UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported):
July 26, 2020

TCR2 THERAPEUTICS INC.
(Exact name of registrant as specified in its charter)

Delaware	**001-38811**	**47-4152751**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(I.R.S Employer Identification No.)**

100 Binney Street Suite 710 Cambridge MA	**02142**
(Address of Principal Executive Offices)	**(Zip Code)**

(617) 949-5200
(Registrant's telephone number, including area code)

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	**TCRR**	**The Nasdaq Stock Market, LLC**

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 7.01 Regulation FD Disclosure.

On July 26, 2020, TCR2 Therapeutics Inc. (the "Company") issued a press release titled "TCR2 Therapeutics Announces RECIST Responses with First TC-210 Dose Tested in Advanced Mesothelin-Expressing Solid Tumors." A copy of the press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

The information under this Item 7.01, including Exhibit 99.1 attached hereto, is being furnished herewith and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such filing.

Item 8.01. Other Events.

The Company from time to time presents and/or distributes to the investment community slide presentations to provide updates and summaries of its business. On July 27, 2020, the Company will host a conference call and webcast to discuss initial data from the Phase 1 portion of the TC-210 Phase 1/2 clinical trial for patients with mesothelin-expressing solid tumors. A copy of its "Presentation of Clinical Data from First Cohort of TC-210 Patients" slide presentation is being filed herewith as Exhibit 99.2 to this Current Report on Form 8-K and incorporated herein by reference. The Company undertakes no obligation to update, supplement or amend the materials attached hereto as Exhibit 99.2.

Statements contained under this Item 8.01, including Exhibit 99.2, regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Such statements include, but are not limited to: TCR^2's guidance regarding TC-210, including the therapeutic potential and clinical benefits thereof, as well as the safety and tolerability of TC-210 and future clinical development plans; TCR^2's ongoing Phase 1/2 clinical trial of TC-210, including its initial results; and the potential impact of COVID-19 on the Company's strategy, future operations and clinical trials.

Any forward-looking statements are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. Risks that contribute to the uncertain nature of the forward-looking statements include, without limitation: uncertainties inherent in clinical studies and in the availability and timing of data from ongoing clinical studies; whether interim results from a clinical trial will be predictive of the final results of the trial; whether results from preclinical studies or earlier clinical studies will be predictive of the results of future trials; the expected timing of submissions for regulatory approval or review by governmental authorities, including review under accelerated approval processes; orphan drug designation eligibility; regulatory approvals to conduct trials or to market products; TCR^2's ability to maintain sufficient manufacturing capabilities to support its research, development and commercialization efforts, whether TCR^2's cash resources will be sufficient to fund TCR^2's foreseeable and unforeseeable operating expenses and capital expenditure requirements, the impact of the COVID-19 pandemic on TCR^2's ongoing operations; and other risks set forth under the caption "Risk Factors" in TCR^2's most recent Annual Report on Form 10-K, most recent Quarterly Report on Form 10-Q and its other filings with the Securities and Exchange Commission. All forward-looking statements contained in this presentation speak only as of the date on which they were made. The Company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press release dated July 26, 2020
99.2	Copy of TCR2 Therapeutics Inc. slide presentation dated July 27, 2020
104	Inline XBRL cover page

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: July 27, 2020

TCR_2 Therapeutics Inc.

By: /s/ Mayur (Ian) Somaiya
Mayur (Ian) Somaiya
Chief Financial Officer

TCR2 Therapeutics Announces RECIST Responses with First TC-210 Dose Tested in Advanced Mesothelin-Expressing Solid Tumors

- TC-210 TRuC-T cell monotherapy induced tumor regression in first five patients

- Two RECIST unconfirmed partial responses and two patients with stable disease through six months

- Manageable toxicity profile, with only one patient exhibiting TC-210-related non-hematologic Grade >2 toxicity

- Translational data demonstrated T cell expansion and cytokine production

- TCR2 to host conference call today starting at 8:00am E.T. with live webcast available online

CAMBRIDGE, Mass., July 26, 2020 - TCR2 Therapeutics Inc. (Nasdaq: TCRR), a clinical-stage immunotherapy company with a pipeline of novel T cell therapies for patients suffering from cancer, today announced positive interim data from the first five patients treated in the Phase 1 portion of the TC-210 Phase 1/2 clinical trial for mesothelin-expressing solid tumors. All five patients showed tumor regression including two RECIST unconfirmed partial responses (one of which remains subject to independent central review) and two patients with stable disease through six months. Translational data further demonstrated TRuC-T cell expansion and activation. A manageable toxicity profile was observed with only one patient exhibiting TC-210-related non-hematologic grade >2 toxicity and no evidence of neurotoxicity or on-target, off-tumor toxicity.

“We are delighted that our very first dose of TC-210 induced consistent tumor regression and clinical benefit in heavily pre-treated cancer patients,” said Garry Menzel, Ph.D., President and Chief Executive Officer of TCR2 Therapeutics. “There are very few options for patients with solid tumors and those expressing mesothelin represent a significant frontier of unmet medical need. While these are early data requiring further study, we are encouraged by the potential of our TRuC-T cells as we continue to enroll and treat patients with the goal of quickly finding a recommended Phase 2 dose for TC-210.”

“Based on my prior experience working with both TCR-T and CAR-T cells, including the FDA approval of Kymriah, observing consistent clinical benefit in patients at presumably suboptimal T cell doses is quite meaningful,” said Alfonso Quintás-Cardama, M.D., Chief Medical Officer of TCR2 Therapeutics. “These early TC-210 data suggest our approach may overcome the challenges faced by many T cell therapies in the hostile solid tumor microenvironment. Our enrolled patients have failed multiple lines of therapy, including standard chemotherapy, checkpoint inhibitors and in some cases other mesothelin-directed approaches, in indications where survival has been historically shorter than six months.”

The primary objectives of the Phase 1 portion of the study are to define the safety profile of TC-210 in patients whose tumors overexpress mesothelin and to determine the recommended Phase 2 dose (RP2D). Secondary objectives include overall response rate (ORR) and disease control rate (DCR). Exploratory objectives include the assessment of expansion, tumor infiltration, and persistence of TC-210 T cells.

Summary of trial conduct, baseline characteristics and TC-210 dose:

- **Screening:** Forty-eight percent of patients met the mesothelin expression cut-off as defined per protocol.
- **Manufacturing:** TC-210 T cell products meeting protocol defined specifications have been manufactured successfully for each patient enrolled in the clinical trial.
- **Patient Characteristics**: TC-210 treated patients included four with mesothelioma and one with ovarian cancer with a median age of 61 years (range, 36-74 years). The median number of prior therapies was five (range, 3-9), including immune checkpoint inhibitor therapy (n=3) and the anti-mesothelin ADC anetumab ravtansine (n=1).
- **TC-210 Dose**: All patients received the same TC-210 dose either with or without lymphodepletion. One patient with mesothelioma was enrolled to dose level (DL) 0 ($5x10^7$ TC-210 T cells/m^2 without lymphodepletion) whereas four patients (three with mesothelioma and one with ovarian cancer) were enrolled to DL1 ($5x10^7$ TC-210 T cells/m^2 following lymphodepletion with fludarabine 30 mg/m^2/day x4 and cyclophosphamide 600 mg/m^2/day x3).

Key clinical findings from the first five patients treated with TRuC-T cells include:

- **Safety**: TC-210 was generally well tolerated, with no patients experiencing neurotoxicity or on-target, off-tumor toxicities. Three (60%) patients experienced Cytokine Release Syndrome (CRS), which was Grade 1 in two patients and Grade 3 in one patient. The patient experiencing Grade 3 CRS also developed Grade 3 pneumonitis during the first week post infusion that responded to tocilizumab and steroid therapy. This patient died 34 days post treatment due to fungal sepsis, which was deemed unrelated to TC-210. Because of the earlier pneumonitis event, however, the Safety Review Team recommended the expansion of the cohort from three to six patients. None of the subsequent three patients treated at DL1 developed pneumonitis or CRS above Grade 1.
- **Clinical Activity**: All five patients treated with TC-210 T cells have had at least one disease response assessment. The DCR was 100%, with all patients experiencing tumor regression. The median change in the sum of diameters of target lesions was -42% (range, -17% to -67%). The ORR was 40% (2 unconfirmed PRs) according to RECIST v1.1. TC-210 therapy induced a significant reduction in FDG uptake by PET imaging in two evaluable patients, including one patient who achieved a complete metabolic response (PR by RECIST v1.1).
- **Translational Data**: Peak TC-210 expansion (C_{max}) occurred between days 7 and 22. The median peak TC-210 expansion was 821 copies/µg of genomic DNA (range, 520 to 5,901 copies/µg). C_{max} increased when TC-210 was administered following lymphodepletion. Cytokine induction post-TC-210 infusion was observed in all evaluable patients suggesting target engagement.

About the Phase 1/2 Clinical Trial in Advanced Mesothelin-Expressing Solid Tumors

The Phase 1/2 clinical trial (NCT03907852) is evaluating the safety and efficacy of TC-210, TCR^2's T-cell receptor fusion construct directed against mesothelin. The trial is enrolling patients with mesothelin expressing NSCLC, ovarian cancer, cholangiocarcinoma, and malignant pleural/peritoneal mesothelioma. The Phase 1 dose escalation portion of the clinical trial utilizes a modified 3+3 design with four increasing TC-210 T cell doses. At each dose, TC-210 will be tested in two separate dose levels: first without lymphodepletion and then following lymphodepleting chemotherapy. The Phase 1 portion of the clinical trial is ongoing.

In the Phase 2 portion of the clinical trial, approximately 50 patients are planned to receive TC-210 at the RP2D in four distinct cohorts according to their cancer diagnosis: NSCLC, ovarian cancer, malignant pleural/peritoneal mesothelioma and cholangiocarcinoma. Each cohort will include ten patients, except the NSCLC cohort which will include 20 patients with eight patients to receive TC-210 as single agent and 12 patients to receive TC-210 in combination with a programmed cell death 1 (PD-1) blocking antibody.

About Mesothelin-Expressing Solid Tumors

Mesothelin is a cell-surface glycoprotein highly expressed in a wide range of solid tumors, including malignant pleural/peritoneal mesothelioma, ovarian cancer, cholangiocarcinoma, breast cancer, pancreatic cancer and others. Overexpression of mesothelin is associated with poorer prognosis in some cancers due to its active role in both malignant transformation and tumor aggressiveness by promoting cancer cell proliferation, invasion, and metastasis. Of the wide range of solid tumors expressing mesothelin, non-small cell lung cancer, ovarian cancer, mesothelioma and cholangiocarcinoma represent a significant patient population up to 80,000 in the United States alone.

TCR2 Therapeutics Conference Call and Webcast

TCR2 Therapeutics will host a conference call and webcast on Monday, July 27th at 8:00am E.T. The webcast and presentation will be made available on the TCR2 Therapeutics website in the Investors section under Eventsat http://investors.tcr2.com/events. Following the live audio webcast, a replay will be available on the Company's website for approximately 30 days.

About TCR2 Therapeutics

TCR2 Therapeutics Inc. is a clinical-stage immunotherapy company developing a pipeline of novel T cell therapies for patients suffering from solid tumors or hematological malignancies. TCR2's proprietary T cell receptor (TCR) Fusion Construct T cells (TRuC®-T cells) specifically recognize and kill cancer cells by harnessing signaling from the entire TCR, independent of human leukocyte antigens (HLA). In preclinical studies, TRuC-T cells have demonstrated superior anti-tumor activity compared to chimeric antigen receptor T cells (CAR-T cells), while secreting lower levels of cytokine release. The Company's lead TRuC-T cell product candidate targeting solid tumors, TC-210, is currently being studied in a Phase 1/2 clinical trial to treat patients with mesothelin-positive non-small cell lung cancer (NSCLC), ovarian cancer, malignant pleural/peritoneal mesothelioma, and cholangiocarcinoma. The Company's lead TRuC-T cell product candidate targeting hematological malignancies, TC-110, is currently being studied in a Phase 1/2 clinical trial to treat patients with CD19-positive adult acute lymphoblastic leukemia (aALL) and with aggressive or indolent non-Hodgkin lymphoma (NHL). For more information about TCR2, please visit www.tcr2.com.

Forward-looking Statements

This press release contains forward-looking statements and information within the meaning of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. The use of words such as "may," "will," "could", "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "projects," "seeks," "endeavor," "potential," "continue" or the negative of such words or other similar expressions can be used to identify forward-looking statements. These forward-looking statements include, but are not limited to, express or implied statements regarding the therapeutic potential of TC-210, future clinical development plans, the development of the Company's TRuC-T cells, their potential characteristics, applications and clinical utility, and the potential therapeutic applications of the Company's TRuC-T cell platform.

The expressed or implied forward-looking statements included in this press release are only predictions and are subject to a number of risks, uncertainties and assumptions, including, without limitation: uncertainties inherent in clinical studies and in the availability and timing of data from ongoing clinical studies; whether interim results from a clinical trial will be predictive of the final results of the trial; whether results from preclinical studies or earlier clinical studies will be predictive of the results of future trials; the expected timing of submissions for regulatory approval or review by governmental authorities, including review under accelerated approval processes; orphan drug designation eligibility; regulatory approvals to conduct trials or to market products; TCR2's ability to maintain sufficient

manufacturing capabilities to support its research, development and commercialization efforts, whether TCR2's cash resources will be sufficient to fund TCR2's foreseeable and unforeseeable operating expenses and capital expenditure requirements, the impact of the COVID-19 pandemic on TCR2's ongoing operations; and other risks set forth under the caption "Risk Factors" in TCR2's most recent Annual Report on Form 10-K, most recent Quarterly Report on Form 10-Q and its other filings with the Securities and Exchange Commission. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this press release may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. Although TCR2 believes that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur.

Moreover, except as required by law, neither TCR2 nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements included in this press release. Any forward-looking statement included in this press release speaks only as of the date on which it was made. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by law.

Investor and Media Contact:

Carl Mauch
Director, Investor Relations and Corporate Communications
TCR2 Therapeutics Inc.
(617) 949-5667
carl.mauch@tcr2.com

Exhibit 99.2

TCR² THERAPEUTICS

POWERING T CELLS FOR
CANCER CURES

Presentation of Clinical Data from First Cohort of TC-210 Patients

Trial ongoing with additional patients enrolled and treated

Forward Looking Statements

This presentation has been prepared by TCR² Therapeutics Inc. ("we," "us," or "our") and contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, our development plans, our clinical results and other future conditions. All statements, other than statements of historical facts, contained in this presentation, including express or implied statements regarding our expectations for the Phase 1/2 clinical study of TC-210 and our planned Phase I clinical trial of TC-110, our expectations for the safety and efficacy of our product candidates, including TC-210 and TC-110, compared to current T-cell therapy approaches, and our expectations regarding the estimated patient populations and related market opportunities in TC-210's and TC-110's targeted indications, are forward-looking statements. These statements are based on management's current expectations and beliefs and are forward-looking statements which involve risks and uncertainties that could cause actual results to differ materially from those discussed in such forward-looking statements.

Such risks and uncertainties include, among others: uncertainties inherent in clinical studies and in the availability and timing of data from ongoing clinical studies; whether interim results from a clinical trial will be predictive of the final results of a trial; the possibility that positive results from preclinical studies and correlative studies may not necessarily be predictive of the results of our planned clinical trials, including the Phase 1/2 clinical trial of TC-210 and the planned Phase 1 clinical trial of TC-110; the risk that the results from the Phase 1/2 clinical trial of TC-210 will not support further development and marketing approval; the risk that we may be unable to gain approval of TC-210 and our other product candidates on a timely basis, if at all; the risk that we have over-estimated the potential patient population for our product candidates, if approved; the risk that the current COVID-19 pandemic will impact our clinical trials and other operations; and the other risks set forth under the caption "Risk Factors" in our most recent Annual Report on Form 10-K for the year ended December 31, 2019, as filed with the SEC on March 30, 2020, as updated in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, as filed with the SEC on May 14, 2020, and in our future filings with the SEC available at the SEC's website at www.sec.gov. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. You should not place undue reliance on any forward-looking statements, which speak only as of the date they are made.

While we may elect to update these forward-looking statements at some point in the future, we assume no obligation to update or revise any forward-looking statements except to the extent required by applicable law. Although we believe the expectations reflected in such forward-looking statements are reasonable, we can give no assurance that such expectations will prove to be correct. Accordingly, readers are cautioned not to place undue reliance on these forward-looking statements. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

Introduction

Garry Menzel, PhD
Chief Executive Officer

Key Takeaways from Our First Cohort of TC-210 Patients

Clinical Trial Overview

- Data on first 5 patients: 4 patients with mesothelioma, 1 with ovarian cancer
- Single infusion of TC-210 TRuC-T Cells ($5x10^7$ cells/m^2)
- Lymphodepletion
  - Fludarabine (30 mg/m^2/day x4)
  - Cyclophosphamide (600 mg/m^2/day x3)

Key Clinical Findings

- **Screening**: 48% patients eligible
- **Manufacturing**: 100% success rate
- **Safety**: Manageable toxicity, no neurotoxicity or on-tumor, off-target toxicities
- **Translational**: Demonstrated T cell expansion and cytokine production
- **Clinical**: ORR 40%, 2 unconfirmed RECIST PRs, Disease Control Rate (DCR) 100%

Mesothelin Is an Excellent Solid Tumor Target

Expression Patterns

Mesothelin is **highly expressed** on tumors

Lower expression in normal tissue, confined to mesothelium in pleura, peritoneum and pericardium

No expression in vital organs

Clinical Data

Target validation from competitor programs, including:

Memorial Sloan Kettering Cancer Center · NOVARTIS · Penn Medicine — CAR-T

BAYER · Bristol-Myers Squibb — ADC

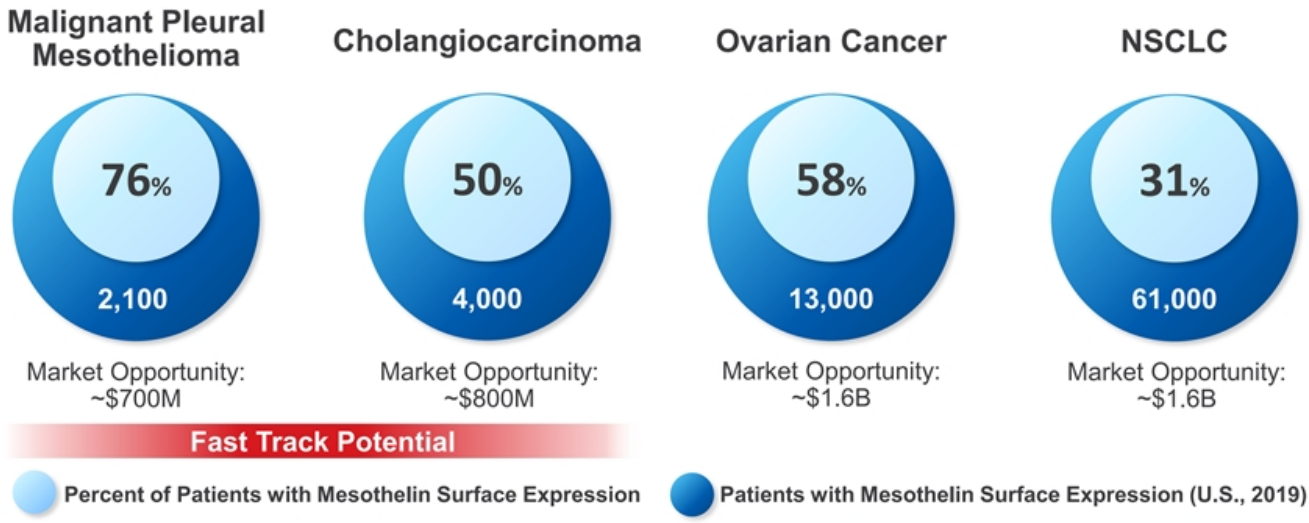
Clinical Need

Up to 80,000

potentially addressable U.S. patients in TC-210's lead indications

Overexpression linked to worse outcomes

Mesothelin Solid Tumors Represent A Significant Market



~$5.0B consensus global peak sales of TC-210

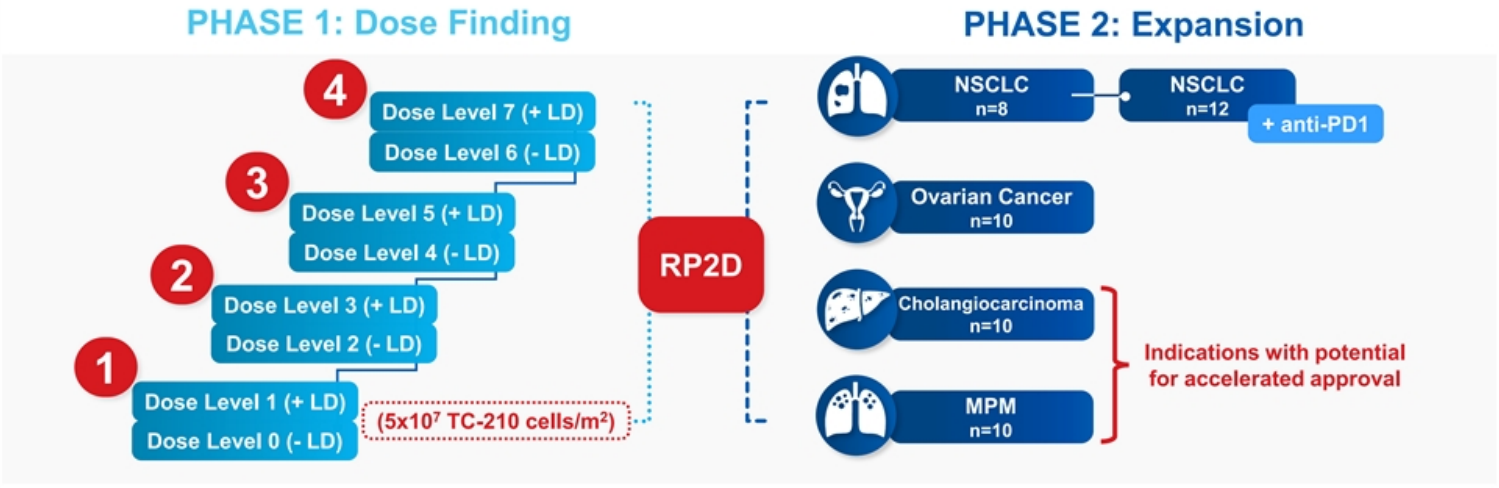
Consensus based on average analyst estimates covering the company

NSCLC, Non-small cell lung cancer Refs: Inaguma 2017, SEER Statistics, Morello 2016

TC-210 Clinical Trial Review

Alfonso Quintás-Cardama, MD
Chief Medical Officer

Ongoing TC-210 Phase 1/2 Trial in MSLN+ Cancers

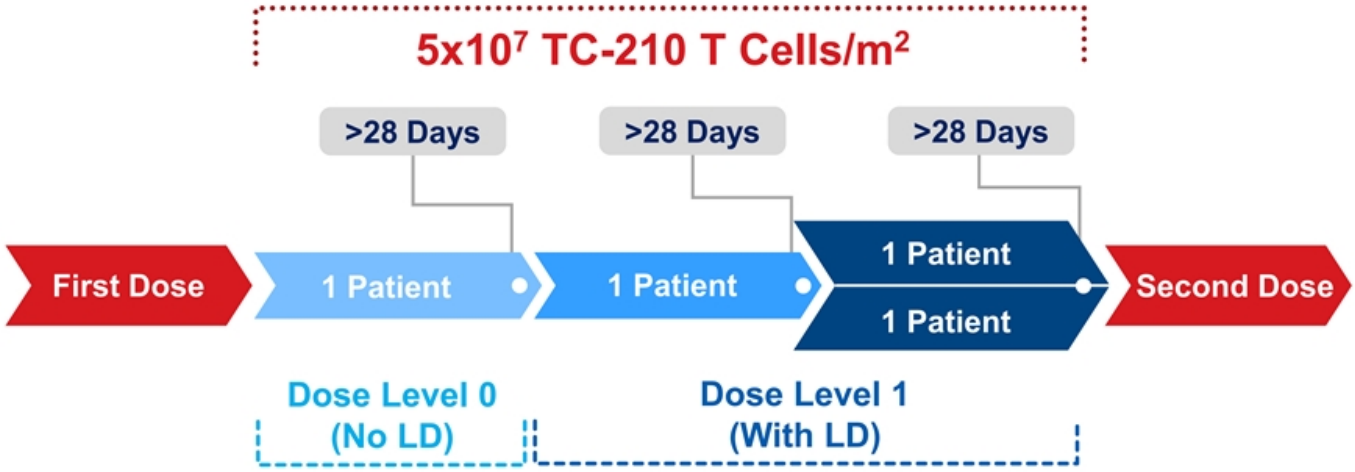


(– LD) Cohorts = 1 patient
(+ LD) Cohorts = 3 patients

LD, Lymphodepletion; RP2D, Recommended Phase 2 dose; MPM, Malignant Pleural/Peritoneal Mesothelioma; NSCLC, Non-Small Cell Lung Cancer

Enrollment Rules During Phase 1

Modified 3+3 Dose Escalation



LD: Lymphodepletion

TC-210 Study: Patient Flow

Mesothelin Expression

- Central lab (Roche/Ventana)

Lymphodepletion Regimen

- Fludarabine (F): 30 mg/m^2 x4
- Cyclophosphamide (C): 600 mg/m^2 x3

TC-210 Administration

- Overnight observation

Clinical Trial Sites

- Sarah Cannon Research Institute
- University of Texas MD Anderson Cancer Center
- National Cancer Institute
- University of Pennsylvania
- Memorial Sloan Kettering Cancer Center

MSLN: mesothelin; LTFU: long term follow-up

TC-210 Phase 1 Dose Escalation: Objectives

Primary

- Safety (Establish the RP2D)

Exploratory

- Expansion, persistence, phenotype, functionality of TC-210 T-cells
- Serum cytokine levels
- Immunogenicity

Secondary

- ORR (CR + PR) according to RECIST v1.1
- DCR (ORR + SD)
- Duration of response
- Survival (PFS, OS)

TC-210 Phase 1 Dose Escalation: Eligibility Criteria

Key Inclusion Criteria

- ≥ 18 years of age
- Adequate Performance Status and organ function
- Pathologically confirmed MPM, NSCLC, ovarian cancer, or cholangiocarcinoma
- Must have received at least 1 systemic standard of care therapy for metastatic and/or unresectable disease
  - **Mesothelioma**: platinum-based therapy
  - **NSCLC**: if actionable mutation must have received appropriate FDA approved agent (e.g. osimertinib); if no actionable mutation, must have received a currently approved frontline regimen
  - **Ovarian cancer**: post frontline therapy; post PARP inhibitor if BRCA1/2 mutated
  - **Cholangiocarcinoma**: post one systemic regimen (frontline if patient refuses standard frontline therapy)
- Measurable disease per RECIST v1.1
- **MSLN expression by IHC (Roche Ventana): 2+ or 3+ in ≥ 50% viable tumor cells**

Pre-Screening, Enrollment and Manufacturing Activity

- MSLN expression above enrollment cutoff in ~50% of screened patients
- Products meeting protocol specifications have been successfully manufactured for all enrolled patients
- Consistent transduction efficiency (mean 43%)

Mesothelin Expression Cut-Off
- 2+ or 3+ in ≥ 50% viable tumor cells

Patients Pre-Screened	79
Tumor Samples Resulted	62
MSLN 2+/3+ in ≥ 50% viable tumor cells n (%)	30 (48)
Patients Enrolled	18
Patients Apheresed	14
Patients Manufactured	12

Patient Characteristics

Characteristics	N = 5
Median age, years (range)	61 (36-74)
Cancer diagnosis	
Mesothelioma	4 (2 peritoneal, 2 pleural)
Ovarian cancer	1
Median No. of prior therapies (range)	5 (3-9)
≥4 prior therapies, No. (%)	3 (60)
Prior ICI therapy, No. (%)	3 (60)
Prior anti-MSLN directed therapy, No. (%)	1 (20)
Transduced cells infused x10^7, Median (range)	9.09 (7.54 – 10.36)
No. awaiting infusion (manufactured product)	6

ICI: immune checkpoint inhibitor; MSLN: mesothelin

Summary of Grade ≥3 Treatment Emergent Adverse Events

Adverse Event	N = 5 (%)
Hematologic	
Neutropenia	4 (80)
Lymphopenia	5 (100)
Thrombocytopenia	1 (20)
Adverse Events of Special Interest	
On Target / On Tumor	
CRS*	1 (20)
Neurotoxicity	0
On Target / Off Tumor	
Pericarditis / Pericardial effusion	0
Pleuritis / Pleural effusion	0
Peritonitis / Ascites	0
Infection / Inflammation	
Pneumonitis*	1 (20)
Sepsis*	1 (20)

*Occurred in same patient

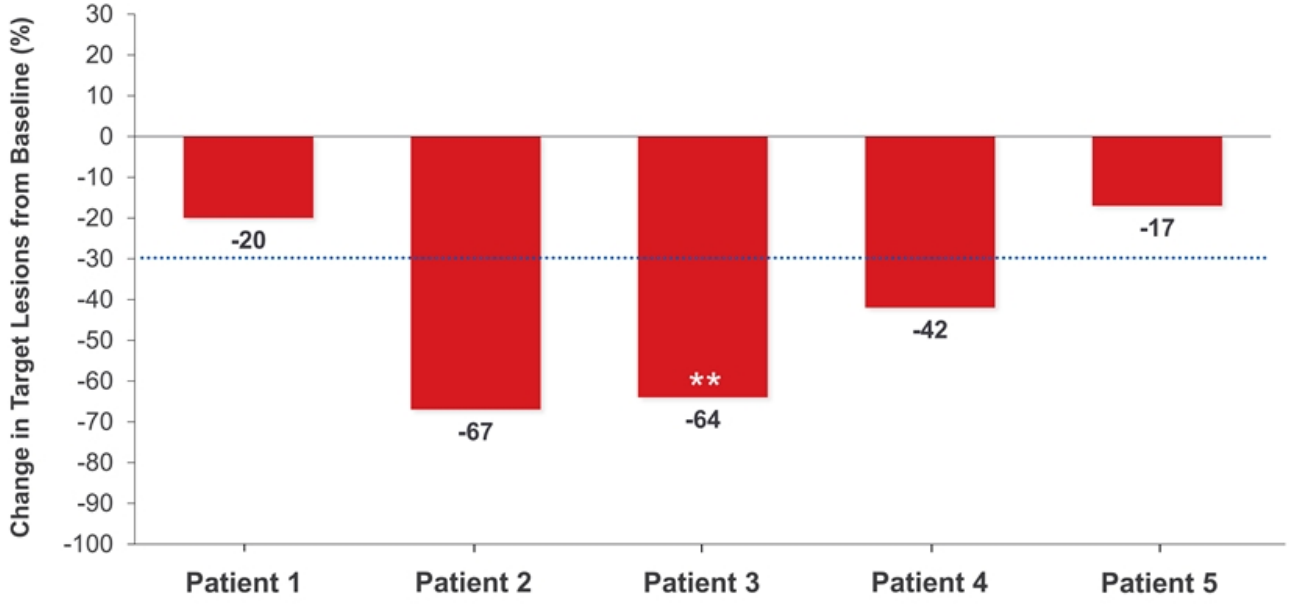
RECIST v1.1 Response Assessment Summary

Patients	1	2	3	4	5
Age/Sex	61/M	74/M	52/F	36/M	70/F
Diagnosis	MPM	MPM	MPM	MPM	Ovarian Ca
MSLN 2+/3+ (% of tumor cells)	90	60	73	95	55
No. Prior Rx	8**	3	3	9	6
Bridging Therapy	None	Pemetrexed/ Cisplatin	Pemetrexed/ Carboplatin	None	Liposomal doxorubicin
LD Chemo	No	Yes	Yes	Yes	Yes
TC-210 dose	$5x10^7/m^2$	$5x10^7/m^2$	$5x10^7/m^2$	$5x10^7/m^2$	$5x10^7/m^2$
Best Target Lesion Response	SD	PR	PR	PR	SD
Best RECIST v1.1 Response	SD	PR*	SD	PR*+	SD

*Unconfirmed
** Received anti-mesothelin ADC
+ Subject to independent central review

Tumor Regression Observed in All Patients with TC-210

Overall Response Rate 40%, Disease Control Rate 100%



** New Lesion at Month 6

Early Efficacy Case Study: Patient 2

Partial Response (RECIST v1.1), Significant Tumor Regression (67%), Complete Metabolic Response

74-year-old male, epithelioid pleural mesothelioma

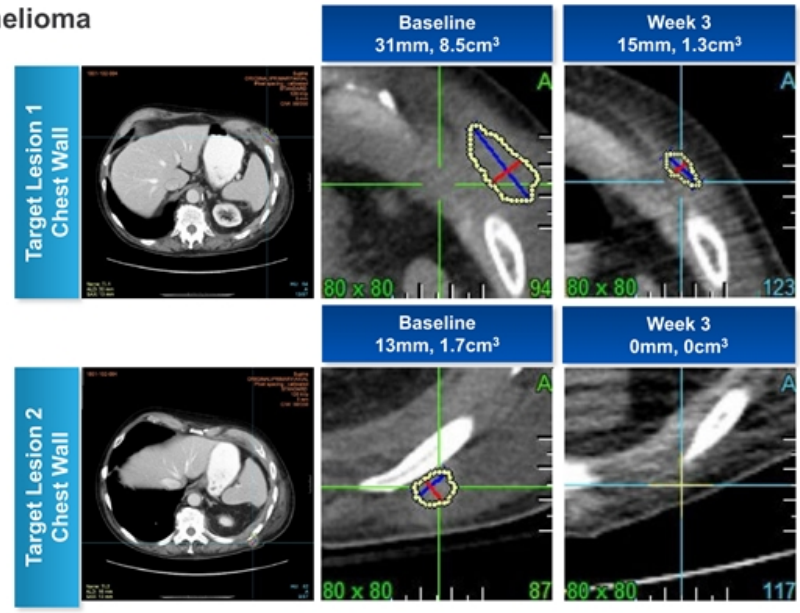
- Extensive surgery Feb 2018 ➡ PD
- Pembrolizumab Sep 2018 ➡ PD
- Carboplatin/pemetrexed Apr 2019 (x4) ➡ PD

Enrolled in TC-210 Clinical Trial Study

- **September 2019**: Lymphodepletion with Flu/Cy followed by $5x10^7/m^2$ TC-210 T cells

Response at Week 3 Post TC-210

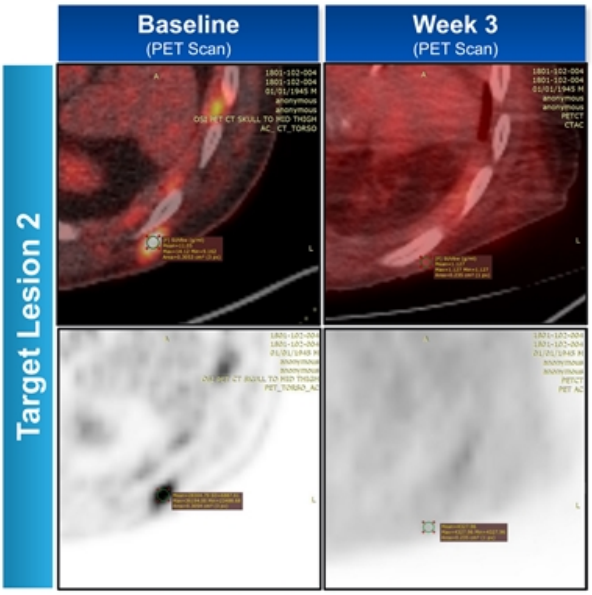
- Target Lesions: **PR**
- Overall: **PR***



*Unconfirmed

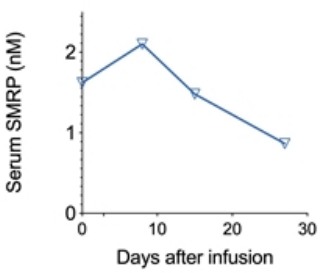
Early Efficacy Case Study: Patient 2

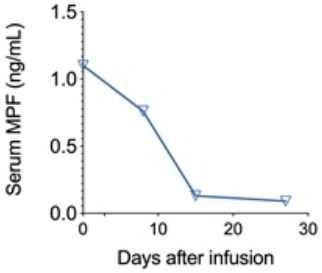
74-year-old male, epithelioid pleural mesothelioma



Complete Metabolic Response

Soluble Mesothelin & MPF



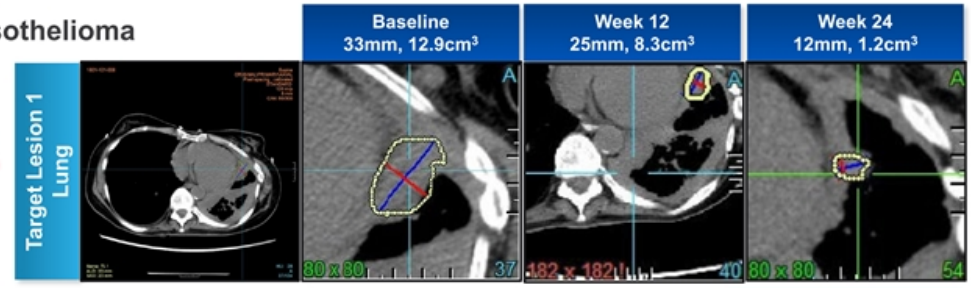


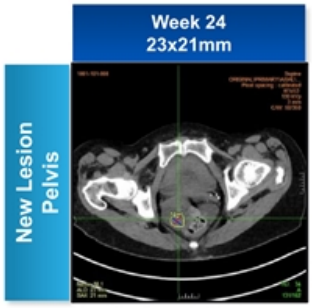
Early Efficacy Case Study: Patient 3

Significant Tumor Regression (64%)

52-year-old female, epithelioid mesothelioma

- Diagnosed Aug 2015
- Left parietal pleurectomy
- Cisplatin/pemetrexed Oct 2015 ➡ **SD**
- Extensive cervical, mediastinal, abd/pelvic masses, bone metastases May 2019
- Carboplatin/pemetrexed July 2019 (x3) ➡ **PD**





Enrolled in TC-210 Clinical Trial Study

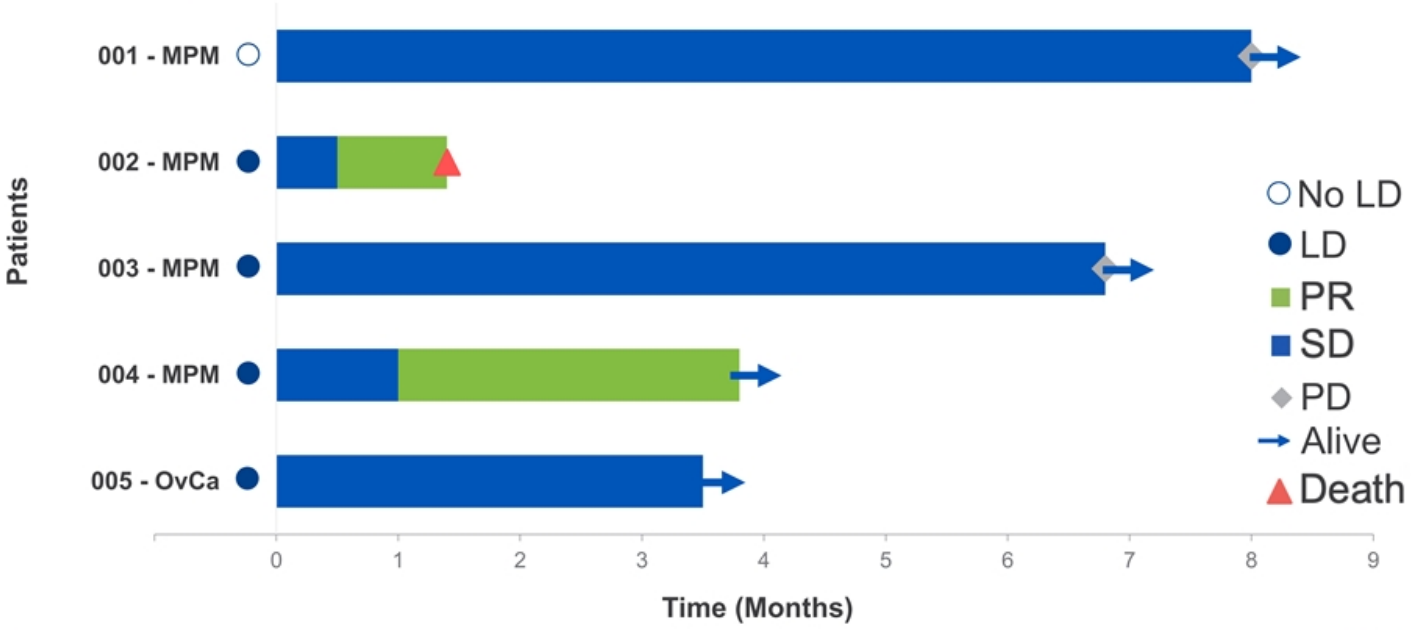
- **September 2019**: Lymphodepletion with Flu/Cy followed by $5x10^7/m^2$ TC-210 T cells

Response at Month 6 Post TC-210

- Target Lesions: **PR**
- Overall: **PD** (new pelvic lesion)

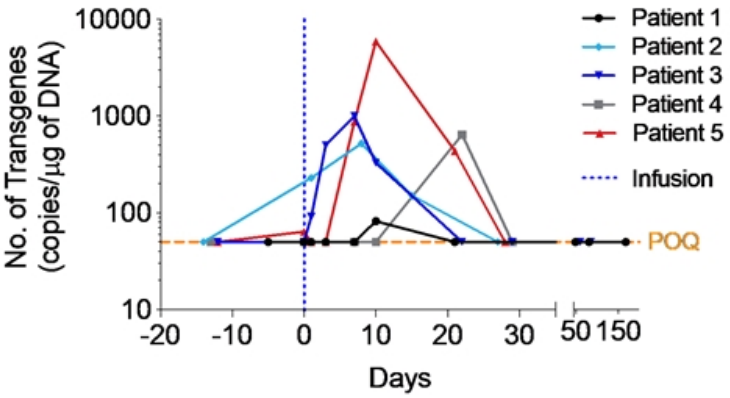
Patient Response and Follow-Up

Overall Response Rate 40%, Disease Control Rate 100%

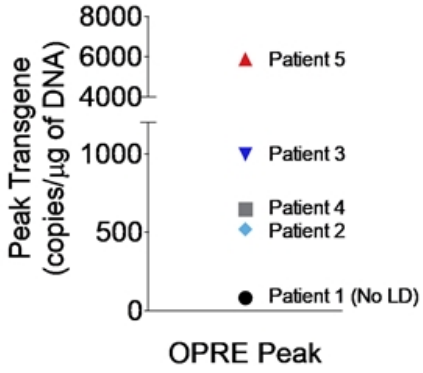


TC-210 T Cell Expansion in Peripheral Blood by qPCR

TC-210 Kinetics

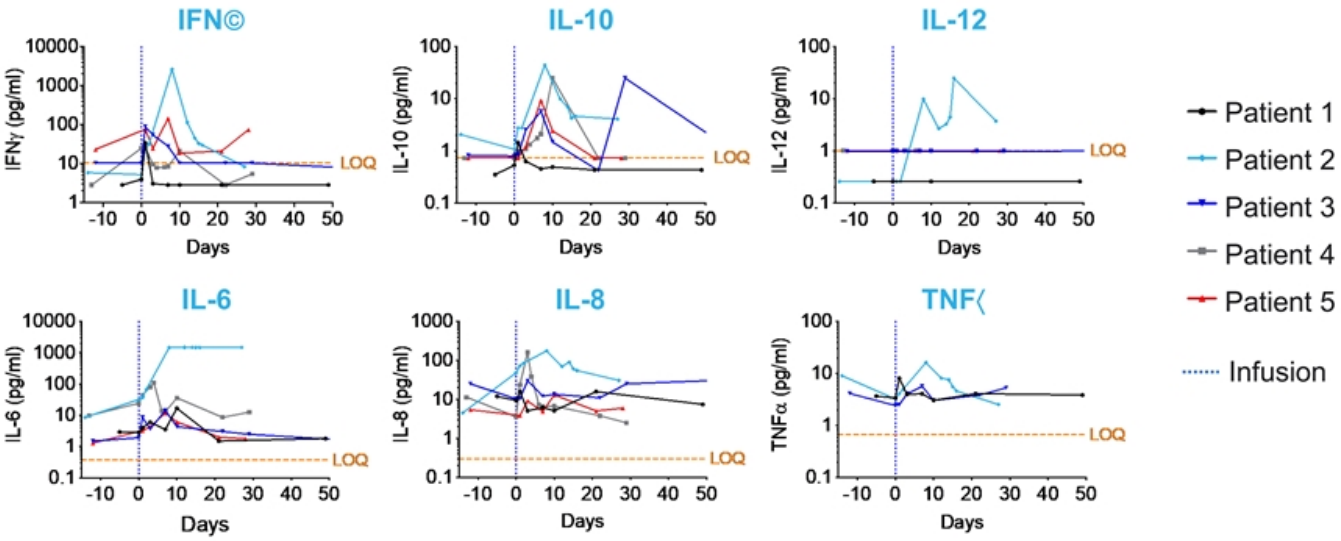


Peak of TC-210 Expansion



- Expansion of TC-210 T Cells in peripheral blood observed in all patients
- Peak expansion occurred between days 7-22 post infusion
- Highest expansion was observed among patients receiving lymphodepletion

Cytokine Levels in Peripheral Blood Following TC-210 Infusion



- TC-210 infusion increased cytokine levels in peripheral blood in all patients
- Higher levels were observed in Patient 2, who experienced grade 3 CRS

TC-210: Summary and Future Direction

- **Encouraging data at first dose tested**
  - Consistent clinical benefit at first TC-210 T cell dose
  - Manageable safety profile
  - High rate of patient eligibility and 100% manufacturing success
- **Next steps**
  - Continue dose escalation until identification of RP2D
  - Initiate phase 2 portion of study, including TC-210 combination with anti-PD1 antibody
- **Additional data expected later in 2020**
  - Data on additional cohorts
  - Detailed translational data

2020 Company Milestones

2H20

TC-210

Phase 1 Follow-Up Update

Target: Mesothelin
Indications: Ovarian Cancer, NSCLC, MPM, Cholangiocarcinoma
Endpoints: Safety, Efficacy & Translational Data
(i.e. infiltration, persistence, cytokines, expansion, phenotype)

2H20

TC-110

Phase 1 Interim Update

Target: CD19
Indications: aALL, DLBCL, NHL
Endpoints: Safety, Efficacy & Translational Data
(i.e. persistence, cytokines, expansion, phenotype)

2020

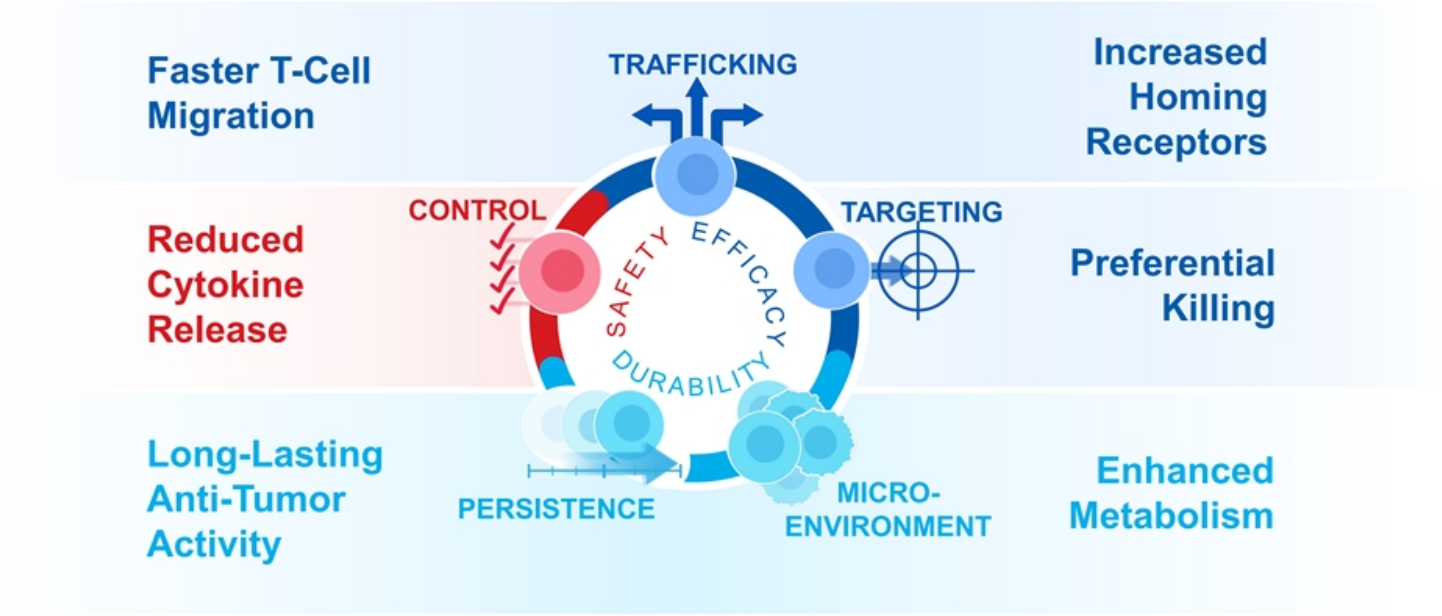
New Targets
Broaden reach with unique binders in hematologic cancers and solid tumors

Enhancements
Dual TRuCs, PD-1 axis and other enhancements to combat the tumor microenvironment

Allogeneic TRuCs
"Off-the-shelf" to simplify manufacturing and reduce costs of therapy

Active Partnering Discussions as Clinical Data Matures

Early Clinical Validation of TRuC-T Cell Platform Strengths




TCR2 THERAPEUTICS
POWERING T CELLS FOR
CANCER CURES
Thank You