal to thrombocytopenia
Lymphopenia	Assumed equal to thrombocytopenia
Pneumonia (grade 3/4)	0.26 (0.14-0.49)
Diarrhea	0.51 (0.28-0.91)
Vomiting	Assumed equal to nausea
Nausea	0.41 (0.23-0.73)
Fatigue	0.89 (0.41-1.96)
Epistaxis (grade 3/4)	0.26 (0.14-0.49)

Model Inputs

Table. Health State Medical Costs

Health state	Cost	Cost year	Cost source
Transfusion independent	\$5,830	2022	Medicare
Transfusion requiring	\$11,130	2022	Medicare
Transfusion dependent	\$11,137	2022	Medicare
Transfusion independent	\$28,300	2021	Commercial
Transfusion requiring	\$71,300	2021	Commercial
Transfusion dependent	\$256,700	2021	Commercial

Model Inputs

Table. Dosing and Acquisition Cost for Each Therapy

Drug Treatment	Pack cost	Unit size	Pack size	Dose per administration	Administrations per cycle
Ruxolitinib (5 mg BID)	\$17,020	5 mg	60	5 mg	56
Ruxolitinib (10 mg BID)	\$17,020	10 mg	60	10 mg	56
Ruxolitinib (15 mg BID)	\$17,020	15 mg	60	15 mg	56
Ruxolitinib (20 mg BID)	\$17,020	20 mg	60	20 mg	56
Hydroxyurea (hydroxycarbamide)	\$39.98	500 mg	100	1000 mg	28
Prednisone/prednisolone	\$7.20	5 mg	100	15 mg	28
ESA (epoetin alpha)	\$331.60	20,000 IU	1	40,000 IU	4
No therapy	\$0	-	-	-	-
Anagrelide	\$179.10	1 mg	100	1 mg	56
Darbepoetin alfa	\$774	100 µg		400 µg	4
Aspirin	\$6.43	325 mg	100	75 mg	28
Danazol	\$380.80	100 mg	100	300 mg	56
Thalidomide and dalteparin	\$8,843.50	200 mg	28	200 mg	28
	\$35.45	5,000 IU	1	5,000 IU	28

Model Inputs

Table. Resource Cost Use

Adverse event	Cost
Blood test monitoring (CPT 80053) ¹	\$10.56 (per test)
Hematology visit (CPT 99213) ¹	\$90.82 (per visit)
Iron chelation (deferasirox) ²	\$153.60 (generic)
	\$5,847.30 (brand)

CPT, current procedural terminology.
1. Centers for Medicare and Medicaid Services. Overview of the Medicare Physician Fee Schedule n.d. <https://www.cms.gov/medicare/physician-fee-schedule/search/overview> (accessed February 12, 2024b). 2. RedBook Online. Micromedex n.d. <https://www.micromedexsolutions.com/home/dispatch> (accessed February 12, 2024).

Model Inputs

Table. AE Costs

AE	Cost (95% CI)
Anemia	\$4,353 (\$4,072-\$4,652)
Thrombocytopenia	\$6,325 (\$5,426-\$7,357)
Asthenia	Assumed equal to nausea
Neutropenia	\$5,321 (\$5,036-\$5,602)
Lymphopenia	Assumed equal to neutropenia
Pneumonia	\$9,941 (\$9,085-\$10,924)
Diarrhea	\$3,265 (\$2,533-\$4,074)
Vomiting	\$895 (\$588-\$1,182)
Nausea	\$1,965 (\$1,328-\$2,481)
Fatigue	Assumed equal to nausea
Epistaxis	Assumed equal to anemia

Model Inputs

Table. Mean EQ-5D-5L Utility Values

Health state	Mean momelotinib scores (95% CI)	Mean BAT scores (95% CI)	Mean treatment-agnostic scores (95% CI)
Transfusion independent	0.7651 (0.7394-0.7917)	0.7585 (0.7342-0.7837)	0.7616 (0.7399-0.7840)
Transfusion requiring	0.7697 (0.7436-0.7966)	0.7298 (0.6956-0.7657)	0.7547 (0.7331-0.7769)
Transfusion dependent	0.7565 (0.7192-0.7958)	0.7121 (0.6715-0.7551)	0.7310 (0.7088-0.7663)

Results

Table. Cost Effectiveness Under Different Cost Scenarios

Comparator	Total costs	Total LYs	Total QALYs	Δ Total cost	Δ QALYs	iNMB
Medicare						
Momelotinib	\$881,223	2.90	2.210	−\$165,938	0.144	\$187,571
BAT	\$1,047,161	2.83	2.066	0 (reference)	0	0
Pacritinib	\$1,180,108	2.83	2.106	\$132,948	0.040	−\$126,964
Commercial						
Momelotinib	\$5,885,598	2.90	2.210	−\$1,045,080	0.144	\$1,066,712
BAT	\$6,930,678	2.83	2.066	0 (reference)	0	0
Pacritinib	\$7,063,625	2.83	2.106	\$132,948	0.040	−\$126,964
Microcosting						
Momelotinib	\$575,646	2.90	2.210	−\$155,887	0.144	\$177,520
BAT	\$731,533	2.83	2.066	0 (reference)	0	0
Pacritinib	\$869,802	2.83	2.106	\$138,269	0.040	−\$132,285