
**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): **May 6, 2019**

ADAPT IMMUNE THERAPEUTICS PLC

(Exact name of registrant as specified in its charter)

England and Wales
(State or other jurisdiction of
incorporation)

1-37368
(Commission File Number)

Not Applicable
(IRS Employer Identification No.)

**60 Jubilee Avenue, Milton Park
Abingdon, Oxfordshire OX14 4RX
United Kingdom**
(Address of principal executive offices, including zip code)

(44) 1235 430000
(Registrant's telephone number, including area code)

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))

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.

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

Title of each class	Trading Symbol	Name of each exchange on which registered
American Depositary Shares, each representing 6 Ordinary Shares, par value £0.001 per share	ADAP	The Nasdaq Global Select Market

Item 7.01 Regulation FD Disclosure.

The information set forth under Item 8.01 of this Current Report on Form 8-K is incorporated herein by reference to this Item 7.01.

The information in Item 7.01 of this Form 8-K (including the attached Exhibit 99.1) shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, (the “Exchange Act”), or incorporated by reference in any filing made by Adaptimmune Therapeutics plc (the “Company”) under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by the Company by specific reference in such a filing.

Item 8.01 Other Events.

On May 6, 2019, Adaptimmune Therapeutics plc (the “Company” or “Adaptimmune”) released a clinical and business update presentation. A copy of the Company’s clinical and business update corporate presentation is furnished as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference. The clinical and business update corporate presentation is also available on the Company’s website at www.adaptimmune.com under Investor Relations. The information contained on the Company’s website shall not be deemed part of this report.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description of Exhibit</u>
99.1	Adaptimmune Therapeutics plc clinical and business update presentation – May 6, 2019.

SIGNATURES

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

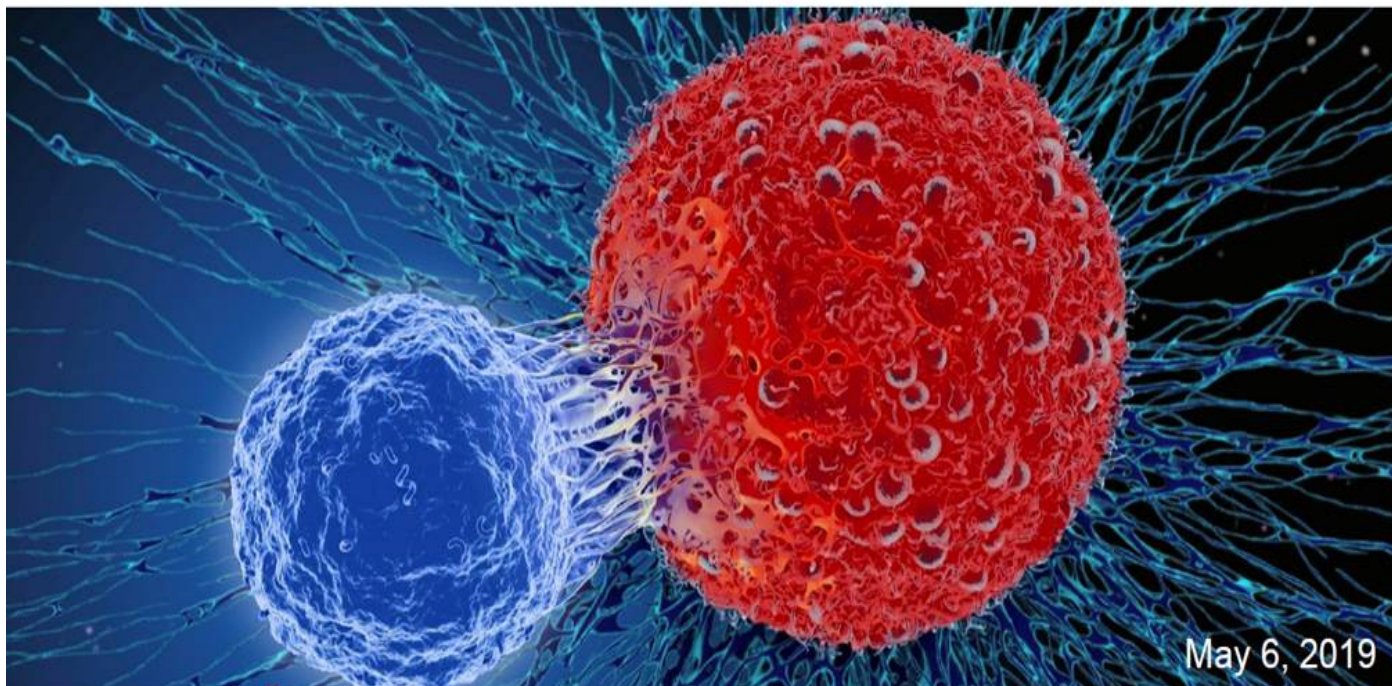
ADAPTIMMUNE THERAPEUTICS PLC

Date: May 6, 2019

By: /s/ Margaret Henry

Name: Margaret Henry

Title: Corporate Secretary



Clinical and Business Update

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 Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC) on February 27, 2019 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.

Headlines

- Compelling data with ADP-A2M4 in synovial sarcoma
 - Partial responses in 4 out of 5 synovial sarcoma patients treated with ~10 billion cells
 - Tumor shrinkage in nearly all assessed synovial sarcoma patients
- Initiating SPEARHEAD-1 trial in synovial sarcoma and MRCLS with ADP-A2M4
- Aim to launch first TCR T-cell therapy in 2022
- Tumor shrinkage in other solid tumors with ADP-A2M4, ADP-A2M10 and ADP-A2AFP
- IND filed for ADP-A2M4CD8 next generation SPEAR T-cells
 - Transform currently observed activity in epithelial tumors into durable responses
- Strong momentum with stem cell derived T-cells in allogeneic (“off-the-shelf”) program
- \$168 million total liquidity taking us into Q3 2020*

- ADP-A2M4
 - Cohort 1 (100 million cells) completed
 - Cohort 2 (1 billion cells) completed
 - All 6 patients ovarian
 - Safety profile established in first two cohorts
 - One patient had 27% reduction, but progressed at Week 12

- ADP-A2M10
 - Cohort 1 completed for both NSCLC and triple tumor*
 - Cohort 2 completed for NSCLC
 - Safety profile established in first two cohorts

Based on extensive NY-ESO data as well as ADP-A2M4 and ADP-A2M10 data:

- Higher doses needed
- Peak persistence important for tumor control

- Synovial sarcoma added to ADP-A2M4 basket trial
- Cohort 3 has been completed (5 billion cell dose target)
 - 1 synovial sarcoma patient
 - 2 other patients (ovarian and esophageal)
- Expansion Phase has recruited 14 patients (up to 10 billion cells)
 - 9 synovial sarcoma patients
 - 5 other patients (melanoma, head and neck, ovarian, NSCLC and gastric)

Data from Cohort 3 and Expansion Phase in ADP-A2M4

Partial responses in 4 out of 5 synovial sarcoma patients treated with ~10 billion cells

- Synovial sarcoma:
 - 10 patients treated
 - 8 scanned to date
 - 6 showed tumor shrinkage
 - 4 PRs out of 5 patients treated with ~10 billion cells
 - › 3 confirmed, one unconfirmed
- Other tumors:
 - 7 patients treated
 - 6 scanned to date (1 patient expired before scan)
 - Tumor shrinkage seen in melanoma (-40%)* and ovarian (-9%)

Progress since ESMO 2018 with ADP-A2M10

Two trials: one triple tumor and one lung cancer study

- Cohort 3 (5 billion dose target) completed in triple tumor
 - 2 SDs, 1 PD
- Safety review permitted Expansion Phase for both studies
 - Treatment with up to 10 billion cells (now up to 15 billion cells)
- Two patients treated in each of triple tumor (Expansion Phase) and NSCLC (Cohort 3) of ADP-A2M10 studies
 - No patient received more than 6 billion cells
 - Both triple tumor patients progressed
 - Both lung patients had reduced tumors (-6% and -28%*)

ADP-A2AFP

Study in hepatocellular carcinoma (HCC)

- Cohort 1 (100 million cells)
 - Tumor necrosis observed in 1 patient
 - Decreased serum AFP observed
- Cohort 2 (1 billion cells) with first patient
 - Transient decrease in serum AFP
 - Tumor shrinkage at first scan
 - Cohort continues to recruit
- Cohort 3 (5 billion cells) to follow

Next steps for ADP-A2M4 and ADP-A2M10

Two new studies to start and continuing ongoing trials

- ADP-A2M4 to start 60-patient SPEARHEAD-1 study in synovial sarcoma and MRCLS
 - Aim to launch first TCR T-cell therapy in 2022
 - Significant commercial opportunity for Adaptimmune
- Next generation ADP-A2M4 – more potent SPEAR T-cells
 - SURPASS trial to start imminently
 - Next-generation ADP-A2M4CD8 SPEAR T-cells
 - IND filed
- ADP-A2M4 and ADP-A2M10
 - Completing Expansion Phases
 - Starting low radiation sub-study of ADP-A2M4 at MD Anderson Cancer Center



ADP-A2M4
in synovial sarcoma
Topline results

Responses in synovial sarcoma ADP-A2M4 Cohort 3 and Expansion

Tumor shrinkage in nearly all assessed synovial sarcoma patients

Patient # (Gender; Age [y])	Baseline SLD (mm)	MAGE-A4 expression (%)			Peak Persistence ^a	Dose ^b	Best response ^c	Maximum change in SLD (%) ^d
		1+	2+	3+				
1 (M, 53)	240	0	0	100	220	9.9	cPR	-86 (Wk 12)
2 (M, 59)	35	0	0	100	101	10.0	cPR	-54 (Wk 10)
3 (M, 42)	204	10	35	50	238	9.9	cPR	-44 (Wk 11)
4 (F, 54)	32	5	15	65	325	9.7	ucPR	-31 (Wk 6)
5 (M, 46)	60	0	0	100	27	4.5	SD	-27 (Wk 12)
6 (F, 57)	60	0	10	90	284	9.7	SD	-15 (Wk 6)
7 (M, 31)	66	10	20	10	45	6.0	SD	+12 (Wk12)
8 (M, 49)	118	10	20	60	19	5.1	PD	+24 (Wk 6)
9 (F, 34)	110	0	0	100	Pending	10.0	Pending	Pending
10 (F, 76)	174	0	15	85	Pending	8.4	Pending	Pending

SLD=sum of lesion(s) diameter(s) in target lesions

(a) (Vector copies per µg/DNA) x 10³

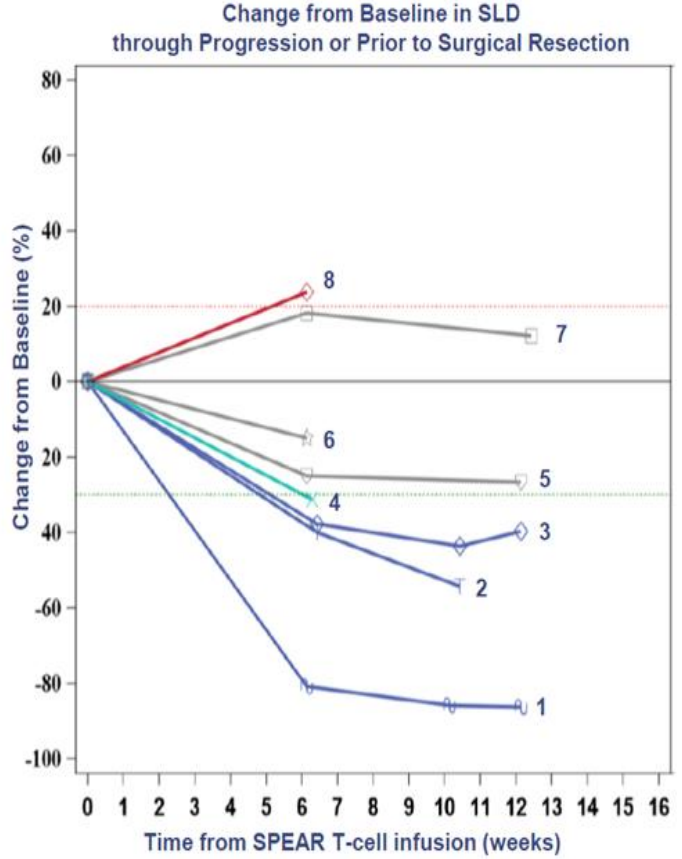
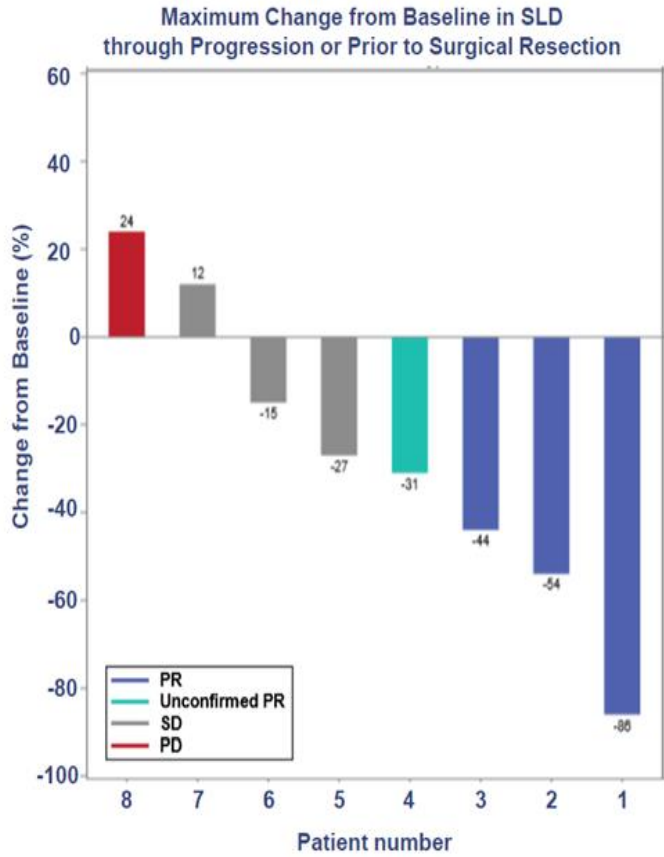
(b) Dose (10⁹ transduced cells)

(c) cPR=confirmed partial response; ucPR=unconfirmed partial response; SD=stable disease; PD=progressive disease

(d) Maximum (%) change in target lesions (SLD) by week of scan (to date); numbers rounded to nearest whole number

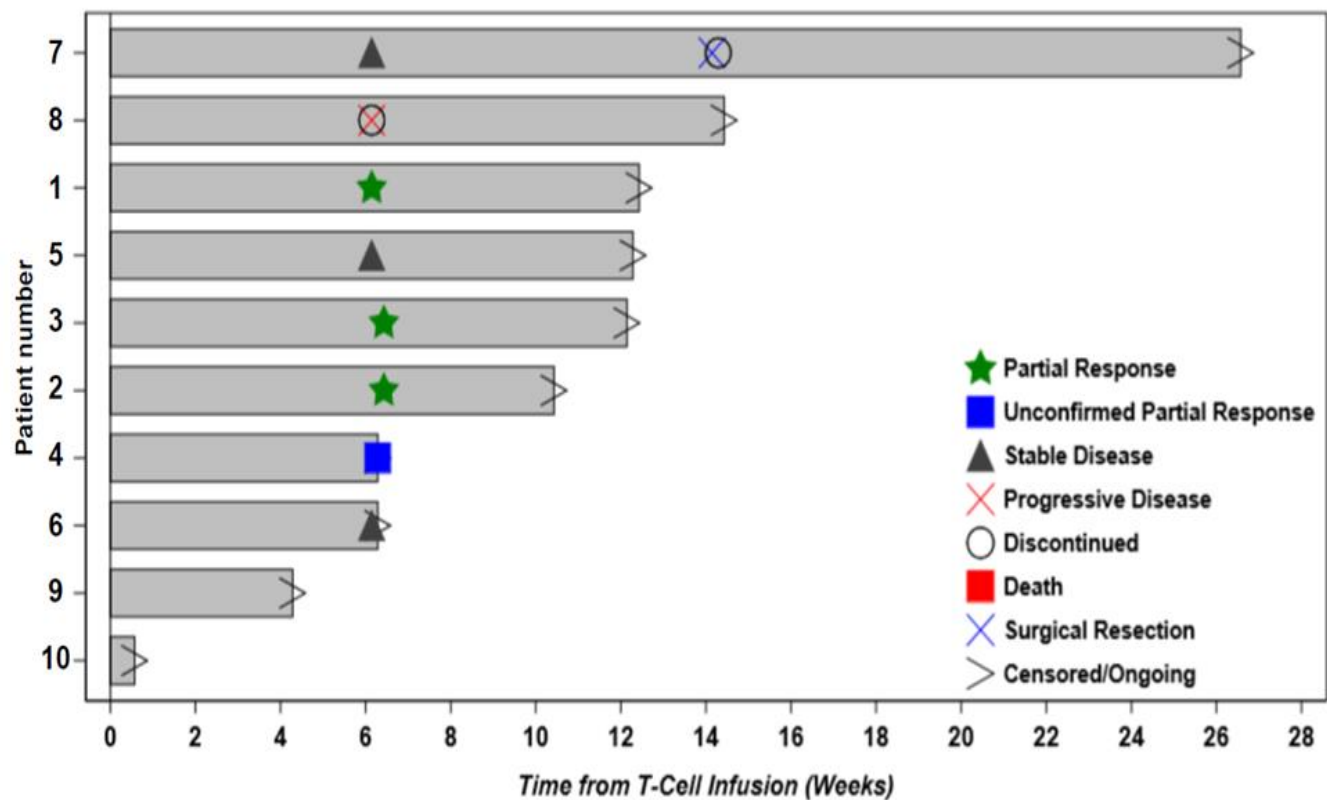
ADP-A2M4 synovial sarcoma

Decreases in target lesions in Cohort 3 and Expansion



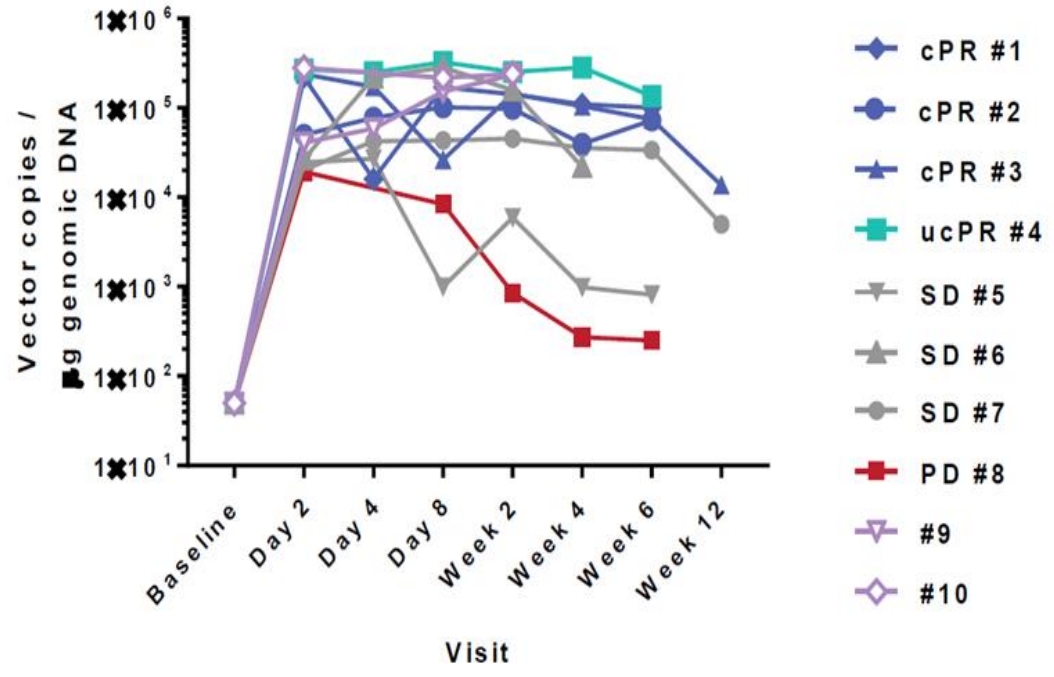
ADP-A2M4 synovial sarcoma

Ongoing antitumor responses



Persistence of ADP-A2M4 SPEAR-T cells in blood (synovial sarcoma)

Response trending with persistence



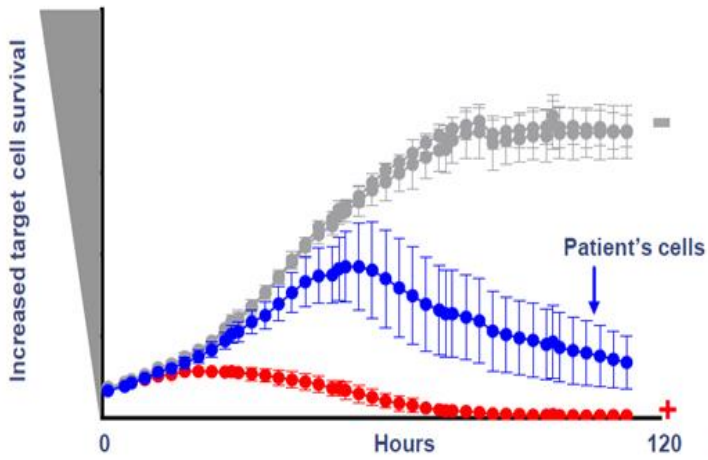
14 | cPR=confirmed partial response; ucPR=unconfirmed partial response;
PD=progressive disease; SD=stable disease;

Killing activity ex vivo correlates with patient response

ADP-A2M4 SPEAR T-cells isolated from patients (in vitro killing assay)

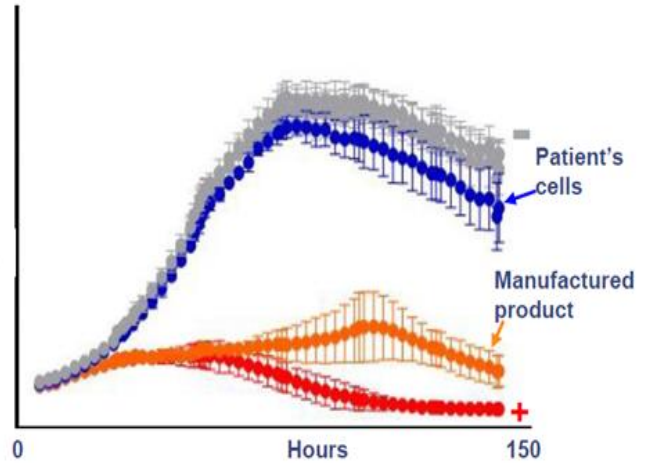
Confirmed PR (Patient #3)

Strong killing by patient's cells
(SPEAR T-cells from malignant pleural effusion at Day 4)



Stable disease (Patient #7)

Poor killing by patient's cells vs. manufactured product
(SPEAR T-cells from blood at Week 2)

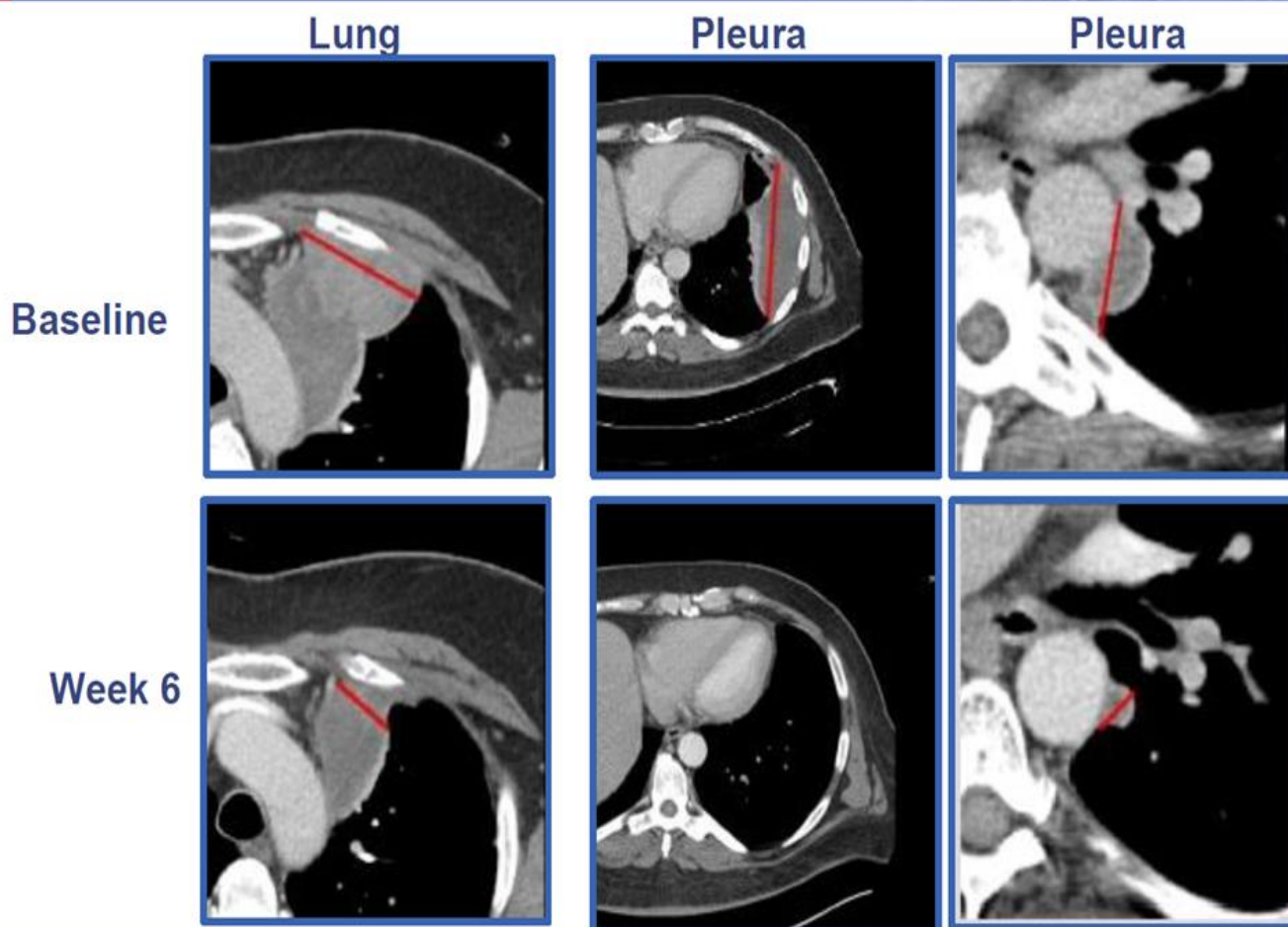


■ Non-transduced normal donor & patient T-cells
(negative controls)

⊕ Transduced healthy donor cells
(positive controls)

ADP-A2M4 synovial sarcoma Patient #1

Confirmed PR with significant tumor burden reduction (-86% max. change in 24 cm SLD)



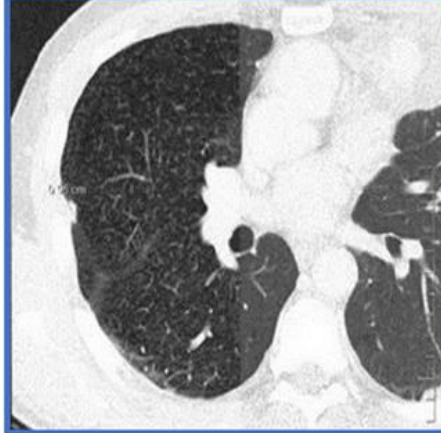
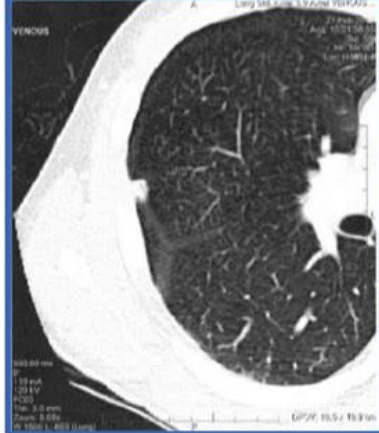
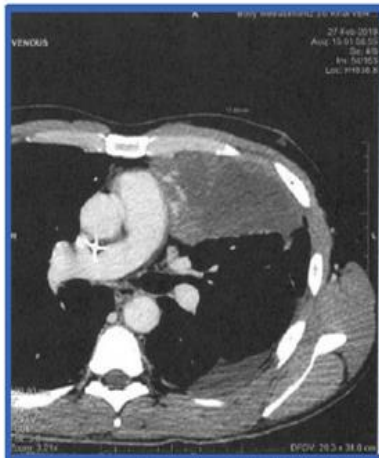
ADP-A2M4 synovial sarcoma Patient #3

Confirmed PR with bulky tumor almost completely resolved (-44% max. change in 20 cm SLD)

Baseline

Week 6

Week 12



SPEARHEAD-1 study starting in 2H 2019 (ADP-A2M4)

Key design elements

- Single-arm, Phase 2 study in more than 20 centers (North America & EU)
- Sample size of 60 treated subjects with:
 - Advanced (metastatic or inoperable) synovial sarcoma or MRCLS, who have received prior chemotherapy
 - HLA-A*02 & MAGE-A4 antigen positive
 - MAGE-A4 expression 30% (2⁺, 3⁺)
- Primary endpoint
 - Overall Response Rate by RECIST v1.1 by independent review
 - Interim futility: 3 or more responses in the first 15 subjects for study continuation
- Safety endpoints with Independent Data Safety Monitoring Board
- Exploratory endpoints: translational and patient-reported outcomes
- Treatment
 - Lymphodepletion: Flu: (30 mg/m²/day) x 4 days; Cy (1800 mg/m²/day) x 2 days
 - Dose: up to 10 billion transduced SPEAR T-cells



Antitumor activity in other
solid tumors with
ADP-A2M4

Summary of ADP-A2M4 in non-sarcoma patients

Tumor shrinkage seen in melanoma (-40%) and ovarian (-9%)

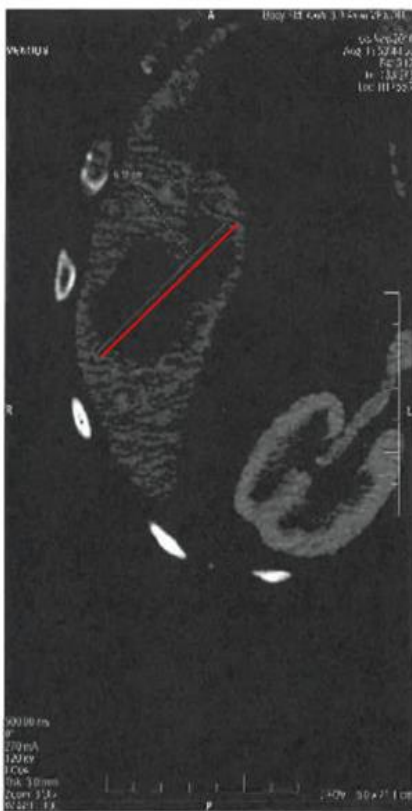
Patient # (Gender; Age [y])	Indication	Baseline SLD (mm)	MAGE-A4 expression (%)			Peak Persistence ^a	Dose ^b	Best response ^c	Maximum change in SLD (%) ^d
			1+	2+	3+				
11 (M, 51)	Melanoma	62	0	0	100	161	10.0	PD	-40 (Wk 10)*
12 (F, 74)	Ovarian	34	5	5	1	130	5.7	SD	-9 (Wk 12)
13 (F, 62)	Ovarian	42	25	15	55	316	9.4	SD	+17 (Wk 6)
14 (M, 61)	Lung	37	15	0	0	206	9.9	SD	0 (Wk 6)
15 (M, 60)	Head & neck	57	0	0	100	60	4.8	PD	+26 (Wk 6)
16 (F, 49)	Gastric	92	25	30	5	206	10.0	PD	+ 52 (Wk 4)
17 (M, 76)	Esophageal	54	0	10	90	35	3.0	Expired before first scan	

SLD=sum of lesion(s) diameter(s) in target lesions
(a) (Vector copies per µg/DNA) x 10³
(b) Dose (10⁹ transduced cells)
(c) cPR=confirmed partial response; ucPR=unconfirmed partial response; SD=stable disease; PD=progressive disease
(d) Maximum (%) change in target lesions (SLD) by week of scan (to date); numbers rounded to nearest whole number

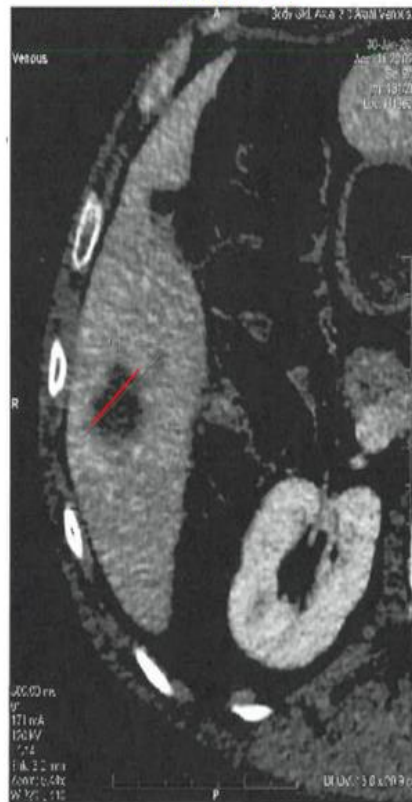
ADP-A2M4 melanoma Patient #11 with high MAGE-A4 expression

Decrease in target lesion (-40% max. change in 6 cm SLD) with PD due to new lesions

Baseline



Week 10





Antitumor activity with
ADP-A2M10

Summary of ADP-A2M10 patients

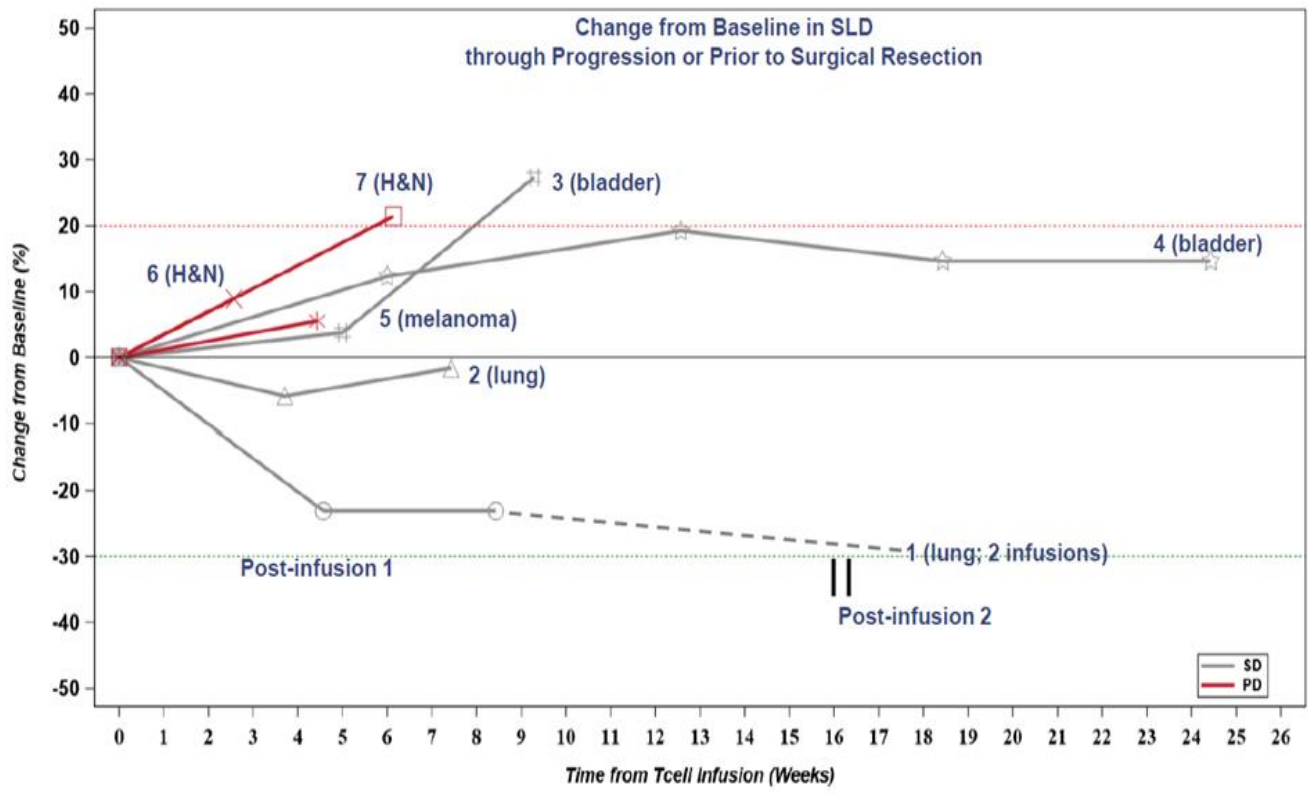
Evidence of antitumor activity in two NSCLC patients

Patient # (Gender; Age [y])	Indication	Baseline SLD (mm)	MAGE-A10 expression (%)			Peak Persistence ^a	Dose ^b	Best response ^c	Maximum change in SLD (%) ^d
			1+	2+	3+				
1 (M, 65) *	Lung	104	5	5	90	44	6.0	SD	-25 (Wk 14)
						105	5.2	SD	-28 (Wk 21)
2 (M, 63)	Lung	188	0	0	25	71	5.2	SD	-6 (Wk 8)
3 (M, 58)	Bladder	106	40	20	5	77	5.3	SD	+4 (Wk 10)
4 (M, 66)	Bladder	130	30	30	20	134	5.5	SD	+12 (Wk 18)
5 (F, 47)	Melanoma	199	5	5	30	13	4.9	PD	+6 (Wk 4)
6 (F, 46)	Head & neck	101	5	70	20	83	6.0	PD	+9 (Wk 4)
7 (M, 76)	Head & neck	70	0	20	80	35	4.0	PD	+21 (Wk 6)

SLD=sum of lesion(s) diameter(s) in target lesions
(a) (Vector copies per µg/DNA) x 10³
(b) Dose (10⁹ transduced cells)
(c) cPR=confirmed partial response; ucPR=unconfirmed partial response; SD=stable disease; PD=progressive disease
(d) Maximum (%) change in target lesions (SLD) by week of scan (to date); numbers rounded to nearest whole number

ADP-A2M10 - evidence of antitumor activity in Cohort 3 and Expansion

Two lung patients with decreases in SLD



ADP-A2M10 NSCLC Patient #1 with high MAGE-A10 expression

Stable disease with decrease in target lesion and disappearance of non-target lesion

Supraclavicular Lymph Node

Right lower lobe Lung

Left upper lobe Lung

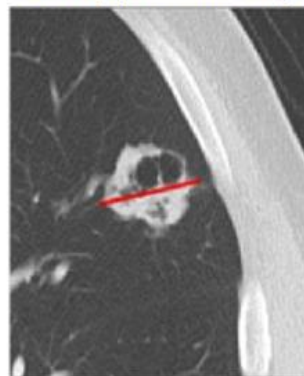
Baseline
Nov 2018



SA: 3.1 cm



LA: 4.1 cm

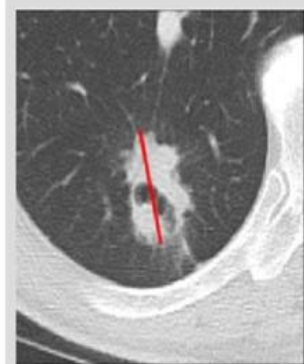


LA: 3.2 cm

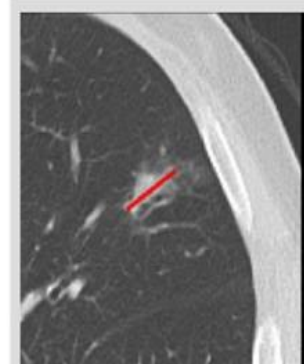
~5 months
Apr 2019



SA: 2.0 cm



LA: 3.6 cm



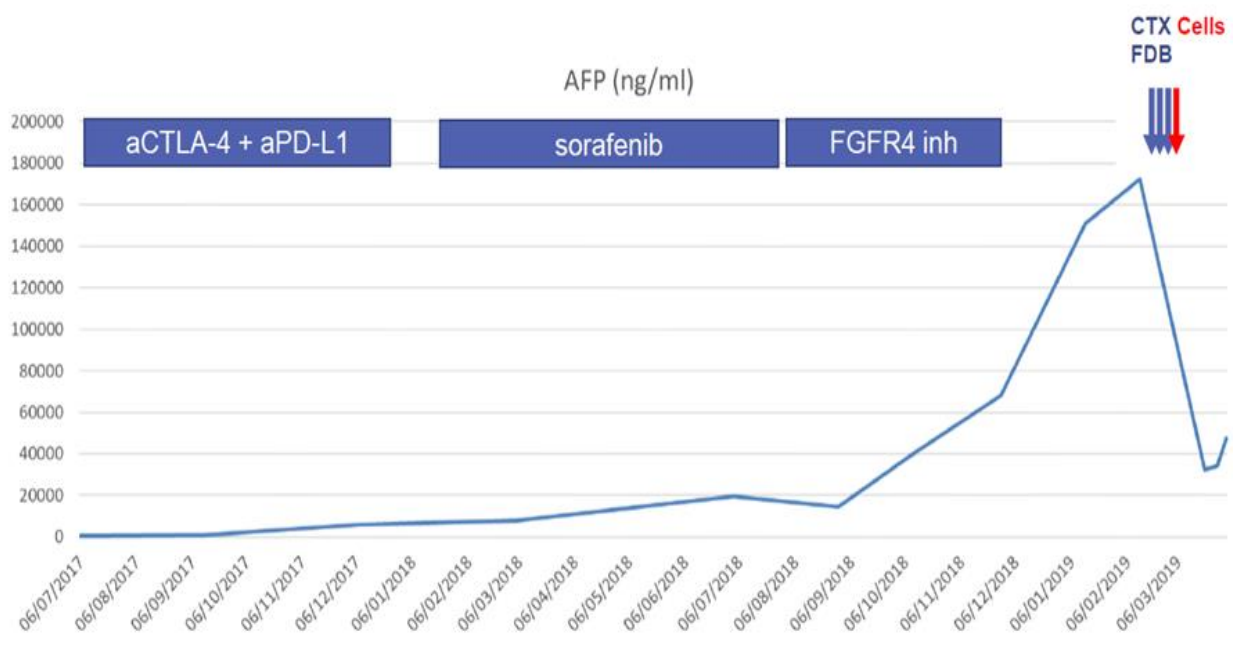
LA: 1.9 cm



ADP-A2AFP
1st patient at 1 billion cells

ADP-A2AFP first patient treated in Cohort 2 with 1 billion cells

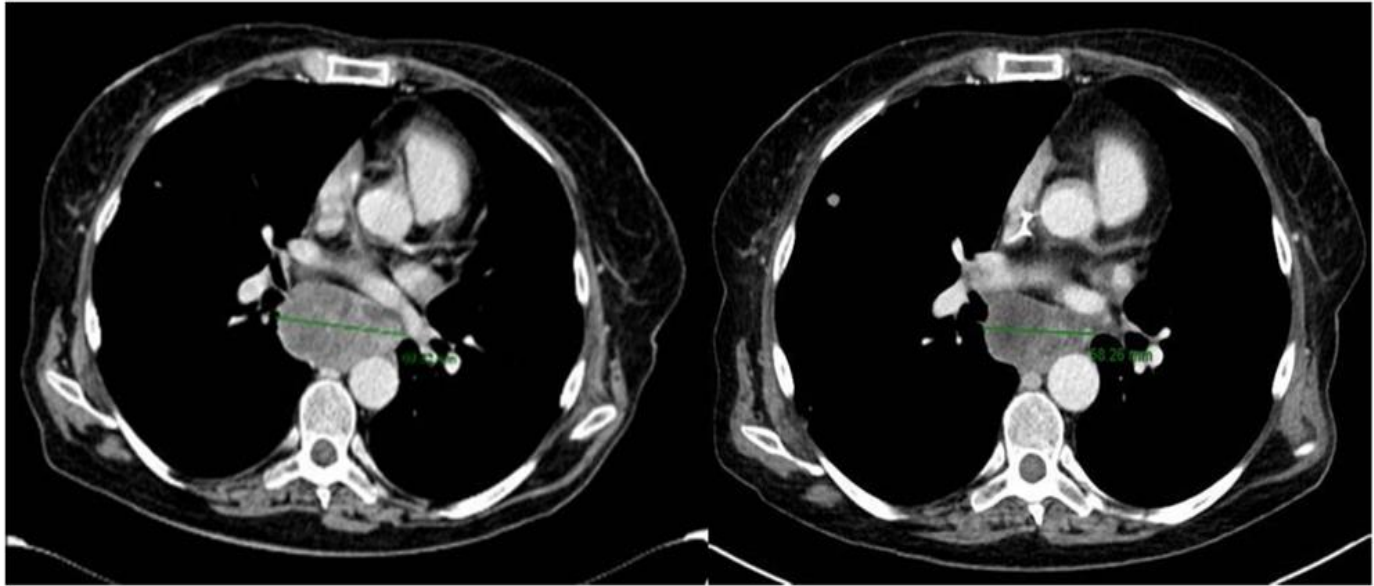
Strong transient decrease in serum AFP



ADP-A2AFP first patient treated in Cohort 2 with 1 billion cells
First evidence of tumor shrinkage at first scan

Baseline

Week 4





Safety with SPEAR T-cells

Patients treated with ADP-A2M4, ADP-A2M10, and ADP-A2AFP (n=44)*

- Most adverse events are consistent with those typically experienced by cancer patients undergoing cytotoxic chemotherapy or other cancer immunotherapies
- There were two reports of CRS \geq Grade 3 for an incidence of ~4.5%
- Incidence rate for all CRS (any grade) is ~39%
- Tolerability in patients treated has been acceptable, to date, and will allow for continued treatment in dose escalation (AFP) and Expansion Phases (ADP-A2M4, ADP-A2M10)
- One serious adverse event report of grade 2 encephalopathy
 - Reported at ESMO 2018
 - Considered related to SPEAR T-cells by the investigator (resolved after 2 days)

Favorable benefit:risk profile in synovial sarcoma
Good tolerability overall



Learnings and next steps
Improving SPEAR T-cells

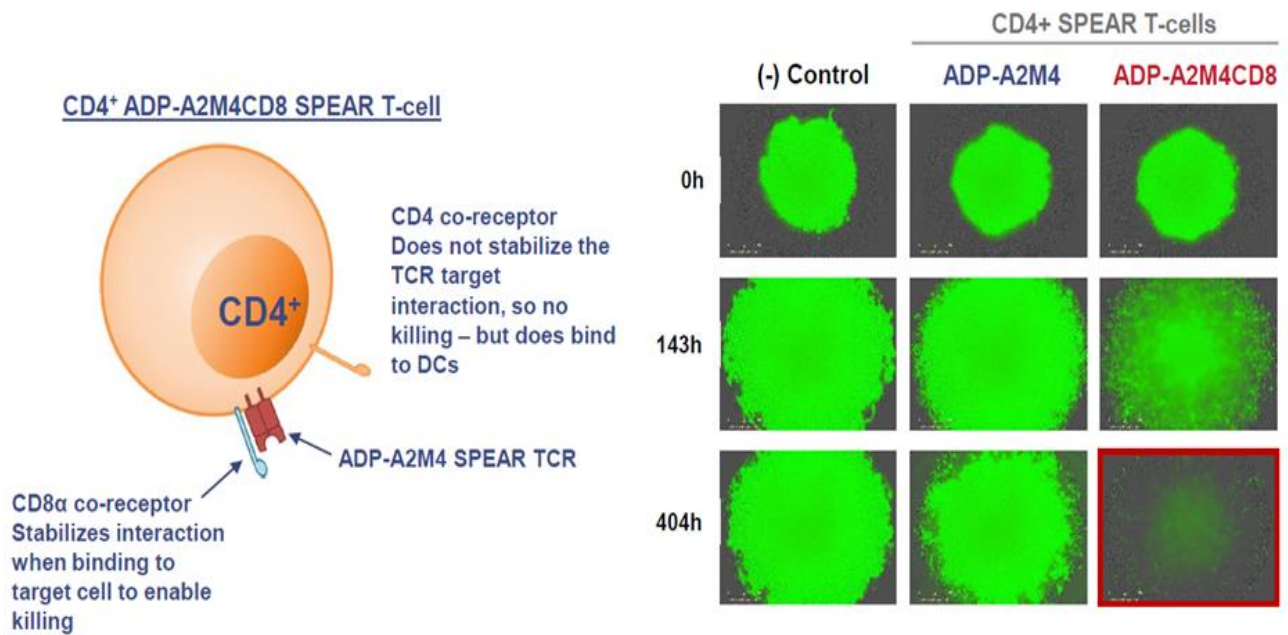
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Next-generation ADP-A2M4CD8 SPEAR T-cells

SPEAR T-cells targeting MAGE-A4 co-expressing CD8 α

Preclinical data AACR 2019:

- No evidence of off-target reactivity
- Improved cytokine release of both dendritic cells (DCs) and T-cells in co-culture with MAGE-A4⁺ cells
- Improved killing of MAGE-A4⁺ cells (shown below)



SURPASS Study (ADP-A2M4CD8) next-gen

Study start planned for 2H 2019 – IND submitted and initial data in 2020

- Up to 30 subjects (HLA-A*02 with MAGE-A4⁺) with:
- Locally advanced inoperable or metastatic cancer
 - Same indications as ADP-A2M4
- Primary endpoint: safety and tolerability
- Secondary endpoints: antitumor activity
- Lymphodepletion:
 - Flu: (30 mg/m²/day) x 4 days; Cy (1800 mg/m²/day) x 2 days
- Dose escalation (3 patients per cohort expand to 6 if DLT)
- Shorter stagger between patients – anticipate faster dose escalation
- Starting doses of ~1 billion cells
 - › Cohort 1 (0.8 to 1.2 billion)
 - › Cohort 2 (1.2 to 3.0 billion)
 - › Cohort 3 (3.0 to 6.0 billion)
- Expansion Phase dose up to 10 billion transduced cells
- IND submitted
- Data expected in 2020

- SPEAR T-cells could be more effective if tumor infiltration increased
 - Preclinical data shows low dose radiation may improve T-cell penetration into tumors*
- Radiation sub-study of ADP-A2M4 to be conducted at MD Anderson Cancer Center
- Up to 10 subjects to be treated
- Primary endpoint: safety
- Secondary endpoint: response
- Radiation
 - 7Gy (low dose) per lesion or isocenter
 - Maximum of 5 lesions or isocenters
 - Administered prior to lymphodepletion



Transform current activity in epithelial tumors into durable responses

Lessons learned and next steps

Key parameters	Adaptimmune approach	SURPASS study (ADP-A2M4CD8)	Radiation sub-study ADP-A2M4
Dose	<ul style="list-style-type: none"> Increase doses up to 10 billion cells 	✓	✓
Lymphodepletion	<ul style="list-style-type: none"> More intense preconditioning to increase cytokines such as IL-15, IL -7 	✓	✓
Antigen expression	<ul style="list-style-type: none"> Higher antigen expression to drive expansion 	✓	✓
Cell fitness	<ul style="list-style-type: none"> Understanding manufacturing parameters 	✓	✓
Cell potency	<ul style="list-style-type: none"> CD8 to increase SPEAR T-cell killing 	✓	
Antigen presentation	<ul style="list-style-type: none"> CD8 to promote epitope spreading 	✓	
Trafficking	<ul style="list-style-type: none"> Disrupt tumor microenvironment Improve cell fitness (manufacturing) 	✓	✓
Target	<ul style="list-style-type: none"> New targets in preclinical development 		

Our evolving pipeline

Ongoing and planned studies in multiple solid tumor indications

	Study	Indications	Pilot studies		Phase 2/3
			Dose Escalation	Expansion	
MAGE-A4	ADP-A2M4	Multiple solid tumors			
	ADP-A2M4 Radiation sub-study*	Multiple solid tumors	2H 2019		
	SPEARHEAD-1	Sarcomas	Not applicable		2H 2019
	SURPASS (ADP-A2M4CD8)	Multiple solid tumors	2H 2019 IND APRIL 2019		
MAGE-A10	ADP-A2M10	NSCLC Bladder Melanoma Head & neck			
AFP	ADP-A2AFP	Hepatocellular carcinoma			

Range of other targets and candidates in preclinical stage
Significant preclinical progress with allogeneic platform (ASGCT 2019)
Aim to launch first TCR T-cell therapy in 2022



Looking forward and
summary

2H 2019

- SPEARHEAD-1 study start
- SURPASS study start
- Radiation study start
- Further data from ADP-A2M10 trials
- Further data from ADP-A2M4 trials outside sarcoma

Beyond 1H 2020

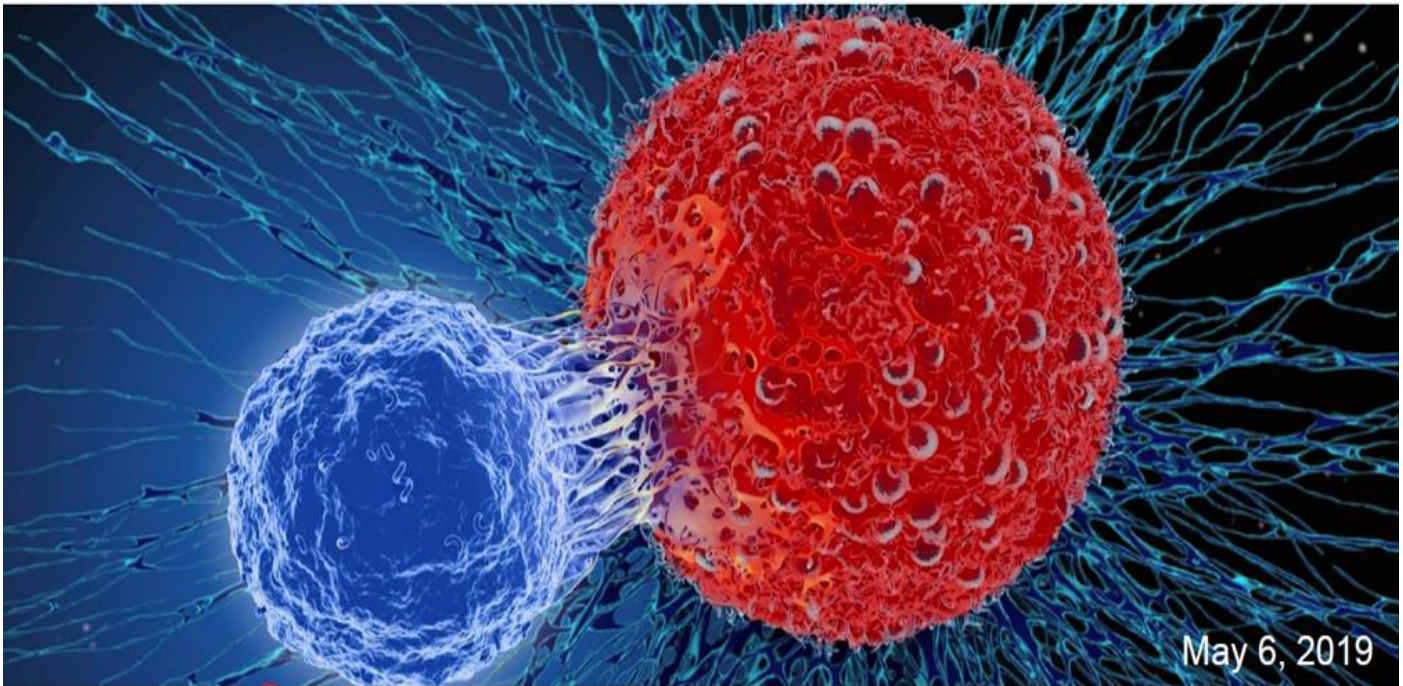
- Allogeneic program data update
- Next targets into clinic
- Data from multiple programs

1H 2020

- Durability of sarcoma responses
- ADP-A2AFP data update
- Safety and response data from SURPASS study
- SPEARHEAD-1 interim futility

- Compelling data with ADP-A2M4 in synovial sarcoma
 - Partial responses in 4 out of 5 synovial sarcoma patients treated with ~10 billion cells
 - Tumor shrinkage in nearly all assessed synovial sarcoma patients
- Initiating SPEARHEAD-1 trial in synovial sarcoma and MRCLS with ADP-A2M4
- Tumor shrinkage in other solid tumors with ADP-A2M4, ADP-A2M10 and ADP-A2AFP
- IND filed for ADP-A2M4CD8 next generation SPEAR T-cells
 - Transform currently observed activity in epithelial tumors into durable responses

Aim to launch first TCR T-cell therapy in 2022



May 6, 2019

Clinical and Business Update