



BOLT
BIOTHERAPEUTICS

*Harnessing the power of the immune system
to improve lives and eradicate cancer*

Nasdaq: BOLT

January 13, 2025

Disclaimer

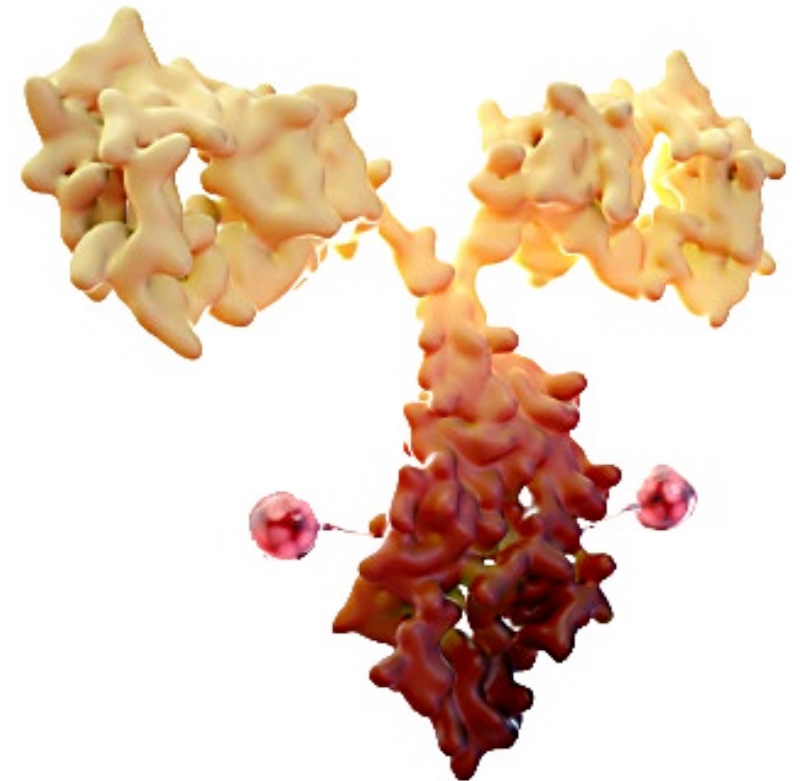
This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this presentation, including statements regarding Bolt Biotherapeutics, Inc. (the "Company," "we," "us," or "our")'s future financial 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 and partnerships, 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 advancement and success of our BDC-3042 clinical trial, the potential initiation of a clinical trial for BDC-4182, the anti-tumor potency, safety and tolerability, and characteristics of our product candidates, 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 key milestones 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 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, 2023. 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.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this presentation, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

Harnessing the Power of the Immune System to Improve Lives & Eradicate Cancer

- **First-in-class Dectin-2 agonist program in dose escalation**
 - Broad potential in multiple solid tumors
 - Macrophage targeting complements ISACs & other I/O approaches
- **Next-generation Boltbody™ ISAC platform**
 - BDC-4182 Claudin 18.2 ISAC will enter the clinic in 2Q 2025
 - Genmab collaboration to develop 3 Boltbody ISAC programs
 - Toray collaboration to develop 1 Boltbody ISAC program
 - Building on lessons from largest ISAC development program
 - HER2-targeted BDC-1001 treated >150 patients in Phase 1 & 2
 - Next-gen ISACs use much more potent immune stimulants
- **Resourced to Succeed**
 - \$84.4 million cash & equivalents¹
 - Operating runway to mid-2026

Immune-Stimulating Antibody Conjugate



¹Cash, cash equivalents, and marketable securities balance of \$84.4 million as of 9/30/2024



Focused Oncology Pipeline

Portfolio of proprietary and partner-funded programs addressing significant unmet needs

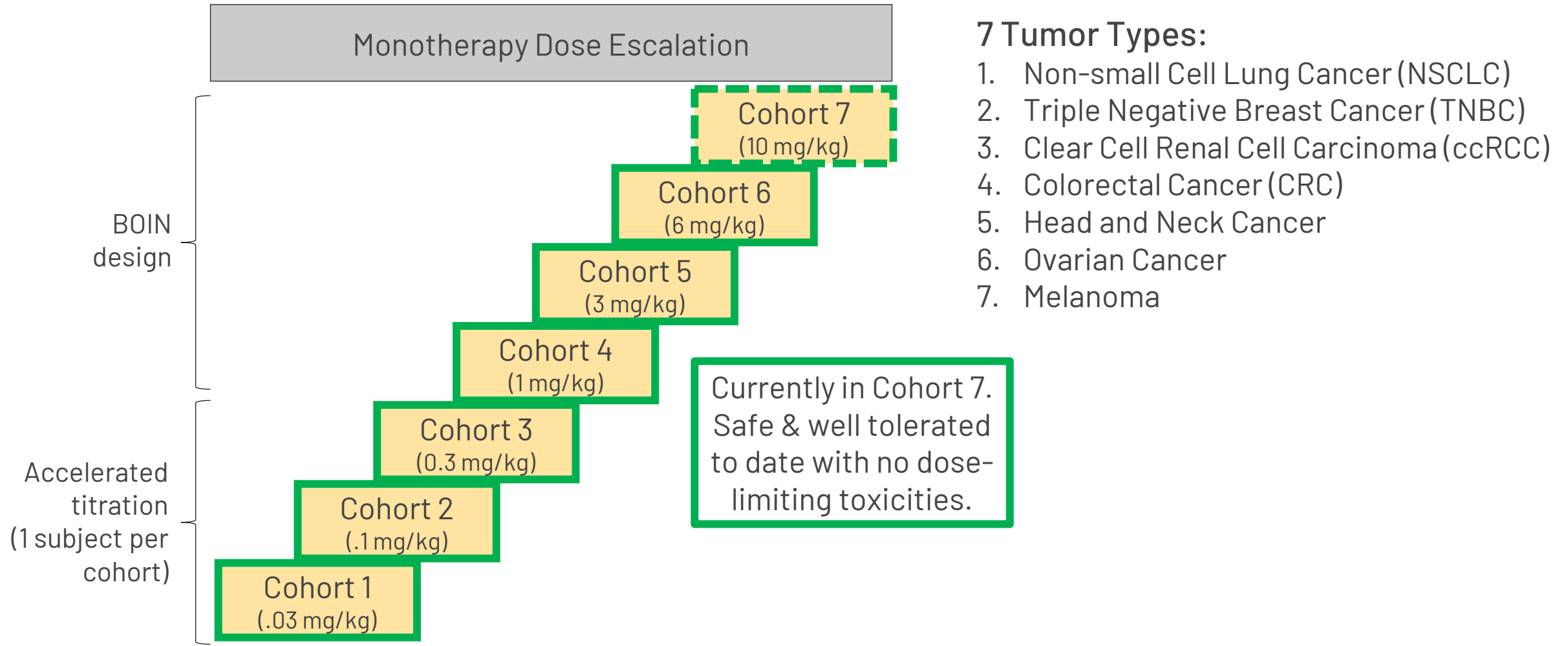
Wholly-owned Development Programs

| Program (Target) | Indications | Discovery | Preclinical | Phase 1 | Phase 2 | Phase 3 |
|-------------------------|--|-----------------------------|-------------|---------|---------|---------|
| BDC-3042 (Dectin-2) | Triple-negative Breast Cancer, Clear Cell Renal Cell Carcinoma, Head & Neck Cancer, Ovarian Cancer, Colorectal Cancer, Non-small Cell Lung Cancer & Melanoma | Dose-escalation study | | | | |
| BDC-4182 (Claudin 18.2) | Gastric & Gastroesophageal Cancer | Clinical trial preparations | | | | |

Boltbody™ ISAC Collaborations

| | |
|---|--|
|  Genmab | Funds 3 bispecific Boltbody ISACs through early clinical development |
|  TORAY | Funds 1 Boltbody ISAC through early clinical development |

BDC-3042 Phase 1 Clinical Trial Ongoing in Various Solid Tumor Types

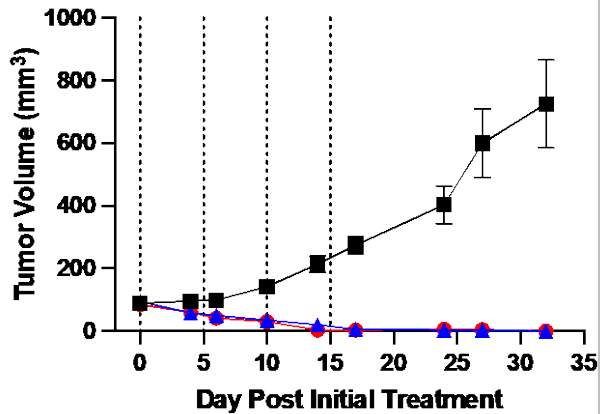


Next-generation ISACs are Dramatically Better than First-generation ISACs

Across multiple tumor antigens with varying expression levels

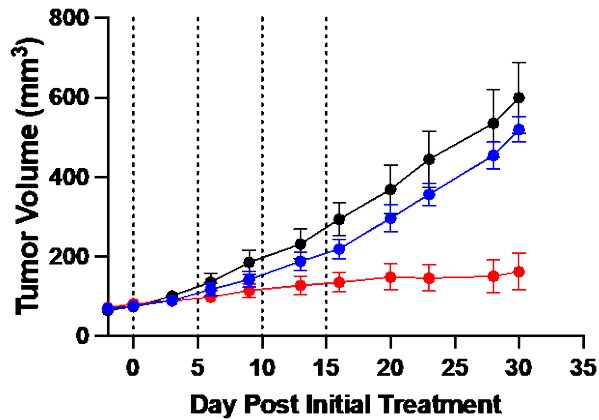
HER2

HCC1954 Model >500K Molecules/Cell



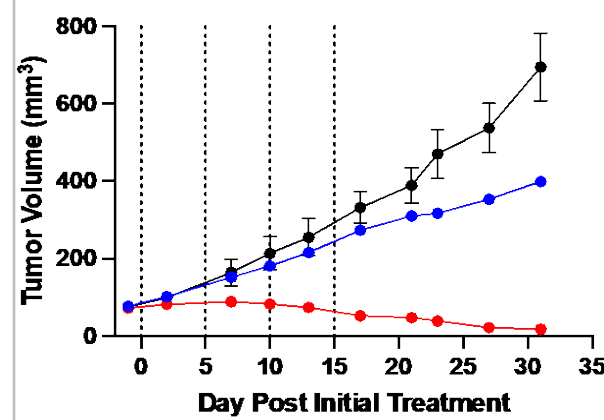
HER2

JIMT-1 Model ~25K Molecules/Cell



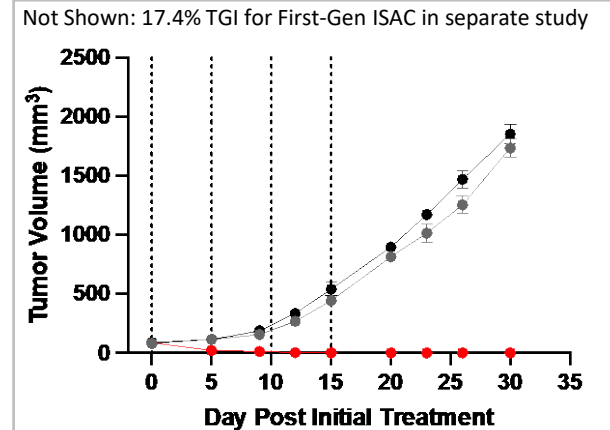
TROP2

JIMT-1 Model ~50K Molecules/Cell



CEA

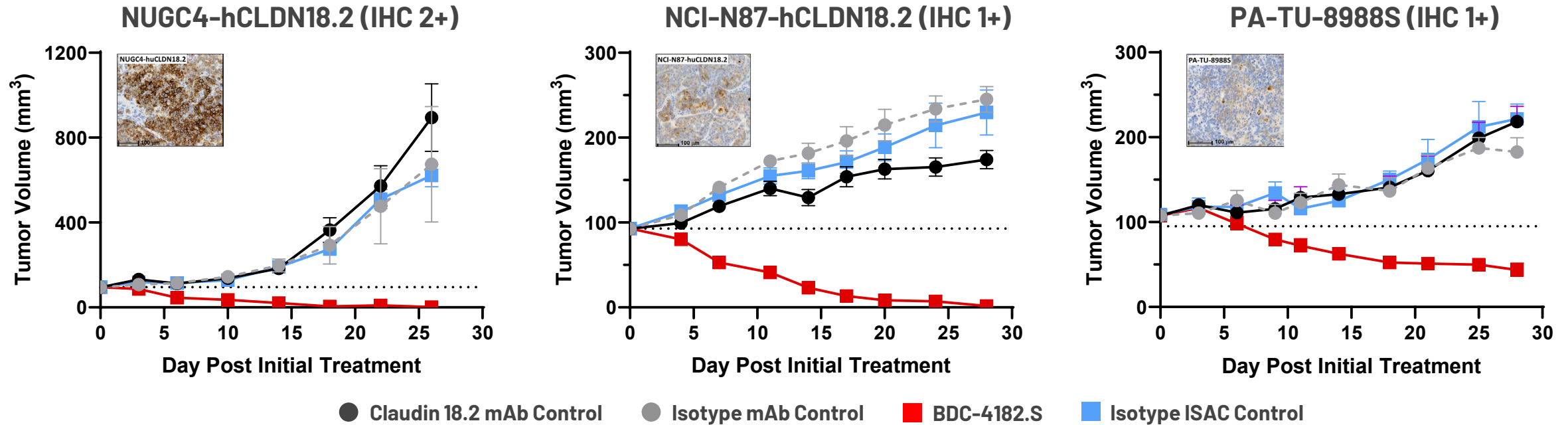
HPAF-II Model ≥60K Molecules/Cell



Naked mAb Control
 First Generation ISAC
 Next Generation ISAC
 Isotype mAb

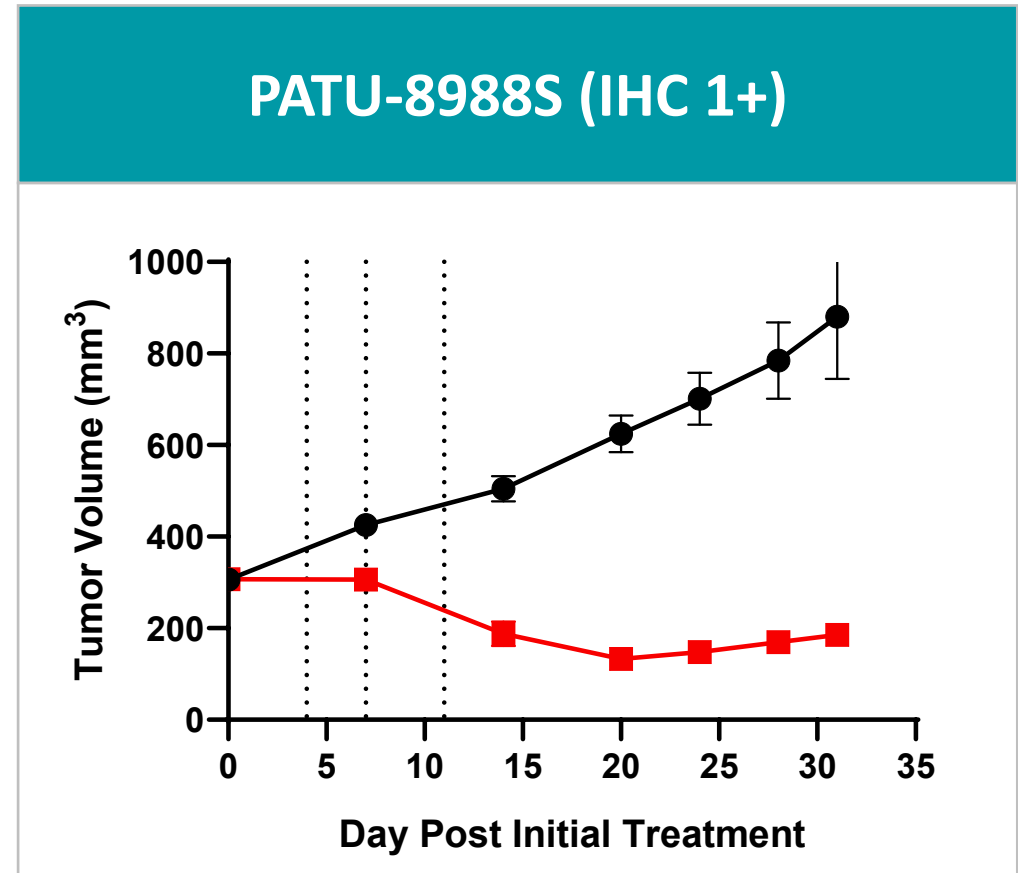
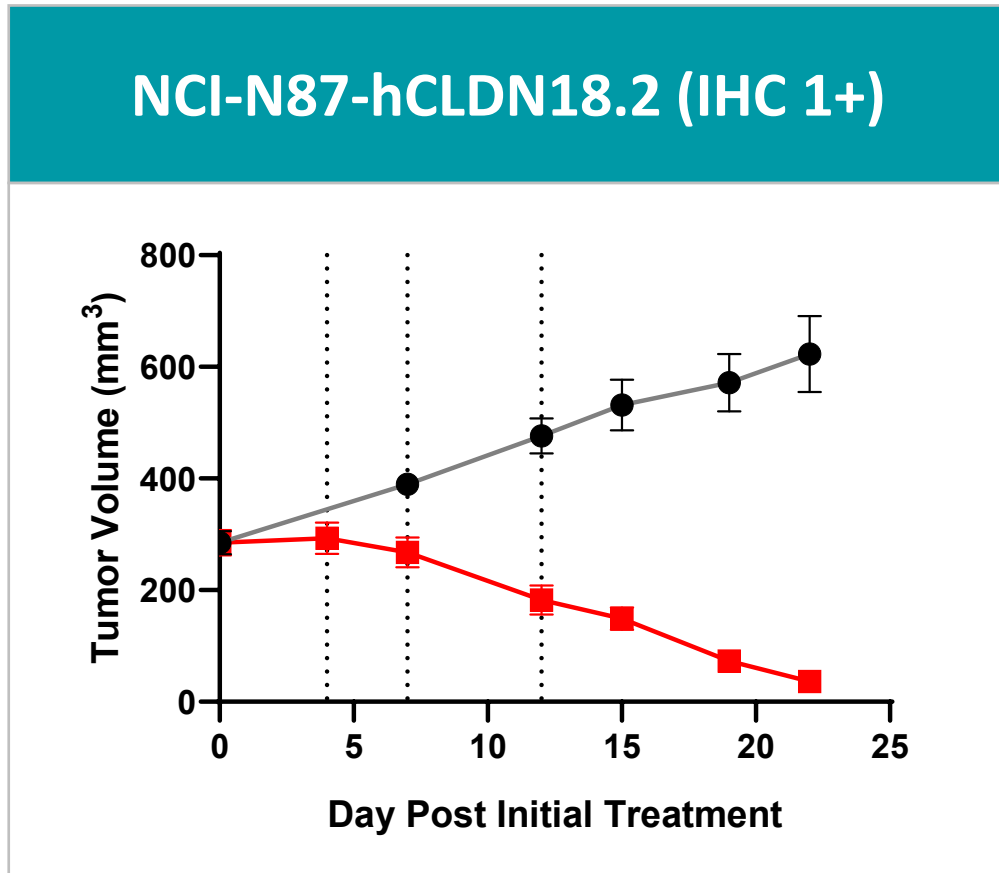
Pharmacodynamic responses in the tumor are also amplified in the tumor with Next Generation ISACs

BDC-4182 Has the Potential to Expand the Market to Lower Claudin 18.2 Expression



| | IHC Score | BDC-4182.S (TGI) | Tumor Free Mice |
|-------------------|-----------|------------------|-----------------|
| NUGC4-hCLDN18.2 | 2+ | 100% | 8 out of 8 |
| NCI-N87-hCLDN18.2 | 1+ | 99% | 6 out of 8 |
| PA-TU-8988S | 1+ | 76% | None |

BDC-4182 Elicits Tumor Regression of Large IHC1+ Tumors in Xenograft Models



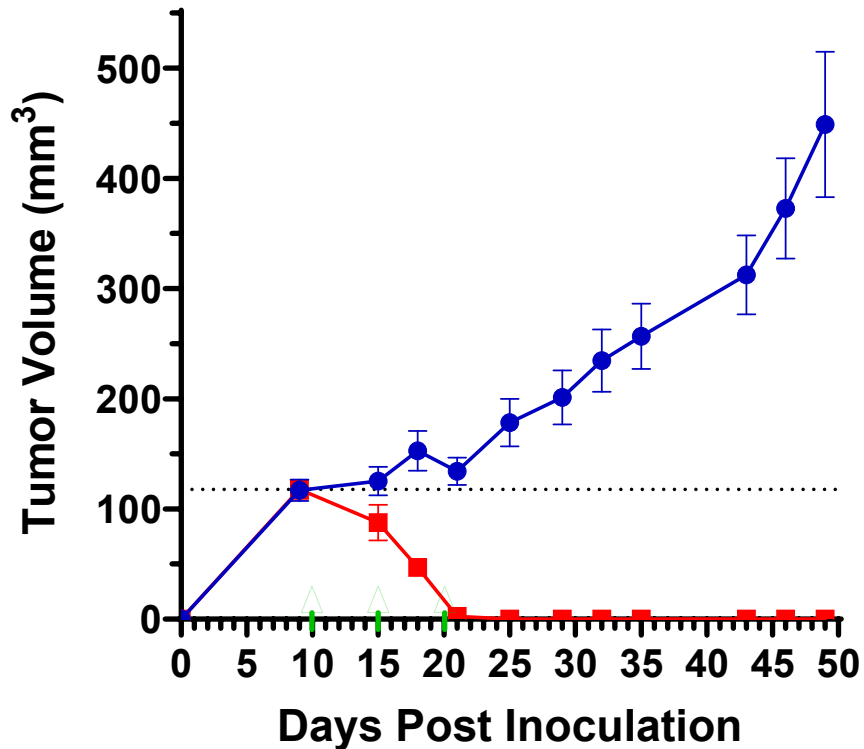
● Claudin 18.2 mAb Control

■ BDC-4182.S

BDC-4182 Elicits Complete Regression in Immunologically Cold KPC Model

Efficacy KRAS^{mut} P53^{mut} Syngeneic Tumor Model

KPC-muCLDN18.2



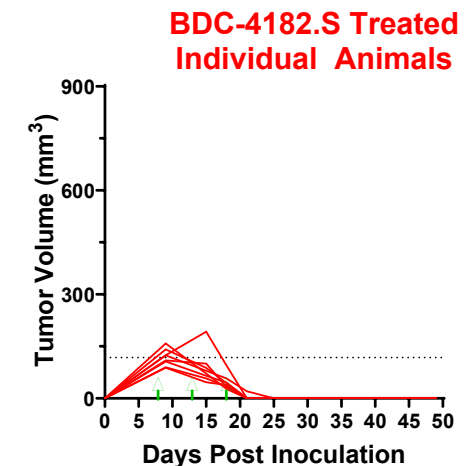
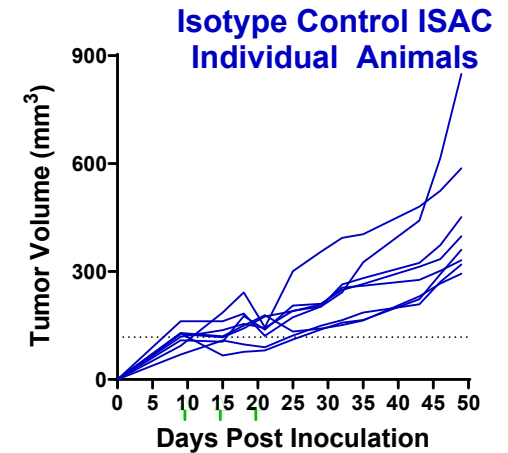
Isotype Control ISAC



BDC-4182.S ISAC



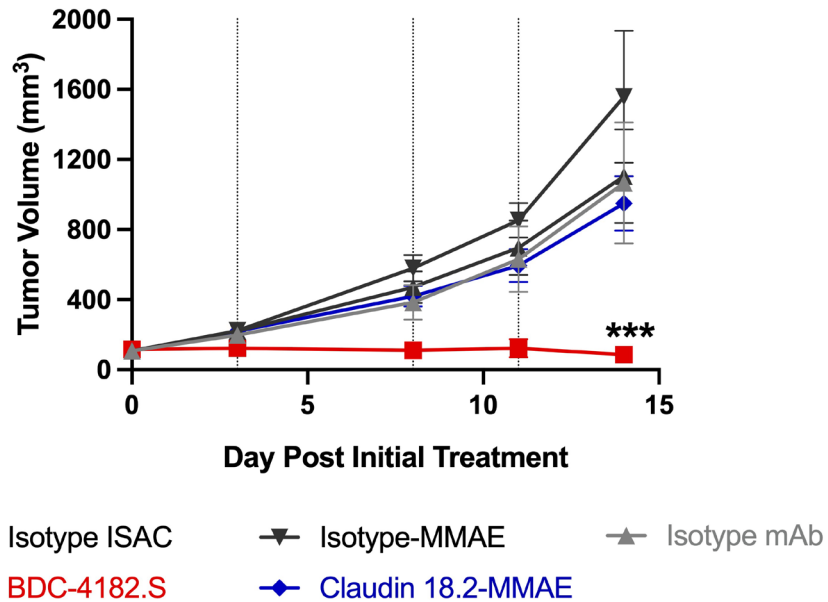
Dosing Day



BDC-4182 Activity Superior to MMAE and TOP1 ADCs in IHC1+ Syngeneic Model

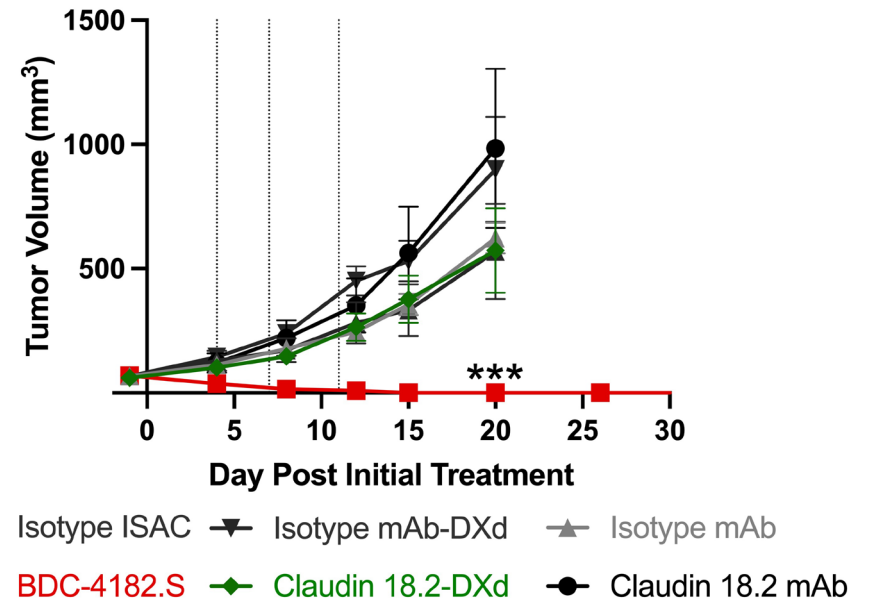
Superior to MMAE ADC

Limited ADC Efficacy in IHC1+ Model



Superior to TOP1 (DXd) ADC

Limited ADC Efficacy in IHC1+ Model



Boltbody™ ISAC Platform Validated by Strategic Collaborations



Innovative leader in antibody & bispecific development for oncology

- Genmab funds up to 3 bispecific Boltbody™ ISACs through early clinical development
- Bolt has option to co-develop & commercialize 1 candidate in certain regions
- Bolt eligible for up to \$285M in milestones plus tiered royalties for each program exclusively developed & commercialized by Genmab



Global leader in innovative technologies, conducting research in cancer immunotherapeutics

- Toray funds Boltbody ISAC for specific & novel target through end of Phase 1
- Global co-development/co-commercialization

Upcoming Milestones for BOLT



BDC-3042 (Dectin-2 Agonist Antibody)

- First-in-class antibody with potential in a wide range of solid tumors
- Update on clinical activity from dose escalation in 1H25



BDC-4182 (Claudin 18.2 Boltbody™ ISAC)

- Next-gen ISAC targeting gastric & gastroesophageal cancers
- Clinical trial initiation in 2Q 2025



Efficient drug development

- Existing cash¹ funds key milestones & operations to mid-2026
- Collaborations fund themselves & provide future upside

ISAC = Immune-stimulating antibody conjugate

¹Cash, cash equivalents, and marketable securities balance of \$84.4 million as of 9/30/2024



BOLT
BIOTHERAPEUTICS

Thank you.

Nasdaq: BOLT

Harnessing the power of the immune system to improve lives and eradicate cancer

Bolt Biotherapeutics

Harness the power of the immune system to improve lives and eradicate cancer

Innovative Pipeline

BDC-3042

- First-in-class I/O target
- Well tolerated to date
- Broad potential market in multiple solid tumors
- Phase 1 in progress

BDC-4182

- Potent next-gen ISAC targeting Claudin 18.2, validated target with significant unmet needs
- Demonstrated superiority to ADCs in preclinical studies
- Preparing for first-in-human clinical trial

Robust Platform Technology

Lessons from BDC-1001 form the basis for designing better ISACs

- Clinical activity in advanced solid tumor setting
- Well tolerated & safe

Collaborations further validate Boltbody™ ISAC platform



Well-Capitalized, Significant Upside Potential

\$84.4 million cash & equivalents¹

- Operating runway to mid-2026

Simple Corporate Structure

- 38.3 million shares of common stock outstanding²
- No debt
- No warrants



BOLT
BIOTHERAPEUTICS

BDC-3042 (Dectin-2 agonist antibody)

BDC-3042 First-in-Class Agonist Antibody Program

Targeting Dectin-2 on Tumor-associated Macrophages (TAMs) for Anti-tumor Activity

BDC-3042

Dectin-2-targeting agonist antibody



Dectin-2 is a Pattern-recognition Receptor

- Dectin-2 is selectively expressed by TAMs in most solid tumors
- Dectin-2 agonism activates TAMs & elicits anti-tumor activity
- BDC-3042 activates human TAMs

Preclinical Proof of Concept Achieved

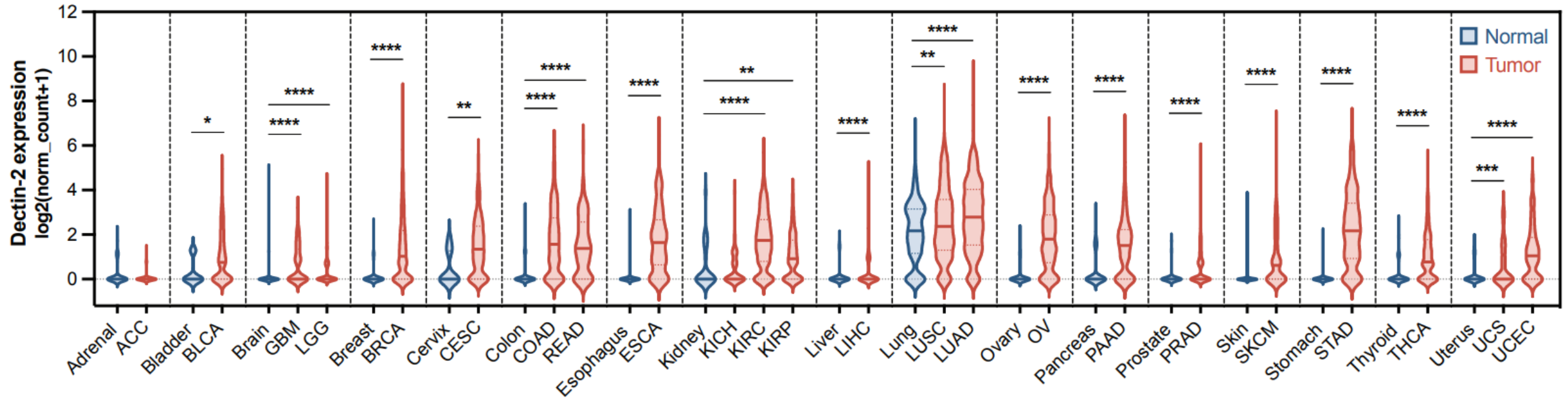
- Potent activator of human TAMs
- Dectin-2 agonism leads to activation of CD8+ T cells, complete regression, and immunologic memory
- Mediates anti-tumor efficacy in humanized mouse model

Clinical Study Ongoing

- Phase 1 dose-escalation trial across 7 tumor types

Dectin-2 Gene Expression is Elevated Across a Broad Set of Tumor Types

Potential market opportunity exceeds \$10 billion in initial target indications



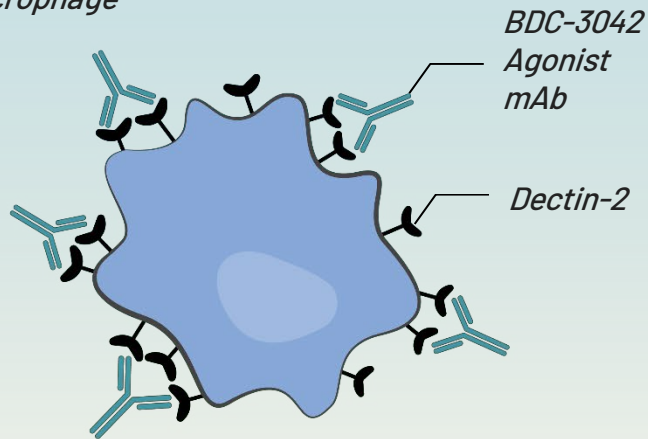
Dectin-2/CLEC6A mRNA expression in human tissue samples from the TCGA (tumor) and GTEX (normal) datasets (accessed Oct. 2019).

Kenkel JA, et al. Cancer Research. 2023;83(suppl 7):2964.

BDC-3042 Mechanism of Action

1 BDC-3042 binds to Dectin-2 & activates macrophages

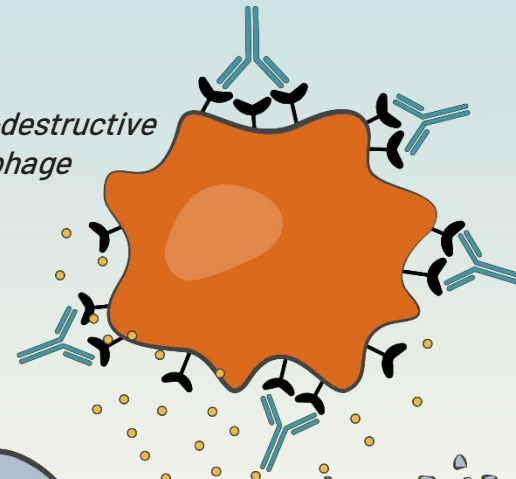
Tumor-supportive macrophage



2 Macrophages transform into tumor-destructive macrophages

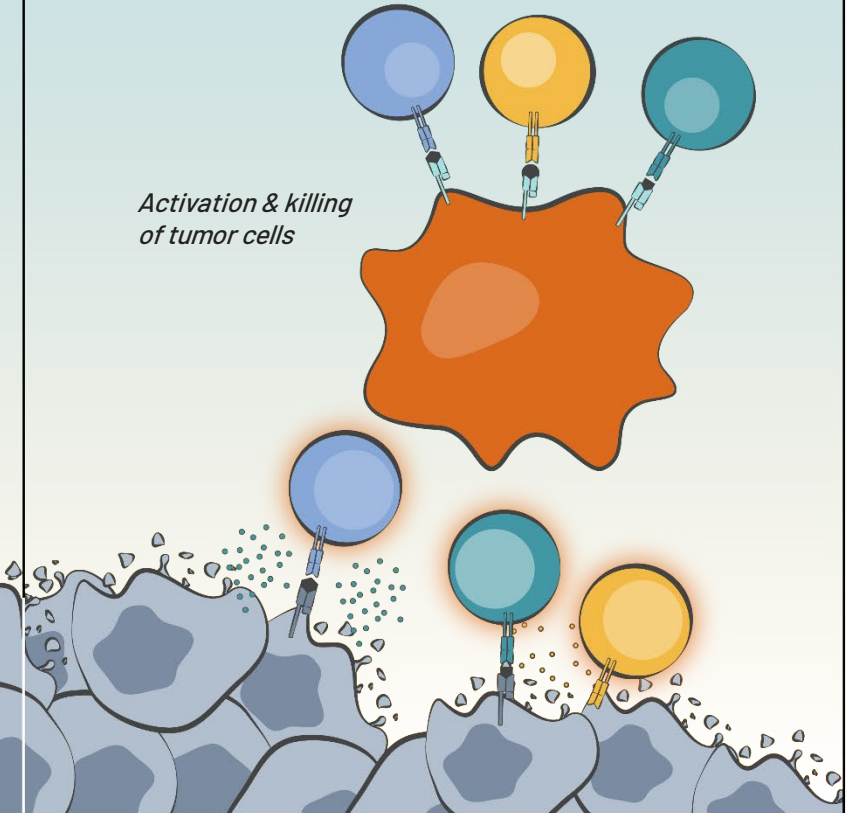
- ↑ Cytokines & chemokines
- ↑ Cytotoxic molecules
- ↑ Antigen presentation

Tumor-destructive macrophage



3 CD8+ T cell & NK cell recruitment, activation, & tumor killing

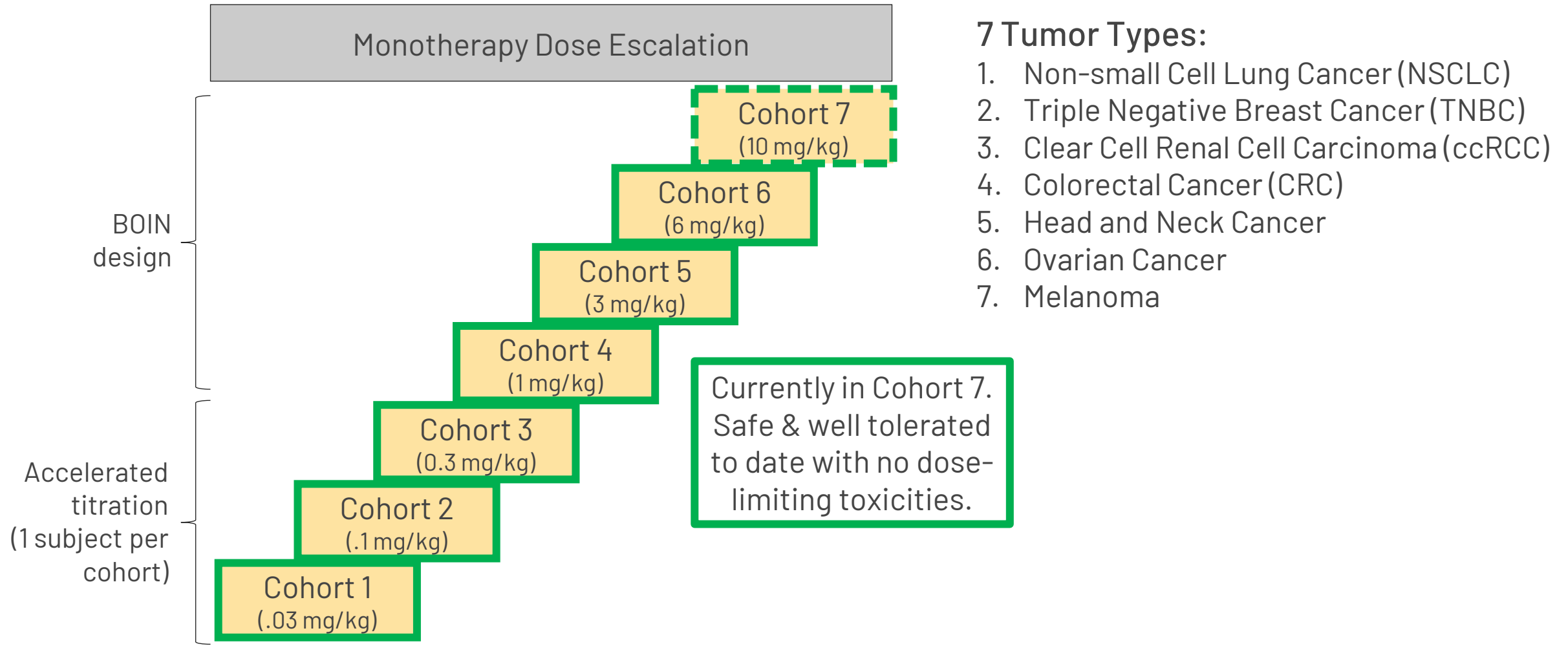
Activation & killing of tumor cells



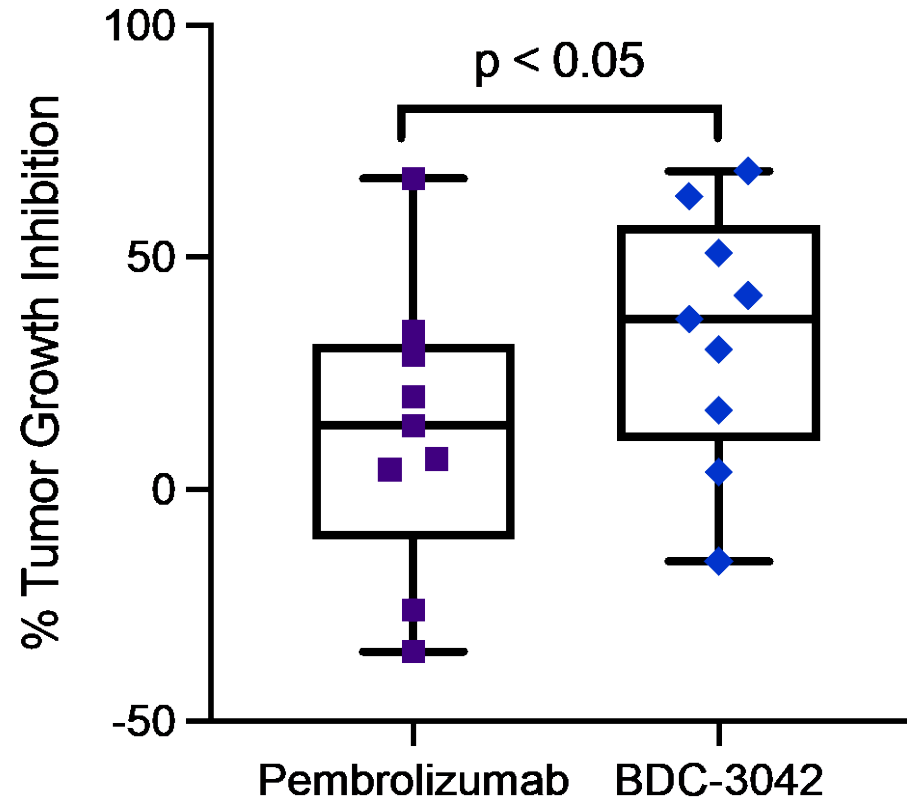
INNATE IMMUNITY

ADAPTIVE IMMUNITY

BDC-3042 Phase 1 Clinical Trial Ongoing in Various Solid Tumor Types



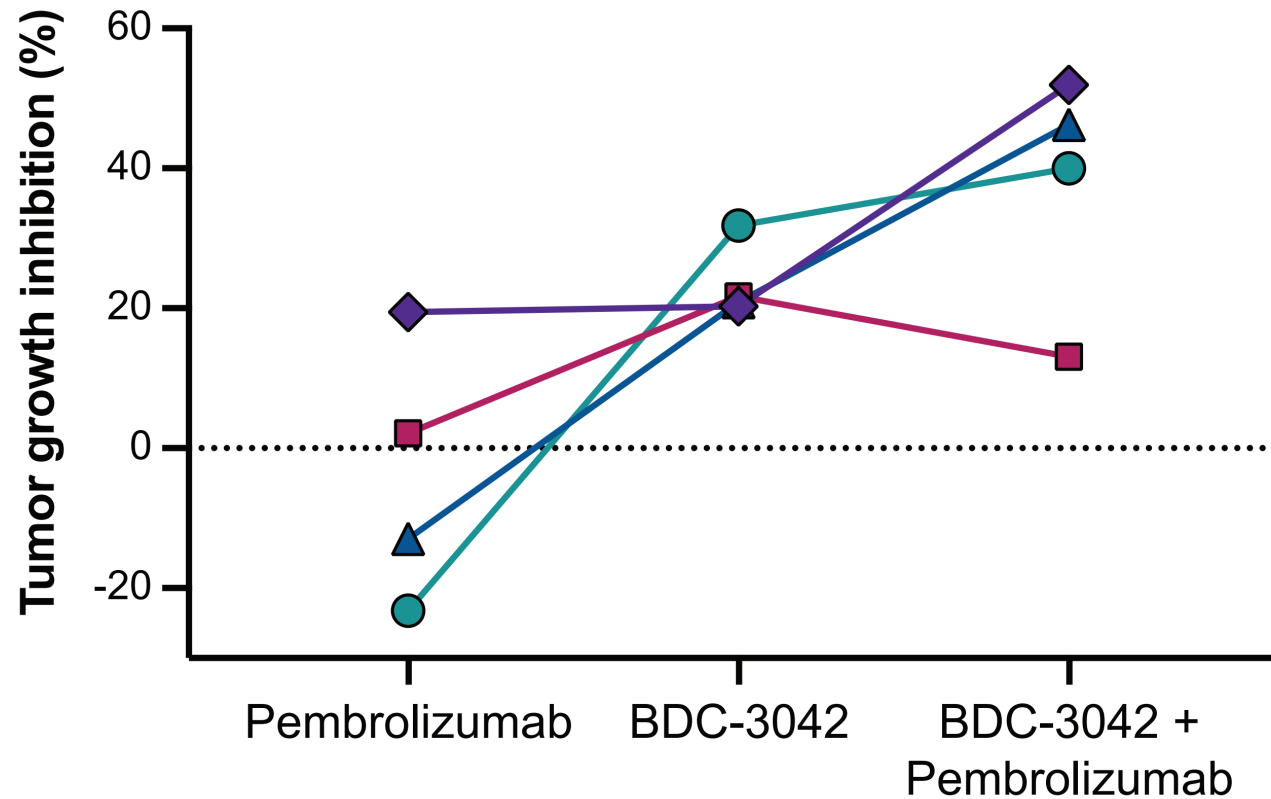
BDC-3042 Mediates Greater Anti-tumor Activity than PD-1 Inhibitor Pembrolizumab in Model of Triple-Negative Breast Cancer



Each data point represents one of 9 unique HSC donor cohorts

Anti-PD-1 Therapy May Improve Anti-tumor Activity of BDC-3042

Monotherapy & Combination Therapy in Humanized Mice Model of Triple-Negative Breast Cancer

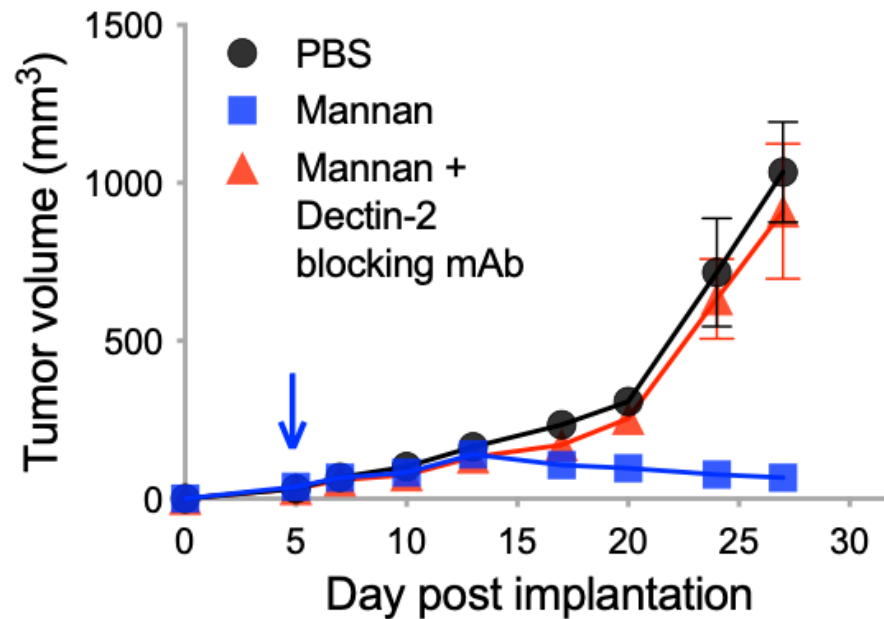


Colors represent individual HSC donor cohorts

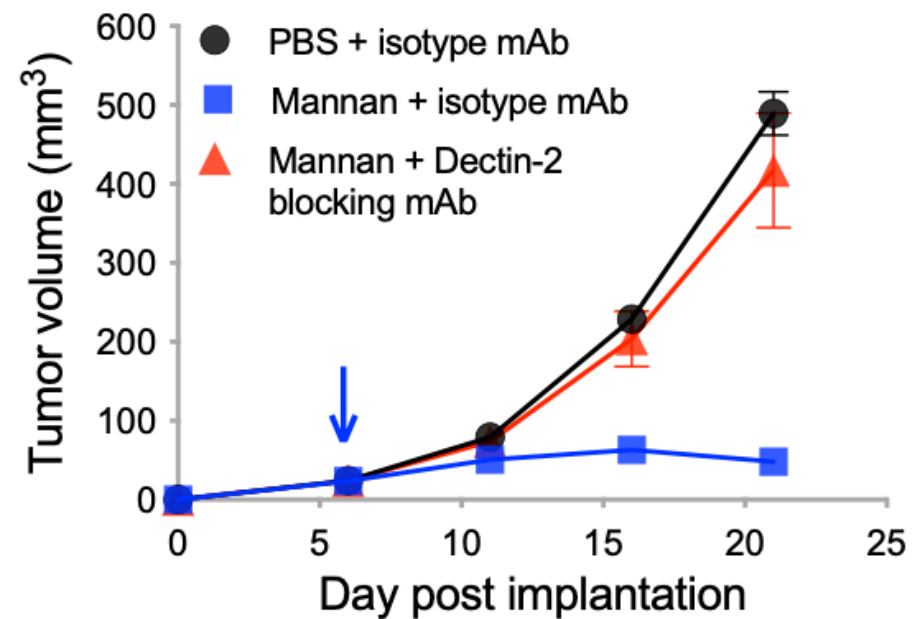
Kenkel JA, et al. Cancer Research. 2023;83(suppl 7):2964.

Dectin-2 Agonism Elicits Anti-Tumor Activity in Multiple Models

MB49 bladder cancer

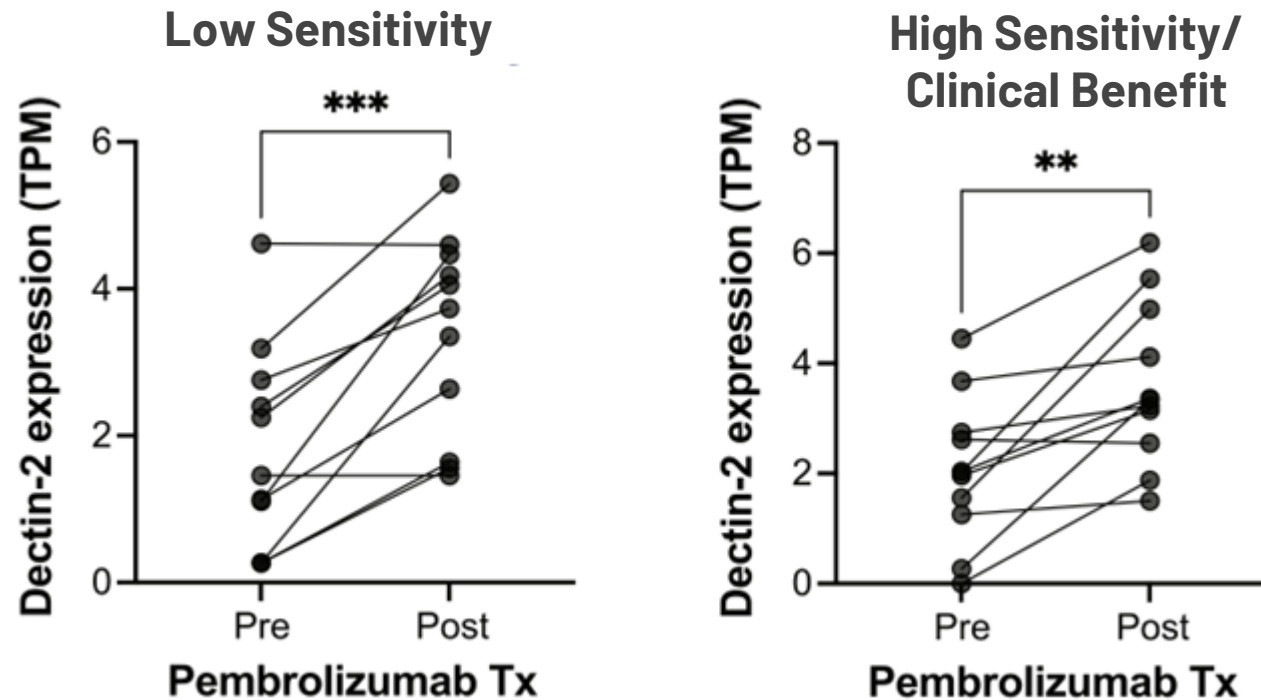


LMP pancreatic cancer



Anti-PD-1 Therapy Increases Dectin-2 Expression in Human Tumors

Pembrolizumab-Treated Mixed Solid Tumors (INSPIRE Trial)



Data obtained from Cindy Yang et al., Nat Commun 2021
Kenkel JA, et al. Cancer Research. 2023;83(suppl 7):2964.

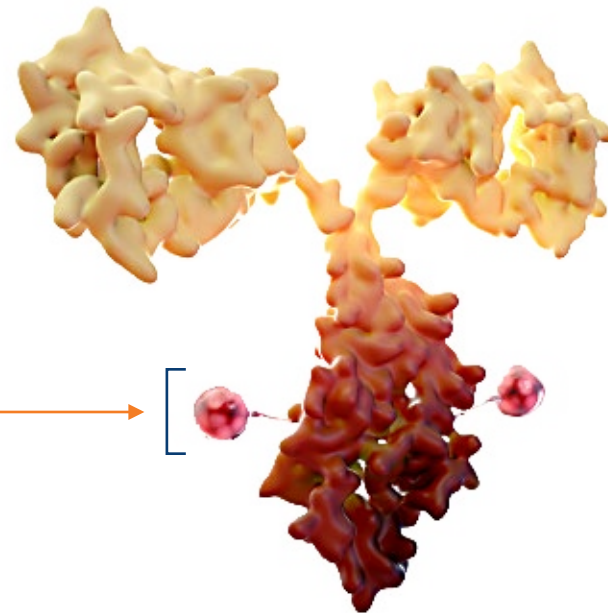


BOLT
BIOTHERAPEUTICS

Next-Generation Boltbody™ ISAC Platform

Pioneering a New Class of Immuno-oncology Products: Immune-stimulating Antibody Conjugates (ISACs)

Boltbody™ ISAC



Tumor-targeting Antibody

- Geo-locates ISAC to antigen on surface of a tumor cell
- Active Fc region drives antibody-dependent cellular phagocytosis (ADCP)

Immune-stimulating Linker-payload

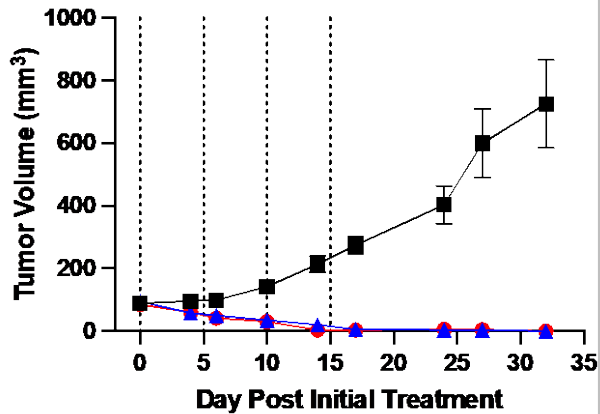
- Potent stimulator of the innate immune system
- Non-cleavable linker
- Cell membrane impermeable

Next-generation ISACs Outperform First-generation ISACs

Across multiple tumor antigens with varying expression levels

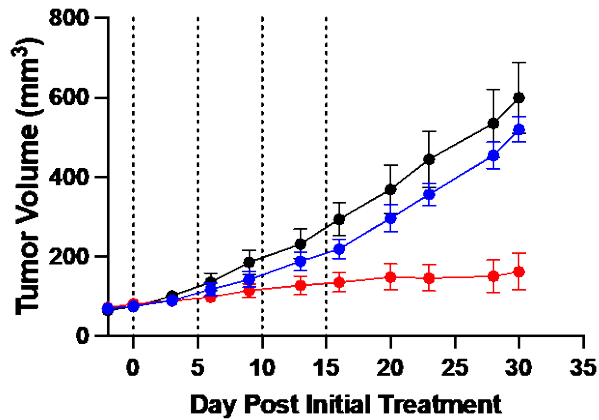
HER2

HCC1954 Model >500K Molecules/Cell



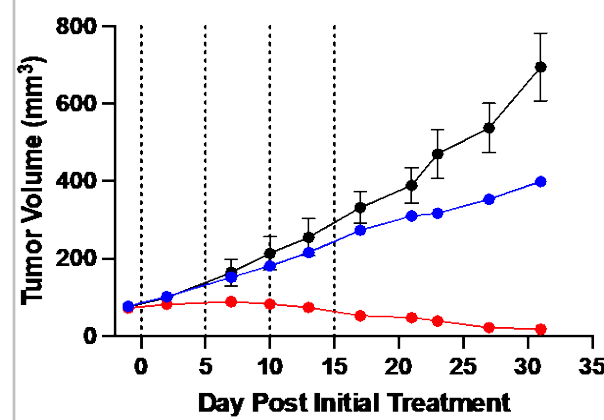
HER2

JIMT-1 Model ~25K Molecules/Cell



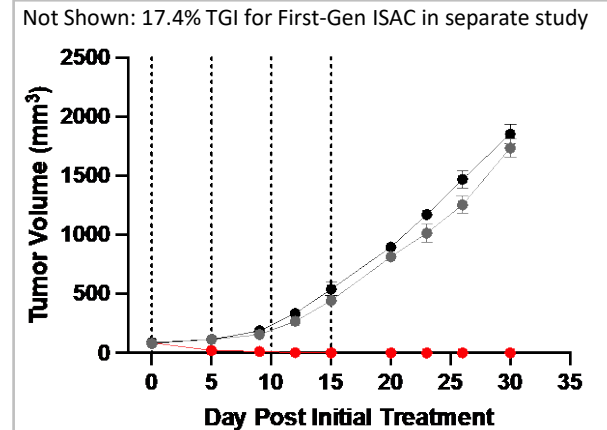
TROP2

JIMT-1 Model ~50K Molecules/Cell



CEA

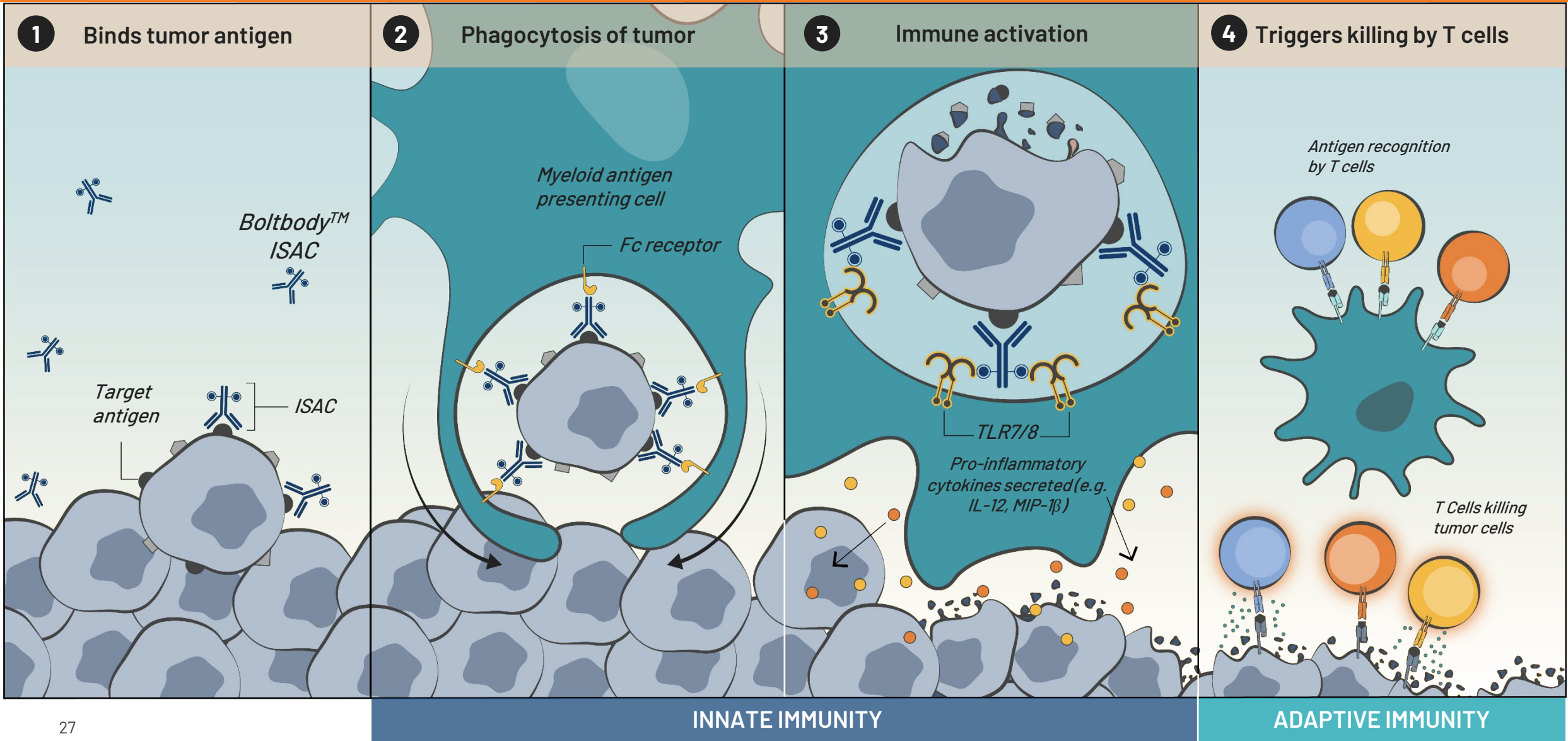
HPAF-II Model ≥60K Molecules/Cell



● Naked mAb Control ● First Generation ISAC ● Next Generation ISAC ● Isotype mAb

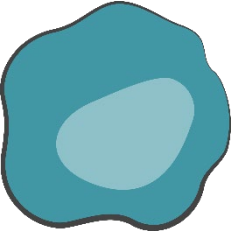

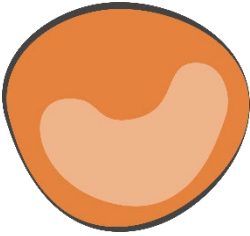
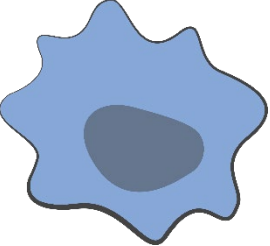
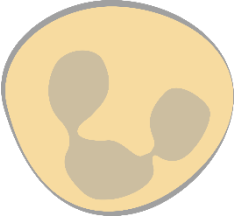
Pharmacodynamic responses in the tumor are also amplified in the tumor with Next Generation ISACs

Boltbody™ ISAC Mechanism of Action



Why Target TLR7 and TLR8?

- TLRs are receptors that recognize specific foreign patterns/signatures (e.g. viral, bacterial, fungal)
- TLR7 and TLR8 are expressed intracellularly in the phagolysosome in a variety of immune cells:

| TLR7 | TLR7/8 | | TLR8 |
|---|---|---|---|
|  |  |  |  |
| Plasmacytoid Dendritic Cells | Conventional Dendritic Cells | Monocytes | Macrophages |
| | | |  |
| | | | Neutrophils |

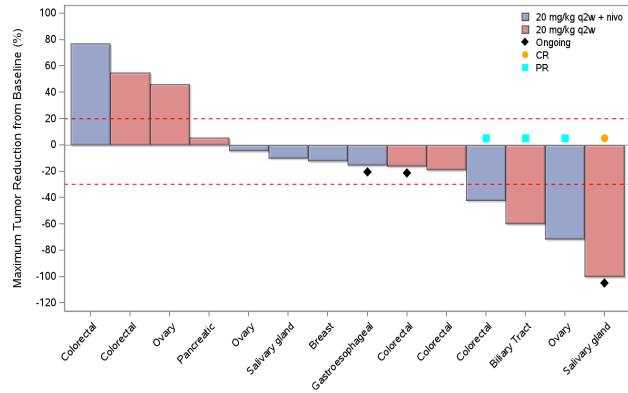
Goal of TLR7 and TLR8 stimulation is anti-tumor activity

Stimulation produces $IFN\alpha$

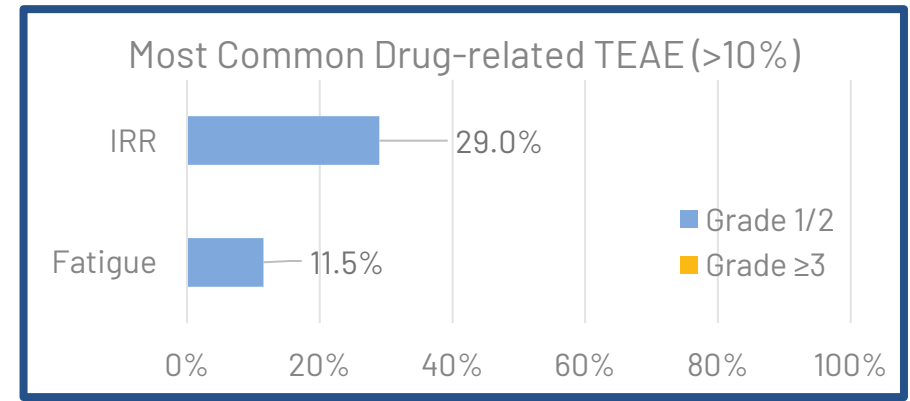
Stimulation produces cytokines such as $TNF\alpha$ and $IL-12p70$ and chemokines such as $MIP-1\beta$ (recruits more myeloid cells) & $IP-10$ (recruits more T cells)

Lessons from BDC-1001 Clinical Trials

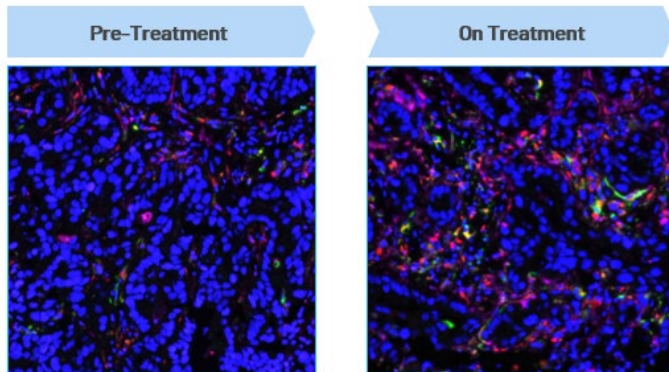
Boltbody ISACs can induce anti-tumor activity¹



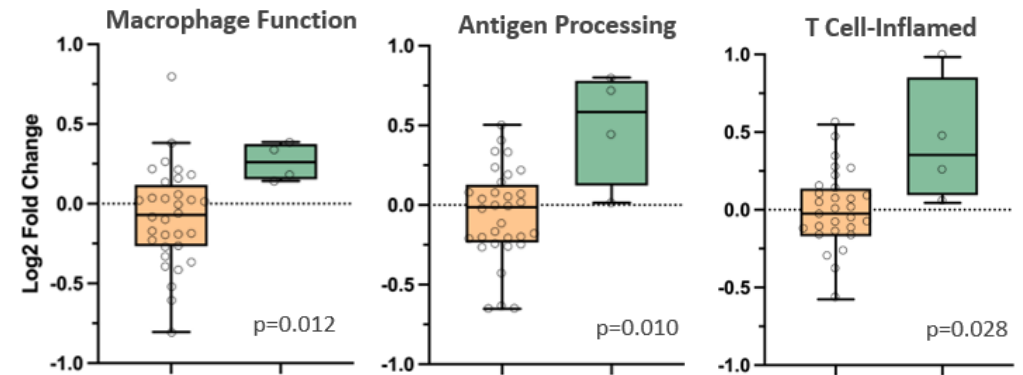
BDC-1001 safety data demonstrated safe delivery of an ISAC²



Boltbody ISACs can drive immune cell infiltration³



Boltbody ISACs can stimulate innate & adaptive immunity⁴



¹ Li B, et al. Ann Oncol. 2023;34(suppl_2):S458-S497 (ESMO, 2023), Data as of 29Aug2023

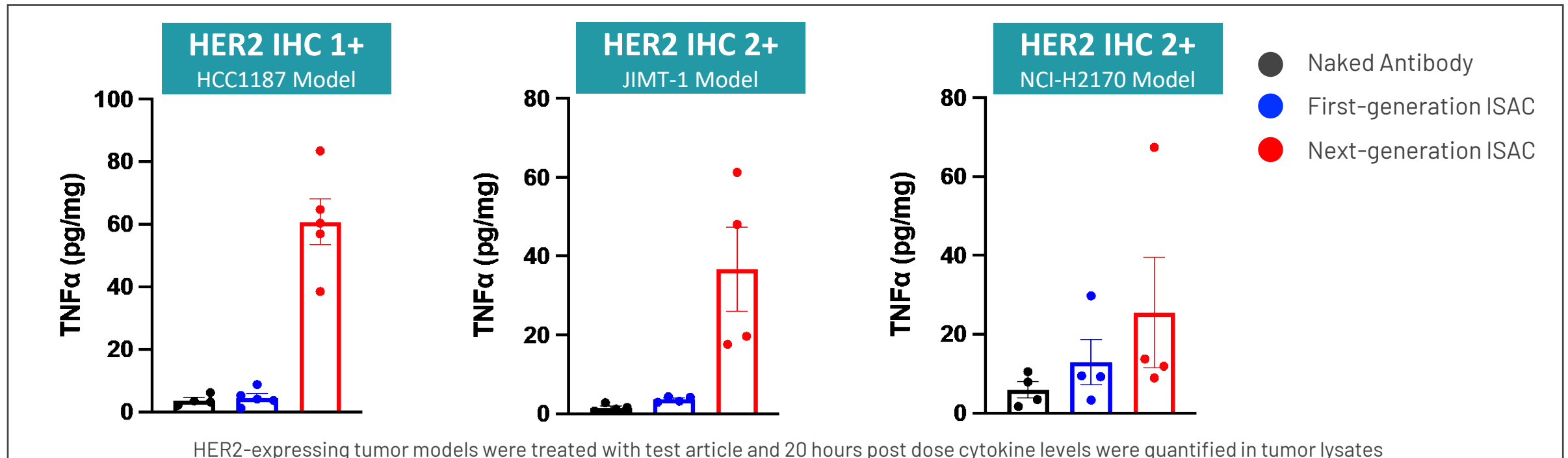
² Data cut-off date: 11Aug2023 (ESMO 2023 update)

³ Li B, et al. ASCO 2023. Abstract 2538

⁴ Illumina RNAseq data from Li B, et al. Ann Oncol. 2023;34(suppl_2):S458-S497 (ESMO, 2023)

Next-Generation ISAC Demonstrates Immunological Activity in tumor models with lower levels of antigen

- Next-generation ISAC produced greater levels of proinflammatory cytokines across all tumor models
- The advantage of the next-generation ISAC was particularly noticeable in lower-antigen tumor models





BOLT
BIOTHERAPEUTICS

BDC-4182 (Claudin 18.2 ISAC)

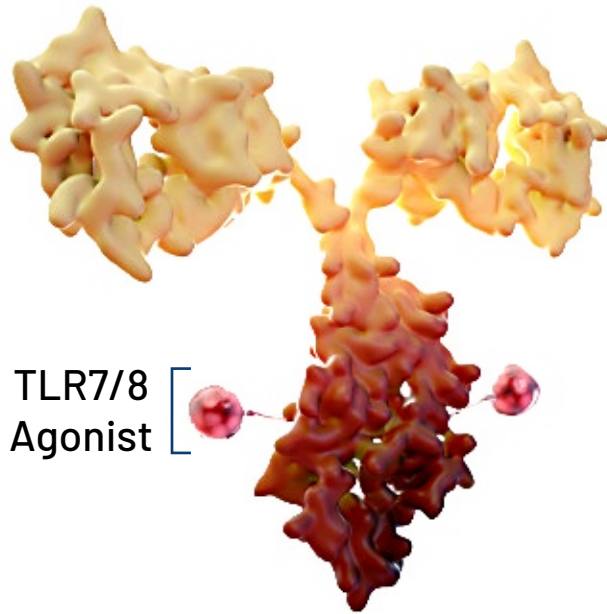
Next-Generation ISAC Clinical Candidate

BDC-4182: Claudin 18.2 Boltbody™ ISAC Program

Next-generation ISAC elicits significant anti-tumor efficacy in tumors with low antigen density

BDC-4182

Claudin 18.2 mAb



BDC-4182 Opportunity

- Clinically validated target in gastric cancer
- Large addressable market
- Activities to prepare for first-in-human clinical trial ongoing

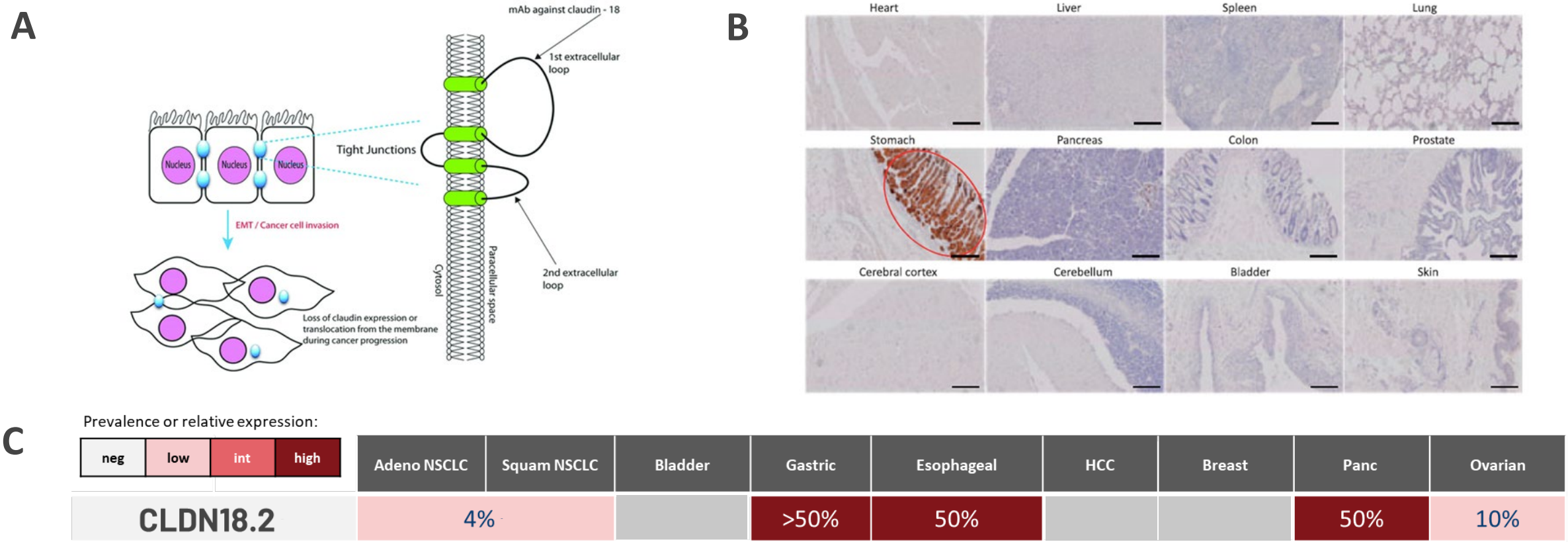
Key Attributes

- Dramatically more potent than BDC-1001 in preclinical assays
- Immunological memory protects against tumor re-challenge and recurrence
- Efficacy in low-antigen-density tumors doubles addressable market versus zolbetuximab

Differentiation in Competitive Claudin 18.2 Landscape

- Superior efficacy relative to TOPI-1 and MMAE-ADCs in multiple tumor models
- Safety benefit seen preclinically versus cytotoxic ADCs
- Immunological memory with epitope spreading provides promise of durable responses and prevents recurrence

Claudin 18.2 is an Attractive ISAC Target with Multi-Billion Dollar Market Opportunity



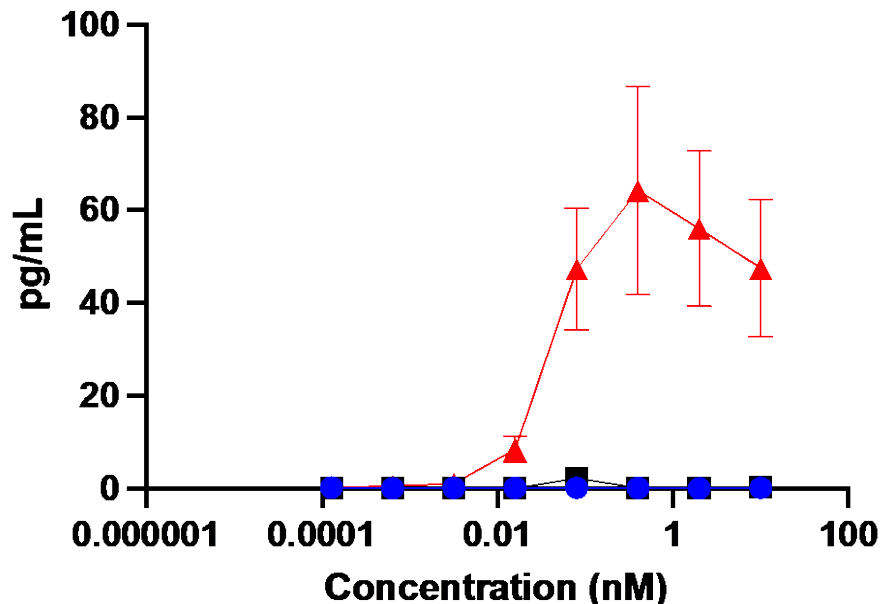
A) Claudin 18.2 (CLDN18.2) is located within tight junction in healthy cells and this controlled localization is lost in cancerous cells¹. **B)** CLDN18.2 is solely expressed in the stomach of normal tissue². **C)** High prevalence of CLDN18.2 positive tumors in gastric, esophageal and pancreatic tumors.

BDC-4182 Delivers Enhanced Immune Activation with Manageable Safety Profile

Enhanced Immune Activation

Human Dendritic Cell-Tumor Co-culture

IL-12p70 Cytokine Secretion



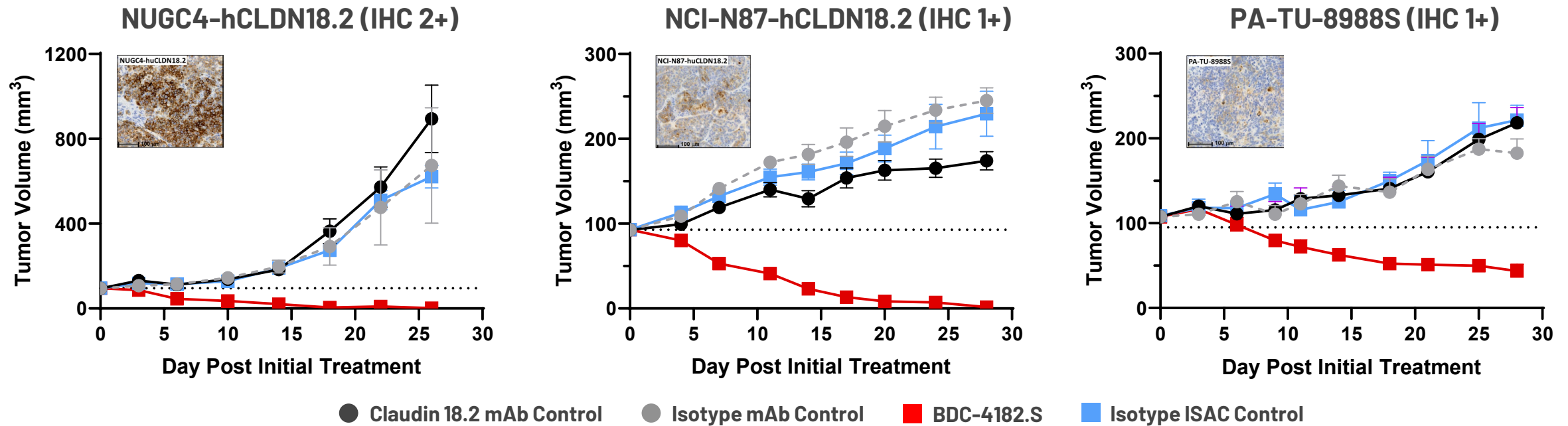
Tolerability at 12 mg/kg

NHP Toxicology

- MTD \geq 12 mg/kg in NHPs
- Changes consistent with Claudin 18.2 targeting
- Evidence of immune activation
- Differentiated toxicology profile from cytotoxic ADCs

● Claudin 18.2 mAb ● BDC-4182 ● Claudin 18.2 ISAC w/ BDC-1001 Payload

BDC-4182 Has the Potential to Expand the Market to Lower Claudin 18.2 Expression

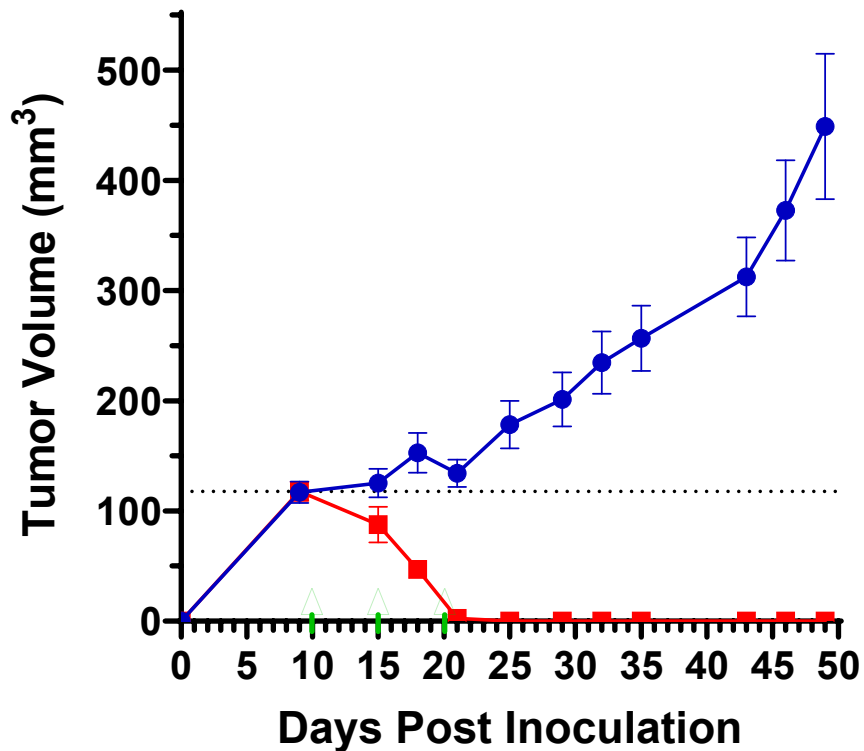


| | IHC Score | BDC-4182.S (TGI) | Tumor Free Mice |
|-------------------|-----------|------------------|-----------------|
| NUGC4-hCLDN18.2 | 2+ | 100% | 8 out of 8 |
| NCI-N87-hCLDN18.2 | 1+ | 99% | 6 out of 8 |
| PA-TU-8988S | 1+ | 76% | None |

BDC-4182 Elicits Complete Regression in Immunologically Cold KPC Model

Efficacy KRAS^{mut} P53^{mut} Syngeneic Tumor Model

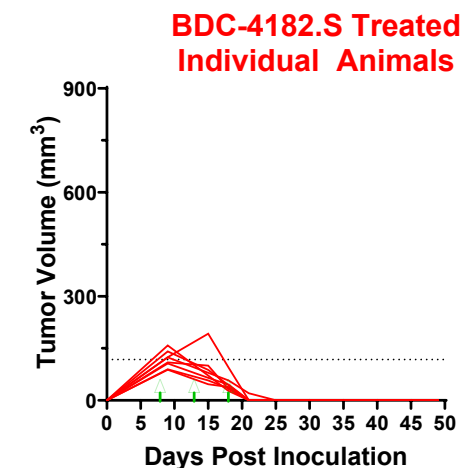
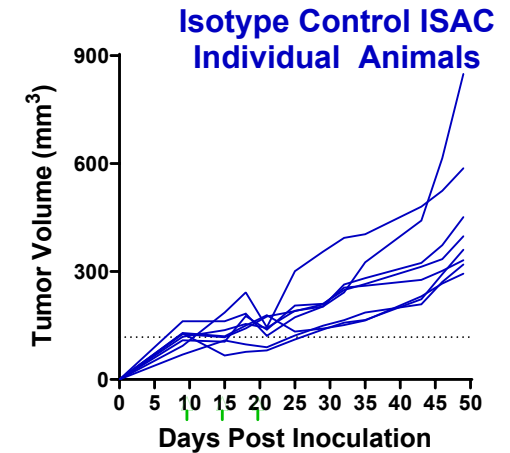
KPC-muCLDN18.2



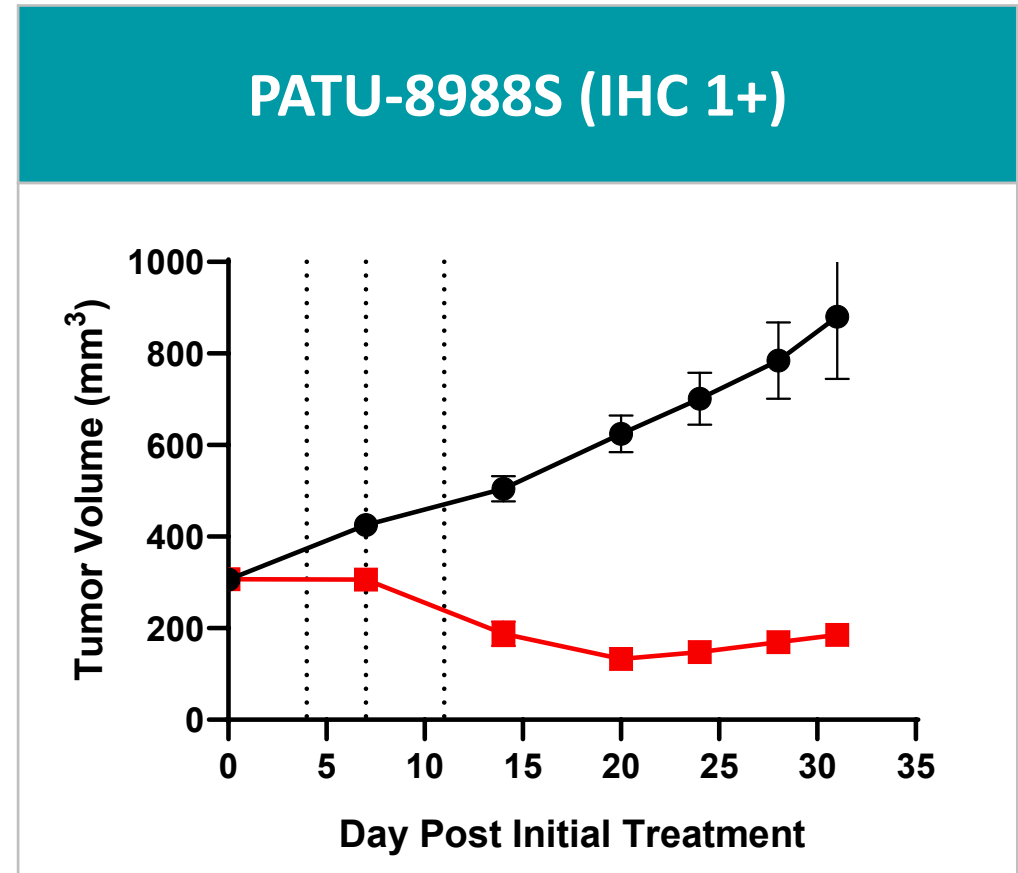
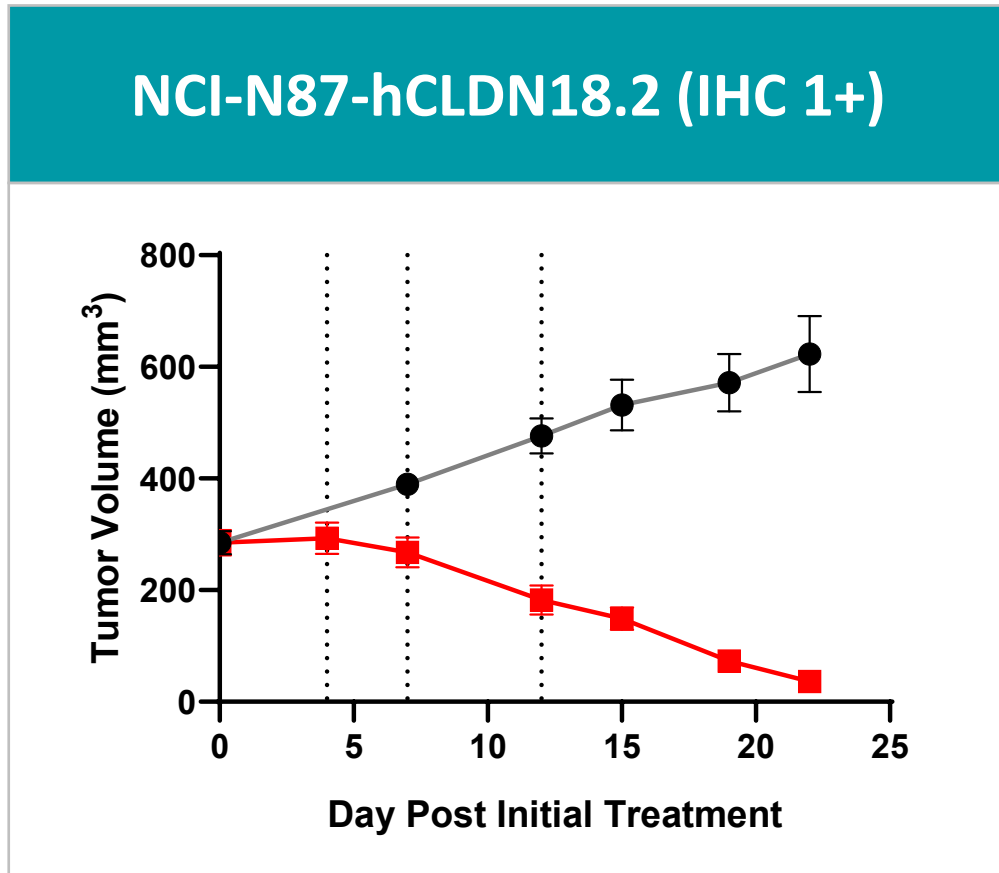
● Isotype Control ISAC

● BDC-4182.S

↑ Dosing Day



BDC-4182 Elicits Tumor Regression of Large IHC1+ Tumors in Xenograft Models



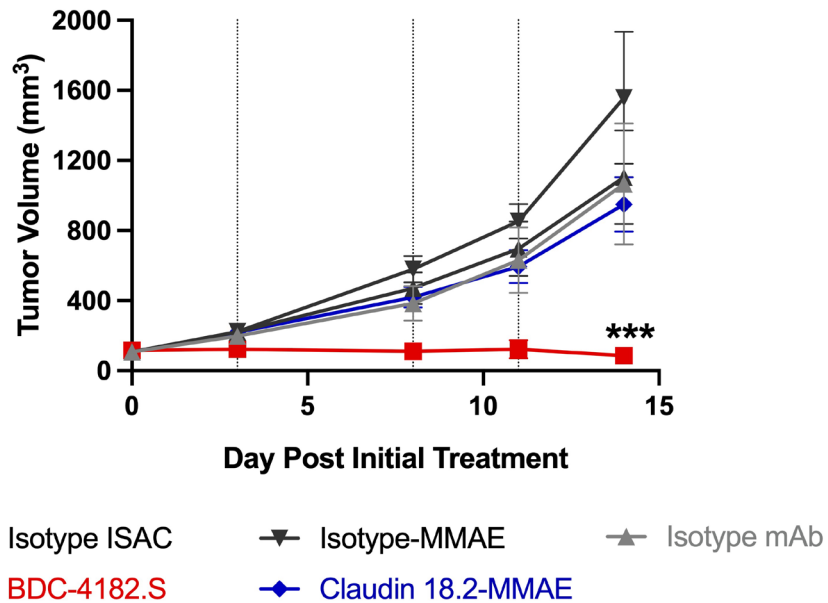
● Claudin 18.2 mAb Control

■ BDC-4182.S

BDC-4182 Activity Superior to MMAE and TOP1 ADCs in IHC1+ Syngeneic Model

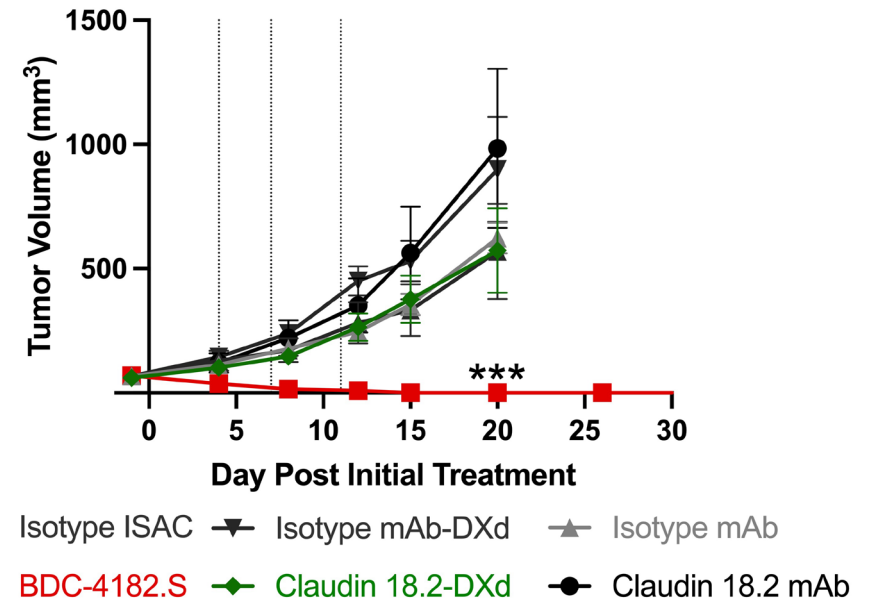
Superior to MMAE ADC

Limited ADC Efficacy in IHC1+ Model

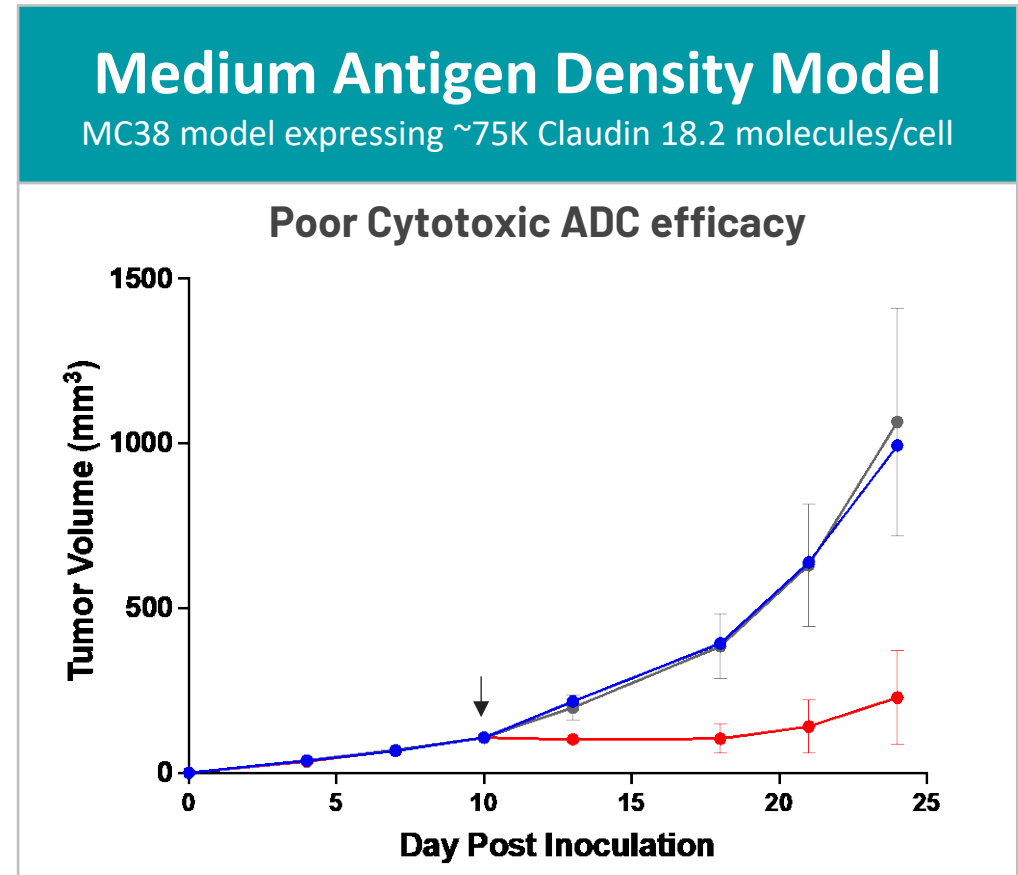
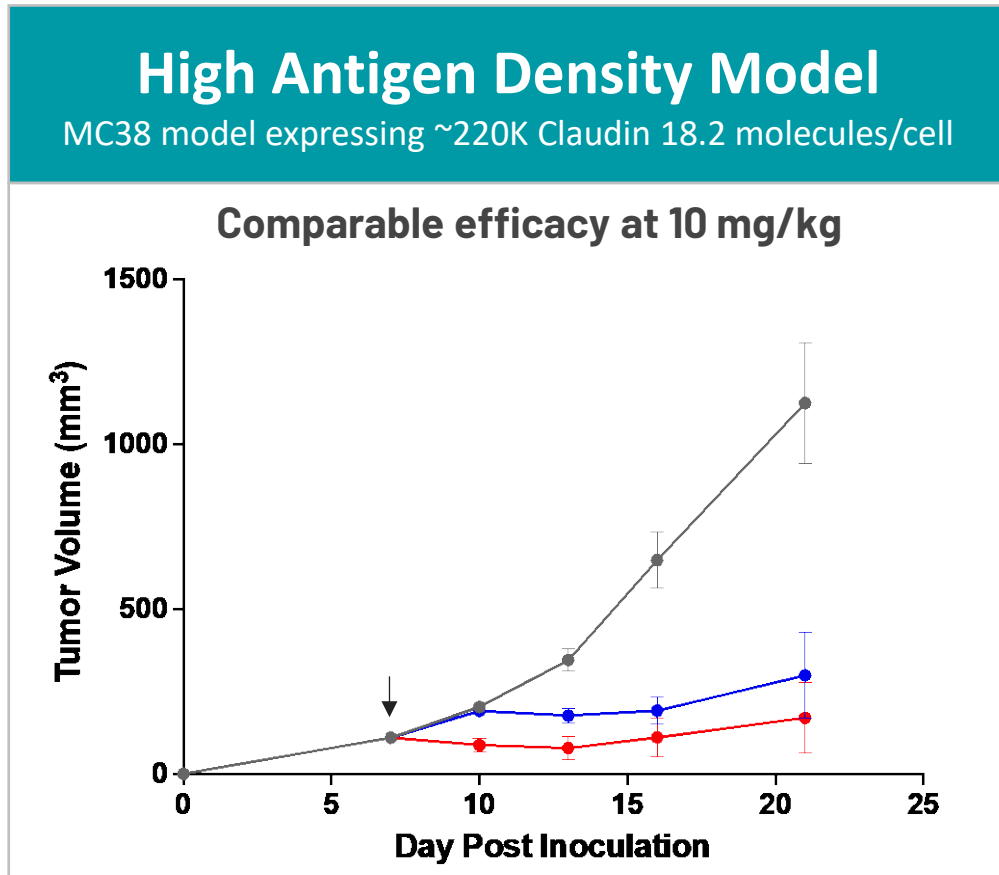


Superior to TOP1 (DXd) ADC

Limited ADC Efficacy in IHC1+ Model



BDC-4182 Outperforms Cytotoxic ADC in Syngeneic Tumor Models

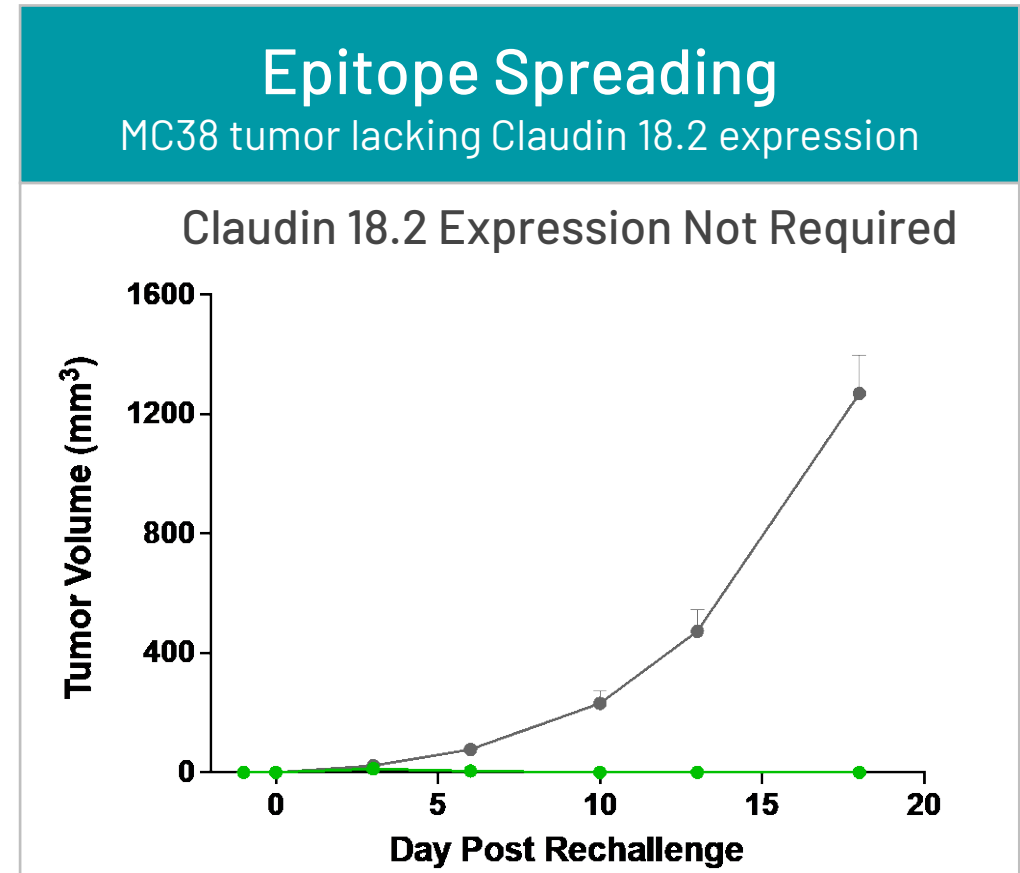
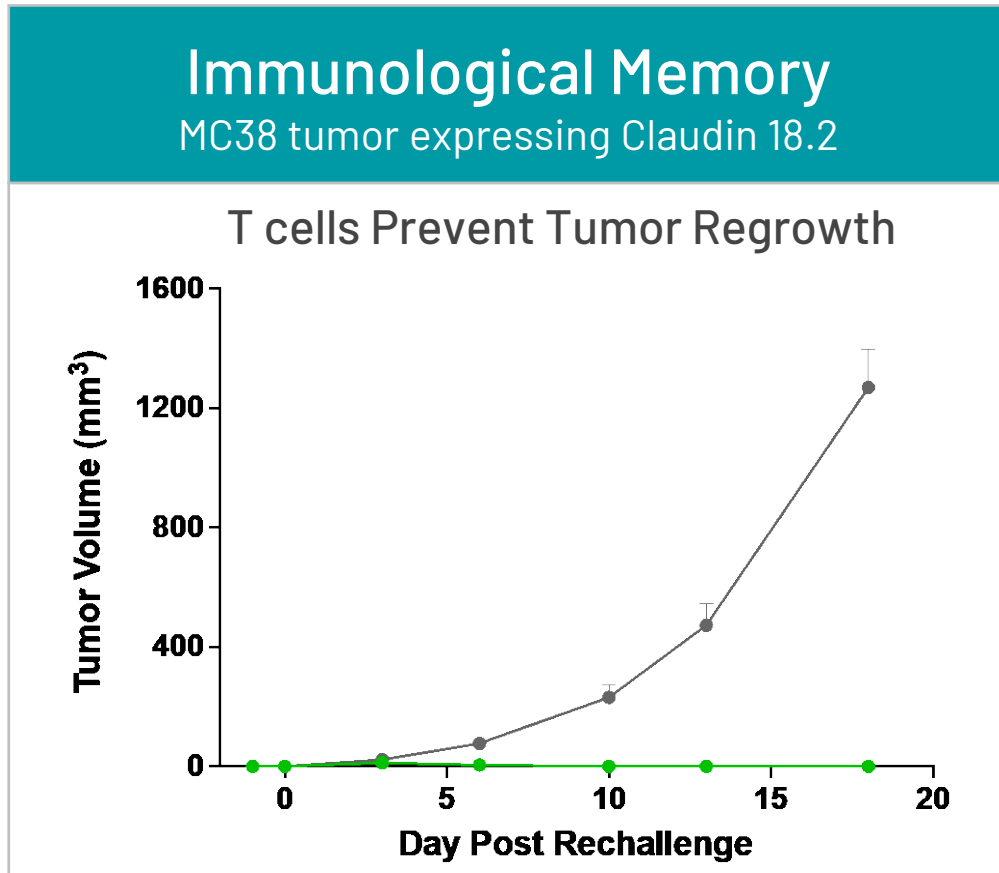


● BDC-4182.S

● Claudin 18.2 MMAE ADC

● Isotype mAb Control

BDC-4182 Offers a Differentiated MoA with Potential for Durable Responses



Mice with complete regression following BDC-4182.S treatment prior to rechallenge: ● T cell depletion ● No T cell depletion

BDC-4182 – Compelling Clinical Candidate Selected for Advancement

- **Robust activity in pre-clinical models**
 - Demonstrate superior efficacy compared to ADCs (MMAE and Topo I)
 - Induces tumor regression in low Claudin 18.2 expressing tumors
 - Elicits epitope spreading and T-cell-dependent immunologic memory
- **Tolerated in NHP at the highest dose tested (12 mg/kg)**
 - Findings are minor and generally transient and reversible.
 - No histological findings in the stomach.
 - Evidence of TLR7/8 activation and CLDN18.2 targeting
 - Favorable toxicology profile enables combination (e.g., with chemotherapy and/or checkpoint regimens) used in first-line and second-line treatments
- **Clinical trial initiation in 2Q 2025**



BOLT
BIOTHERAPEUTICS

Summary

BOLT: Innovative Pipeline with Multiple Near-term Inflection Points



BDC-3042 (Dectin-2 Agonist Antibody)

- First-in-class antibody with potential in a wide range of solid tumors
- Update on clinical activity from dose escalation in 1H25



BDC-4182 (Claudin 18.2 Boltbody™ ISAC)

- Next-gen ISAC targeting gastric & gastroesophageal cancers
- Clinical trial initiation in 2Q 2025



Efficient drug development

- Existing cash¹ funds key milestones & operations to mid-2026
- Collaborations fund themselves & provide future upside

ISAC = Immune-stimulating antibody conjugate



BOLT
BIOTHERAPEUTICS

Thank you.

Nasdaq: BOLT

Harnessing the power of the immune system to improve lives and eradicate cancer