



# REIMAGINING THERAPEUTIC ANTIBODIES FOR THE TREATMENT OF CANCER

Cowen and Company 40<sup>th</sup> Annual Health Care Conference



MARCH 2020

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This presentation concerns products that have not yet been approved for marketing by the U.S. Food and Drug Administration (FDA). No representation is made as to their safety or effectiveness for the purposes for which they are being investigated.

# Company Highlights

Clinical-stage  
biopharmaceutical  
company developing  
unique cancer  
treatments with  
a novel class of  
antibodies:

**Probody®  
Therapeutics**

- **Leader in field** of “conditional activation” of therapeutic antibodies with broad platform and discovery engine
- **Five drug candidates** in the clinic; Three in Phase 2
  - **CX-072 (anti-PD-L1)**: an emerging, differentiated centerpiece of combination therapies
  - **CX-2009 (anti-CD166) and CX-2029 (anti-CD71)**: previously undruggable targets with first in class potential
  - **BMS-986249 and BMS-986288 (anti-CTLA-4 Probody therapeutics)**: expansion of therapeutic window for CTLA-4
- **Major Partnerships (BMS, AbbVie, Amgen)**
- **Strong balance sheet**; \$296 million at end of Q4 2019

# Reimagining Therapeutic Antibodies for the Treatment of Cancer

## ANTIBODIES ARE A SUCCESSFUL CLASS OF THERAPEUTICS

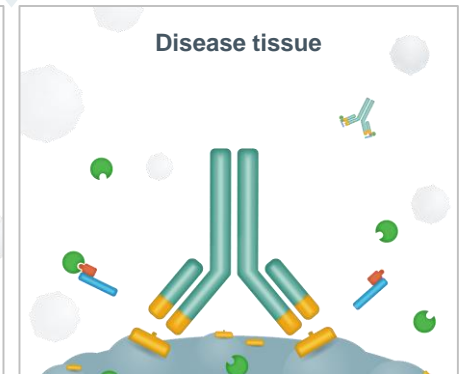
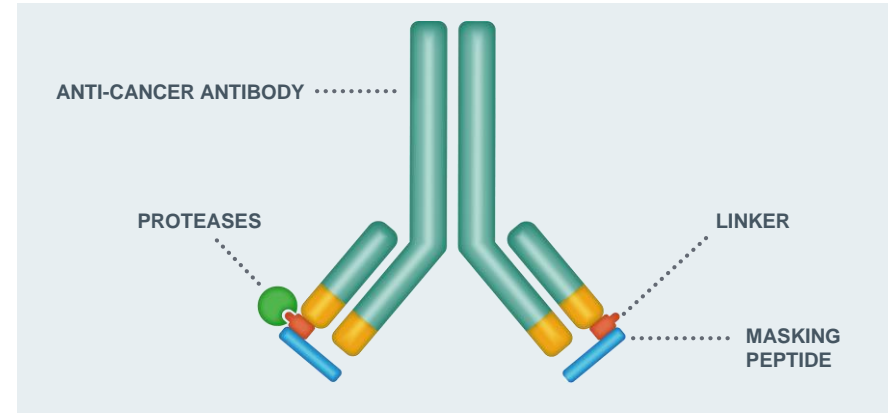
- Powerful, potent modalities; > \$100 billion WW sales 2018
- Potency can be a liability for widely distributed targets
- Major opportunity to improve targeting and localize antibody pharmacology

## CYTOMX PROBODY PLATFORM IS DESIGNED TO LOCALIZE TARGET BINDING TO TUMOR








- Maintaining potency
- Reducing side effects
- Enabling new target opportunities

## PROBODY PLATFORM BUILT ON A DECADE OF “HIGH SCIENCE” RESEARCH AT CYTOMX

- Deep knowledge of tumor microenvironment biology
- Innovative antibody engineering and deep Intellectual Property



# Clinical Stage Probody Pipeline Advanced to Phase 2 Across Multiple Programs

PRODUCT CANDIDATE	INDICATION	PHASE 1	PHASE 2	PHASE 3/ REGISTRATIONAL	COMMERCIAL RIGHTS
<b>CX-072</b> (+ Ipilimumab)	Relapsed Refractory Melanoma	PD-L1 Probody Immunotherapy			 CYTOMX
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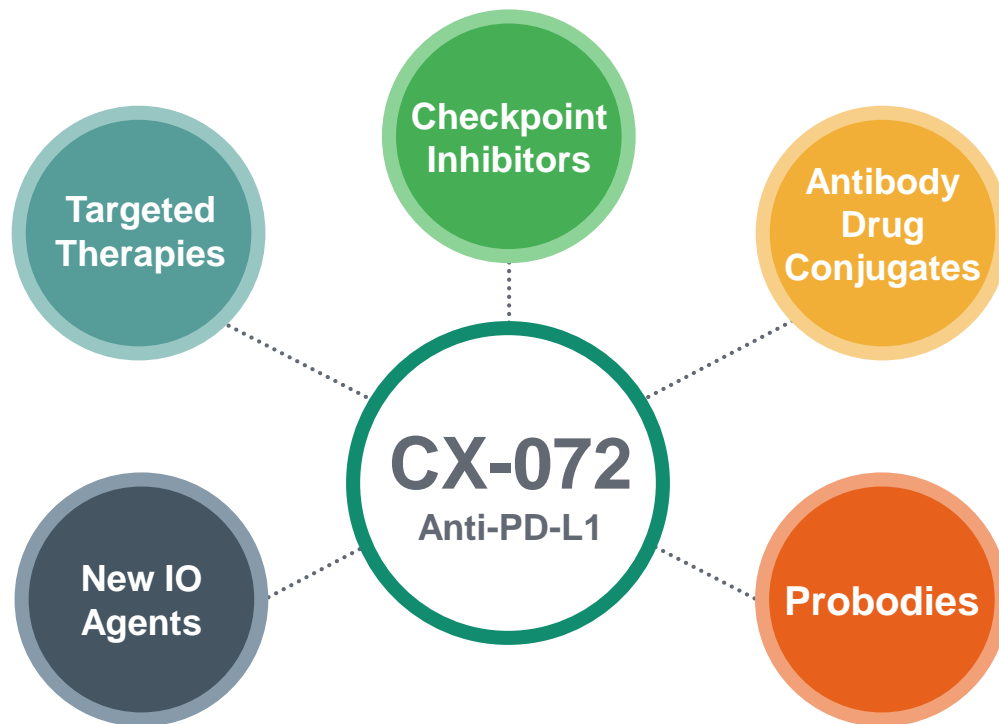
 Wholly Owned

 Partnered

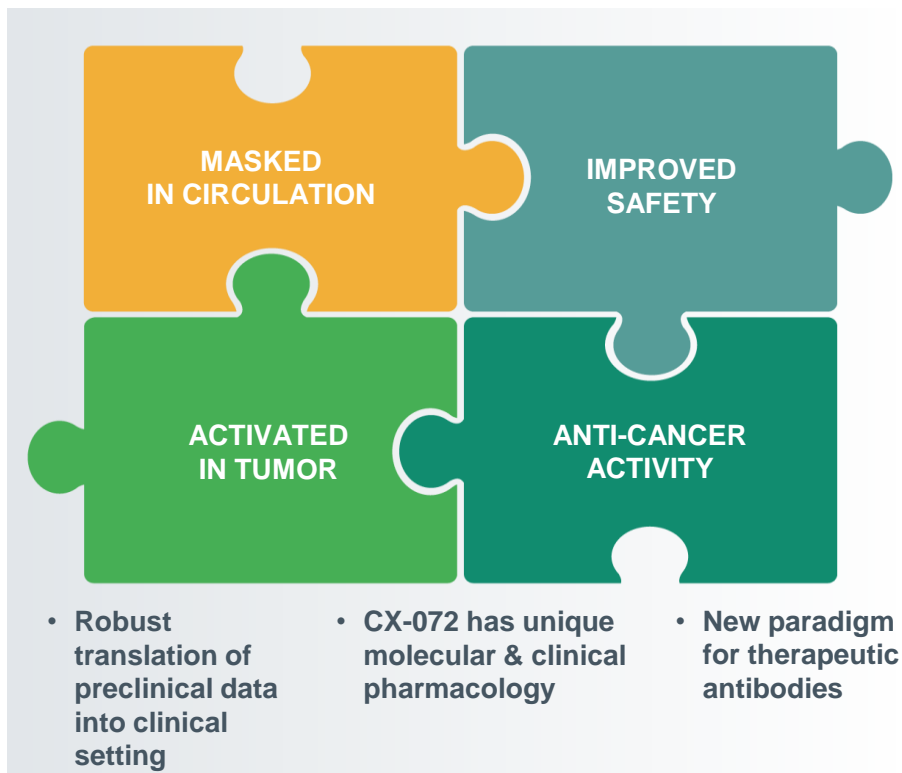
# CX-072 Anti-PD-L1 Probody Therapeutic: Potential as a Differentiated Centerpiece of Cancer Combination Therapy

- **Targeted Product Profile:**

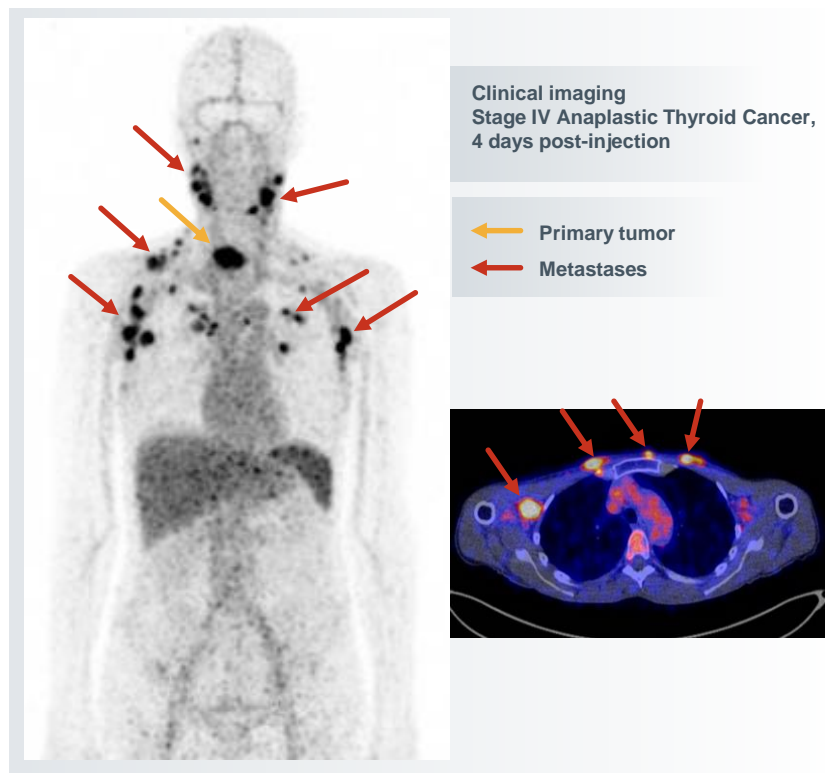
- **Safer monotherapy**
- **Enabling more effective combinations**



# CX-072 Phase 1/2 Data Support Proof of Concept for Probody Platform and Novel anti-PD-L1 Agent



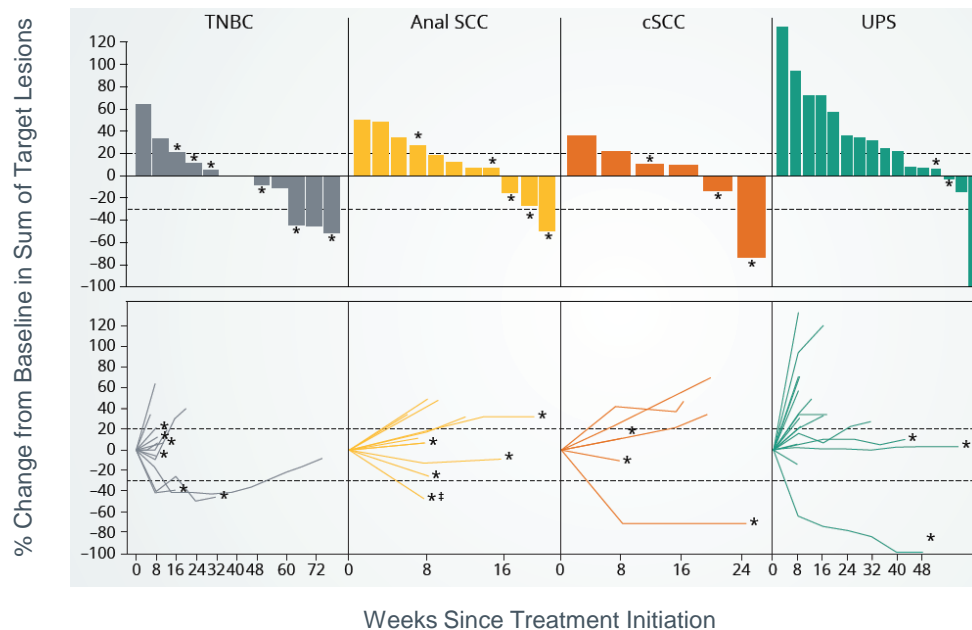
Autio KA et al. Poster 3071. ASCO 2018, Jun 1-5, Chicago, Illinois.  
Boni V et al. Poster 435P. ESMO 2018, Oct 19-23, Munich, Germany.  
Lyman SK et al. Poster P87. SITC; 2018 November 7-11, Washington, D.C.



Collaboration with E. G. E. de Vries,  
University Medical Center Groningen, The Netherlands

# ASCO 2019: Monotherapy CX-072 is Clinically Active in Multiple Tumor Types at 10 mg/kg

**Percent Change from Baseline in Sum of Target Lesion Measurements (Top Panel)  
Percent Change in Tumor Burden Over Time (Bottom Panel), by Cancer Classification**



triple negative breast cancer (TNBC), squamous cell carcinoma (SCC), cutaneous squamous cell carcinoma (cSCC), undifferentiated pleomorphic sarcoma (UPS)

\* Denotes patient considered to be on treatment, as no end-of-treatment date was listed in database as of data cut-off (April 5, 2019). Evaluable patients include those in the safety population except patients who are ongoing with no post-baseline response assessment as of data cutoff.

† At data cutoff, the patient had unconfirmed partial response that was subsequently confirmed.

Presented at ASCO 2019



# ASCO 2019: CX-072 Monotherapy at 10 mg/kg Shows Favorable Safety Profile

Total (N=72)*	
NUMBER (%) OF SUBJECTS EXPERIENCING	
TEAE Grade 3+	35 (49.0)
Related to CX-072 (TRAE)	4 (6.0)
TEAE Leading to CX-072 Discontinuation	2 (3.0)
Related to CX-072 (TRAE)	0
TEAE Leading to Death	1 (1.0)
Related to CX-072 (TRAE)	0
IRRs	4 (6.0)
Grade 3+	0
IRAEs Grade 3+	2 (3.0)

\* triple negative breast cancer (TNBC), squamous cell carcinoma (SCC), cutaneous squamous cell carcinoma (cSCC), undifferentiated pleomorphic sarcoma (UPS), small bowel adenocarcinoma (SBA)

treatment emergent adverse event (TEAE), treatment related adverse event (TRAE) infusion-related reactions (IRR), immune related adverse event (irAE)

irAEs are defined as prospectively identified treatment-related AEs that are associated with the use of systemic or topical immunosuppressive agents or hormonal supplementation

Data cutoff as of April 5, 2019

Presented at ASCO 2019

# Leveraging CX-072 to Extend the Reach of PD/CTLA-4 Combination Therapy

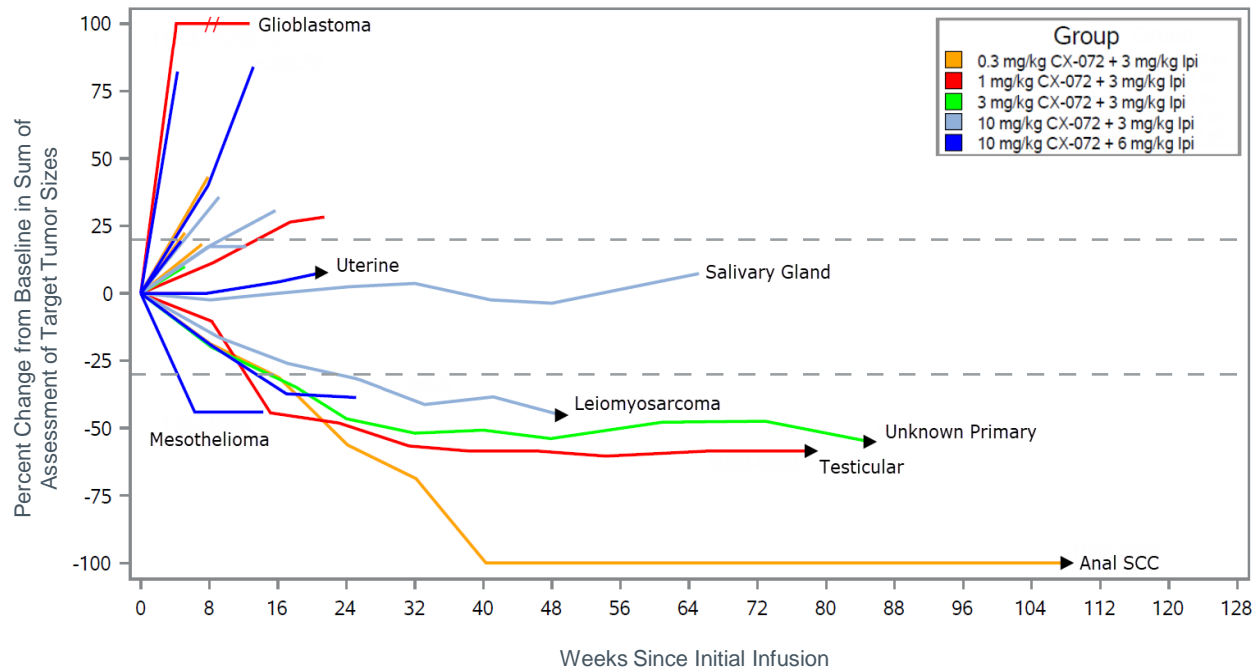


- PD-(L)1 + CTLA-4 is the most validated IO-IO combination
- Approvals and entry into early lines of therapy have been significantly limited by the toxicity profile

	CheckMate 067 Nivo 1mg/Ipi 3mg N=313	CheckMate 067 Nivo 3mg N=316	CheckMate 069 Nivo 1mg/Ipi 3mg N=94
ORR	58%	44%	56%
TRAE Grade 3 - 4	55%	21%	54%
TRAE leading to discontinuation	36%	8%	36%

- Current approvals for ipilimumab + nivolumab:
  - 1<sup>st</sup> line melanoma, advanced bladder, renal, MSI high colorectal and hepatocellular carcinoma
- Widely used regimen uses only 1 mg/kg of ipilimumab, yet there is a well recognized dose response to CTLA-4 inhibition
- Checkmate 227 (NSCLC): ipilimumab reduced to 1 mg/kg, Q6W
- Probody platform allows evaluation of CX-072 in combination with full dose (3 mg/kg) ipilimumab

# CX-072 plus Ipilimumab Combination Phase 1 Data: Durable Responses in Weakly IO-Sensitive Tumors and Clinically Manageable Safety Profile Compares Favorably to Historical Data\*



\* Larkin et al., NEJM, July 2015  
Ipilimumab (ipi); treatment related adverse event (TRAE), immune related adverse event (irAE)  
Data cutoff as of October 2019  
Press Release dated October 29, 2019

## Unselected Tumor Types

### Activity Summary

- 5/27 (19%) ORR
- 37% DCR
- 1 CR
- 4 PR
- Duration of Response
- Median 14.6 months

### Tolerability Summary

- MTD defined 10 mg/kg CX-072 + 3 mg/kg ipilimumab
- 27 pts CX-072 0.3, 1, 3 and 10 mg/kg + Ipilimumab 3, 6 and 10 mg/kg
  - 9 (33%) Grade 3/4 TRAE
  - 6 (22%) Grade 3/4 irAEs
- 20 pts CX-072 0.3, 1 and 3 mg/kg + Ipilimumab 3 mg/kg
  - 5 (25%) Grade 3/4 TRAE
  - 3 (15%) Grade 3/4 irAEs
  - 1 (5%) TRAE Leading to Discontinuation

**Open-label, Non-randomized, Multicenter, Simon Two Stage Phase 2 Study (NCT03993379)**

**First Cohort\*: PD-1/PD-L1 relapsed/refractory unresectable or metastatic melanoma**

**CX-072**

800mg  
every 3 weeks  
followed by CX-072  
800mg Q2W  
+

**ipilimumab**

3 mg/kg  
every 3 weeks  
(4 cycles)

Stage 1  
N = 40

Assess  
Registrational  
Potential



Stage 2  
N = TBD

Assess  
Registrational  
Potential



**Primary Endpoint:**  
ORR per RECIST 1.1

**Secondary Endpoints:** Tolerability, PFS, OS and  
Duration of Response

**Initial Data from Stage 1 Anticipated in 2020**



# Targeting Undruggable Targets

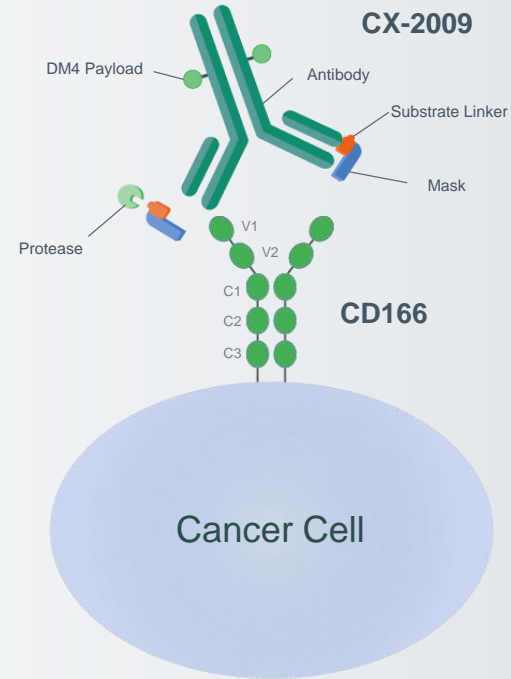
CX-2009 and CX-2029

Probody Drug Conjugates with First in Class Potential



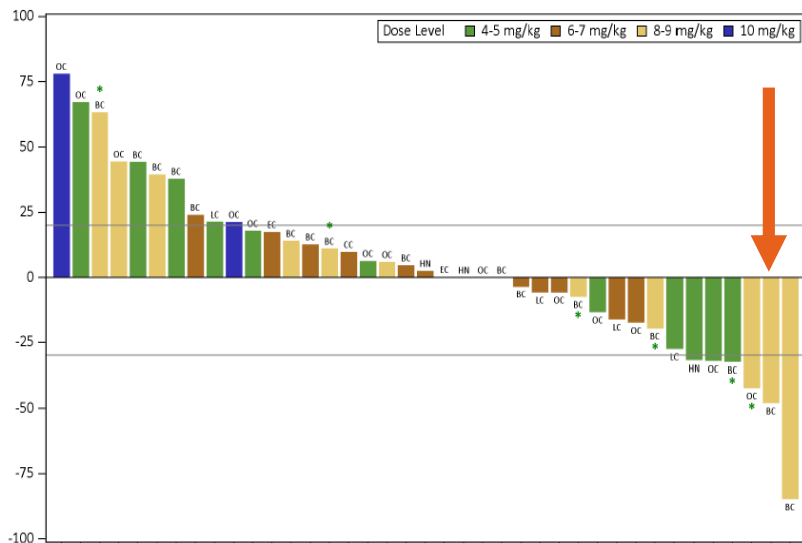
# CX-2009 is an Investigational First-in-Class Anti-CD166 Probody Drug Conjugate with Broad Market Potential

- CD166 is highly expressed in many cancers
  - Including breast, lung, ovarian, head and neck
  - Undruggable with conventional approaches due to normal tissue expression
- Probody platform enables the potential development of this attractive target with CX-2009
  - Masking technology limits binding to normal tissues
  - Potent SPDB-DM4 payload (microtubule inhibitor)



# Single Agent Activity for CX-2009 Observed in Phase 1 Dose Escalation in Multiple Cancer Types with Q3W Dosing Schedule

- 15/39 (38%) achieved tumor shrinkage
- 29/39 (74%) achieved stable disease or better at the time of the first on-treatment scan

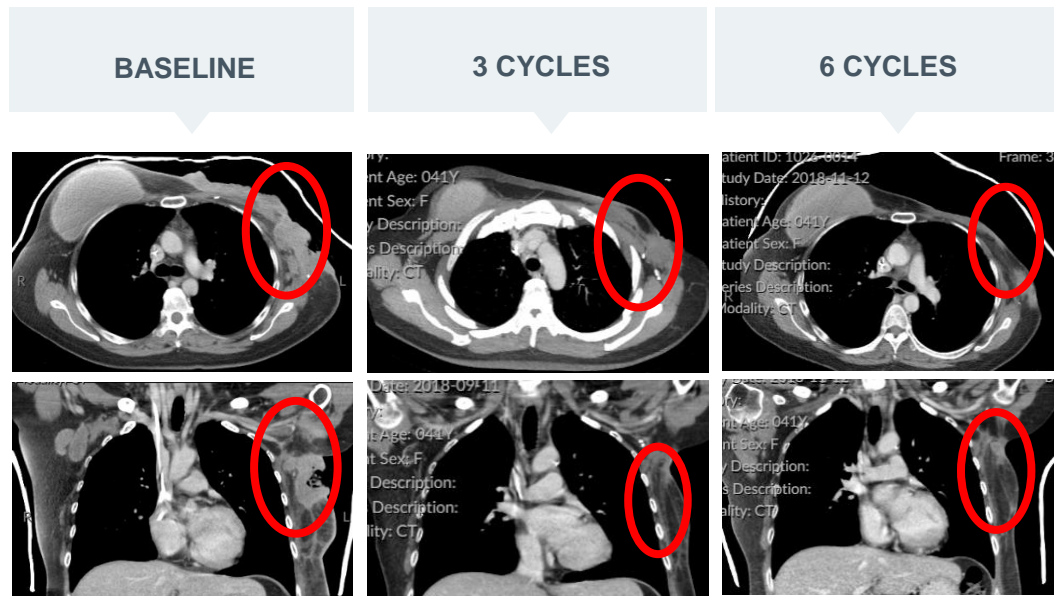


\*Denotes patient considered to be on treatment, as no end-of-treatment date listed in database as of data cut-off date.

\* CX-2009 4- to 10-mg/kg dose levels; response-evaluable population with post-baseline disease assessments.

Patients (n=9) who are evaluable for efficacy but are not presented in the figure as the magnitude of tumor burden change was not in the database at the time of data cut-off. Patients (n=2) with non-measurable disease at baseline who are evaluable for efficacy are not included in the figure. Patients (n=3) with one evaluable post-baseline tumor scan <7 weeks from treatment start assessed as stable disease will be considered to have best overall response of not evaluable.

BC=breast carcinoma; LC=non-small cell lung carcinoma; OC=epithelial ovarian carcinoma; EC=endometrial carcinoma; HN=head and neck squamous cell carcinoma; CC=cholangiocarcinoma.



New lesion observed. Progression noted.

## Case Study: Pembrolizumab-refractory TNBC Patient at 8 mg/kg

# Most Common Grade 3/4 Treatment-Related Adverse Events

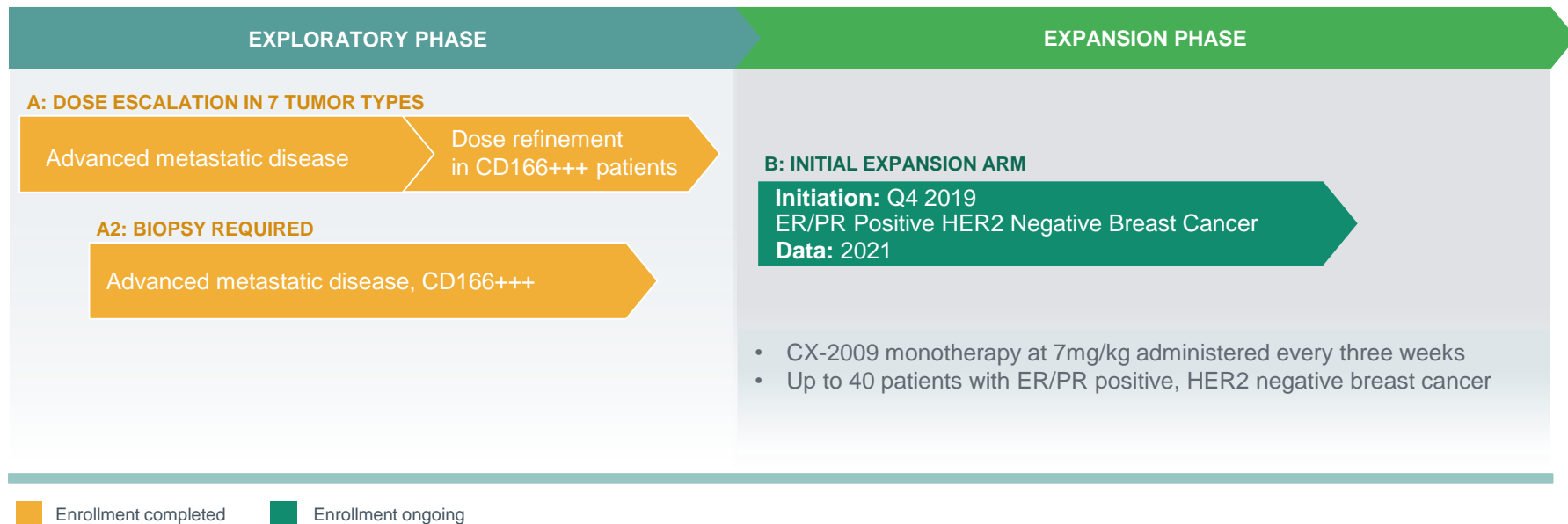
	< 4mg/kg (N=10)	4-5 mg/kg (N=19)	6-7 mg/kg (N=18)	8-9 mg/kg (N=23)	10 mg/kg (N=8)	All Cohorts
KERATITIS*	0	1 (5)	0	4 (17) <sup>a</sup>	1 (13)	6 (8)
INCREASED AST	0	0	0	1 (4)	3 (38)	4 (5)
INCREASED ALT	0	0	0	1 (4)	2 (25)	3 (4)
NAUSEA	0	0	1 (6)	2 (9)	1 (13)	4 (5)
HYPONATREMIA	0	0	2 (11)	1 (4)	0	3 (4)
ANEMIA	0	1 (5)	1 (6)	0	0	2 (3)
FATIGUE	0	1 (5)	0	0	1 (13)	2 (3)
PERIPHERAL SENSORY NEUROPATHY	0	1 (5)	1 (6)	0	0	2 (3)
VOMITING	0	0	1 (6)	1 (4)	0	2 (3)

Grade 3/4 Treatment Related Adverse Events Observed in ≥ 2 Patients

\* Ocular prophylaxis not mandated in Phase 1 Dose Escalation

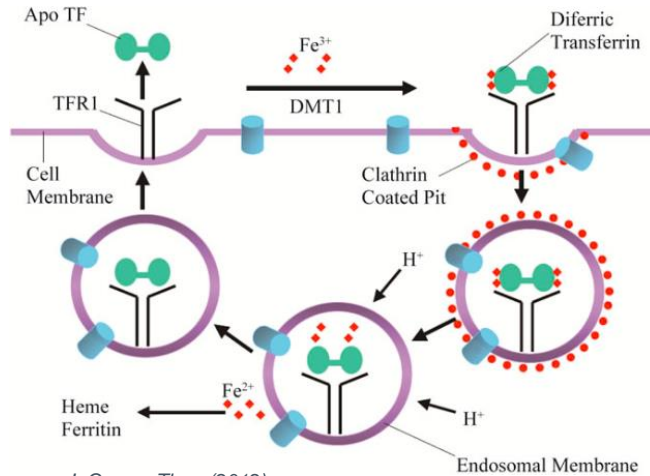
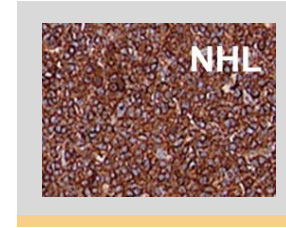
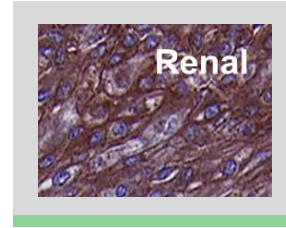
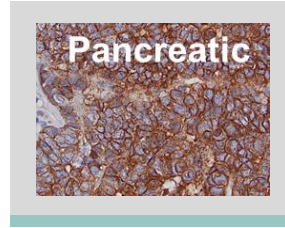
<sup>a</sup> Including one patient with Grade 4 Keratitis





# CD71 (TfR1) Transferrin Receptor

## A High Potential Target for a Probody Drug Conjugate



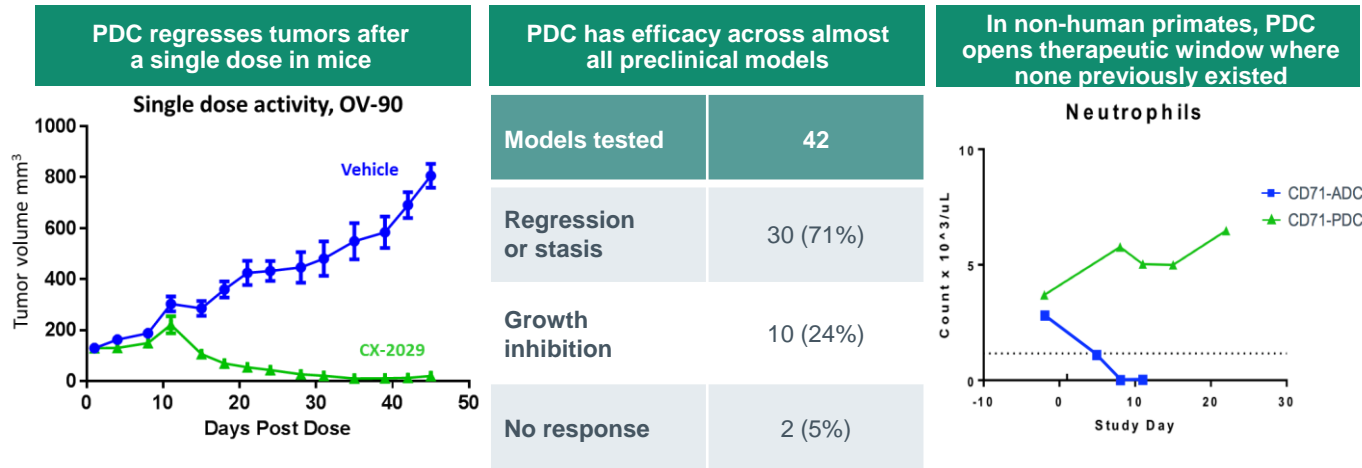
*J. Cancer Ther. (2012)*

- Ubiquitously expressed on dividing, normal and malignant cells
- Mediates iron uptake required for cell division
- Professional internalizing protein: often used as a positive control in ADC experiments
- Expression in normal dividing cells prohibits development of a traditional ADC

abbvie

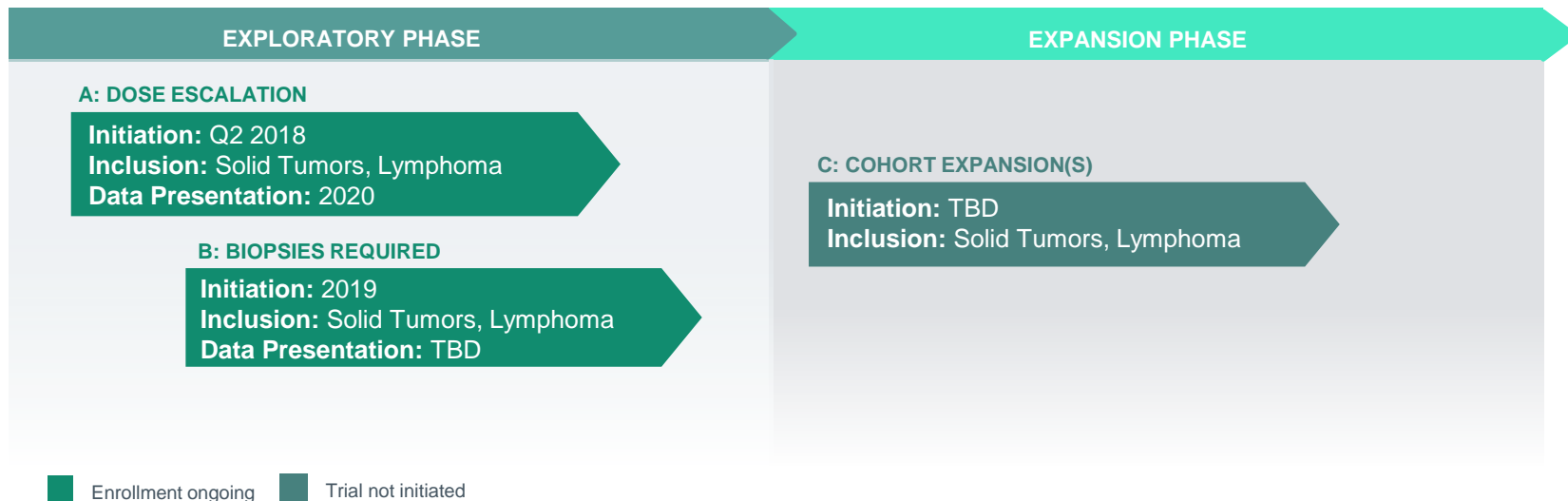
# Probody Platform Has the Potential to Enable CD71 as a Drug Conjugate Target

## Preclinical Proof of Concept Data



*Partnered with AbbVie: Co-development rights and profit split;  
Enrolling Phase 1/2 Trial*

abbvie



***CytomX and AbbVie are co-developing a PDC against CD71,  
with CytomX leading pre-clinical and early clinical development***

abbvie

# Major Alliances With Leading Oncology Companies Broaden CytomX Pipeline of Probody Therapeutics



- Multi-target collaboration
- CTLA-4 Probody  
BMS986249 in Phase 2
- CTLA-4 Probody  
BMS986288 in Phase 1
- >\$4B in potential milestones, tiered royalties up to low-double digits
- \$297M earned to date



- CD71 (CX-2029) + 2 additional targets
- Co-development, co-commercialization, and profit split on CX-2029
- CD71 Probody CX-2029 in Phase 1
- Up to \$1B in potential milestones
- \$75M earned to date



- EGFR-TCB + 3 additional targets
- Co-development, profit split on EGFR-TCB
- \$1.4B in potential development, regulatory & commercial milestones
- \$60M earned to date
- CytomX receives rights to one Amgen preclinical TCB

More than 20 Active Probody Programs Internally and with Partners

# Strong Recent Progress in BMS Alliance

## Lead Programs Aimed at Improving Therapeutic Window for CTLA-4

- Ipilimumab Probody BMS-986249 Advanced to Randomized Phase 2 Study in 1L Metastatic Melanoma
  - BMS-986249 plus nivolumab vs. nivolumab +/- ipilimumab
- BMS-986288, Probody of Modified Version of Ipilimumab, Advanced to Phase 1/2 in Solid Tumors
  - BMS-986288 monotherapy +/- nivolumab
- Ongoing drug discovery activities










Bristol-Myers Squibb



CYTOMX  
THERAPEUTICS

# Clinical Stage Probody Pipeline Advanced to Phase 2 Across Multiple Programs

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 Wholly Owned

 Partnered

# 2020 Outlook and Milestones

## Wholly Owned Programs

### **CX-072 (PD-L1 Probody Therapeutic)**

- Stage 1 data anticipated from Phase 2 CX-072 and Ipilimumab combination trial in relapsed refractory melanoma
- Evaluate additional ipilimumab combination expansion cohorts
- Additional combination strategies

### **CX-2009 (CD166 PDC)**

- Advancement of Phase 2 expansion in ER/PR positive HER2 negative breast cancer
- Initiate CX-2009 + CX-072 Combination

## Partnerships

### **BMS Alliance**

- BMS-986249 Phase 2 advancement
- BMS-986288 Phase 1 advancement
- New program initiation

### **AbbVie Alliance**

- CX-2029 Part A Phase 1 data

### **Amgen Alliance**

- Advancement of lead EGFR-CD3 candidate

### **Ongoing Business Development**

- Pipeline / Platform





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