Developing next generation antibodies into transformative cancer therapies that improve patients' lives

Corporate Presentation
Nasdaq: CMPX
January 2025

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Compass Corporate Highlights

CTX-009: Late-Stage Bispecific	**Bispecific (DLL4xVEGF-A)** in Ph 2/3, targeting multi-$B oncology indications
Strong Phase 2 Data	BTC: **37.5% response rate** in 2L/3L pts (FOLFOX is **5%** in 2L) CRC: Demonstrated **monotherapy activity** in patients with 3L/4L CRC
Near-Term Milestone	Potentially registrational (Ph 2/3) study in BTC with **top-line data in Q1 2025**
Deep Expertise in Antibodies	**Three novel clinical candidates** with a rich preclinical **VEGF-IO pipeline**
Well Capitalized	**Cash runway into Q1 2027** (~$127M @YE) with respected core investor base

* BTC = biliary tract cancer; CRC = colorectal cancer; 2L = 2nd line therapy; 3L = 3rd line therapy; IO = immunotherapy

Diversified / Robust Pipeline with Multiple Value Inflection Points

Program	Target	Discovery	Pre-Clinical	Phase 1	Phase 2	Phase 3	Anticipated Milestones
CTX-009 (tovecimig)	**DLL4 x VEGF-A**	Biliary Tract Cancer (2L)					**Q1 2025: Top-line data**
		Colorectal Cancer (monotherapy 3L/4L)					Completed (monotherapy activity)
		Colorectal Cancer (w/ chemo 2L)					**Mid-2025: Trial initiation**
CTX-471	**CD137**	Basket Study – NCAM (CD56)+					**Mid-2025: Trial initiation**
		Basket Study – Post-checkpoint					Completed
CTX-8371	**PD-1 x PD-L1**	Solid Tumors					H1 2025: Complete dose escalation **H2 2025: Phase 1 data**
CTX-10726	**PD-1 x VEGF-A**	Solid tumors					**YE 2025: IND filing**
VEGF-IO Bispecifics	**Multiple**						Ongoing

* Not shown: Investigator Sponsored Trial of CTX-009 in **1st line** biliary tract cancer (Q1 2025 expected initiation)

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Leadership Team Experienced in Drug Discovery and Development

Thomas J. Schuetz, MD, PhD
President, CEO, &
Vice Chairman of the Board

Barry Shin, JD, MBA
EVP, CFO

Bing Gong, PhD
SVP, Discovery Research

Minori Rosales, MD, PhD
SVP, Head of Clinical Development

Jon Anderman, JD
SVP, General Counsel &
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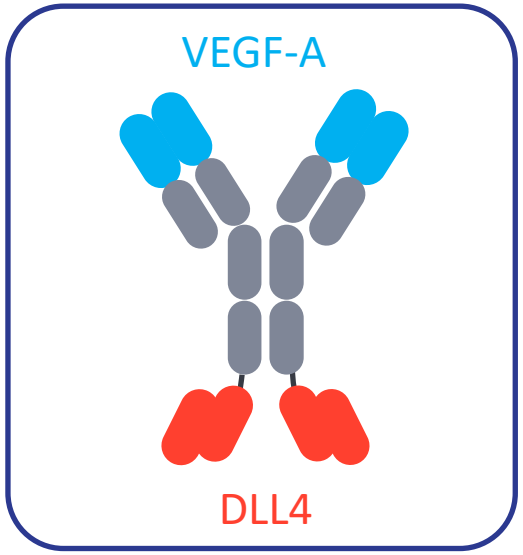
CTX-009

DLL4 X VEGF-A bispecific antibody

CTX-009: Bispecific with Compelling MOA (DLL4 x VEGF-A)



2x2 target binding valency

Anti-VEGF-A MAb
VEGF/VEGF-R signaling

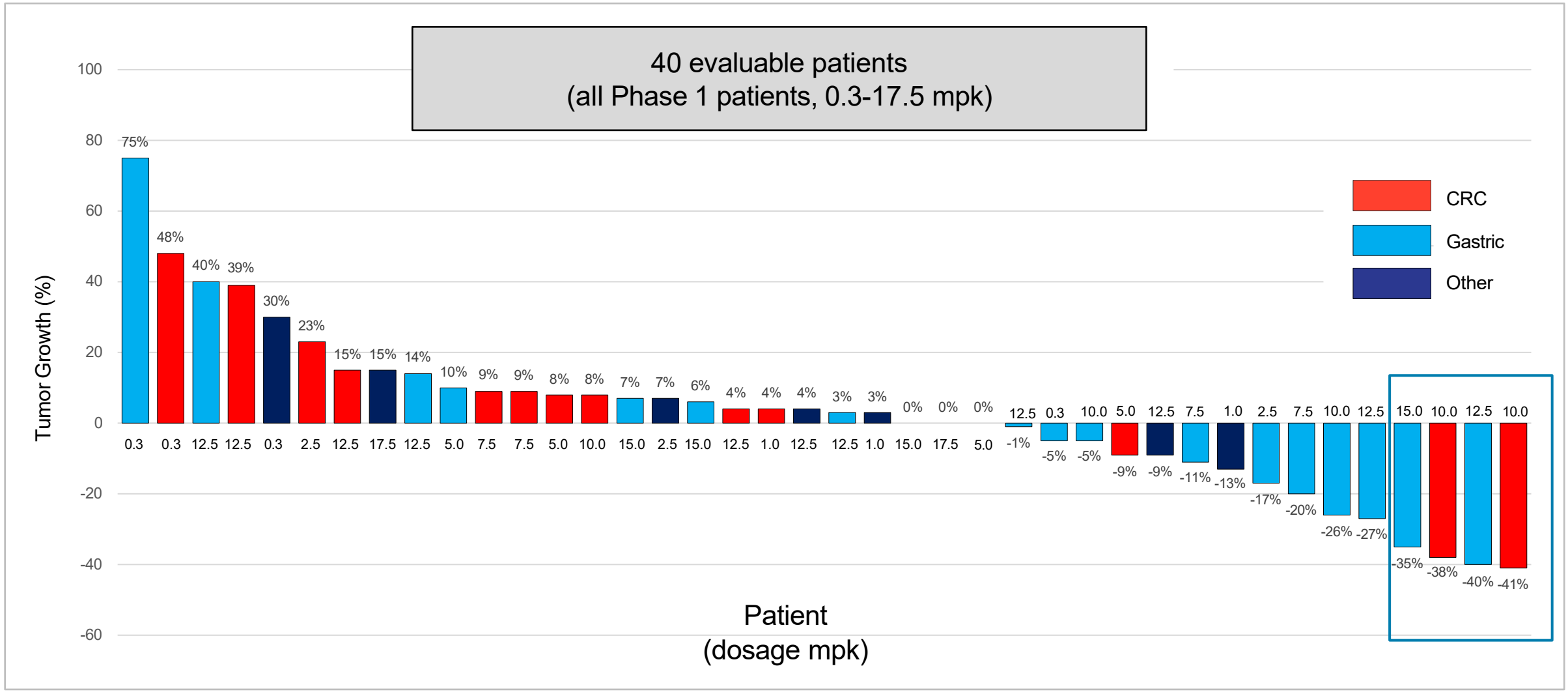
→ **Disrupts tumor vessel formation**
(proven anti-angiogenic agent)

Anti-DLL4 MAb
DLL4-Notch-1 signaling

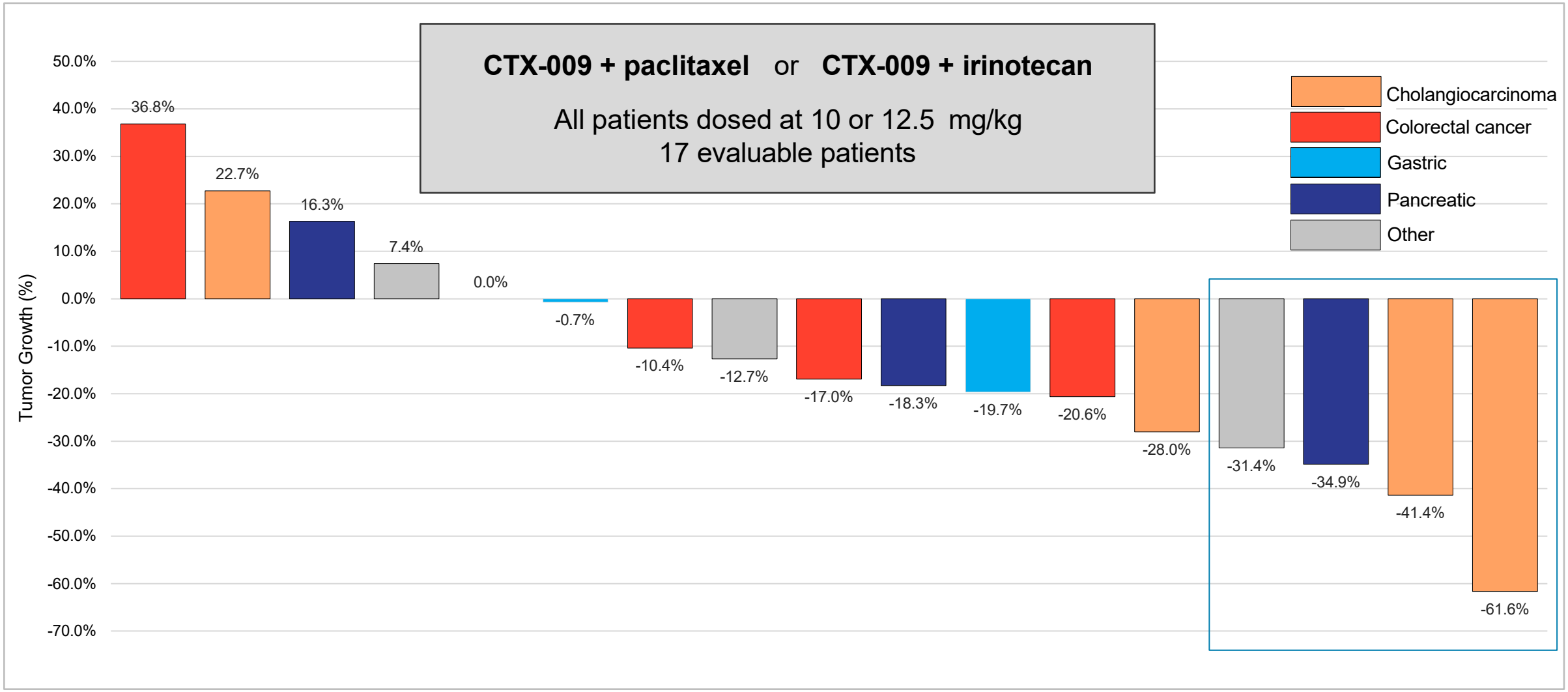
→ **Targets tumor DLL4 expression and alters perfusion in tumor vessels**
(novel angiogenesis target)

- Dual blockade: **VEGF-A** – validated target for blockbuster oncology therapeutics (e.g.: Avastin®)
  DLL4 (Notch-1 ligand) – mediates resistance to anti-VEGF therapies
- Bispecific anchors in tumor microenvironment (DLL4) to disrupt angiogenesis
- Only DLL4 X VEGF bispecific to demonstrate monotherapy activity in patients with CRC and GC

CTX-009: Monotherapy Activity in Ph 1a Data



CTX-009: Combination Activity in Ph 1b Data



CTX-009: Summary of Ph 1 Signals of Efficacy Across Tumor Types

Data for Phase 1 Patient Dosed in Efficacious Range (10-12.5 mg/kg)

	Overall Response Rate	**Clinical Benefit Rate**	**Overall Safety** (generally well tolerated)
Monotherapy	**18.8% ORR** (3/16)*	**68.8%** (11/16)	Grade 3 hypertension (16%) Comparable to Avastin (Avastin label 5%-18%) typically managed with anti-hypertensive drugs
Combination Therapy	**23.5% ORR** (4/17)*	**76.5%** (13/17)	Grade 3 hypertension (24%); neutropenia (12%) anemia (18%); thrombocytopenia (12%) Cytopenia events are related to the concomitant chemotherapy

* Confirmed responses in monotherapy

CTX-009: Phase 2 Combination Study Design (Completed)

Patients with unresectable biliary tract cancers after one or two prior therapies

Open label, multi-center (S. Korea), single-arm Phase 2 Study

- **Dosing** — **CTX-009** (10 mg/kg IV biweekly), in combination with **Paclitaxel** (80 mg/m^2 IV weekly, three weeks out of four)
- **Primary Endpoint** — Objective response rate (ORR) based on RECIST v1.1
- **Secondary Endpoints** — Time to treatment failure (TTF), duration of response (DOR) Progression-free survival (PFS), overall survival (OS), safety
- **Enrollment** — 24 patients (unresectable biliary tract cancers, 2L / 3L)
- **Simon Two-Stage Design** — Stage 2 not initiated; advanced directly to randomized study based on FDA recommendation

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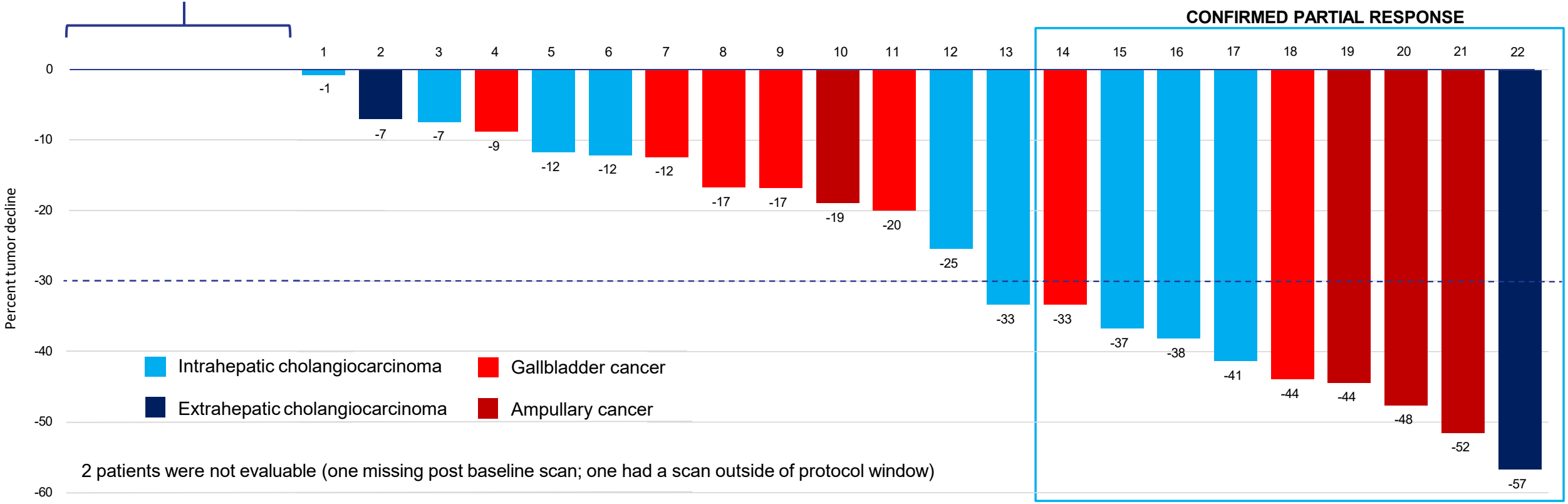
CTX-009: Compelling Ph 2 Data Across BTC Subclasses

Responses achieved across multiple BTC subclasses.

ORR = 37.5%
CBR = 91.7%

No pts showed progressive disease



2 patients were not evaluable (one missing post baseline scan; one had a scan outside of protocol window)

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CTX-009: Summary Phase 2 Results

Endpoint	Value (95% CI)
Overall Response Rate (ORR)	**37.5%**
Stable Disease (SD)	**54.2%**
Progression Free Survival (PFS)	**9.4 months** (5.4 - 11.1)
Overall Survival (OS)	**12.5 months** (10.9 - NA)
Duration of Response (DoR)	**6.9 months** (3.5 - NA)

Post-hoc Subset Analysis

Number of previous systemic therapies	ORR
2L pts treated (n=11)	**7/11 (63.6%)**
3L pts treated (n=13)	2/13 (15.4%)

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Safety Profile Of CTX-009 is Consistent with Approved Agents

Treatment-Emergent ≥ Grade 3 Adverse Events (>10% of patients)

Phase 2 BTC study of CTX-009 plus paclitaxel

Event	24 Total Patients N (%)
Neutropenia	20 (83.3%)
Anemia	5 (20.8%)
Hypertension	4 (16.7%)
Thrombocytopenia	3 (12.5%)
TEAE leading to discontinuation: confusion, embolism, pneumonia (grade 5), biliary fistula, large intestine perforation, blood creatinine increased, and blood urea nitrogen increased	

Bevacizumab and paclitaxel label information

Event	Bevacizumab (label) [1]	Paclitaxel (label) [2]
Neutropenia		52%
Hypertension	5-18%	
Anemia		16%
Thrombocytopenia		7%
	Additional events: GI perforation, wound healing complications, proteinuria, hemorrhage	Additional events: hypersensitivity reactions, infections, bleeding, neuropathy

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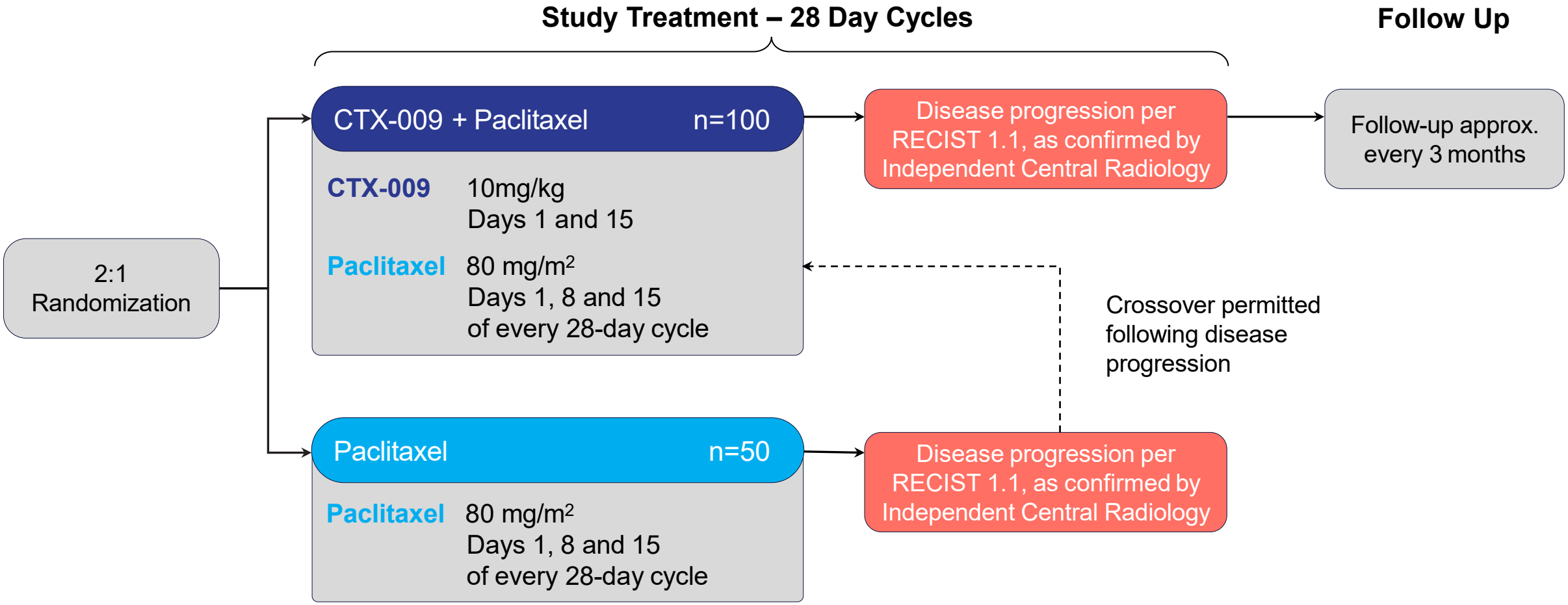
1. https://www.accessdata.fda.gov/drugsatfda_docs/label/2022/125085s340lbl.pdf 2. https://www.accessdata.fda.gov/drugsatfda_docs/label/2011/020262s049lbl.pdf

COMPANION-002: Phase 2/3 U.S. BTC Study

Registrational-intent study in patients who have received one prior line of therapy



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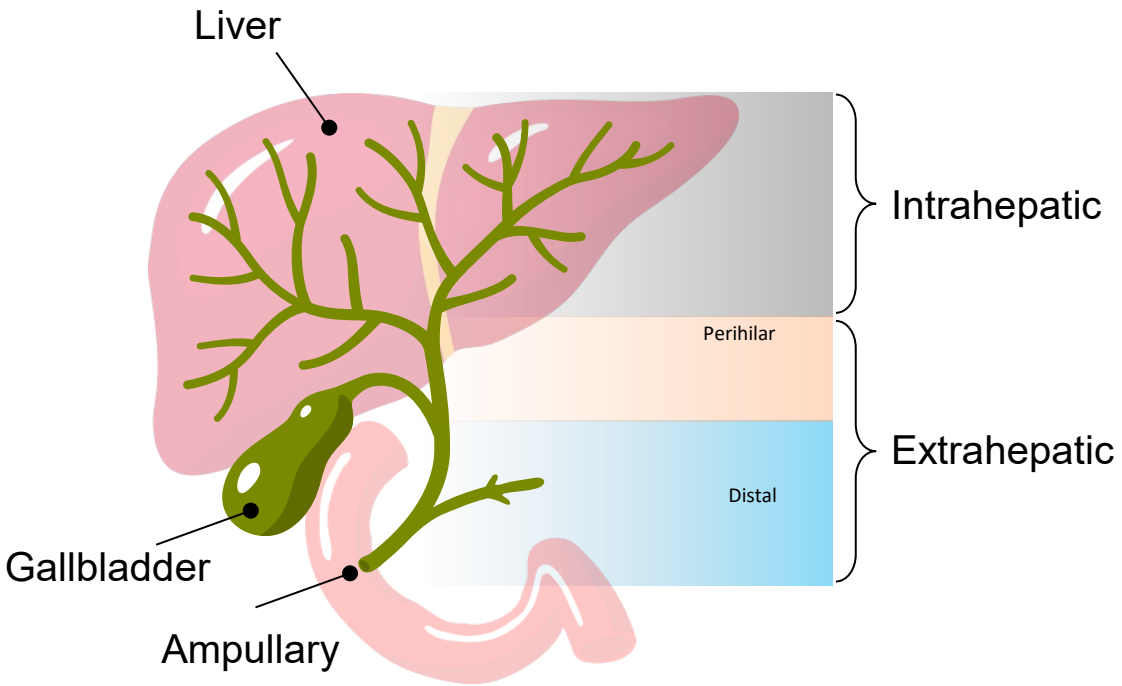
CTX-009 as New Potential Standard of Care in 2L BTC

Line	Program	N	ORR	Progression Free Survival / Overall Survival (Months: 0, 2, 4, 6, 8, 10, 12, 14)
First Line				
1L	**Gem/Cis + Durv[1]**	341	26.7%	7.2 m; 12.8 m
1L	**Gem/Cis + Pembro[2]**	533	28.7%	6.5 m; 12.7 m
Second Line				
2L	**ABC-06[3]**	81 BSC	0%	5.3 m
		81 FOLFOX	5%	4.0 m; 6.2 m
CTX-009* in 2L and 3L				
2L/ 3L	**CTX-009 + Paclitaxel[4]**	24	**37.5%** [64% 2L; 15% 3L]	**9.4 m**; **12.5 m**

*Historical data presented above. CTX-009 is investigational, and no head-to-head studies have been conducted.

1. PMID: 38319896; 2. PMID: 37075781; 3. PMID: 33798493; 4. DOI: 10.1200/JCO.2023.41.4_suppl.540

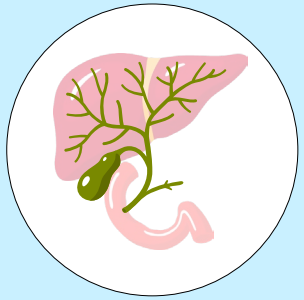
Incidence of BTC is Significant and Not Fully Appreciated



Cancer site	Epidemiology-based Approach (SEER)	Claims-based Approach (ICD)
Liver & intrahepatic bile duct	15%[2] of 41,630[1]	---
Gallbladder & other biliary	12,350[1]	---
Other & unspecific primary sites	11%[3] of 34,950[1]	---
Incidence	**~22,400**	**~22,800**[4]

1. PMID: 38230766; 2. Lowe, R, et al. Epidemiology, risk factors, anatomy, and pathology of cholangiocarcinoma. UpToDate, Inc. (2022); 3. PMID: 35484217; 4. Komodo Health x Cholangiocarcinoma Foundation. (2023)

Significant Unmet Needs in Current Treatments for BTC

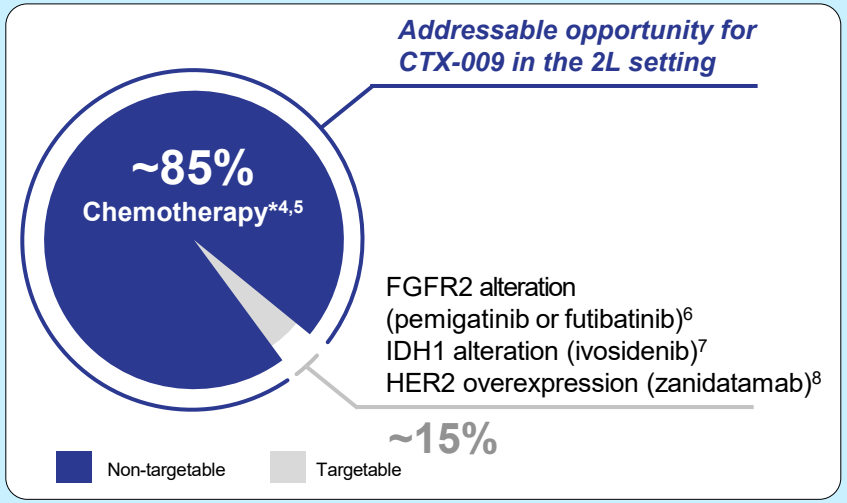


Currently Approved SoC

1L

Gem/Cis + durvalumab (TOPAZ1)[1] pembrolizumab (KN-966)[2]

2L



~85% of 2L patients have limited treatment options

Unmet Needs

- 2-year OS of 23.6% (95% CI)[3]
- Majority of patients will progress

- FOLFOX chemotherapy[4]:
  - **ORR of 5%**
  - 72% ≥Grade 3 AEs
- 53% ≥Grade 3 AEs in patients receiving BSC in control arm.

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1. PMID: 38319896; 2. PMID: 37075781; 3. Oh *et al.* Poster 56P ESMO 2022; 4. PMID: 33798493;
5. NCCN (2024). Biliary Tract Cancers (version 4.2024); 6. PMID: 37017301; 7. PMID: 33182517; 8. PMID: 38266541

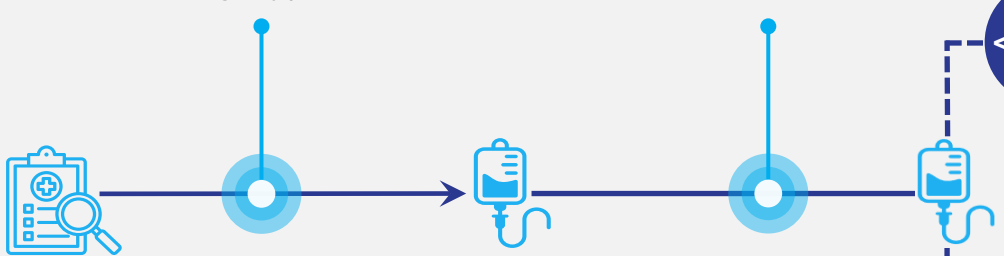
2L BTC U.S. Market Potential is >$1 Billion

Annual BTC incidence in the U.S. (~22.8K)[1]

Clinical progression

~95% receive 1L treatment
(~10% undergo resection but only ~5% are cured after surgery)[2]

~70% of 1L patients **receive 2L treatment**[3]



<15% → Approved 2L targeted therapies[4,5] (contraindications include: ocular toxicity, hyperphosphatemia)

>85% → Chemotherapy/ **Opportunity for CTX-009**

Patient numbers

~22.8K	~21.7K	~15.2K

1. Komodo Health x Cholangiocarcinoma Foundation. (2023); 2. PMID: 27829275; 3. Based on Compass Therapeutics' analysis and PMID: 38319896;
4. PEMAZYRE prescribing information; 5. LYTGOBI prescribing information

CTC-009: Ph 2 CRC Monotherapy Activity

Patients who received 2 or 3 prior regimens (3rd and 4th line study)

63% (26/41) were treated in the 4th line

Preliminary Results

Endpoint	Value
Overall Response Rate	**5% (2/41)**
Disease Control Rate	71% (29/41)
Median PFS	3.9m
Median OS	10.2m

Monotherapy activity in heavily pre-treated patients

Supports advancement into:

Phase 2 Combination Study (w/ chemo 2L)

Mid-2025 expected study initiation

Safety profile consistent with prior CTX-009 trials with hypertension as the most common AE

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Significant Unmet Needs in Current CRC Treatments

>100,000 US Patients Annually

Line	Program	N	ORR	Progression Free Survival / Overall Survival (Months: 0, 2, 4, 6, 8, 10, 12, 14)
Second Line				
2L	**Bevacizumab + Chemo[1]**	407	5%	5.7 m; 11.2 m
Third Line +				
3L+	**Regorafenib[2,3]**	505	1%	1.9 m; 6.4 m
3L+	**Fruquintinib[4]**	461	1.5%	3.7 m; 7.4 m
3L+	**Lonsurf[5]**	534	1.5%	2.0 m; 7.1 m
3L	**Lonsurf + Bevacizumab[6,7]**	246	6.1%	5.6 m; 10.8 m
CTX-009* in 3L and 4L				
3L / 4L	**CTX-009[8]**	41	**5%**	**3.9 m**; **10.2 m**

*Historical data presented above. CTX-009 is investigational, and no head-to-head studies have been conducted.

1. PMID: 23168366; 2. PMID: 23177514; 3. Grothey, A., et al., *ASCO Presentation.* (2012); 4. PMID: 37331369; 5. PMID: 25970050; 6. PMID: 37133585; 7. Tabernero, J., et al., *ASCO GI Presentation* (2023); 8. Compass Therapeutics Q2 Press Release. Aug 2024.

CTX-009: Strong Near-Term Momentum

BTC (2L) Data
Q1 25
Ph 2/3

- Top-line ORR data from Ph 2/3 study (potentially registrational)

BTC (1L) Study
Mid-2025 Initiation
IST

- MD Anderson Cancer Center investigator sponsored trial in 1L patients
- CTX-009 to be added to front line SOC regimen in BTC patients

CRC Study
Mid-2025 Initiation
Ph 2

- Combination study (w/ chemo) building on monotherapy data
- Potential DLL4+ biomarker

CTX-009 granted Fast Track Designation in BTC in April 2024

CTX-471

CD137 agonist

CTX-471: Potential Best-in-Class CD137 Agonist

CTX-471: Next Generation CD137 Agonist

Fully human, IgG4, optimized affinity for agonistic antibody

Unique epitope: non-ligand blocking

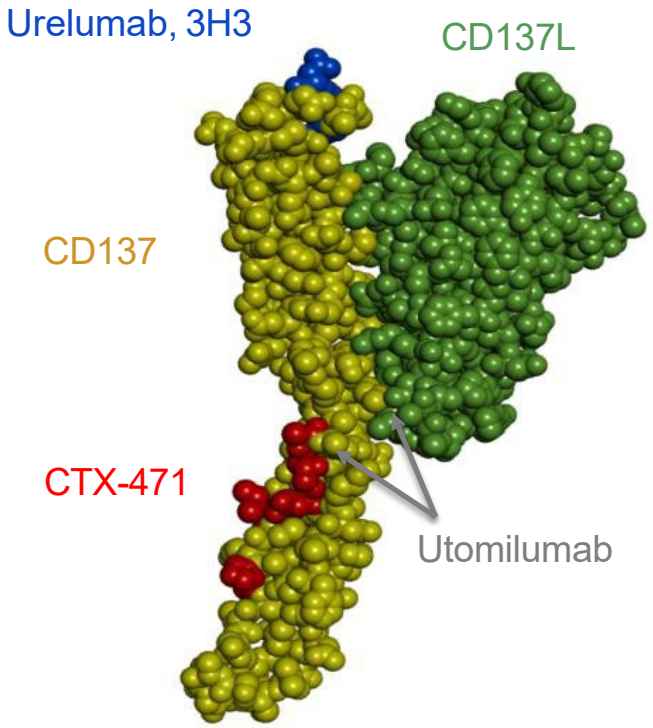
CTX-471: Signals of Activity in Phase 1

Monotherapy Phase 1a ascending dose study completed

- MTD defined by immune thrombocytopenia

Monotherapy Phase 1b Post-PD-1 Cohort Expansions completed

- 60 patients with 17 different tumor types enrolled
- 4 PRs observed: melanoma (3 of 11) and mesothelioma (1 of 4)
- 1 CR: small cell lung cancer (1 of 3)
- Potential biomarker of response identified in biopsies: NCAM (CD56)+ tumors were more likely to respond to CTX-471



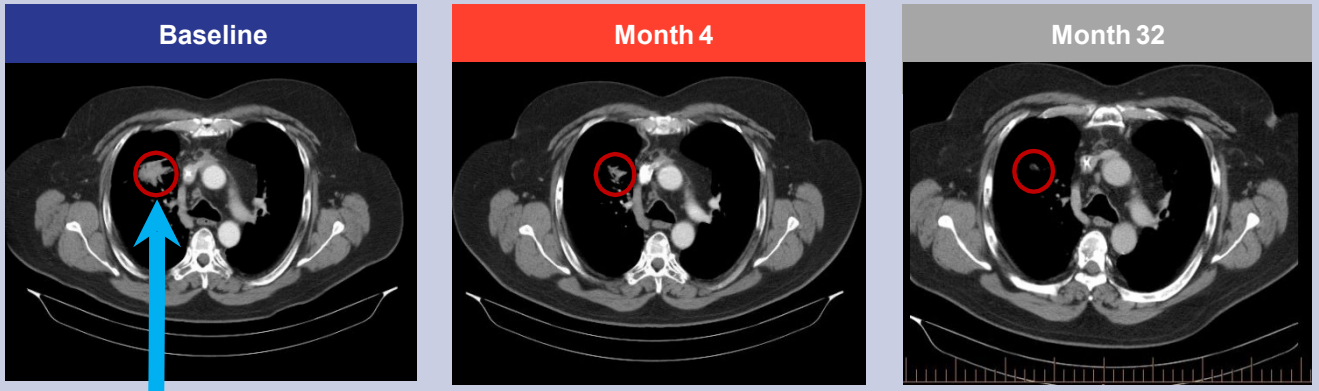
JCI Insight. 2020;5(5):e133647

Advancing to Ph 2 NCAM (CD56)+ Basket Study

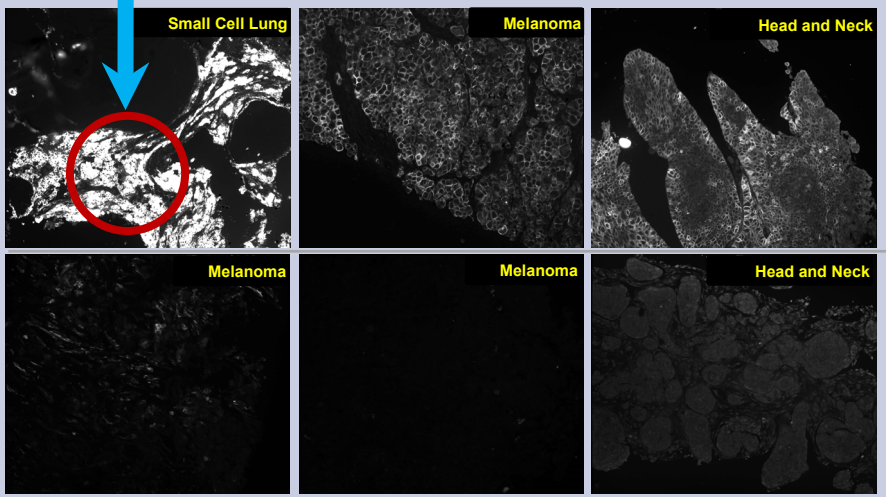
mid-2025 expected initiation

PMID: 36725933, ASCO 2024, Abstract #2535, SITC 2024 Abstract #679

CTX-471: Complete Response in Small Cell Lung Cancer Patient



- CTX-471 treated patient with advanced SCLC had a PET negative **complete response** after ~3 years on therapy
- Previously treated with: carboplatin/etoposide plus atezolizumab (1L), and nivolumab (2L)



Patients with Clinical Benefit (CR / PR / SD)

Patients with Progressive Disease

NCAM Biomarker

NCAM (CD56) was identified as a potential biomarker of activity in Phase 1 studies of CTX-471

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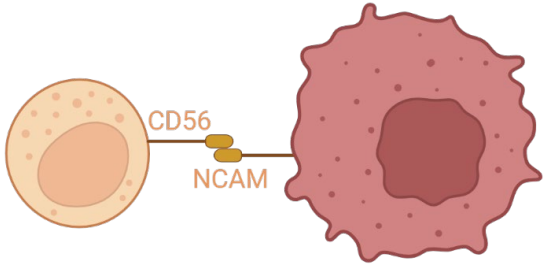
NCAM (CD56) High in Patients with CTX-471 Disease Control

NCAM may render tumors sensitive to CTX-471 treatment: proposed mechanism of action

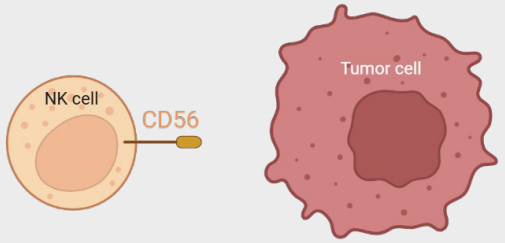
1

NCAM (CD56) "Positive" Tumor



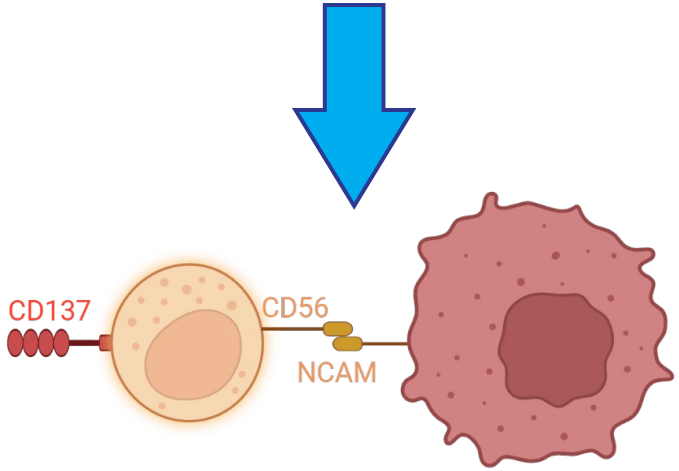
Binding of tumor cell to NK cell via NCAM (CD56)

NCAM (CD56) "Negative" Tumor



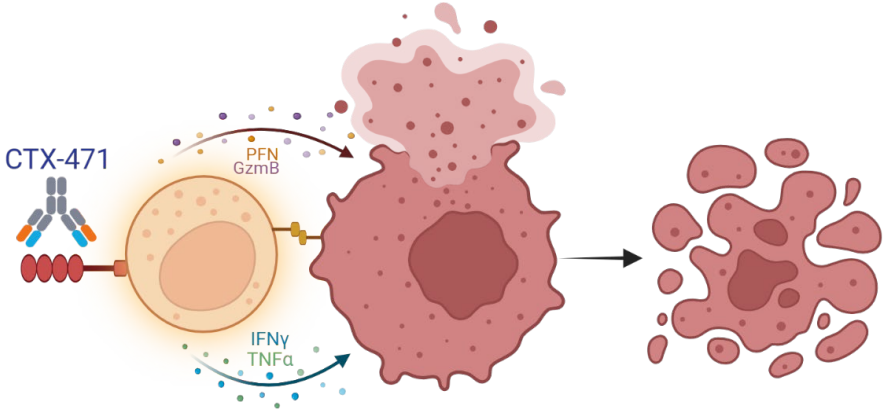
No NCAM (CD56) binding to NK cell

2



Infiltration and upregulation of CD137 leading to an activated NK cell

3



CD137 agonism via binding of CTX-471 leading to tumor cell killing

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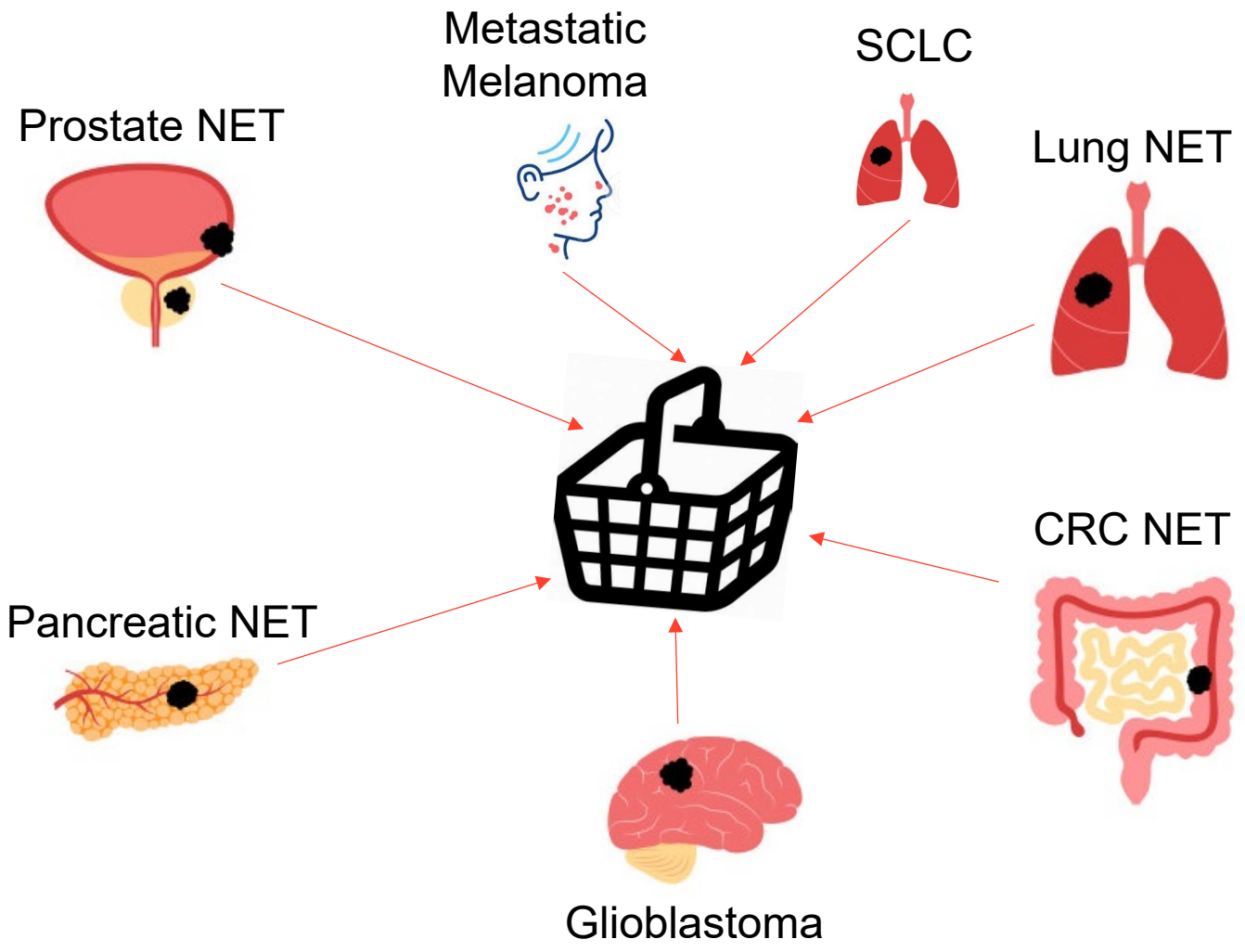
Created with BioRender.com

CTX-471: Proposed NCAM (CD56) Basket Trial



US 2023 – SEER Database	
Indication	**NCAM Pts**
SCLC*	37,000
Glioblastoma*	14,707
Metastatic/Melanoma	5,610
Pancreatic NET	3,203
Prostate NET	2,883
NSCLC NET	2,383
Colon NET	1,530
TOTAL	**60,316**

* ~100% NCAM+

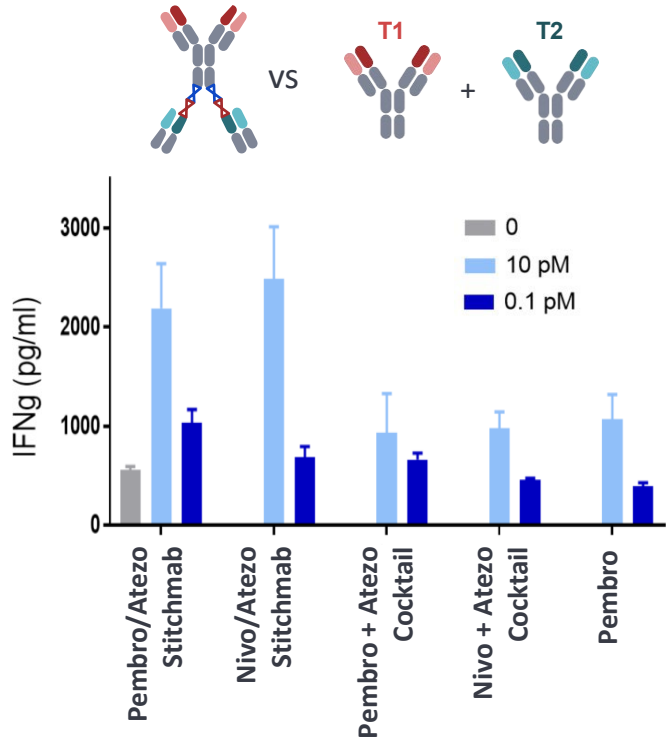
NET = Neuroendocrine Tumor

CTX-8371

PD-1 x PD-L1 bispecific antibody

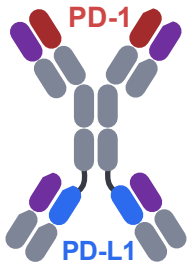
StitchMabs™ Platform was Utilized to Identify CTX-8371

Unexpected synergistic activity of PD-1/PD-L1 combination in bispecific Stitchmabs format



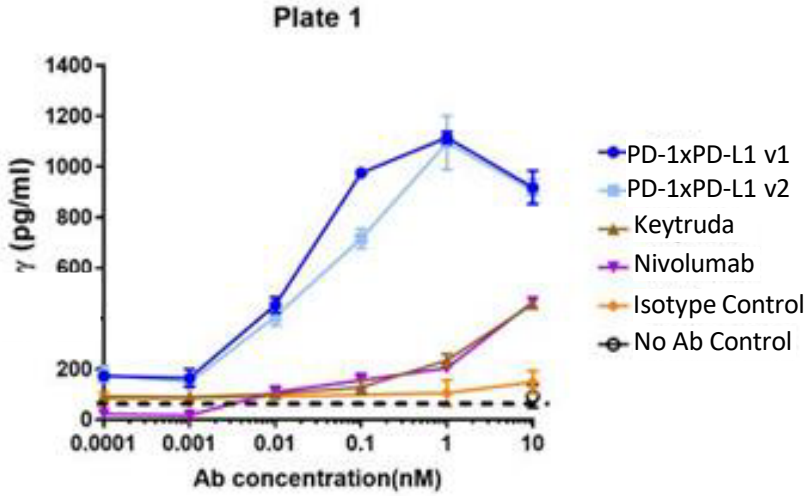
Mixed lymphocyte reaction (MLR) assay

Common Light Chain bispecifics were generated to test therapeutic hypothesis



CTX-8371

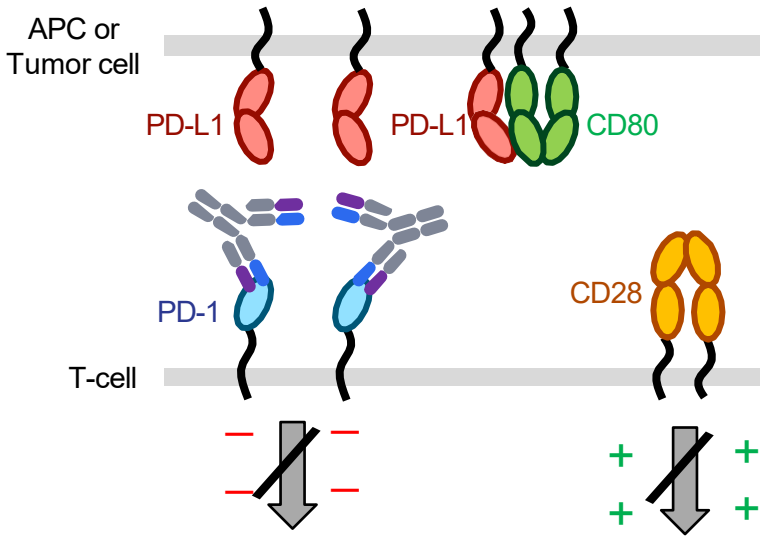
Our PD-1xPD-L1 bispecifics observed to outperform PD-1 blockers in T-cell activation assay



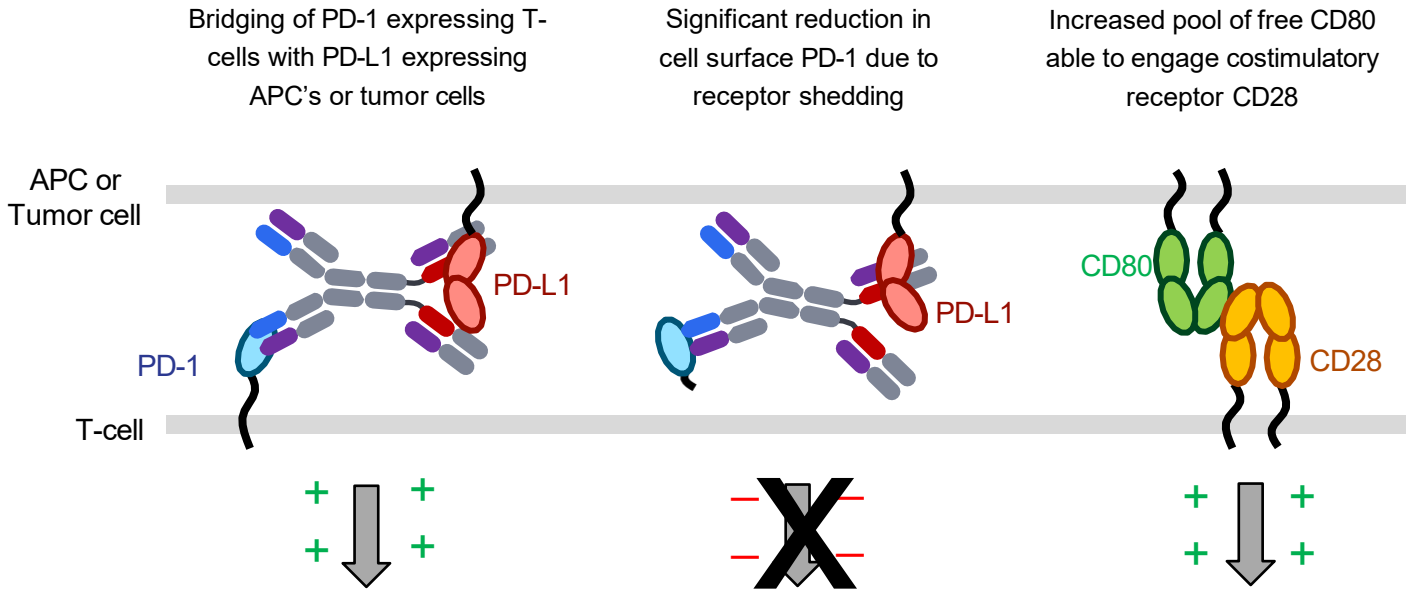
CTX-8371: Differentiated MoA Leads to Enhanced T-Cell Activation

First-in-class – converting PD-1 positive T-cells into PD-1 negative T-cells

PD-1 blockers release brake but don't directly promote T-cell activation



CTX-8371 activates T-Cells Through Diverse Mechanisms of Action



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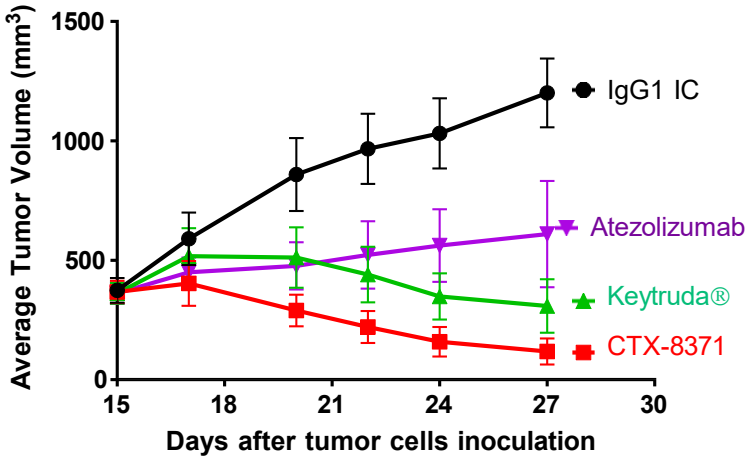
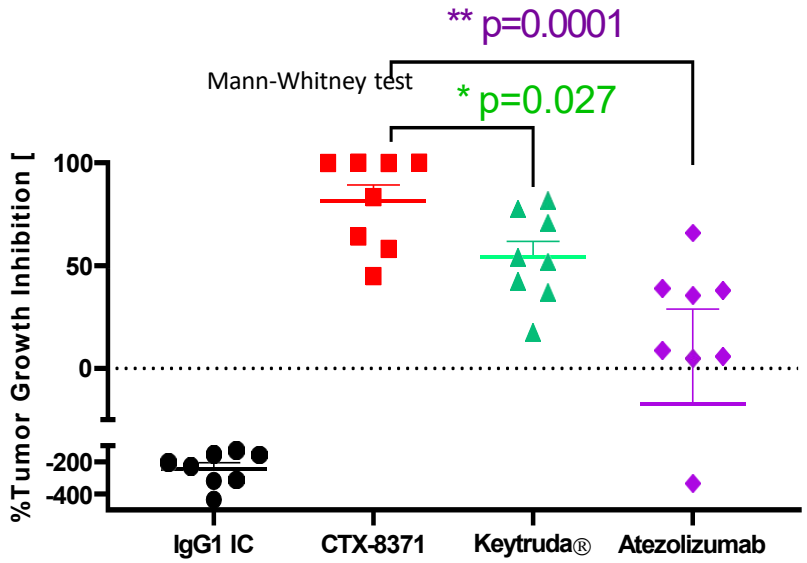
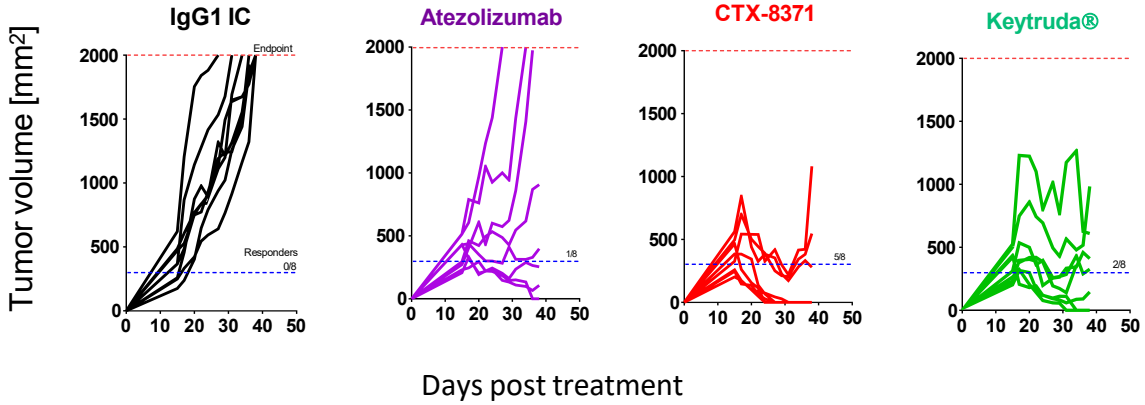
CTX-8371: Pre-Clinical Proof of Concept

Activity in MC38-hPD-L1 model implanted in hPD-1/hPD-L1 transgenic mice







Group	% Cured	Tumor free / total
CTX-8371	**62.5**	**5/8**
Atezolizumab	12.5	1/8
IgG1 IC	0	0/8
Keytruda	25	2/8

COMPASS THERAPEUTICS

CTX-8371: Development Status

IND was accepted

First patient was dosed in April 2024

No DLTs; second dose level enrolling

Currently enrolling patients in dose escalation and opening additional clinical sites

Phase 1 study design

Multiple ascending dose, dose-escalation study 5 doses planned: 0.1, 0.3, 1.0, 3.0, and 10 mg/kg

Post PD-1 or PD-L1 patient population: Melanoma,

NSCLC, HNSCC, Hodgkin's Lymphoma, TNBC

Potential for proprietary combination regimens with CTX-009 and CTX-471

CTX-10726

PD-1 x VEGF-A bispecific antibody

CTX-10726: PD-1 x VEGF-A Bispecific

CTX-10726: Drug Discovery and Engineering

Fully human, glycosylated IgG1 with silenced Fc-γ receptor binding

- *Anti-VEGF* Clinically proven mechanism (bevacizumab)
- *Anti-PD-1* Proprietary anti-PD-1 scFv with highly stable structure
  High affinity, cooperative target binding
  More potent PD-1 blockade vs other drugs in class*
  Leverages clinical experience from CTX-8371 program

CTX-10726: De-Risked Development Pathway

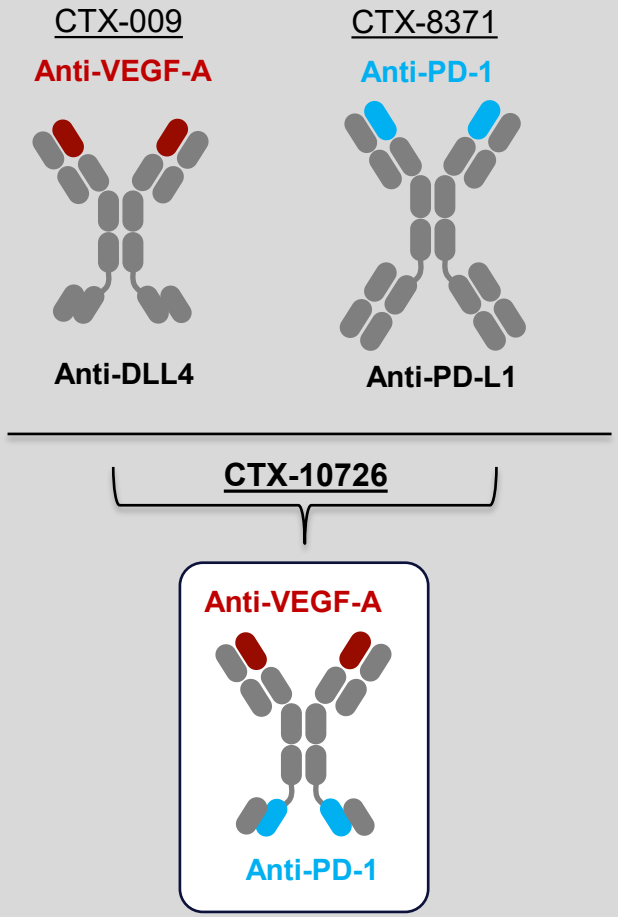
IND filing expected by Q4 2025 with potential clinical data 2026

MOA validated / de-risked by ivonescimab & other PD-1 x VEGF programs

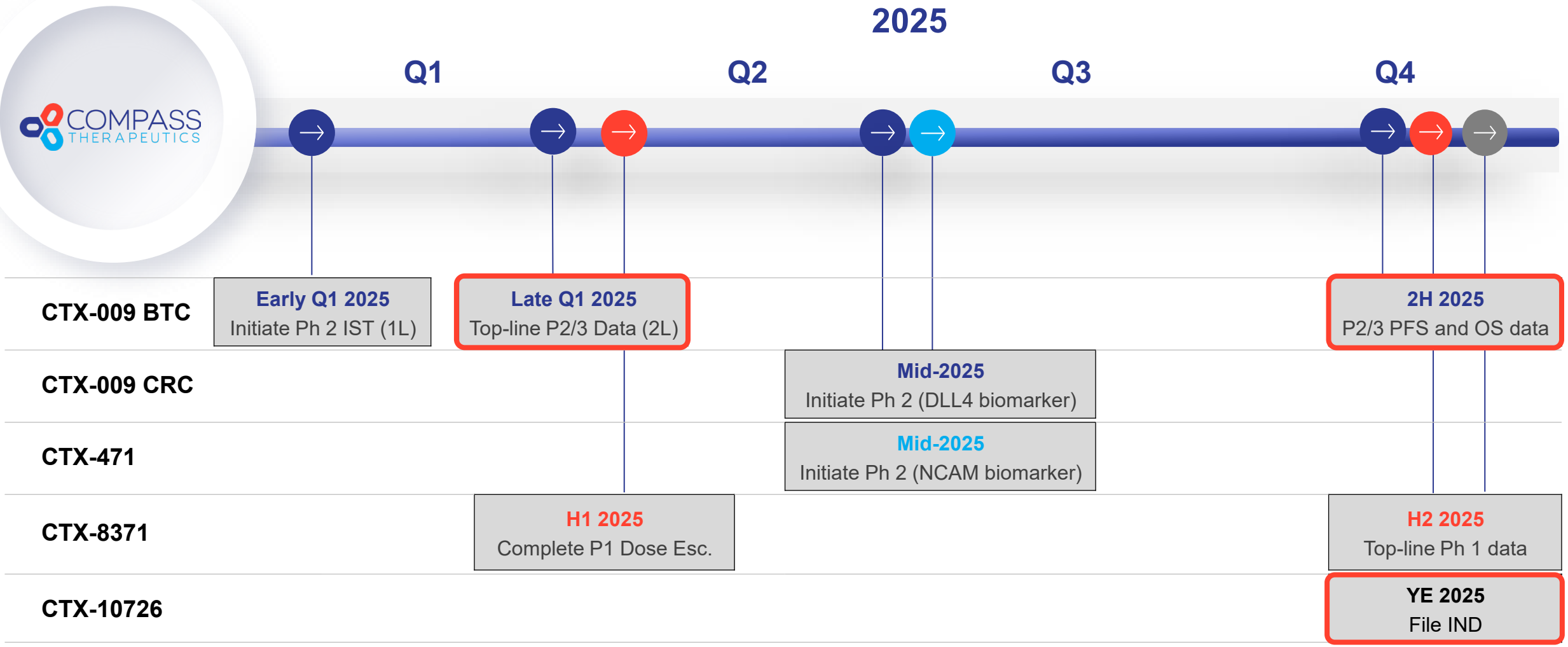
Novel composition of matter IP

*Comparison based on reported PD-1 blockade data (IC50, nM) for ivonescimab

CTX-10726 Builds on Compass' Deep VEGF-IO Expertise



Key Upcoming Milestones



Compass Therapeutics

Website: compasstherapeutics.com
Nasdaq: CMPX