

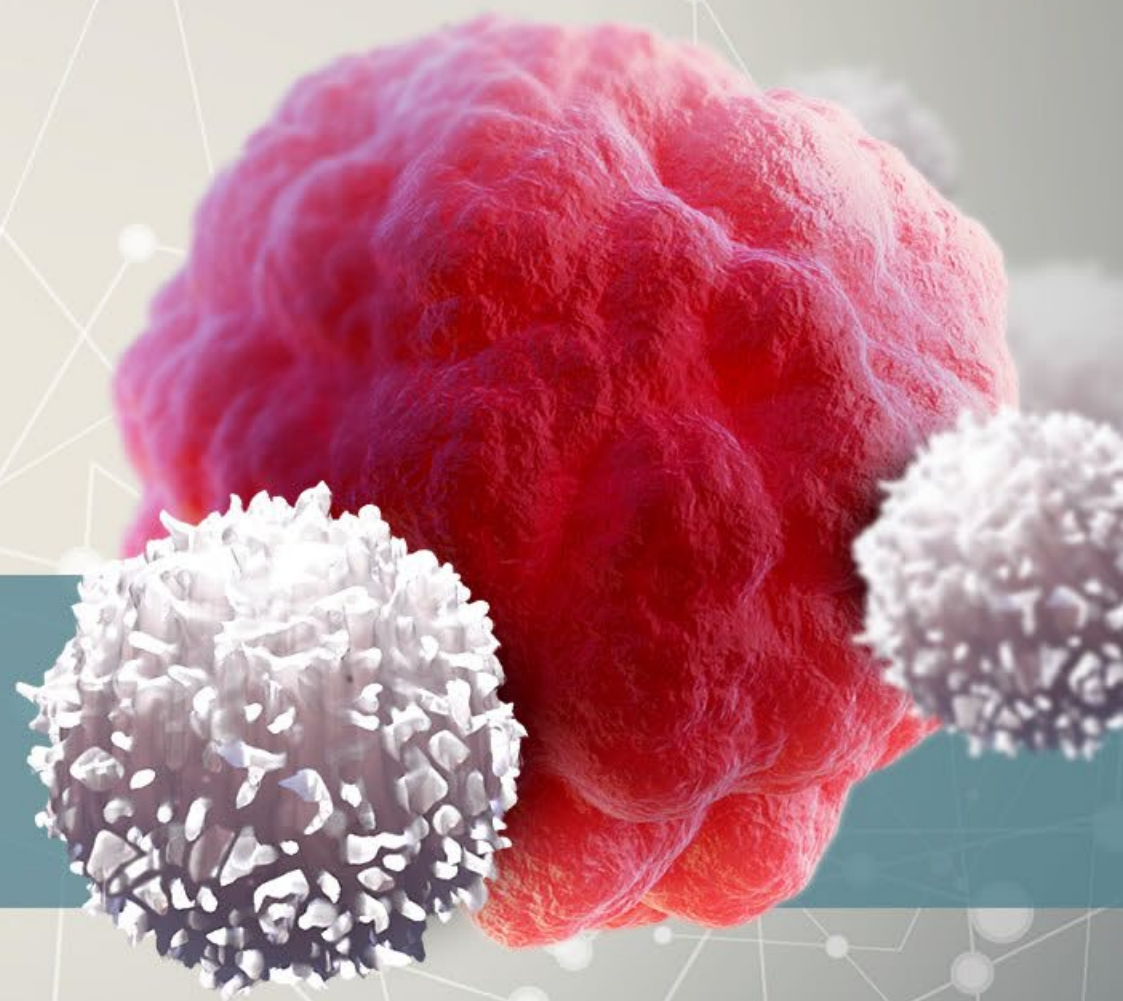


geneos
THERAPEUTICS

CORPORATE PRESENTATION

GT-EPIC™: EXQUISITELY PERSONALIZED IMMUNOTHERAPIES FOR CANCER

Q3, 2023



GENEOS OVERVIEW



Mission to develop Personalized Therapeutic Cancer Vaccines (PTCV's) to treat cancer



Leveraged DNA Medicines IP from INOVIO

- Exclusive license in the FIELD of patient specific cancer prevention or therapy
- Additional PTCV-related IP developed internally



Institutional VC backed company

- \$50M raised to date
- Key investors - Santé Ventures, INO, KIP-VC, Flerie Invest, 3B Future Health Fund, Shanghai Healthcare Capital



GT-30 Phase 1b/2a POC study in 2L Advanced HCC

- Fully enrolled, near completion

EXPERIENCED LEADERSHIP TEAM



NIRANJANI Y. SARDESAI, PH.D
President & CEO, BOD
Founder



JOANN PETERS, MHA
Chief Operating Officer



ILDIKO CSIKI, MD, PH.D
Consulting Chief Medical Officer



FEDERICA F. O'BRIEN
Consulting CFO



DAVID WURTMAN, MD MBA
Consulting Chief Business Officer



JIAN YAN, PH.D
VP, Research & Discovery



MYRNA THOMAS
VP, QA Manufacturing



BETH JUNKER, PH.D
Consultant CMC / Manufacturing

BOARD OF DIRECTORS

DR. SAMUEL BRODER
Independent; Former NCI Director

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Santé Ventures

DR. JAMES EADIE
Santé Ventures

DR. LAURENT HUMEAU
Inovio Pharmaceuticals

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KIP-VC, USA

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Flerie Invest

DR. ROBERTO DE PONTI (BOD OBSERVER)
3B Future Health Fund

DR. JING BAO (BOD OBSERVER)
Shanghai Healthcare Capital

ADVISORS

DR. DAVID B. WEINER
Wistar Institute

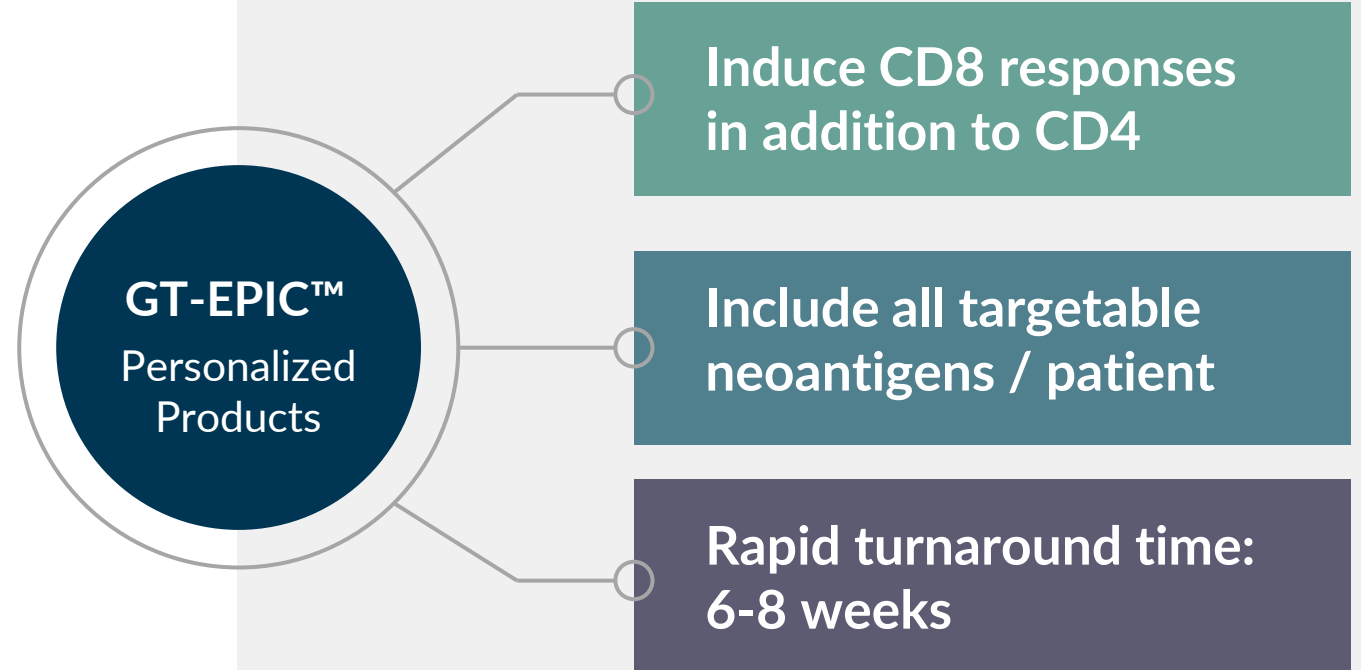
DR. CHI VAN DANG
Ludwig Institute, Johns Hopkins University

MS. SHAWN TOMASELLO
Independent; Formerly Kite, Celgene

GENEOS PERSONALIZED CANCER VACCINES (PCV) ARE VERSATILE & POTENT

GENEOS DIFFERENTIATION:

- Deliver cancer neoantigens & shared antigens in patient specific product
- Leverage patient's own immune system to in vivo select neoantigens that induce T cells and drive clinical responses

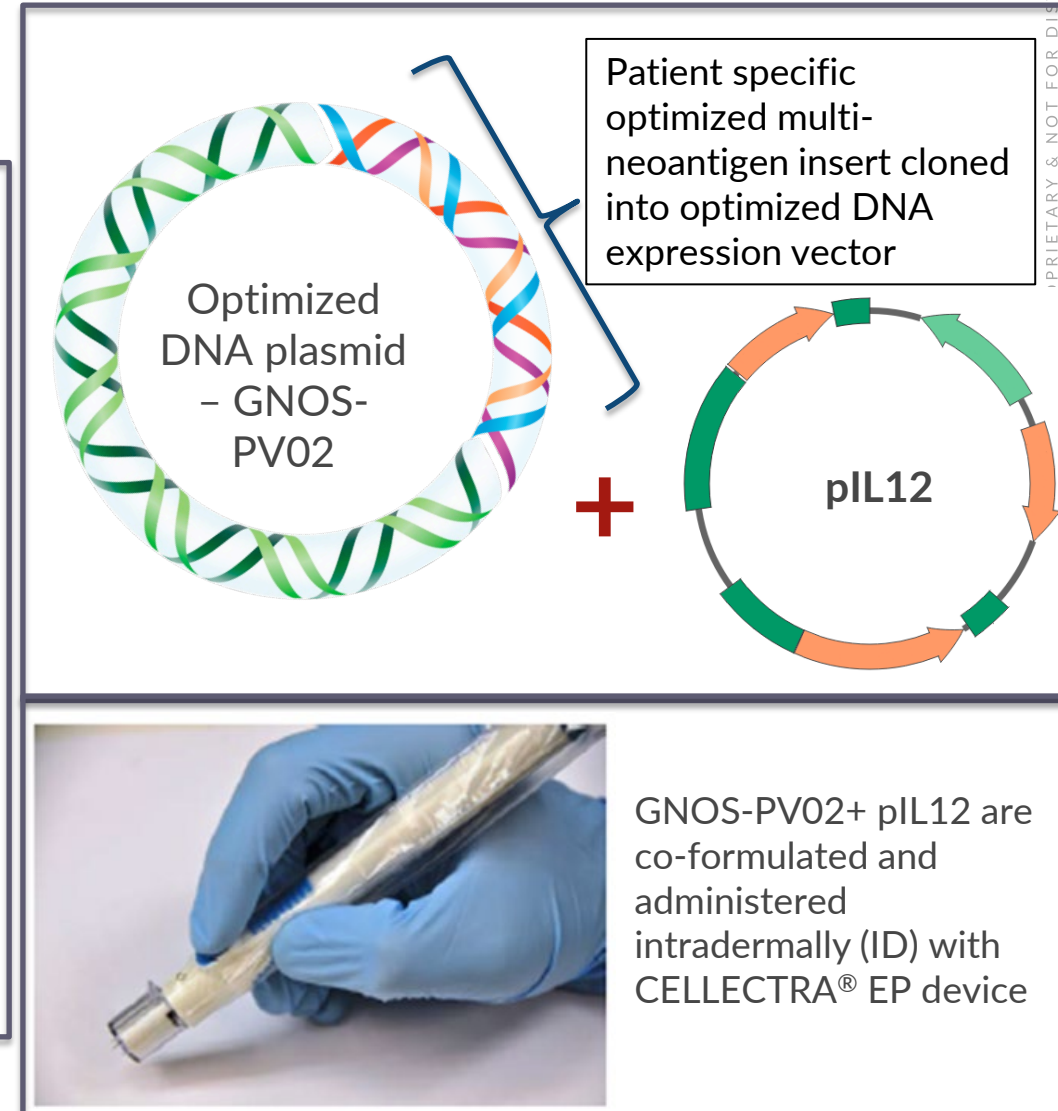


Targeting all neoantigens can address potential issues with tumor immune escape & polyclonal, multi-focal tumors

GENEOS PERSONALIZED TREATMENT DRIVES IMMUNE RESPONSES BY DESIGN

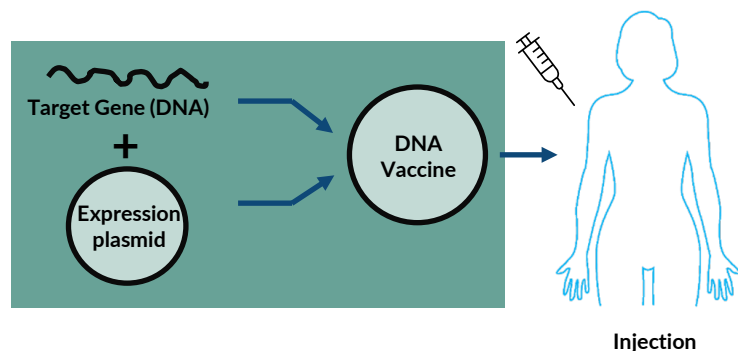
OPTIMIZED DNA NEOANTIGENS + pIL12 + CELLECTRA® ELECTROPORATION (EP)

- Personalized product has three components –
 - Optimized DNA plasmid encoding neoantigens
 - IL-12 (pIL12): Cytokine immune-modulator; Boosts T cells
 - CELLECTRA® delivery device (*in vivo* electroporation; EP): Efficient plasmid uptake for optimal antigen production
- Combination activates robust functional antigen specific CD4+ & CD8+ killer T cells

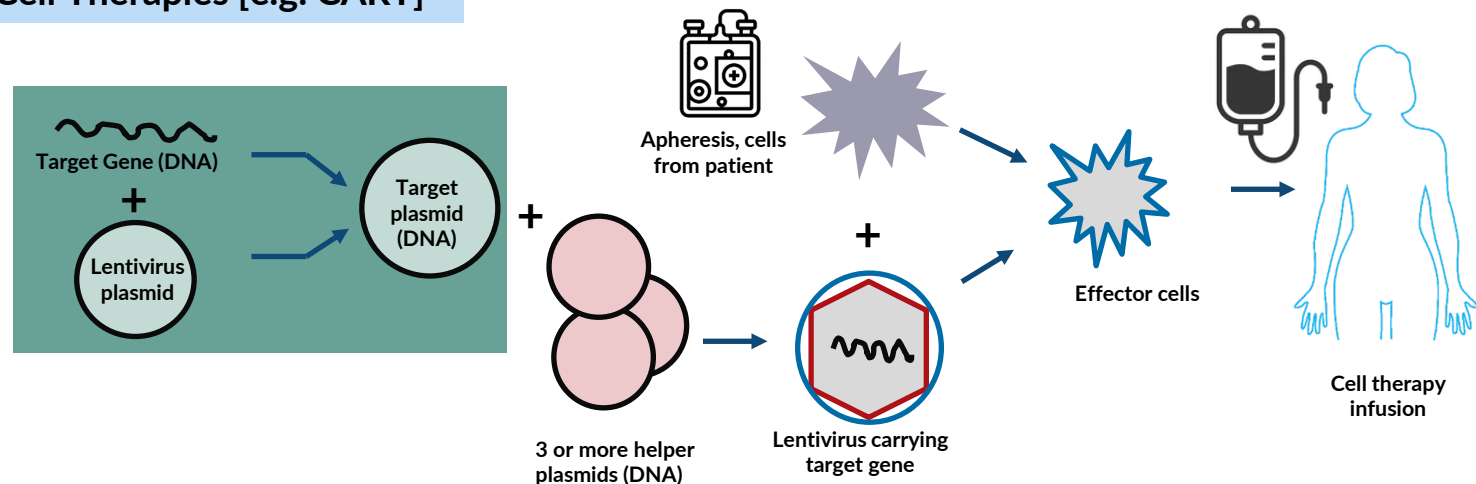


ALL CELL & GENE THERAPY (CGT) PRODUCTS START WITH THE MANUFACTURING OF PLASMID DNA: FOR GENEOS IT IS ALSO THE FINAL DRUG PRODUCT

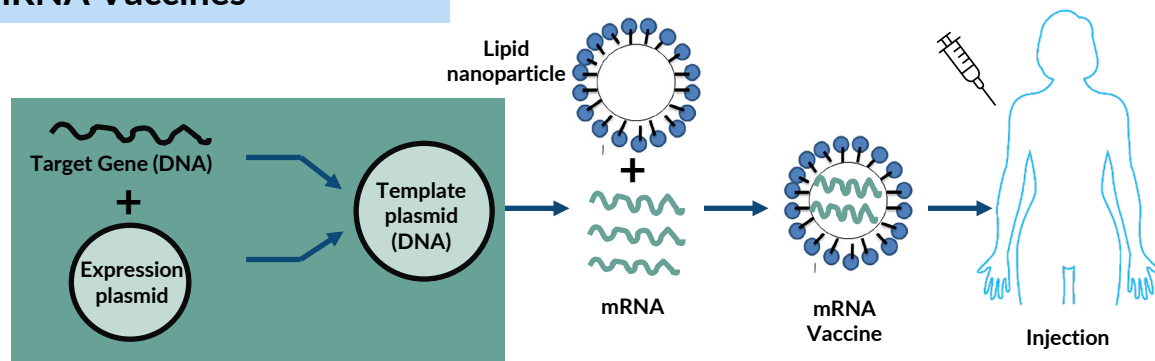
GT-EPIC™ DNA Vaccines



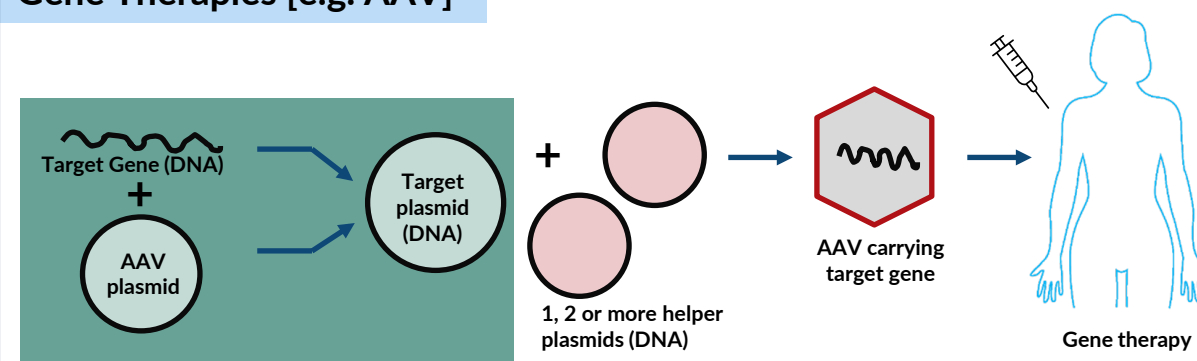
Cell Therapies [e.g. CART]



mRNA Vaccines

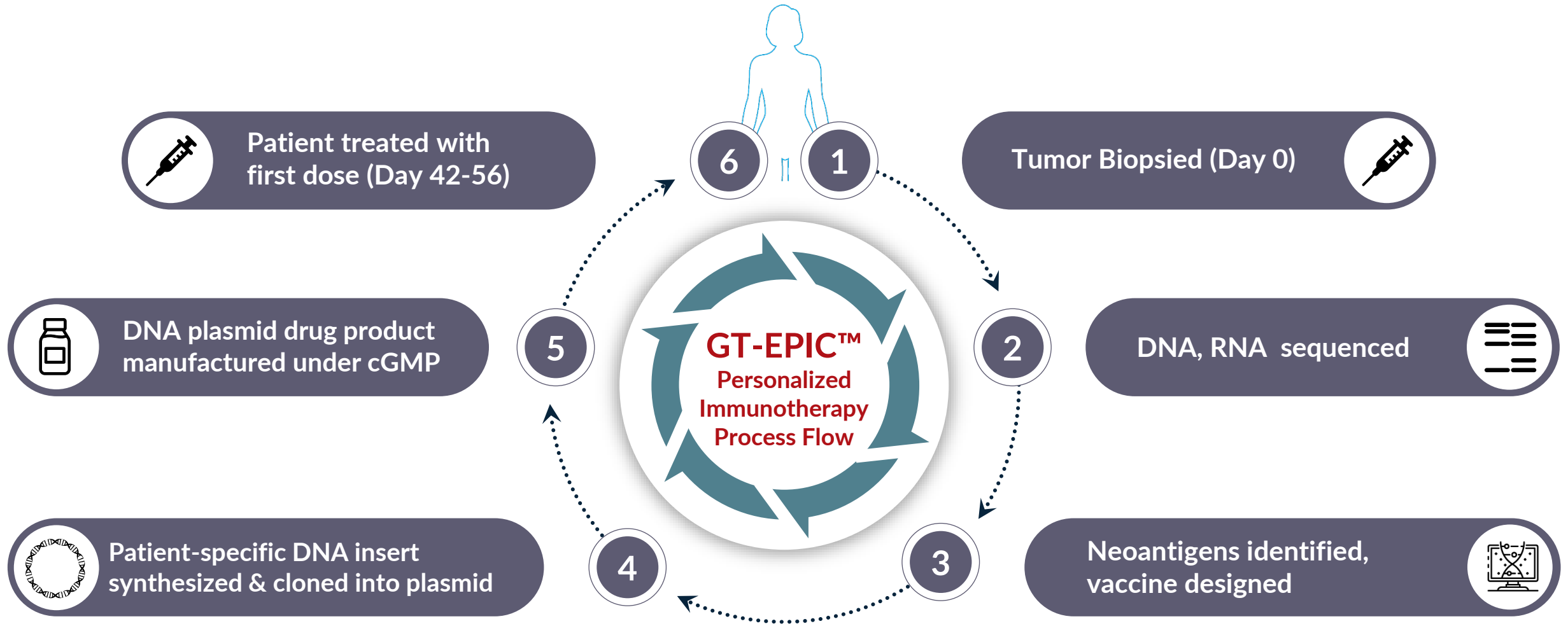


Gene Therapies [e.g. AAV]



- Manufacturing represents a key competitive advantage for Geneos' GT-EPIC™ DNA platform
- Higher process complexity drives larger manufacturing TAT and COGS for the other CGT platforms.

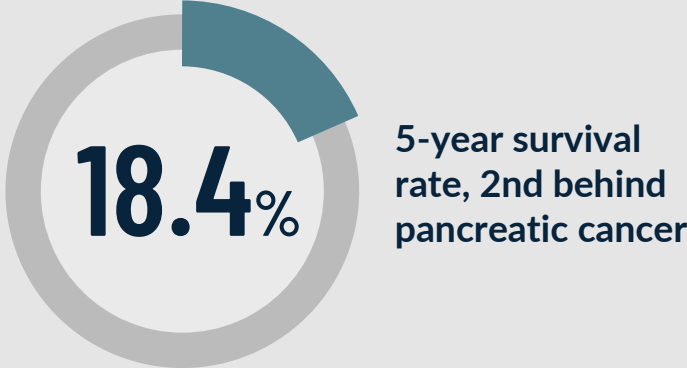
GT-EPIC™ PERSONALIZED IMMUNOTHERAPY PROCESS HAS BEEN SUCCESSFULLY TRANSLATED TO THE CLINIC



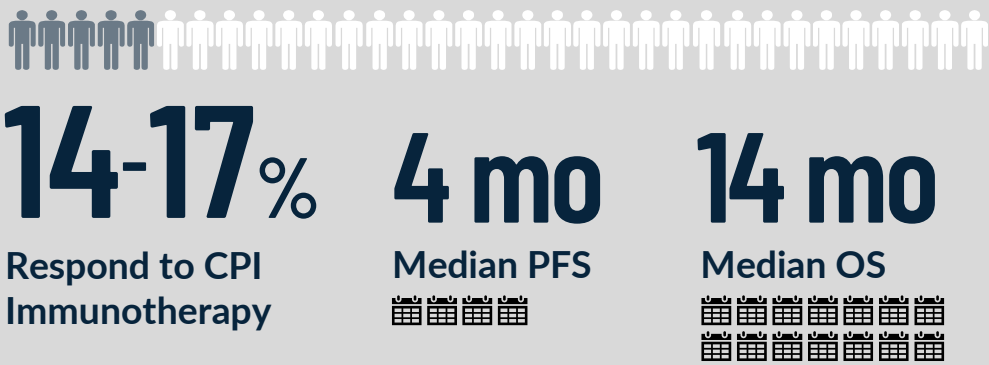
HEPATOCELLULAR CARCINOMA

LARGE UNMET CLINICAL NEED

US cases per year:
29,000
EU: 34,000/year
WW: 800,000/year

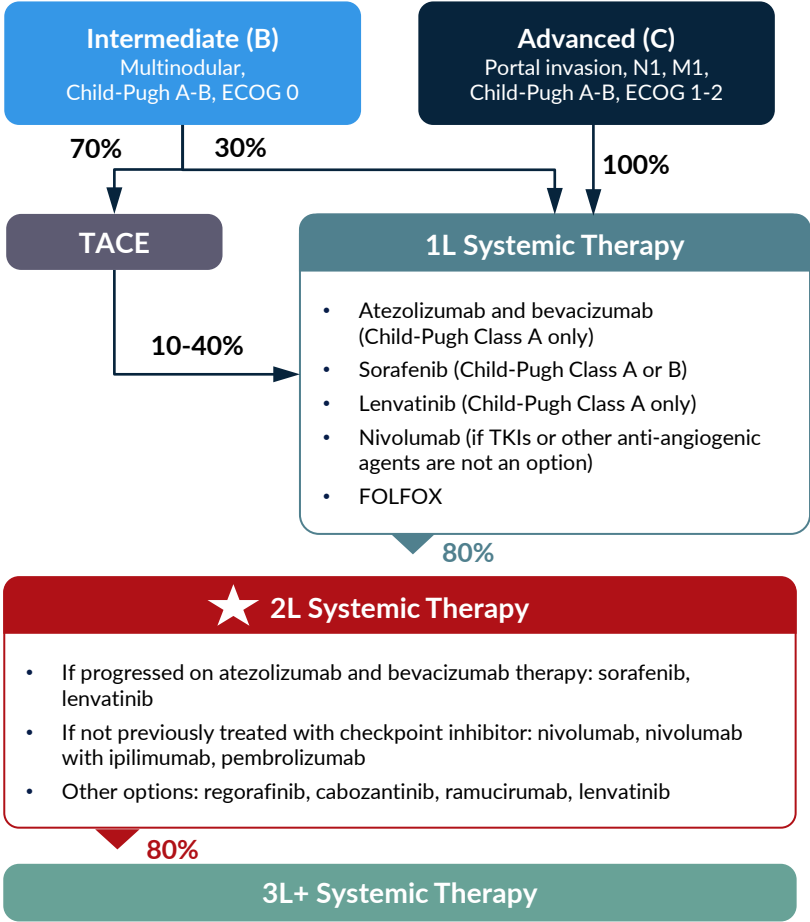


CPI IN ADVANCED HCC



★ GENEOS-targeted segment in HCC could benefit from CD8+ inducing therapy

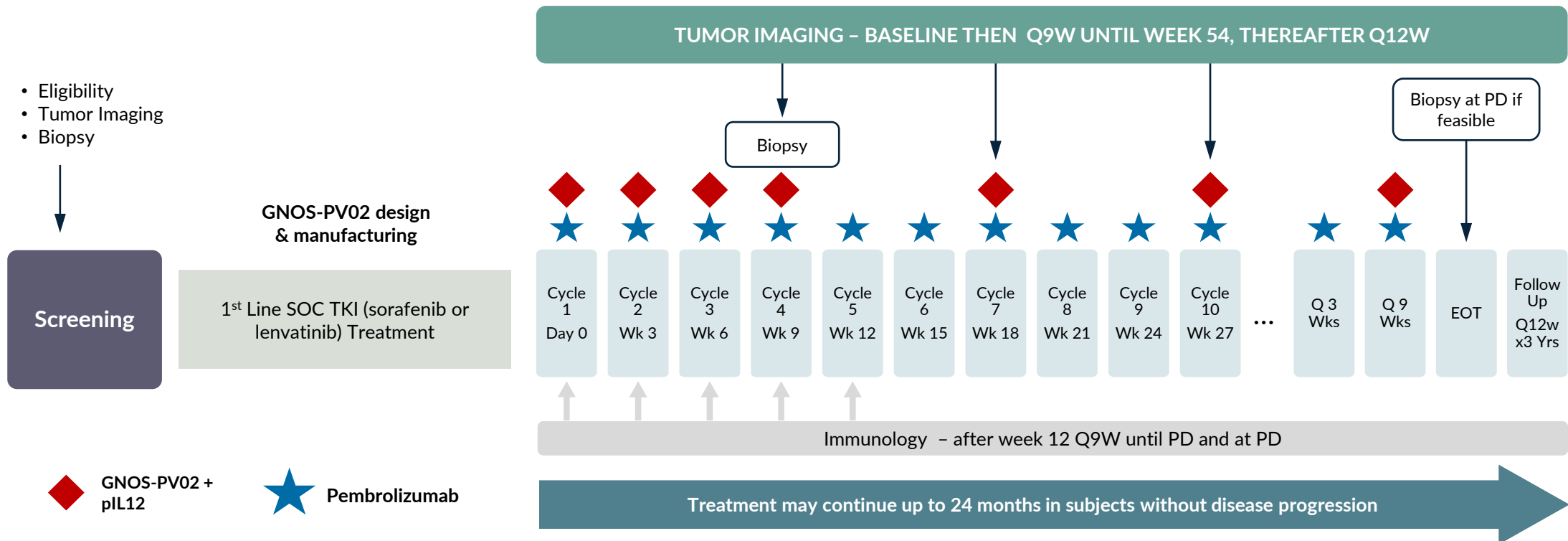
Treatment Overview



GT-30 CLINICAL TRIAL IN 2ND LINE ADVANCED HCC

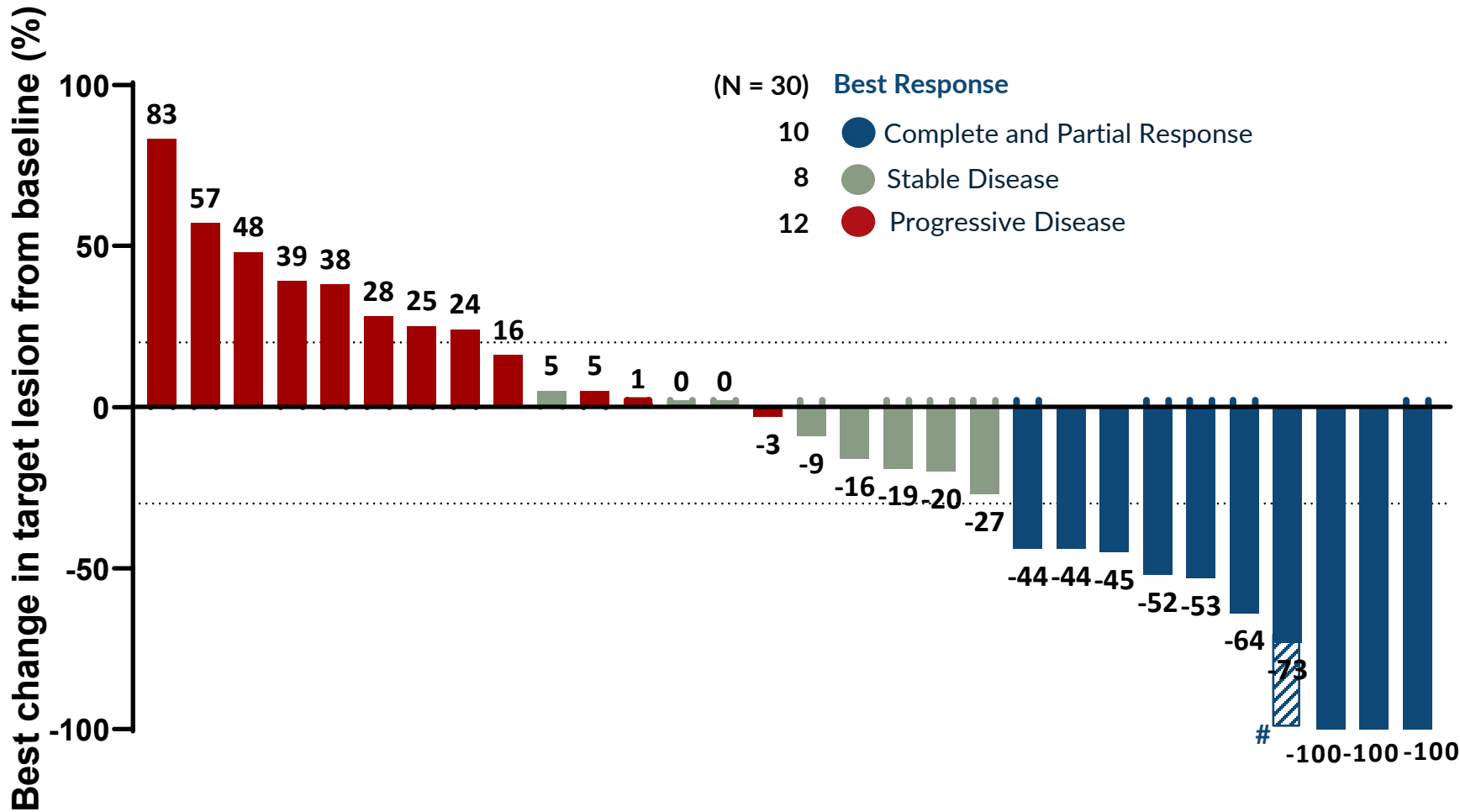
Advanced HCC patients who progress during or are intolerant to 1st Line TKI treatment (sorafenib or lenvatinib)

- Goal is to demonstrate safety, immune responses, and enhanced efficacy (ORR, PFS, OS) compared to single agent anti-PD1 therapy
- N = 24 patients (Johns Hopkins University, Mount Sinai, New Zealand Clinical Research)
- Study expanded to n = 36 patients based on current promising data



GT-30 ITT: 32.3% ORR IN THE FIRST 31 PATIENTS (3 CR, 7 PR)

Best Response in 30 evaluable patients (as of Feb 10, 2023)*



Disease Control Rate (DCR) per RECIST 1.1: 58.1% (CR/PR/SD, 18/31)

Target Lesion Control Rate: 67.7% (21/31)

Pt 2105, a confirmed PR, achieved secondary resectability

* One patient was not evaluable

On-going study; Data subject to change

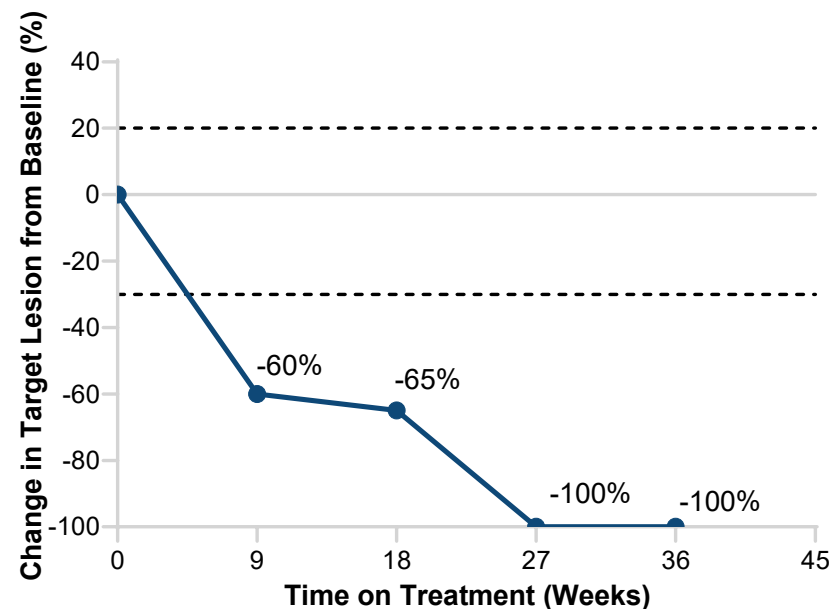
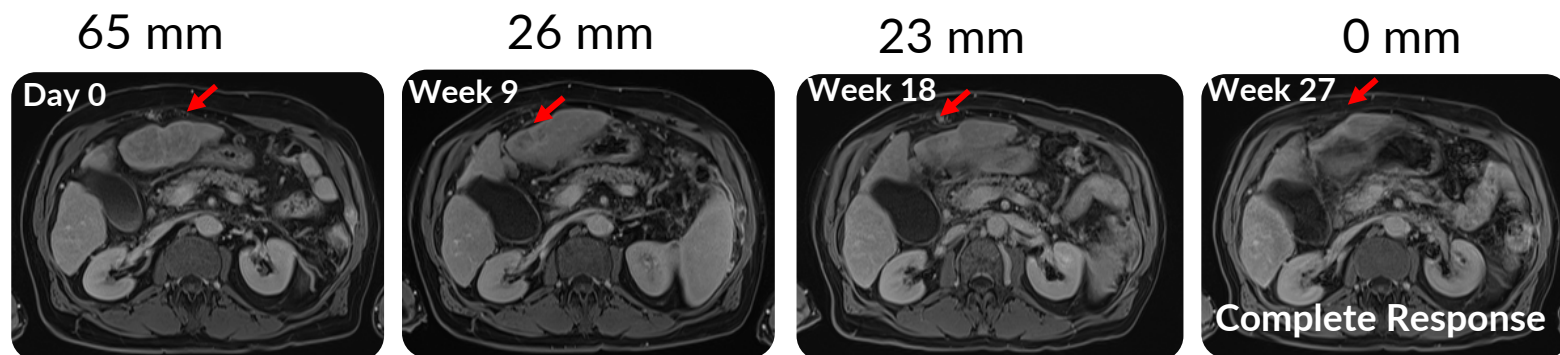
GT-30-2915: COMPLETE RESPONSE

73 yo, white male
HCC (Aug2019)
Microwave ablation (Aug2019)
TACE (Dec2020 and Jan2021)
Lenvatinib (Jun2021; BOR SD)
GNOS-PV02 (Sep2021)
Etiology: non-viral
T2N0M0 (II) BCLC B
Beta-catenin mutation
(CTNNB1 S45F)

Significant Medical History:
Hepatitis C, Cirrhosis, heavy alcohol intake

Neos: 40
PTCV doses: 9
Status: On study

SAEs: 2, unrelated to study treatments
AEs related to PTCV/pIL12/EP: 2, both Grade 1



GT-30-2105: Reduction in Liver Primary & Two Lung Mets Creates Path to Resection Resulting in Cancer Free Status

68 yo, white female
HCC (May2019)
Lenvatinib (Jun2019)
Radiotherapy (Jul2020)
GNOS-PV02 (Nov2021)
Etiology: non-viral
T4N0M1 (IVB) BCLC C

Significant Medical History:

- Hypertension, diverticulitis, GERD
- DVT, Meningioma

Neos: 40

PTCV Doses: 5

Status: Follow up

Hepatectomy Surgery: 20Apr22

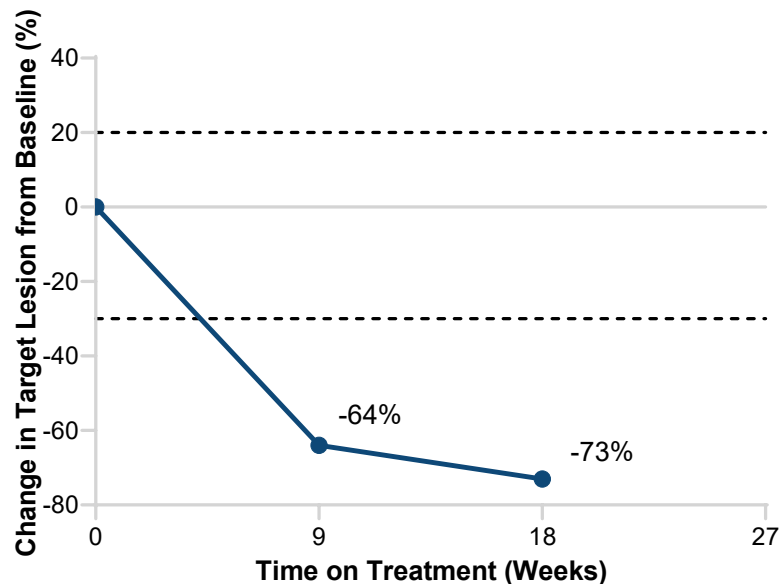
Pembro Q6W: 17May22

No SAEs

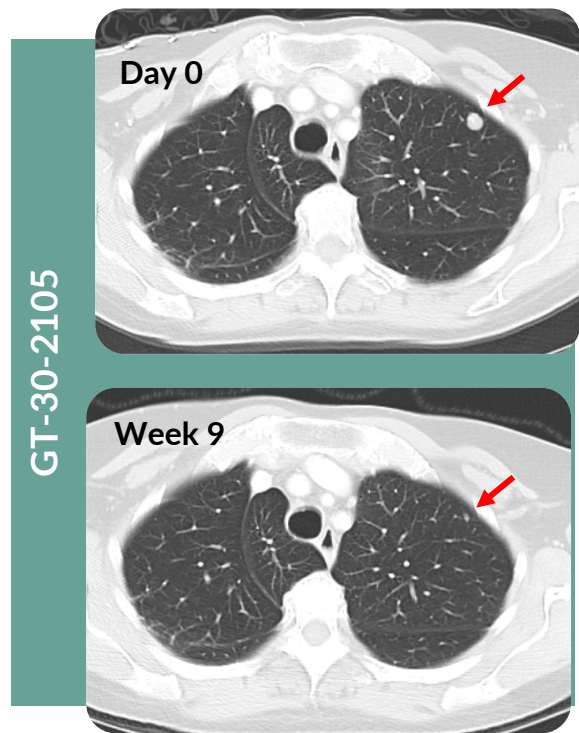
No AEs related to PTCV/pIL12/EP

Patient with liver primary and two lung mets; liver biopsied to determine neos for design of PTCV but lung lesions used as target lesions for RECIST1.1

- After 5 PTCV+pIL12 doses, liver lesion shrank to point of secondary resectability and lung mets shrank to point of being amenable to XRT
- Lesions responded fully to XRT and surgery
- Patient now disease and recurrence free

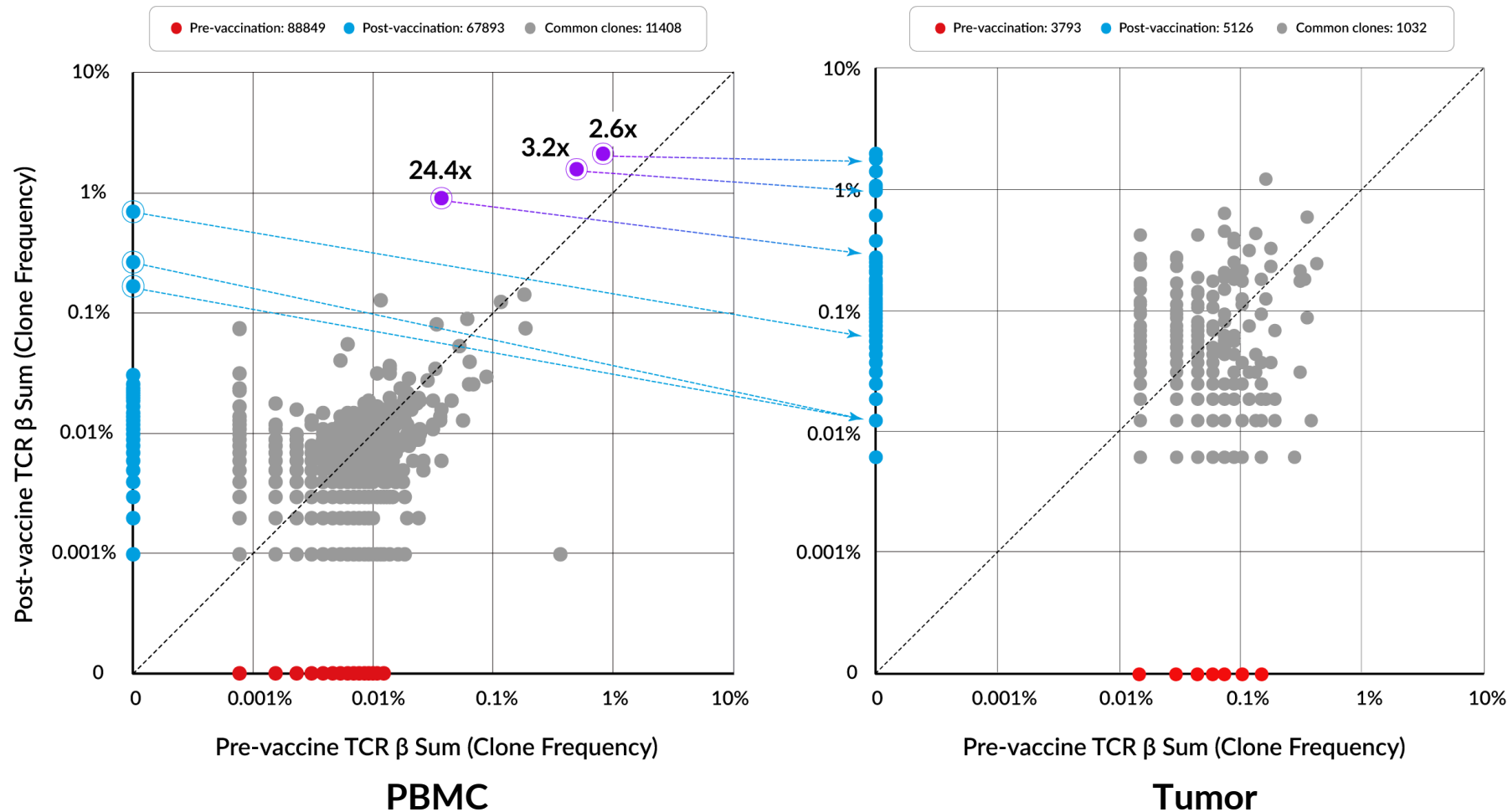


PR



Target lesions (mm)			
Location	d0	w9	w18
Lung LUL	11	4	2
Lung RML	22	8	7

GT-30 CASE STUDY: POST-VACCINATION INCREASE IN PERIPHERAL T CELL CLONES THAT INFILTRATE THE TUMOR



PBMC (Blood) and Tumor:

Expansion of several pre-vac clones (purple) and detection of multiple new T cell clones (blue) post-vaccination

Arrows highlight infiltration of high frequency clones from blood into the tumor post-vaccination

GT-30 CLINICAL DATA SUMMARY

Clinical Efficacy

- 3 CR & 7PRs detected by RECIST 1.1 out of first 31 patients on treatment and 30 evaluable as of February 2023
- Overall, 16/31 patients with some level of tumor reduction; 18/31 with CR/PR/SD on treatment (DCR)
- Next data readouts: 36 Pts in Q3 2023

Safety Data

- No treatment related SAEs noted to-date
- 200+ doses of GNOS-PV02+pIL12 and 350+ doses of pembrolizumab across 31 subjects treated

Treatment Feasibility

- Personalized cancer treatments can be designed, manufactured, & administered successfully
- Delivered up to 40 neoantigens/patient
- 6-8 week turnaround time feasible

GT-10 CASE STUDY: EFFICACY FROM A SECOND TUMOR TYPE EXPANDS CLINICAL APPLICABILITY

PT # 10-101: 21y Female, Anaplastic Astrocytoma/GBM

Diagnosis & Primary Treatment

- IDH positive, MGMT methylated
- Two surgeries; Radiation; Temozolomide

GT-10 Treatment

- Monotherapy with GNOS-PV + pIL12

Single Patient Compassionate Use IND

- PCV contains both MHC Class I and II antigens
- 30 antigens (27 neoantigens; 3 shared antigens)

Patient treated only
with PCV
monotherapy

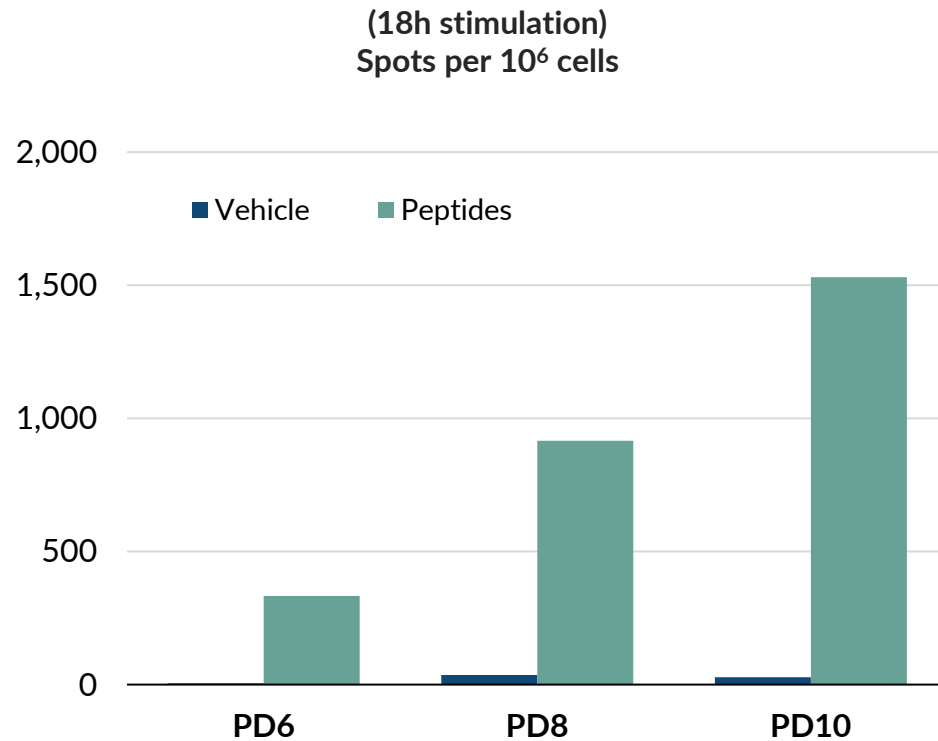
GT-10 Treatment & Outcome (as of June 30th, 2022; Treatment ongoing):

- Patient is recurrence free 60+ mo since 1^o surgery & 48+ mo on GT-10 treatment
- No related SAEs

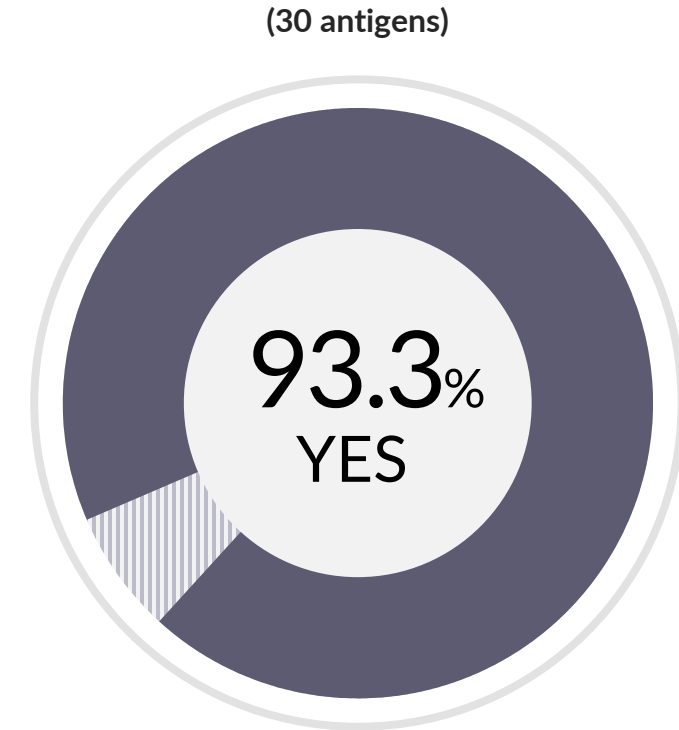
Extended RFS/PFS, OS - illustrates the persistence of response to GT-EPIC™ immunotherapy

GT-10 IFN γ ELISPOT ANALYSIS: RESPONSES DETECTED TO 93.3% ENCODED ANTIGENS

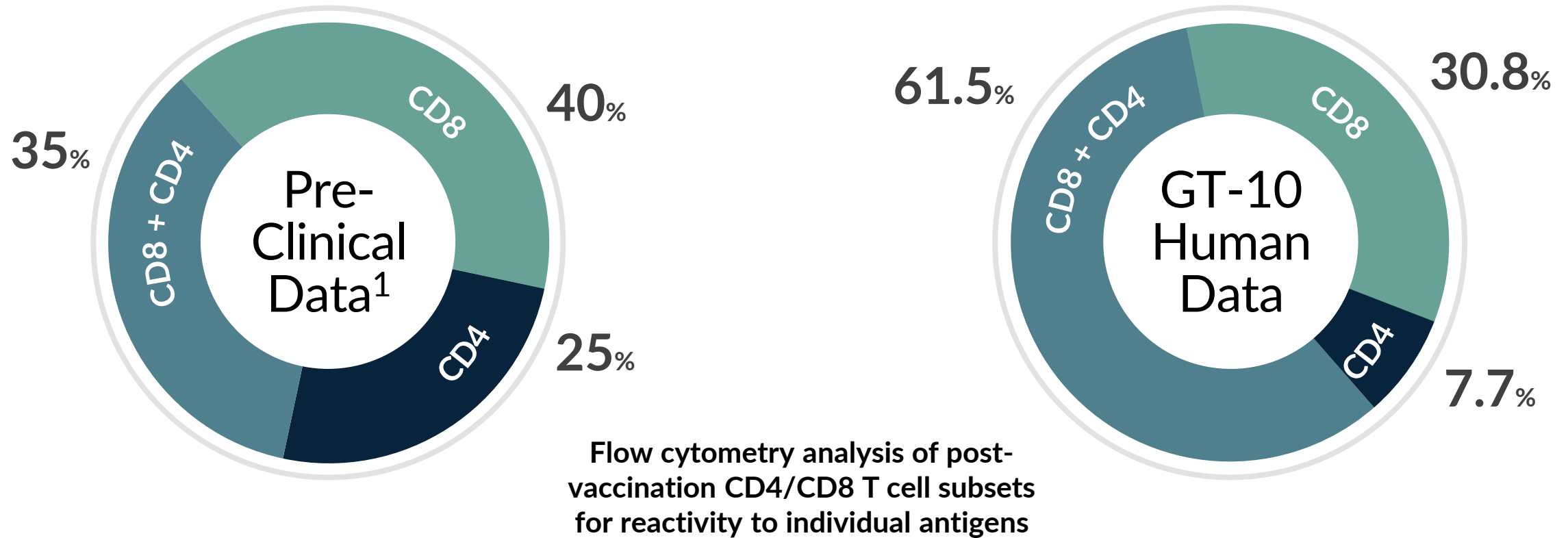
Cumulative ELISpot data from vaccine antigens show induction of a robust response



Responses detected to:
3/3 (100%) shared tumor antigens
25/27 (92.6%) neoantigens



GT-10 IMMUNE PHENOTYPING: GT-EPIC™ VACCINES INDUCE CD8 T CELL RESPONSES TO HIGH PROPORTION OF ENCODED ANTIGENS



- **Humans: 92% of the epitopes tested individually yield CD8 T cells**
- **Pre-clinical (mouse) models: 75%**

GT-EPIC™ CLINICAL DATA SUPPORTS A MOA BASED ON TUMOR-SPECIFIC IMMUNE-ACTIVATION

Strong induction of antigen-specific T cells

- IFN γ -producing T cells detected by ELISpot analysis
- Polyfunctional T cells – TNF, IFN γ , multiple cytokines, activation markers detected in antigen-specific manner

CD4 & CD8 T cell responses

- CTL phenotype

Tumor Infiltration by Lymphocytes (TILs)

- Pre- vs. on-treatment TCR sequence analysis demonstrates expansion of new clones in both blood and tumor tissue
- Infiltration of newly expanded clones into the tumor

VALIDATED MOA DRIVES GT-EPIC™ DISCOVERY ENGINE FOR NOVEL TCRs TO HIGH VALUE TARGETS FOR PARTNERING

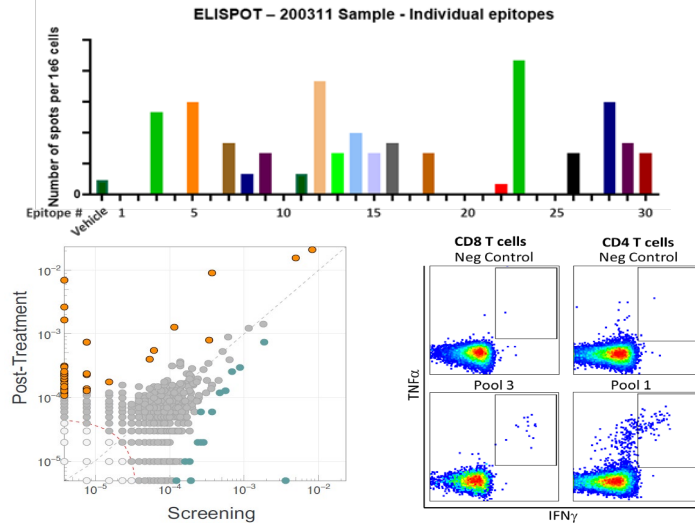
GT Personalized Vaccine Administration

WITH GENEOS PLATFORM, WE CAN RAPIDLY IDENTIFY NEOANTIGENS AND MANUFACTURE PATIENT SPECIFIC PRODUCTS IN LESS THAN HALF THE TIME OF OUR COMPETITORS



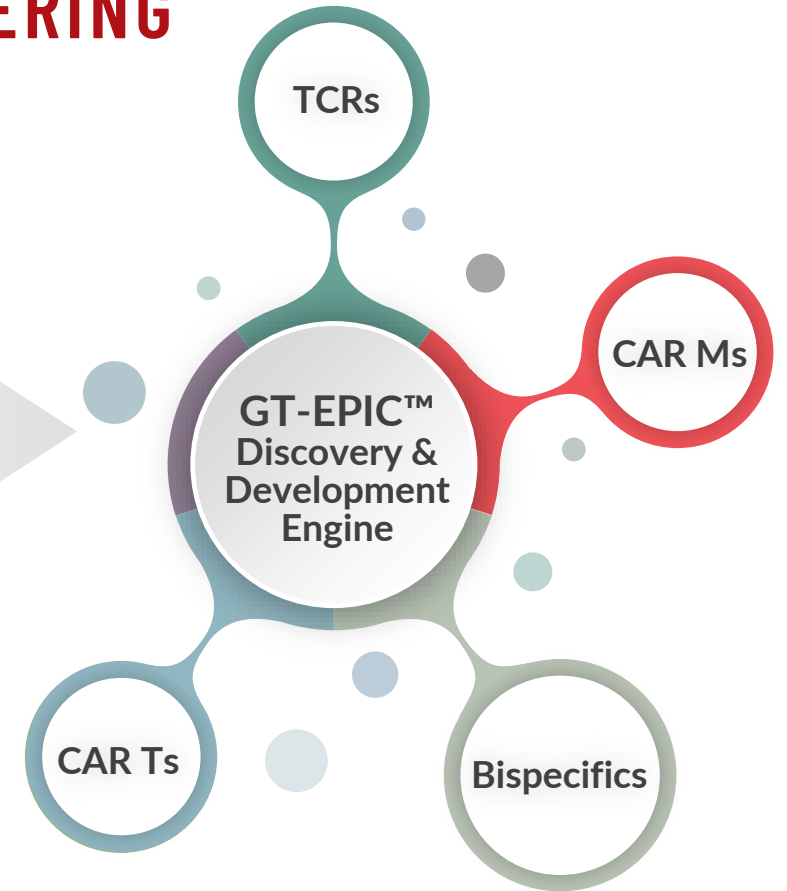
1. Biopsy specimen collected at clinical site (Day 0)
Specimen(s) shipped for DNA, RNA sequencing
2. DNA, RNA Sequencing & somatic variant calls
3. Proprietary neoantigen DNA insert design & optimization
4. GMP manufacture of patient specific vaccine
5. GMP product shipped to clinical site
6. Patient treated Day 42-56

On-Treatment Immune Monitoring



Discovery Engine Highlights:

- Vaccine induced CD8 T cells
- Over 800+ (neo) antigens encoded in PCVs to date
- Select Mutations/Neos include: p53, β -catenin
- Select shared cancer antigens: Survivin, gp100



Validated TCRs, BCRs to novel antigens provide additional assets for partnering in the cell therapy space - CARTs, CAR Macrophages, TCRs, Bispecifics

GENEOS SUMMARY



Compelling Clinical Data



**High Neoantigen Payloads
Drive CD8s & TILs**



Multiple Upcoming Catalysts



Strong Discovery Platform



**BRINGING PATIENT SPECIFIC
TUMOR TARGETED
IMMUNOTHERAPIES
TO THE WORLD, ONE PATIENT
AT A TIME.**

Dr. Niranjan Y. Sardesai

