Mirvetuximab soravtansine (IMGN853), a folate receptor alpha (FRα)-targeting antibody-drug conjugate (ADC), in platinum-resistant epithelial ovarian cancer (EOC) patients: activity and safety analyses in Phase I pooled expansion cohorts

Kathleen N. Moore1, Ursula A. Matulonis2, David M. O’Malley3, Jason A. Konner4, Lainie P. Martin5, Raymond P. Perez6, Todd M. Bauer7, Lucy Gilbert8, Shelly M. Seward9, Amit M. Oza10, Rodrigo Ruiz-Soto11, Michael J. Birrer11, University of Oklahoma Health Sciences Center, Oklahoma City, OK; Dana-Farber Cancer Institute, Boston, MA; The Ohio State University-James CCC, Columbus, OH; Memorial Sloan Kettering Cancer Center, New York, NY; Fox Chase Cancer Center, Philadelphia, PA; University of Kansas, Kansas City, KS; Sarah Cannon Research Institute/Tennessee Oncology, PLLC, Nashville, TN; McGill University Health Center, Montreal, Canada; Wayne State University-Karmanos Cancer Institute, Detroit, Michigan; Princess Margaret Cancer Center, Toronto, Canada; Immunogen Inc, Watertown, MA; Massachusetts General Hospital, Boston, MA.

Abstract 5547

INTRODUCTION

Elevated folate receptor alpha (FRα) expression is observed in approximately 80% of recurrent ovarian cancers, thus providing an attractive candidate for targeted therapeutic strategies in this indication. Mirvetuximab soravtansine (IMGN853) is an antibody-drug conjugate (ADC) comprised of a FRα-binding antibody, disulaver linker, and the maytansinoid DM4, a potent tubulin-targeting agent.

The early clinical evaluation of mirvetuximab soravtansine has revealed good tolerability and encouraging activity when administered as monotherapy to patients with advanced EOC, particularly within the setting of platinum-resistant disease.1-3 Primary or acquired resistance to platinum imparts a highly negative prognosis for EOC patients1, and active agents in this population represent an urgent unmet medical need. Standard-of-care chemotherapeutics currently used as single agents in platinum-resistant disease (e.g., paclitaxel, pegylated liposomal doxorubicin, and topotecan) show low objective tumor response rates (15-20%) and progression-free survival (PFS; 3-4 months)4-6.

A pooled analysis of safety and efficacy was performed in individuals with previously treated EOC, enrolled across three expansion cohorts as part of a Phase I trial of mirvetuximab soravtansine.

This includes a subset of “FORWARD I eligible” patients who would have met the three key eligibility criteria for the recently initiated, pivotal Phase 3 study (FORWARD I; NCT0261876): platinum-resistant disease, medium/high FRα expression, and 1-3 prior lines of therapy.

Objectives, Methods, and Patient Population

Primary objective: To characterize the safety and clinical activity of mirvetuximab soravtansine in a pooled analysis of EOC patients across three expansion cohorts

Treatment schedule: Mirvetuximab soravtansine administered at 6 mg/kg (AWB) Q3W until disease progression, adverse event (AE), or investigator/patient decision

Primary eligibility criteria for each expansion cohort:
- Platinum-resistant EOC cohort: ≥2 prior lines of therapy, measurable disease
- Ovarian biopsy cohort: Recurrent disease, regardless of platinum sensitivity, and amenable to biopsy; measurable or non-measurable disease; no limit on number of prior lines of therapy
- Corrodirsidost eye drop cohort: Recurrent disease, regardless of platinum sensitivity; measurable or non-measurable disease; 3-4 prior lines of therapy

CONCLUSIONS

- Mirvetuximab soravtansine demonstrates encouraging activity in platinum-resistant ovarian cancer
- In FORWARD I eligible patients (platinum-resistant, 1-3 prior lines of therapy, and medium/high FRα expression) a confirmed ORR of 47% and medium PFS of 6.7 months were achieved
- The Q3W dosing regimen continues to be well-tolerated, and the majority of adverse events were generally low grade and manageable
- The consistency of data across cohorts supports the Phase 3 trial design
- FORWARD I is the ongoing randomized Phase 3 study of mirvetuximab soravtansine monotherapy vs. investigator’s choice chemotherapy, with PFS as the primary endpoint (ASCO Annual Meeting 2017, Abstract# 5547)

References:

FORWARD I

- FORWARD I is the ongoing randomized Phase 3 study of mirvetuximab soravtansine monotherapy vs. investigator’s choice chemotherapy, with PFS as the primary endpoint (ASCO Annual Meeting 2017, Abstract#TPS3607)

- The authors would like to especially thank the patients who have consented to be included in this study, as well as their families.

The authors would like to especially thank the patients who have consented to be included in this study, as well as their families.