Corporate Presentation

August 2022

Disclaimer

This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this presentation, including statements regarding Bolt Biotherapeutics, Inc. (the "Company," "we," "us," or "our")'s future financial condition, ability to achieve upcoming milestones for our product candidates, the timing of our clinical trials and the success and results of our pipeline programs, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potentially” “predict,” “should,” “will” or the negative of these terms or other similar expressions. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, among other things: the success, cost and timing of our product development activities and clinical trials; our expectations about the timing of achieving regulatory approval and the cost of our development programs; our ability to obtain funding for our operations, including funding necessary to complete further development and commercialization of our product candidates; our ability to fund our clinical programs and the sufficiency of our cash, cash equivalents, and marketable securities to fund operations through 2025 and the achievement of key milestones; the commercialization of our product candidates, if approved; our plans to research, develop and commercialize our product candidates; our ability to attract collaborators with development, regulatory and commercialization expertise; future agreements with third parties in connection with the commercialization of our product candidates; the success of our current collaborations with third parties, including our collaborations with Bristol-Myers Squibb Company, Innovent Biologics, Inc., Genmab A/S and Toray Industries, Inc.; the achievement of milestone payments or any tiered royalties related to our collaborations; the size and growth potential of the markets for our product candidates, and our ability to serve those markets; the rate and degree of market acceptance of our product candidates; and regulatory developments in the United States and foreign countries. These risks are not exhaustive. For a detailed discussion of the risk factors that could affect our actual results, please refer to the risk factors identified in our SEC reports, including, but not limited to our Annual Report on Form 10-K for the year ended December 31, 2021. New risk factors emerge from time to time and it is not possible for our management to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward- looking statements. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this presentation.

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BOLT BIOTHERAPEUTICS

Bolt Biotherapeutics Today

Experts in Myeloid Biology and Cancer Drug Development

- **Prioritizing advancement of two promising programs**
  - BDC-1001, a HER2-targeting Boltbody™ ISAC
  - BDC-3042, a Dectin-2 agonist antibody
- **Focusing on next-generation ISAC programs, including our collaborations**
  - Discontinued BDC-2034; potential to pursue new CEA ISAC program in the future
  - Pursuing multiple ISACs with collaborators that cover development costs through initial proof-of-concept
- **Expected cash runway extended by two years through 2025**

Building Value in 2022 and Beyond

- **Strong progress in 2022**
  - BDC-1001: Steady enrollment in dose-escalation studies
  - BDC-3042: IND-enabling activities on track

- **Current cash of $224M[1] funds operations through multiple clinical milestones, including:**
  - **BDC-1001 (HER2 Boltbody™ ISAC)**
    - Complete monotherapy dose escalation, determine RP2D in 2H 2022
    - Complete Opdivo® combination dose escalation, determine RP2D in 2H 2022
  - **BDC-3042 (Dectin-2 Agonist Antibody)**
    - Submit IND in 1H 2023
    - First-in-human Phase 1 clinical trial planned for 2023 start

[1] Cash, cash equivalents, and marketable securities balance of $223.6 million as of June 30, 2022

Opdivo® is a trademark of Bristol-Myers Squibb Company

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Prioritized Pipeline

Near-term Milestones and Partner-funded Programs

Proprietary Development Programs		
BDC-1001 (HER2)	HER2-expressing solid tumors	• Multi-arm Phase 1/2 Trial monotherapy & Opdivo® combination • Next milestone: RP2D in 2H22
BDC-3042 (Dectin-2)	Range of solid tumors with high unmet need	• IND-enabling studies underway • IND and Phase 1 in 2023
Next-Gen ISAC (Undisclosed)	Solid tumors	• Discovery
Next-generation Boltbody™ ISAC Collaborations		
Genmab	Innovative leader in antibody and bispecific development in oncology	• Funds 3 bispecific Boltbody™ ISACs through early clinical development • Option for Bolt to co-develop & commercialize 1 candidate in certain regions
Innovent	Fully integrated biopharma with large antibody library and strong presence in Greater China	• Funds up to 3 Boltbody™ ISACs through early clinical development • Option for Bolt to co-develop & commercialize 2 candidates in certain regions
TORAY	Global leader in innovative technologies, conducting cancer immunotherapeutics research	• Toray funds Boltbody™ ISAC for a specific, novel target through Phase 1 • Global co-development & co-commercialization rights to Bolt

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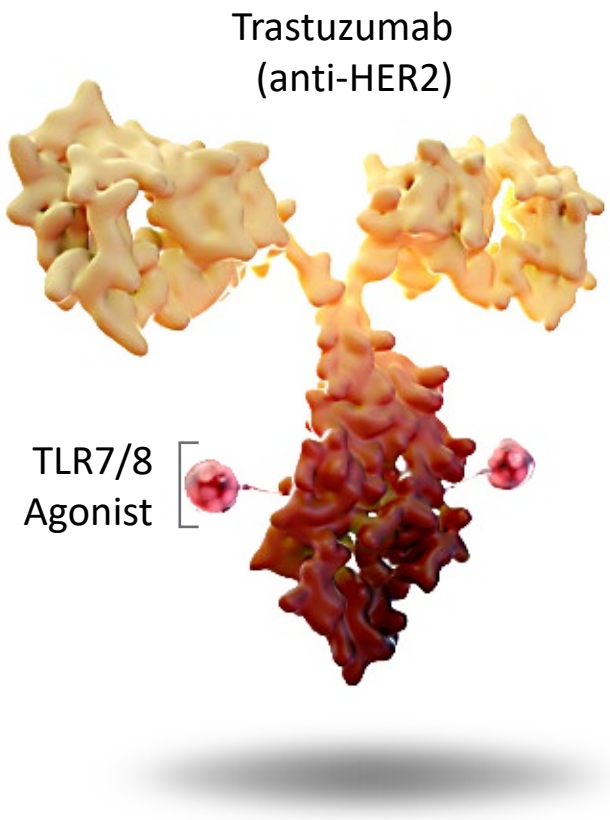
BDC-1001:
HER2 Boltbody™ ISAC

BDC-1001 Boltbody™ ISAC Program in Phase 1/2 Development

Targeting HER2-Expressing Solid Tumors

BDC-1001



BDC-1001

- Trastuzumab biosimilar (anti-HER2) conjugated via a non-cleavable linker to a proprietary TLR7/8 agonist

Bristol Myers Squibb Partnership

- Investigating BDC-1001 in combination with PD-1 checkpoint inhibitor Opdivo® (nivolumab)
- Clinical collaboration, Opdivo supplied at no cost

Dose-escalation portion of Phase 1/2 clinical program ongoing

- Interim monotherapy data reported at ESMO Immuno-Oncology Congress 2021 for subjects enrolled in initial cohorts of study
- Enrolled q2w monotherapy & combination with Opdivo, follow-up ongoing
- Weekly dosing underway in monotherapy & Opdivo combination dose escalation
- RP2D expected in 2H 2022

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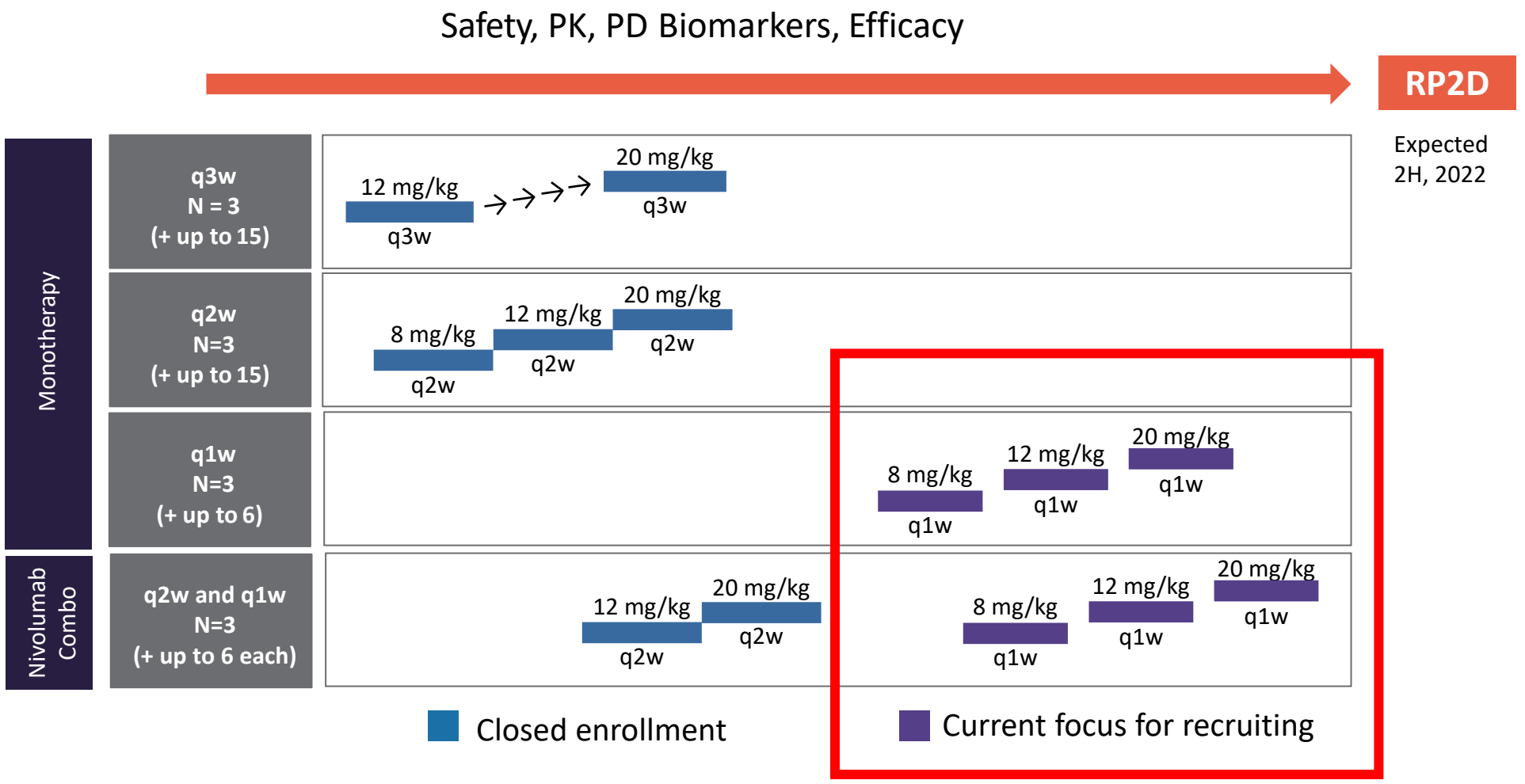
Investigating BDC-1001 Monotherapy & Combination with Opdivo®

Increasing Drug Exposure via Weekly Administration



BDC-1001 Showing Promise in Phase 1/2 Trial

Completion of Dose-escalation Expected in 2022

Favorable Safety Profile	• Demonstrated favorable safety & tolerability to date • Dose-escalation monotherapy and combination studies with Opdivo® are ongoing
PD Insights Consistent with Mechanism	• Tumor microenvironment & plasma biomarker changes consistent with MOA • No evidence of anti-drug antibody (ADA) formation
Early Signs of Clinical Disease Control	• Early signs of disease control, even below target exposure level • Disease control (SD or PR) noted in 13/40 evaluable subjects in multiple tumor types • Durability: 6 patients with stable disease >12 weeks; PR maintained >52 weeks
Dose-Escalation Continues	• Human PK model predicts achieving threshold exposure with more frequent dosing • Weekly dosing underway

Sharma MR, et al., ESMO I-O Poster (2021); data as of October 2021

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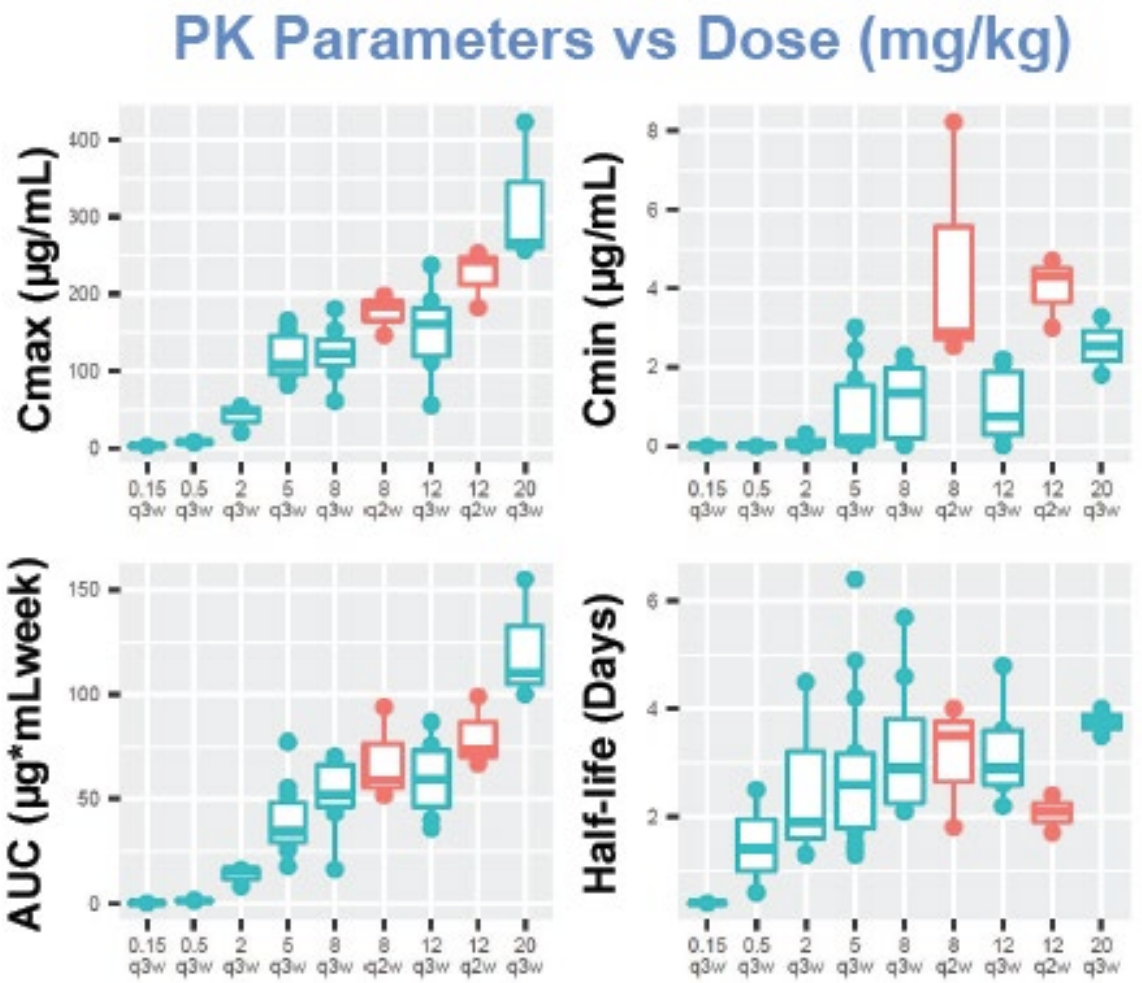
BDC-1001 PK Parameters in Ongoing Dose-escalation Trial Show Increase with Ascending Dose Treatment



Summary of PK Data

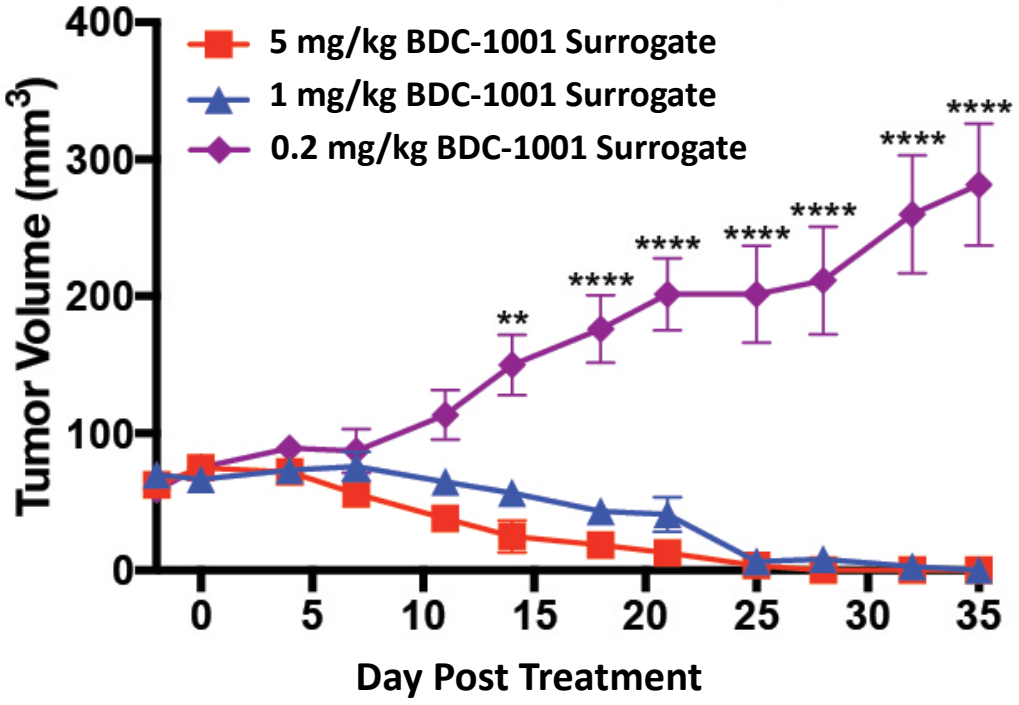
- Target C_{min} levels not yet achieved
  - (C_{min} of ~16 µg/ml for optimal efficacy in preclinical models)[1,3]
- Clinical PK modeling suggests higher sustained trough levels >16 µg/mL can be achieved in humans via higher q2w or weekly dosing
- Observed exposure levels to date are lower than predicted based on NHP (non-human primate) modeling data; BDC-1001 does not follow-presumed allometric scaling regarding clearance
- C_{max} increases proportionally with dose

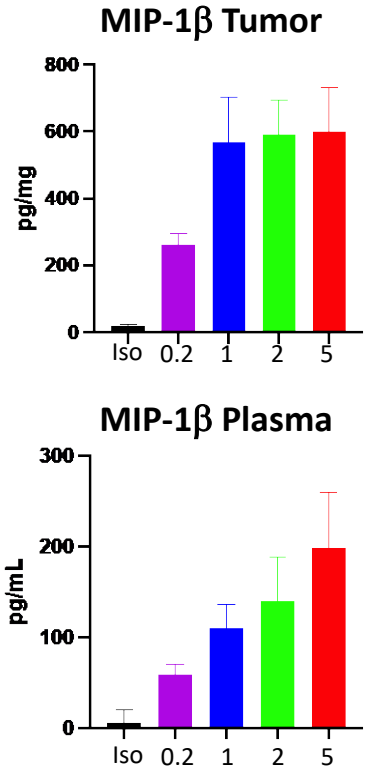
Sharma MR, et al., ESMO I-O Poster (2021); data as of October 6, 2021

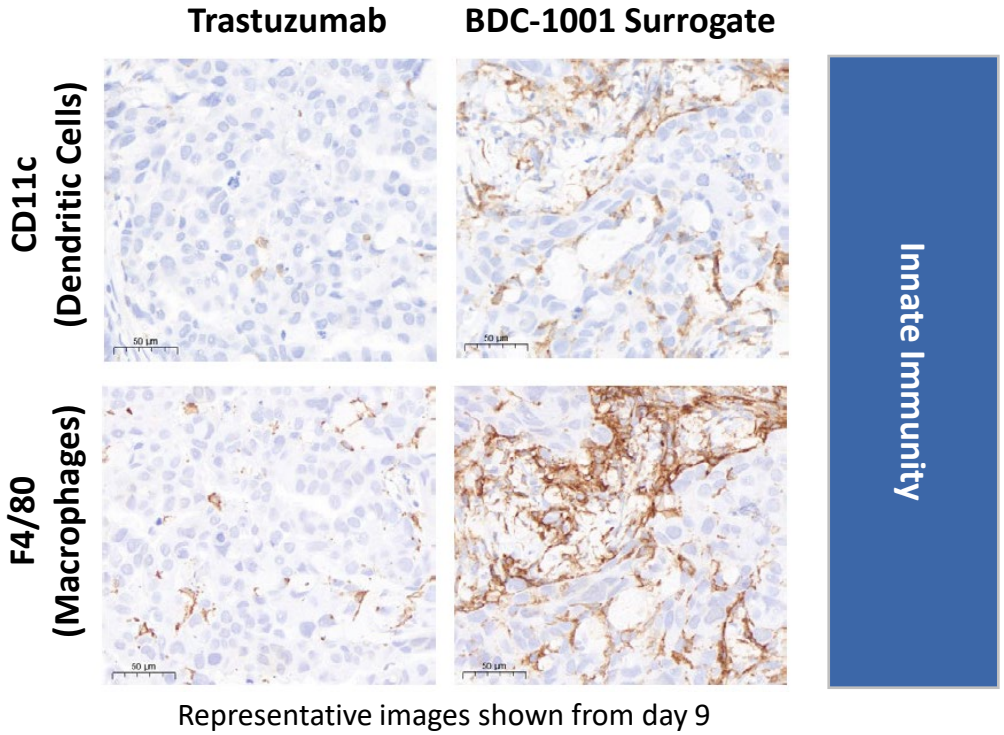
1. Ackerman SE, et al. *Nature Cancer*. 2021;2:18–33.
3. Bolt Biotherapeutics internal data.

BDC-1001 Surrogate Shows Dose-dependent Efficacy & Pharmacodynamic Responses

HCC1954 IHC3+ Xenograft Model (Functional Myeloid Cells Only)







Representative images shown from day 9

Efficacy

- Preclinical experiments indicate a minimal target serum concentration of **~16 μg/ml** at trough for optimal efficacy

Pharmacodynamic Biomarkers

- Increases in proinflammatory cytokines & chemokines in tumor; modest increases in serum
- Recruitment of dendritic cells & macrophages to tumor

SCID/Beige mice were dosed with BDC-1001 surrogate every 5 days through day 25 with cytokines and myeloid infiltration measured 24 hours or 9 days following the first dose, respectively. Representative figures are from independent experiments.

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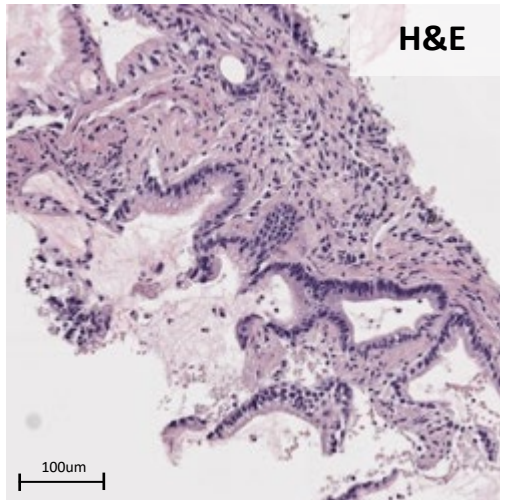
Evidence of Activated Tumor Immunity in Paired Tissue Biopsies

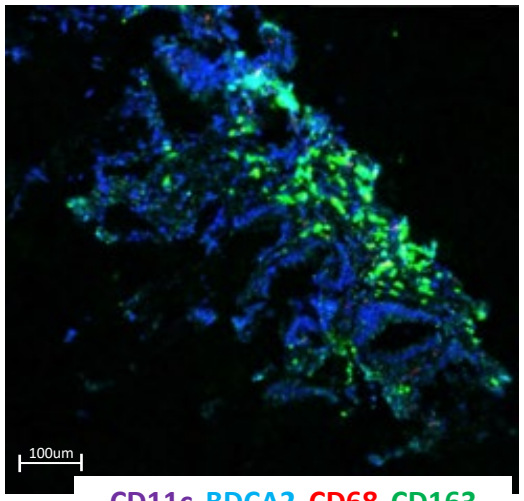
Clinical Trial Subject with Cervical Cancer on BDC-1001 5 mg/kg q3w

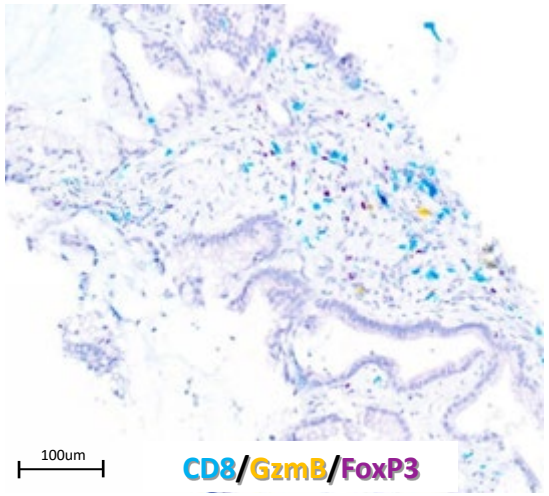
Myeloid cells infiltration

T cell infiltration & activation

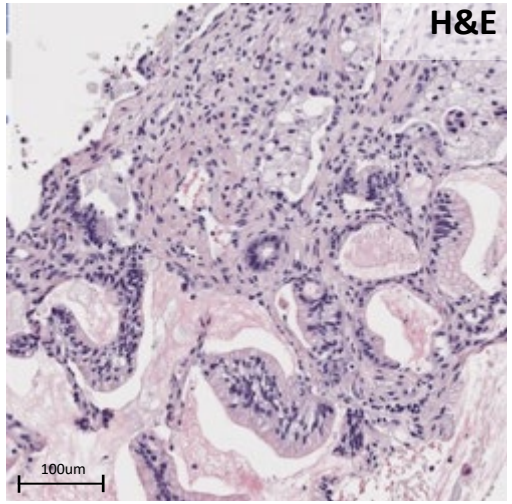
Baseline (Lung Biopsy)

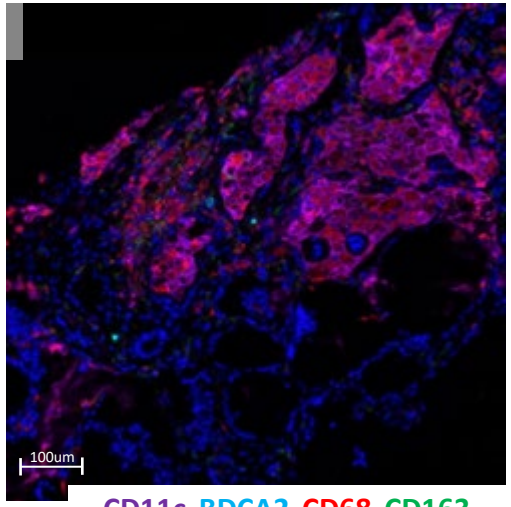


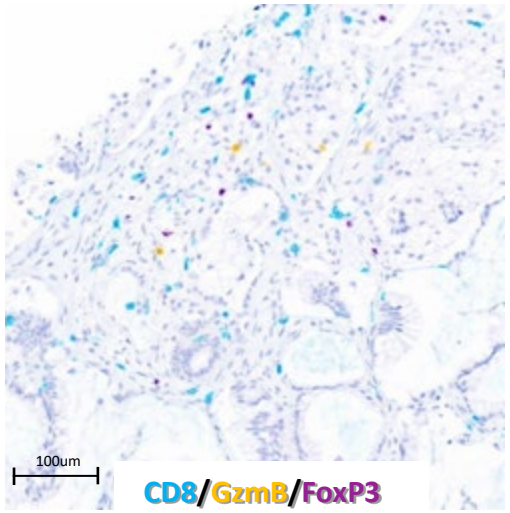




On-treatment @C2D4 (Lung Biopsy)







*Dark blue staining in these panels is cell nuclei

- 29-year-old female with recurrent metastatic endocervical cancer, HER2 amplified, MSS, PD-L1 negative
- Previously treated with surgical resection, & multiple systemic regimens including cisplatin, carboplatin, paclitaxel, bevacizumab, ZW49
- On BDC-1001 5 mg/kg q3w with stable disease for 23+ weeks & ongoing

Key Changes:

- ~Four-fold increase in classic dendritic cell (cDC, CD11c+) & two-fold increase in plasmacytoid dendritic cell (pDC, BDCA2+) infiltration
- Six-fold increase in M1 (CD68+CD163-) & slight decrease in M2 (CD163+) macrophage infiltration
- Increase in dendritic cell (DC) infiltration & M1/M2 ratio on BDC-1001 treatment (vs baseline)

Sharma MR, et al., ESMO I-O Poster (2021); data as of October 6, 2021

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BDC-1001 Clinical Activity Seen in 13/40 Tumor-evaluable Subjects* Across Multiple Solid Tumor Types & Dose Levels (2-20 mg/kg)

Tumor Response	Site of Primary Tumor	Duration of Disease Control (PR or SD) in Weeks	Cohort
Partial response (>36 weeks)	Colorectal	36§	5 mg/kg q3w
Long-term stable disease (>12 weeks)	Endometrial	24	2 mg/kg q3w
	Cervix	23+	5 mg/kg q3w
	Breast	15+	8 mg/kg q3w
	Melanoma	13+	8 mg/kg q3w
	Colorectal	19+	8 mg/kg q2w
	Colorectal	13+	8 mg/kg q2w
Stable disease at Week 6 scan	Gastro-esophageal	10+	12 mg/kg q3w
	Ovarian	6	20 mg/kg q3w
	Colorectal	6	2 mg/kg q3w
	Colorectal	6	5 mg/kg q3w
	Bile duct	6	8 mg/kg q3w
	Gastro-esophageal	7+	8 mg/kg q3w

*Defined as subjects with baseline & at least one post baseline tumor scan available
§Patient continued with PR at 52 weeks without any subsequent therapies
+ Denotes subjects are still on treatment

Sharma MR, et al., ESMO I-O Poster (2021); data as of October 6, 2021

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PK Modeling Predicts Higher Exposure with More Frequent Dosing

	Median AUCs over 3 weeks (µg*day/mL)[4]	CL (mL/day/kg)[5,6]	Median C_{max},ss (µg/mL)[4]	Median C_{min},ss (µg/mL)[4]	Median half-life (days)[5,6]
Trastuzumab (8 then 6 mg/kg q3w)	1600	3.8	178	29	25-30
BDC-1001 @ 20 mg/kg q3w	828	25	335	1.4	3
BDC-1001 @ 20 mg/kg q2w	1242	25	362	7.0	3
BDC-1001 @ 8 mg/kg q1w	1010	25	151	14.6	3
BDC-1001 @ 12 mg/kg q1w	1510	25	227	21.9	3
BDC-1001 @ 20 mg/kg q1w	2520	25	379	36.6	3

SS, steady state

Sharma MR, et al., ESMO I-O Poster (2021); data as of October 6, 2021

4. Herceptin Hylecta. Prescribing information. Genentech, Inc. Accessed November 15, 2021. https://www.accessdata.fda.gov/drugsatfda_docs/label/2019/761106s000lbl.pdf
5. Quartino AL, et al. *Cancer Chemother Pharmacol*. 2019;88:329-340.
6. Bruno R, et al. *Cancer Chemother Pharamcol*. 2005;56:361-9.

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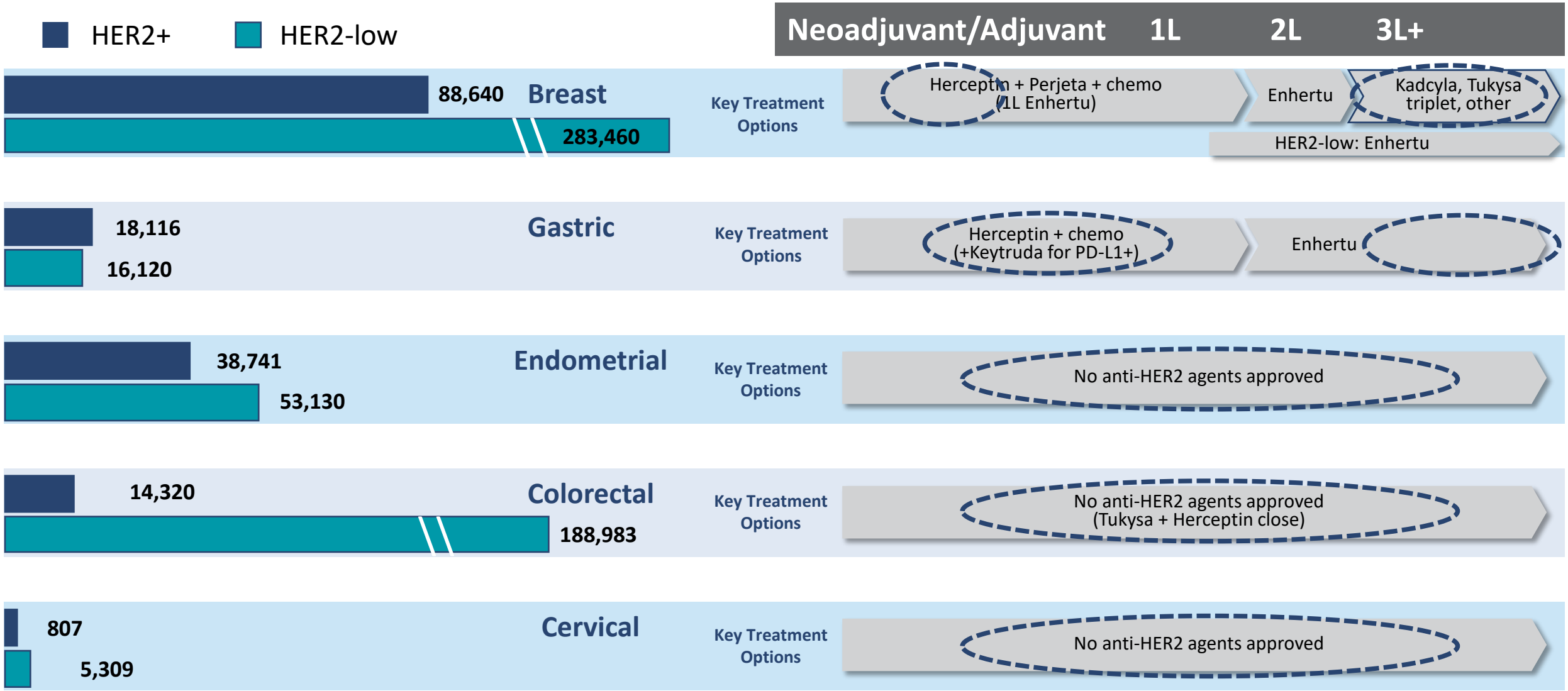
Continued Opportunity for BDC-1001 in the Dynamic HER2 Therapeutic Market



US + Top5 EU incidence numbers based upon 2022 SEER/American Cancer Society (US) & 2020 European Cancer Information System.
HER2 segmentation based upon various scientific publications with HER2-low being IHC2+ unamplified & IHC1+ unamplified.

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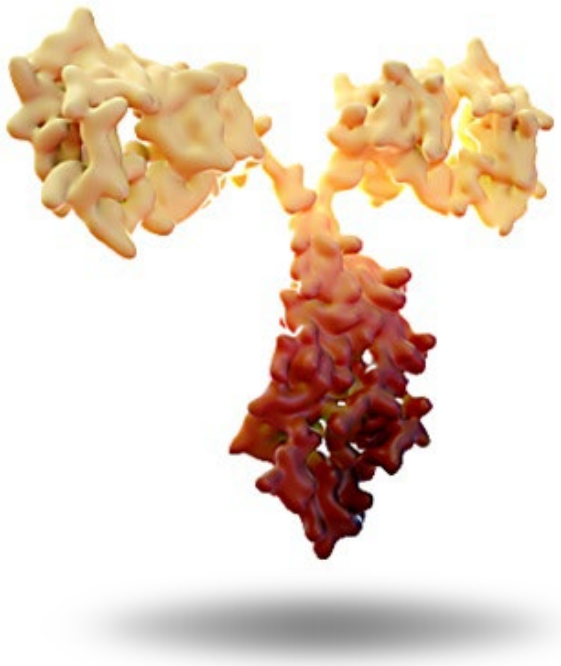
BDC-3042:
Dectin-2 Agonist Antibody

BDC-3042 Reprograms Tumor-associated Macrophages via Dectin-2 Agonism

Complementary Approach to ISACs and TLR Agonism to Modulate TME

BDC-3042

Dectin-2
Agonist Antibody



BDC-3042: Dectin-2 agonist antibody

- Dectin-2 is expressed by tumor-associated macrophages (TAMs) in a wide range of solid tumors
- BDC-3042 activates human TAMs to elicit anti-tumor immune responses

Preclinical Proof of Concept achieved

- Potent activator of human macrophages
  - Activates TAMs within human tumor samples
  - Elicits secretion of pro-inflammatory cytokines & chemokines (e.g., TNFα, IL-6, IL-1β, & CCL3)
- Mediates anti-tumor efficacy in humanized mouse model

Status

- IND-enabling activities underway
- Phase 1 initiation planned in 2023

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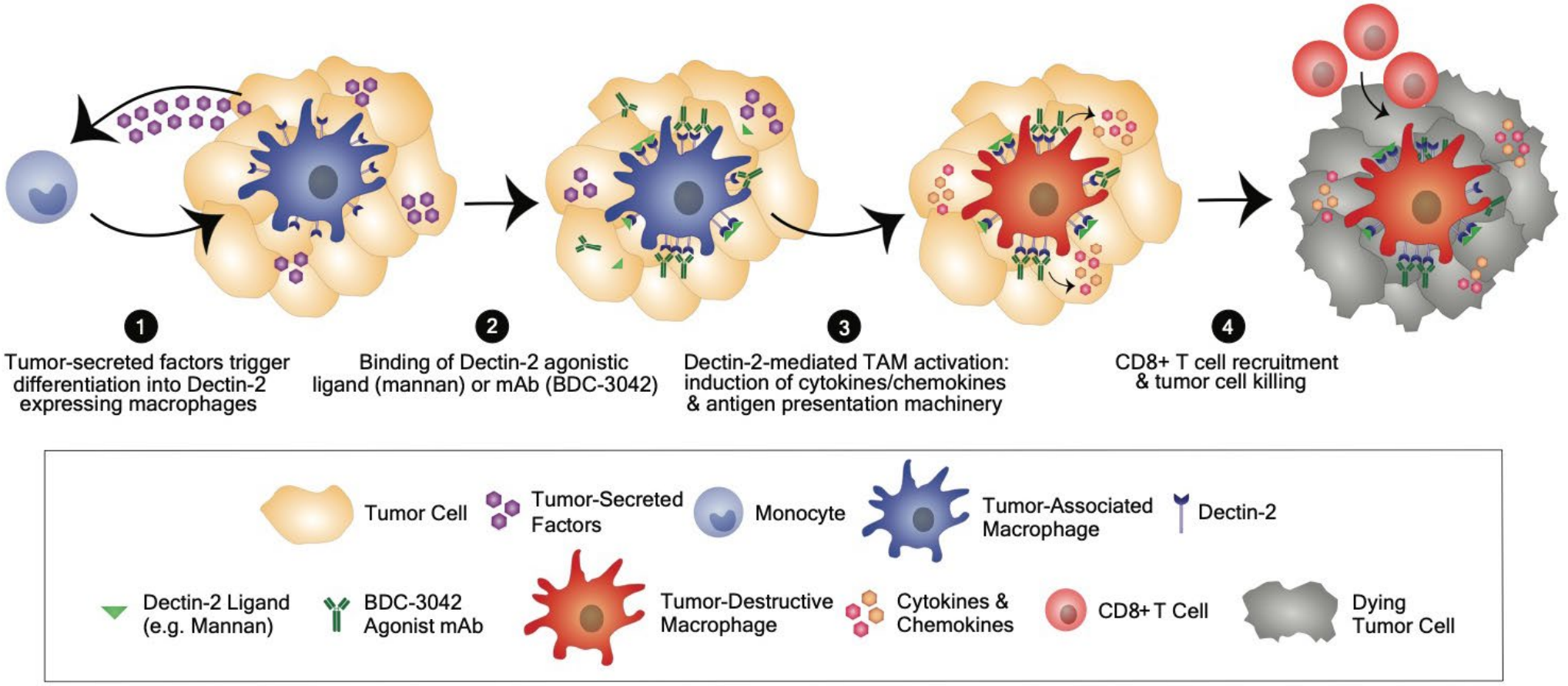
BDC-3042-Mediated Dectin-2 Agonism Activates TAMs & Elicits Anti-tumor Immune Response



Kenkel JA, et al., AACR Poster (2022)

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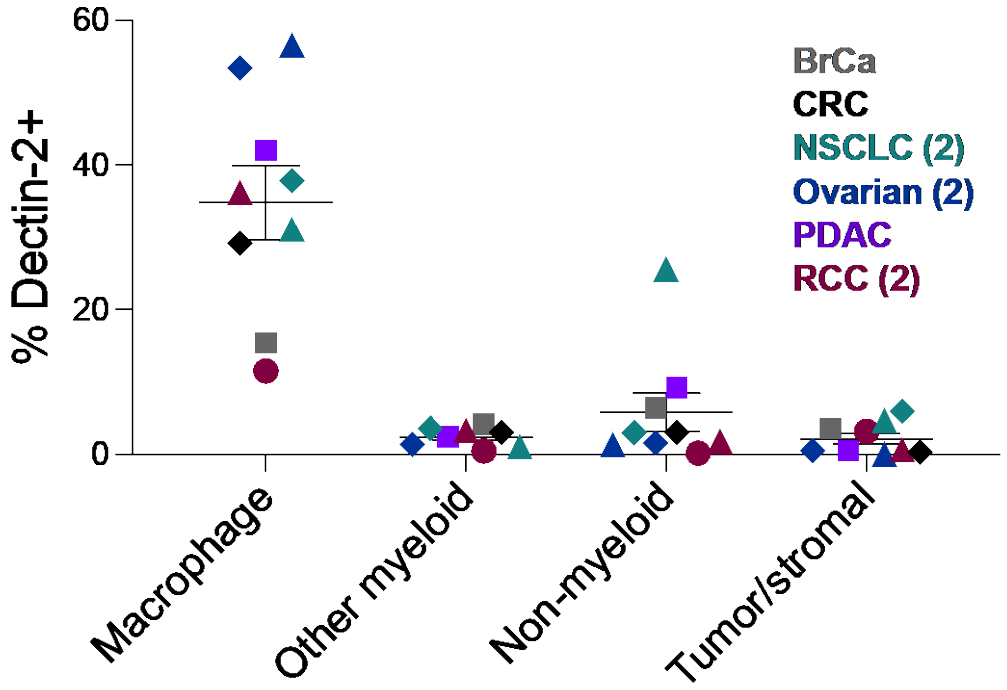
Dectin-2 is Preferentially Expressed in Macrophages & BDC-3042 Activates TAMs Within Primary Tumor Samples

Kenkel JA, et al., SITC Poster (2021)

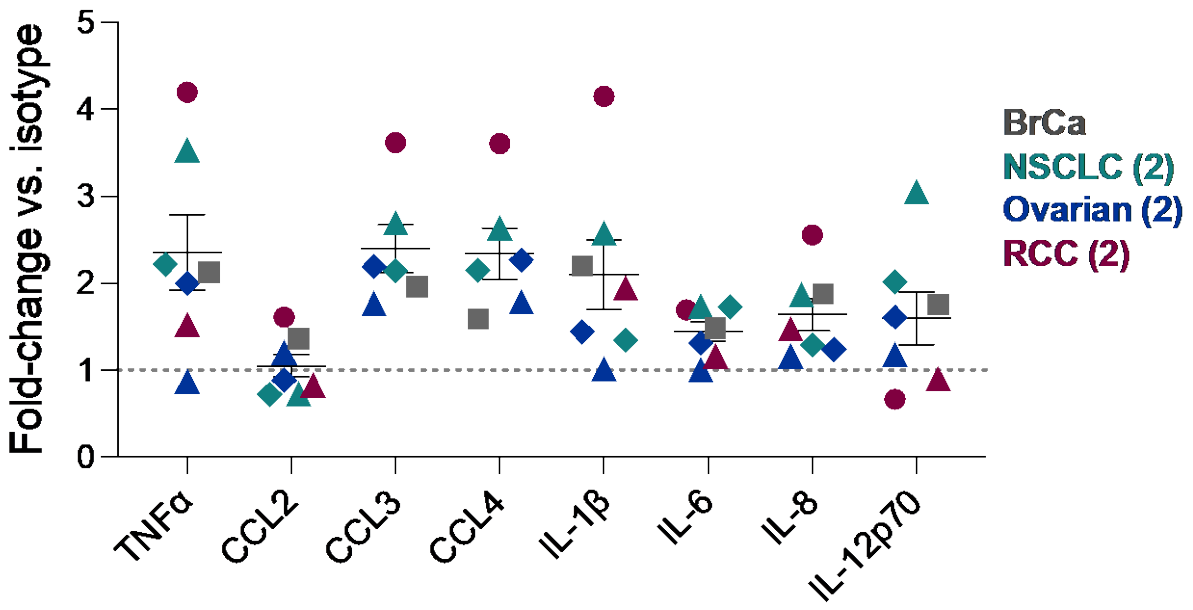
Human TAMs Express Dectin-2

Expression Seen Across Several Solid Tumor Types



BDC-3042 Activates TAMs

Elicits Pro-Inflammatory Cytokine & Chemokine Secretion



DTCs or dissociated primary tumor samples were stimulated for 24 h with BDC-3042 or an isotype control (67 nM, equivalent to in vitro EC_{90}). TAMs were defined as CD45+CD11b+CD14+ cells.

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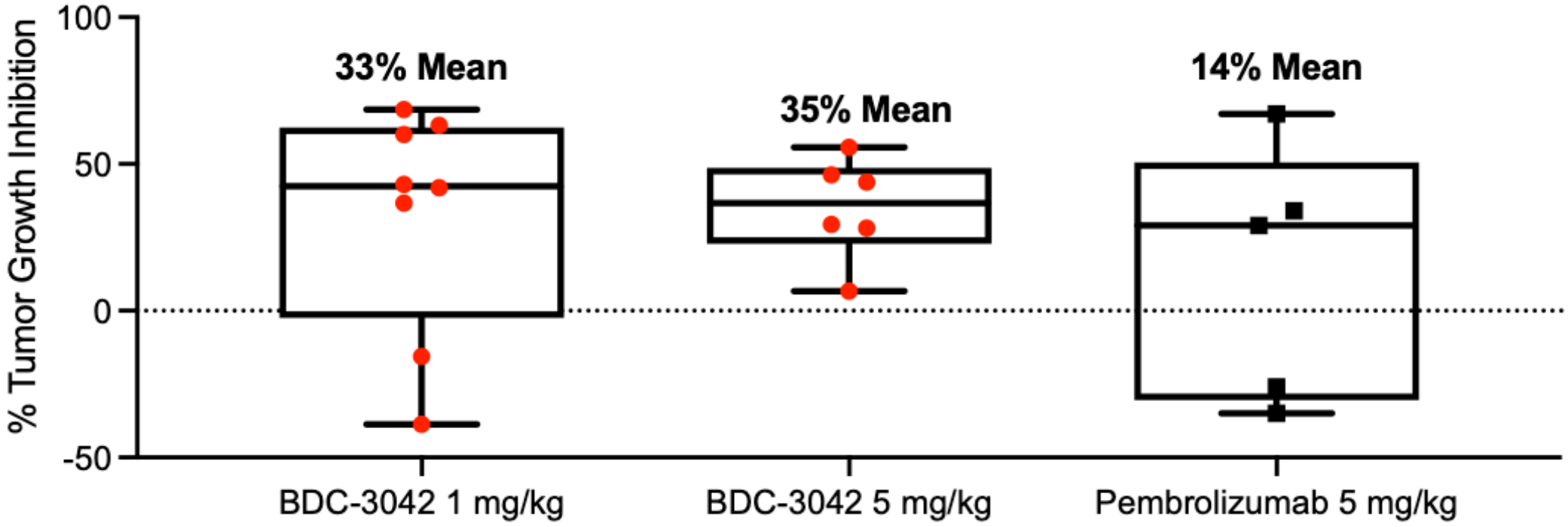
BDC-3042 Mediates Anti-tumor Activity in Humanized Mice Bearing Triple-negative Breast Tumors (MDA-MB-231)

Kenkel JA, et al., AACR Poster (2022)



Each data point represents a unique HSC donor cohort

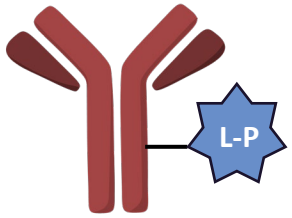
BDC-2034
CEA Boltbody™ ISAC
Program Update

BDC-2034 Update

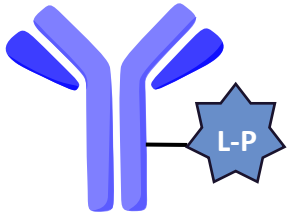
- **BDC-2034 discontinued due to off-target toxicities related to lack of specificity of the targeting antibody**
  - Data suggest toxicity resulted from cross-reactivity of BDC-2034 target mAb for CEACAMs other than CEACAM5
  - Significant safety risk in order to achieve serum concentration estimated for human clinical efficacy
- **Highly specific CEACAM5 ISAC conjugated to same linker-payload lacked toxicity**
  - Highly specific CEACAM5 ISAC (CEA2 ISAC) retains in vivo efficacy and has improved safety margins
  - BDC-2034 linker-payload was well tolerated in non-GLP tox studies when conjugated to other mAbs
- **CEACAM5 remains a target of interest to Bolt**

Same BDC-2034 Linker-Payload Does Not Cause Toxicity with Other Antibodies

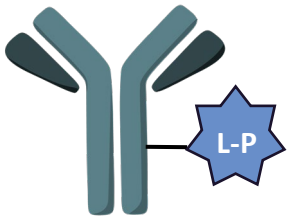
CEACAM5-Specific Antibody Provides Safety Window



BDC-2034 (CEA)



CEA2 ISAC (CEA)



Trastuzumab ISAC (HER2)

Dose Administered	**3 mg/kg**	**9 mg/kg**	**3 mg/kg**
Serum IL-6 (peak at 6-24 hr)	2,382 ± 902 pg/mL	491 ± 80 pg/mL	132 ± 24 pg/mL
Notable Findings	Cytopenias, CRS and mortalities in GLP study	No findings	No findings

Preclinical data shown are the mean and SEM of the peak level following the 1st dose, n=3 per group. All ISACs contained the same linker-payload and were dosed IV at Days 1 and 15. Serum cytokines measured by MSD.

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Summary

Building Value in 2022 and Beyond

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Thank You