A Phase 1 Study of ALX148, a CD47 Blocker, in Combination with Established Anticancer Antibodies in Patients with Advanced Malignancy

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Background

CD47 is a ubiquitously expressed protein that plays a critical role in the regulation of immune cell function, particularly the interactions between immune cells and cancer cells. ALX148 is a novel anti-CD47 antibody that selectively engages with high affinity the αI domain of CD47, which is a critical receptor for the “Don’t Eat Me” signal that cancer cells use to evade immune surveillance.

Methods

AT148201 Study Design

- **Patient Eligibility:** Patients were enrolled if they had biopsy-proven metastatic solid tumors with adequate organ function and a Karnofsky performance status of at least 60.
- **Dosage Design:** ALX148 was administered at 2.5 mg/kg and 10 mg/kg in combination with trastuzumab or cetuximab, respectively.
- **Safety and Efficacy:** Safety and efficacy were evaluated in a dose-escalation study, with efficacy data reported at the 10 mg/kg dose level.

Results

**Patient Baseline Characteristics**

- **Enrolled Patients:** 30 patients across multiple tumor types were enrolled.
- **Tumor Types:** Included melanoma, NSCLC, gastric/GEJ, and other solid tumors.
- **Dosage Levels:** Patients were enrolled in different dosage levels of ALX148.

**Response to Treatment**

- **Complete Response:** 3 patients achieved a complete response (CR) in the NSCLC group.
- **Partial Response:** 4 patients achieved a partial response (PR) in the gastric/GEJ group.

**Safety Profile**

- **Grade 3/4 Adverse Events:** The most common adverse events were fatigue, neutropenia, and pyrexia.
- **Dose Modifications:** Dose modifications were made to manage adverse events.

Conclusions

- **Combination Therapy:** ALX148 demonstrated emerging anti-cancer activity in combination with anti-cancer antibodies, with a favorable toxicity profile.
- **Future Directions:** Further studies are needed to evaluate the efficacy and safety of ALX148 in combination with other treatments.

References