MAY 2021

NextCure

Next-Generation Immunomedicines

Forward-Looking Statements

To the extent that statements contained in this presentation are not descriptions of historical facts, they may be deemed to be forward-looking statements under the Private Securities Litigation Reform Act of 1995. Words such as “may,” “will,” “expect,” “anticipate,” “estimate,” “intend,” “next,” “near-term,” “future” and similar expressions, as well as other words and expressions referencing future events, conditions, or circumstances, are intended to identify forward-looking statements. Examples of forward-looking statements in this presentation may include, among others, statements regarding: (i) the timing, progress and results of our preclinical and clinical trials; (ii) the evaluation of biomarkers; (iii) the impact of the COVID-19 pandemic on the initiation, progress or expected timing of those trials and the timing of related data, as well as our efforts to adjust trial-related activities to address the impact of the COVID-19 pandemic; (iv) the timing or likelihood of regulatory filings for our product candidates; (v) our manufacturing capabilities and strategy; (vi) the potential benefits and activity of our product candidates; (vii) our expectations regarding the nature of the biological pathways we are studying; (viii) our expectations regarding our FIND-IO platform; and (ix) the potential benefits of our relationships with Dr. Lieping Chen and Yale University.

Various factors could cause actual results to differ materially from those projected in any forward-looking statement. Such risks and uncertainties include, among others: the impact of the ongoing COVID-19 pandemic on our business, including our clinical trials, third parties on which we rely and our operations; our limited operating history and no products approved for commercial sale; our history of significant losses; our need to obtain additional financing; risks related to clinical development, marketing approval and commercialization; and the unproven approach to the discovery and development of product candidates based on our FIND-IO platform. No forward-looking statement is a guarantee of future results or events, and one should avoid placing undue reliance on such statements. For further discussion of these and other factors that could affect the outcome of our forward-looking statements, see our filings with the Securities and Exchange Commission, including in "Risk Factors" and "Special Note Regarding Forward-Looking Statements" in the Risk Factors section and throughout NextCure’s Form 10-K filed with the SEC on May 6, 2021. Except as otherwise indicated, this presentation speaks as of the date indicated herein. Except as required by law, we assume no obligation to update any forward-looking statements, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future. The information in this presentation is not complete and may be changed.

NextCure Highlights

3 INDs in 5 Years

NC318 (S15)	NC410 (LAIR-1)	NC762 (B7-H4)

FIND-IO Discovery

- Functional screening engine
- Validating novel cancer targets
- New MOAs

Team

- Fully integrated
- Experienced management
- Immunology expertise

Clinical

- Patient responses
- Patient selection
- Biomarkers

GMP Manufacturing

- Dedicated, state-of-the-art
- Expanded capacity (2,000L)

Cash (Runway): $283.4M (2H 2023)

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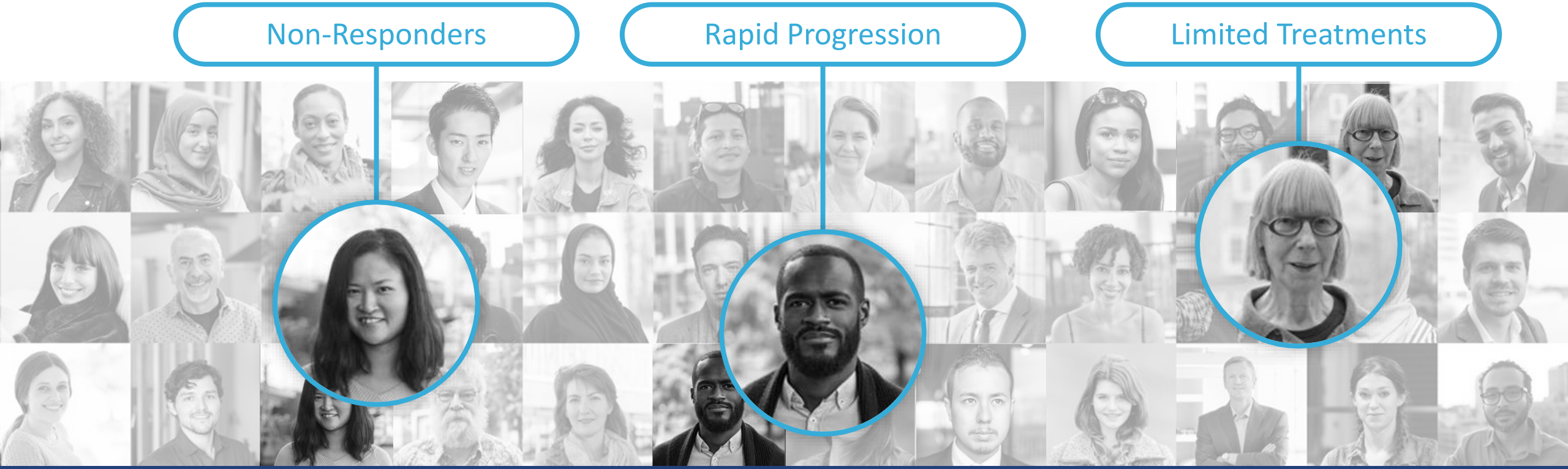
Unmet Medical Needs of Cancer Patients



We Need New Solutions

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Unmet Medical Needs of Cancer Patients

NEW Therapeutic Options

POSITIVE Clinical Responses

IMPROVED Quality of Life

Focused on Patients Not Adequately Addressed Today

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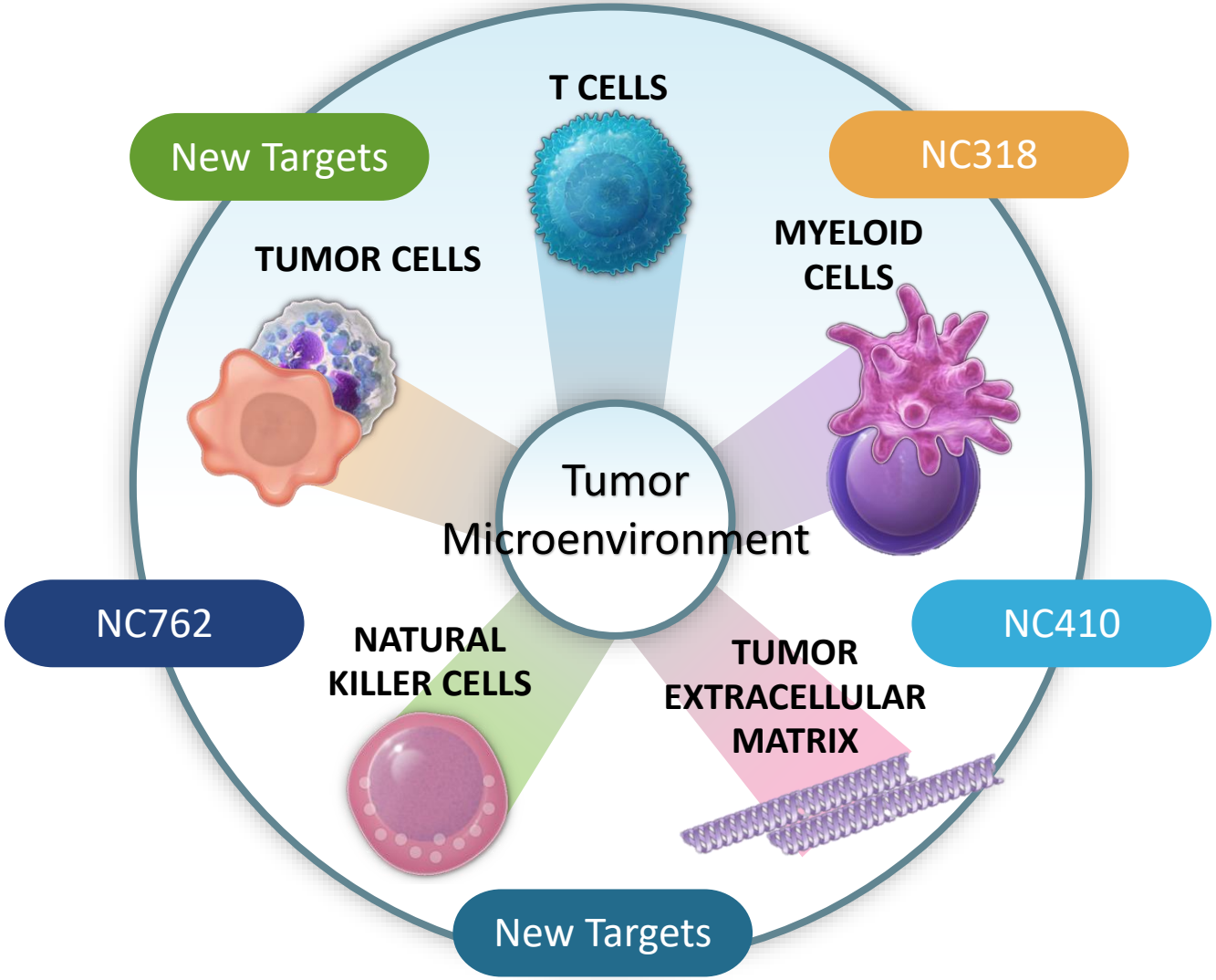
Multiple Mechanisms of Action & Differentiation



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Product Development Pipeline

PROGRAMS	CELLS	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	NEXT MILESTONE	WORLDWIDE RIGHTS
PRODUCT CANDIDATES								
NC318 (S15) Monotherapy	Tumors and macrophages	ONCOLOGY					Report update 4Q 2021	NextCure
NC318 (S15) Anti-PD-1 Combo*	Tumors and macrophages	ONCOLOGY					Initial data 1H 2022	NextCure
NC410 (LAIR-1)	Dendritic and T cells	ONCOLOGY					Initial data 2H 2021	NextCure
NC762 (B7-H4)	Tumors	ONCOLOGY					Start Phase 1 2Q 2021	NextCure
DISCOVERY AND RESEARCH PROGRAMS								
Multiple Programs	Multiple cell types						IND filing in 2022	NextCure

*Investigator-initiated (IIT) trial (Yale University)

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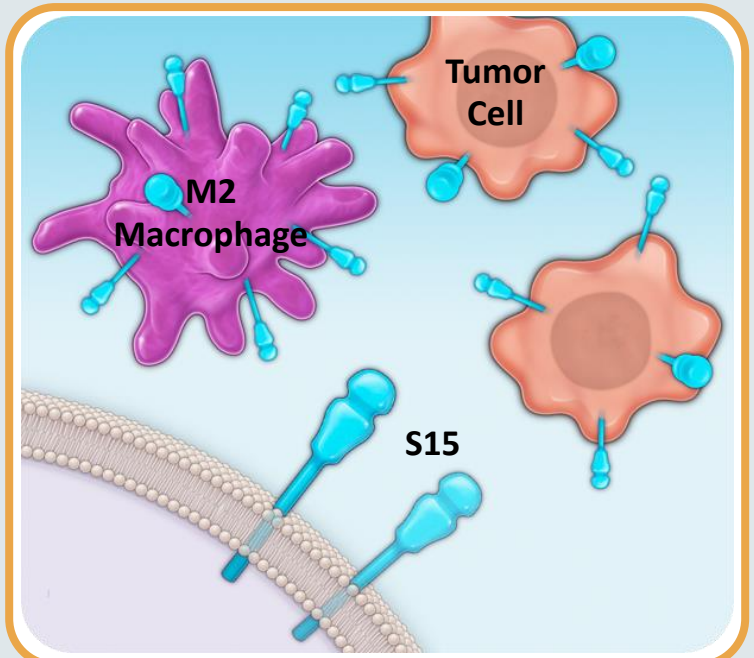
NC318

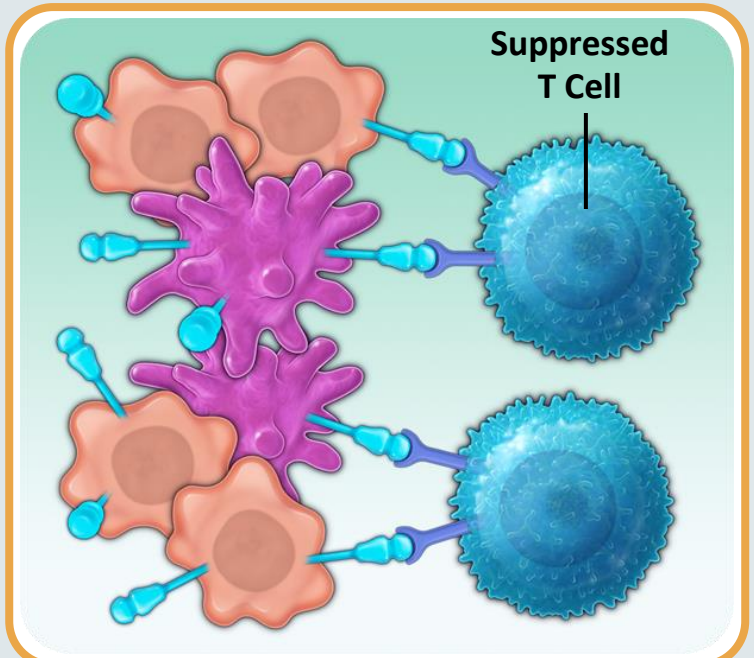
Humanized Siglec-15 (S15) Monoclonal Antibody

Phase 1/2 CLINICAL TRIAL

BIOLOGY



MOA



UPDATE

- Clinical strategy update
- TNBC partial response
- CLIA validated assay for patient selection (2Q 2021)
- Ongoing relationship with Yale
  - NSCLC
  - Monotherapy
  - Pembro combo

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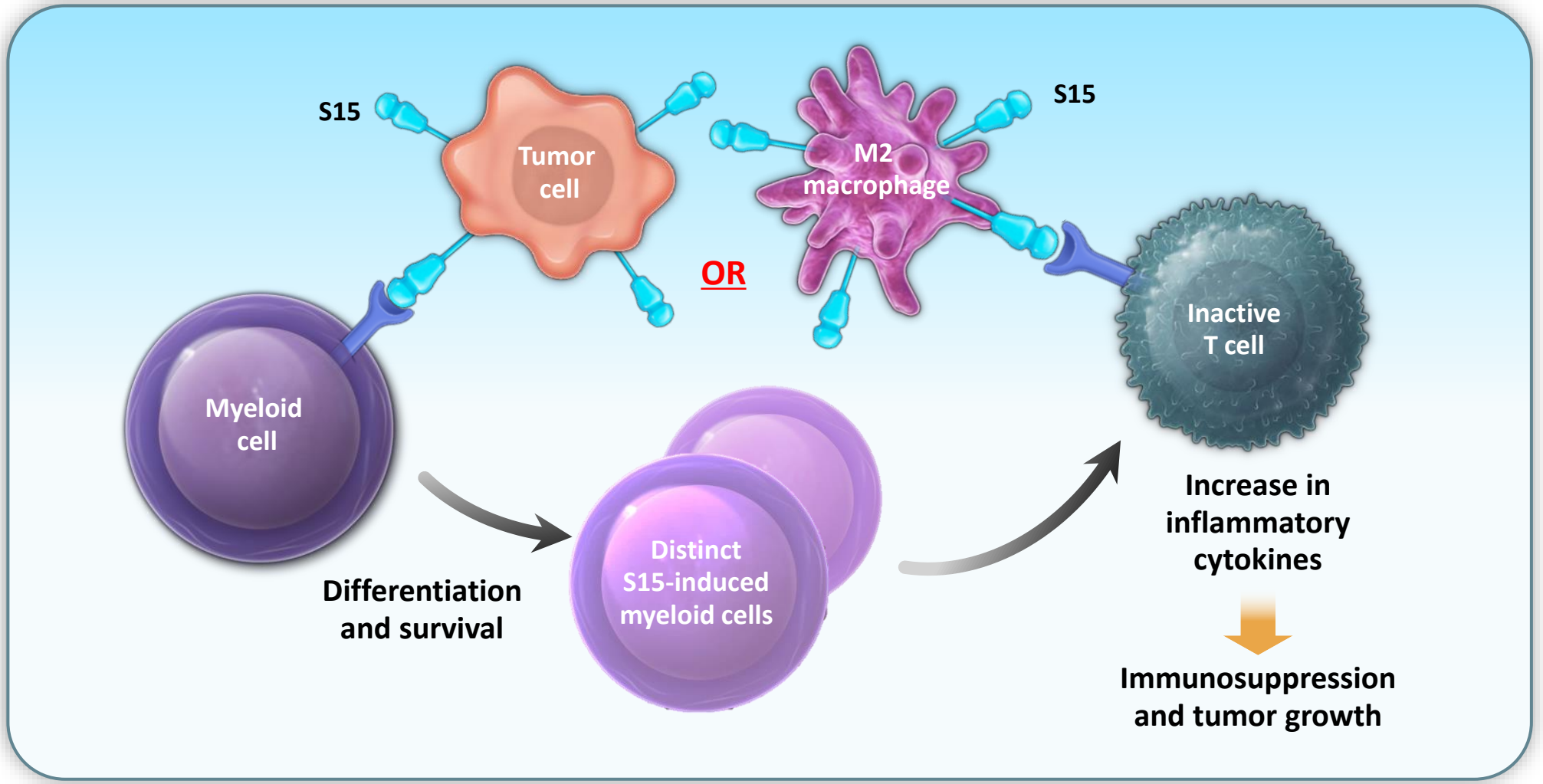
S15 is Immunosuppressive in the Tumor Microenvironment



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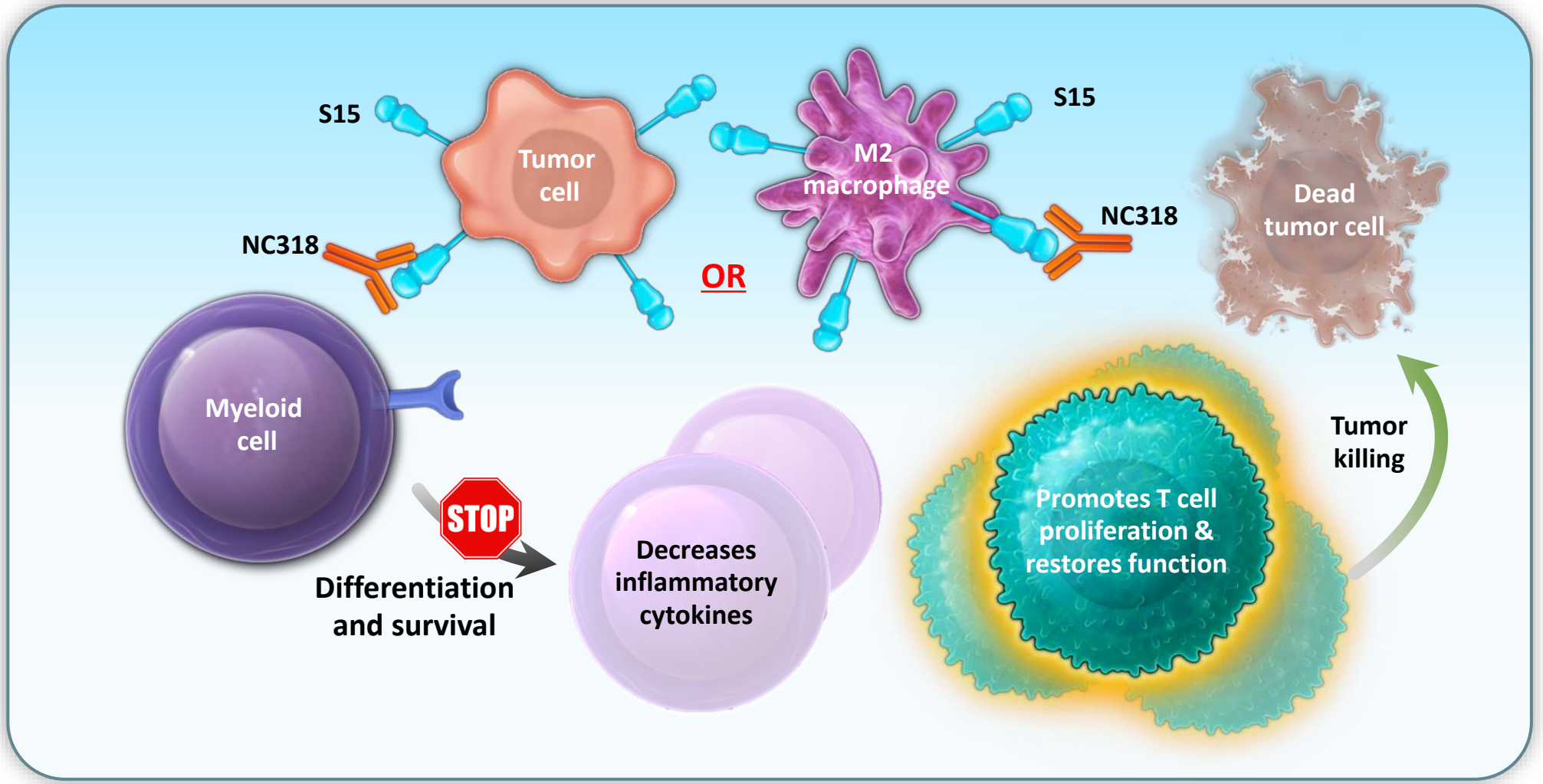
NC318 Blocks Immunosuppressive Activity Induced by S15



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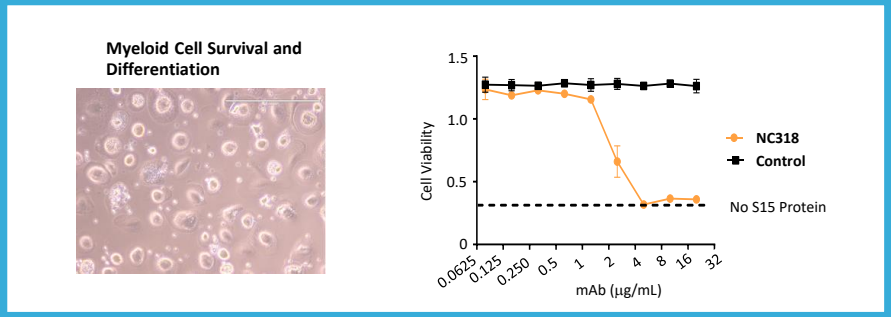
NC318 Mechanism of Action Restores Immune Function *In Vitro*

INHIBITS

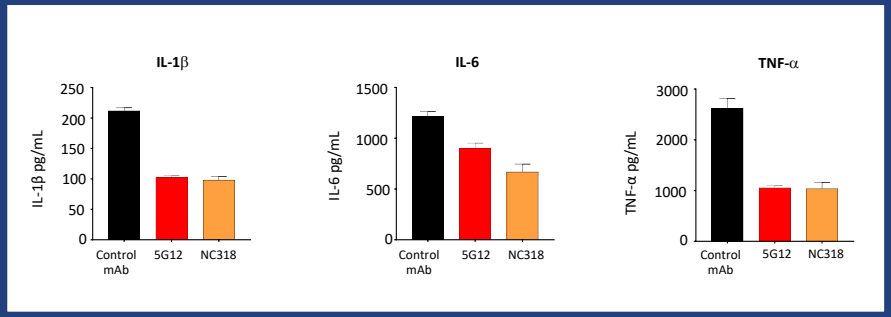
Myeloid Cell Differentiation and Survival



Blocks survival of myeloid cells

DECREASES

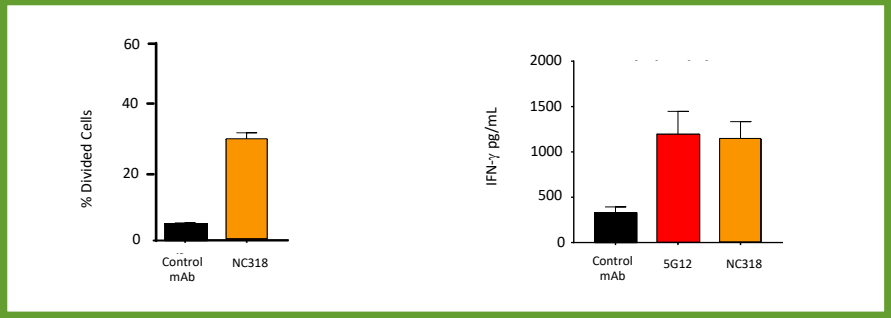
Pro-Inflammatory and Pro-Tumorigenic Cytokines



Decreases IL-1β, IL-6 & TNF-α

PROMOTES

T Cell Function



Increases T cell proliferation & IFN-γ production

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NC318 Phase 1 Monotherapy Trial

DOSE ESCALATION AND SAFETY AND TOLERABILITY

Completed

ENROLLMENT

- 49 patients
- 15 tumor types
- Median of 3 prior therapies
- All comers regardless of PD-L1 or S15 expression status

SAFETY

- No DLTs through 800 mg
- 1 DLT at 1600 mg: Grade 3 pneumonitis
- Common irAEs observed, including diarrhea, rashes, vitiligo, arthralgias

RESPONSES

- 1 confirmed CR (118+ weeks)
- 1 confirmed PR (92+ weeks)

The Angeles Clinic and Research Institute, A Cedars-Sinai Affiliate · next Oncology · NYU Langone Medical Center · John Theurer Cancer Center at Hackensack University Medical Center · Yale University

Most common AEs: infusion reactions, fatigue, headaches, pruritis, elevated amylase and elevated lipase

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NC318 Phase 2 Monotherapy Trial Status as of March 4, 2021

TUMOR TYPES

- NSCLC
- Ovarian
- H&N
- TNBC

DESIGN

- Monotherapy
- 400 mg every 2 weeks
- Biopsies required
- Biomarker evaluation

UPDATE

- Confirmed PRs
  - H&N (40 weeks)
  - TNBC (21+ weeks)
- S15+ patient selection (2Q 2021)

The Angeles Clinic and Research Institute, A Cedars-Sinai Affiliate | next Oncology | NYU Langone Medical Center | John Theurer Cancer Center at Hackensack University Medical Center | Yale University

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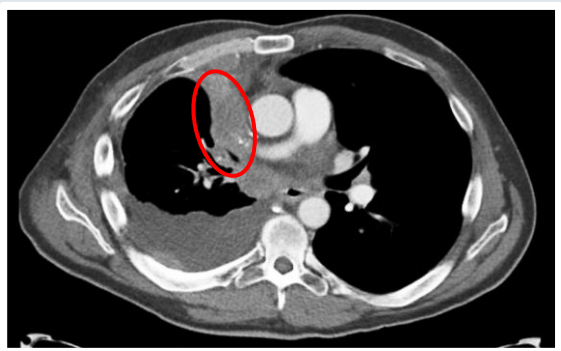
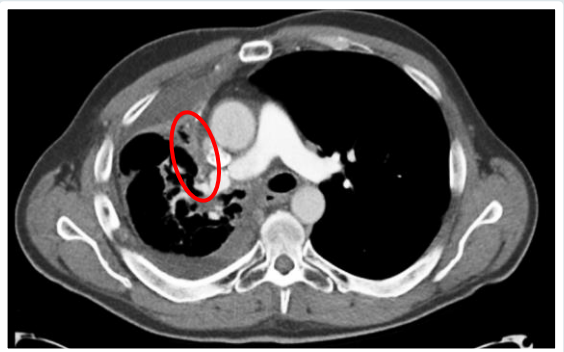
Partial Responses in Head & Neck and Triple-Negative Breast Cancer

HEAD & NECK SQUAMOUS CELL CARCINOMA

BASELINE



WEEK 24



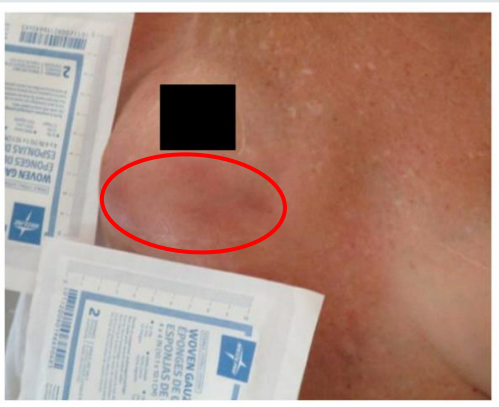
Target lesion decreased 37%

53 y/o HNSCC with multiple lesions (PD-L1 TPS <50%) 400 mg every 2 weeks

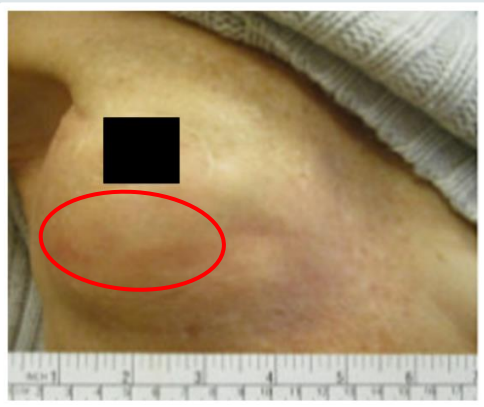
PRIOR THERAPIES:
Chemotherapy (3x)
Radiation (3x)
Nivo, Pembro (<3 mo to progression)

TRIPLE-NEGATIVE BREAST CANCER

BASELINE



WEEK 8



Target lesion decreased 82%

67 y/o TNBC (PD-L1 TPS <1%) 400 mg every 2 weeks

PRIOR THERAPIES:
Chemotherapy (3x)
Radiation (1x)
Pembro (best response stable disease then progression)

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Yale Investigator-Initiated Phase 2 Trial in Non-Small Cell Lung Cancer

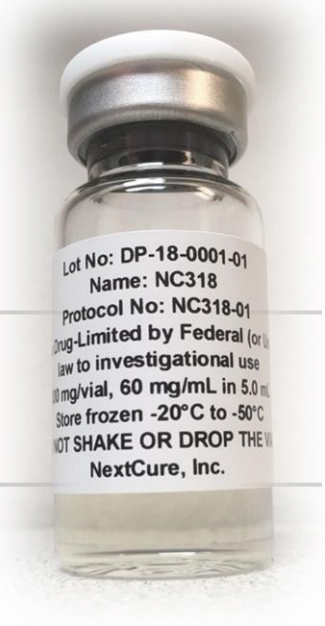
PRINCIPAL INVESTIGATORS	MONO	COMBO
• Roy Herbst, MD, PhD • Scott Gettinger, MD	• S15+ patients • PD-1 failure	• Pembrolizumab • 2 arms – PD-1 failure – PD-1 naïve

NCT04699123

NC318

Restores Immune Function in a Highly Suppressive TME

- MOA / Preclinical studies complete
  - Relieves S15-mediated inhibition of T cells
  - Increases IFN-γ production
  - Decreases inflammatory cytokines
- Completed enrollment of Phase 1
- Report Phase 2 monotherapy update 4Q 2021
- Initial data from investigator-initiated trial 1H 2022



NC410

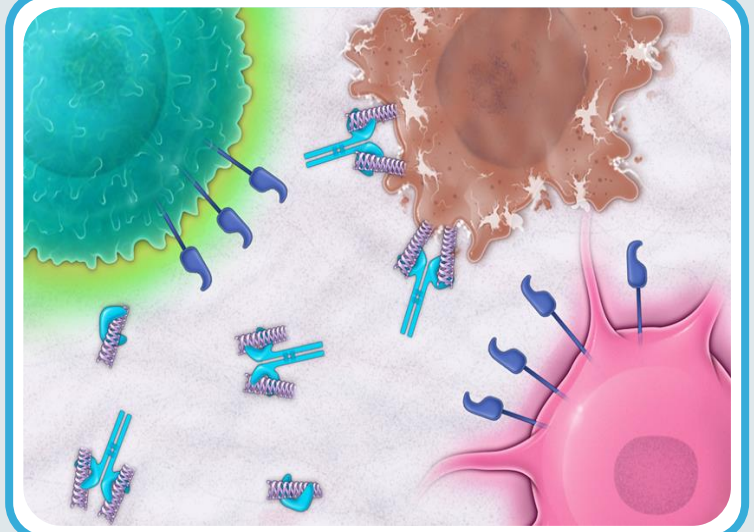
Decoy Human Fusion Protein Targeting the TME

Phase 1/2 CLINICAL TRIAL

BIOLOGY

- Dendritic cells and T cells
- Advanced or metastatic cancers
  - NSCLC
  - Ovarian cancer
  - Pancreatic cancer

MOA



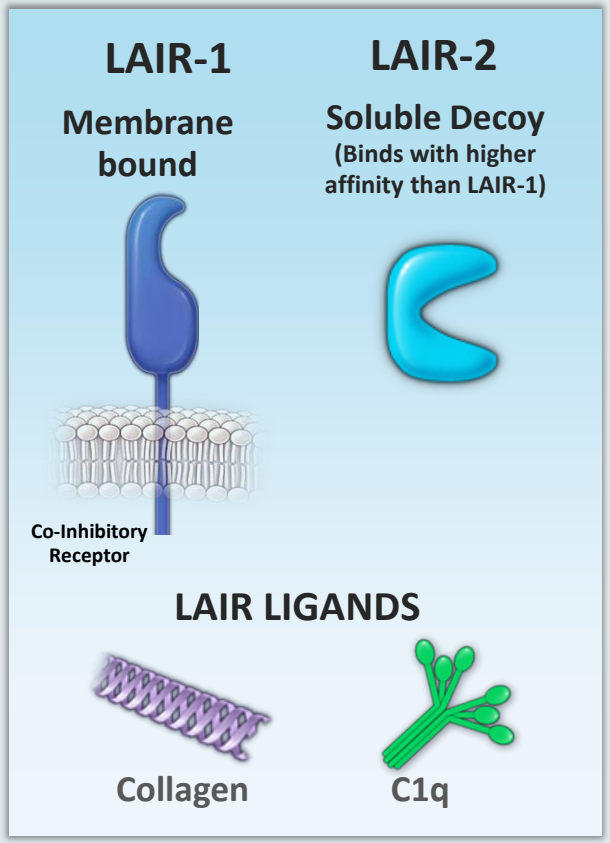
UPDATE

- Extracellular matrix remodeling
- Enhances T cell infiltration and tumor killing
- Synergistic combinations
- ASCO 2021 poster

LAIR-1 & LAIR-2 Functional Relationship

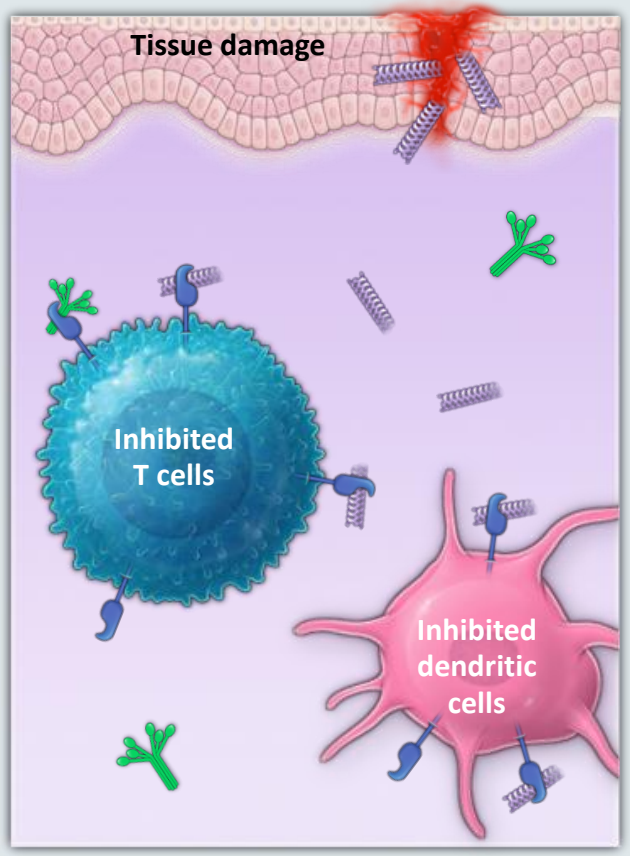
LAIR & LIGANDS

LAIR-1 and LAIR-2 Bind Collagen and C1q



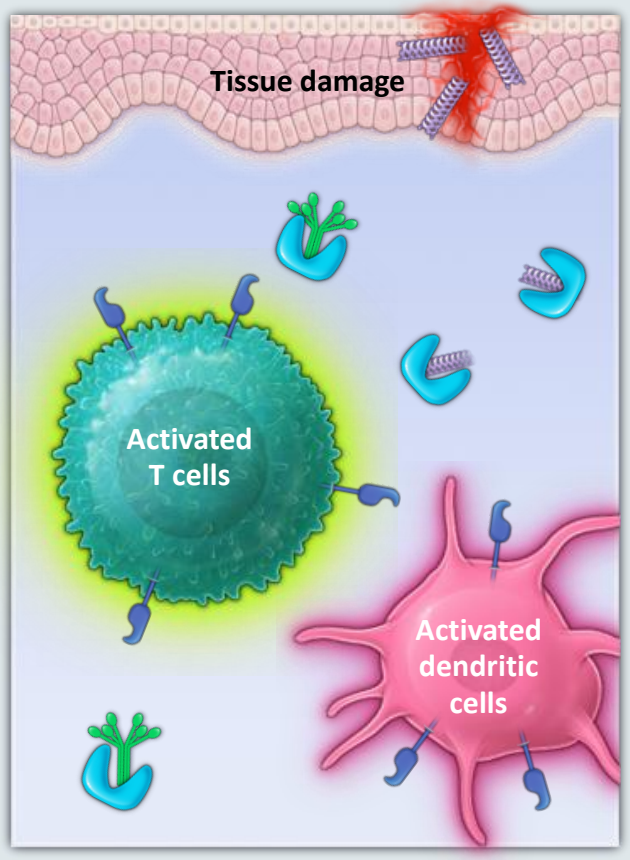
LAIR-1

Ligands Expressed in Response to Inflammation & Inhibit Immune Function



LAIR-2

LAIR-2 Modulates LAIR-1 Mediated Inhibition



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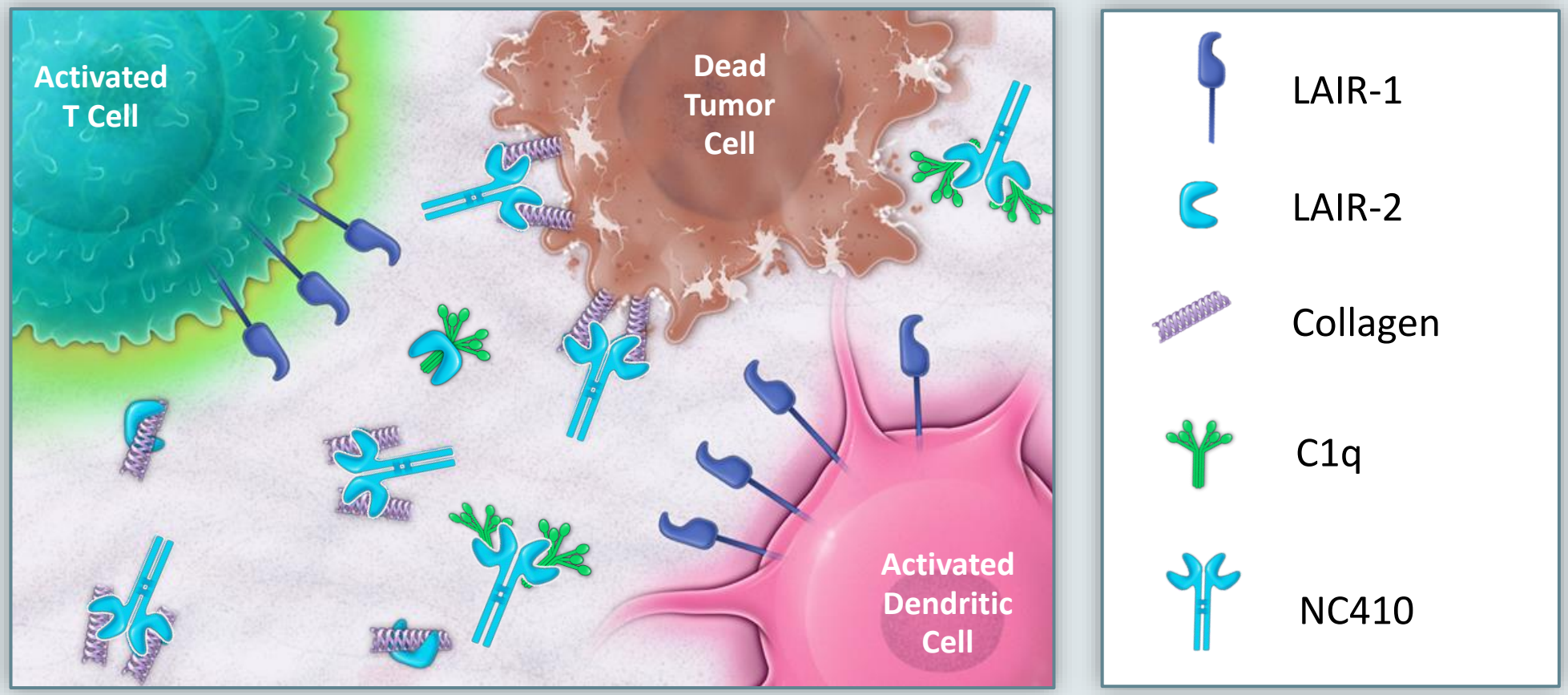
NC410 Prevents Immune Suppression

NC410 IS A FUSION PROTEIN OF LAIR-2 AND A DECOY FOR LAIR-1 AND PROMOTES T CELL FUNCTION AND DC ACTIVATION

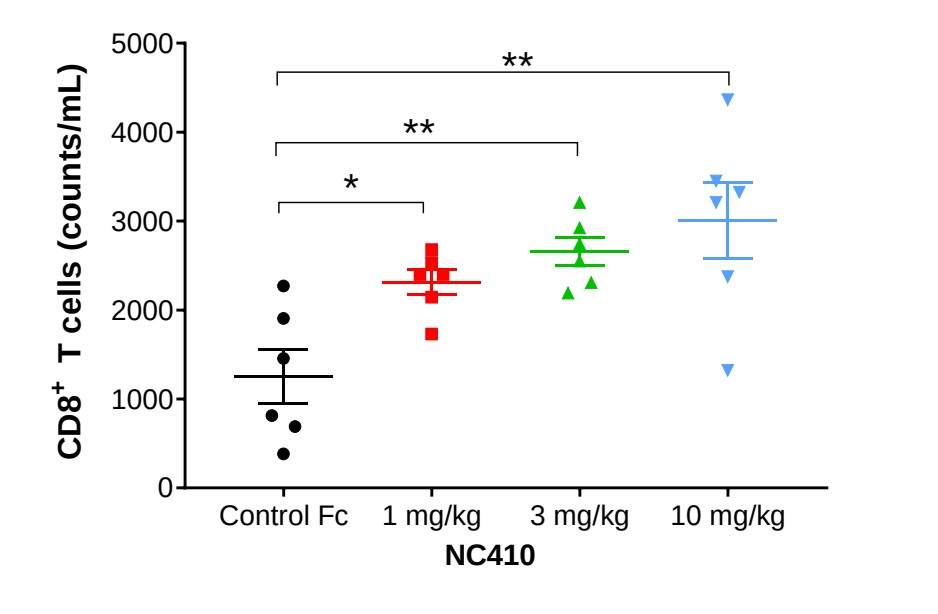


NextCure

NC410 Enhanced T Cell Expansion and Relieved Immunosuppression

Blocked

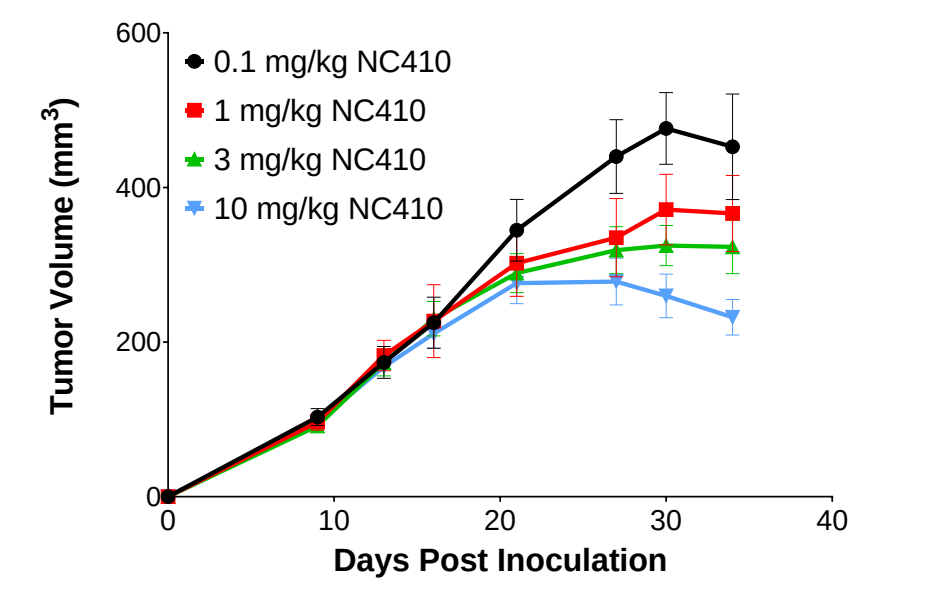
SUPPRESSION



Human CD8+ T cell expansion
in vivo

Decreased

TUMOR VOLUME



Human PBMCs in mice: CD8+ T cell activity decreased tumor volume in HT29 model

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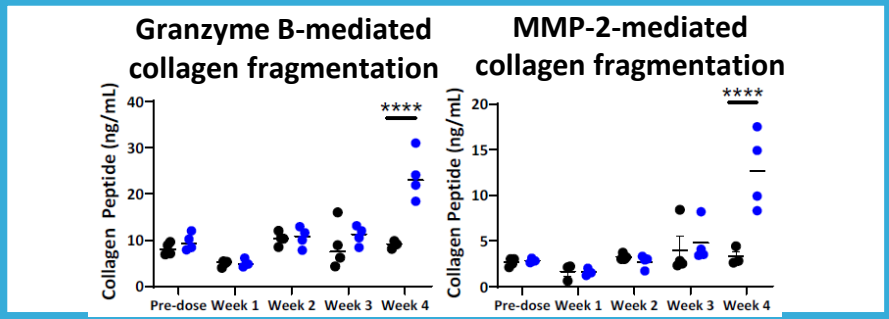
NC410 Restores Immune Function

TARGETS

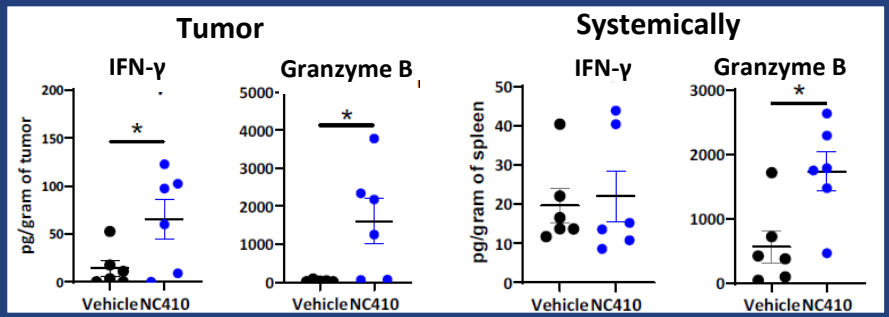
Extracellular Matrix



ECM remodeling

PROMOTES

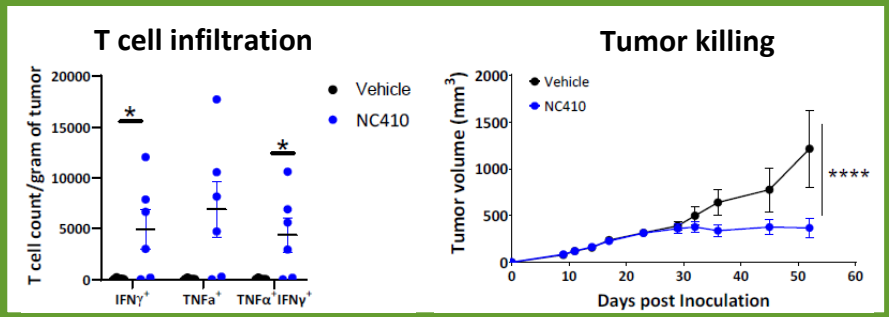
Anti-Tumor Immunity



Local and systemic immune activity

ENABLES

Immune Normalization



Enhances T cell infiltration and tumor killing

Tian et al., SITC 2020

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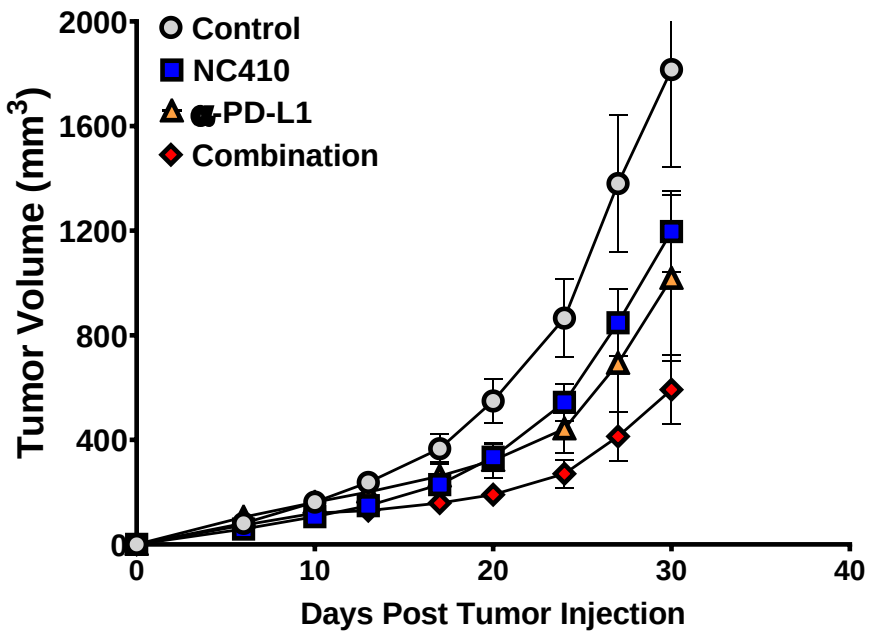
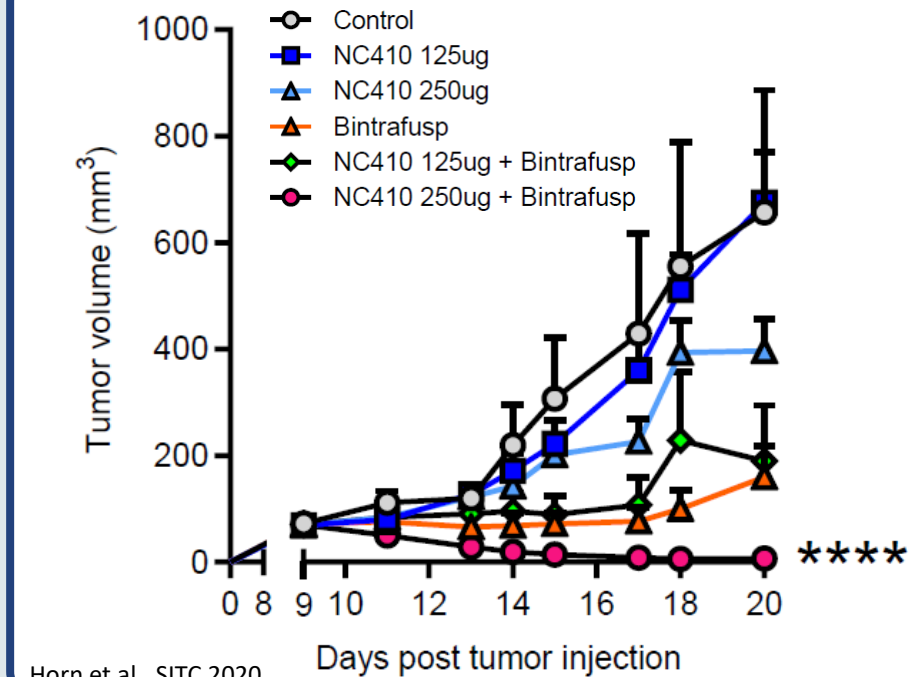
NC410 Demonstrates Synergistic Activity in Preclinical Models

PD-L1



BINTRAFUSP ALPHA



Horn et al., SITC 2020

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NC410 Phase 1 Portion of Phase 1/2 First-in-Human Trial

DESIGN

- Dose-escalation
- Safety & tolerability

TUMOR TYPES

Advanced or metastatic solid tumors

- NSCLC
- Ovarian cancer
- Pancreatic cancer

DELIVERABLES

Initial Phase 1 data
2H 2021

NIH NATIONAL CANCER INSTITUTE Center for Cancer Research

John Theurer Cancer Center at Hackensack University Medical Center

THE UNIVERSITY OF TEXAS MD Anderson Cancer Center

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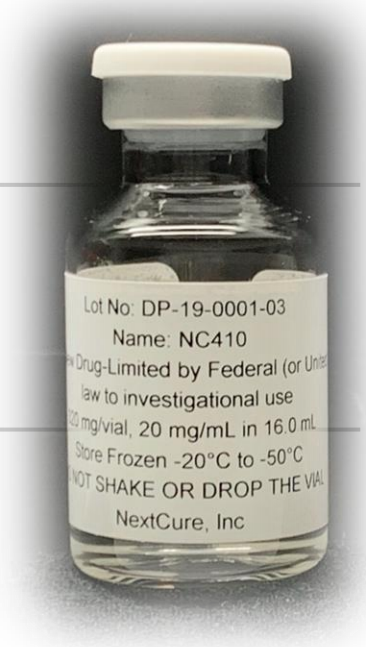
NC410

Remodels ECM Enhancing Immune Infiltration and Tumor Killing

- Promotes T cell function and dendritic cell activity in preclinical studies
- IND filed & received FDA clearance Q1 2020
- Initiated Phase 1 trial
- Initial Phase 1 data 2H 2021



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NC762

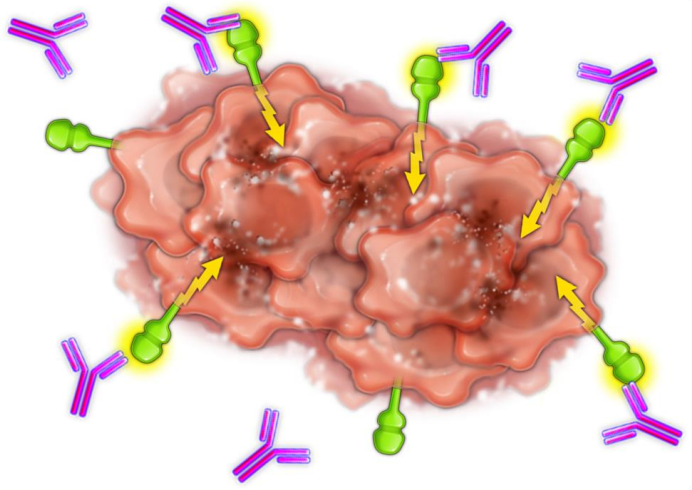
Humanized B7-H4 Monoclonal Antibody

Phase 1/2 CLINICAL TRIAL

BIOLOGY

- NC762 inhibits tumor cell growth and is not dependent on T cells
- NK cells enhance anti-tumor activity
- B7-H4+ tumors
- Advanced or metastatic cancers
  - NSCLC
  - Breast cancer
  - Ovarian cancer

MOA



UPDATE

- IND filed
- Unique mechanism of action
- IHC assay for patient selection
- Biomarkers
- Phase 1 2Q 2021
- AACR 2021 Poster

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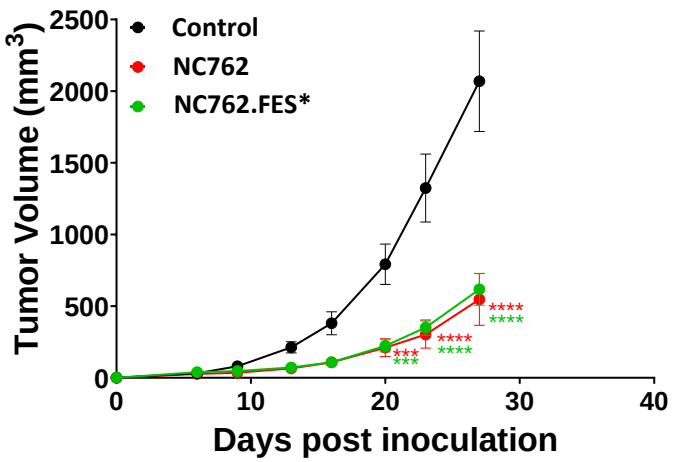
NC762 Inhibits Human Melanoma Tumor Growth *In Vivo*

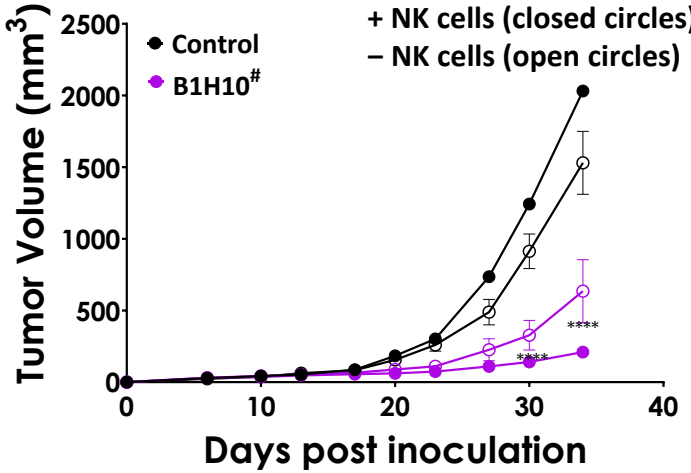
Activity Enhanced by Human PBMCs

TUMOR INHIBITION



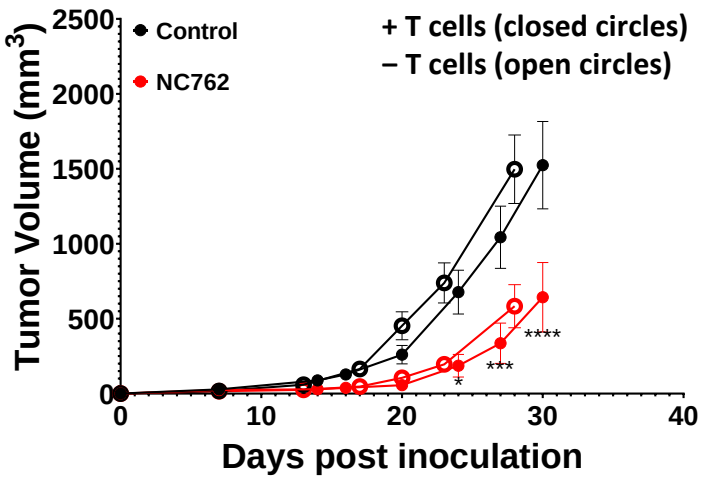
*Designed to reduce FcγR binding/restrict ADCC activity

NKs ENHANCE ACTIVITY



#Parent of NC762

T CELLS NOT REQUIRED



Archer et al., AACR 2021

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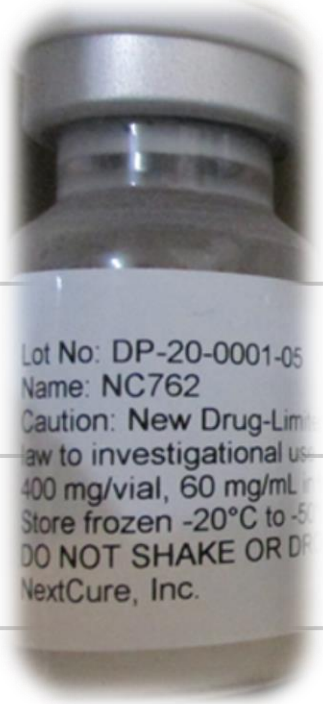
NC762
Summary

- Unique MOA
  - mAb inhibits tumor cell growth
  - Not dependent on immune cell infiltration into TME
  - NK cells enhance activity
- IND filed with FDA
- Initiate Phase 1 trial 2Q 2021
- Initial Phase 1 data mid-2022



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Finding Solutions with a Powerful Discovery Engine

Functional, Integrated, NextCure Discovery in Immuno-Oncology

FUNCTIONAL READOUTS

- T cell activation
- Cytokine release
- Proliferation
- Apoptosis
- Effector function
- Pathway reporters

TARGET LIBRARIES

- Membrane proteins
- Soluble proteins
- Small molecules
- Soluble factors

CELL TYPES

- Primary
- Cell lines
- Lymphoid
- Myeloid
- Tumor

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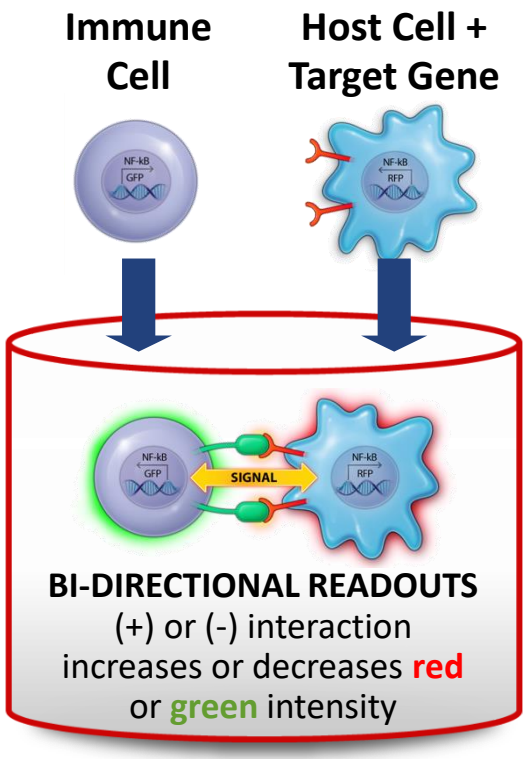
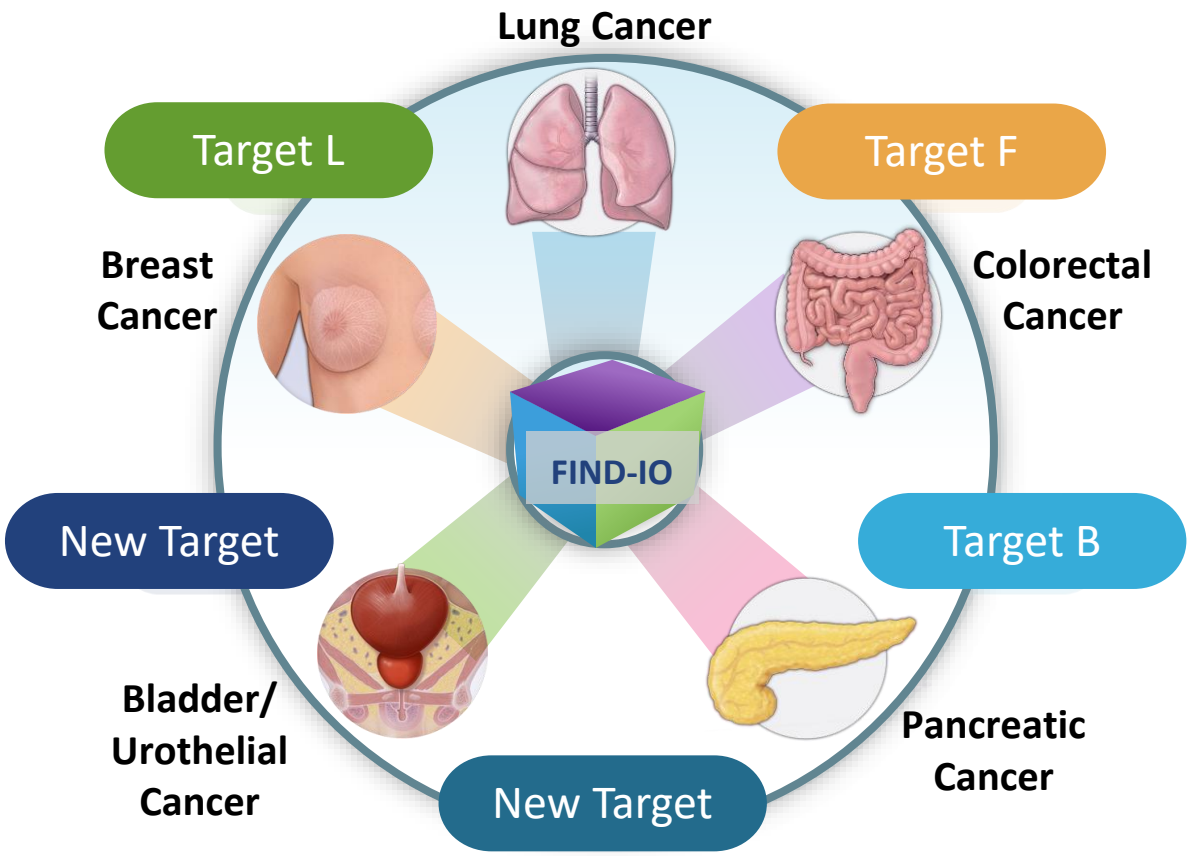
Versatile, Flexible and Comprehensive Approach for Product Development

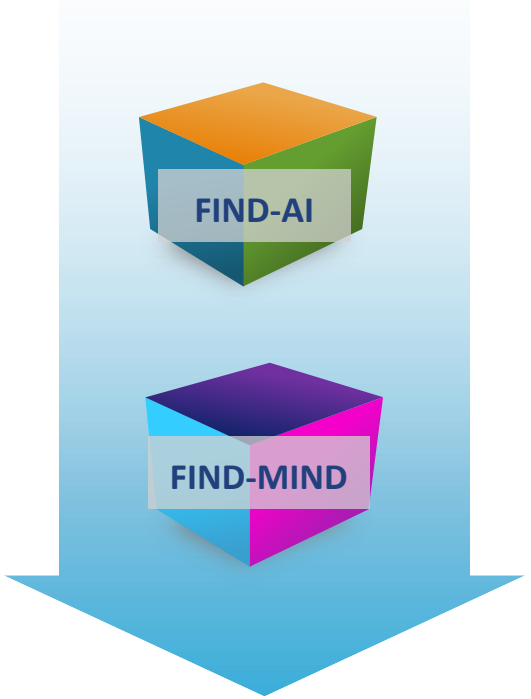
FUNCTIONAL READOUTS



FUTURE PIPELINE



DIVERSIFICATION



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Anticipated Near-Term Milestones

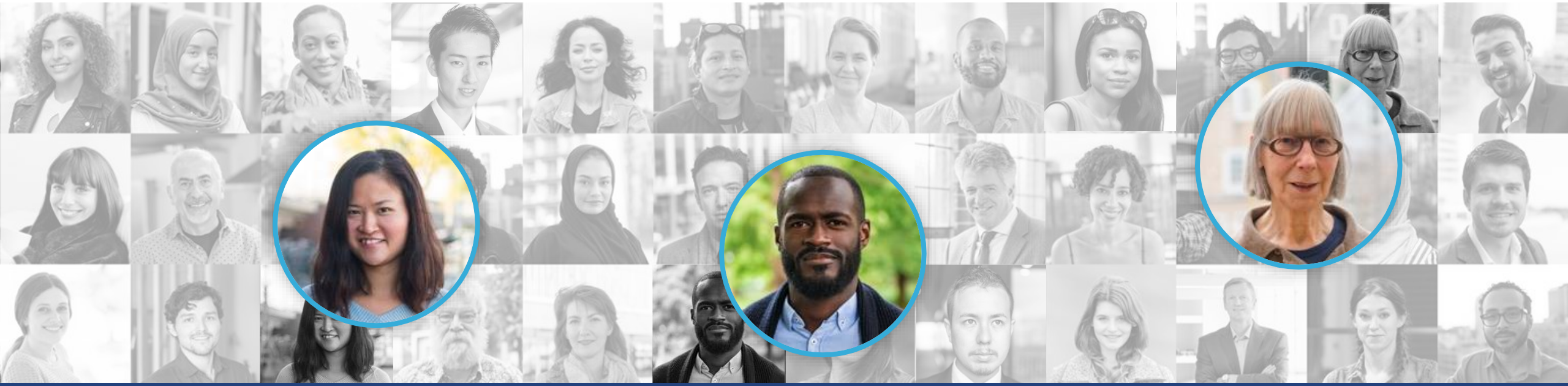
Cash Position: $268.2M Runway: 2H 2023

PROGRAMS	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4
PRODUCT CANDIDATES								
NC318 (S15) Monotherapy				Phase 2 update				
NC318 (S15) Anti-PD-1 Combo*		Start Phase 2			Anticipate initial data			
NC410 (LAIR-1)				Initial data				
NC762 (B7-H4)		Start Phase 1				Initial data		

*Investigator-initiated (IIT) trial (Yale University)

NextCure

NextCure



Committed to Addressing the Unmet Needs of Patients with New Solutions

FOCUSED	PROVEN	INNOVATIVE	EXPERIENCED	FUTURE
Approach	Momentum	Platform	Team	Deliverables