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Preliminary results from a phase I/II study of 9MW2821, an antibody-drug conjugate targeting nectin-4, in patients with advanced solid tumors

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Background: Nectin-4 is an adhesion molecule that highly expressed in variety of solid tumors and could be a potent therapeutic target. 9MW2821 is a monoclonal antibody-drug conjugate (ADC) that delivers monomethyl auristatin E to cells expressing Nectin-4. Here we report the first-in-human, multicenter, phase I/II study designed to explore the safety, pharmacokinetics and efficacy of 9MW2821 in advanced solid tumors.

Methods: 9MW2821 was administered by intravenous infusion on days 1, 8 and 15 of each 28-day cycle. The study included dose escalation, dose expansion and cohort expansion period which included urothelial cancer (UC) and other Nectin-4 positive solid tumors. Primary objectives were assessment of safety and preliminary efficacy.

Results: As of April 27, 2023, 97 patients (pts) were enrolled with doses ranging from 0.33 to 1.5mg/kg. Median age was 57 years (range, 32-78). Only 1 dose limiting toxicity of grade 4 neutropenia lasted more than 5 days was observed at 1.5mg/kg group. Maximum tolerated dose was not yet reached. Treatment related adverse events (TRAEs) of any grade occurred in 64.9% pts. The most common TRAEs were white blood cell (WBC) count decreased (36.1%), neutropenia (35.1%), nausea (22.7%), aspartate aminotransferase increased (22.7%), rash (19.6%), alopecia (19.6%), fatigue (18.6%), decreased appetite (18.6%), anemia (17.5%), vomiting (16.5%), peripheral sensory neuropathy (16.5%). Grade 3/4 TRAEs occurred in 35.1% pts. The most common grade 3/4 TRAEs were WBC count decreased (18.6%) and neutropenia (18.6%). Treatment related death was not observed. Among 39 pts treated with 9MW2821 at 1.25mg/kg or above and evaluable for tumor assessment, objective response rate (ORR) and disease control rate (DCR) was 38.5% and 84.6%, respectively. In 18 pts with UC who progressed after platinum-based chemotherapy and immune checkpoint inhibitors and dosed at 1.25mg/kg, ORR and DCR was 55.6% and 94.4%, respectively. Objective responses were also observed in pts with breast cancer and cervical cancer

Conclusions: The results showed that 9MW2821 had manageable safety profile and promising antitumor activity. Enrollment continues to determine efficacy of 9MW2821 in certain solid tumors.

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First-in-human study of SGN-B7H4V, a B7-H4-directed vedotin ADC, in patients with advanced solid tumors: Preliminary results of a phase I study (SGNB7H4V-001)

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Background: B7-H4 is a B7 immune checkpoint ligand expressed at low levels in normal tissue and is upregulated in solid tumors, including breast, ovarian, and endometrial cancers. SGN-B7H4V is an investigational vedotin ADC comprising a B7-H4-directed monoclonal antibody conjugated to monomethyl auristatin E via a protease-cleavable linker. We report first results from dose escalation (Part A) of this ongoing phase 1 study.

Methods: SGNB7H4V-001 is a first-in-human, multicenter study evaluating the safety, tolerability, pharmacokinetics, and antitumor activity (objective response rate per RECIST v1.1) of SGN-B7H4V in patients with advanced solid tumors. Part A enrolled patients with histologically or cytologically confirmed locally advanced unresectable or metastatic solid tumors irrespective of B7-H4 expression. Patients received SGN-B7H4V on Days 1 and 8 of a 21-day cycle (2Q3W, 0.75, 1.0, 1.25, or 1.5 mg/kg), or on Days 1 and 15 of a 28-day cycle (2Q4W, 1.25, 1.5, 1.75, or 2.0 mg/kg).

Results: As of 10 March 2023, 75 patients were enrolled and received SGN-B7H4V. In 2Q3W (n=35), 3 patients (8.6%) had dose-limiting toxicities (DLTs) of hyperglycemia (1.25 mg/kg), arterial embolism (1.5 mg/kg), and neutropenia (1.5 mg/kg). The most common TEAEs across doses were fatigue (20.0%), peripheral sensory neuropathy (20.0%), and neutropenia (17.1%). The most common grade  $\geq 3$  TEAE was neutropenia (14.3%). In 2Q4W (n=40), 2 of 39 DLT-evaluable patients (5.1%) had DLTs of peripheral sensory neuropathy (1.5 mg/kg) and transaminitis (2.0 mg/kg). The most common TEAEs were fatigue (27.5%), peripheral sensory neuropathy (27.5%), and nausea (22.5%). The most common grade  $\geq 3$  TEAEs were anemia, dyspnea, hypotension, and pneumonia (5.0% each). Confirmed objective responses (starting at 0.75 mg/kg) were observed in evaluable patients with breast (7/25 patients), ovarian (2/15 patients), endometrial (1 [complete response]/16 patients), and biliary tract cancers (2/9 patients).

**Conclusions:** SGN-B7H4V showed a manageable safety profile in patients with advanced solid tumors. Responses were observed at all tested dose levels and across various tumor types. Dose expansion in select tumor types is planned.

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Anti-tumor activity of belvarafenib in combination with cobimetinib in patients with metastatic solid tumors harboring BRAF fusions or BRAF class II/III mutation

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Background: Belvarafenib (Belva) is a type II selective RAF dimer inhibitor that, in combination with Cobimetinib (Cobi) has shown clinical activity in patients with NRAS-mutant melanoma ( ASCO 2021 , ESMO 2021 ). One cohort in this phase I trial evaluated BRAF fusions (including indel/rearragement) or class II/III point mutations, which are considered potential therapeutic targets for Belva +/- Cobi. Here, we present findings on activity and safety of Belva and Cobi in patients with BRAF fusion including indel/rearrangement.

Methods: A total of 23 patients harboring BRAF non-canonical aberration were enrolled and treated with Belva 300mg PO BID and Cobi 20mg PO TIW (3 times a week) in the HM-RAFI-103 study (NCT03284502). Sub-cohort A (SC-A) enrolled patients with BRAF fusions and sub-cohort B (SC-B) enrolled patients with BRAF class II/ III point mutations. Safety results were updated based on 133 patients who were treated with Belva and Cobi as of Jan 31, 2023.

Results: In SC-A, a total of 15 patients harboring BRAF fusions (Melanoma (10), NSCLC (3), CRC (1), Pancreatic cancer (1)) and 8 patients with BRAF class II/III point mutation were in SC-B (Biliary tract cancer (3), CRC (3), SCLC (1), Glioblastoma (1)) were enrolled. The confirmed objective response rate (ORR), assessed by investigators' assessment, for SC-A was 60.0%, median progression-free survival (mPFS) was 13.7 months, and median duration of response was 12.0 months (95% CI: 7.43 to 22.34) with median follow-up time 12.9 months, while patients in SC-B showed best response of stable disease. As of cut-off date, the most common treatment related adverse events from 133 patients is dermatitis acneiform (54.1%), rash (28.6%), and blood creatine phosphokinase increased (24.1%). No new safety signals were found.

Table: 661MO			
		SC-A: BRAF fusion (N=15)	SC-B: Point mutation (N=8)
Best overall response	CR	0	0
	PR	9 (60.0)	0
	SD	5 (33.3)	4 (50.0)
	PD	1 (6.7)	4 (50.0)
ORR	n (%)	9 (60.0)	0
	95% Cl	32.29, 83.66	0, 36.94
Disease control rate (PR+SD)	n (%)	14 (93.3)	4 (50.0)
	95% Cl	68.05, 99.83	13.70, 78.80
mPFS	month	13.7	2.1
	95% CI	7.36, 18.23	1.61, 7.16

Conclusions: The combination of Belva with Cobi showed promising anti-tumor activity as well as durable responses in patients with BRAF fusions regardless of cancer type.

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