Corporate Presentation

Nasdaq: PYXS
August 2022

PYXIS ONCOLOGY

Forward-Looking Statements

This presentation contains forward-looking statements. All statements other than statements of historical facts contained in this presentation, including without limitation statements regarding our future results of operations and financial position, future revenue, timing and progress of our current clinical trials, the expected results of our clinical trials, business strategy, prospects, research and development costs, timing and likelihood of success, the size of the market opportunities, as well as plans and objectives of management for future operations, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that are in some cases beyond our control and may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. The words ""may," "would," "should," "expects," "plans," "anticipates," "could," "intends," "target," "projects," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these terms or other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. The forward-looking statements in this presentation are only predictions and represent our views as of the date of this presentation. Although we believe the expectations reflected in such forward-looking statements are reasonable, we cannot guarantee that the future results, advancements, discoveries, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. The forward-looking statements are subject to a number of risks, uncertainties and assumptions, which are more fully described in our periodic and other reports filed with the Securities and Exchange Commission (SEC), including in the section titled "Risk Factors." Any forward-looking statement speaks only as of the date on which it was made. Pyxis Oncology undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

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PYXIS ONCOLOGY

Company Highlights

- Clinical portfolio targeting difficult-to-treat cancers
- Agile business model advancing internally and externally-sourced therapeutic candidates
- Multiple potential clinical catalysts across two leading ADC and IO programs over the next 18 months
- Executive team with proven track record of success in cancer development and commercialization
- Strong balance sheet of $207 million cash as of August 15, 2022 with extended cash runway through 2H 2024

PYXIS ONCOLOGY

Intentionally Built Organization with Substantial Functional Expertise and Proven Drug Development Experience

111 Total prior drug approvals/ launches

59 Prior Oncology drug approvals/ launches

117 Number of prior biotech/ pharma companies

>75 Decades of biotech/ pharma experience

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Source: Onboarding Survey of Pyxis employees

Significant Industry Contributions

MYLOTARG (gemtuzumab ozogamicin) · BESPONSA (inotuzumab ozogamicin) · Rituxan (Rituximab) · AVASTIN (bevacizumab) · Tarceva (erlotinib)

Herceptin SC (trastuzumab subcutaneous) · TRODELVY (sacituzumab govitecan-hziy) · Kadcyla (trastuzumab emtansine) · Zynlonta (loncastuximab tesirine-lpyl) · PADCEV (enfortumab vedotin-ejfv) · ADCETRIS (brentuximab vedotin)

TORISEL (temsirolimus) · Abecma (idecabtagene vicleucel) · BAVENCIO (avelumab) · Caprelsa (vandetanib) Tablets · TEPMETKO (tepotinib) · Eligard (leuprolide acetate)

Eloxatin (OXALIPLATIN injection) · firazyr (icatibant injection) · Jemperli (dostarlimab-gxly) · IBRANCE (palbociclib) · IDHIFA (enasidenib) · Kepivance (palifermin)

Nexavar (sorafenib) tablets · PHESGO (pertuzumab/trastuzumab/hyaluronidase-zzxf) · Empliciti (elotuzumab) · REZUROCK (belumosudil) tablets · SARCLISA (isatuximab-irfc) · skysona

TALZENNA (talazoparib) · TIBSOVO (ivosidenib tablets) · Uroxatral (alfuzosin HCl) · Vectibix (panitumumab) · Zejula (niraparib) · zynteglo (autologous CD34+ cells encoding βA-T87Q-globin gene)

Pharma-trained, Biotech-minded

Pfizer · Genentech · ADC THERAPEUTICS · Bristol Myers Squibb · Lilly

Johnson & Johnson · Roche · teva · Wyeth · EMD SERONO

Seagen · ALEXION · Baxter · Jounce THERAPEUTICS · AMGEN

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Daiichi-Sankyo · BAYER · Incyte · idera · Kadmon · SANOFI

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President and CEO

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Pfizer

Pam Connealy, MBA

CFO

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Genentech
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Jay Feingold, MD, PhD

CMO

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Innovating Science. Inspiring Hope.

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We see what's next ONCOLOGY

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Pipeline Prioritization Hones Focus on Most Advanced Programs While Maintaining Financial Flexibility to Strategically Pursue BD Opportunities

Pausing Development of Earlier-Stage Pipeline to Enhance Focus on Assets with Potential Near-Term Catalysts

$207M

Cash available to progress a **refocused pipeline** with continued advancement of potential first-in-class and/or best-in-class programs to improve the lives of patients with difficult-to-treat cancers

Reduced Cash Burn + **Creative Partnership and Funding Opportunities** = **Capitalize on Current Market Dislocation**

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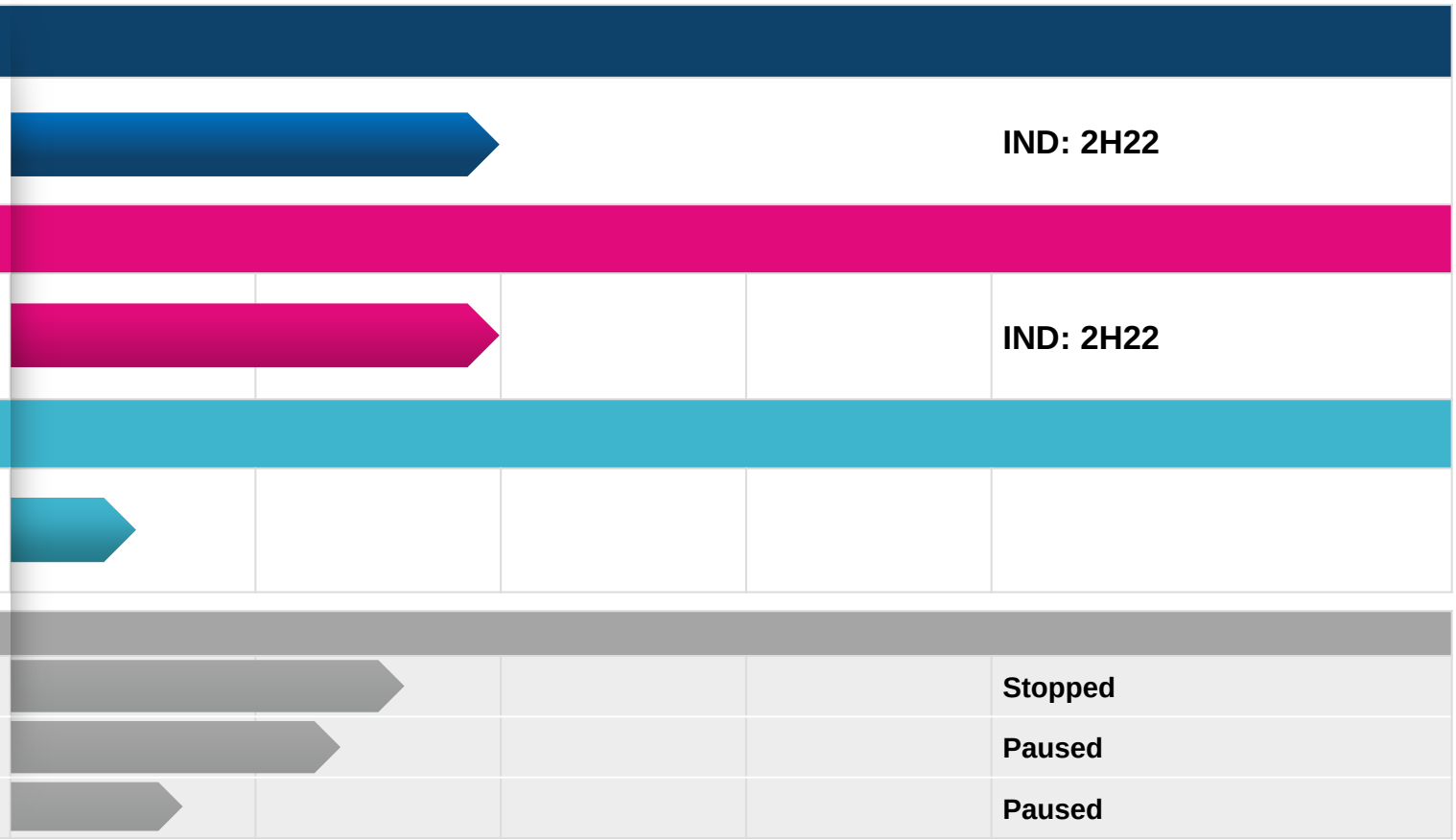
Reprioritized Pipeline & Resources with Potentially Significant Near-Term Clinical Milestones

Program	Proposed Indications	Next Milestone
Antibody-Drug Conjugates (ADC)		
Anti-EDB (PYX-201)	NSCLC, Breast	IND: 2H22
Immuno-Oncology (IO)		
Anti-Siglec-15 (PYX-106)	Thyroid, Head and Neck, NSCLC	IND: 2H22
Multiple Modalities		
Internal Discovery & Joint Ventures	Solid and Heme Tumors	
Deprioritized Programs		
Anti-DLK1 ADC (PYX-202)	SCLC, STS	Stopped
Anti-CD123 ADC (PYX-203)	AML, MDS	Paused
Anti-KLRG1 mAb (PYX-102)	Solid Tumors	Paused



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Anti-EDB (PYX-201): Overview

Novel non-internalizing ADC with a well characterized linker/payload designed to induce immunogenic cell death

- **Targeting Antibody Used for Tumor Imaging Studies Showed Highly Tumor Restricted EDB Expression**
- **Designed to have Bystander Effect Targeting Tumor Cells and TME with Potential for Checkpoint Inhibitor Combo**
- **Designed with Linker-Payload and Conjugation Chemistry that has Exhibited Clinical Activity**
- **Designed to have Activity Independent of Tumor Cell Surface Expression**

Anti-EDB (PYX-201): Mechanism of Action

A Holistic Antitumor Strategy

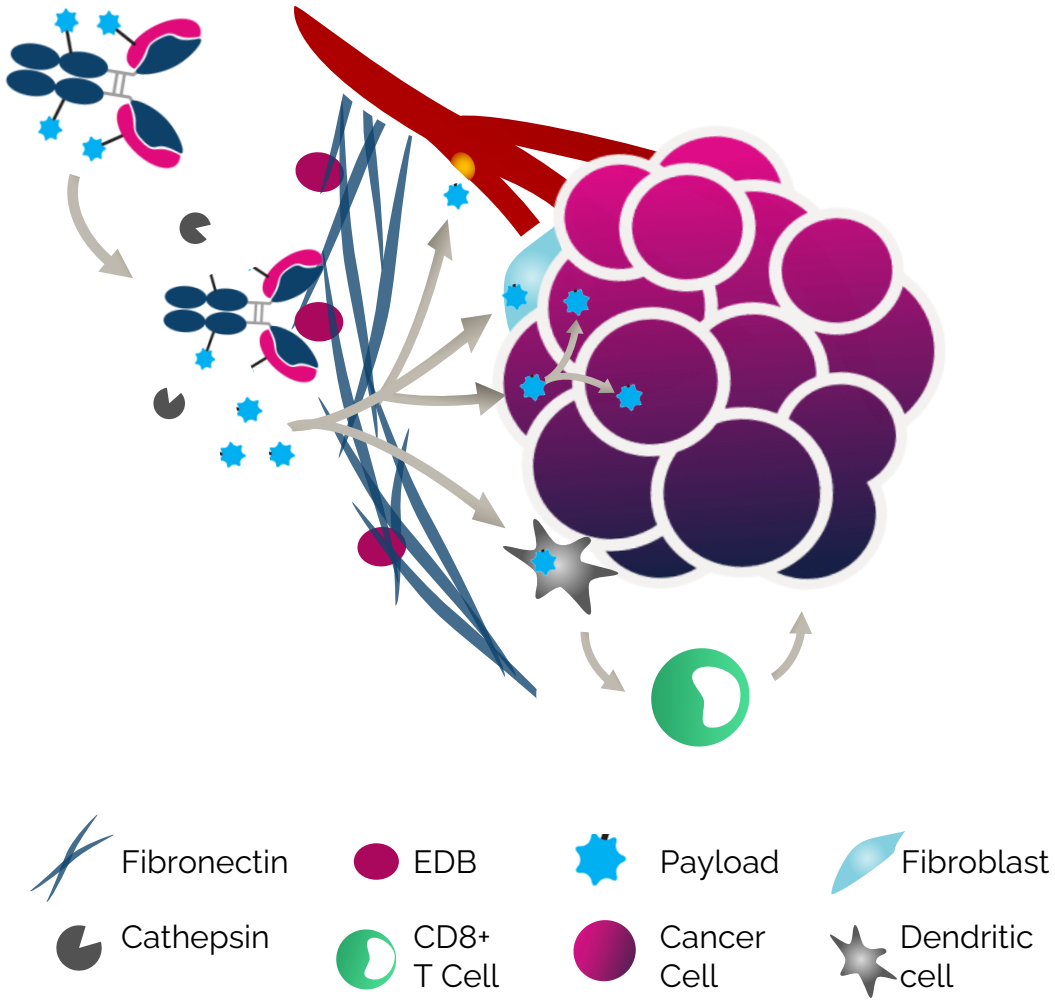
1. **Targeting**
   Anti-EDB (PYX-201) binds to EDB-fibronectin, an integral component of extracellular matrix in the tumor

2. **Payload Release**
   Cathepsin cleaves anti-EDB (PYX-201)'s plasma membrane permeable auristatin payload

3. **Direct Cell Killing**
   Auristatin directly attacks cancer cells and other components that form the supportive tumor infrastructure, including fibroblast and tumor vasculature

4. **Strong Bystander Activity**
   Auristatin traffics into and kills adjacent tumor cells

5. **Immunogenic Activity**
   Auristatin induces immunogenic cell death and dendritic cell maturation for subsequent T cell priming to elicit an antitumor immune response



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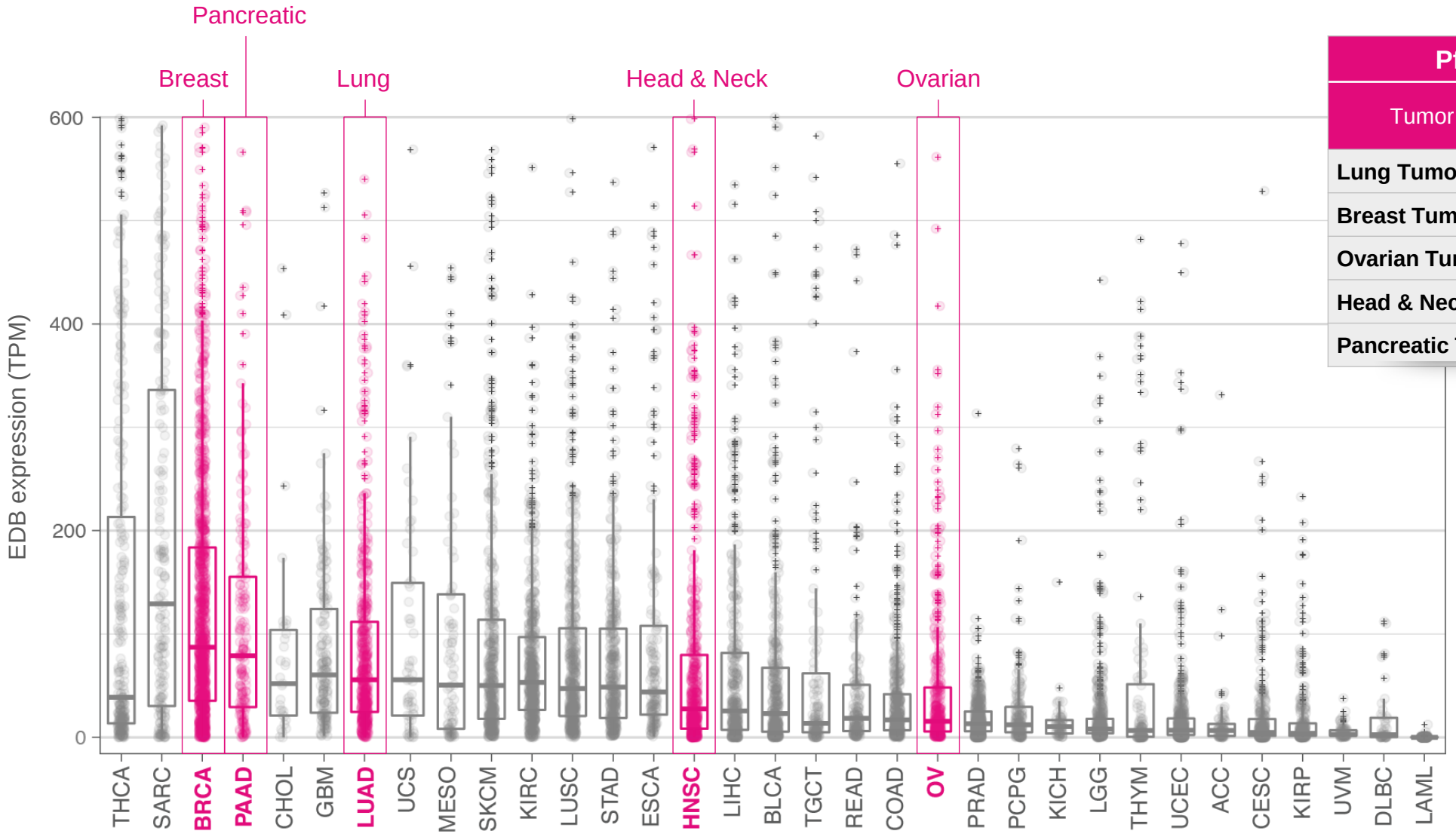
EDB is a Differentiated Target with High Expression Profile



Pfizer IHC Data	
Tumor Type	% Moderate or High (IHC)
Lung Tumors	**100**
Breast Tumors	**92**
Ovarian Tumors	**83**
Head & Neck Tumors	**80**
Pancreatic Tumors	**79**

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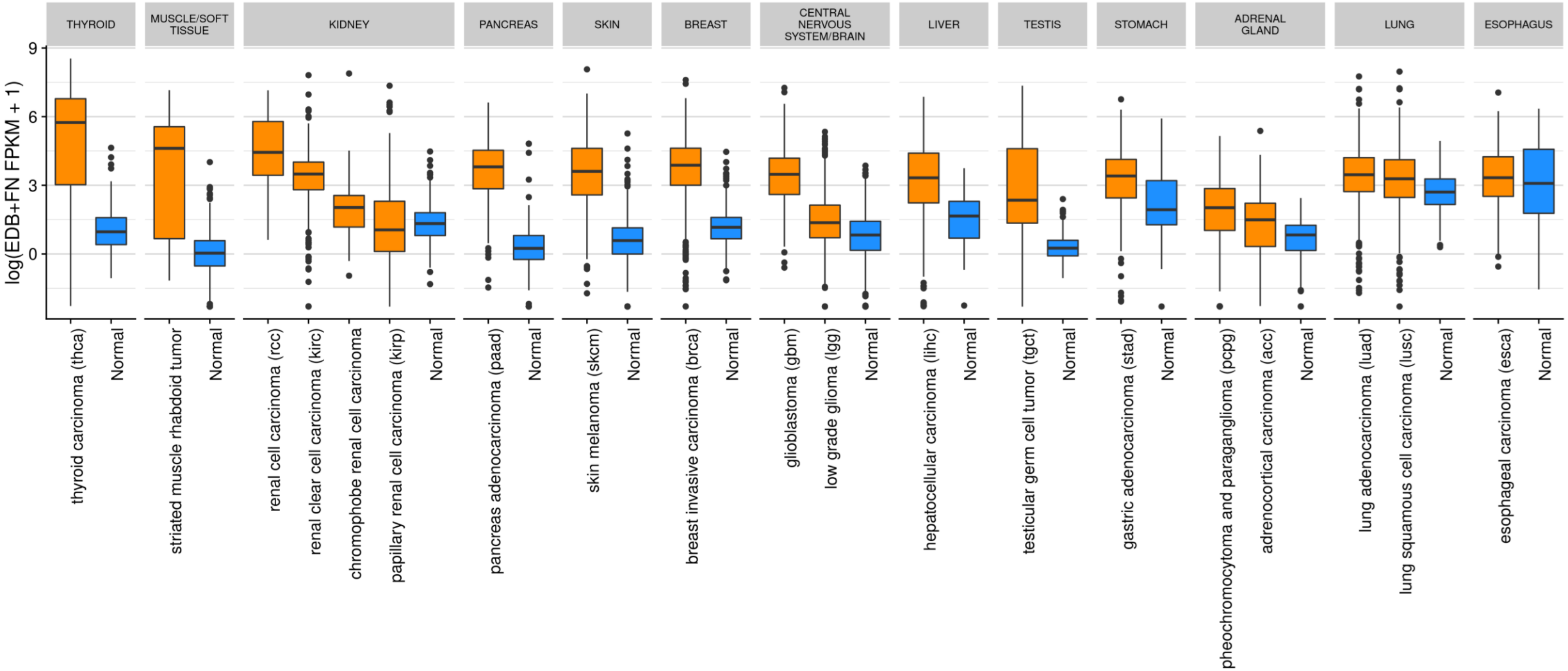
Source: Pyxis Oncology data, other than as indicated.

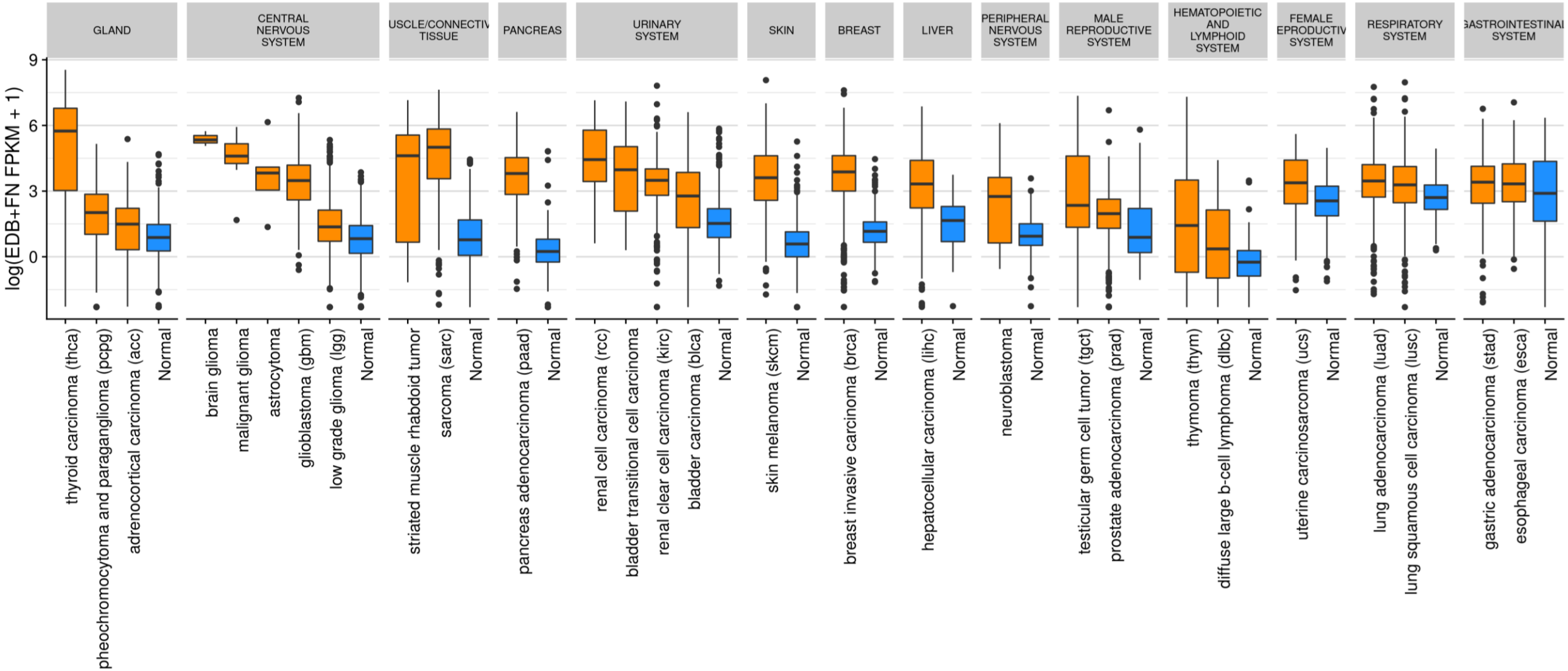
Comparison of Tumor vs. Normal Expression of EDB+FN mRNA

Indications where tumor expression is significantly higher than normal tissue expression



BH-adjusted p-value < 0.05.
Source: Pyxis Oncology data.

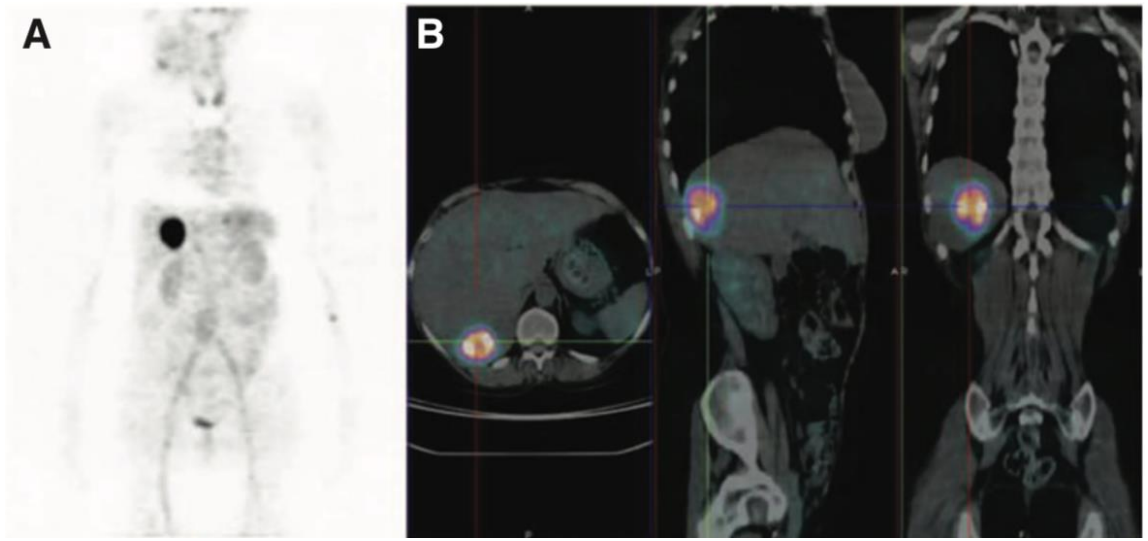
Broader Comparison of Tumor vs. All Normal Expression of EDB-FN mRNA



BH-adjusted p-value <0.05.
Source: Pyxis Oncology data.

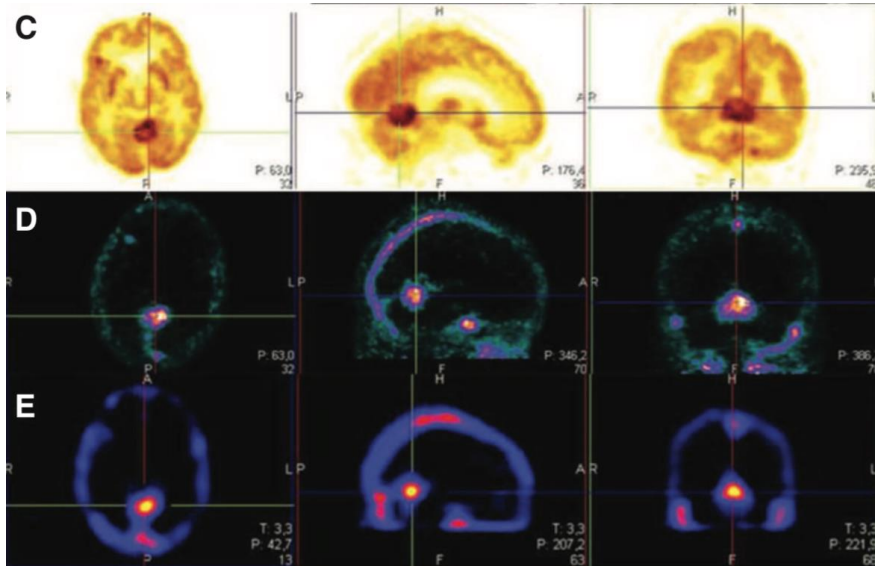
ADC PYX-201 (EDB-Auristatin) Target De-risking: EDB-targeted Radio-conjugate Accumulates in Malignant Lesions

PET imaging using radiolabeled target-antibody shows accumulation in hepatic and CNS lesions



A) PET image 24 hours p.i., showing a hepatic lesion with high antibody uptake.

B) Corresponding transaxial, sagittal, and coronal projections PET/CT fusion images.



C) FDG PET image of a lesion in the cerebellar region (transaxial, sagittal, and coronal projections).

D) Corresponding PET images from the diagnostic phase with radio-labeled antibody (24 hours p.i.).

E) SPECT images posttherapy from the use of radio-labeled antibody (24 hours p.i.).

Poli GL et al 2013, *Cancer Immunol Res*; 1(2); 134–43

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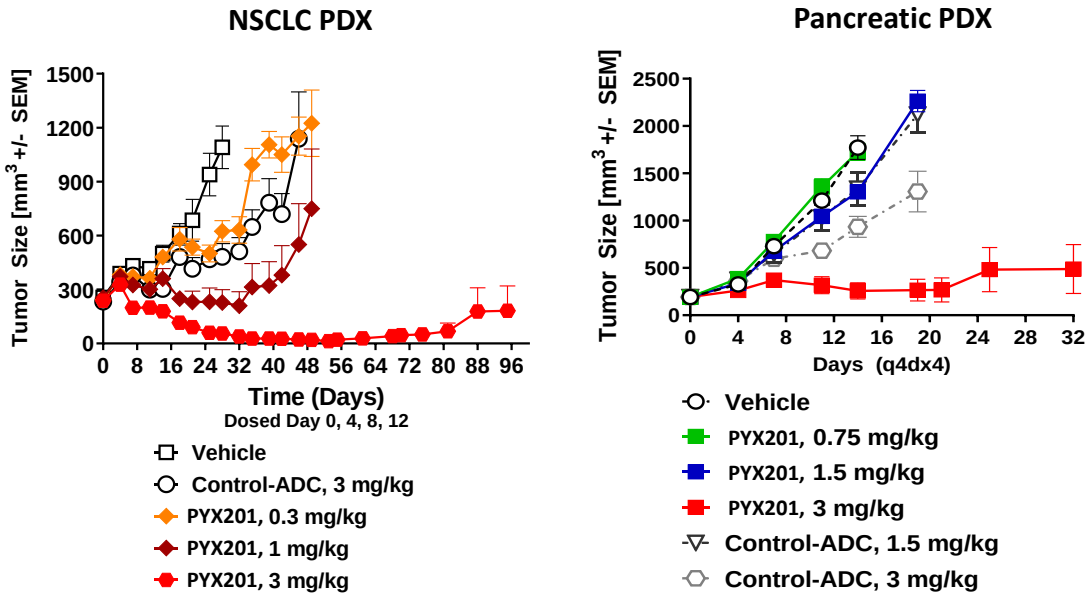
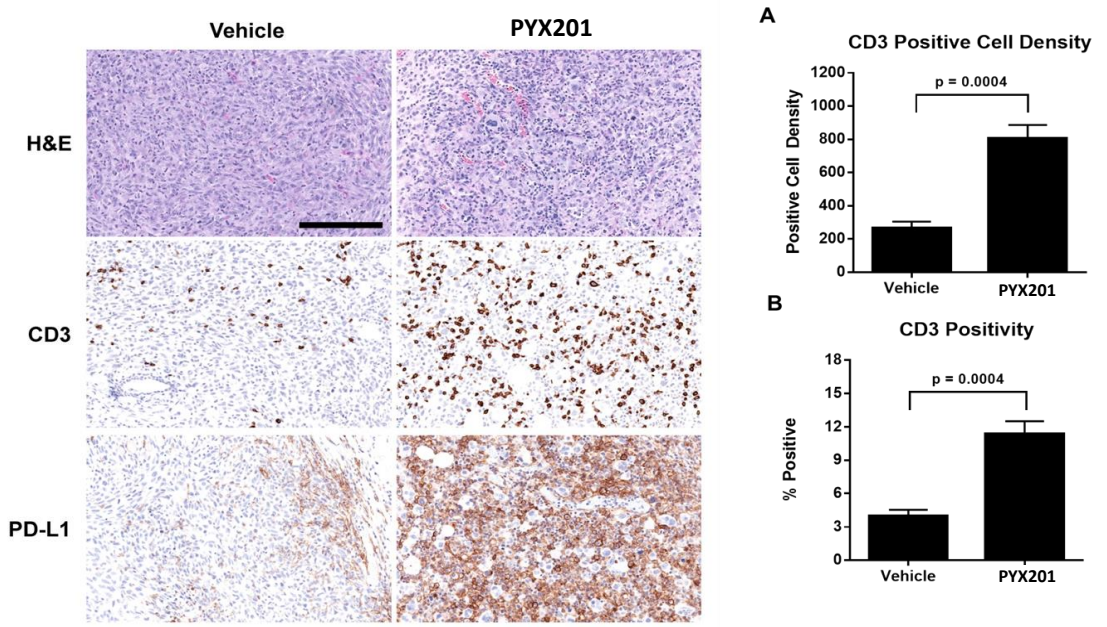
Anti-EDB (PYX-201): Summary of Key Data

PYX-201 is highly active in patient-derived xenograft (PDX) models of NSCLC and Pancreatic Cancer*



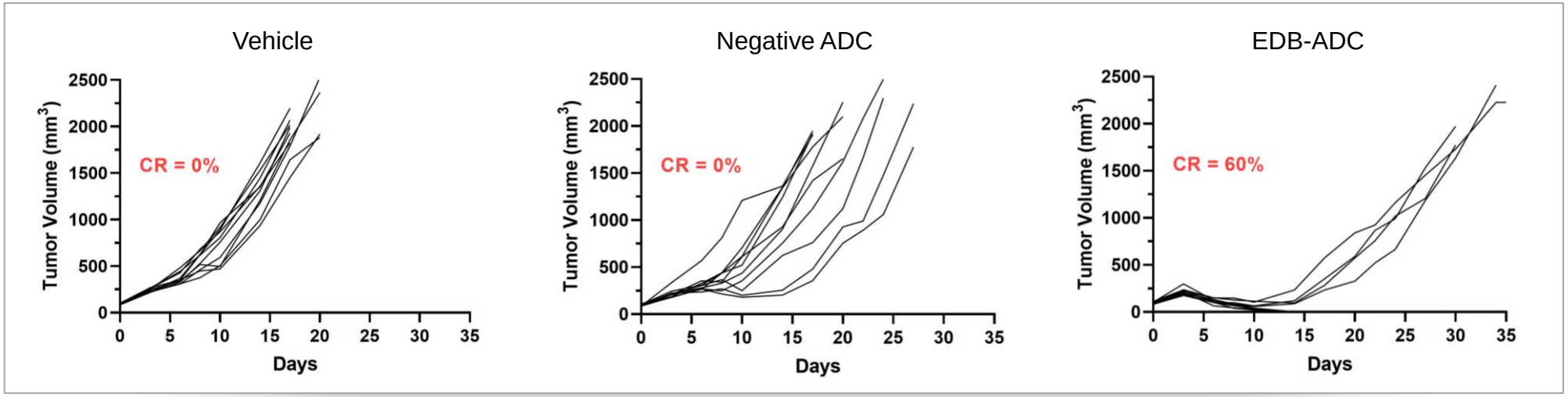
PYX-201 induces immunogenic cell death & T cell infiltration (CD3)



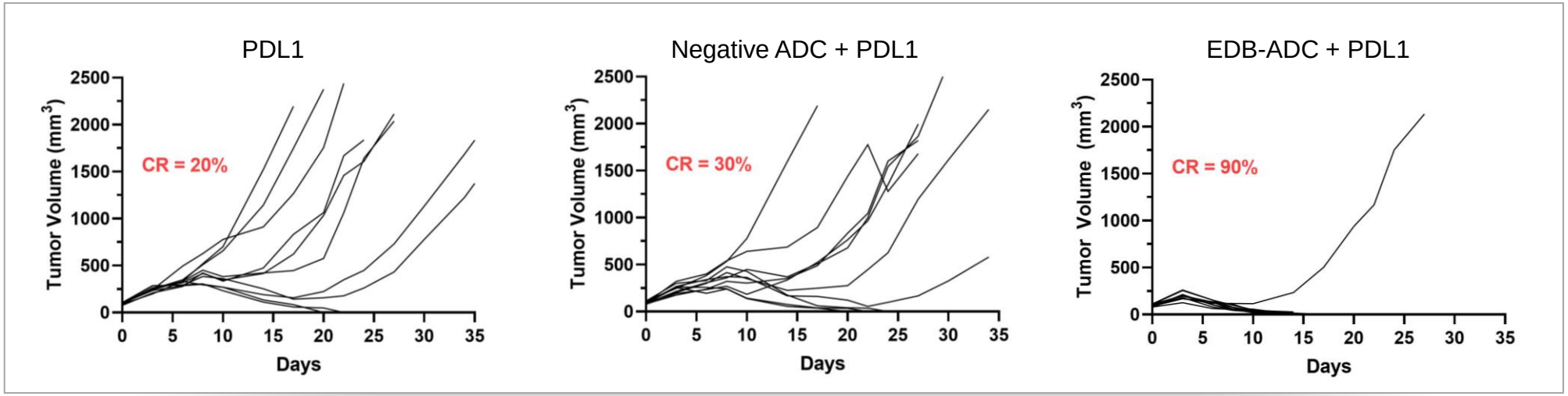
Note(s):* Select tumor models shown.

Anti-EDB (PYX-201): Suboptimal EDB-ADC Doses Synergistically Reduced Tumor Growth EMT6 Syngeneic Model when Combined with Anti-PD-L1 and/or Anti-4-1BB

Monotherapy



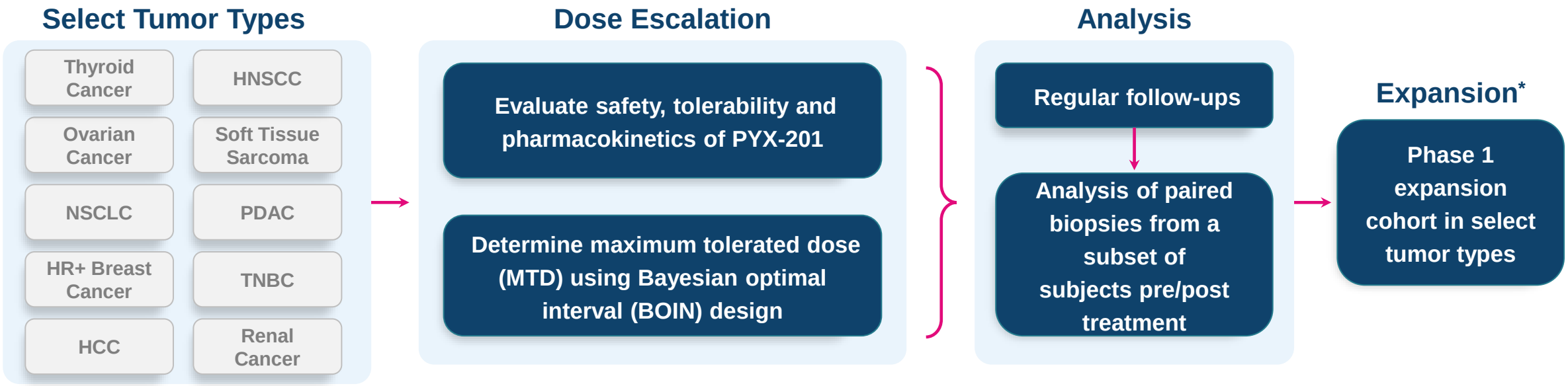
PD-L1 Treatment



Note: Lines represent responses of individual mice

PYX-201-101 Study Overview

First-in-Human, Open-label, Multicenter Study Evaluating PYX-201 in Subjects with Advanced Solid Tumors



Objectives:

- Determine recommended dose(s) of PYX-201
- Evaluate safety and tolerability
- Characterize the pharmacokinetic profile
- Evaluate ORR, DOR, DCR, PFS, and OS
- Evaluate immunogenicity of PYX-201

NSCLC: Non-small cell lung cancer; HNSCC: and neck squamous cell carcinomas; PDAC: Pancreatic ductal adenocarcinoma; TNBC: Triple negative breast cancer.

* The expansion phase will be triggered by a protocol amendment. The indications, dosing schedules, and assessment timepoints planned for the expansion phase will be determined based on clinical safety, efficacy, biomarker, and pharmacokinetic (PK) data obtained during the dose escalation phase.

Anti-Siglec-15 (PYX-106): Potential Best-In-Class, Highly Differentiated Fully Human Antibody in NSCLC and Solid Tumors

Higher binding affinity leads to enhanced T cell responses at higher dose levels, empowering the immune system to kill and fend off cancer cells

- **Demonstrates 6-fold higher affinity to human Siglec-15 than benchmark in development**
- **Potent, dose-dependent reversal of Siglec-15-mediated T cell suppression *ex vivo***
- **Well-tolerated in preclinical studies with half-life of 7 days resulting in less frequent dosing**
- **Potential for better exposure and no evidence of anti-drug antibody**
- **Potential to combine with anti-PD-(L)1 or another immunotherapy**

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Anti-Siglec-15 (PYX-106): Mechanism of Action

1. **Target expression**
   Siglec-15 is expressed on M2 macrophages also by tumor cells

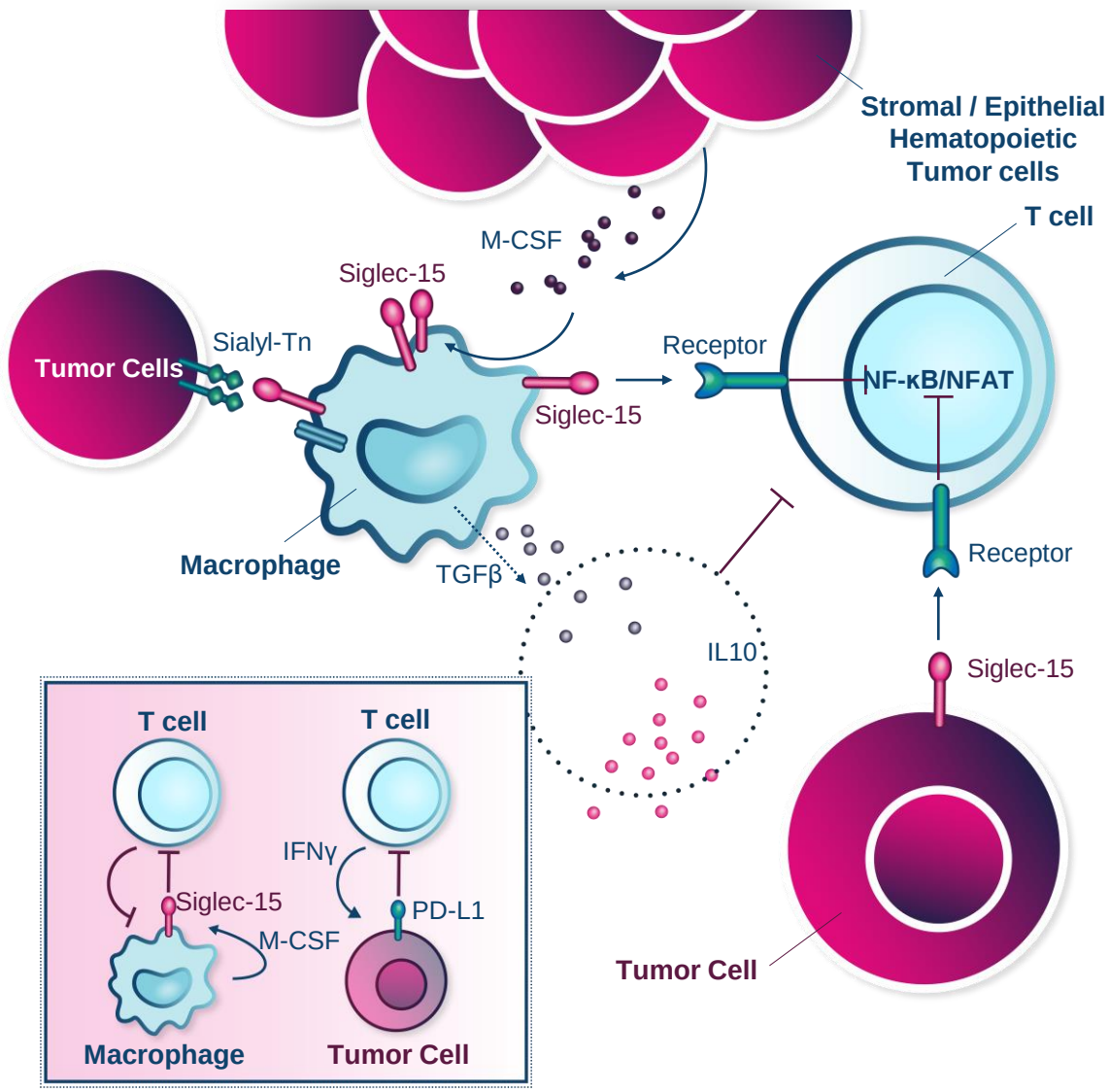
   Siglec-15 is critical to osteoclast differentiation and regulation and has also been identified as a T cell inhibitory molecule

   Essentially mutually exclusive expression with PD(L)-1, implying Siglec-15 may be a critical immune evasion mechanism in PD-L1-negative patients

2. **Binding**
   Binding of Siglec-15 to an unknown receptor on T cells leads to suppression of T cell proliferation and function

3. **Inhibition**
   This inhibition reduces IFN secretion, which may further promote Siglec-15 expression

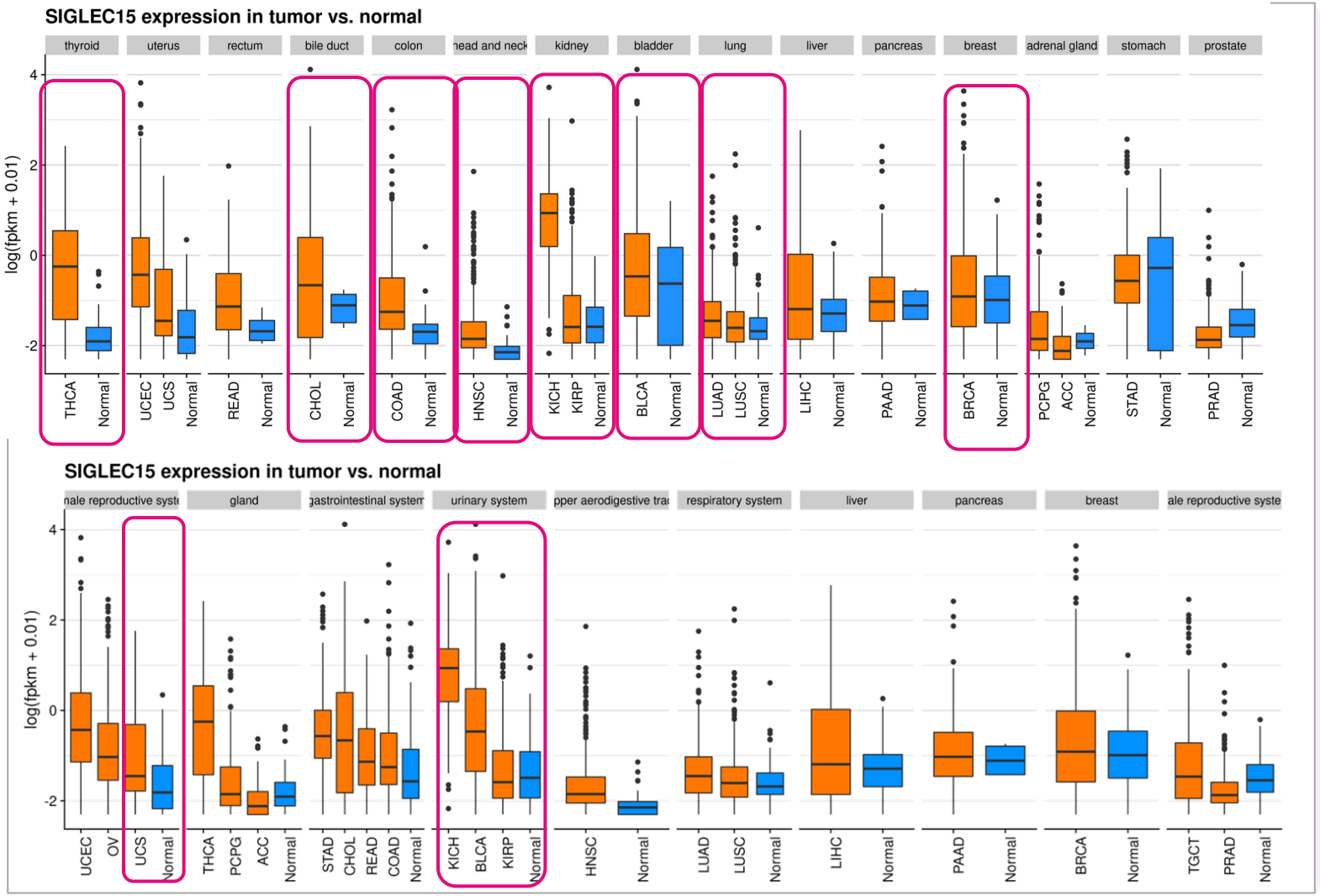
PYX-106 may synergize with and rescue PD(L)-1 targeted therapy activity, with the potential for sequential drug administration for enhanced anti-tumor activity



Sun et al., Clin Cancer Res 2021; Wang et al., Nat Med 2019; Biosion Corporate Presentation; GlobalData; Citeline Informa

Siglec-15 is Upregulated in Multiple Solid Tumor Indications

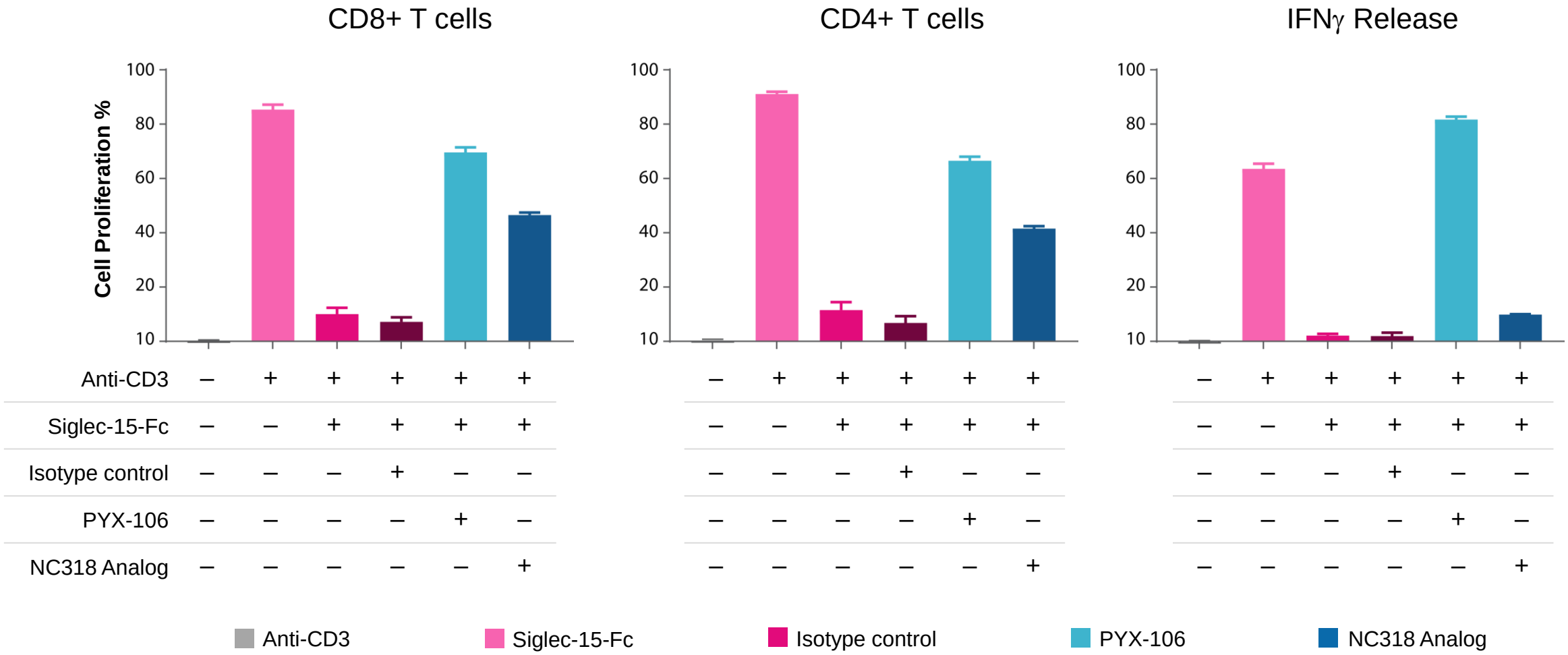
Overall expression is lower in normal tissues than in tumor



Comparison of tumor vs. normal expression by tissue (top) and tissue category (bottom), where tumor vs. normal is significantly different

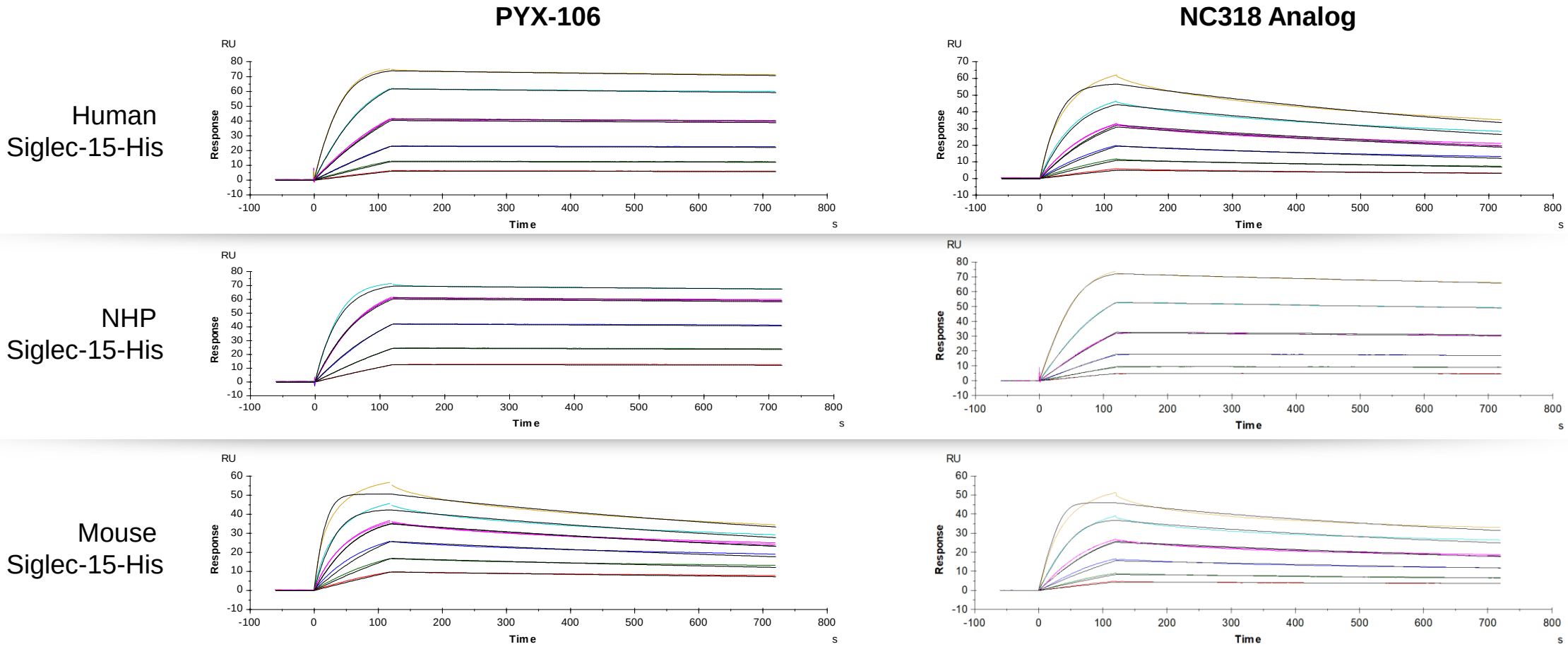
Source: Pyxis Oncology data

PYX-106 Reverses Siglec-15 Mediated T Cell Suppression Which Upregulates the Immune System and Prevents Tumor Growth



Source: Biosion AACR 2022 poster

PYX-106 Demonstrates 6-Fold Higher Binding Affinity to Siglec-15 Than NC318 Analog, Critical to Enhancing Tumor Cell Adhesion and Invasion



Antibody	Human Siglec-15			NHP Siglec-15			Mouse Siglec-15		
	ka (1/Ms)	kd (1/s)	K_D (M)	ka (1/Ms)	kd (1/s)	K_D (M)	ka (1/Ms)	kd (1/s)	K_D (M)
PYX-106	1.88E+06	7.46E-05	**3.96E-11**	7.08E+05	5.32E-05	**7.51E-11**	2.24E+06	1.65E-04	**7.37E-11**
NC318 Analog	2.27E+06	9.55E-04	4.22E-10	1.13E+06	7.81E-04	4.48E-10	5.47E+06	9.31E-04	1.70E-10

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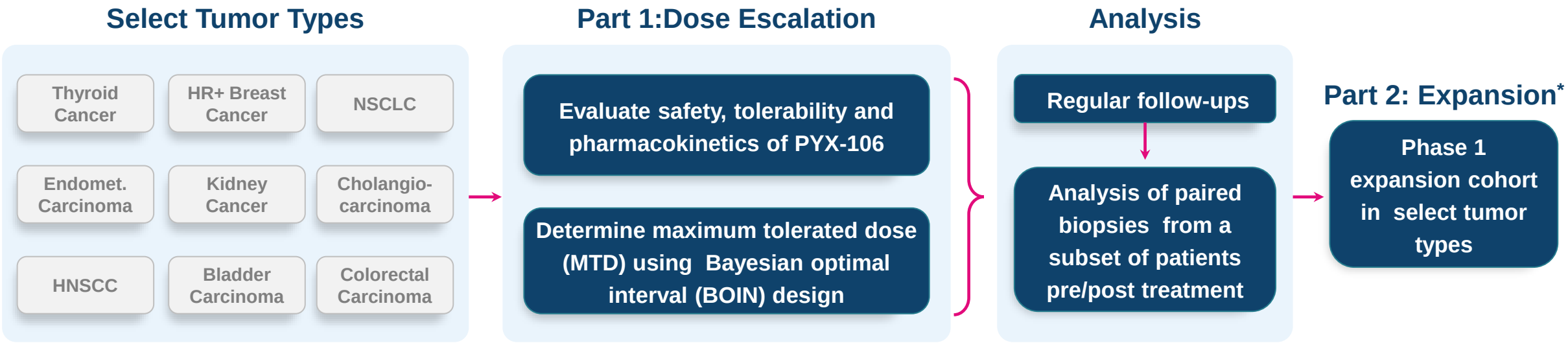
Source: Biosion AACR 2022 poster

PYX-106-101 Study Overview

First-in-Human, Open-label, Multicenter Study Evaluating PYX-106 in Subjects with Advanced Solid Tumors



Objectives:

- Determine the recommended dose for Part 2
- Evaluate safety and tolerability
- Characterize the pharmacokinetic profile
- Evaluate ORR, DOR, DCR, PFS, and OS
- Evaluate immunogenicity of PYX-106

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* The expansion phase will be triggered by a protocol amendment. The indications, dosing schedules, and assessment timepoints planned for the expansion phase will be determined based on clinical safety, efficacy, biomarker, and pharmacokinetic (PK) data obtained during the dose escalation phase.

Pyxis Oncology Pipeline Holds Potential Significant Near-Term Milestones

Program	Proposed Indications	Discovery	Preclinical	Phase 1	Phase 2	Next Milestone
Antibody-Drug Conjugates (ADC)						
Anti-EDB (PYX-201)	NSCLC, Breast					IND: 2H22
Immuno-Oncology (IO)						
Anti-Siglec-15 (PYX-106)	Thyroid, Head and Neck, NSCLC					IND: 2H22
Multiple Modalities						
Internal Discovery & Joint Ventures	Solid and Heme Tumors					

Thank You

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