

Conditionally Active Biologics: Transforming Cancer Therapy

JPM Conference 2023

Fireside Chat

January 10, 2023



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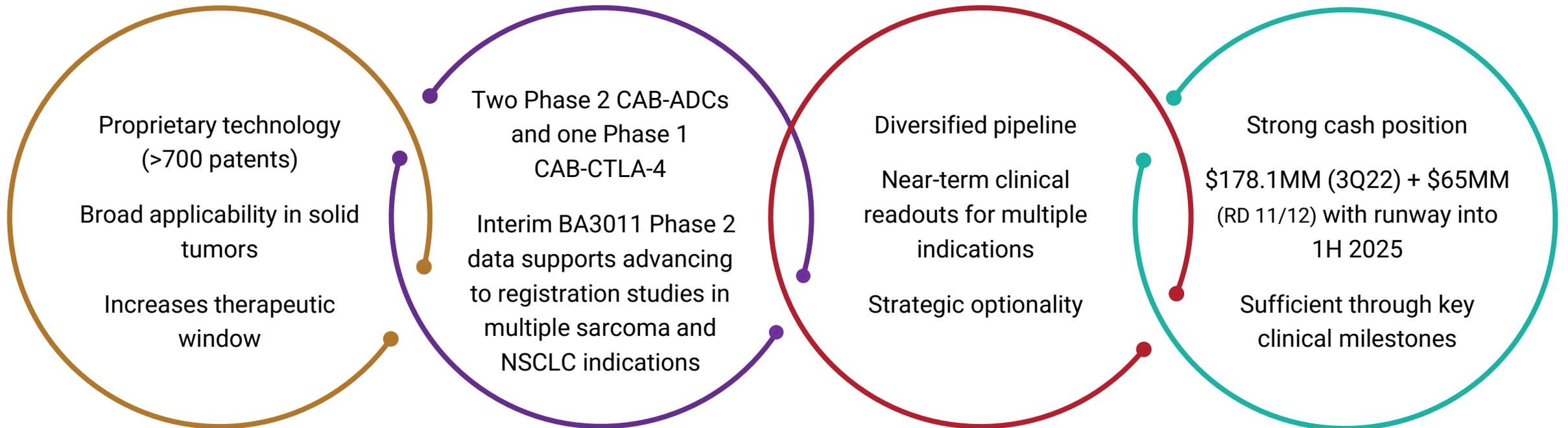
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BioAtla[®] is a clinical stage company focused on transforming cancer therapy with **Conditionally Active Biologics (CABs)**



Selective and targeted CAB technology widens therapeutic window, thus has the potential to enhance clinical outcomes in multiple tumor types



BioAtla discovered that acidic pH at the cancer cell surface unveils binding sites that are shielded at normal pH of healthy cells



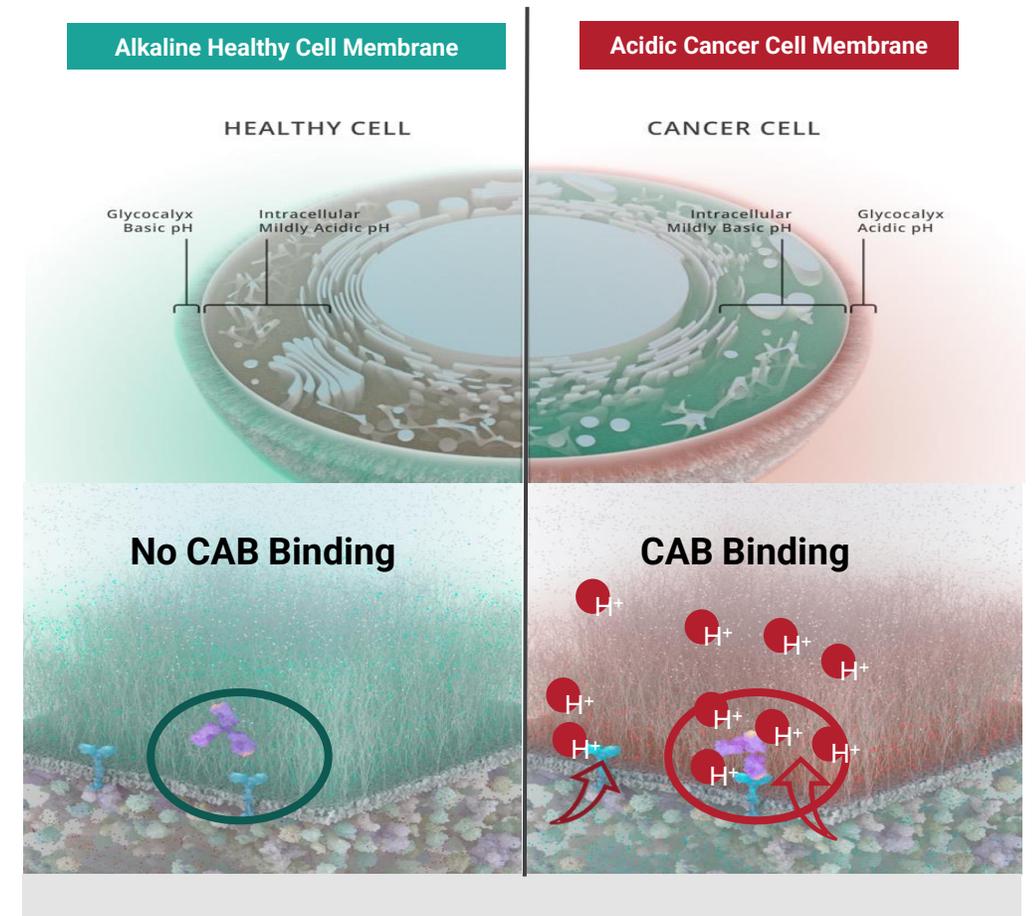
BioAtla invented CAB technology, creating antibodies that bind **only** to these unveiled sites on cancer cells



CAB binding region is not masked or caged and thus different from prodrugs that require irreversible enzymatic cleavage to become activated



CAB antibodies have the potential for increased efficacy with improved safety relative to traditional antibodies



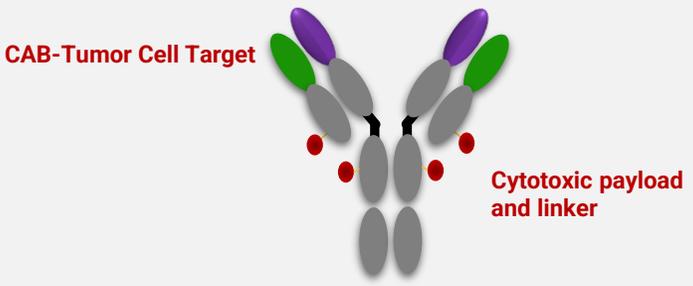
Chang, H.W., Frey, G., Liu, H., Xing, C., Steinman, L, Boyle, B.J., & Short, J.M. (2021) PNAS 118(9): 1-10, Suppl. 1-19.

Broad applicability of BioAtla's CAB platform across several antibody types has the potential to treat multiple solid tumors

ADCs

Targets: AXL, ROR2

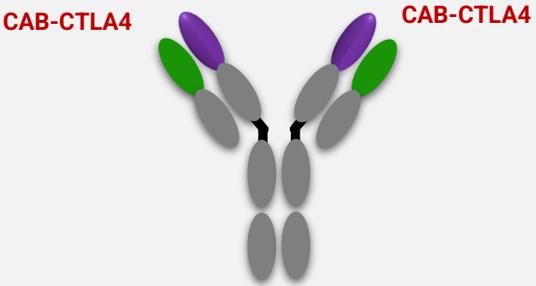
Widely expressed in a variety of tumor types, AXL and ROR2 overexpression correlates with poor prognosis, metastasis, and drug resistance to PD-1 and EGFR therapies



Naked Antibodies I/O

Target: CTLA-4

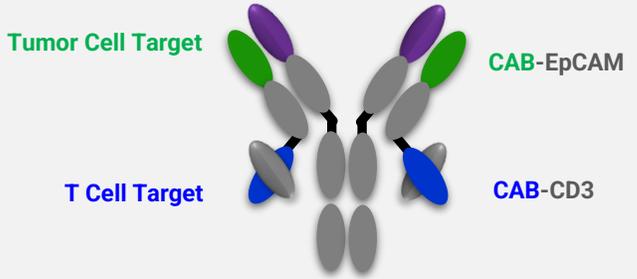
CTLA-4 blockade activates effector T cells, thereby enhancing anti-tumor immunity



Bispecific TCE

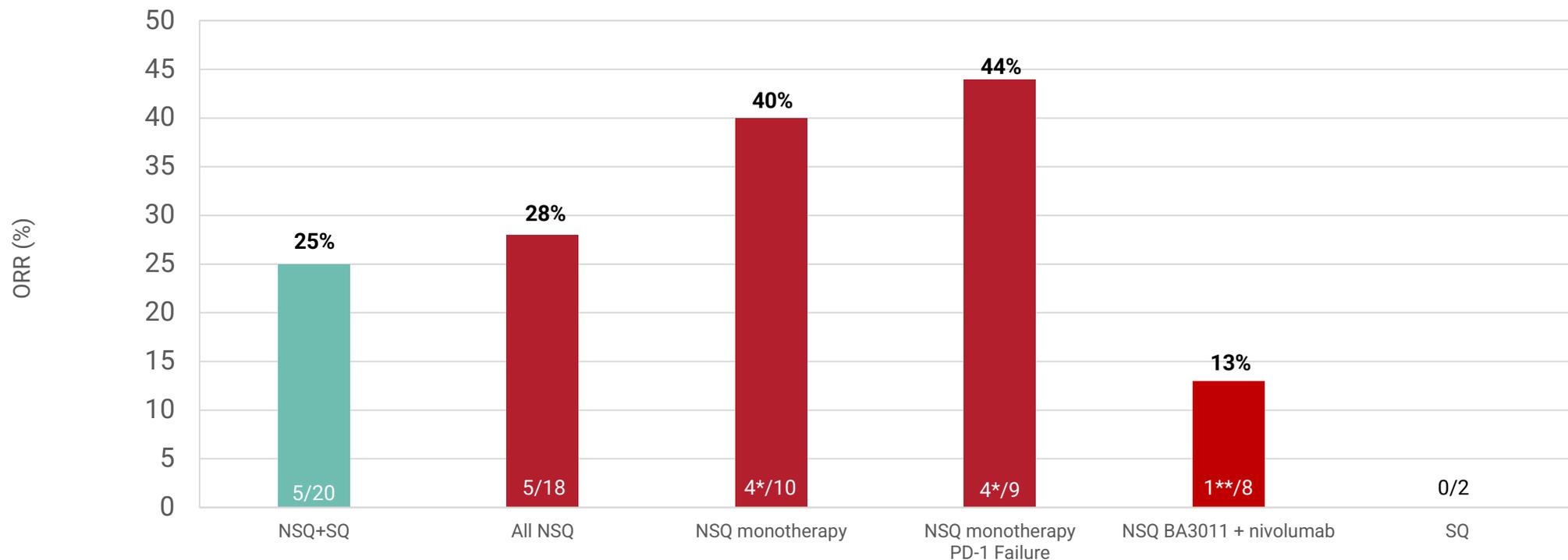
Target: EpCAM & CD3

Bispecific antibodies bridge cancer cells and cytotoxic T lymphocytes, activating T cells and promoting cancer cell lysis



Phase 2 part 1 BA3011 NSCLC initial interim analysis

supports advancing preparations for part 2 potentially registration study in PD-1 failure NSCLC



W/D – withdrew; NSQ – non-squamous; SQ – squamous
Responses include 4 partial responses (*) and one complete response (**)



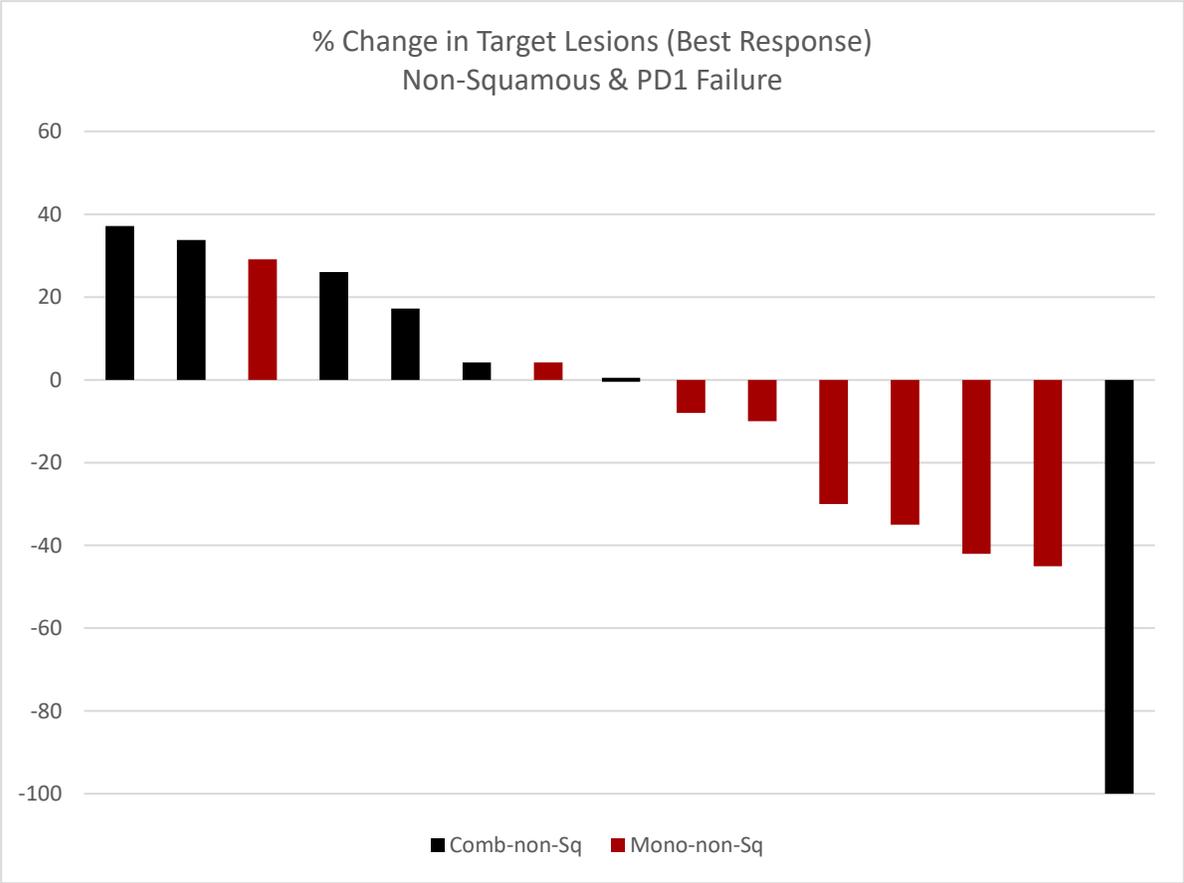
Average prior lines of therapy = 3

Interim data- Data cut-off of Jan 4, 2023

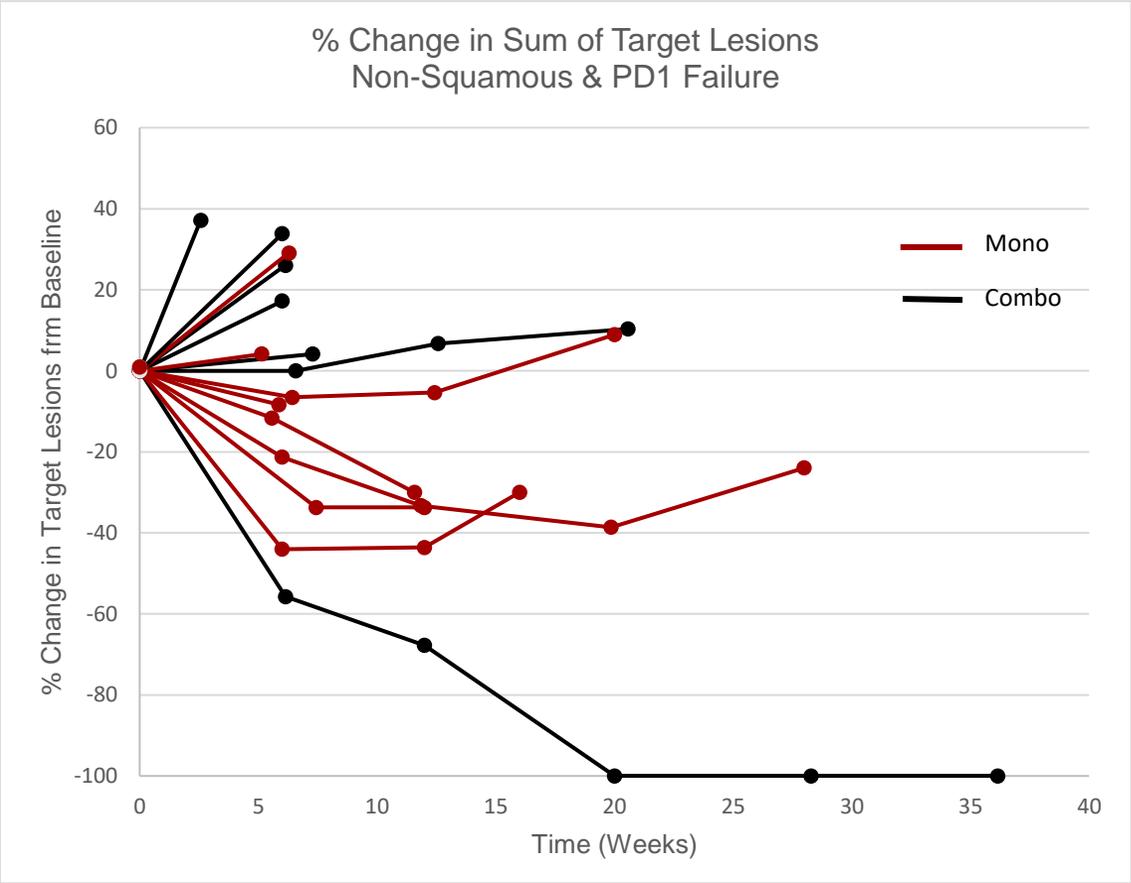
Change from Baseline in Sum of Target Lesions

Non-Squamous / PD-1 Failure

% Change in Target Lesions (Best Response)
Non-Squamous & PD1 Failure



% Change in Sum of Target Lesions
Non-Squamous & PD1 Failure



Interim data- Data cut-off of Jan 4, 2023
Graphs represent patients who have had the opportunity to be followed for 12 weeks or more

Promising safety and tolerability profile continues to emerge in NSCLC

Phase 2 at the RP2D 1.8 mg/kg Q2W

Characteristic	BA3011 (N=18)	BA3011 + Opdivo (N=9)
Any Adverse Events (AEs)	17 (94%)	9 (100%)
Related AEs with CTCAE ¹ Grade 3 or 4 ²	5 (28%)	2 (22%)
Any related serious AEs ²	2 (11%)*	3 (33%) [^]
Related AEs leading to death ²	0	0
Related AEs leading to treatment discontinuation ²	2 (11%) [§]	0

Constipation	All Grade 1-2 (11%)
Peripheral Neuropathy	All Grade 1-2 (15%)
Diarrhea	All Grade 1-2 (15%)

No grade 3 – 4 AEs related to constipation, peripheral neuropathy or diarrhea observed. Low-grade constipation observed is consistent with baseline levels seen in advanced cancer patients.

- No treatment-related deaths
- Few treatment-related SAEs
- Few AEs leading to treatment discontinuation
- No clinically meaningful on-target toxicity observed over background
- Differentiated profile due to avoiding on-target off-tumor toxicity

Interim data- Data cut-off of Dec 21, 2022

Note: ¹CTCAE: Common Terminology Criteria for Adverse Events. The NCI Common Terminology Criteria for Adverse Events is a descriptive terminology which is utilized for Adverse Event (AE) reporting. A grading (severity) scale is provided for each AE term. ²As assessed by the investigator. Missing responses are counted as related.

*DKA & infusion reaction [^]creatinine increase, diplopia (subsequently deemed unrelated to BA3011 post data transfer) & acute kidney injury; [§]DKA & infusion reaction

BA3011 Phase 2 part 1 NSCLC

Key Takeaways

- Impressive response in monotherapy NSQ PD-1 failure population
- Durability of response looks promising
- Emerging safety profile continues to be differentiated
- Preparing for FDA interactions in 1H
- NSQ PD-1 failure population represents a significant unmet need and commercial opportunity

Sarcoma Update

- UPS Phase 2 part 2 potentially registrational study design
 - Total of ~80 AXL-expressing UPS patients are planned to be enrolled
 - FDA supportive of investigating a more frequent dosing regimen
 - First 40 patients with a TmPS $\geq 50\%$ will be randomized 1:1 to two different dosing arms including a more frequent dosing regimen
 - Additional 40 patients will be enrolled at the selected dose
 - Primary efficacy endpoint for is objective response rate (ORR) per RECIST v1.1
 - Primary efficacy analysis will be based on ~60 patients treated at the selected dosing regimen
 - Prior systemic regimens limited to ≤ 3
- Currently studying more frequent dosing regimen in LMS (n = 10) – First patient first scan had a 29.6% reduction in tumor lesion size; Other patients' data pending

BA3021 Program Update

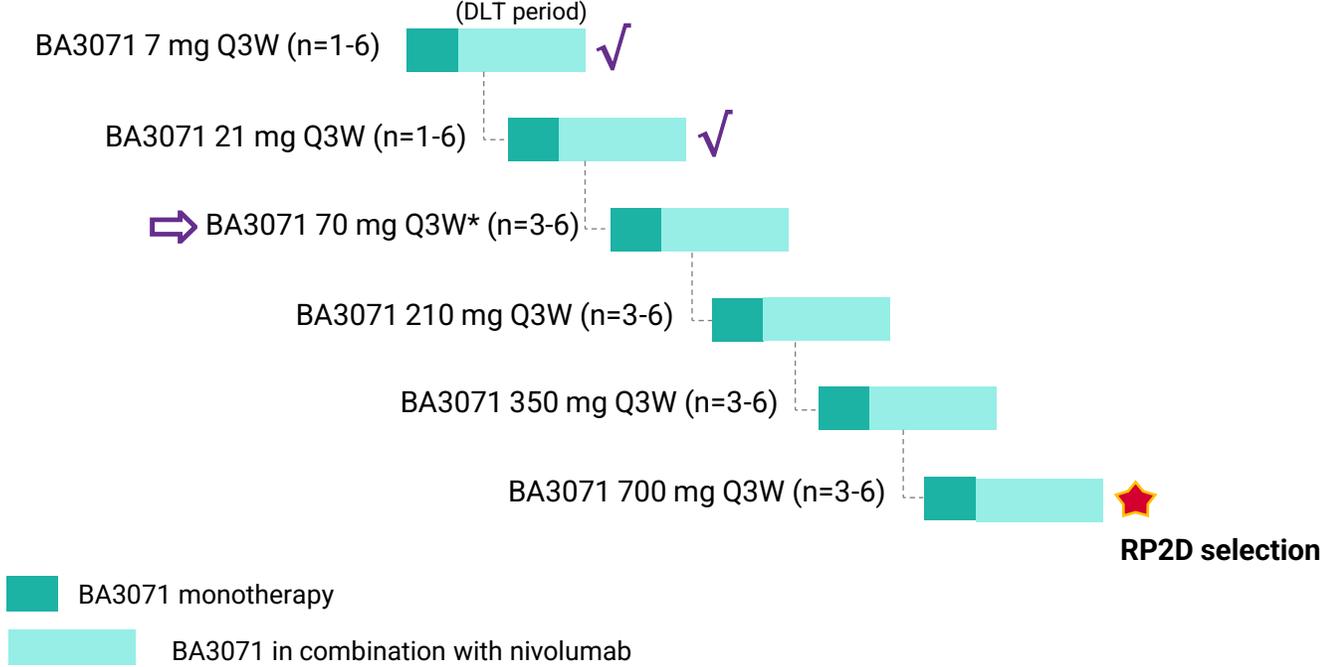
ROR2+ Tumor Types	Status
NSCLC	<ul style="list-style-type: none">▪ Currently enrolling phase 2 part 1▪ Anticipate preliminary data update at or around Q1 quarterly call
Melanoma	<ul style="list-style-type: none">▪ Implementing liquid biopsy as part of study protocol▪ Anticipate enrollment update at or around Q1 quarterly call
SCCHN	<ul style="list-style-type: none">▪ Multiple sites activated▪ Actively screening patients for ROR2 expression

No ROR2 ADC or small molecules in the clinic to date, suggesting CAB-ROR2-ADC is a first-in-class therapy across multiple tumor types

Phase 1/2 trial design for CAB-CTLA-4 Naked Antibody (BA3071)

in tumors known to be responsive to CTLA-4 treatment

FPI 3Q 2022



- Key Takeaways:
- First 2 dosing cohorts cleared
 - 2 of 3 patients in 3rd cohort (1 mg / kg) have cleared DLT period
 - No DLTs observed to date
 - Enrollment in 4th cohort (3 mg / kg) to begin later this month

Objectives

- Determine Phase 2 dose and MTD
- Characterize safety and clinical activity of BA3071 monotherapy and in combination with a PD-1 inhibitor (Nivolumab)
- Characterize PK, ADA and biomarkers



*Dose equivalent to approved ipilimumab dose in combination with nivolumab (1 mg/kg)

Expected timing for key milestones in 2023

Program	Indications	2023	
		1H	2H
BA3011 <i>Mecbotamab Vedotin</i>	UPS	★ Phase 2 part 2 dosing	
	NSCLC	Phase 2 part 1 data ★	★ Phase 2 part 1 planned ASCO submission
	Ovarian*	★ Request for written FDA feedback	★ Phase 2 part 2 initiation
BA3021 <i>Ozuriftamab Vedotin</i>	NSCLC		★ Phase 2 IIT interim data
	Melanoma	★ Phase 2 interim data	
	SCCHN		★ Phase 2 interim update
	Ovarian*		★ Phase 2 interim data
BA3071	Multiple tumor types**	★	★ Phase 1 data and Phase 2 initiation
BA3182	Adenocarcinoma** Multiple tumor types**	★ Phase 1 initiation	



CAB-ADCs

CAB-I/O

CAB-Bispecifics

*Phase 2 Investigator-initiated trial combination with PD-1 (n=20) in platinum failure patients. Initial sites activated. **Anticipated indications based upon tumor target expression.