Luveltamab tazevibulin (luveltamab or STRO-002) is a novel FolRα Folate receptor alpha (FolRα) targeting antibody-drug conjugate (ADC) with a stable cleavable linker and a 3-aminoophenyl/methanobacteriophagedharm (DM4) that induces cytotoxic and immunogenic cell death—

- Designed using cell-free antibody production and site-specific conjugation technology
- Designed to target multiple cancers with a broad range of FolRα expression

Luveltamab demonstrated preliminary single-agent activity in platinum-resistant ovarian cancer in a phase 1 dose-expansion study STRO-002-GM1 (NCT03748186; Figure 1): As of the most recent data cutoff in April 2023—

- In a cohort of 32 patients with advanced relapsed EOC and high FolRα expression (>25% of cells with staining of any intensity by immunohistochemistry), the objective response rate (ORR) was 37.5%, median duration of response was 5.5 months, and median progression-free survival was 6.1 months—
- A subanalysis demonstrated a higher ORR at 5.2 mg/kg compared with 4.3 mg/kg (43.8% vs 31.3%)—
- Treatment was generally well tolerated; the most common adverse events were neutropenia, fatigue, and arthralgia

METHODS

- **STRO-002-GM1 Study Design**
  - Part 1: Dose-optimization phase (Figure 2)
    - Patients will be randomized 1:1 to treatment with luveltamab 4.3 mg/kg (with prophylactic GCSF) or investigator’s choice chemotherapy (gemcitabine, paclitaxel, or pegylated liposomal doxorubicin, or topotecan)
    - An interim analysis is planned when at least 25 patients in each cohort have completed at least 2 cycles of treatment
  - Part 2: Optimized dosing regimen (Figure 2)
    - The selected dosing of luveltamab will be based on its overall efficacy and safety profile following the interim analysis
    - Includes a control arm consisting of investigator’s choice chemotherapy (gemcitabine, paclitaxel, pegylated liposomal doxorubicin, or topotecan)

Table 1. Eligibility

<table>
<thead>
<tr>
<th>Key inclusion criteria</th>
<th>Key exclusion criteria</th>
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<tbody>
<tr>
<td>High-grade EOC, fallopian tube, or primary peritoneal cancer</td>
<td>Prior treatment with a FolRα-targeting ADC</td>
</tr>
<tr>
<td>Positive FolRα expression per central pathology testing</td>
<td>Relapsed platinum-resistant EOC and received a total of 1 to 3 prior regimens</td>
</tr>
<tr>
<td>Response performed after a line of platinum-based therapy with subsequent progression within 6 to 8 months</td>
<td>Response required after 1 line of platinum-based therapy with subsequent progression within 6 to 8 months</td>
</tr>
<tr>
<td>Propagation within 8 months after 2 or 3 lines of platinum therapy or lack of response or stable disease</td>
<td>Prior bevacizumab treatment or documented fetal impairment per National Cancer Institute Common Terminology Criteria for Adverse Events v5.0</td>
</tr>
<tr>
<td>At least 1 radiographically measurable target lesion per RECIST v1.1</td>
<td>Primary pulmonary or gastrointestinal refractory disease</td>
</tr>
<tr>
<td>ECOG PS 0-1</td>
<td>Adequate bone marrow, renal, and liver function</td>
</tr>
</tbody>
</table>

**Key end points**

- **Primary endpoint:** Progression-free survival by blinded independent central review per RECIST v1.1
- **Secondary endpoints:** Overall survival, ORR and duration of response by RECIST v1.1, and safety (adverse events and clinical laboratory abnormalities per National Cancer Institute Common Terminology Criteria for Adverse Events v5.0)

**METHODS (CONTINUED)**

- **SUMMARY OF TRIAL**
  - Luveltamab is an investigational FolRα-targeted ADC in development for FolRα-expressing tumors, including ovarian cancer
  - The primary objective of the REFRaME-O1 study is to investigate the efficacy and safety of luveltamab for the treatment of patients with relapsed platinum-resistant ADC expressing FolRα
  - Enrollment commenced in July 2023
  - The REFRaME-O1 study is registered with ClinicalTrials.gov (NCT05870748)

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**REFERENCES**


**DISCLOSURES**

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