



First in class engineered T cells for safer, more efficacious  
and durable therapies in solid tumors

Q2 2023

# Rationally designed T-cell Antigen Coupler (TAC) platform technology

Ability to develop safer & effective T cell medicines for solid tumors

2023

Start of 2 HER2 Phase 2 trials

Start of Claudin18.2 Phase 1 trial

2024

Start of  $\gamma\delta$  allogeneic clinical program

Non-Confidential



Clear line of sight to 1<sup>st</sup> approvable indication in 3L gastric cancers

Lead HER2 program: strong PRs, remarkable safety profile with no ICU visits for CRS and no neurotox: validation of the TAC platform for the future of T cell medicines

Phase 2 trial mono and in combination with Keytruda®; opportunity to pursue 3L and 2L gastric cancer indications

2<sup>nd</sup> Program targeting Claudin18.2 adds to building a gastric cancer franchise

Efficient & scalable autologous manufacturing with 100% success rate to date

# Experienced management team



**Paul Lammers, MD, MSc**  
**CEO**

EMD Serono, Mirna  
Therapeutics, Organon



**Robert Williamson**  
**President & COO**

Haya Therapeutics, BioTheryx  
PharmAkea, Pharmasset, Eos



**Andy Bader, PhD**  
**CSO**

Asuragen, Mirna Therapeutics,  
Orros Biotherapeutics



**Deyaa Adib, MD**  
**CMO**

Bellicum, Baxalta, Astellas,  
Ariad, Rain Oncology Inc.,  
Sanofi Aventis



**Donna Rill**  
**CTO**

Cell Medica, Opexa  
Therapeutics, Baylor  
College of Medicine



**Jon Irvin**  
**SVP of Finance**

Esoterix Laboratory Services,  
Ernst & Young, Bio Numerik



**Cynthia Molina**  
**VP, Regulatory Affairs**

Cell Medica, Agennix



**Chris Murray**  
**VP, Human Resources**

Bellicum, Lonza

**~70 EMPLOYEES**

**60% | US**

**40% | Canada**

**CORPORATE HQ**

Austin, TX

**R&D AND MSAT LAB**

Hamilton, ON

**GMP MANUFACTURING  
FACILITY**

South San Francisco, CA

**FINANCING**

**>\$102M Series A**

leaps



Northpond  
Ventures

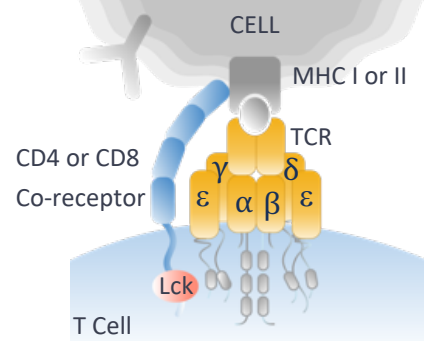
B  
Capital  
Group



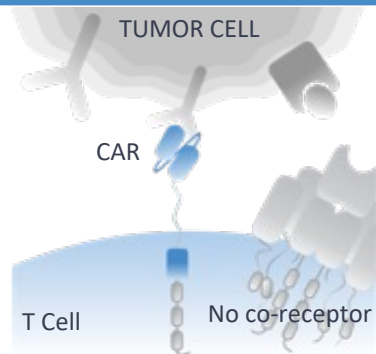
# TAC T cells are designed to improve safety, efficacy, and durability over CAR T

Mimic natural T cell activation while maintaining MHC independence

## Natural T Cell Biology

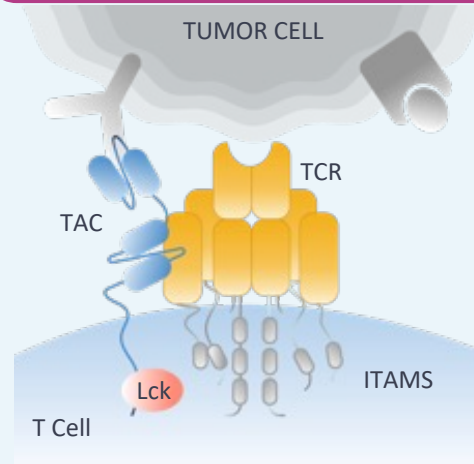


## CAR-T Cells



CAR-T cell has "no brakes" which leads to toxicity

## TAC-T Cell



Intracellular co-receptor domain of TAC adds key regulatory control and mimics natural T cell activation

No activation nor co-stimulatory domains

Composition of matter patents granted in US, CN, JP, HK, AU, MX, KR

## KEY ATTRIBUTES

- ✓ No tonic signaling or premature exhaustion
- ✓ Normal immune synapse
- ✓ Controlled, low & effective cytokine release
- ✓ Deep penetration & activation in tumors
- ✓ T cell persistence (majority memory CD8 cells)

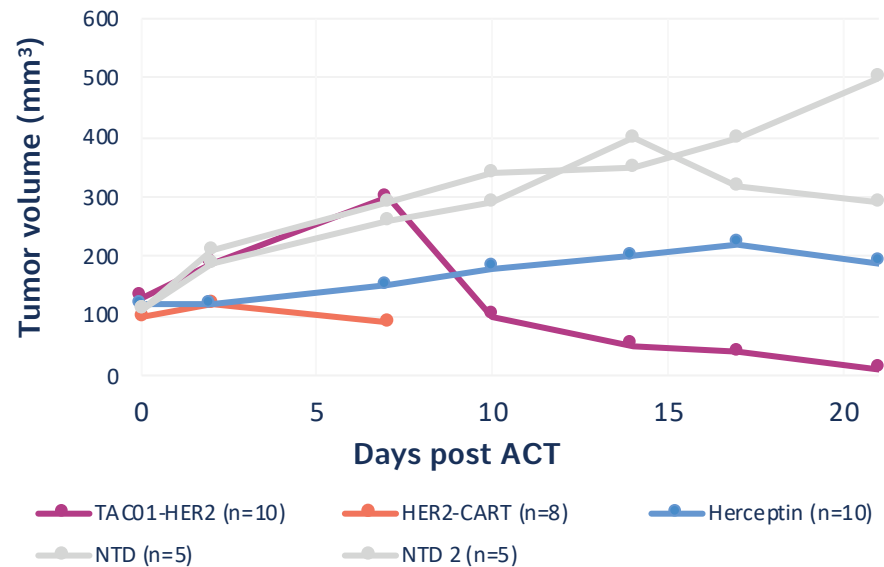




# Strong scientific & clinical rationale for gastric cancer franchise

Supported by compelling preclinical and growing clinical data

TAC100-HER2 reduces tumor burden in Herceptin® – sensitive gastric cancer mouse model\*



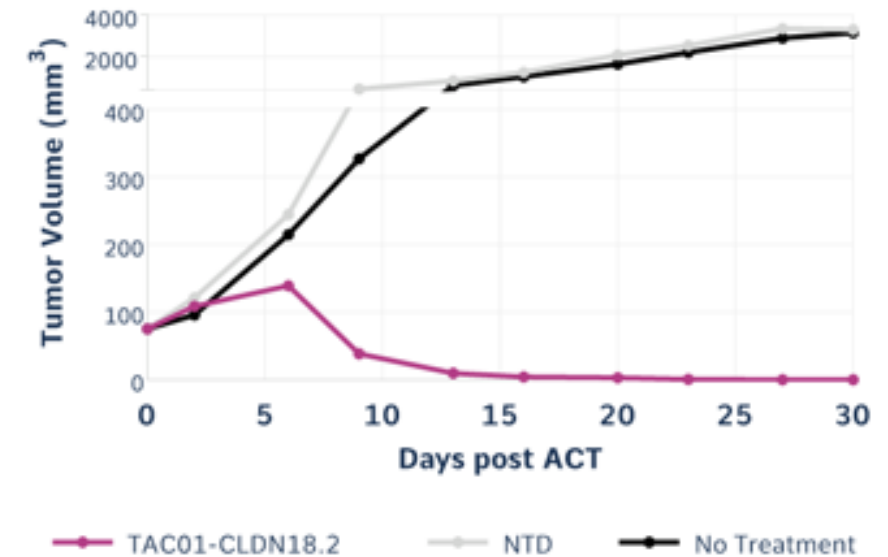
HER2

1 NTD = Non Transduced

\* Study conducted by corporate partner, who considered this 'stunning data'



TAC101-Claudin18.2 depletes gastro-esophageal cancer model (n=6/group) \*\*



Claudin 18.2

Non-Confidential

\*\* Study conducted by external CRO



# Triumvira is building a foundation in gastric & gastro-intestinal cancer

Expansion into other tumors and therapeutic areas through existing pipeline and partnerships

Autologous

Allogeneic

Autologous / Allogeneic | TBD

Platform	Target	Indication	Discovery	Preclinical	Phase I	Phase II
<b>TAC100</b>	<b>HER2</b> Autologous	Gastric, GEJ				
<b>TAC101</b>	<b>Claudin18.2</b> Autologous	Gastric, PDAC				
<b>TAC201</b>	<b>Claudin18.2</b> Allogeneic	Gastric, PDAC				
<b>TACX03</b>	<b>GUCY2C</b> Auto or Allo	CRC, GEJ, PDAC				
<b>TACX04</b>	<b>GPC3</b> Auto or Allo	HCC				
<b>&gt; NEXT-GENERATION TAC PROGRAMS</b>		Solid tumors				

CRC=colorectal cancer; GEJ=gastroesophageal junction cancer;  
HCC=hepatic cell carcinoma; PDAC=pancreatic ductal adenocarcinoma

Non-Confidential

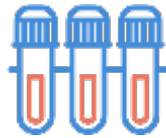


# Phase 1 study showed differentiated safety profile over CAR T therapy



Zero

neurotoxicity events, and no ICU admissions



Only

One

$\geq$  grade 3 CRS, at dose level 4



Only

One

dose limiting toxicity that was target related

## MOST COMMON TOXICITIES

observed in all cohorts were lymphodepletion related

## Hematologic toxicities

most resolved in



$\leq 24$  days



# Phase 1 study showed differentiated safety profile over CAR T therapy

No ICANS, no ICU admissions, only 1 grade 3 CRS

Dose Levels 1 (n=4), 2 (n=4), 3 (n=3) & 4 (N=8) Adverse Events

AEs by Severity	Adverse Event**	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Lymphodepletion associated
	Anemia	4	7	4	0	0	
	WBC Count Decreased	2	4	4	1	0	
	Neutrophil Count Decreased	3	5	2	0	0	
	Lymphocyte Count Decreased	1	1	2	0	0	
	Thrombocytopenia	1	1	2	0	0	
	Hypo-albuminemia	3	1	0	0	0	
	Blood Fibrinogen Increased	2	0	0	0	0	
	ALT increased	4	0	0	0	0	
	Tachycardia	2	0	0	0	0	
	Fatigue	2	0	0	0	0	CAR Risks
	Cytokine Releases Syndrome	5	6	1	0	0	
	ICANS (neuro-toxicity)	0	0	0	0	0	
	Pneumonitis (immune-related toxicity, D15-27 post dose w/o ICU)	0	0	1	0	0	TAC-T Related

	Percent CRS Grade ≥3	Percent Neurotoxicity
Kymriah® USPI	0-48%	43-71%
Yescarta® USPI	8-9%	74-87%
Carvykti® USPI	5%	26%
<b>TAC100-HER2 Ph 1 trial</b>	<b>5%*</b>	<b>0%</b>

\* 1/19 patients

1 Grade 3 pneumonitis at Dose Level 4 = only Dose Limiting Toxicity

Drug Safety Monitoring Committee decided on **DL 4 (6-8 X 10<sup>6</sup> TAC+ T cells/kg)** as **Recommended Phase 2 Dose**

\* Across different indications; based on US Package Inserts

\*\* Notes: Safety Data as of 24-Apr-23. Most frequent and relevant AEs are reported





# Phase 1 study clinical results viewed very favorably by trial oncologists

83% Disease control rate and 33% ORR across dose levels 2-4 in 3L+ GE cancer

DL1

DL2

DL3

DL4

## Phase 1 Refractory Cancer Patients

19 patients previously exposed to a range of 2-12 therapies

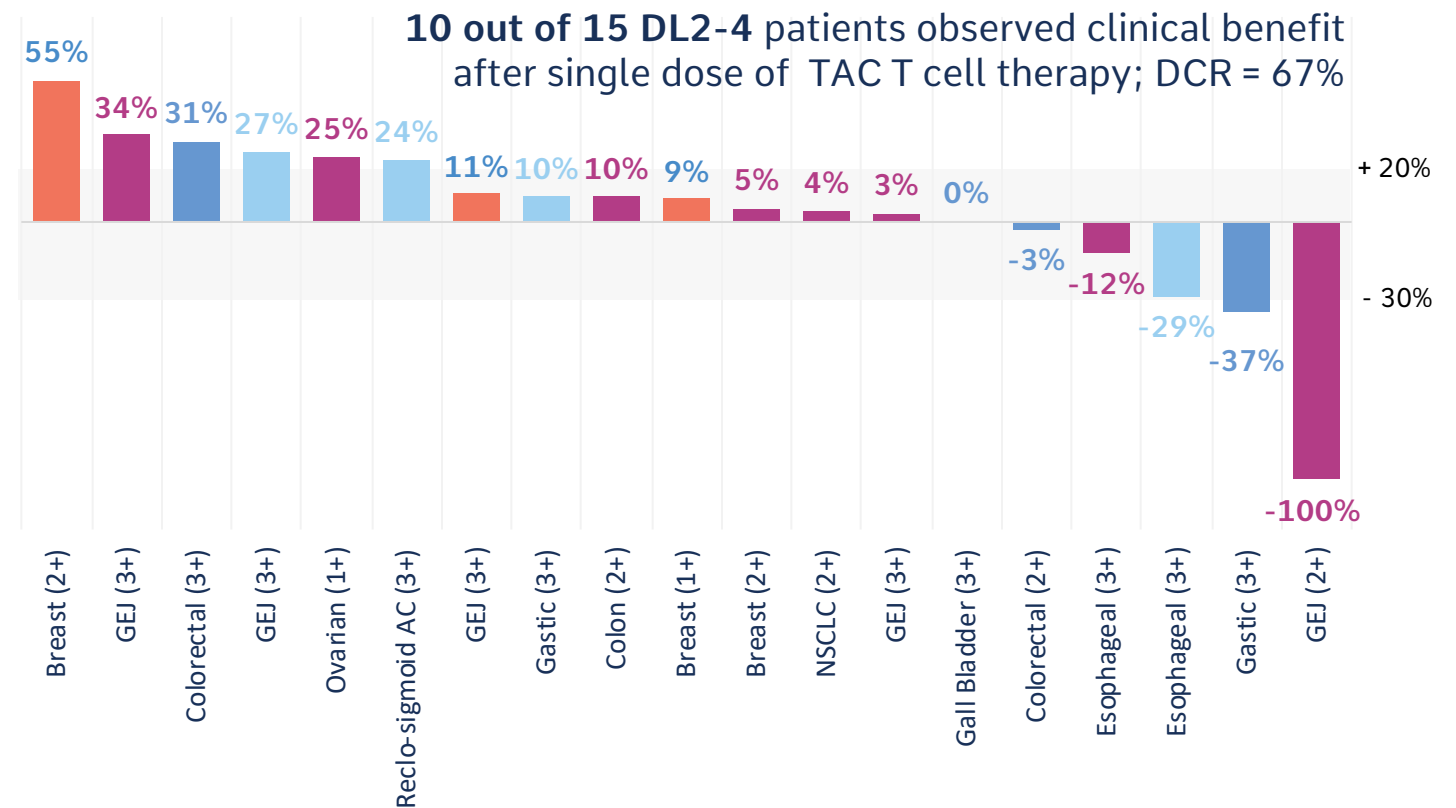
### Results in DL2-4 gastric & esophageal cancer patients

DCR 83% at 1<sup>st</sup> assessment

2 PRs (1 CR of target lesion)

ORR 33% exceeds current

SOC of 4% in 3L+ (Shitara et al 2018)

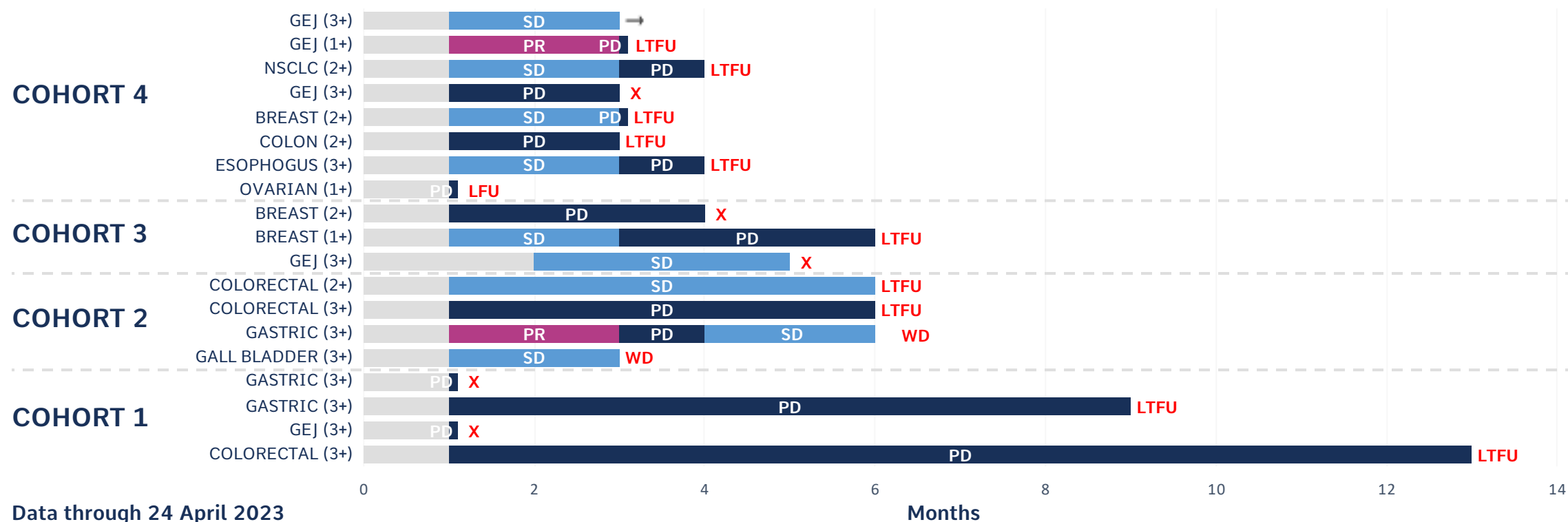


# Phase 1 study clinical results viewed very favorably by trial oncologists

83% Disease control rate and 33% ORR across dose levels 2-4 in 3L+ GI cancer



TAC01-HER2-03 Patient Response and Follow-Up



LTFU = Long Term Follow-Up (No Subsequent Scans); X = Death; WC = Withdraw consent;  
LTFU = Lost to Follow-Up

Non-Confidential



## TREATMENT HISTORY

Diagnosed in 2021

Chemotherapy + HER2-  
Bispecific mAb therapy (best  
response → Partial response)

Chemotherapy + Herceptin®

Palliative Radiotherapy (x2)

Bridging chemotherapy  
for 3 cycles prior to  
TAC100-HER2 infusion →  
patient in progression

Received DL2 TAC100-HER2  
cells after cy/flu LDC

# The first partial response seen in gastric cancer

## Underscoring potential of TAC100 in gastric cancers

### Stage 4b Gastric Adenocarcinoma

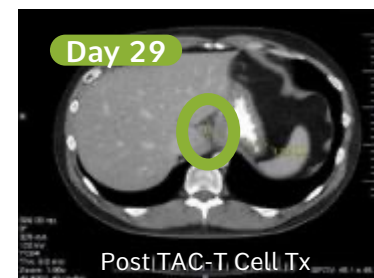
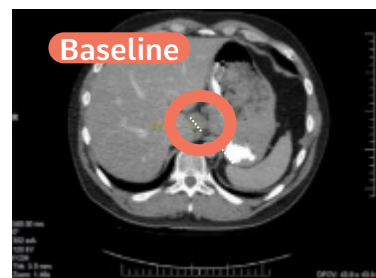
42 year old male; ECOG = 0; Central HER2 Status: 3+ (IHC), + (FISH)

**RECIST 1.1 Tumor Response Assessment**  
(Measurable Disease)

**20 MM**

Target Lesion

**13 MM**



**CHANGE**  
**- 36.5%**

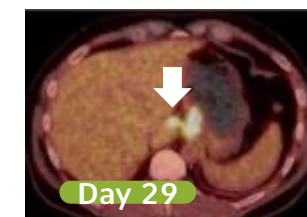
### Safety

Infusion well tolerated

**No SAEs, AEs of special interest, or DLTs**

### PET Scan Results Evaluable Tumor Reduction

Gastrohepatic Node Decrease in Size



Periportal Mass Decrease in Size



## TREATMENT HISTORY

De novo metastatic disease in 2017

1L FOLFOX / Herceptin® → PR →  
FOLFOX dropped for neuropathy → PD

2L FOLFIRI / Herceptin® → PR → PD

3L Enhertu® → PD

4L taxol/ramucirumab → PR → PD

Bridging therapy with taxol +  
ramucirumab + Herceptin®

Upon progression, received DL4  
TAC100-HER2 cells post flu/cy LDC

# Second partial response in GEJ with a 100% reduction of target lesion

Underscoring potential of TAC100 in gastric cancers

## Advanced Gastro-Esophageal Junction Cancer

59 year old male; HER2 Status: 2+ (IHC), + (FISH)



**Primary lesion**  
(3 cm)



**100%** reduction of Primary lesion (CR),  
but small increase in pelvic free fluid +  
new sub-centimeter lymph node lesions

RECIST Score: PARTIAL RESPONSE



# Phase 1 results efficacy signals registration-enabling phase 2 trial in gastric & esophageal adenocarcinomas

## Key Phase 2 Trial Design Elements

01

**HER2+ (2+; 3+ by IHC/+ve FISH)**

No more than 4 prior therapies, or pts. who cannot tolerate/refuse other options

02

**Redosing option based on pre-set clinical criteria** to extend duration of clinical benefit

03

**Combination arm with Keytruda®** to optimize clinical responses and persistence

04

**Leading cell therapy academic trial sites**

Phase 2 trials to start in Q3 of 2023:

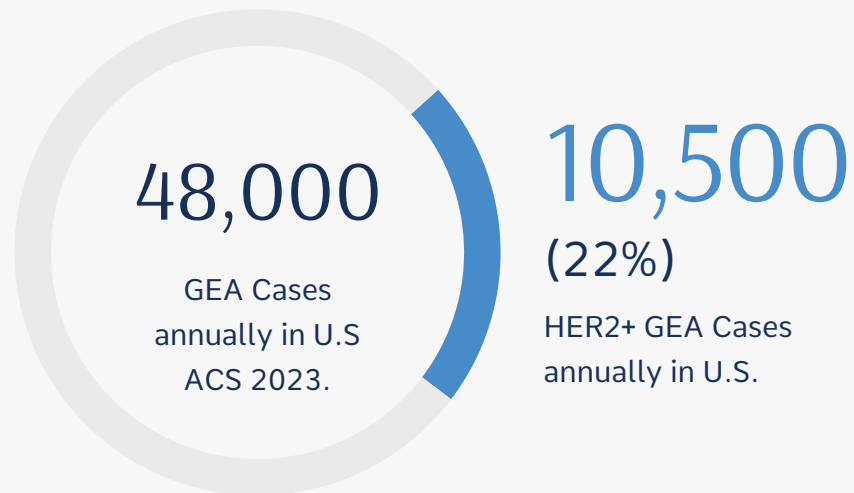
- **TAC100 Mono-therapy (n=36 pts.)**
- **TAC100 Combination therapy with Keytruda® (n=34 pts.)**
- **Simon 3 Stage Design**



# Recognition by GI onc medical community validated the strength of TAC100 data and highlighted the unmet medical need

We anticipate initial approval and launching in underserved gastric & esophageal cancer

## ADDRESSABLE POPULATION



ASCO<sup>®</sup> Gastrointestinal  
Cancers Symposium

AACR<sup>®</sup> American Association  
for Cancer Research<sup>®</sup>

sitc  
Society for Immunotherapy of Cancer

ASCO<sup>®</sup>  
AMERICAN SOCIETY OF CLINICAL ONCOLOGY

ESMO<sup>®</sup> GOOD SCIENCE  
BETTER MEDICINE  
BEST PRACTICE

WORLD CONGRESS ON  
Gastrointestinal  
Cancer

The acceptance for presentation at the most important annual medical & scientific meetings serves as a validation of the interest in our TAC T technology, the phase 1 results to date in solid tumors, and their clinical relevance.

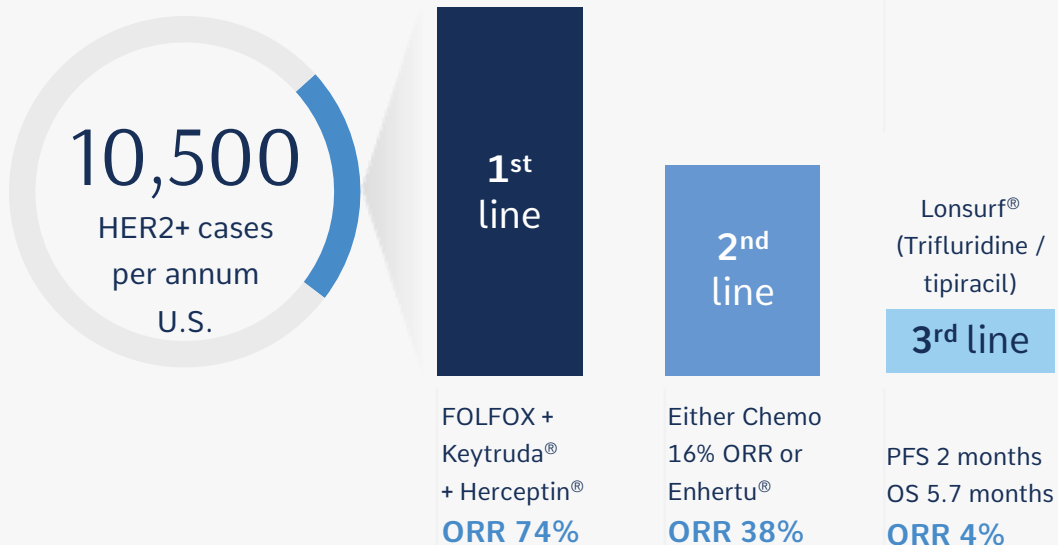




# Registrational Phase 2 trial design defines first target indication

3<sup>rd</sup> Line with upside in 2<sup>nd</sup> and 1<sup>st</sup> lines, and potential for chemotherapy sparing regimen

## 3L GC/GEJ CANCERS POORLY SERVED



## TARGET OUTCOME FOR PHASE 2 TRIAL WILL POSITION TAC100 AS SOC IN 3L HER2+ GASTRIC & ESOPHAGEAL CANCERS

### Monotherapy Clinically Meaningful Target:

An ORR of ~20% & DOR 4 months

PFS = 4.5 months

OS = 8 months

### Combo With Keytruda:

3<sup>rd</sup> line ORR of 25% & DOR 5-6 months

3<sup>rd</sup> line results to establish new SOC of Keytruda + TAC in 2nd line setting

### Data Driven & Efficient Simon 3 Stage Design for Phase 2

DOR= Duration of Response; ORR=Objective Response Rate; PFS= Progression Free Survival; OS= Overall Survival



# Compelling preclinical data supports selection of Claudin18.2

Targeting Claudin18.2 positive cancers expands biomarker-driven gastric franchise



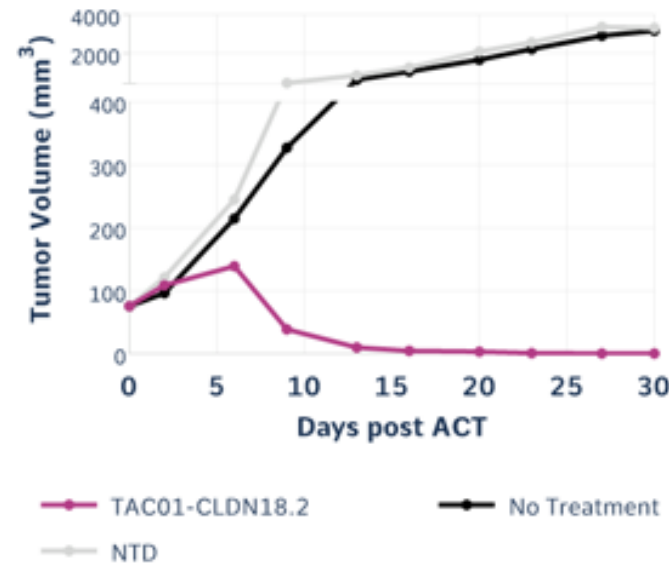
Claudin 18.2 selectively expressed in tight junctions

between normal gastric cells, and not visible to T cells.

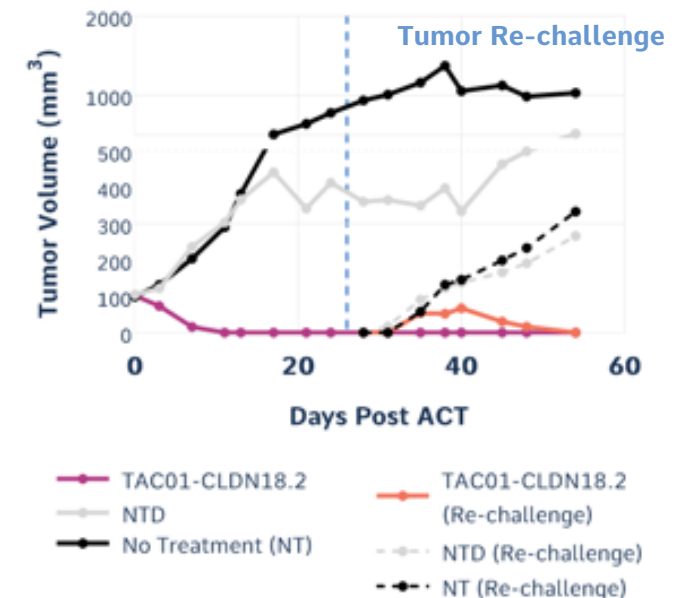
In cancer, Claudin 18.2 expression becomes visible

to T cells, opening up targeting ability

TAC101-Claudin18.2 depletes gastroesophageal cancer model (n=6/group)



TAC101-Claudin18.2 depletes tumors and protects against tumor re-challenge in gastric cancer model (n=4/group)



High expression of Claudin 18.2 seen in 25-40% of gastric cancers, 24-55% in pancreatic cancers (PDAC)

TAC-Claudin18.2 also shows in vivo efficacy in pancreatic cancers

**IND submission anticipated in Q2 2023**



# Claudin18.2 program is on track to dose first patient in Sept 2023

Accelerated path to phase 2 based on HER2 program learnings

FPI Sept 2023

## Phase 1 Dose Expansion

ALL comers CLDN18.2<sup>+</sup> solid tumors

3+3 dose escalation

DL1

6-8 X 10<sup>5</sup>

TAC<sup>+</sup> T CELLS / KG

DL2

1-3 X 10<sup>6</sup>

TAC<sup>+</sup> T CELLS / KG

DL3

6-8 X 10<sup>6</sup>

TAC<sup>+</sup> T CELLS / KG

RP2D

FPI H2 2024

## Phase 2 Dose Expansion

CLDN18.2<sup>+</sup> solid tumors (CLDN status TBD based on Ph 1)

CLDN18.2<sup>+</sup> Gastric and GEJ Cohort (n=57) Simon 2 stage

CLDN18.2<sup>+</sup> PDAC Cohort (n=10) exploratory

CLDN18.2<sup>+</sup> Ovarian and NSCLC Cohort (n=24) Simon 2 stage

A 2<sup>nd</sup> dose may be administered if subjects meet clinical response & safety criteria

All patients will receive Lymphodepletion prior to infusion

Simon 2 Stage design for Phase 2 based on anticipated ORR of 40%

Expected RP2D at DL3 = TAC100-HER2 DL4 dose equivalent

GEJ: Gastroesophageal Junction; PDAC: Pancreatic Ductal Adenocarcinoma; NSCLC: Non-Small Cell Lung Cancer

Non-Confidential



## COCOON® TREE



### Single

#### Cocoon® Platform unit



Holds 5 Cocoon® platforms in same footprint as single unit

#### Quality

**100% Success rate to date**

High cell yields & option to re-dose

High cell quality/consistency

#### Cost

**~40% Lower cost at scale**

Smaller Facility/  
Fewer FTEs

Plug and Play  
Scalable

#### Time

**9 Days start to finish**

Enclosed automated Cocoon

21-24 days  
vein-to-vein

# First mover advantage in automated autologous manufacturing

Three years of experience paying off with reliable clinical supply and commercial-ready products

## COCOON® PLATFORM from Lonza

industrializes and automates autologous cell manufacturing processes

Triumvira's GMP facility in South San Francisco holds

**8 COCOON® PLATFORMS**

Current capacity to manufacture

**TAC-T Cells**

**> 200 pts/year**



# Fast follower allogeneic gamma-delta T cell program enabled by modular TACs

Donor derived Gamma-Delta program on track for IND 1H-2024

## Clear benefits for using Gamma-Delta T cells for allogeneic

Unique anti-tumor biology

- ✓ Naturally primed to penetrate peripheral tissues
- ✓ Kills via adaptive & innate mechanisms

Ideal cell source

- ✓ Relatively abundant
- ✓ Low/no risk of GvHD
- ✓ No need for gene editing

Clear Treatment Benefits

- ✓ Off-the-shelf
- ✓ Rapid treatment with opportunity for frequent re-dosing
- ✓ Lower cost of goods

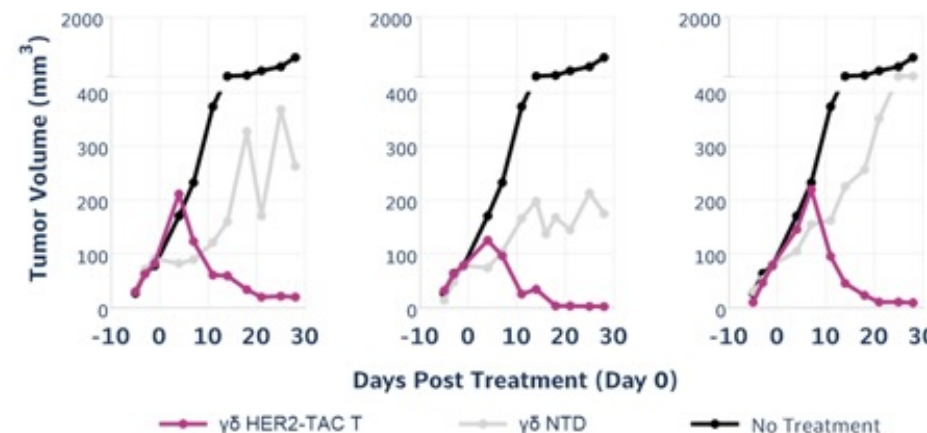
### γδ TAC-T Cells

ARE EFFECTIVE IN PRECLINICAL MODEL OF HER2+ GASTRIC CANCER

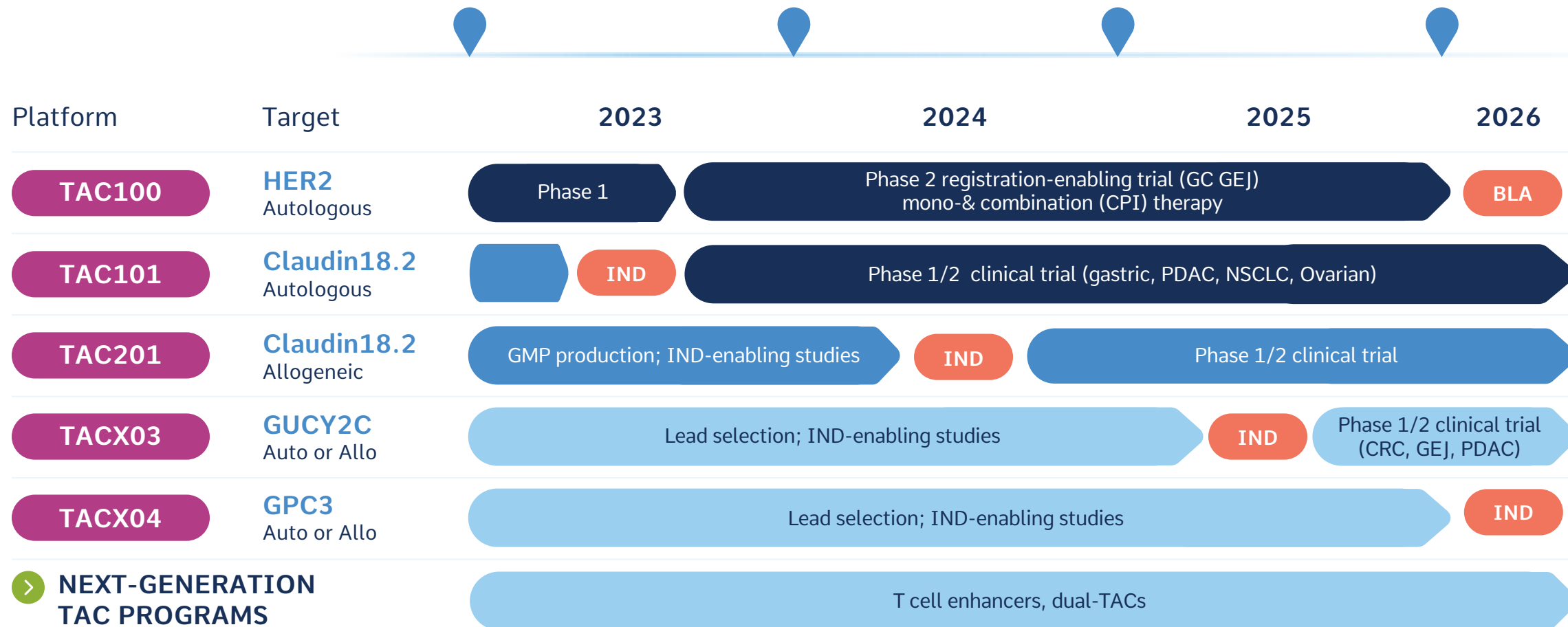
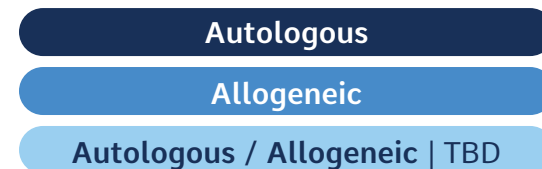
Donor 1

Donor 2

Donor 3



# 4 INDs & 1 BLA over next 36 months



CRC=colorectal cancer; GEJ=gastroesophageal junction cancer;  
HCC=hepatic cell carcinoma; PDAC=pancreatic ductal adenocarcinoma

Non-Confidential

20





# Significant clinical news flow

## 2023

### CLINICAL

**TAC100**

**HER2** Phase 2 initiation:  
monotherapy and in combo with  
Keytruda in GC/GEJ cancers

**TAC101**

**Claudin18.2** IND  
Phase 1 initiation and FPI

## 2024

### CLINICAL

**TAC100**

**HER2** Phase 2 fully enrolled

**TAC101**

**Claudin18.2** Phase 1 data & RP2D

**TAC201**

**Claudin18.2** Allo IND and FPI

## 2025

### CLINICAL

**TAC100**

**HER2** Phase 2 completed and  
BLA initiation EOY

**TAC101**

**Claudin18.2** RP2D, Phase 2 initiation

**TAC201**

**Claudin18.2** Allo Expansion

**GUCY2C**

IND & FPI



# Partnering at Triumvira

## Existing agreements

- ✓ **Early collaboration for Cocoon® Platform**
- ✓ **In-licensed novel binders**
- ✓ **PD-1 supply agreement with Merck**

## Potential partnerships

**Clinical:** TAC01-HER2 co-development, other programs

**Platform:** TAC as backbone for next-gen cell therapies, Autologous and / or Allogeneic, solid / liquid

**Enabling:** therapeutic combos / other improvements

**Regional:** program co-development



# Rationally designed T-cell Antigen Coupler (TAC) platform technology

Ability to develop safer & effective T Cell medicines for solid tumors

2023

Start of 2 HER2 Phase 2 trials

Start of Claudin18.2 Phase 1 trial

2024

Start of  $\gamma\delta$  Allogeneic clinical program

Non-Confidential

Clear line of sight to 1<sup>st</sup> approvable indication in 3L gastric cancers



Lead HER2 program with strong PRs, no ICU visits for CRS, no neurotox, and ability to re-dose validate the platform for the future of T cell medicines

Phase 2 trial in combination with Keytruda® will provide opportunity to pursue 2L gastric cancer indication

2<sup>nd</sup> Program targeting Claudin18.2 adds to building a gastric cancer franchise

Efficient & scalable autologous manufacturing with 100% success rate to date



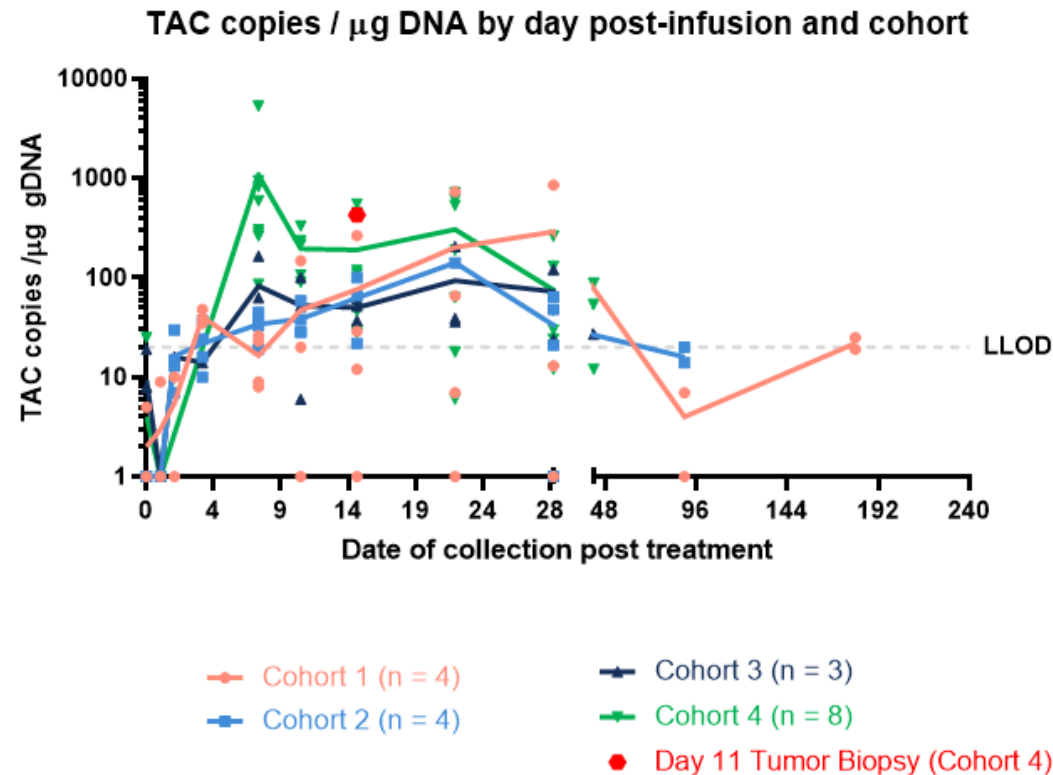


First in class engineered T cells for safer, more efficacious  
and durable therapies in solid tumors

Q2 2023

# TAC detected in blood and tumor biopsy

PK levels at Dose Level 4 higher than at lower dose levels



## BLOOD PK

Unequivocal detection of TAC in blood

Exposure greatest in DL4 (AUC, Cmax)

Tmax earlier in higher dose levels

## TUMOR PK

Unequivocal detection of TAC in a Day 11 tumor biopsy

TAC concentrations in tumor are higher than in blood at time of biopsy

