EE356

Cost-effectiveness of subcutaneous mosunetuzumab plus polatuzumab vedotin versus rituximab plus gemcitabine and oxaliplatin for United States (US) patients with autologous stem cell transplant-ineligible relapsed/refractory large B-cell lymphoma (LBCL)

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Summary

This analysis investigates the **cost-effectiveness** of subcutaneous mosunetuzumab plus polatuzumab vedotin (**Mosun-Pola**) versus rituximab with gemcitabine and oxaliplatin (**R-GemOx**) in patients with relapsed/refractory (R/R) LBCL, who were ineligible for autologous stem cell transplant (ASCT), from a **US payer perspective**

Compared with R-GemOx, **Mosun-Pola was associated with increased life years (LYs) and quality-adjusted life years (QALYs)** and lower progression-related costs

At a willingness to pay threshold of $150,000/QALY, **Mosun-Pola was cost-effective compared with R-GemOx** in patients with ASCT-ineligible R/R LBCL from a US payer perspective

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Background

- The Phase III SUNMO trial (GO43643; NCT05171647) assessed subcutaneous mosunetuzumab, a CD20xCD3 T-cell-engaging bispecific antibody, in combination with intravenous polatuzumab vedotin, a CD79b-directed antibody drug conjugate, versus R-GemOx in patients with R/R LBCL.[1]
- Enrolled patients had previously received at least one line of systemic therapy and were ineligible for ASCT.
- Fixed-duration Mosun-Pola met the co-primary endpoints of a statistically significant benefit over R-GemOx in objective response rate (median: 70% vs 40%; p-value <0.001) and progression-free survival (PFS; median: 11.5 vs 3.8 months; hazard ratio [HR], 0.41, 95% confidence interval [CI]: 0.3–0.6; p-value <0.001)[1]
  - An interim analysis of overall survival (OS) did not yet demonstrate statistical significance of Mosun-Pola versus R-GemOx (median: 18.7 vs 13.6 months; HR, 0.80, 95% CI, 0.5–1.2; p-value 0.28).[1]
- The aim of this analysis was to investigate the cost-effectiveness of Mosun-Pola versus R-GemOx in patients with ASCT-ineligible R/R LBCL from a US payer perspective.

Methods

- A partition survival model was used to estimate lifetime QALYs gained, LYs gained, direct healthcare costs, and incremental cost-effectiveness ratios (ICERs) for Mosun-Pola versus R-GemOx.
- OS and PFS were extrapolated based on SUNMO data (cut-off date: February 17, 2025) using fitted parametric curves chosen by Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC).
- Direct healthcare costs included drug (using average sales price [ASP]) and administration costs, Grade ≥3 adverse event management, subsequent treatment, routine and terminal care, and all-Grade cytokine release syndrome (CRS) monitoring costs
  - Drug costs were based on AnalySource® (2026) and The Centers for Medicare and Medicaid Services (CMS) ASP (Quarter 1 [Q1] 2026)
  - Costs were calculated using publicly available unit cost data sourced from published literature and adjusted to 2026 US dollars (USD); future costs and benefits were discounted at an annual rate of 3%.
- Long-term remission: if patients remained progression-free at 2 years, patient mortality in the model was matched to that of the general population with a standardized mortality ratio of 1.09, and supportive costs were no longer accrued for the long-term remission population.
- A probabilistic sensitivity analysis utilized 1,000 Monte Carlo simulations, and a one-way sensitivity analysis (OWSA) varied model inputs by ±20%.
- An ICER ≤$150,000/QALY (willingness-to-pay threshold) was considered cost-effective in the US.

Table 1. Sources for population age and LBCL incidence and treatment for the Medicare population

Model input	Value	Reference
OS parametric distribution Mosun-Pola R-GemOx	 Log normal Log normal	SUNMO study; best fit based on AIC and BIC
PFS parametric distribution Mosun-Pola R-GemOx	 Generalized gamma Log normal	SUNMO study; best fit based on AIC and BIC
Drug acquisition costs Mosun-Pola R-GemOx	 Mosunetuzumab Cycle 1: $58,737 Mosunetuzumab Cycle 2–8: $27,823 Polatuzumab vedotin Cycle 1–6: $16,643 Cycle 1–6: $2,198	Medicare ASP (Q1 2026)*
Drug administration costs Mosun-Pola R-GemOx	 Mosunetuzumab Cycle 1: $215 Mosunetuzumab Cycle 2–8: $72 Polatuzumab vedotin Cycle 1: $186 Polatuzumab vedotin Cycle 2–6: $158 Cycle 1: $404 Cycle 2–6: $376	CPT-based unit costs from 2026 CMS physician fee schedule
Adverse event management costs Mosun-Pola R-GemOx	 $12,648 $11,048	Based on the HCUP NIS 2021 sample and inflated to 2026 USD†
CRS monitoring costs for Mosun-Pola	$157	Badaracco et al. (2023)[2‡]
Weekly supportive care costs PFS – on treatment PFS – off treatment Progressed disease	 $244 $192 $174	Healthcare resource utilization rates from NICE TA649 (company submission, Table 55 and clinical opinion). Costs from Perales et al. (2021)[3] inflated to 2026 USD
Terminal care cost	$28,428	Costs inflation adjusted to 2026 USD using CPI[4]
Subsequent treatment cost Mosun-Pola R-GemOx	 $354,731 $354,731	Genentech, Inc. (data on file). Medicare ASP (Q1 2026)[§]
Utility value PFS – on treatment PFS – off treatment Progressed disease	 0.780 0.780 0.691	Utilities were derived from EQ-5D-5L in the SUNMO study using US tariffs[5]

*Includes costs due to wastage, no vial sharing in base case. Dose calculations based on SUNMO population: average age (61 years), height (165.36cm), weight (71.66kg), and body surface area (1.78m^2) for dose calculations. Rituximab cost is weighted average including biosimilars based on market share data (March 2026 ASP from Medicare). Duration is based on time to off-treatment curves obtained directly from the SUNMO trial data. †Grade ≥3 adverse events occurring in ≥5% of patients for any of the regimens in the SUNMO study are included in the analysis. Unit costs were derived from the 2021 NIS of the HCUP (https://hcup-us.ahrq.gov/db/nation/nis/NIS_Introduction_2021.jsp) on May 22, 2024 and were inflated to 2026 USD using the BLS Medical Care component of the CPI. ‡Unit costs of CRS events by Grade ($10,914 for Grades 1–2 and $89,414 for Grade ≥3 in 2020 USD) were obtained from Badaracco et al. (2023) and inflated to 2026 USD using the BLS Medical Care component of the CPI. CRS rates were sourced from the pivotal trial or US prescribing information for each regimen. §Utilization of subsequent therapies was based on internal Genentech, Inc. market research and was assumed to be non-differential by treatment arm. March 2026 ASP from Medicare was used to assign costs to subsequent treatments.
BLS, Bureau of Labor Statistics; CPI, consumer price index; CPT, current procedural terminology; HCUP, Healthcare Cost and Utilization Project; NICE, National Institute for Health and Care Excellence; NIS, National Inpatient Sample.

Results

- When compared with R-GemOx, Mosun-Pola was associated with an incremental cost of $137,419 and an improvement of 1.26 QALYs and 1.02 LYs, leading to an ICER of $109,462/QALY (**Table 2**).
- The incremental cost was driven by increased treatment and administration costs ($270,902) and adverse event costs ($1,600), and decreased supportive care costs (−$28,590), subsequent treatment (−$105,652) and terminal care costs (−$841; **Figure 1**).
- The ICER for Mosun-Pola compared with R-GemOx was most sensitive to the post-progression utility (**Figure 2**).
- Mosun-Pola was cost-effective in 74% of simulations compared with R-GemOx.

Table 2. Base case results

	Mosun-Pola	R-GemOx	Incremental
Total costs	$574,589	$437,170	$137,419
Total QALYs	5.53	4.28	1.26
Total LYs	7.17	6.15	1.02
ICER (cost/QALY)			**$109,462**

Figure 1. Cost savings by category

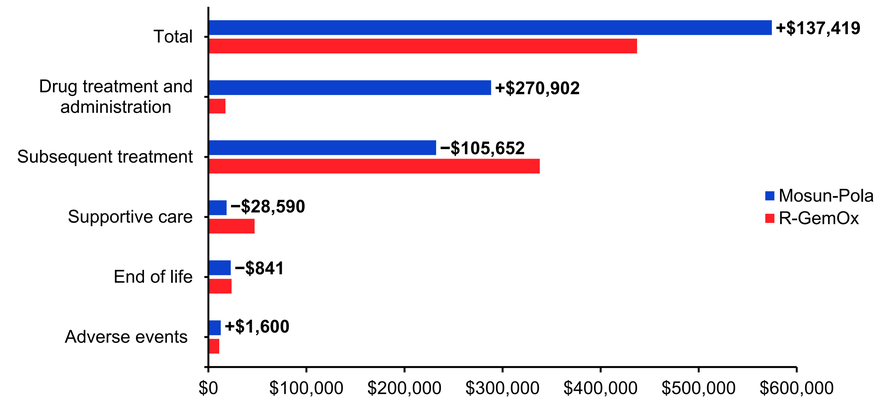
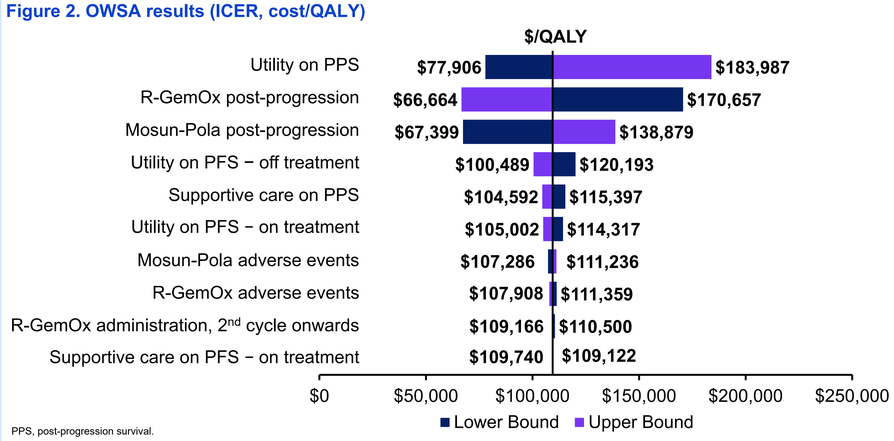


Figure 2. OWSA results (ICER, cost/QALY)



PPS, post-progression survival.

Limitations

- Inputs based on clinical trials may not always be generalizable to the real world.
- Modelled OS and PFS were based on extrapolations of SUNMO data.
- Costs were derived from different sources in order to ensure costs were publicly accessible.
- Utility values were captured in aggregate and are assumed to be similar for Mosun-Pola versus R-GemOx.

Conclusions

- Mosun-Pola provided a clinical benefit, with increased QALYs and LYs compared with R-GemOx, and was associated with lower supportive care and progression-related costs versus R-GemOx.
- At a willingness to pay threshold of $150,000/QALY, Mosun-Pola was cost-effective compared with R-GemOx in patients with ASCT-ineligible R/R LBCL from a US payer perspective.

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Disclosures

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