# Budget Impact Analysis of Revumenib for the Treatment of Relapsed or Refractory Acute Leukemias with a *KMT2A* Translocation in the United States

Poster EE254

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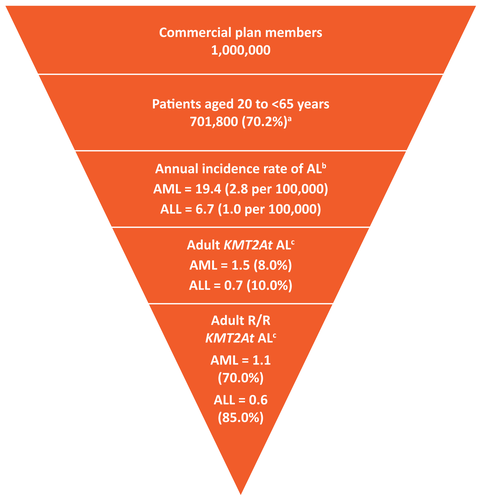
## BACKGROUND

- Relapsed or refractory (R/R) disease commonly occurs among patients with acute leukemias (ALs), including acute myeloid leukemia (AML) and acute lymphoblastic leukemia (ALL), and is associated with substantial healthcare resource utilization (HCRU) and negative effects on health-related quality of life[1,2]
- A subgroup of patients with AL harbor a translocation of the lysine methyltransferase 2A gene *(KMT2At)*, which is associated with high rates of R/R disease and poor clinical outcomes[3,4]
- On November 15, 2024, the US Food and Drug Administration approved revumenib as the first treatment for patients aged ≥1 year with R/R *KMT2At* AML and ALL[5]
  - In the phase 1/2 registration-enabling study AUGMENT-101 (NCT04065399), treatment with revumenib, a first-in-class oral menin inhibitor of the menin–KMT2A interaction, resulted in high remission rates among patients with R/R *KMT2At* ALs, with a well-tolerated safety profile[6]
  - Revumenib is now recommended in the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) as the sole targeted therapy for patients with *KMT2At* AML and ALL (category 2A)[7,8]
- This study aimed to estimate the financial impact of adding revumenib into a hypothetical drug formulary to treat adult patients with R/R *KMT2At* AL, using a budget impact model (BIM)

## METHODS

- A de novo BIM was developed to analyze a hypothetical formulary comprising 1 million members from the perspective of US commercial third-party payers over a 3-year time horizon
- The eligible population for the BIM included adult patients with R/R *KMT2At* AL (**Figure 1**)

**Figure 1**. Estimated Eligible Population Based on Epidemiology Inputs[3,9–15]




[a]According to US Census Bureau. [b]According to the National Cancer Institute's Surveillance, Epidemiology, and End Results Program. [c]Derived from published epidemiology data for the target population.[3,9–15]
**AL**, acute leukemia; **ALL**, acute lymphoblastic leukemia; **AML**, acute myeloid leukemia; **R/R**, relapsed/refractory.

- As no other targeted therapies were approved for the target population during BIM development, 11 non-targeted pharmacotherapies were included in the model as alternate treatment options
  - Market shares for the included treatment options were allocated based on the likelihood of achieving subsequent complete remission and/or the presence of a targetable genetic alteration (**Table 1**)

## METHODS

**Table 1.** Market Share of Treatment Options Over Years 1–3[a]

| Market share, % | Before revumenib | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|
| **AML** | | | | |
| Revumenib | 0 | 10 | 15 | 20 |
| Intensive chemotherapy | 40 | 35 | 33 | 32 |
| HMA/LDAC | 15 | 12 | 11 | 10 |
| Venetoclax + azacitidine | 25 | 23 | 23 | 22 |
| Gilteritinib | 10 | 10 | 9 | 8 |
| Gilteritinib + azacitidine | 10 | 10 | 9 | 8 |
| **Total** | **100** | **100** | **100** | **100** |
| **ALL** | | | | |
| Revumenib | 0 | 5 | 10 | 15 |
| Intensive chemotherapy | 30 | 30 | 29 | 28 |
| Blinatumomab | 30 | 28 | 26 | 24 |
| Inotuzumab ozogamicin | 25 | 23 | 22 | 21 |
| Inotuzumab ozogamicin + mini-CVD + blinatumomab | 10 | 9 | 8 | 7 |
| Brexucabtagene autoleucel | 2.5 | 2.5 | 2.5 | 2.5 |
| Tisagenlecleucel | 2.5 | 2.5 | 2.5 | 2.5 |
| **Total** | **100** | **100** | **100** | **100** |

[a]Market shares based on market forecasting from the study sponsor.
**ALL**, acute lymphoblastic leukemia; **AML**, acute myeloid leukemia; **CVD**, cyclophosphamide + vincristine + dacarbazine; **HMA/LDAC**, hypomethylating agent/low-dose cytarabine.

### CLINICAL INPUTS

- Clinical inputs included duration of treatment, time to subsequent treatment, overall survival (OS), and frequency of grade ≥3 adverse events (AEs) (**Table 2**)
  - It was assumed only grade ≥3 AEs would incur significant HCRU, and all grade ≥3 AEs would require hospitalization

**Table 2.** Clinical Inputs[16–31]

| Clinical outcomes | Median duration of treatment, months | Median time to subsequent treatment, months | Median OS, months |
|---|---|---|---|
| Revumenib[6,16] | 2.39[b] | 2.8[b] | 8.0 |
| **AML** | | | |
| Intensive chemotherapy[17–23] | 0.92 | 3.7 | 7.3 |
| HMA/LDAC[24,25] | 0.92 | 0.92 | 6.02 |
| Venetoclax + azacitidine[26] | 1.84 | 2.3 | 5.9 |
| Gilteritinib[24] | 4.6 | 4.6 | 9.3 |
| Gilteritinib + azacitidine[24] | 4.6 | 4.6 | 9.3 |
| **ALL** | | | |
| Intensive chemotherapy[27] | 1.0 | 1.8 | 6.7 |
| Blinatumomab[28] | 2.76 | 7.3 | 7.7 |
| Inotuzumab ozogamicin[27] | 2.53 | 5.0 | 7.7 |
| Inotuzumab ozogamicin + mini-CVD + blinatumomab[29] | 2.76 | 13.0 | 17.0 |
| Brexucabtagene autoleucel[30] | 0.03 | 11.6 | 25.4 |
| Tisagenlecleucel[31] | 0.03 | 24.0 | 54.01 |

[a]Same clinical inputs for AML and ALL. [b]Includes additional data on file.
**ALL**, acute lymphoblastic leukemia; **AML**, acute myeloid leukemia; **CVD**, cyclophosphamide + vincristine + dacarbazine; **HMA/LDAC**, hypomethylating agent/low-dose cytarabine; **OS**, overall survival.

### COST INPUTS

- Costs associated with treatment (drug acquisition and administration), management of grade ≥3 AEs, treatment-related supportive care and monitoring, and post-discontinuation care (subsequent treatment and end-of-life care) were included
  - The median duration of a given treatment was used to calculate its cost, including drug acquisition and administration costs, with time to subsequent treatment and median OS used to calculate post-discontinuation costs (**Table 3**)
  - All costs were adjusted to 2024 USD

**Table 3.** Drug Acquisition and Administration Costs Per Cycle[a]

| Treatments[b] | Acquisition cost, $ | Administration cost, $[c] |
|---|---|---|
| **AML** | | |
| Revumenib | 36,867 | 0 |
| Intensive chemotherapy | 4,801 | 234,439 |
| HMA/LDAC | 1,593 | 1,163 |
| Venetoclax + azacitidine | 17,050 | 407 |
| Gilteritinib | 26,259 | 0 |
| Gilteritinib + azacitidine | 29,696 | 1,492 |
| **ALL** | | |
| Revumenib | 36,867 | 0 |
| Intensive chemotherapy | 4,801 | 215,822 |
| Blinatumomab | 137,204[d] | 22,813[d] |
| Inotuzumab ozogamicin | 135,414 | 639 |
| Inotuzumab ozogamicin + mini-CVD + blinatumomab | 417,200[d] | 6,072[d] |
| Brexucabtagene autoleucel | 462,000[e] | 109,765 |
| Tisagenlecleucel | 519,418[e] | 109,765 |
| **Post-discontinuation costs, $[f]** | | |
| Subsequent systemic treatment, per month | 42,889 | |
| End-of-life | 17,459 | |

[a]28-day cycle unless noted otherwise. [b]Information from Truven Health Analytics. Micromedex® RED BOOK®. [c]Based on the published literature, hospitalization length of stay for administering intensive chemotherapies was used to calculate associated costs. [d]Per 42-day cycle. [e]Single administration. [f]Same monthly post-discontinuation cost applied to all patients, regardless of prior therapy, and assumed to be subsequent treatment.
**ALL**, acute lymphoblastic leukemia; **AML**, acute myeloid leukemia; **CVD**, cyclophosphamide + vincristine + dacarbazine; **HMA/LDAC**, hypomethylating agent/low-dose cytarabine.

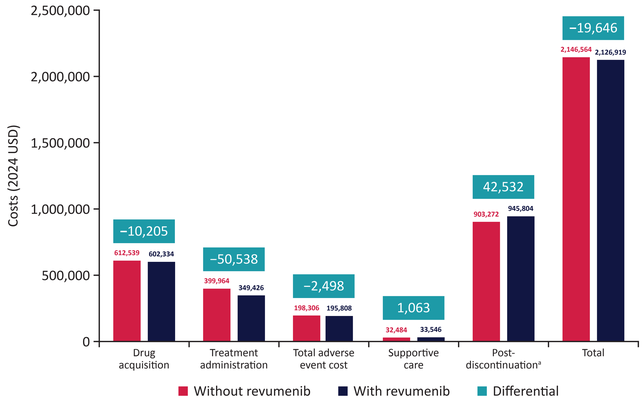
## RESULTS

- In a hypothetical 1-million-member commercial health plan, an estimated 1.7 adults with R/R ALs (AML, 1.1; ALL, 0.6) per year would be eligible for revumenib (**Figure 1**)

### BASE-CASE ANALYSIS

- The 3-year total plan cost was estimated to decline from $2,146,564 to $2,126,919 following the introduction of revumenib, driven mainly by lower costs for treatment administration (**Figure 2**)
  - Savings over the 3-year period (−$19,646) translated into estimated per-member-per-month (PMPM) and per-treated-member-per-month (PTMPM) cost savings of −$0.0005 and −$329, respectively
- Introducing revumenib to the formulary was estimated to increase patient life-years during the 3-year time horizon from 3.80 to 3.83 cumulatively for the cohort of patients, with fewer grade ≥3 AEs in the scenario with revumenib versus without (10.82 vs 10.99)

**Figure 2**. Aggregated Costs and Budget Impact (3 years)

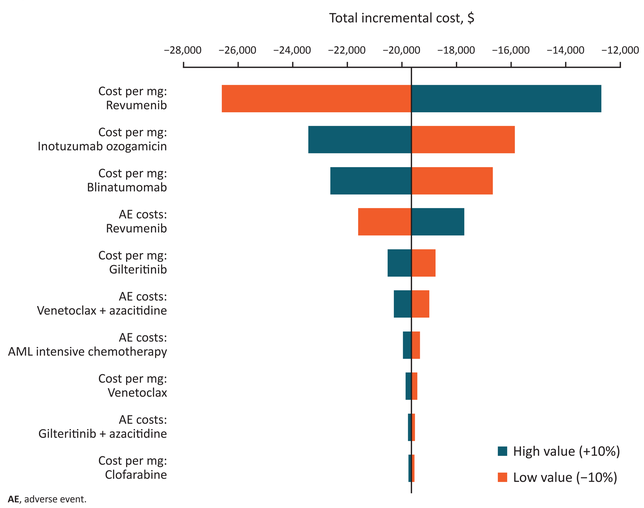



[a]Includes costs related to post discontinuation and end-of-life support.

### SENSITIVITY ANALYSIS

- Sensitivity and scenario analyses were performed to assess robustness of the model
- A one-way sensitivity analysis indicated that decremental total costs associated with the introduction of revumenib varied from −$26,598 to −$12,693 (−$0.0007 to −$0.0004 PMPM) over 3 years (**Figure 3**)
  - The model was most sensitive to the drug acquisition cost of revumenib, followed by acquisition costs for ALL-specific treatment with inotuzumab and blinatumomab

**Figure 3**. One-Way Sensitivity Analysis Relative to Base Case




**AE**, adverse event.

### SCENARIO ANALYSES

- In general, different scenario analyses demonstrated a decremental impact on the budget (−$0.0018 to −$0.0003 PMPM) and clinical consequences given the small treatment-eligible population (**Table 4**)

**Table 4.** Scenario Analyses

| Scenario | Incremental results (without revumenib – with revumenib) | | |
|---|---|---|---|
| | Total cost, $ | PMPM, $ | PTMPM, $ |
| Excluding costs of monitoring, supportive care, concomitant medication, and subsequent treatment | −63,240 | −0.0018 | −1,060 |
| Revumenib uptake from other treatment increased by 10% | −21,233 | −0.0006 | −356 |
| Revumenib uptake from other treatment decreased by 10% | −18,058 | −0.0005 | −303 |
| Lower end of values for population inputs[a] | −10,324 | −0.0003 | −422 |
| Higher end of values for population inputs[b] | −22,232 | −0.0006 | −232 |

Compared with 8%, 70%, and 10% in the base-case analysis, inputs for *KMT2At* AML, R/R *KMT2At* AML, and *KMT2At* ALL were [a]3.9%, 55%, and 4.6%, respectively, and [b]11.3%, 85%, and 14%, respectively.
**ALL**, acute lymphoblastic leukemia; **AML**, acute myeloid leukemia; **PMPM**, per-member-per-month; **PTMPM**, per-treated-member-per-month; **R/R**, relapsed/refractory.

## LIMITATIONS

- Pediatric patients and patients in commercially insured Medicare Advantage Plans were excluded
- Projected market mix and revumenib uptake in the BIM need to be validated with real-world data
- Clinical efficacy data for treatment options other than revumenib were not *KMT2At*-specific; therefore, clinical improvement in the scenario with revumenib may have been underestimated

## CONCLUSIONS

- Including revumenib in a formulary for adult patients with R/R *KMT2At* ALs was approximately cost neutral, offering patients access to a targeted treatment with the potential to improve outcomes without increasing financial implications
- The decremental budget impact was mainly driven by the lower drug administration costs of revumenib, an oral menin inhibitor, which eliminates the need for visits to the cancer clinic or hospitalizations for parenteral drug administration
- One-way sensitivity and the different scenario analyses underscored the robustness of the base-case results

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