

SPEAR-heading

THE CANCER REVOLUTION

**SPEARHEAD-1 Data at ASCO 2021 Annual Meeting
May 19, 2021**



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-Q filed with the Securities and Exchange Commission (SEC) on May 6, 2021 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.

Arming Cells. Against Cancer. For Good.

To transform the lives of people
with cancer by designing and
delivering cell therapies



5-year core value drivers: our “2-2-5-2” plan

Data from SPEARHEAD-1 will support our BLA filing next year for our first commercial MAGE-A4 targeted product



Two
marketed
SPEAR T-cell
products targeting
MAGE-A4

- Synovial sarcoma
- Esophageal and EGJ cancers



Two
additional BLAs
for SPEAR T-cell
products

- Additional indications for MAGE-A4 targeted products
- ADP-A2AFP



Five
autologous
products in the
clinic

- HiT
- Next-gen TILs
- New targets
- Broader HLA coverage



Two
allogeneic
products entering
the clinic

- SPEAR T-cell product targeting MAGE-A4
- HiT mesothelin – partnered with Astellas

Integrated Cell Therapy Capabilities

Research | Preclinical | Translational | Clinical | CMC | Regulatory | Commercial

There is a large unmet medical need for people with synovial sarcoma



“Initial data from SPEARHEAD-1 indicate that afamicecel has the potential to offer people with synovial sarcoma a promising new treatment option where there is currently a great unmet medical need. As clinicians, we want to be able to provide a treatment regimen that can help offer a better quality of life.”

-- Dr. Sandra P. D'Angelo of the
Memorial Sloan Kettering Cancer Center



“Amongst the limitations of using chemotherapy to treat synovial sarcoma is the need to always be on a therapy and to deal with the side effects that come from it. Chemo patients are not able to live a normal life. What we’re really looking for is a therapy where once it’s performed, it’s durable and you don’t need another one.”

-- Dr. Brian Van Tine, Associate Professor of Medicine,
Division of Oncology, Section of Medical Oncology,
Washington University School of Medicine



“After suffering from misdiagnosis or years long journey to diagnosis, people living with synovial sarcoma struggle with limited, and often ineffective, treatment options. A treatment for synovial sarcoma patients that gives them more options, a better prognosis, and a better quality of life is long overdue.”

-- Brandi Felser, CEO, Sarcoma Foundation of America



SPEARHEAD-1 Update at ASCO 2021

SPEARHEAD-1: A Phase 2 trial of afami-cel in patients with advanced synovial sarcoma or MRCLS

Key eligibility and Endpoints

KEY ELIGIBILITY CRITERIA

- Advanced synovial sarcoma or MRCLS
- ECOG 0 or 1
- Aged ≥ 16 and < 75 years
- HLA-A*02 positive
- MAGE-A4 expression: $\geq 30\%$ of tumor cells that are $\geq 2+$ by immunohistochemistry
- Must have previously received either an anthracycline- or ifosfamide-containing regimen

EFFICACY



- ORR per RECIST v1.1 by independent review
- Duration of response
- Time to response
- Progression-free and overall survival

SAFETY AND TOLERABILITY



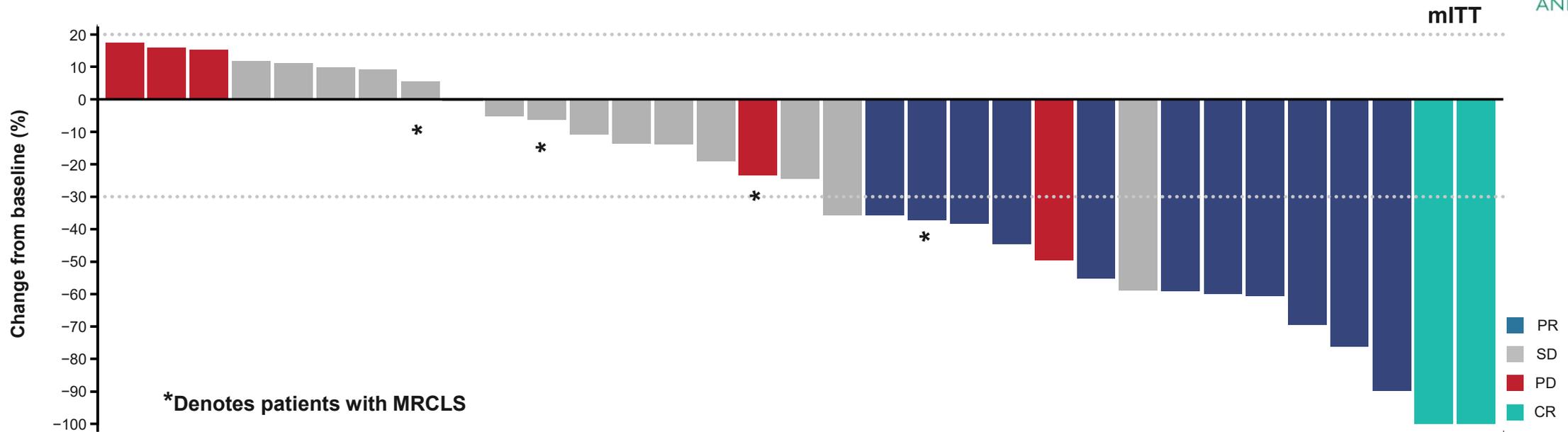
- Adverse Events (AEs)
- AEs of Special Interest

ECOG = Eastern Cooperative Oncology Group; MRCLS = myxoid/round cell liposarcoma; ORR = overall response rate; RECIST = Response Evaluation Criteria in Solid Tumours

Deep responses observed with afami-cel therapy

Best overall response by RECIST v1.1

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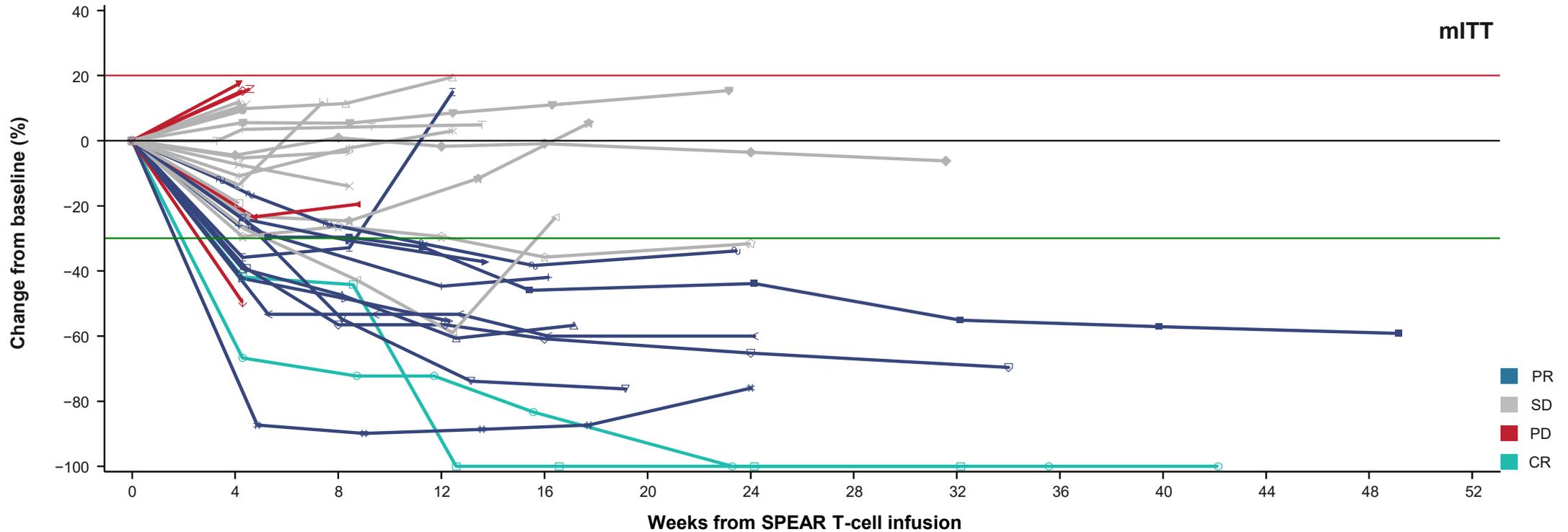
- Overall response rate 39.4% (13/33): synovial sarcoma 41.4% (12/29) and MRCLS 25.0% (1/4)
- Two CRs in patients with synovial sarcoma
- Disease control rate of 84.8% (28/33)

CR = complete response; mITT = modified intent to treat; MRCLS = myxoid/round cell liposarcoma; PD = progressive disease; PR = partial response; SD = stable disease; Data represent percent changes from baseline in sum of diameters (sum of the long diameters for non-nodal lesions and short axis for nodal lesions) in target lesions through progression or prior to surgical resection; Responses evaluated by RECIST v1.1 per Investigator assessment; Data excludes 4 patients who were pending 1st efficacy assessment as of the data cut-off

Data cut-off March 29, 2021

Initial durability encouraging with afami-cel therapy

Best overall response by RECIST v1.1



- Improvements in sum of diameters over time have been observed
- Median duration of response not reached – range (weeks): 4.3+, 38.0+

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CR = complete response; mITT = modified intent to treat; PD = progressive disease; PR = partial response; SD = stable disease; Data represent percent changes from baseline in sum of diameters (sum of the long diameters for non-nodal lesions and short axis for nodal lesions) in target lesions through progression or prior to surgical resection; Responses evaluated by RECIST v1.1 per Investigator assessment; + Denotes censored ongoing response

Data cut-off March 29, 2021

Treatment-emergent adverse events in ≥ 25% of patients

Favorable safety profile for afami-cel

Preferred Term, mITT, n (%)	N = 37	
	Any Grade	≥ Grade 3
Any	35 (95)	34 (92)
Lymphocyte count decreased	31 (84)	31 (84)
Neutrophil count decreased	27 (73)	25 (68)
White blood cell count decreased	25 (68)	23 (62)
Nausea	24 (65)	1 (3)
Cytokine release syndrome	22 (59)	1 (3)
Pyrexia	19 (51)	1 (3)
Anemia	14 (38)	8 (22)
Fatigue	14 (38)	0
Constipation	11 (30)	0
Back pain	10 (27)	2 (5)
Platelet count decreased	10 (27)	6 (16)
Vomiting	10 (27)	0

Most TEAEs were consistent with those typically experienced by cancer patients undergoing cytotoxic chemotherapy and/or cancer immunotherapy

mITT = modified intent to treat; TEAE = treatment-emergent adverse event; Grouped terms: lymphocyte count decreased/lymphopenia, neutrophil count decreased/neutropenia, white cell count decreased/leukopenia, cytokine release syndrome/cytokine storm, platelet count decreased/thrombocytopenia; 3 patients had Grade 5 event (all unrelated to T-cell therapy): respiratory failure (1), general physical health deterioration (1), death (1)

SPEARHEAD-1: A Phase 2 trial of afami-cel in patients with advanced synovial sarcoma or MRCLS

Key highlights of the data

- Afami-cel is efficacious and well-tolerated in heavily pre-treated patients
- To date, safety profile of afami-cel has been favorable, with mainly low-grade cytokine release syndrome and tolerable/reversible hematologic toxicities
- Deep responses have been observed and responses seen in both synovial sarcoma and MRCLS
- Initial durability data is encouraging
- Responses were observed across a broad range of MAGE-A4 expression and cell doses

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SPEARHEAD-1 data will support marketing application submissions next year for afami-cel

First milestone in our 2-2-5-2 strategic plan

- Afami-cel response rates compare favorably to available 2nd line therapies*
- SPEARHEAD-1 is ongoing
 - Cohort 1 (n=45) enrollment and treatment is complete and Cohort 2 (n=45) is currently recruiting
 - The primary evidence supporting marketing applications will be based on Cohort 1
- Marketing applications in the US and EU are on track for 2022 for people with synovial sarcoma and MRCLS
- Planning for successful marketing applications and regulatory agency interactions



*Pollack S, et al. Cancer Medicine. 2020;9:4593–4602; Seto T, et al Med. Sci. 2019, 7, 48; van der Graaf WT, et al. 2012, Lancet, 379(9829), 1879-1886

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