



Unleash Immunity

Corporate Presentation
August 2021

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TScan highlights



Proprietary Target and TCR Discovery Platforms

- Enables 'multiplexed' TCR-T therapy

Robust Pipeline in Cancer

- Liquid tumor program – 2 INDs, Q4 2021
- Solid tumor program – 3 INDs, H2 2022; 1 IND, 2023

Non-Viral Cell Manufacturing

- Enables 'enhanced' T cell engineering

Strategic Partnerships

- Novel oncology target partnership with Novartis

Strong Investor Support

- \$260M from RA Capital, Blackrock, Novartis and others

Our team



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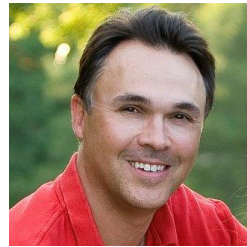
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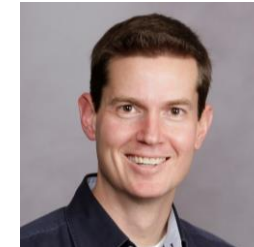
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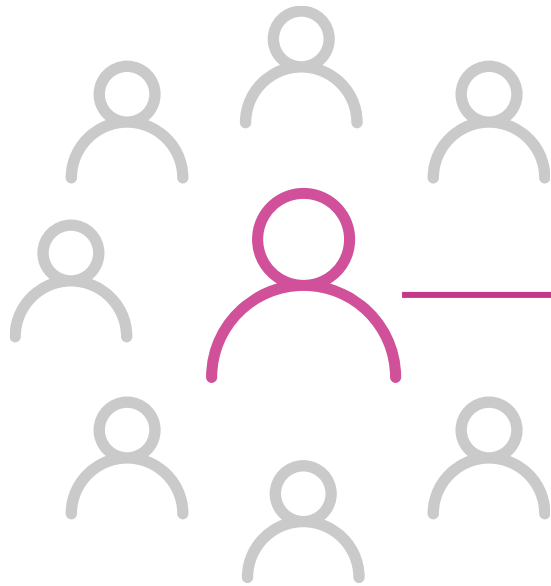
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Learning from patients who are winning their fight against cancer...

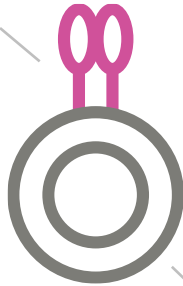
Learning

Treating



Patient actively responding to immunotherapy

T Cell Receptor



T Cell

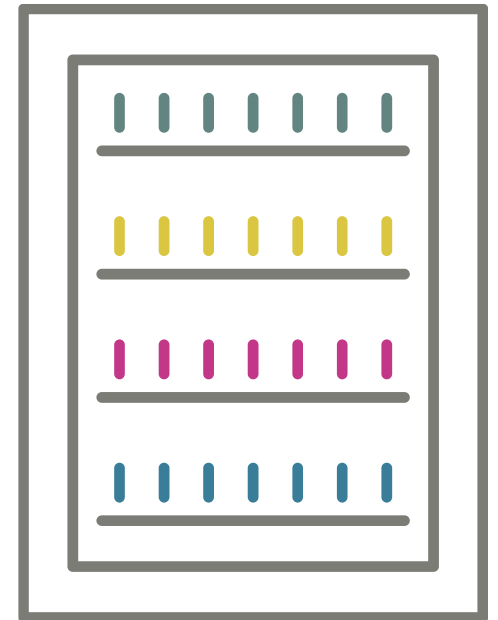
Anti-cancer T cells with **unknown targets**



TScan Technology

- IDs targets and therapeutic TCRs
- Clinically de-risk TCRs by IDing off-targets

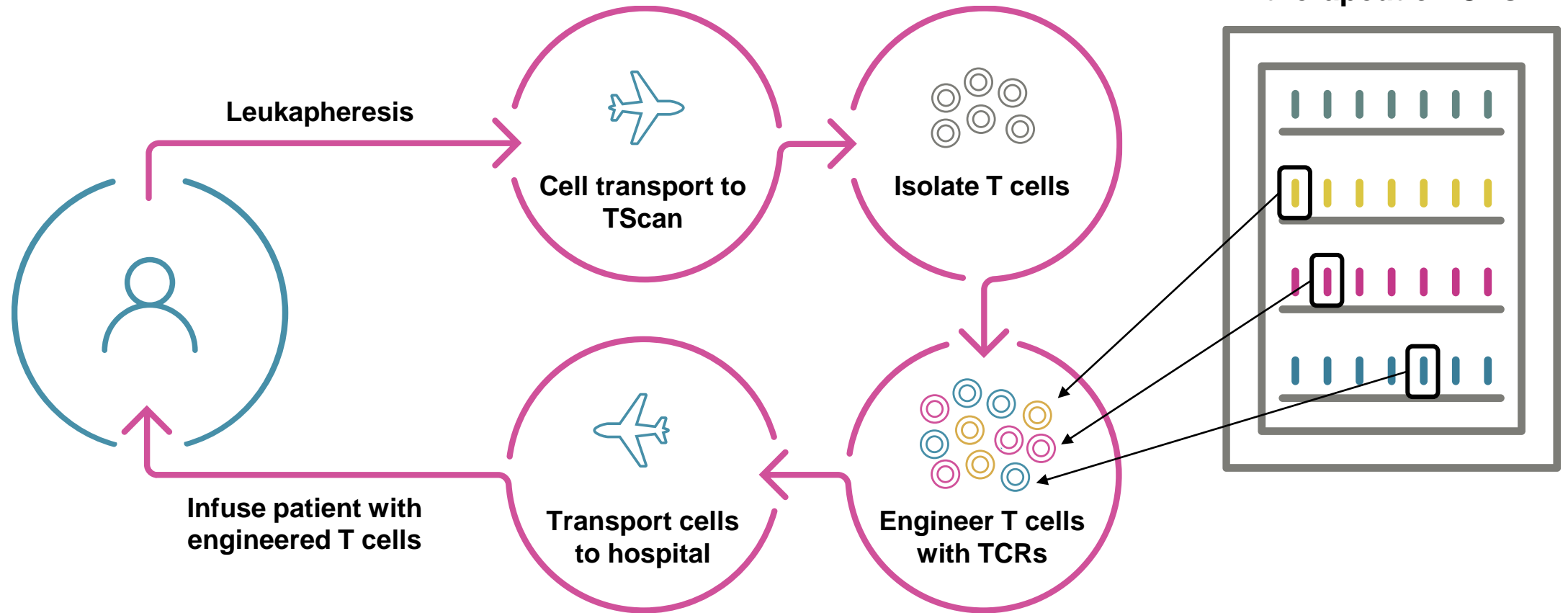
ImmunoBank of therapeutic TCRs



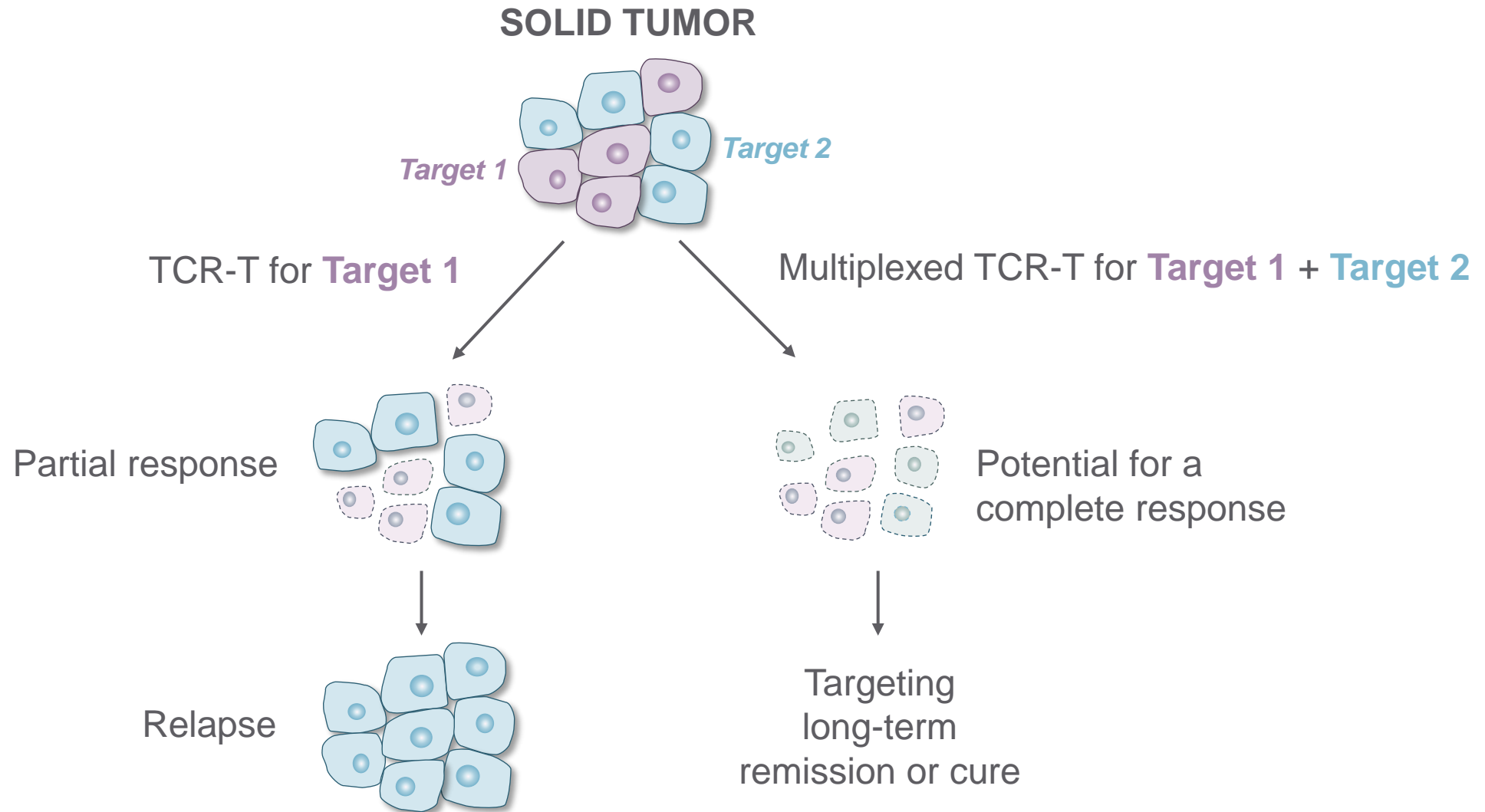
...to treat patients who are not

Learning

Treating



Multiplexed TCR-T may overcome tumor heterogeneity



Proprietary TCR-T pipeline addresses liquid and solid tumors

| | Target | Indications | Discovery | Lead Optimization | IND-Enabling | Phase 1 | Phase 2/3 |
|----------------------|------------|--|-----------|-------------------|--------------|---------|-----------|
| PROPRIETARY PROGRAMS | | | | | | | |
| Liquid Tumor Program | | | | | | | |
| TSC-100 | HA-1 | AML, MDS, ALL ² | | | | | |
| TSC-101 | HA-2 | | | | | | |
| Solid Tumor Program | | | | | | | |
| TSC-200 ¹ | HPV16 | Head & Neck, Cervical, Anal, NSCLC ³ , Melanoma | | | | | |
| TSC-201 | Target-201 | | | | | | |
| TSC-202 | Target-202 | | | | | | |
| TSC-203 | PRAME | | | | | | |

Note: The TSC-200 product series is designed to be used in combination as part of a multiplexed TCR-T therapy, with treatment tailored to target expression in each patient tumor

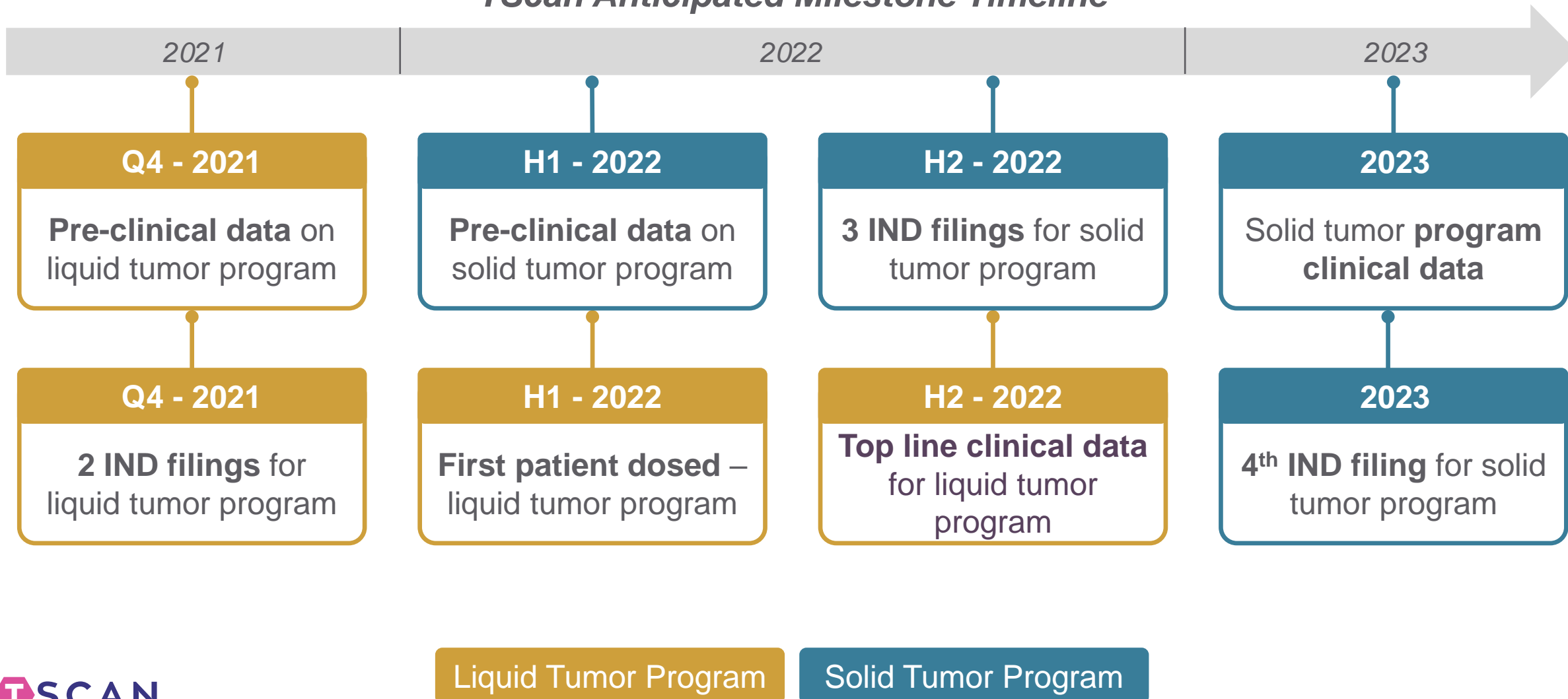
¹ TSC-200 will only be developed in HPV-positive cancers, which include head & neck, cervical, and anal cancers

² AML: Acute myeloid leukemia; MDS: Myelodysplastic syndromes; ALL: Acute lymphocytic leukemia

³ NSCLC: Non-small cell lung cancer

Broad pipeline drives multiple value-creating milestones

TScan Anticipated Milestone Timeline



TScan Technology

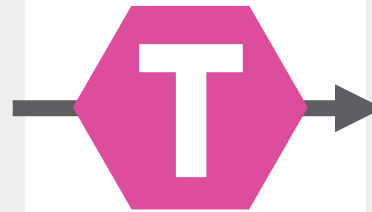
TScan positioned to overcome solid tumor challenges using multiplexed TCR-T therapy

Most solid tumor patients do not respond to current therapies

Checkpoint / TIL therapy response limited to subset of patients



CAR-T efficacy limited to liquid tumors



TScan's platforms overcome current challenges with multiplexed TCR-T

TCR-T can address majority of patients

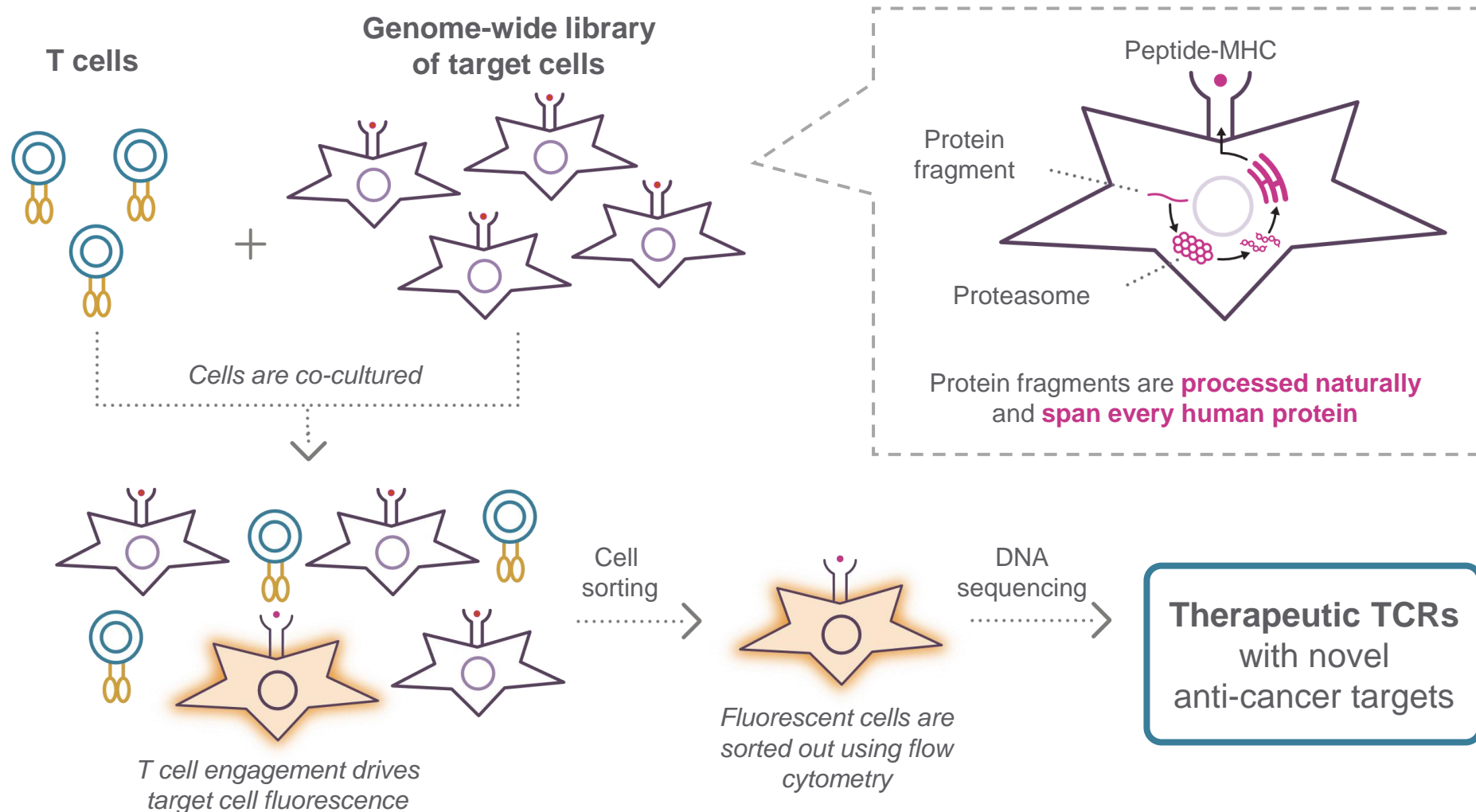


TCR-T can infiltrate solid tumors

TCR-T provides a potential solution for solid tumors but is limited by available targets

TScan platforms enable discovery of novel targets for multiplexed TCR-T

TScan's proprietary platform – TargetScan – enables identification of the natural targets of clinically-active TCRs

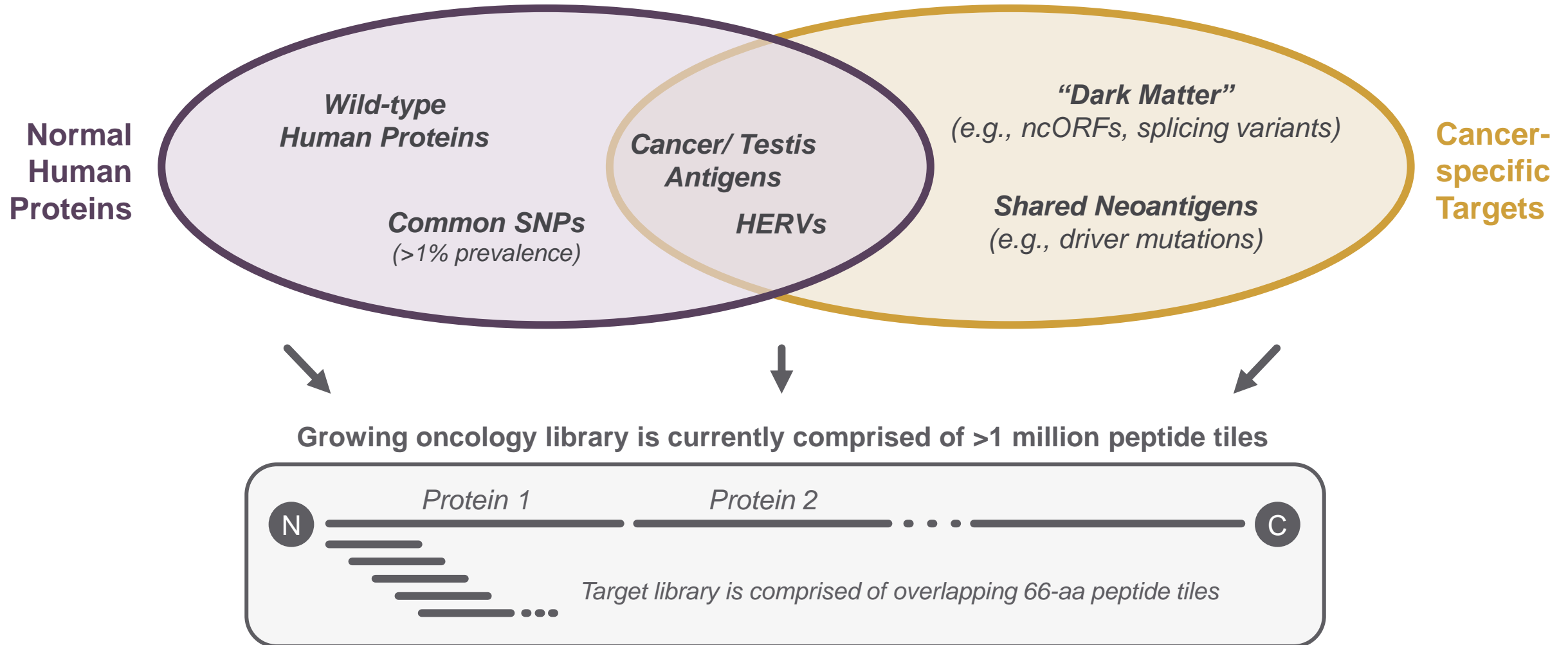


Physiologically relevant – natural processing of antigens

Comprehensive – covers every protein in the human proteome

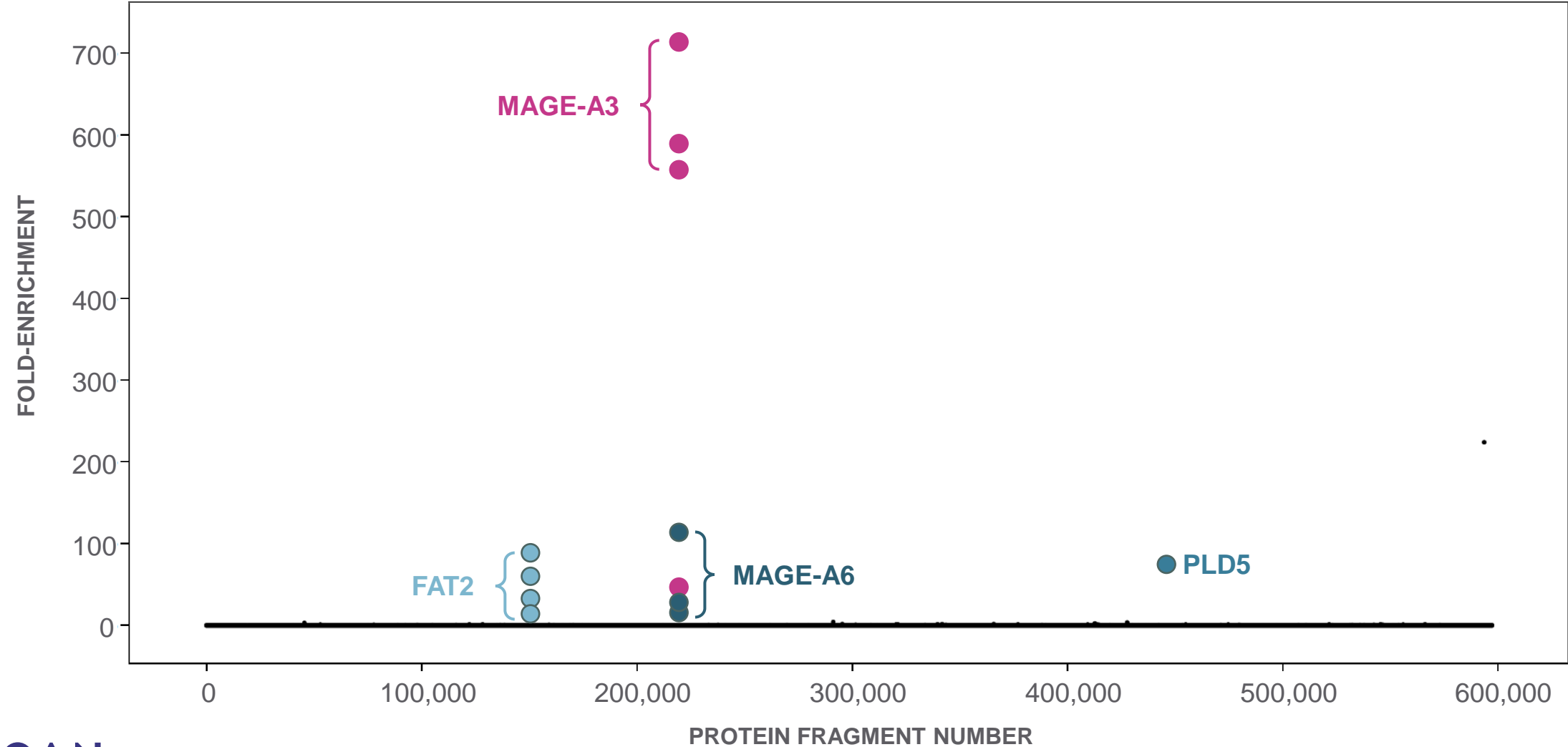
Proprietary library enables discovery of diverse TCR-T targets

Example TScan Oncology Library – Version 3.0



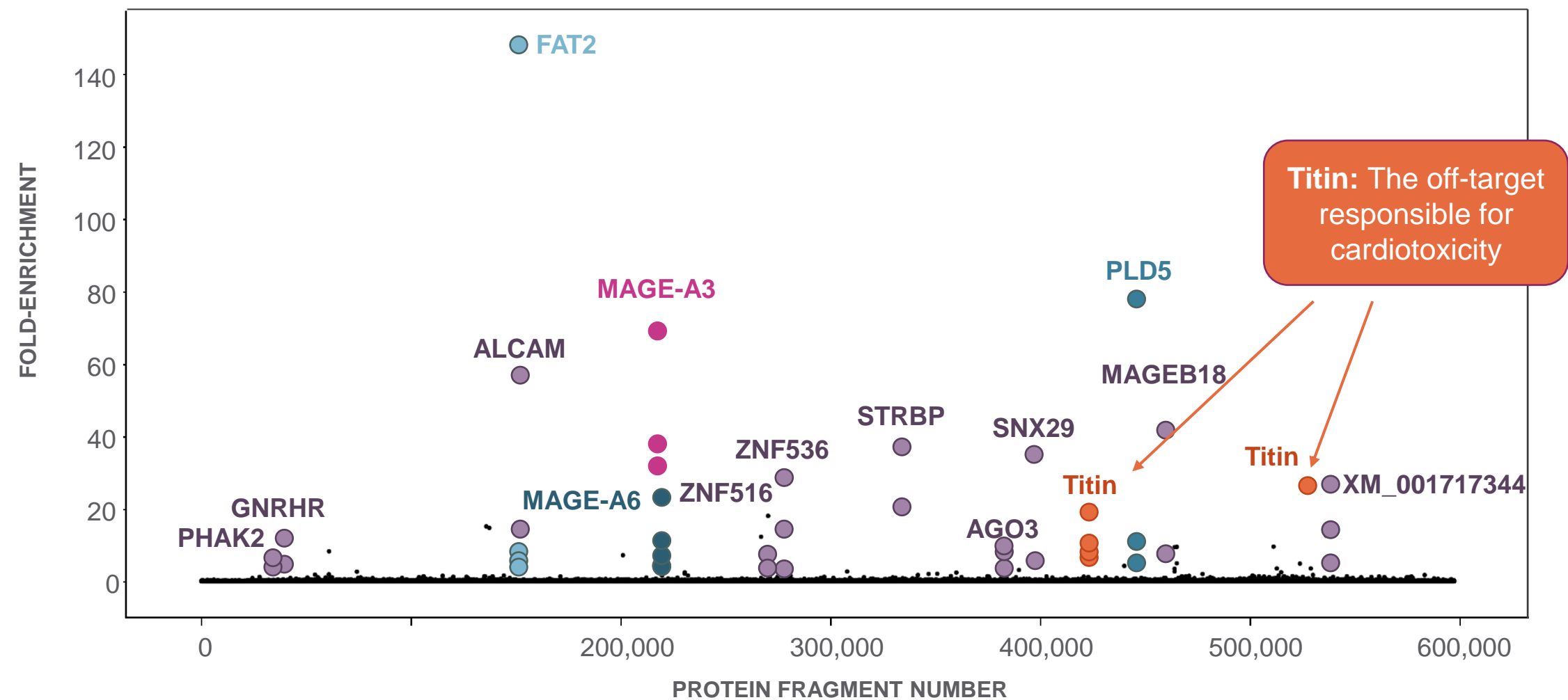
TargetScan clearly identifies the targets of TCRs

Genome-wide screen of a *TCR known to recognize MAGE-A3*

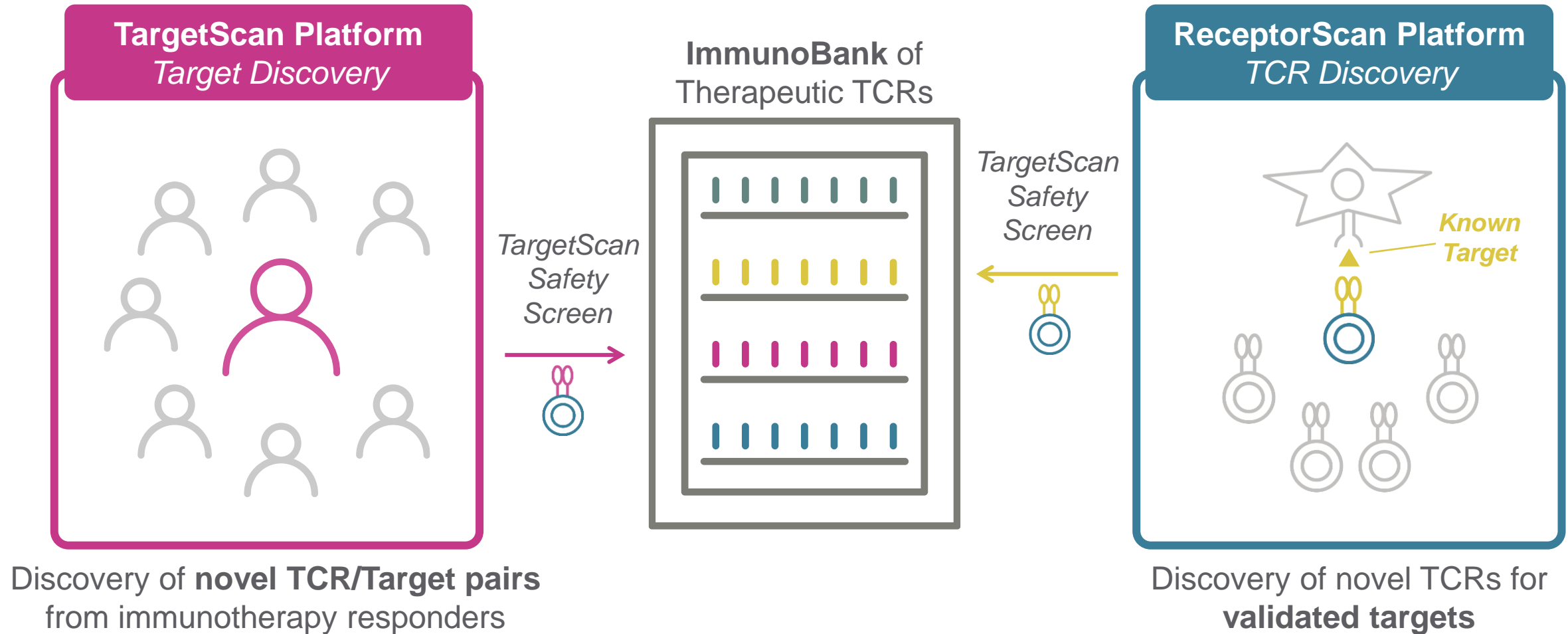


TargetScan identifies clinically relevant off-targets

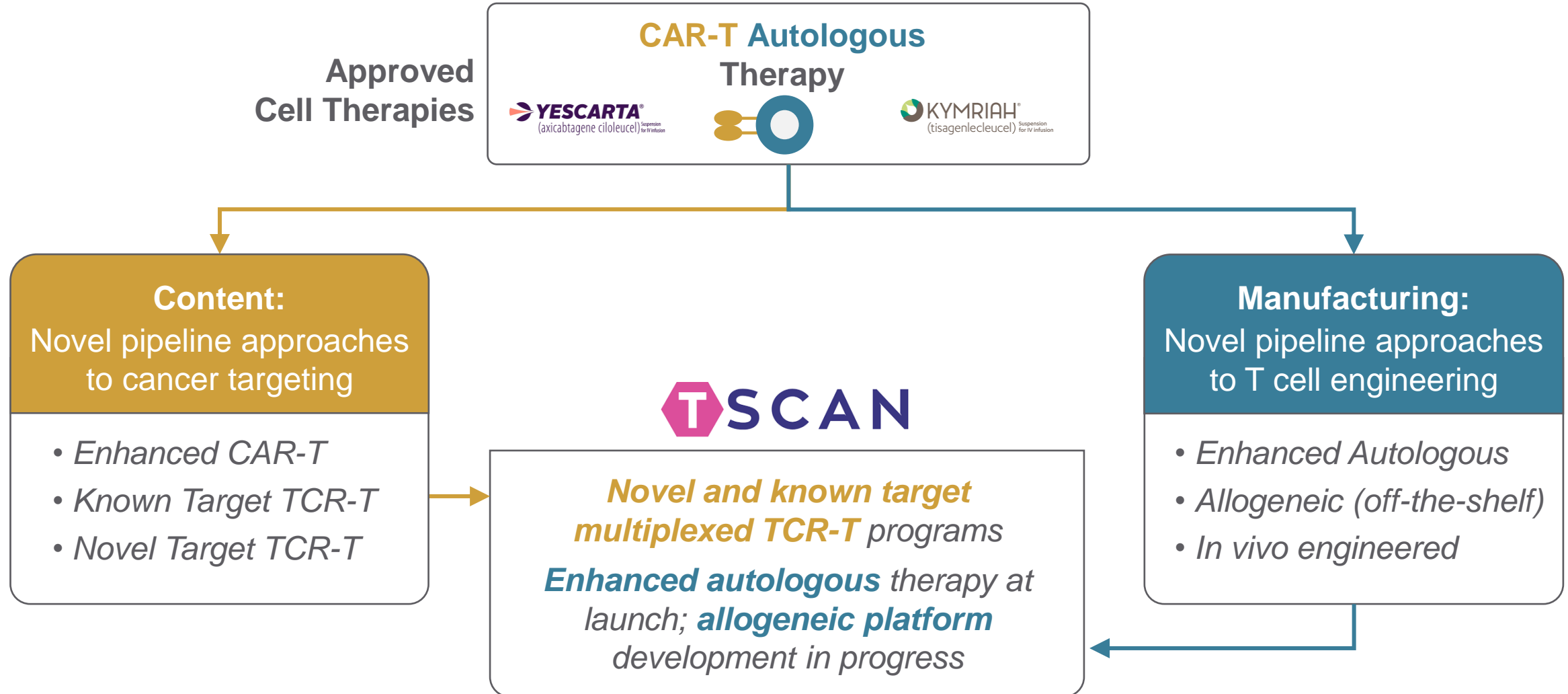
Genome-wide screen of *affinity-enhanced MAGE-A3 TCR*



Leveraging TargetScan and ReceptorScan platforms to build a bank of therapeutic TCRs



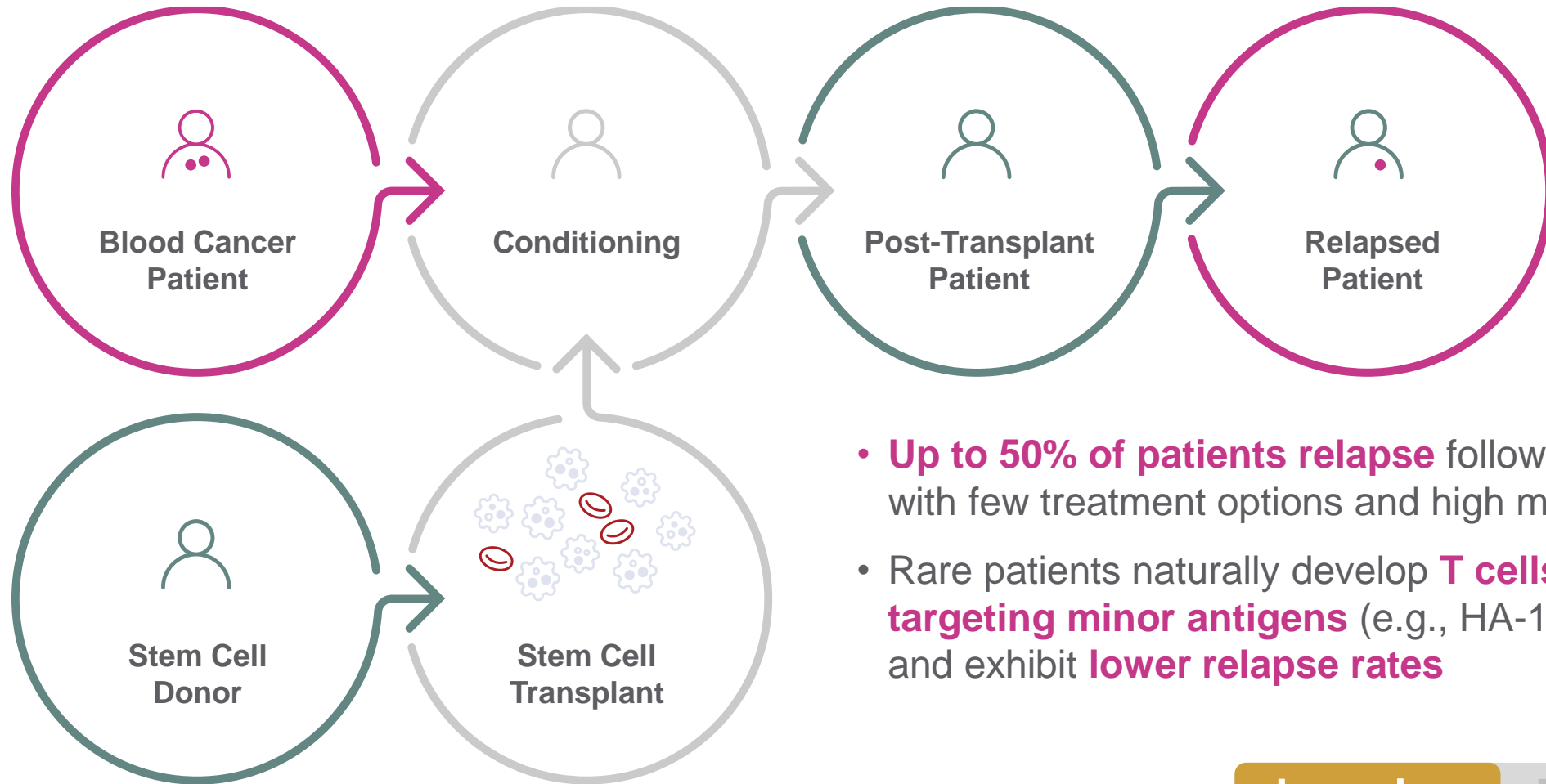
Novel TCR content and innovative manufacturing platform



Clinical Programs:

Liquid Tumor Program

Lead program designed to prevent relapse following stem cell transplant (SCT)

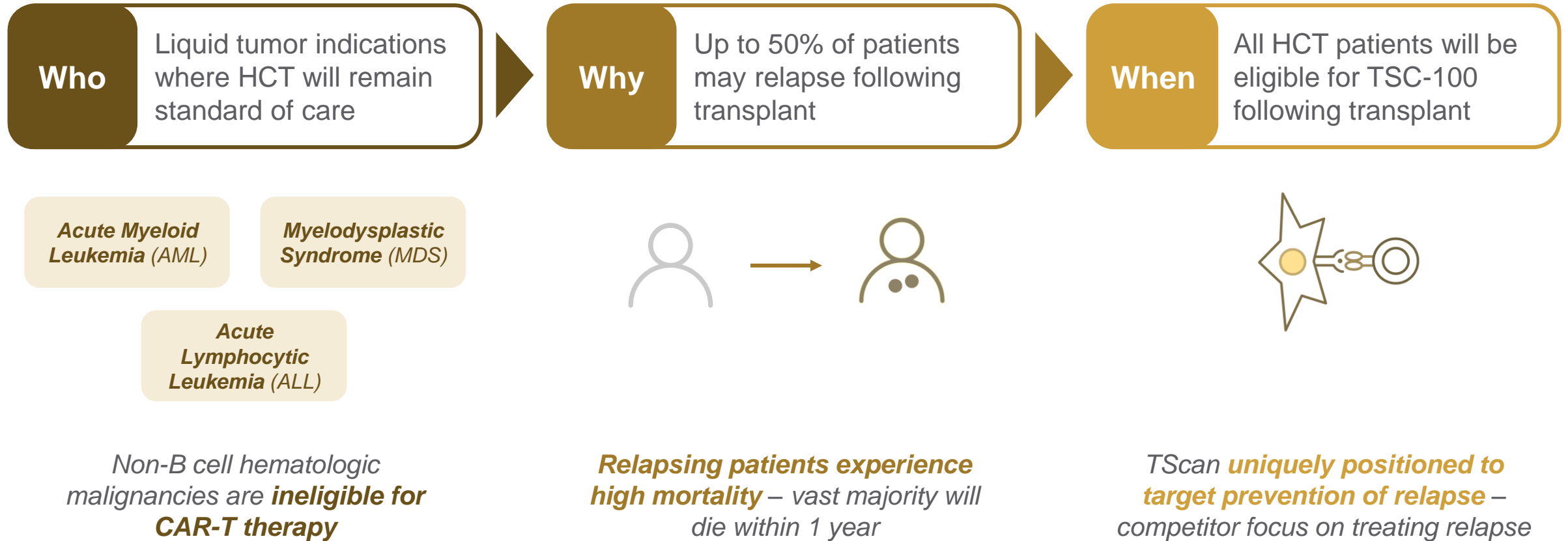


- **Up to 50% of patients relapse** following SCT, with few treatment options and high mortality
- Rare patients naturally develop **T cells targeting minor antigens** (e.g., HA-1, HA-2), and exhibit **lower relapse rates**

Learning

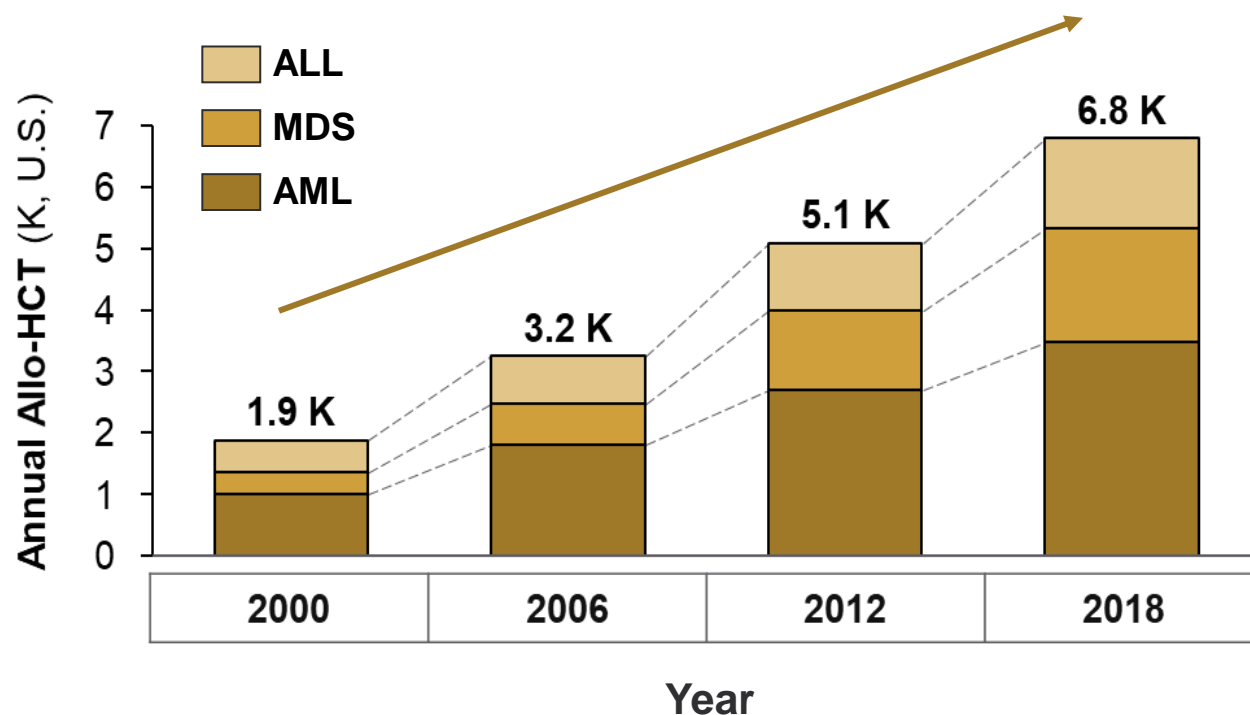
Treating

Liquid tumor program is designed to meet a high unmet need



Liquid tumor program addresses a large and growing market

Number of Allogeneic HCTs in Key TSC-100 Program Indications



HCT use has been increasing ~7% year over year for the treatment of priority hematologic malignancies (e.g., AML, MDS, ALL)

HCT use is anticipated to continue to grow, driven by:

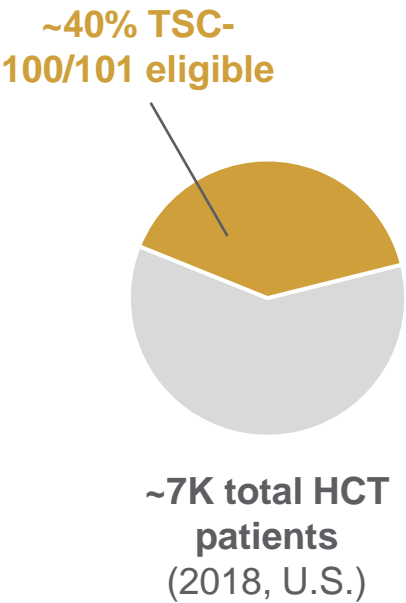
- ↑ *Novel pipeline agents improving remission rates prior to transplant, increasing HCT eligibility*
- ↑ *More safe and tolerable conditioning therapies increasing willingness to transplant more patients (e.g., lower risk, elderly)*

The TSC-100 program is designed to address a **large, growing pool of addressable patients** in key indications

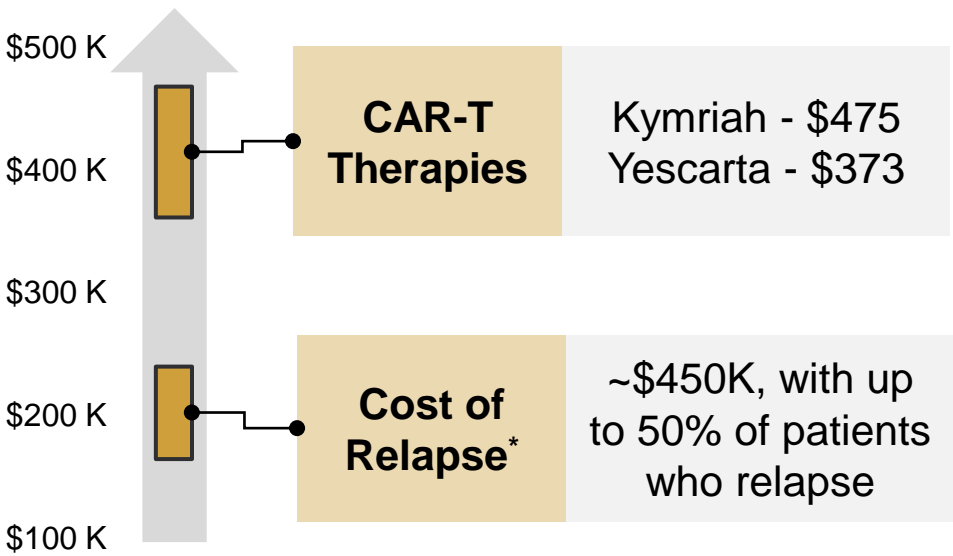
The TSC-100 program represents a meaningful commercial opportunity that addresses a key unmet need in oncology

~40% of patients receiving HCT will be eligible for TSC-100 and TSC-101

Pricing analogs support a premium priced cell therapy asset for relapse prevention



- ~7K+ patients currently receive HCT for key indications annually in the U.S. alone, with **historical growth projected to continue**
- Within the HCT pool, **~40% of patients will be eligible** for the TSC-100 program based upon HLA type and minor antigen mismatch



*Calculated as a risk adjusted cost of relapse (i.e., \$450K x 40-50% of patients = \$180-\$220K risk adjusted cost of relapse)
Source: CIBMTR; Majhail. Bone Marrow Transplant. 2013; Barrett. Expert Rev Hematol. 2010; Pandya. Avd Ther. 2019; Rautenberg. Int J Mol Sci. 2019; Bejanyan. Biol Blood Marrow Transplant. 2016.

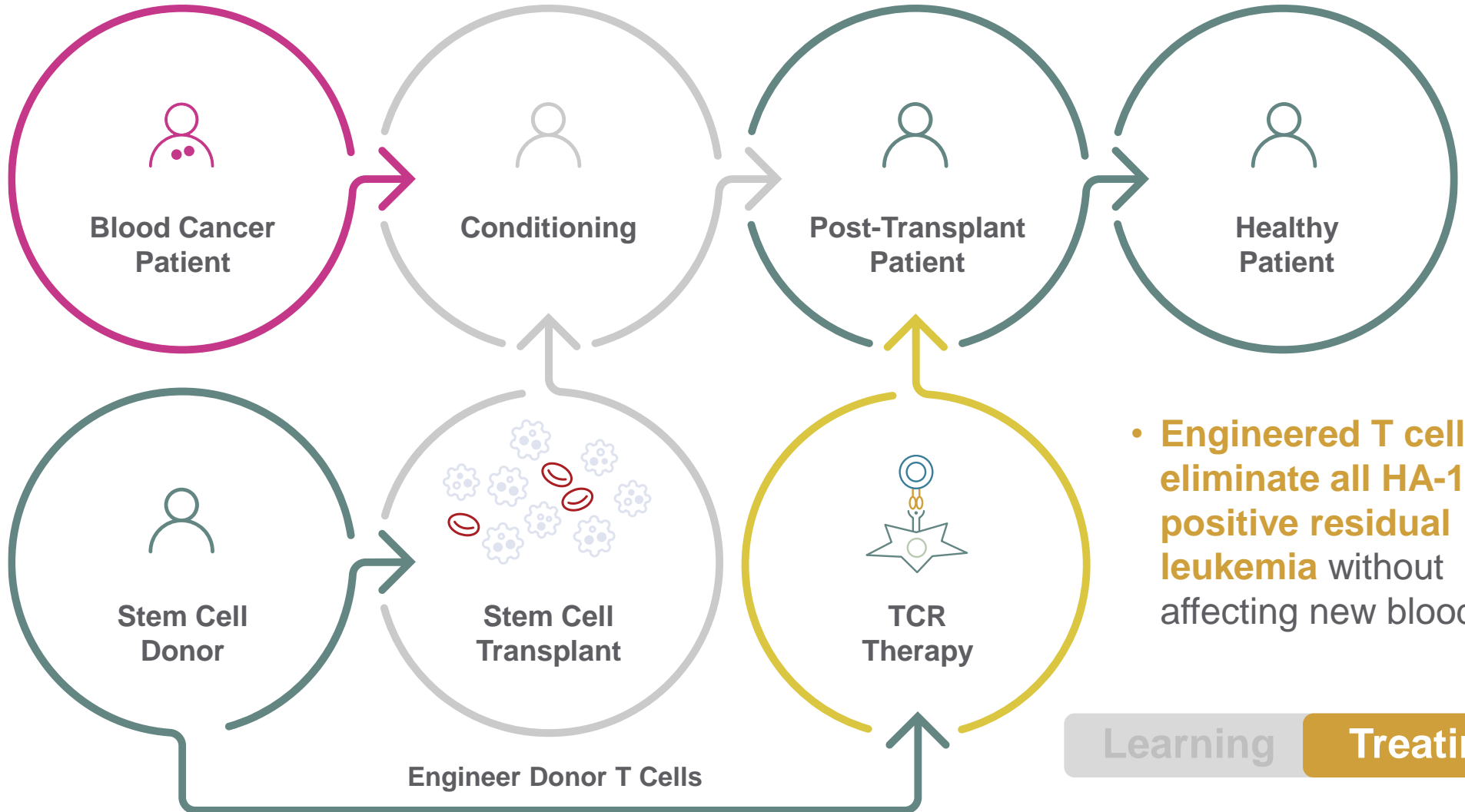
Engineering donor T cells to eliminate residual leukemia cells, preventing patient relapse and risk of death

TSC-100 Design:

HA-1⁺ & HLA-A*02:01⁺ patient

HA-1⁺ target peptide is presented by HLA-A*02:01

VLHDDLLEA



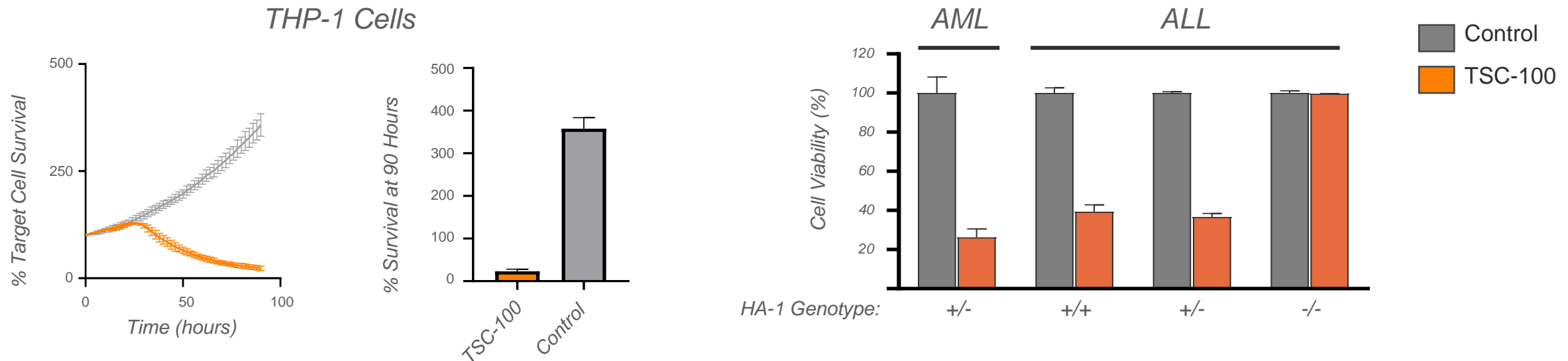
- **Engineered T cells eliminate all HA-1-positive residual leukemia** without affecting new blood cells

Learning

Treating

TSC-100 displays strong HA-1-specific cytotoxicity *in vitro*

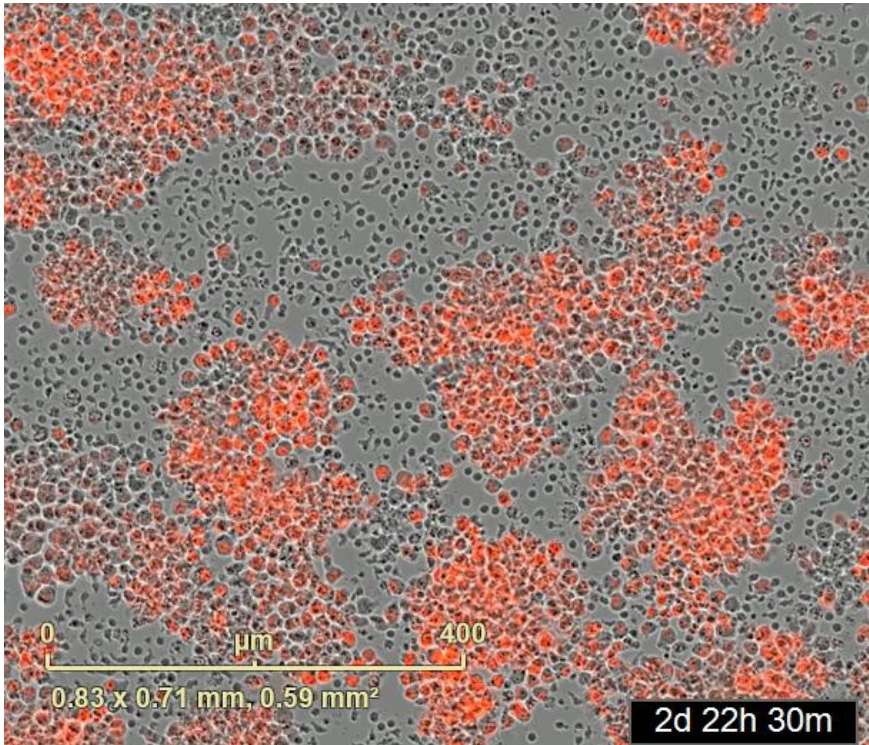
Example Cytotoxicity Data



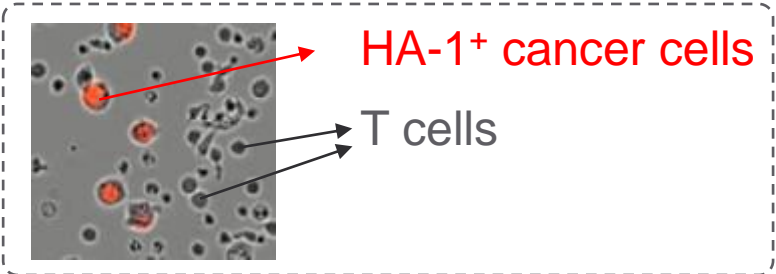
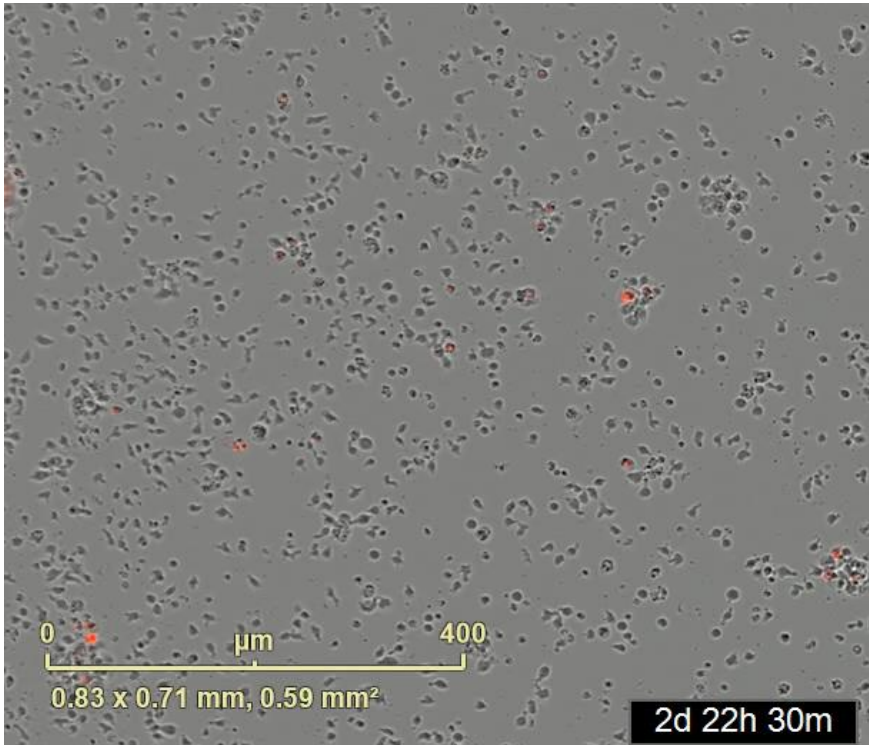
TSC-100 exhibits robust activity via cytotoxicity assays, cytokine production (e.g., IFN γ , granzyme B), and T cell proliferation

Illustrative video of *in vitro* studies showing the potential of TSC-100 to reduce HA-1-positive cancer cells

Non engineered T cells

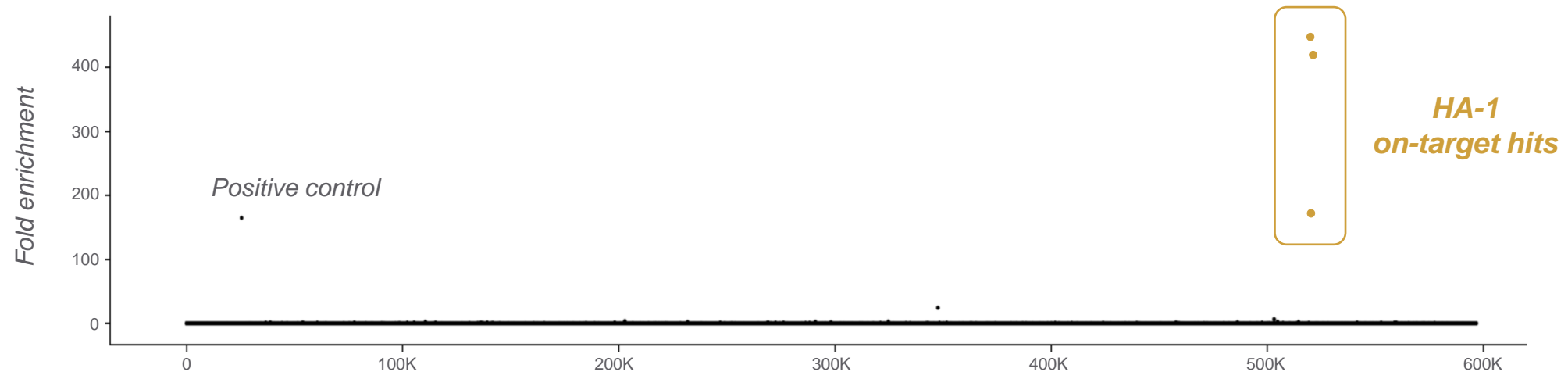


TSC-100



TSC-100 shows enhanced potential safety based on TargetScan safety screen

Off-target TargetScan Safety Data



- TargetScan revealed **no significant off-targets** for the TSC-100 TCR
- TSC-100 demonstrated no cross-reactivity or alloreactivity

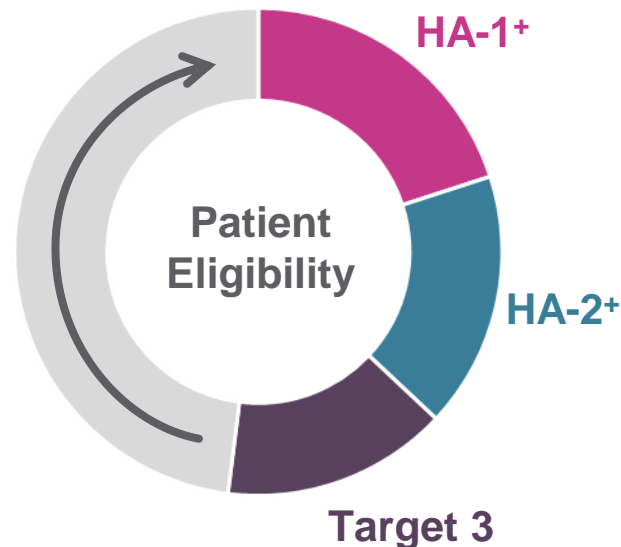
Multi-target program provides comprehensive solution for patients following SCT

Eligible Patients



Diagnostic Tests

- HLA type
- Genotype (HA-1, HA-2, Target 3)



Clinical Trial Patient Cohorts

HA-1⁺, HLA-A*02:01

HA-2⁺, HLA-A*02:01

HA-1⁺ & HA-2⁺, HLA-A*02:01

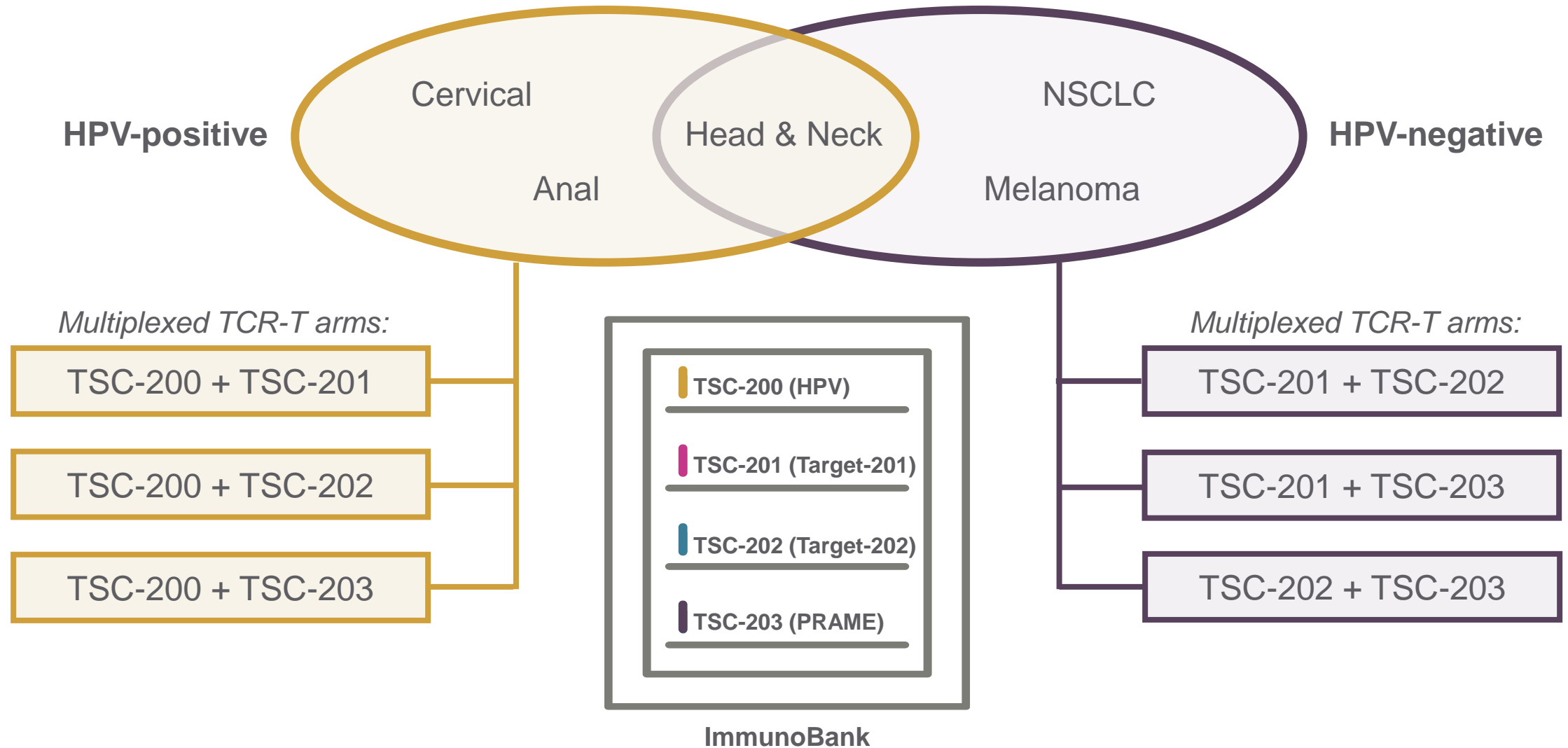
Target 3, HLA-B*07:02

Additional arms may be opened sequentially

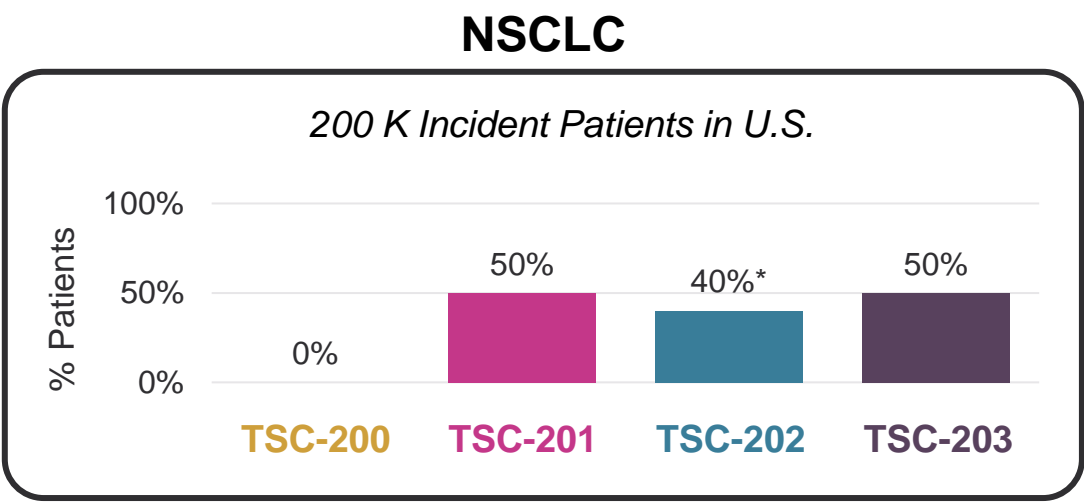
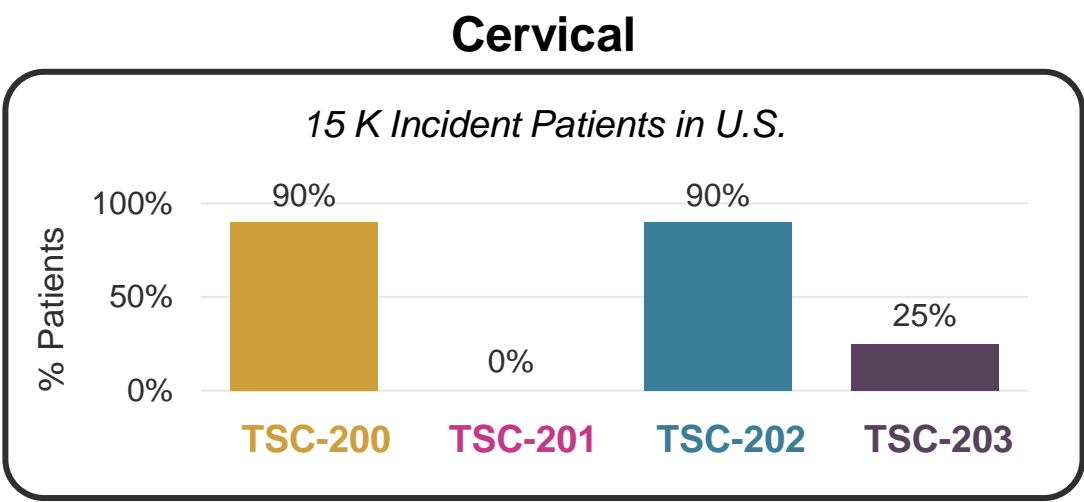
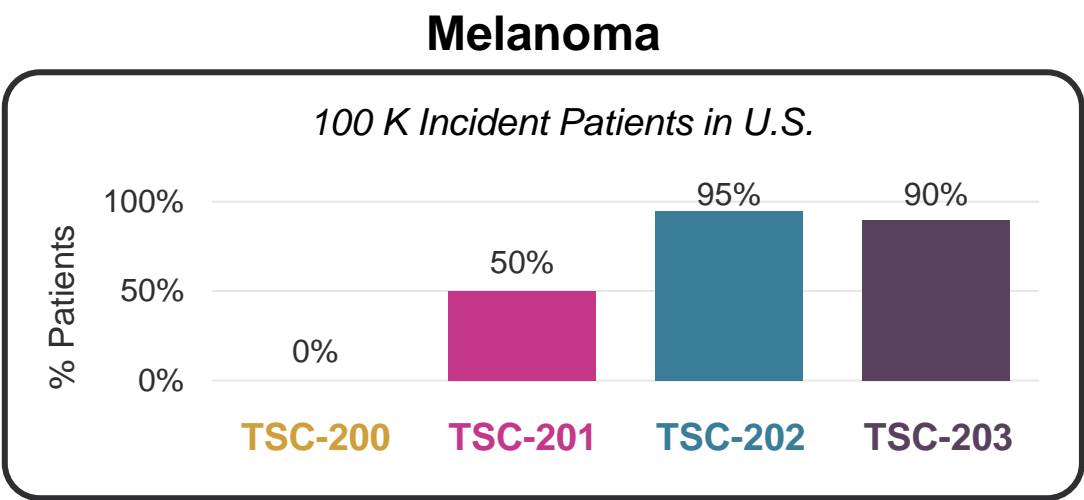
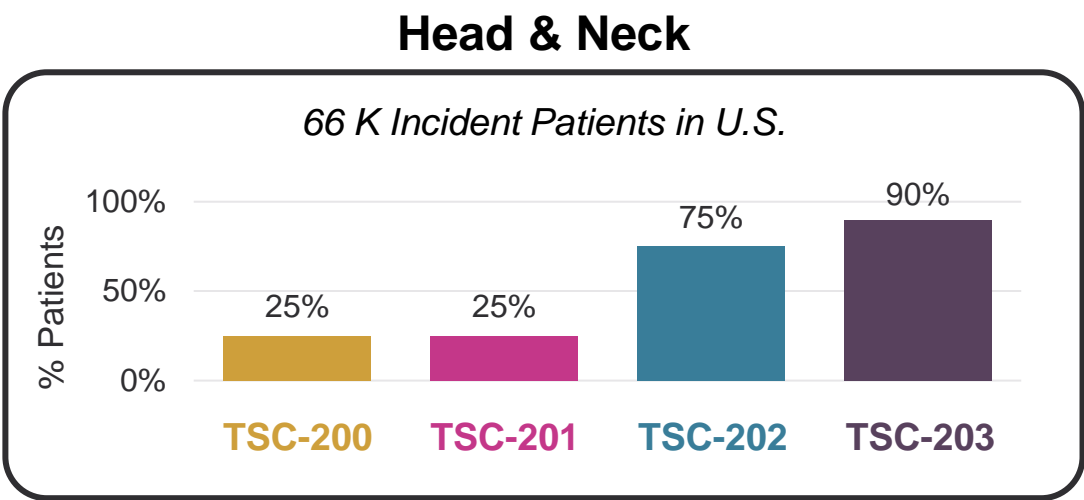
Clinical Programs:

Solid Tumor Program

Solid tumor program targets HPV+ and HPV- tumors

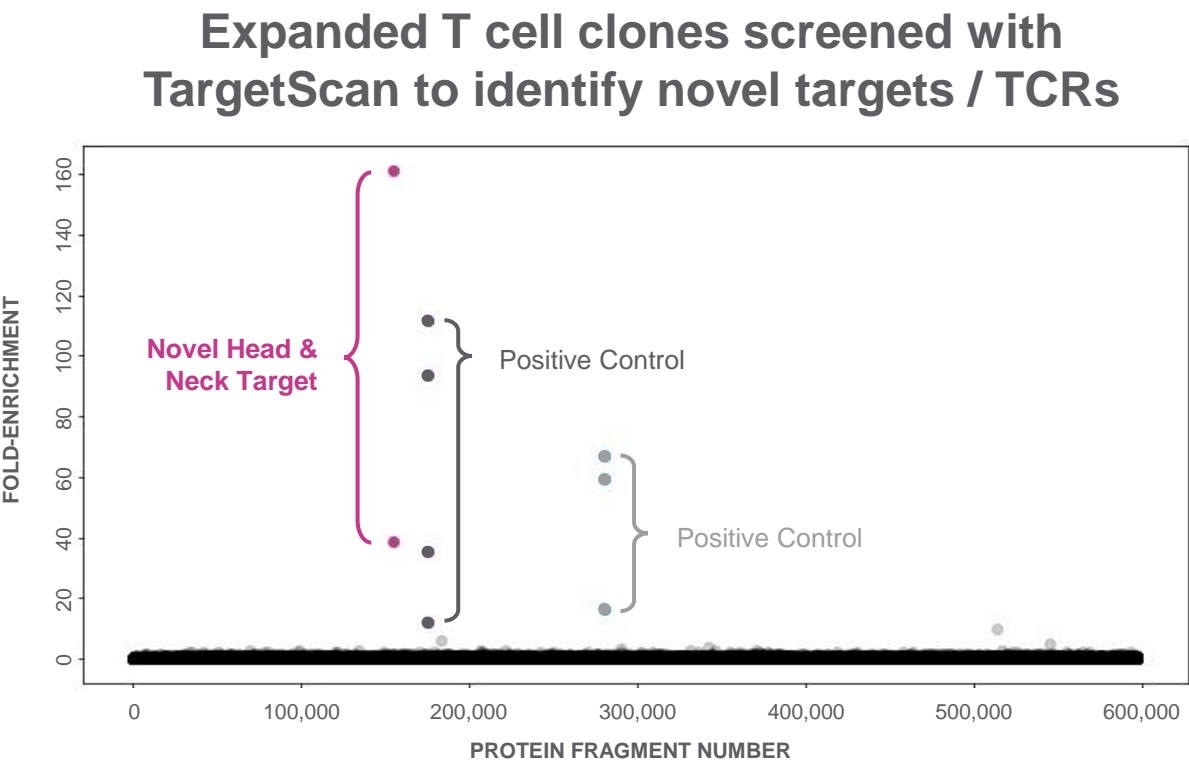
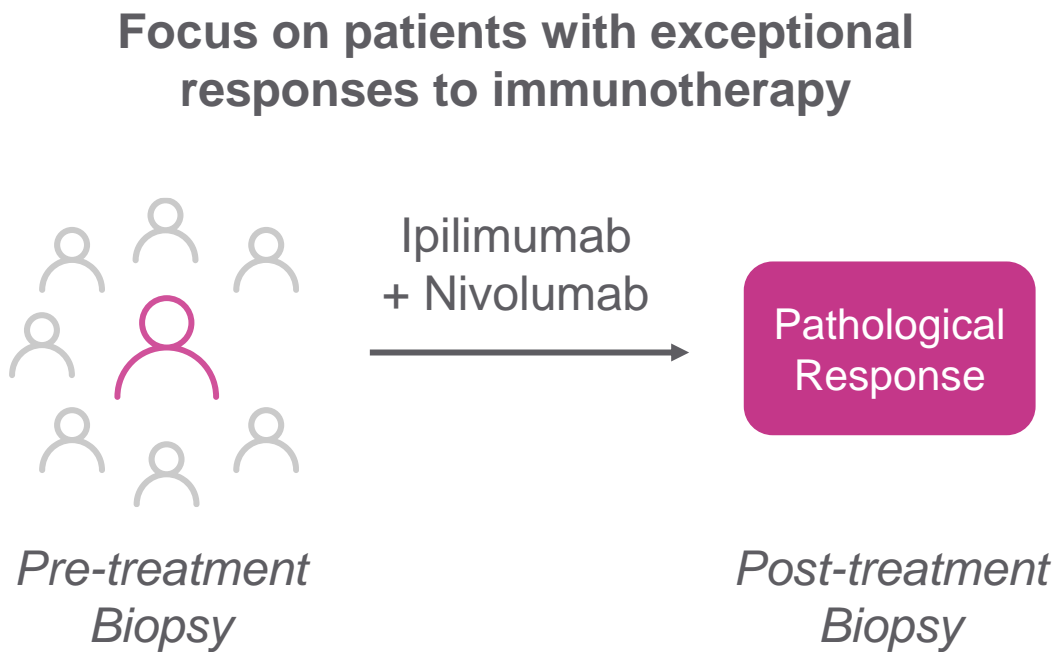


Initial targets are expressed in overlapping cancer indications, enabling multiplexed TCR-T therapy

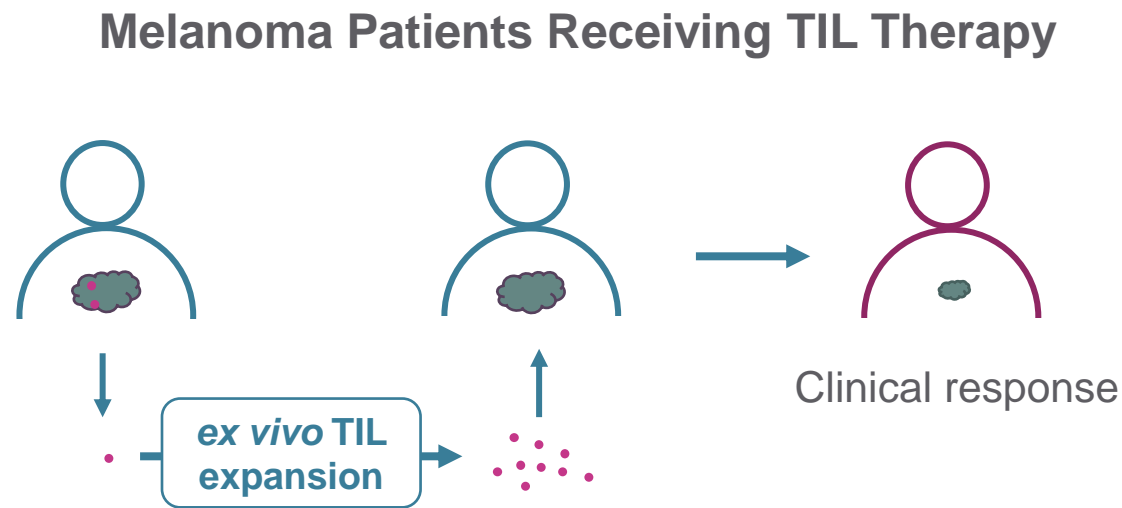


*Denotes broad lung cancer expression.

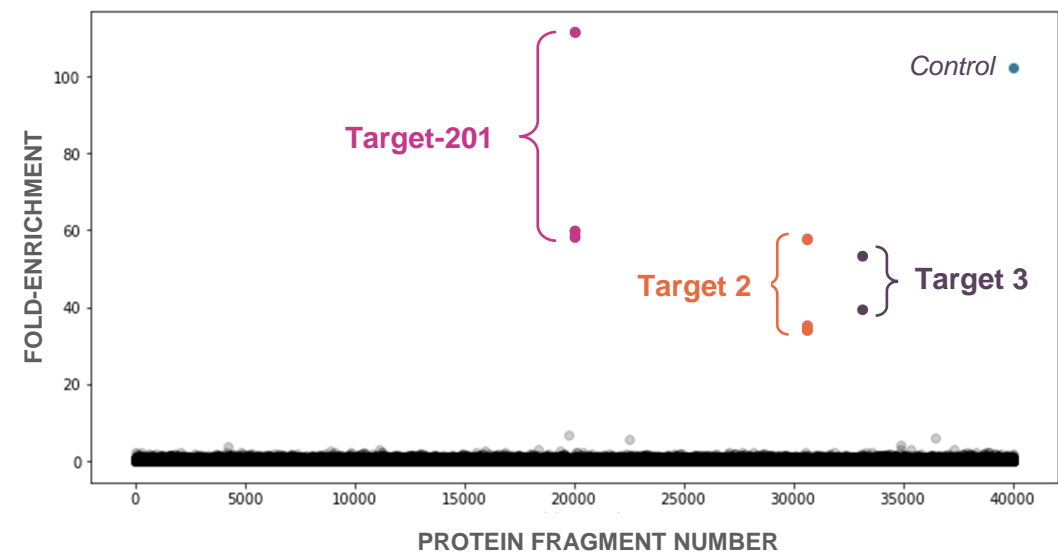
TargetScan identifies targets of clinically-active TCRs from immunotherapy-responsive patients



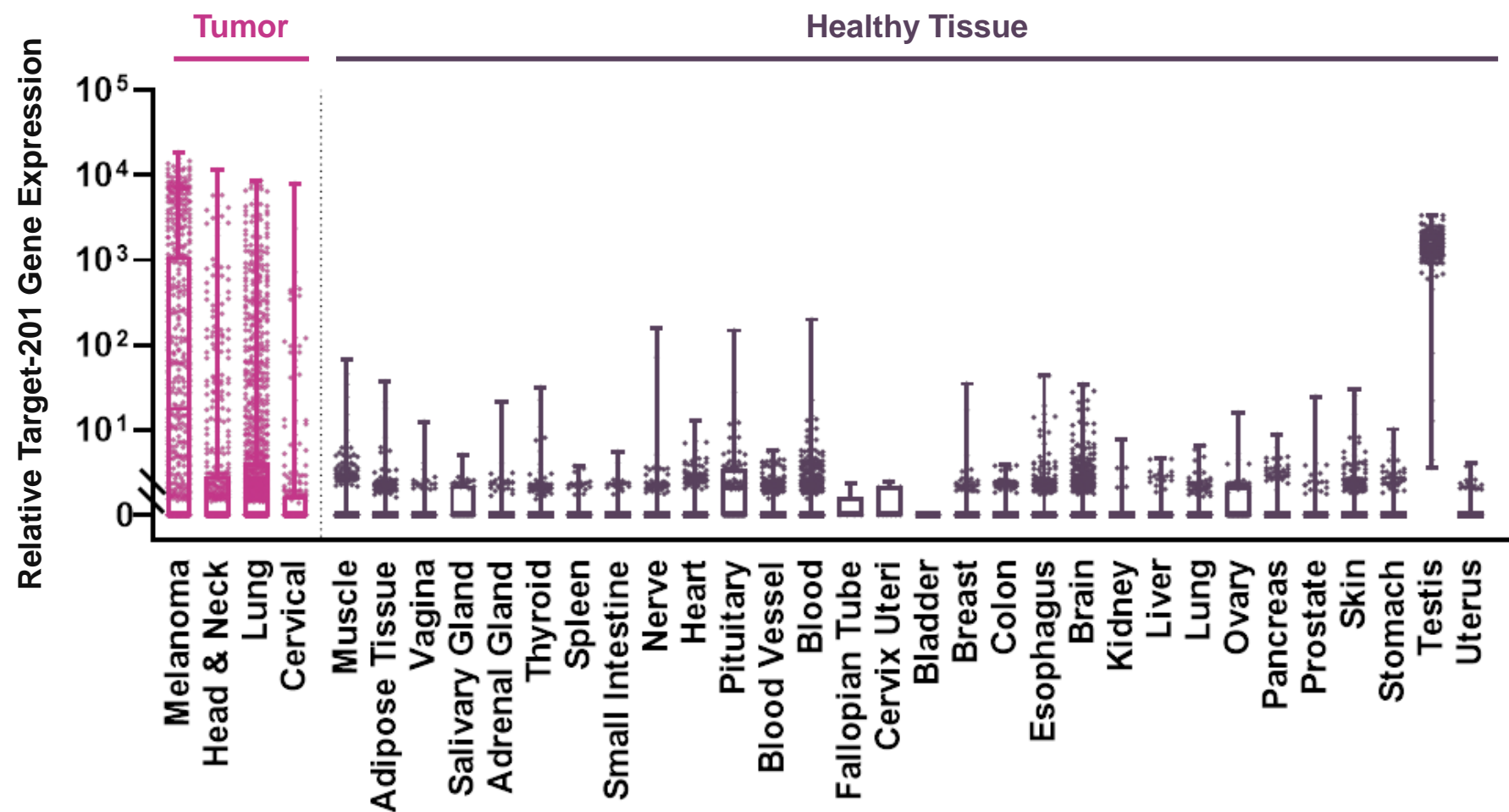
TIL therapy-responsive patients provide another valuable source of clinically-active TCRs



Three Novel Cancer/Testis Antigen Targets Identified from TIL-Responsive Patients

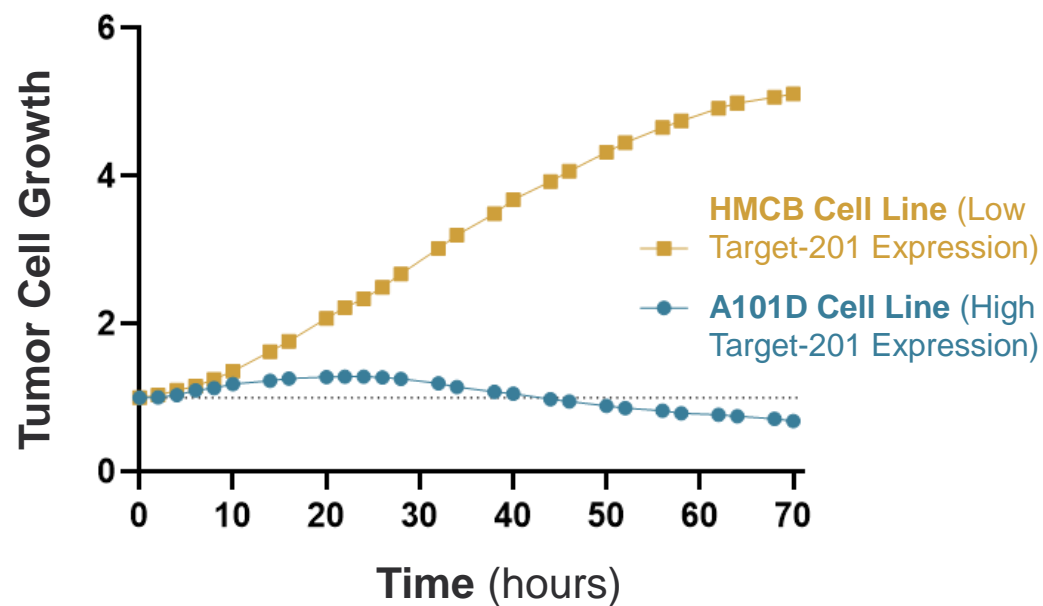


Target-201 is a cancer/testis antigen expressed in various cancers but not healthy tissue

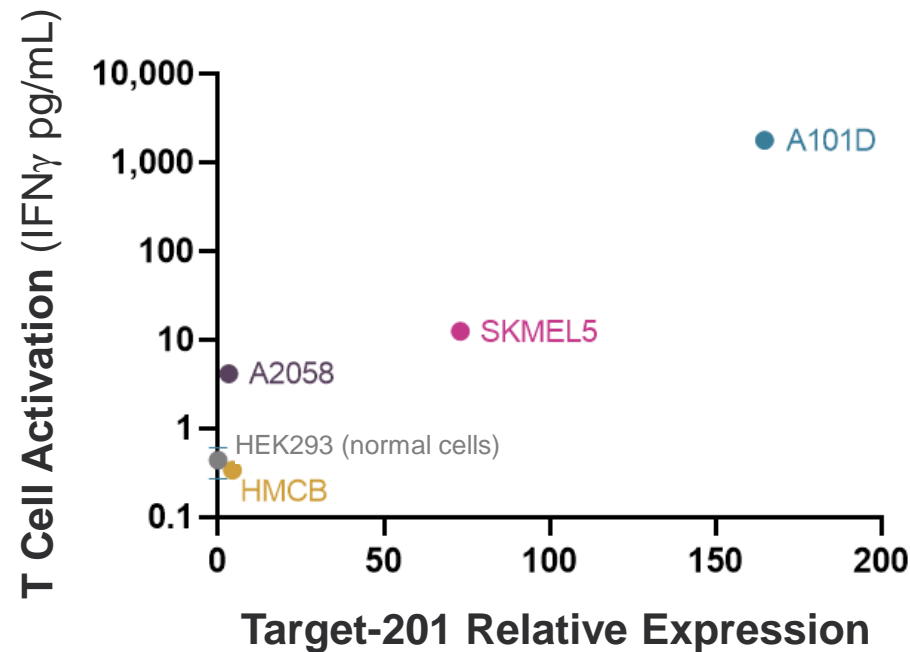


Target-201 TCR kills melanoma cells that naturally express Target-201 in preclinical studies

T Cells Kill Melanoma Cells Expressing High Levels of Target-201



Activation of T Cells Correlates with Target-201 Expression



Discovery process is yielding a diverse and growing Immunobank of TCR-T candidates

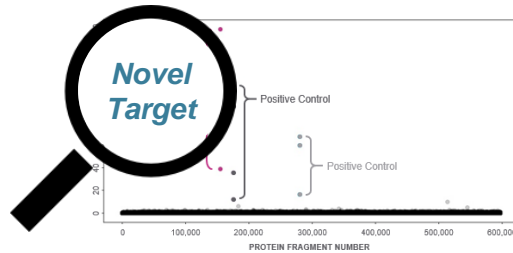
Clinical Responders Recruited

Clinically responsive immunotherapy patients studied, including TIL & checkpoint inhibitor tx



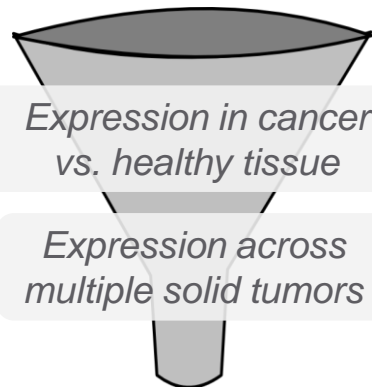
Novel Targets Identified

300+ TCRs screened via TargetScan
Over 40 novel targets identified to date



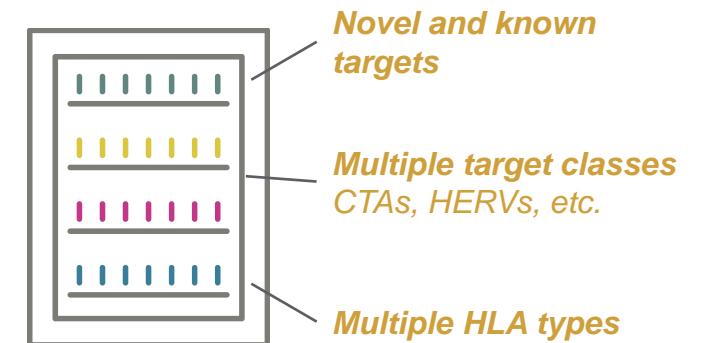
Priority Targets Selected

Priority targets identified based on specific criteria, including:

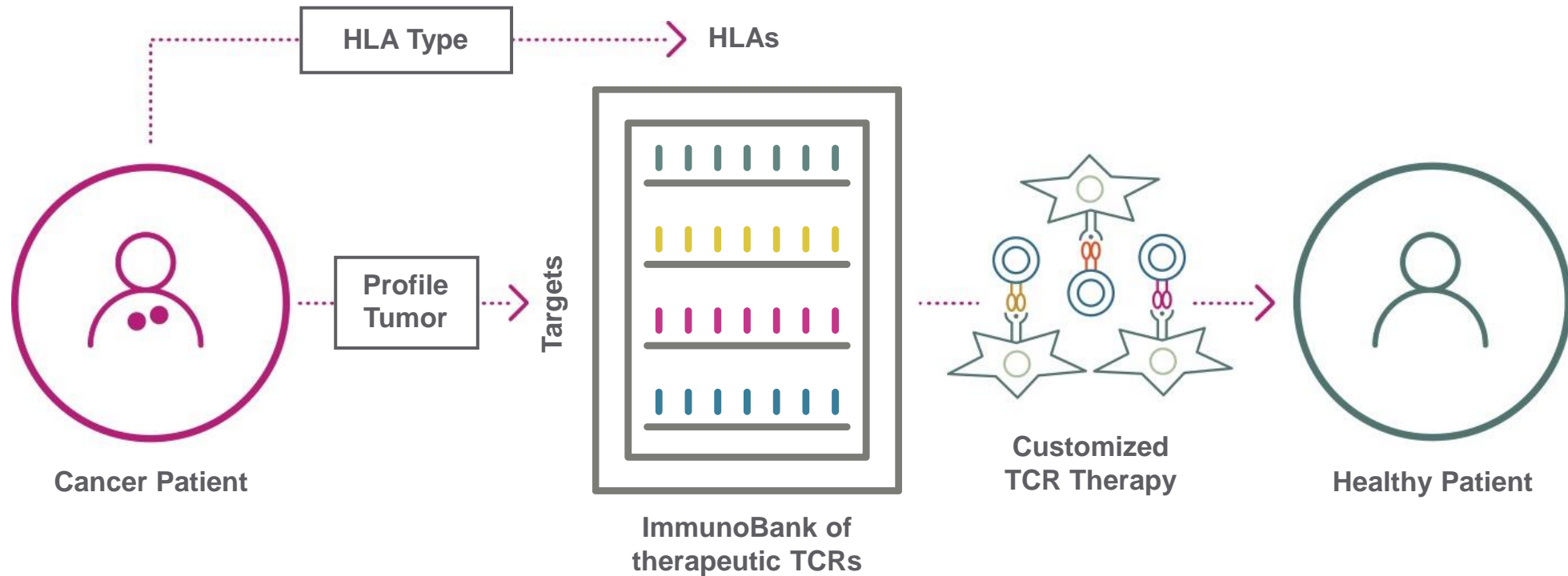


Progression of Targets to Clinic

Priority targets are being **moved into ImmunoBank** for multiplexed TCR-T



ImmunoBank of TCRs may provide customized, off-the-shelf, multiplexed TCR-T

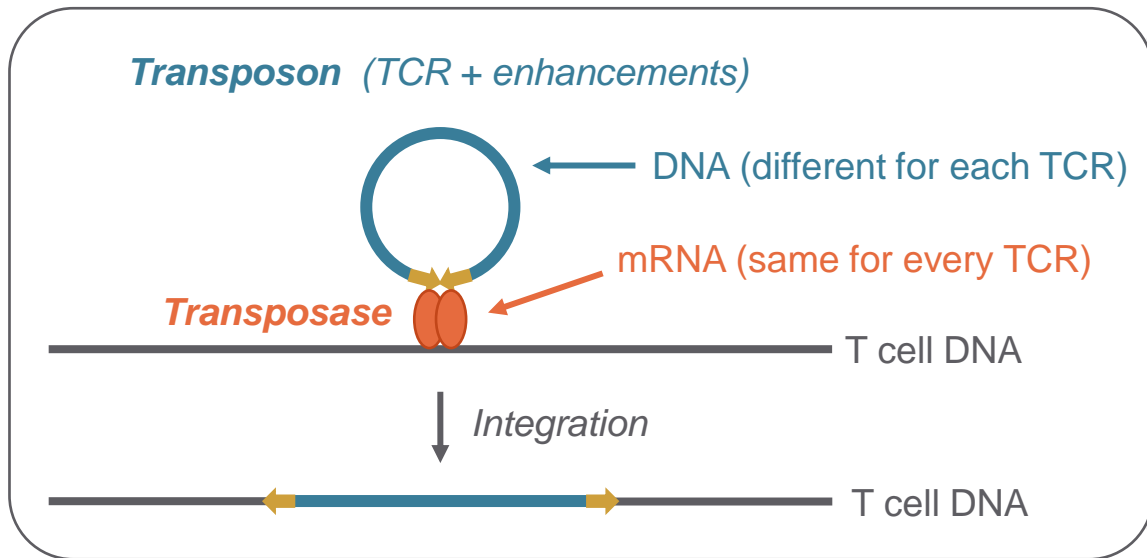


Multiplexed TCR-T may **overcome both tumor heterogeneity and resistance due to target loss**

Manufacturing

Non-viral delivery overcomes constraints of lentivirus - Enables TCR-T multiplexing and T cell enhancements

T-Integrate Delivery System



Advantages of T-Integrate over lentivirus:



Greater cargo size enables delivery of T cell functional enhancements



Rapid process development



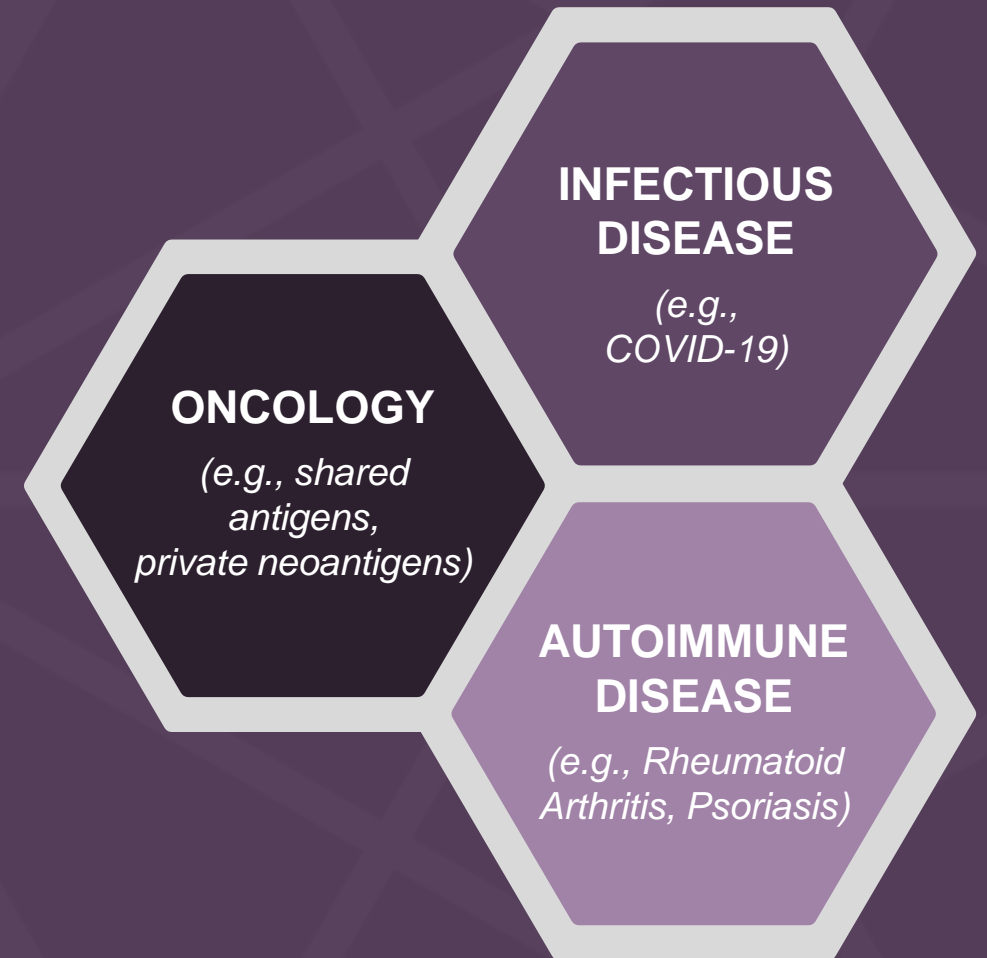
Cost-effective manufacturing

Internal manufacturing expected to facilitate progress to clinic



- 7,000 square foot **GMP production facility** with QC labs and GMP warehouse
- **Internal manufacturing team** with extensive cell therapy experience
- Expected to **fully support multiple clinical programs** through phase 2 clinical trials

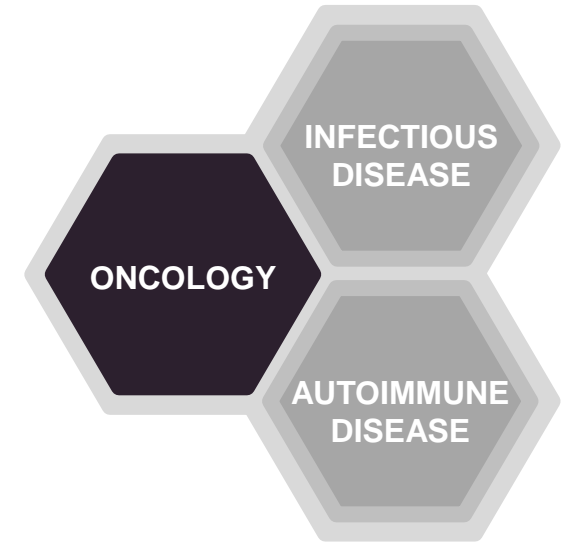
Building Corporate Value Through Partnerships



Strategic Novartis partnership builds value in oncology

Partnership with Novartis leveraging TargetScan to **discover novel shared targets in solid tumors**

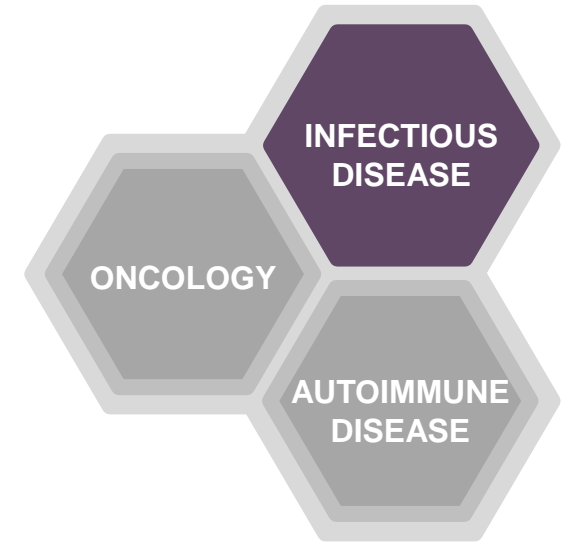
- Identifying novel targets and TCRs from patients actively responding to immunotherapy in a select solid tumor indication
- Novartis has the option to license and develop TCRs for up to three novel targets and rights of first negotiation for certain additional TCRs. TScan keeps all additional targets/TCRs not licensed by Novartis
- Payments to TScan include:
 - \$20M upfront plus up to \$10M in research reimbursement
 - Development and commercial milestones
 - Tiered royalties



TargetScan identified COVID-19 T cell targets – Developing next generation vaccines, diagnostics with partners

Using blood from recovering COVID-19 patients, TargetScan found:

- A shared set of targets largely located **outside the spike protein**
- **Little cross-reactivity** with other ‘common cold’ coronaviruses
- Results **published in Immunity** in October 2020



TScan has signed ***diagnostic and therapeutic partnerships*** as well as early-stage collaborations for COVID-19



Summary



Proprietary target discovery technology identifies novel targets for TCR-T therapy and de-risks development of clinical candidates



TCR-T company with liquid tumor program (IND expected in 2021) and solid tumor program (IND expected in 2022)



Building additional corporate value via strategic partnerships, including recent target discovery partnership with Novartis



Supported by top investors, with \$260M in equity funding