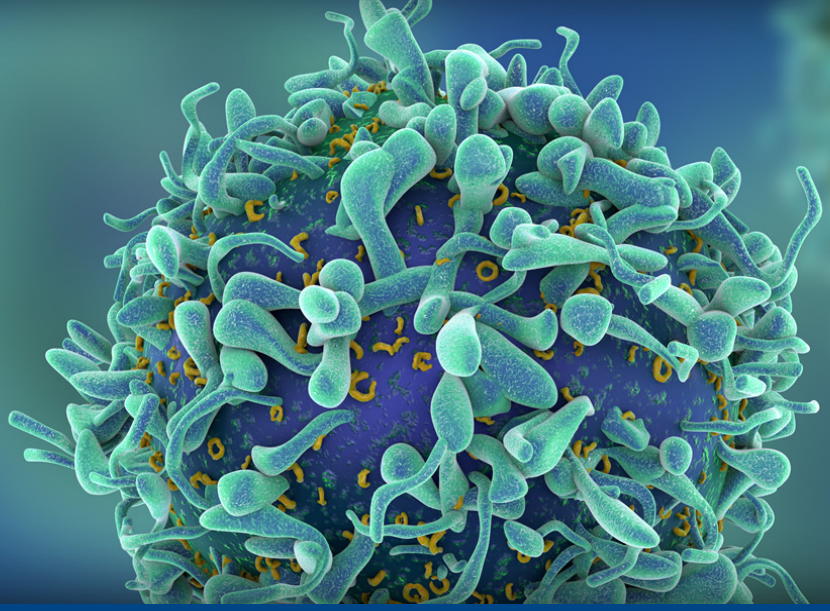


Adaptimmune Therapeutics plc
Engineering TCRs for T-cell Therapy in Solid Tumors

July 2017

Corporate Presentation

Adaptimmune

TRANSFORMING T CELL THERAPY

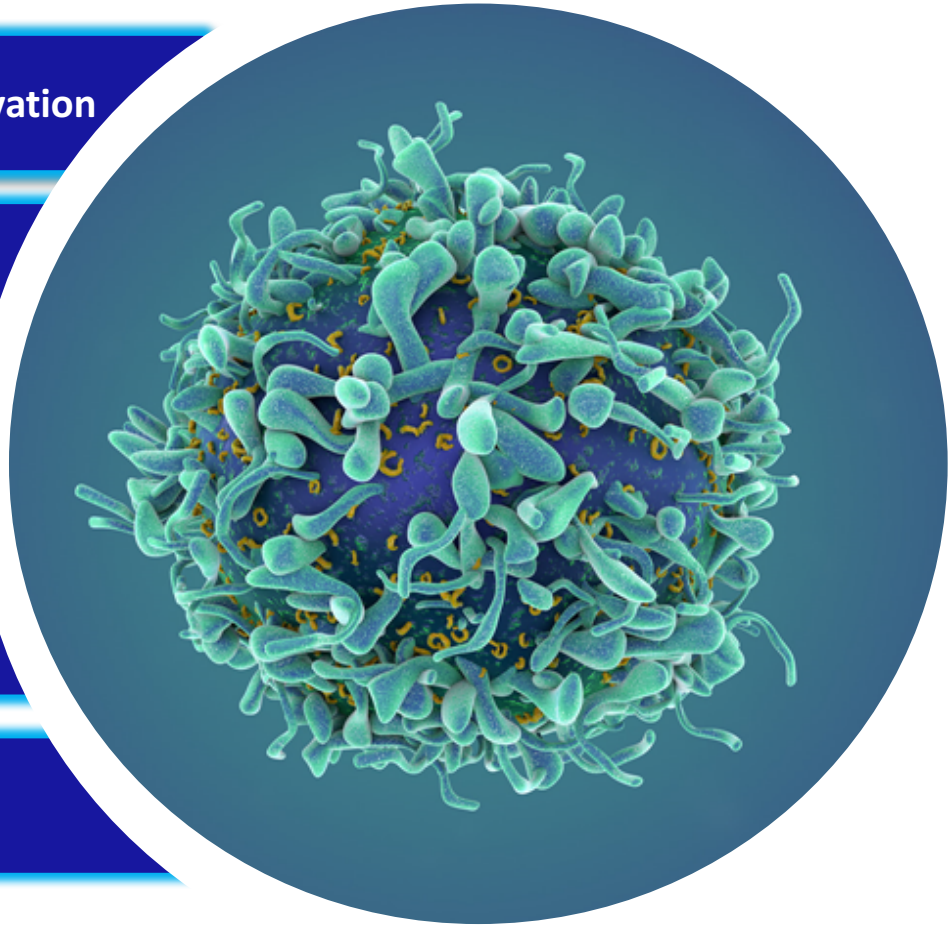
Disclaimer

This presentation contains "forward-looking statements," as that term is defined under the Private Securities Litigation Reform Act of 1995 (PSLRA), which statements may be identified by words such as "believe," "may", "will," "estimate," "continue," "anticipate," "intend," "expect" and other words of similar meaning. These forward-looking statements involve certain risks and uncertainties. Such risks and uncertainties could cause our actual results to differ materially from those indicated by such forward-looking statements, and include, without limitation: the success, cost and timing of our product development activities and clinical trials; our ability to submit an IND and successfully advance our technology platform to improve the safety and effectiveness of our existing TCR therapeutic candidates; the rate and degree of market acceptance of T-cell therapy generally and of our TCR therapeutic candidates; government regulation and approval, including, but not limited to, the expected regulatory approval timelines for TCR therapeutic candidates; and our ability to protect our proprietary technology and enforce our intellectual property rights; amongst others. For a further description of the risks and uncertainties that could cause our actual results to differ materially from those expressed in these forward-looking statements, as well as risks relating to our business in general, we refer you to our Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (SEC) on May 10, 2017 and our other SEC filings.

We urge you to consider these factors carefully in evaluating the forward-looking statements herein and you are cautioned not to place undue reliance on such forward-looking statements, which are qualified in their entirety by this cautionary statement. The forward-looking statements contained in this presentation speak only as of the date the statements were made and we do not undertake any obligation to update such forward-looking statements to reflect subsequent events or circumstances. We intend that all forward-looking statements be subject to the safe-harbor provisions of the PSLRA.

Adaptimmune: Leading the TCR T-cell Space

- >20 years of T-cell receptor (TCR) innovation
- Proprietary affinity-tuned TCRs
- Deep SPEAR T-cell pipeline
- Responses in solid tumors
- Combination & next generation



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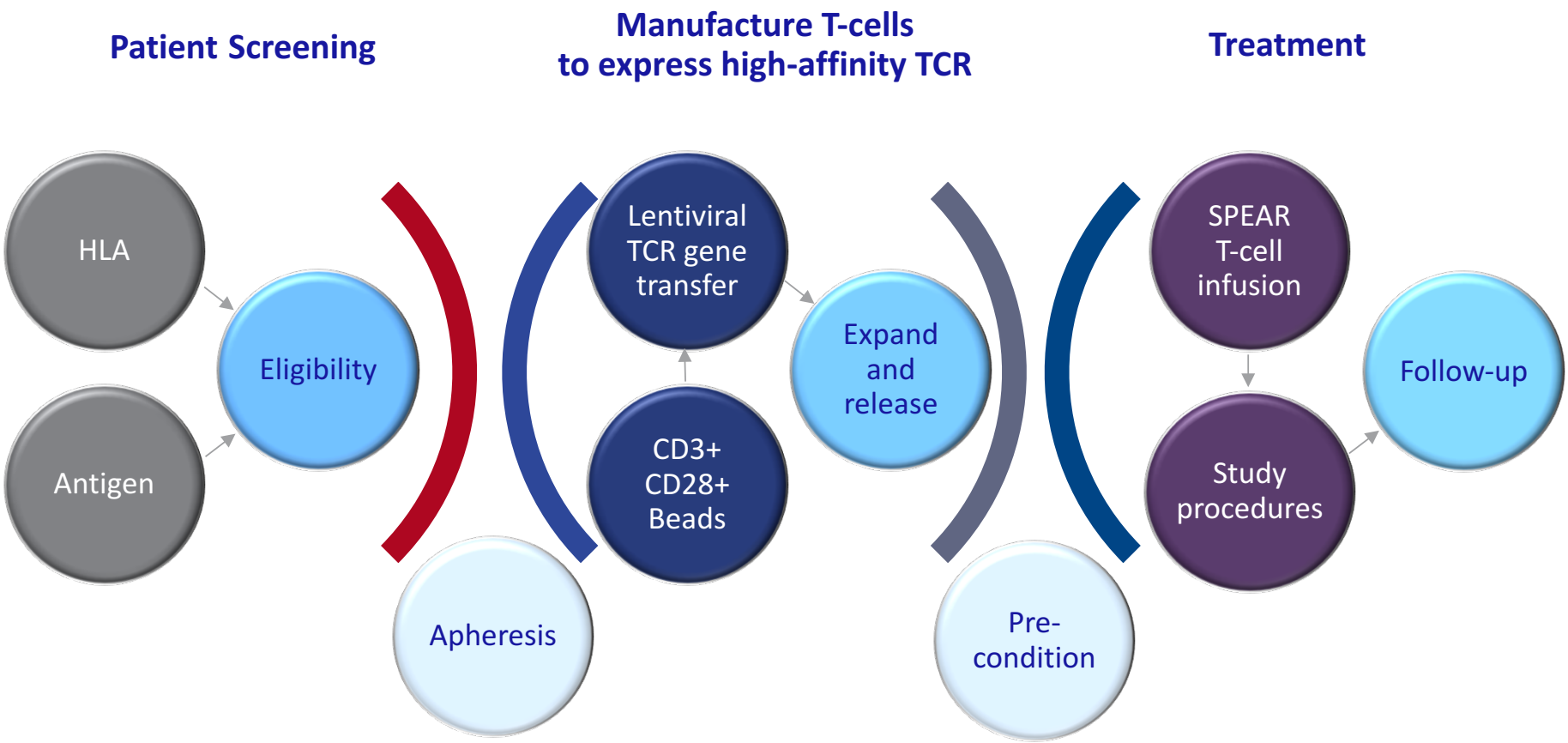
Autologous T-cell Therapy for Patients

Using SPEAR T-cells to target solid tumors



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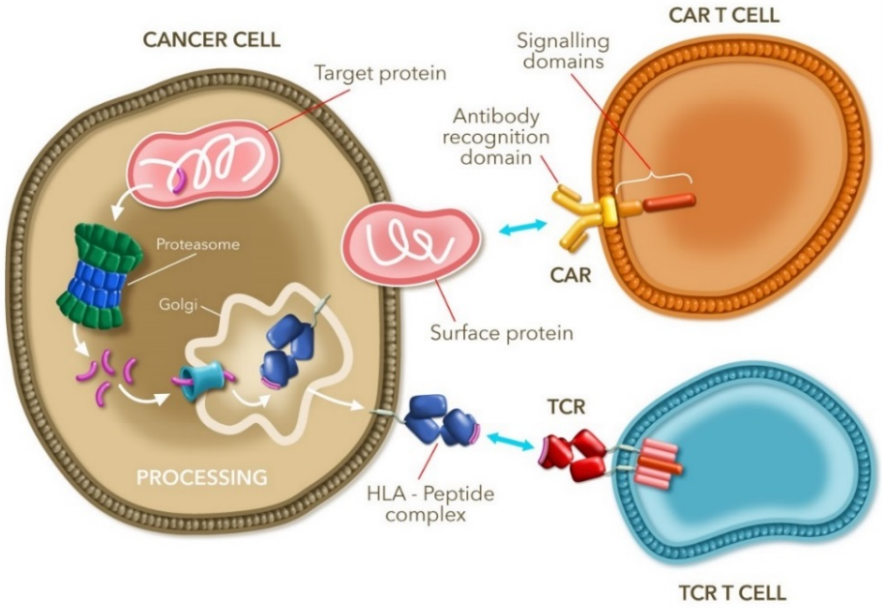
CAR-T vs TCR

Access to more targets with T-Cell Receptors (TCRs)



CAR-T	Very few targets; limited to extracellular
	Chimeric antigen receptor; not designed to recognize an HLA peptide
TCRs	Access to extra- and intracellular proteins
	Affinity tuned SPEAR TCRs overcome low target expression; required to address solid tumors

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Pipeline Overview

Multiple TCR programs targeting solid tumors

GSK option	NY-ESO	• Encouraging clinical data in synovial sarcoma and multiple myeloma • Planned registration study in synovial sarcoma • Active trials in synovial sarcoma, myxoid/round cell liposarcoma (MRCLS), ovarian, and non-small cell lung cancer (NSCLC)
Wholly-owned	MAGE-A10	• Studies enrolling in head & neck, melanoma, urothelial (bladder), and NSCLC
	AFP	• Study enrolling in hepatocellular cancer
	MAGE-A4	• Multi-tumor study enrolling in melanoma, urothelial, head and neck, ovarian, NSCLC, esophageal, and gastric cancers

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Clinical Pipeline

Nine actively enrolling studies across eleven tumor types

SPEAR target	Indication	Notes	Phase I / II	Comment
NY-ESO	Synovial sarcoma	Cohorts 1-4; registration study planned		ASCO Update
	Myxoid / Round cell liposarcoma	Pilot study		
	Multiple myeloma	Combination with anti-PD1 (KEYTRUDA)		Initiated May 2017
	Ovarian	Modified CTX / FLU		
	Non-small cell lung cancer (NSCLC)	Modified CTX / FLU		
MAGE-A10	NSCLC	Modified CTX / FLU		
	Urothelial (bladder), melanoma, H&N	Modified CTX / FLU		
AFP	Hepatocellular cancer	Modified CTX / FLU		Initiated May 2017
MAGE-A4	Urothelial, melanoma, H&N, ovarian, NSCLC, esophageal, gastric	Modified CTX / FLU		Initiated May 2017

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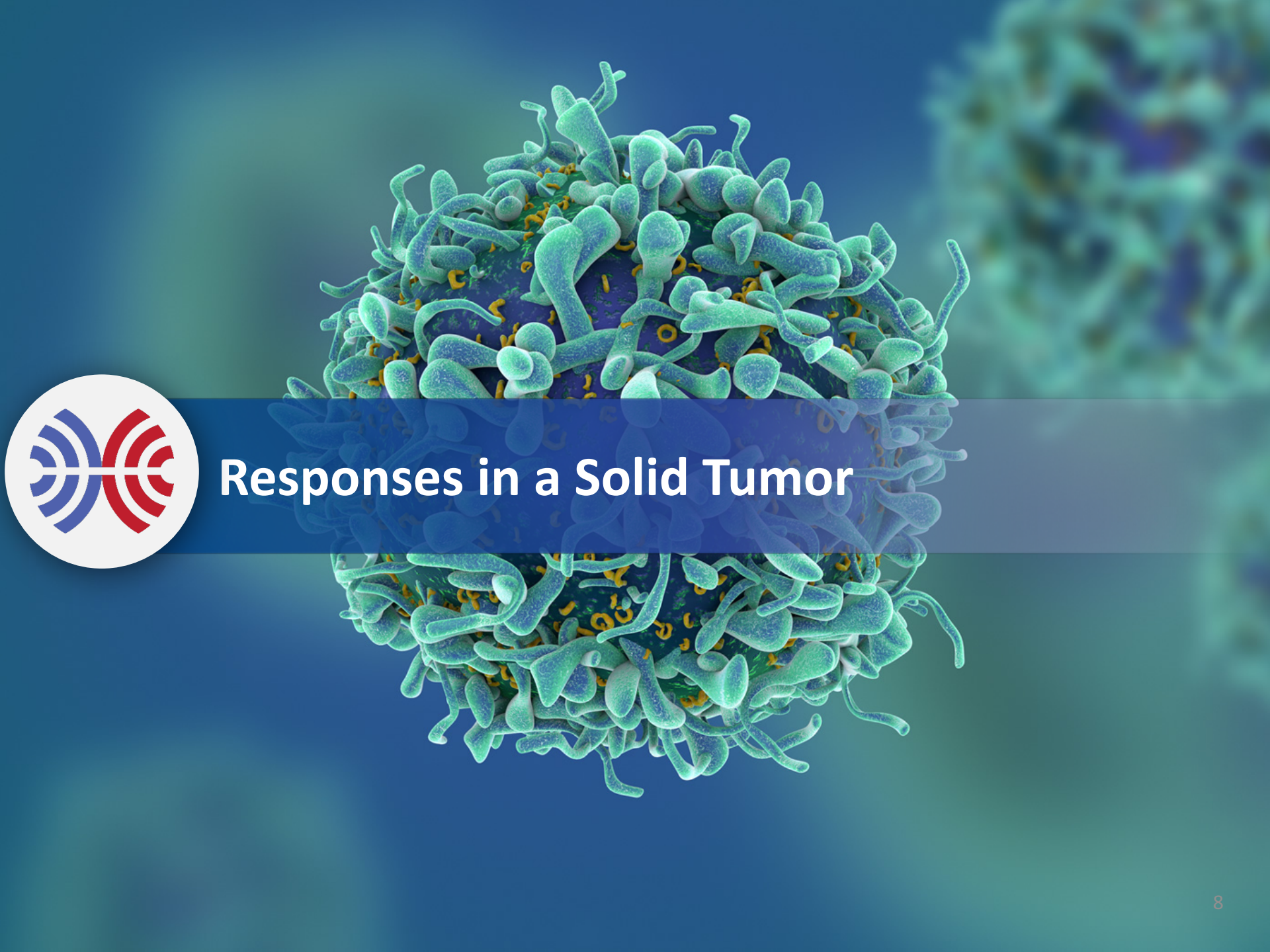

Responses in a Solid Tumor

Key Study Design Elements

NY-ESO SPEAR T-cells in synovial sarcoma

Design Element	Overview
Objectives	▪ Primary – response rate by RECIST v1.1 ▪ Secondary – overall survival, safety, duration of response, progression-free survival ▪ Exploratory – persistence, phenotype, and function of SPEAR T-cells; mechanisms of resistance and sensitivity
Cohorts	▪ Cohort 1: High NY-ESO / Flu 30 mg/m^2/day x 4 + Cy 1800 mg/m^2/day x 2 ▪ Cohort 2: Low NY-ESO / NY-ESO / Flu 30 mg/m^2/day x 4 + Cy 1800 mg/m^2/day x 2 ▪ Cohort 3: High NY-ESO / Cy 1800 mg/m^2/day x 2 ▪ Cohort 4: High NY-ESO / Flu 30 mg/m^2/day x 3 + Cy 600 mg/m^2/day x 3

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Synovial Sarcoma – Responses in all Cohorts

Registration study around end of year

Cohort 1
(NY-ESO^{hi}, CTX/FLU^{hi})

- ••60% response rate in patients at target dose
- ••Median predicted survival continues to increase (~37 mos)

Cohort 2
(NY-ESO^{low}, CTX/FLU^{hi})

- •• 2 out of 5 patients with confirmed responses
- ••Enrollment ongoing

Cohort 3
(NY-ESO^{hi}, CTX^{hi}; no FLU)

- ••One confirmed response
- ••Patient 309 case study

Cohort 4
(NY-ESO^{hi}, CTX/FLU^{low})

- ••3 out of 6 patients with confirmed responses
- ••Enrollment ongoing

Positive response data in a solid tumor

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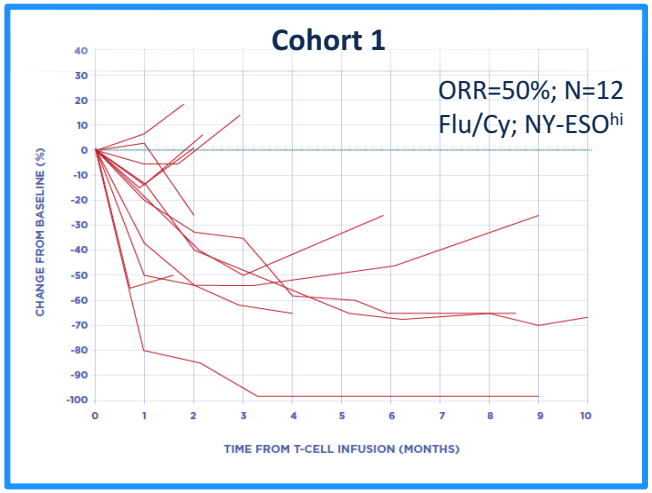
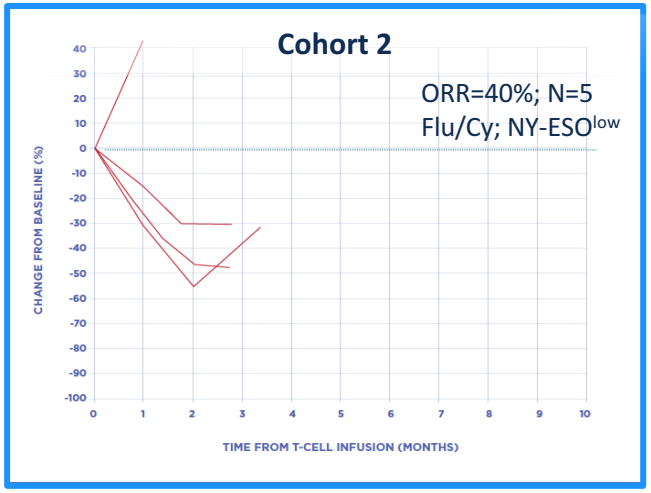
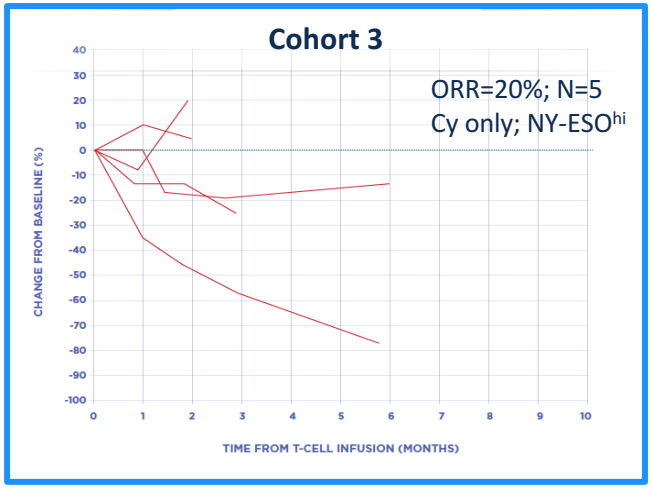
Data cutoff 30 Mar 2017

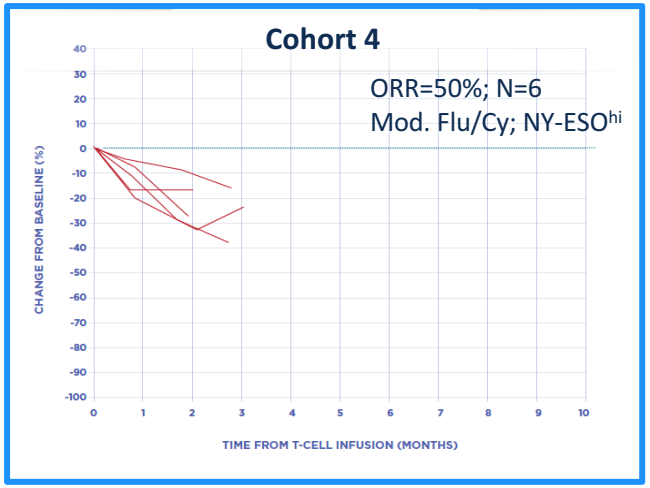
Responses in all Cohorts

Percent change from baseline in target lesions









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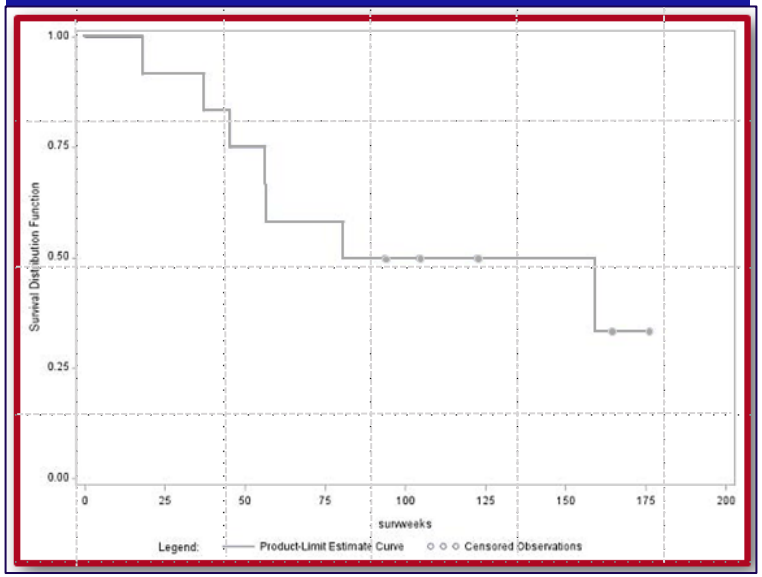
Cohort 1 at target dose: ~37 mos. estimated survival

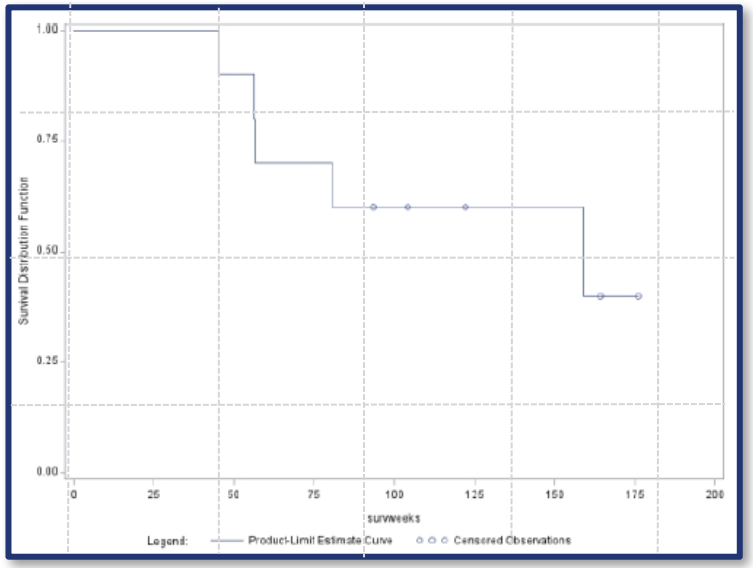
Median estimated survival continues to increase

120 wks (~28 mos) [a]



12 treated patients

159 wks (~37 mos) [b]



10 at target dose of 1B cells

5 patients have survived ≥2 Years

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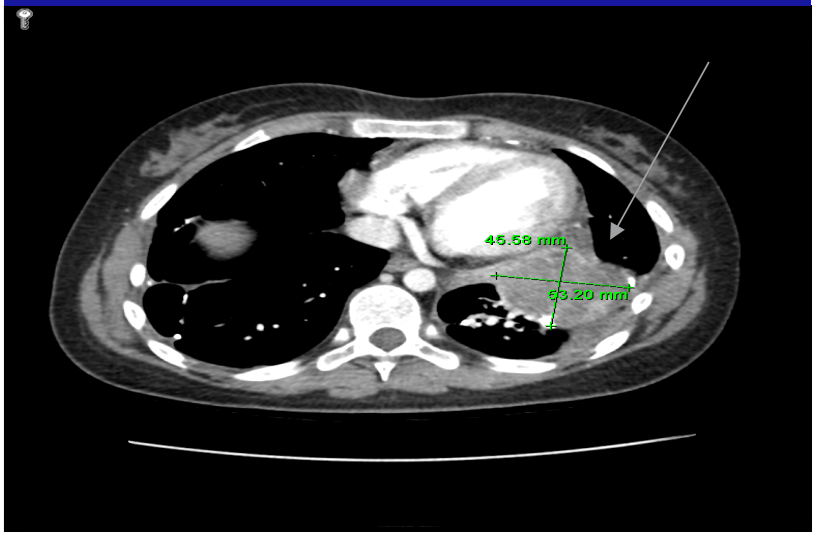
[a] 95% CI (37, NE); log(-log) median OS
[b] 95% CI (45, NE); log(-log) median OS

Data cutoff 30 Mar 2017

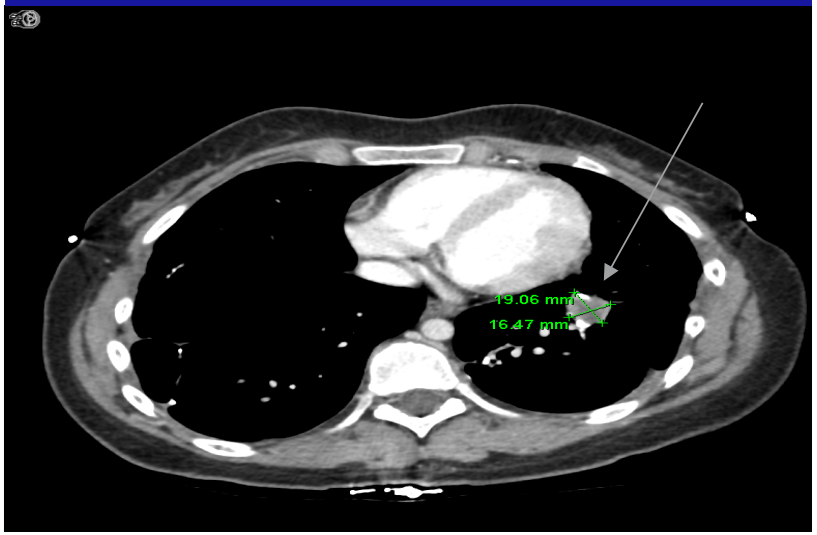
Cohort 3: Case Study

Patient 309

Baseline (lung)



Month 6 (lung)



Baseline:

- 15-yr-old female with synovial sarcoma of left calf, bilateral lung metastases
- Heavily pre-treated; amputation above knee, thoracotomy
- On-study disease in lungs

Post-infusion:

- 3.02 x 10^9 transduced cells
- CRS Day 2-3: Grade 2; resolved
- Partial response – Week 4, confirmed Week 8, Month 6

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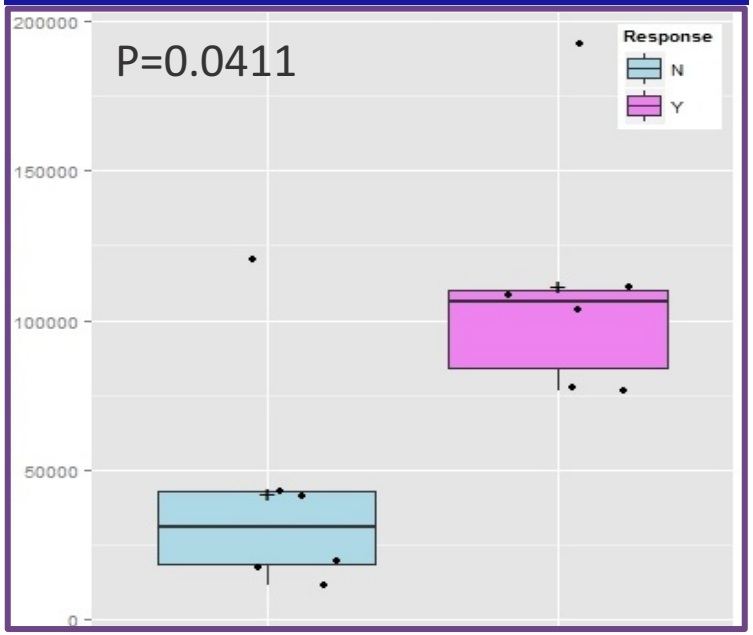
Data cutoff 30 Mar 2017

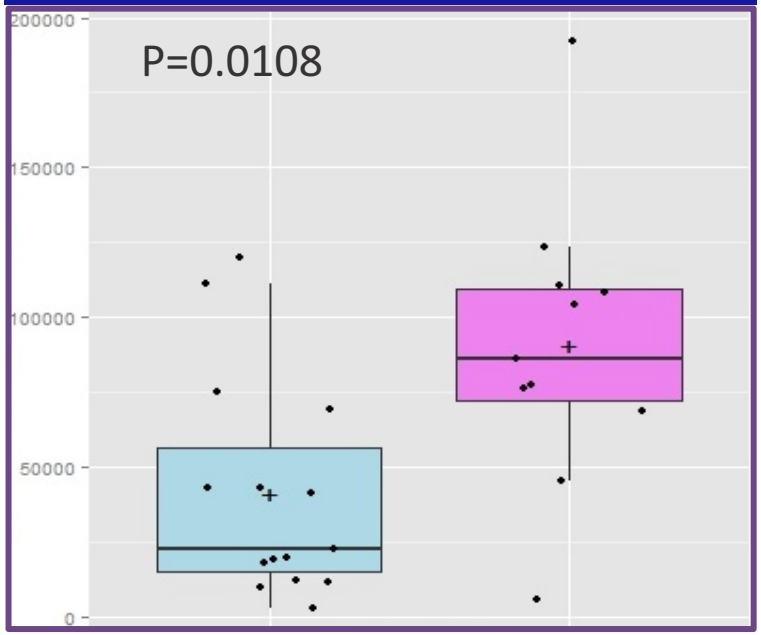
Maximum Expansion Correlates with Response

Non-responders vs. responders

Cohort 1



All Patients



Wilcoxon Rank Sum Test (Exact)

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SPEAR T-cells Well Tolerated

Manageable toxicity to date in synovial sarcoma study

CRS Grade 3 or above	14.3% No Grade 5 All cases resolved
Neurotoxicity	0 Events of seizure, cerebral edema, or encephalopathy

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NY-ESO in Synovial Sarcoma

Well Tolerated with encouraging response and survival data

Initial efficacy results encouraging

Cohort 1 survival data promising

NY-ESO SPEAR T-cells continue to be well tolerated

Maximal expansion appears to correlate with response

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Wholly-owned Portfolio

Portfolio across Major Cancers

Extending eligible patient coverage across a range of solid tumors

Wholly-owned

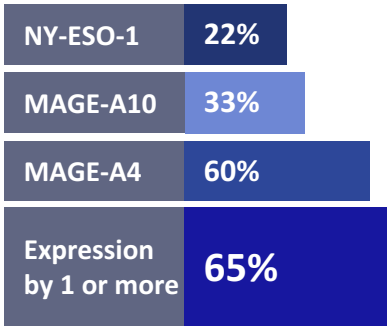
MAGE-A10

- Studies enrolling in head & neck, melanoma, urothelial (bladder), and NSCLC

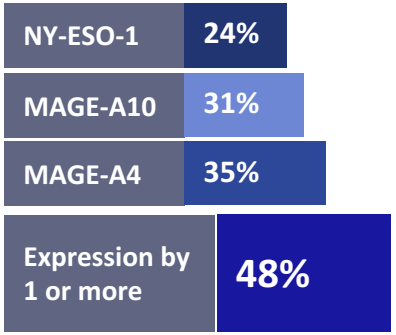
MAGE-A4

- Multi-tumor study enrolling in melanoma, urothelial, head and neck, ovarian, NSCLC, esophageal, and gastric cancers

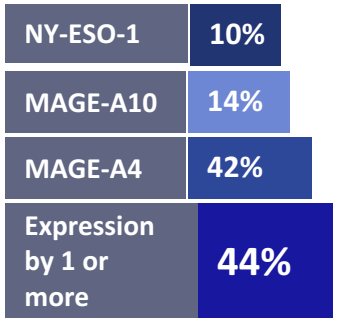
Lung Squamous Cell



Urothelial Cancer



Head & Neck Cancer



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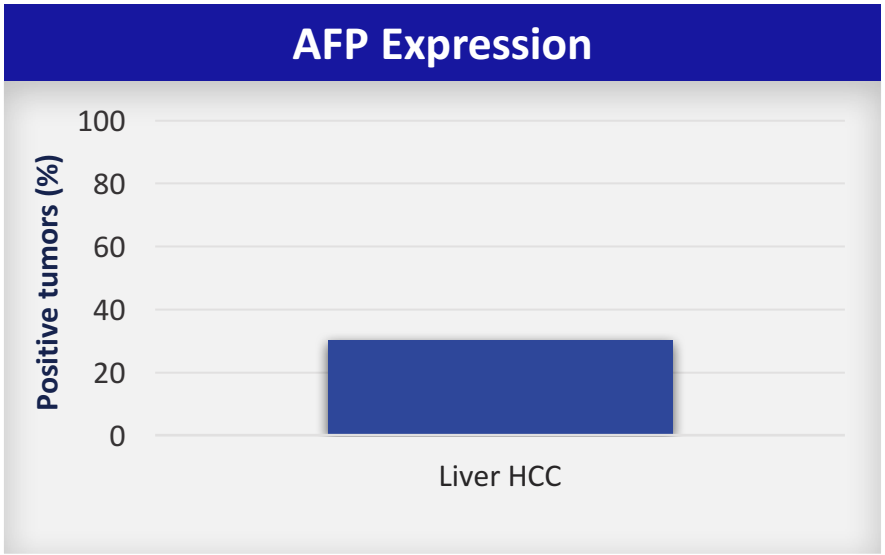
Portfolio across Major Cancers

AFP SPEAR T-cells in hepatocellular cancer

Wholly-owned	AFP	Study enrolling in hepatocellular cancer



Source: TCGA Research Network: http://cancergenome.nih.gov, January 2016.

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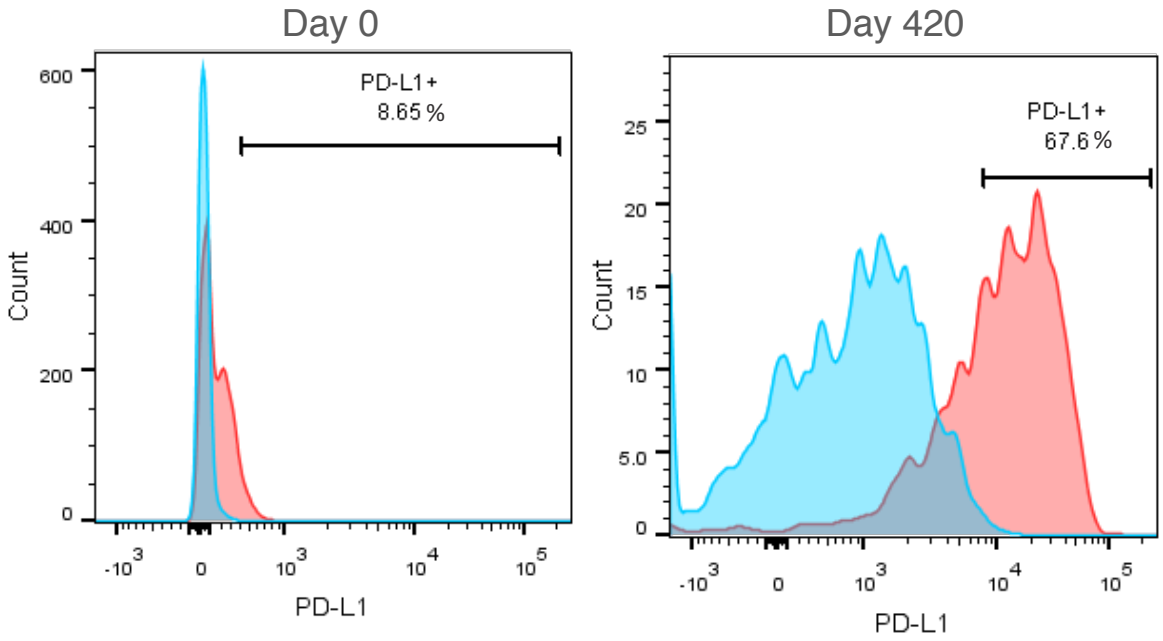
Translational data informs next generation and combination approaches

PD-L1 Up-regulated in Relapsing Myeloma Patients

Using Combination Therapy to Overcome Resistance



NY-ESO-1 T-cells + PD-1 inhibitor (Keytruda®)

- Patients with Relapsed/refractory myeloma
- Cyclophosphamide/Fludarabine conditioning

Randomization 1:1

NY-ESO-1

NY-ESO-1 + anti-PD1

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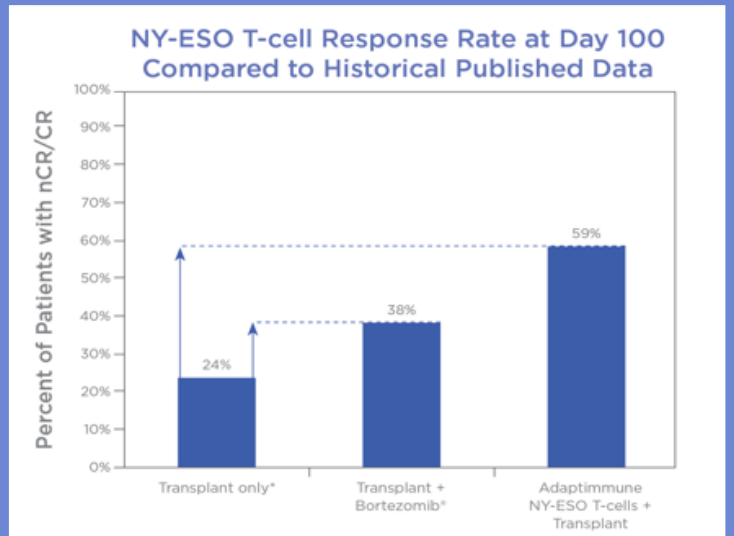
91% Response Rate at Day 100 in Multiple Myeloma

NY-ESO multiple myeloma study

SPEAR target	Indication	Notes	Phase I / II
NY-ESO	Multiple myeloma	Autologous SCT	
		Combination with anti-PD1 (KEYTRUDA)	

Complete **Ongoing**

- 3-year overall survival (OS) as of Jan, 2016
- 91 percent (20/22) response rate at day 100
- Median: PFS=19.1 months (11/2015)
- Manageable toxicity, highly persistent cells



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Leading Innovation in Engineered T-cell Therapy

Next Generation: Depth and Durability in Solid Tumors

- Enhancing resistance to tumor microenvironment
  - ✓ Block effects of immunosuppression (e.g., TGF-β)
  - ✓ Overcoming metabolic restrictions of tumor environment
  - ✓ Other internal programs in development
- Enhancing T-cell potency and function
  - ✓ Enhancement of Class-I restricted CD4 T-cell function
  - ✓ Enhancement of cytotoxic function
  - ✓ Enhancement of epitope spreading
  - ✓ Other internal programs in development
  - ✓ Partnership with Bellicum

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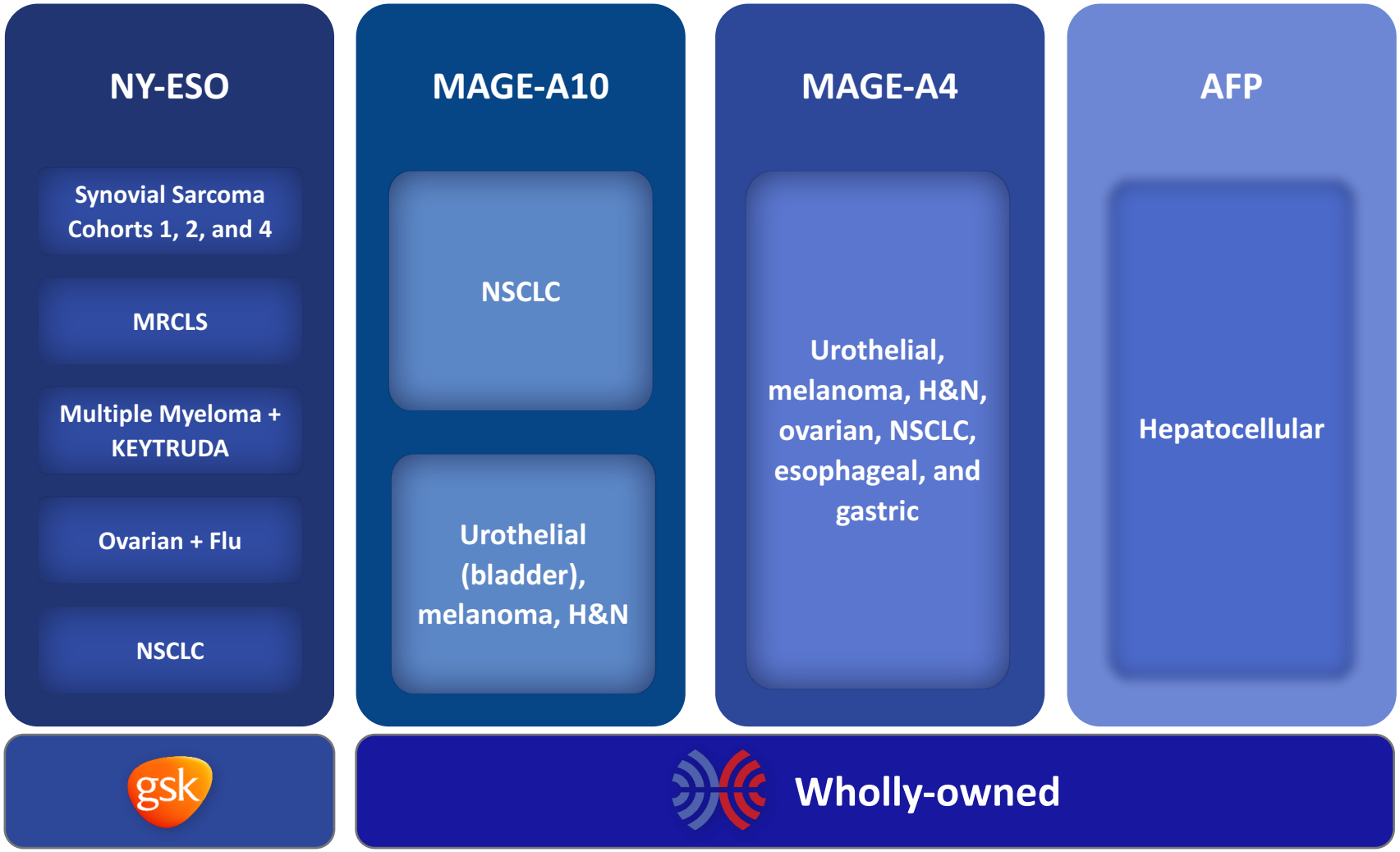
2017 and 2018 – Milestones

2017-2018: Data Delivery

Potential for data from multiple SPEAR T-cell therapies



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Adaptimmune: Leading the TCR T-cell Space

Platform	••Deep pipeline of SPEAR T-cells across major cancers ••Extending patient coverage in range of solid tumors
Momentum	••Nine enrolling trials in 11 tumor indications ••Encouraging data in synovial sarcoma
Milestones	••Funded through to late 2019 ••Data from multiple assets across a variety of solid tumors in the next 12 to 18 months

Positioned for significant data delivery 2017-2018

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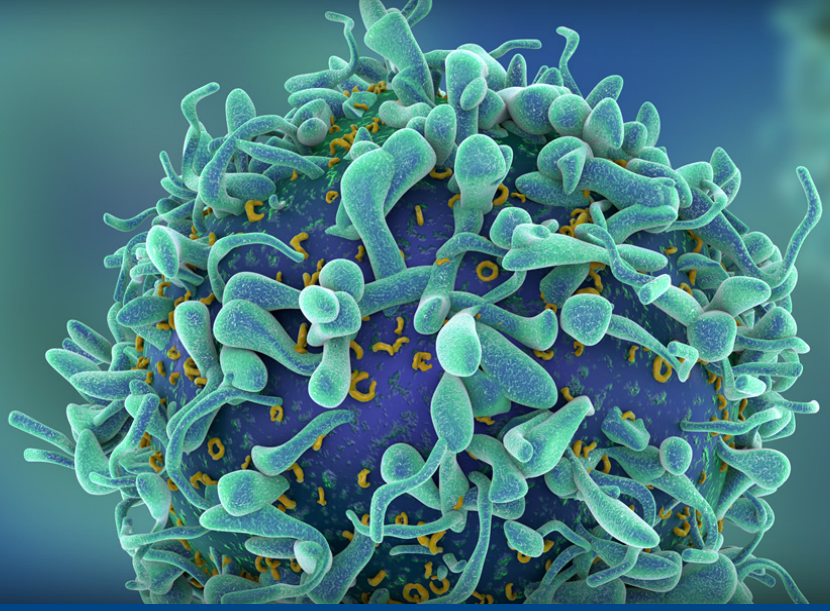

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