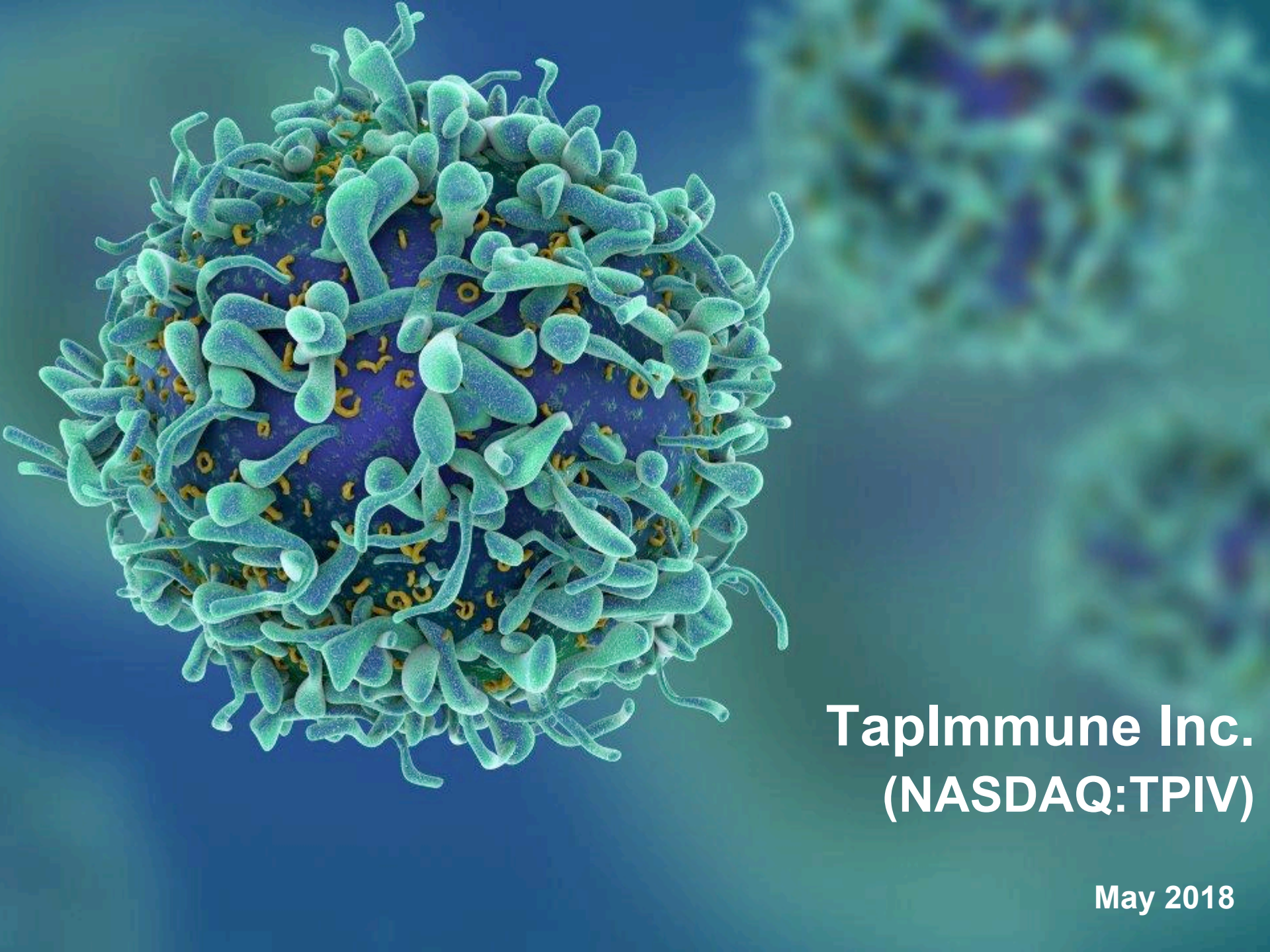

TapImmune Inc.
(NASDAQ:TPIV)

May 2018

Forward-Looking Statements

Certain statements contained herein are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended, that involve risks and uncertainties. All statements other than statements relating to historical matters including statements to the effect that we “believe”, “expect”, “anticipate”, “plan”, “target”, “intend” and similar expressions, including without limitation statements relating to long-term stability, TapImmune Inc.’s (“TapImmune” or the “Company”) plan of operations and finances, and the potential for the Company’s vaccines and proposed clinical trials, should be considered forward-looking statements. Our actual results could differ materially from those discussed in the forward-looking statements as a result of a number of important factors, including factors discussed under the heading “Risk Factors” in the Company’s periodic reports on Form 10-Q and 10-K. No representation or warranty (expressed or implied) is made as to, and no reliance should be placed on, the fairness, accuracy or completeness of the information contained herein. Accordingly, none of the Company, or any of its principals, partners, subsidiaries or affiliates, or any of such person's board members, officers or employees accepts any liability whatsoever arising directly or indirectly from the use of this presentation. Certain information set forth herein includes estimates, projections and targets and involves significant elements of subjective judgment and analysis, which may or may not be correct. No representations are made as to the accuracy of such estimates, projections or targets or that all assumptions relating to such estimates, projections or targets have been considered or stated or that such estimates, projections or targets will be realized. This presentation does not purport to contain all of the information that may be required to evaluate the Company and any recipient hereof should conduct its own independent analysis of the Company and the data and information contained herein. Any forward-looking statements are not guarantees of future performance and actual results may differ materially from estimates in the forward-looking statements. Unless otherwise stated, all information in this presentation is as of the date on the cover page of this presentation, and the Company undertakes no obligation to revise these forward-looking statements to reflect events or circumstances that arise after the date hereof.

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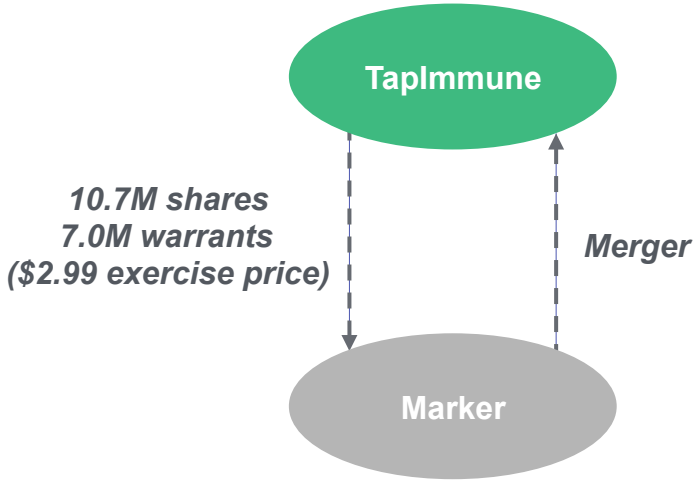
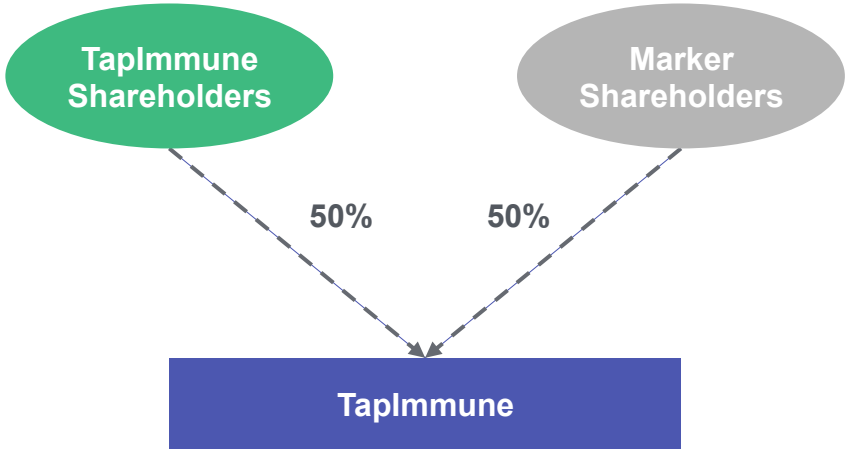
Transaction Overview

Transaction Structure



Pro Forma Ownership



- TapImmune Inc. (“TapImmune” or the “Company”) and Marker Therapeutics, Inc. (“Marker”) to combine in a merger transaction
- TapImmune is currently in discussions with leading institutional investors with respect to a financing
  - Proceeds will be used to help advance **several Phase II clinical trials**, continue the **buildout of operational and clinical facilities**, fund ongoing **non-clinical expenses,** and for general corporate purposes
  - Capital raise is expected to be sufficient to fund the combined company into the second half 2020
- TapImmune will be renamed and rebranded
- Both TapImmune and Marker have the full support of each of their respective Boards of Directors
- Corporate headquarters will be relocated to Houston

Investment Highlights

Transformational T Cell Therapies	Unique and highly differentiated approach that addresses the major challenges faced by CAR and TCR approaches
Multi-Antigen Approach Drives Enhanced Efficacy	Durable responses with clear evidence of epitope spreading targeting multiple tumor associated antigens safely
Requires No Gene Modification of T Cells	Significantly reduced cost and complexity of manufacturing as compared to conventional CAR-T and TCR approaches
Robust Clinical Response With Minimal Toxicity	Superior toxicity profile as compared to other cell therapy approaches, with no related SAEs or CRs observed to date

Gene-Modified T Cell Therapy: What We Now Know

CAR-T, TCR and NK therapies have made headway in treating cancer, but data underscores the many hazards and limitations

Clinical Impact	× Limited durability of response
Limitations of Single Antigen Targeting	× Treatment limited to targeted antigen × High relapse rate due to antigen-negative escape × Inconsistent ability to generate epitope spreading
Clinical Safety Concerns	× Cytokine Release Syndrome (CRS) is not only common but potentially required for CAR-T efficacy × Neurotoxicity has caused program ending fatalities and is still not well understood
Product Safety Concerns	× Retroviral, Lentiviral, Transposon (integrated genes) potential of insertional mutagenesis
High Cost and Manufacturing Complexity	× High cost of genetic modification and selection × Requirement for hospitalization and use of tocilizumab for treatment

Current Cell Therapy Landscape

Marker technology addresses the limitations of currently known CAR-T and TCR cell therapy programs

	JUNO / Celgene	Kite Pharma / GILEAD	cellectis / Pfizer	Adaptimmune / gsk	NOVARTIS	MARKER THERAPEUTICS
Multi-Specific	✗	✗	✗	✗	✗	✓
Epitope Spreading	✗	✗	✗	✗	✗	✓
No Genetic Modification	✗	✗	✗	✗	✗	✓
No Fatalities Caused by Therapy	✗	✗	✗	✗	✗	✓
No Lymphodepletion Required	✗	✗	✗	✗	✗	✓
Treatment Cost[1]	JCAR015 and JCAR017 Launch Price **$250,000**	Yescarta **$373,000**	UCART19 Launch Price **$200,000**	MM Treatment Launch Price **$250,000**	Kymriah **$475,000**	**Significantly lower costs**
Common Issues in Competitive Cell Therapies	**Inconsistent response rates** **Significant relapse rates**		**High toxicity** **Limited efficacy in solid tumors**	**High manufacturing costs** **Difficult to scale**		**Potential to address major issues with other cell therapies**

1. Based on Wall Street Research Estimates

Multi Tumor-Associated Antigen (MultiTAA) Cell Therapy

Multiple Antigens

- Target expression of multiple tumor antigens thereby targeting more tumor cells

Clinical Safety

- No related SAEs or CRS in 60+ patients

No Genetic Modification

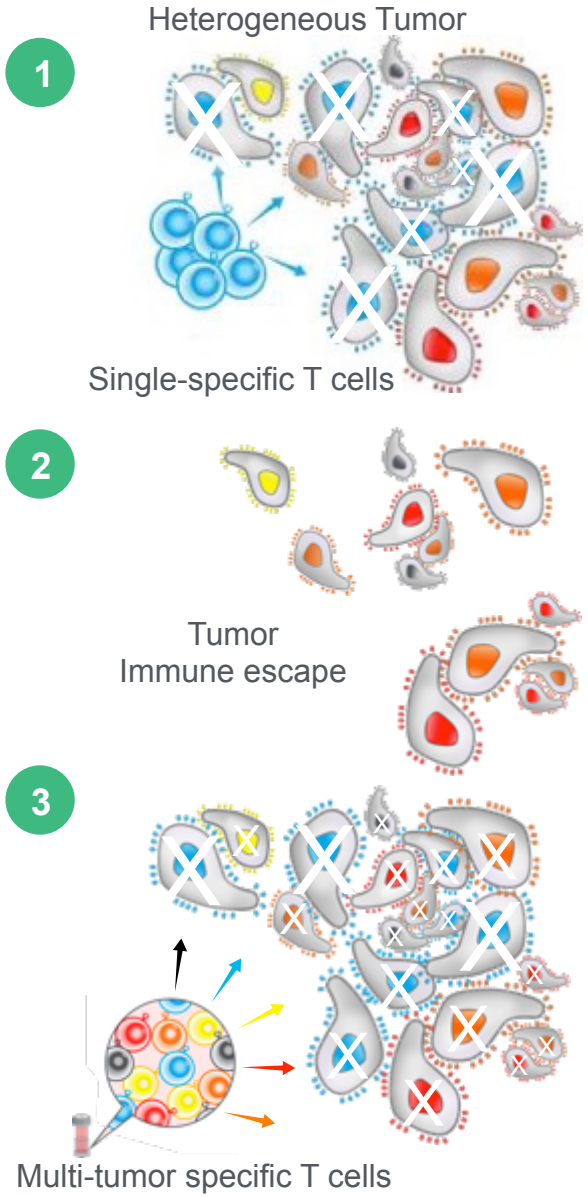
- Native peptides presented in culture, natural T cells expand with no mutagenesis risk

Lower Cost

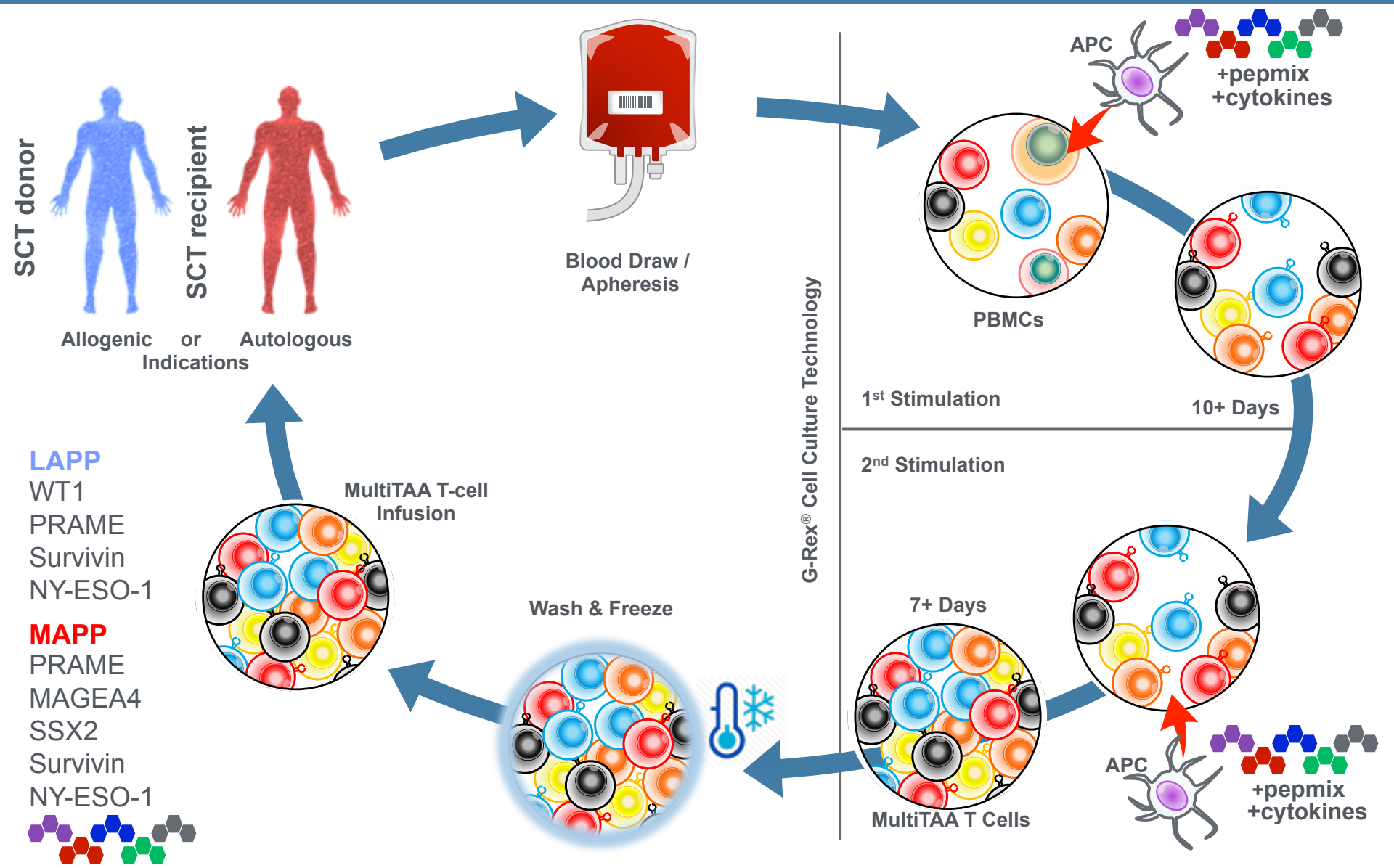
- Efficient process requires no genetic modification or extensive manipulation of product

Clinical Impact

- Potential of increased duration – prevents immune escape with antigen spread



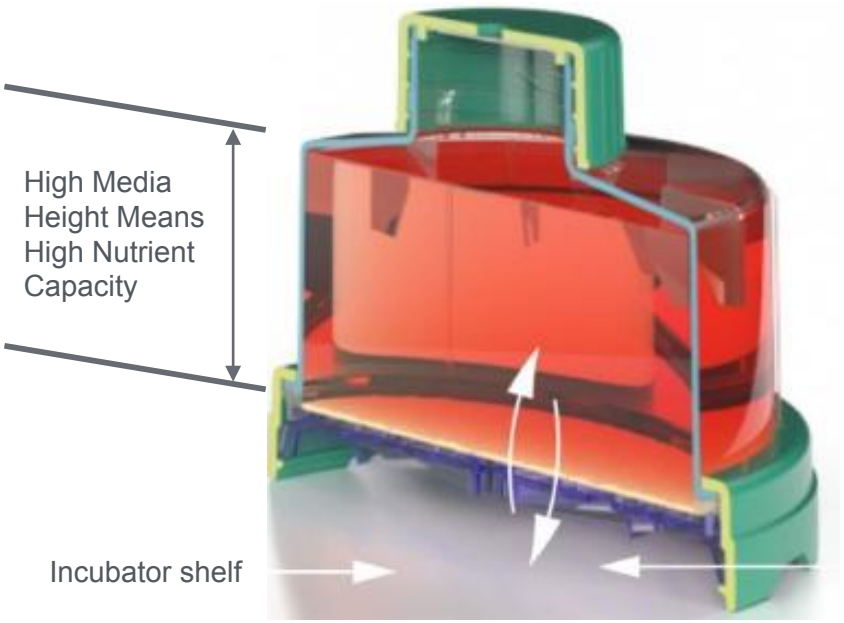
MultiTAA T Cell Manufacturing Process



Highly-Efficient Cell Processing Approach

GREX®

Cross-Sectional View



1. Add Cells and Large Volume of Media
2. Set in Incubator
3. Cells Obtain Oxygen and Nutrients on Demand (no need for media exchange, shaking or rolling)
4. To Collect Cells, Withdraw 90% of Media Volume and then Remove Cells (simplified cell recovery as harvest density approaches 30 x 10^6 cells/ml)

O_2 from ambient air and CO_2 from media is exchanged through the Gas Permeable Membrane

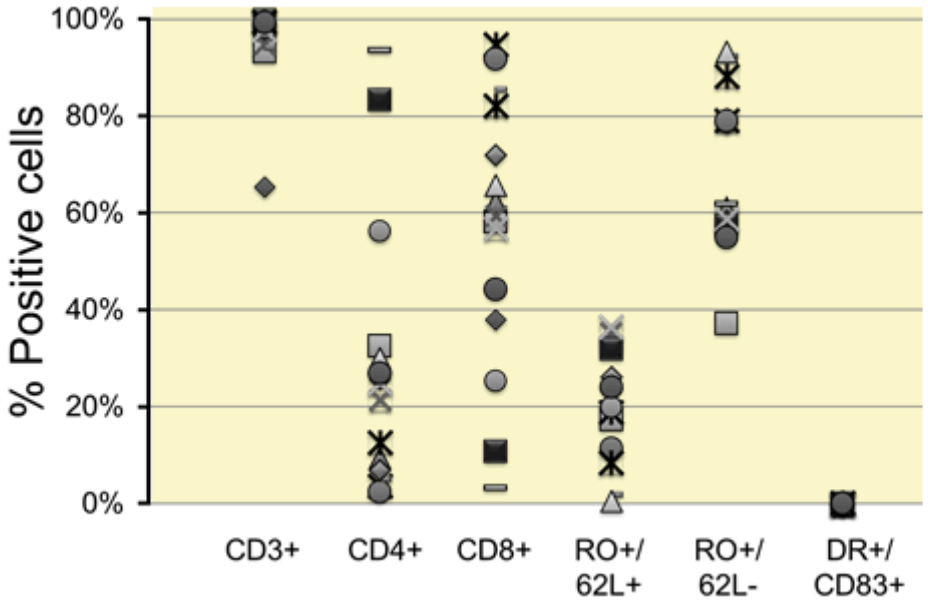
- No special capital equipment
- Single use, disposable devices
- High density culture
- Improved access to O_2 & nutrients

- Shortened culture durations
- Reduced interventions & risk
- Reduced labor – no weekend duty
- >10 fold cost savings vs bags

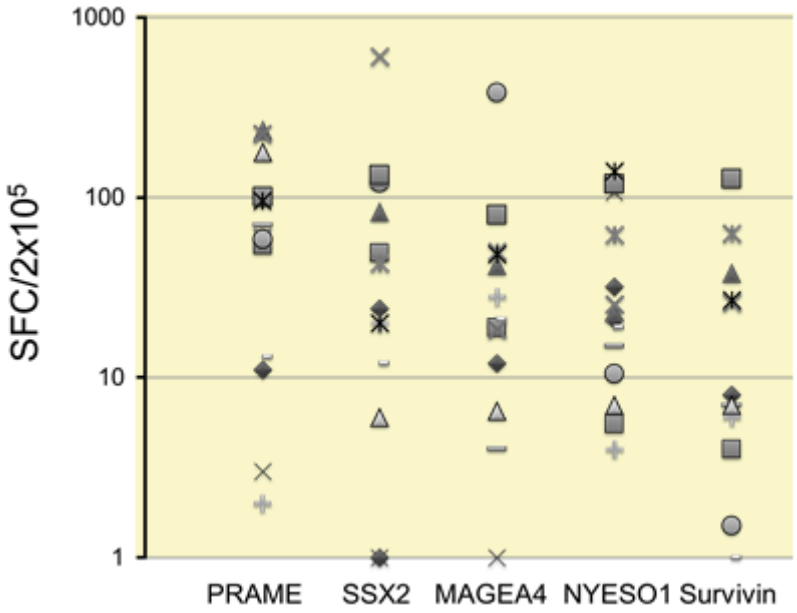
- Directly scalable platform
- FDA registered Class I Device
- Widespread application
- Simplified process

Profile and Specificity of MultiTAA T Cells

Cell Phenotype



Peptide-Specific Responses

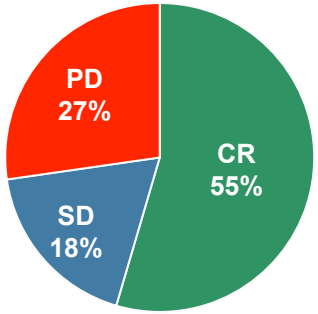


- Expanded multiTAA T cells are polyclonal
- Express a mix of central and effector memory markers for immediate anti-tumor effects and long term persistence
- MultiTAA T cells recognize multiple tumor-expressed targets

Summary of Interim Clinical Outcomes

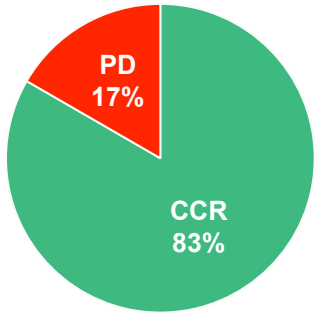
Lymphoma

Active[1]



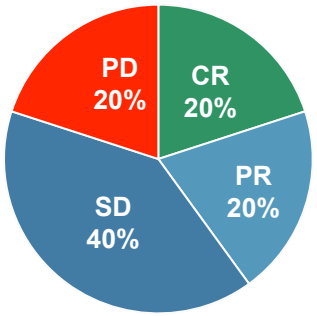
11 Patients Evaluable,
13 Patients Treated
CR Duration 4-27+mo

Adjuvant[2]

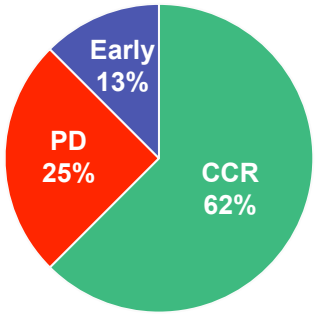


18 Patients Treated
CCR Duration 3-37mo

AML



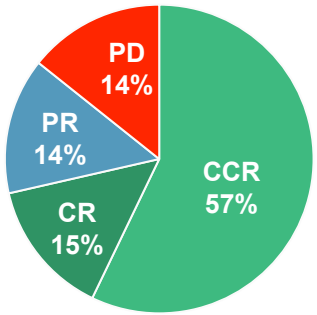
5 Patients Treated
CR/PR Duration 7-11mo



8 Patients Treated
CCR Duration: 8-20mo

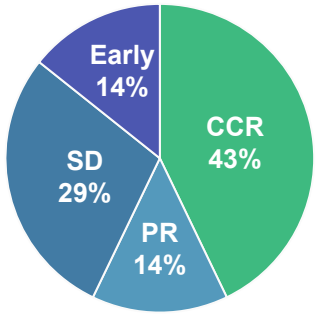
Myeloma

<90 days post ASCT



7 Patients Treated
3 Active / 4 In Remission
Duration of Response 10-25mo

>90 days post ASCT



7 Patients Treated
4 Active / 3 In Remission
Duration of Response 7-25mo

To date, 50% CR/PR in active MM patients, 100% CCR for patients in remission

Continued Complete Response
Complete Response
Partial Response
Stable Disease
Progressive Disease
Early

1. Treatment applied to patients with active disease after HSCT
2. Treatment applied to patients in remission after HSCT

Kite's CAR-T Results: Toxicity Rates

Table 2. Adverse Events, the Cytokine Release Syndrome, and Neurologic Events Associated with Treatment.*

Event	Any Grade	Grade 1 or 2	Grade ≥3
		number of patients (percent)	
Adverse event			
Any	101 (100)	5 (5)	96 (95)
Pyrexia	86 (85)	72 (71)	14 (14)
Neutropenia	85 (84)	6 (6)	79 (78)
Anemia	67 (66)	24 (24)	43 (43)
Hypotension	60 (59)	46 (46)	14 (14)
Thrombocytopenia	59 (58)	21 (21)	38 (38)
Nausea	59 (58)	59 (58)	0
Fatigue	52 (51)	50 (50)	2 (2)
Decreased appetite	50 (50)	48 (48)	2 (2)
Headache	47 (47)	46 (46)	1 (1)
Diarrhea	43 (43)	39 (39)	4 (4)
Hypoalbuminemia	41 (41)	40 (40)	1 (1)
Hypocalcemia	40 (40)	34 (34)	6 (6)
Chills	39 (39)	39 (39)	0
Tachycardia	39 (39)	37 (37)	2 (2)
Febrile neutropenia	35 (35)	4 (4)	31 (31)
Encephalopathy	34 (34)	13 (13)	21 (21)
Thrombocytopenia	59 (58)	21 (21)	38 (38)
Vomiting	34 (34)	33 (33)	1 (1)
Hypokalemia	33 (33)	30 (30)	3 (3)
Hyponatremia	33 (33)	23 (23)	10 (10)
Constipation	31 (31)	31 (31)	0
White-cell count decreased	31 (31)	2 (2)	29 (29)
Cytokine release syndrome			
Any	94 (93)	81 (80)	13 (13)
Pyrexia	77 (76)	66 (65)	11 (11)
Hypotension	41 (41)	32 (32)	9 (9)
Hypoxia	22 (22)	13 (13)	9 (9)
Tachycardia	21 (21)	20 (20)	1 (1)
Chills	20 (20)	20 (20)	0
Sinus tachycardia	8 (8)	8 (8)	0
Headache	5 (5)	5 (5)	0

Table 2. (Continued.)

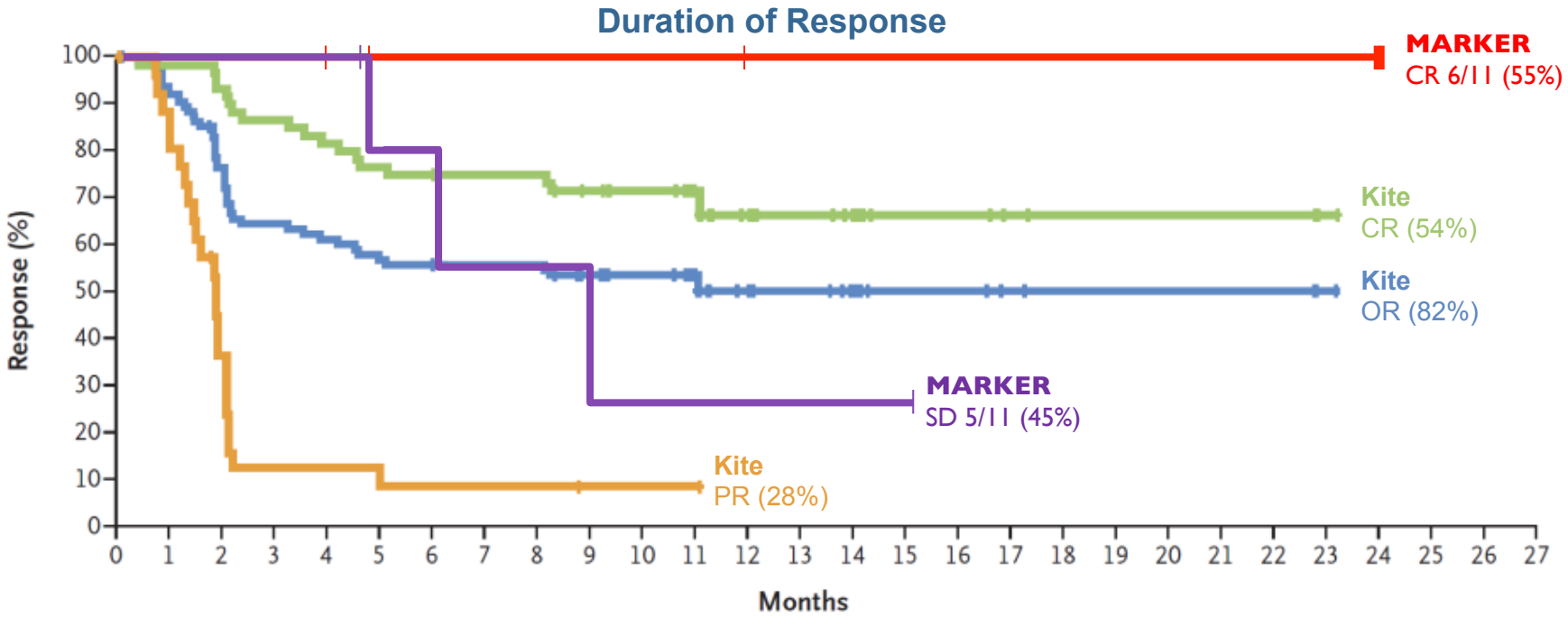
Event	Any Grade	Grade 1 or 2	Grade ≥3
		number of patients (percent)	
Neurologic event			
Any	65 (64)	37 (37)	28 (28)
Encephalopathy	34 (34)	13 (13)	21 (21)
Confusional state	29 (29)	20 (20)	9 (9)
Tremor	29 (29)	28 (28)	1 (1)
Aphasia	18 (18)	11 (11)	7 (7)
Somnolence	15 (15)	8 (8)	7 (7)
Agitation	9 (9)	5 (5)	4 (4)
Memory impairment	7 (7)	6 (6)	1 (1)
Mental-status change	6 (6)	4 (4)	2 (2)

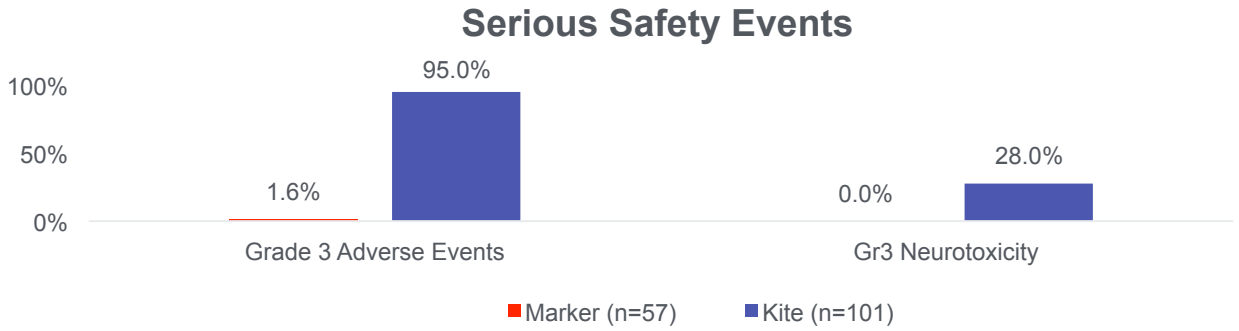
* Listed are adverse events that occurred in at least 30% of the patients, along with symptoms of the cytokine release syndrome and neurologic events that occurred in at least 5% of the patients. The cytokine release syndrome was categorized according to a modified grading system proposed by Lee et al.[24] Individual symptoms of the cytokine release syndrome and neurologic events were graded according to the National Cancer Institute Common Terminology Criteria for Adverse Events, version 4.03.

Source: NEJM Dec 28, 2017 (377.26) "Axicabtagene Ciloleucel CAR T-Cell Therapy in Refractory Large B-Cell Lymphoma"

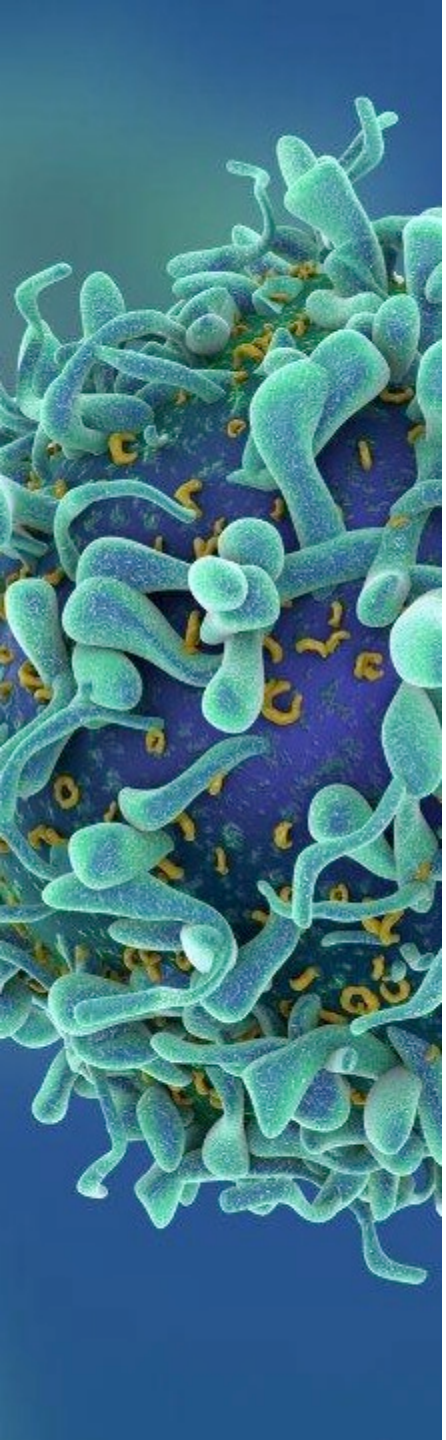
Active Lymphoma Outcome Comparison of Marker to Kite

13 patients treated for active disease (best response: 6 CR; 5 SD; 2 too early)





Marker data superimposed on Kite's experience, Neelapu, et al. N Engl J Med 2017; 377:2531-44



MultiTAA T Cell Therapy

Lymphoma Interim Clinical Results

31 patients treated to date

No SAEs
No CRS

Active Disease Treatment

13 patients treated with active disease

- 7 HL and 6 NHL
- 11 Evaluable patients (>3 months follow-up)

Results:

- Overall responses: 6/11 (all CR – 55%)
- Duration of 5 to 12+ months
- 2 patients with stable disease (5 – 12 months)
- 3 patients with relapse

Adjuvant Treatment

18 patients treated while in remission

- 5 HL and 13 NHL
- 18 Evaluable patients (>3 months follow-up)

Results:

- Overall continued CR rate: 15/18 (83%)
- Duration of 3 – 37 months
- 3 patients with relapse at 8,12,19 months

Active Lymphoma Clinical Trial Outcomes

13 patients treated for active disease (6 CR; 1 SD; 3 PD; 1 off study; 2 too early)

ID	Age/Sex	Disease	Prior Therapies	Duration of Response After First Line (Double Hit Status)	Response to T Cell Therapy (Duration)
01	34/F	HL	ABVD → ICE → Cis-Gem→ XRT → ASCT → EBV T cells → Brentuximab → Yttrium90 → CART-CD30	No response to first line ABVD- chemo refractory (HL, so chromosomes not tested)	Stable disease (5 mo) → Off study [Revilimid (5 mo) →PD1]
02	55/F	HL/NHL	RCHOP + XRT → ICE → ASCT	5 months CR to first line then relapse (unknown chromosome status)	CR (4 mo) Died of pneumonia
03	35/M	HL	ABVD → XRT → IGEV → ESHAP → ASCT → GVD → XRT	6 months CR to first line then relapse (HL, no chromosomes tested)	CR (>2 years ongoing)
04	43/F	HL	ABVD → ICE → ASCT → Brentuximab	3 months CR to first line then relapse (HL, no chromosomes tested)	CR (>1 year ongoing)
05	48/M	HL	ABVD → ICE → ASCT + XRT → Brentuximab	No response to first line ABVD –chemo refractory (HL, so not tested)	CR (>2 years ongoing)
06	47/F	DLBCL	RCHOP → GDC → ASCT	13 months CR to first line then relapse (FL transformed to DLBCL)	CR (>2 years ongoing)
07	31/F	HL	ABVD→ XRT → ICE → Nav/Gem → ASCT → HDACi → Brentuximab → Bendamustine → PD1i	4 months CR to first line, then relapse (HL, so not tested)	Stable disease (5 mo) → PD
08	69/M	NHL	EPOCH → Romidepsin → ASCT	No response to first line- chemo refractory (T cell so note tested)	Stable disease (15 mo)
09	54/M	DLBCL	RCHOP → R-ICE→ ASCT	5 month CR to first line then relapse (unknown chromosome status)	Stable disease (6 mo) → PD → Started PD1i
10	18/F	HL	ABVE-PC→XRT → IVBor → Brentuximab → PD1i	4 month CR to first line, then relapse (HL, so not tested)	Stable disease (9 mo) → PD
11	48/M	DLBCL	EPOCH-R → R-ICE → ASCT → XRT	No response to first line- chemo refractory (Normal chromosomes)	CR (5 mo)
12	49/M	HL	ABVD →ICE → ASCT → XRT → Brentuximab → Nivolumab → Bendamustine	2 month PR to first line then relapse (chromosomes not tested)	Too early
13	54/M	DLBCL	EPOCH-R → ICE-R → XRT → ASCT	Residual disease after first line (c-myc and bcl-2 translocated)	Too early

Data as of Jan 2018. Duration > 12 months unless otherwise noted

Adjuvant Lymphoma Clinical Trial Outcomes

18 patients infused as adjuvant (15/18 in remission)

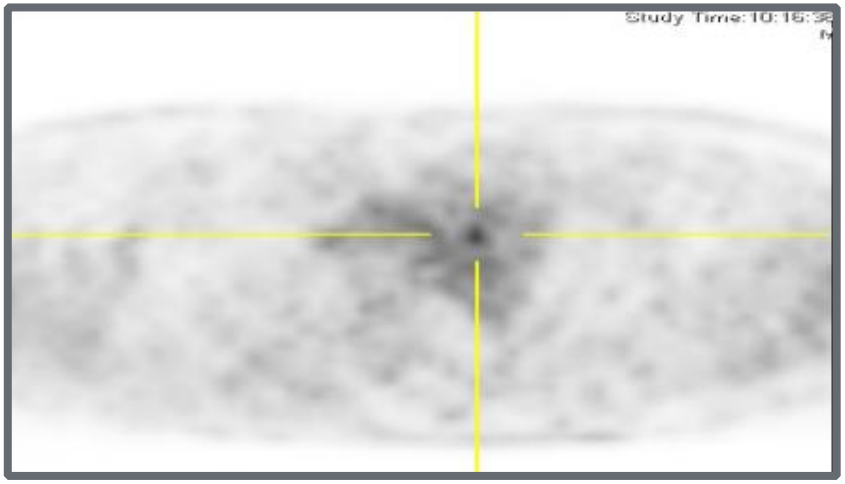
ID	Age/Sex	Disease	Prior Therapies	Duration of Response After First Line (Double Hit Status)	Response to T Cell therapy (Duration)
01	38/M	HL & DLBCL	ABVD → RICE → ASCT	No response to first line therapy- chemo refractory (Chromosomes not tested)	CCR (37 mo)
02	78/F	DLBCL	R→ RCHOP	14 month CR after R-CHOP	In remission (8 mo) →relapse
03	78/F	DLBCL	R → RCHOP→ multiTAA T cells→ R-Bendamustine	14 month CR after R-CHOP (Normal Chromosomes)	CCR (17 mo)
04	21/M	HL	ABVD → Brentuximab→Nav/Gem→ ASCT	2 month CR after ABVD (Chromosomes not tested)	CCR (29 mo)
05	36/M	HL	ABVD → ICE → ASCT + XRT → Brentuximab	12 month CR after ABVD (chromosomes not tested)	In remission (12 mo) → relapse
06	54/M	DLBCL	RCHOP → R-EPOCH → R-DHAP→ ASCT	No response to first line (unknown chromosomes)	In remission (19 mo) → relapse
07	61/M	DLBCL	R-EPOCH → ASCT → XRT	Suspected Residual disease after first line chemo (Bcl2- and cmyc rearranged- double hit))	CCR (16 mo)
08	31/F	HL	ABVD + XRT → ICE → ASCT → XRT → Brentuximab → DHAP	4 month response to first line chemo (chromosomes not tested)	CCR (25 mo)
09	62/M	T cell	CHOP + XRT → ASCT	Persistent disease despite chemo (chromosomes not tested)	CCR (28 mo)
10	53/M	Mantle	R-HyperCVAD → R-Bendamustine → R-Ibrutinib → ASCT + XRT	7 year response after first line chemo (chromosomes not tested)	CCR (20 mo)
11	67/M	Mantle	R-Bendamustine-Ara-C → ASCT	Residual disease after first line chemo (chromosomes not tested)	CCR (15 mo)
12	65/F	DLBCL	R-EPOCH → ASCT	CR post first line chemo, did not relapse after that (bcl-2, myc, and bcl 6 rearranged- triple hit)	CCR (18 mo)
13	35/M	HL	ABVD → Brentuximab+Bendamustine → ASCT → XRT	5 month CR to first line (no chromosomes tested)	CCR (6 mo)
14	73/F	DLBCL	R-CHOP → XRT → ESHAP → RIE	2 month CR to first line (normal chromosomes)	CCR (6 mo)
15	49/F	DLBCL	HyperCVAD → ASCT	CR post first line chemo, did not relapse (chromosomes not tested)	CCR (9 mo)
16	41/M	DLBCL	ABVD → R-ICE → ASCT	4 month CR after first line chemo (chromosomes not tested)	CCR (9 mo)
17	32/F	T cell ALCL	CHOP → Brentuximab → Crizotinib → CD30 CAR T cells → Crizoinib	4 year CR after first line chemo (chromosomes not tested)	CCR (6 mo)
18	25/M	HL	ABVD → Brentuximab → ICE → ASCT	No response to first line chemo (chromosomes not tested)	CCR (3 mo)

Data as of Jan 2018. Duration > 12 months unless otherwise noted

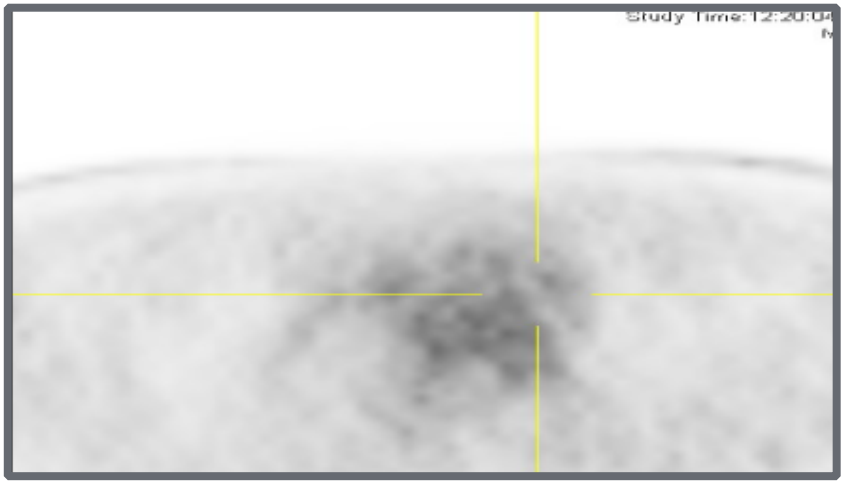
Case #1 Response in Lymphoma Trial (Patient #5)

Data demonstrate clinical benefit as post-infusion T cells exhibit antigen spreading

Pre-Infusion

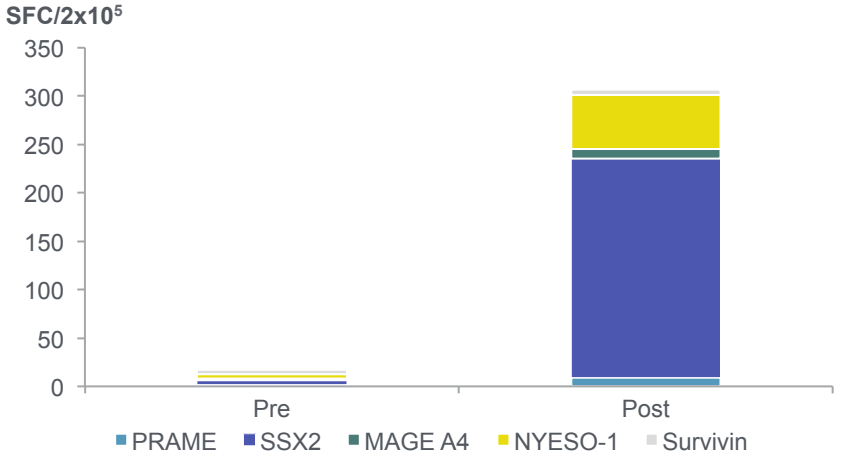


Post-Infusion

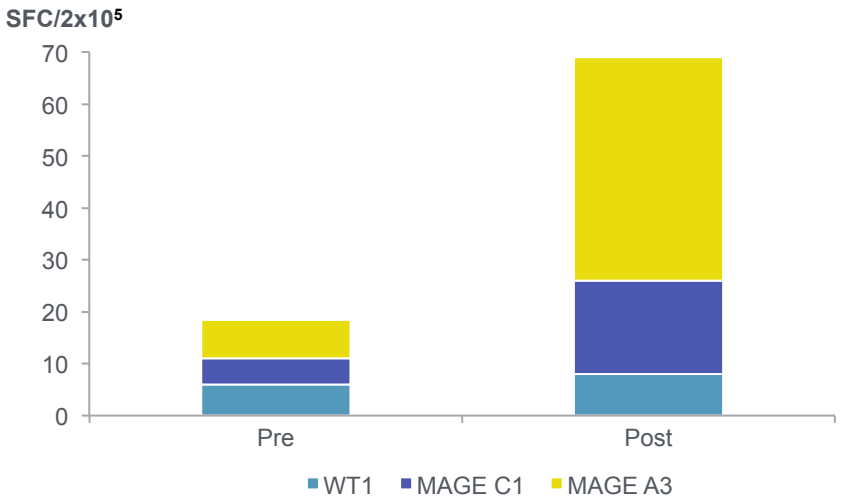


SUVmax: decrease 5.7 to 1.8

Targeted Antigens



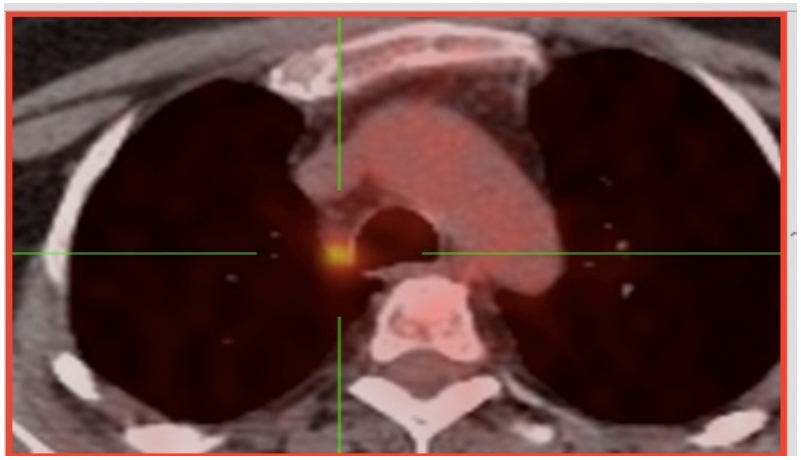
Non-Targeted Antigens



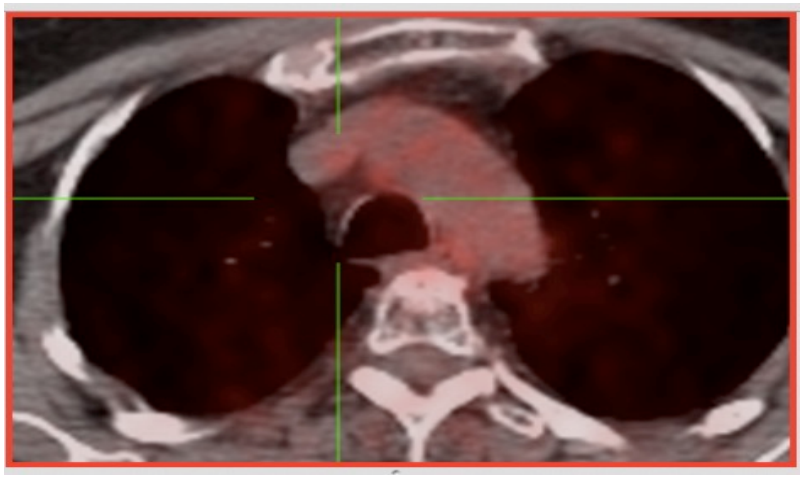
Case #2 Response in Lymphoma Trial (Patient #2)

Data demonstrate clinical benefit as post-infusion T cells exhibit antigen spreading

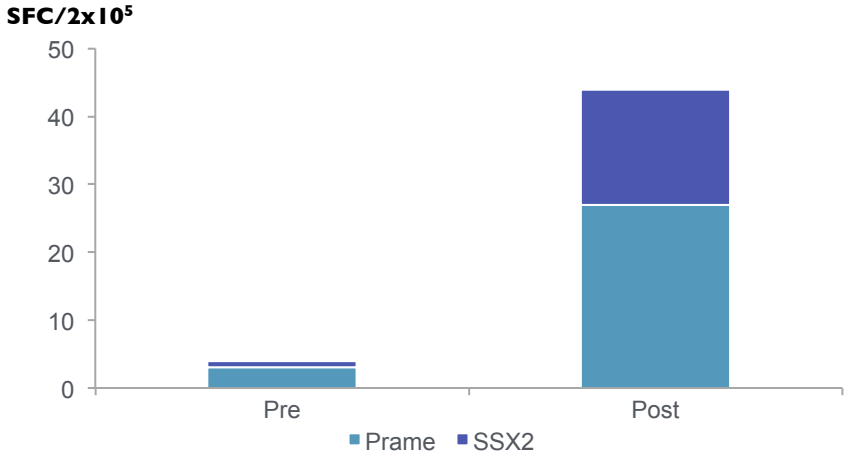
Pre-Infusion



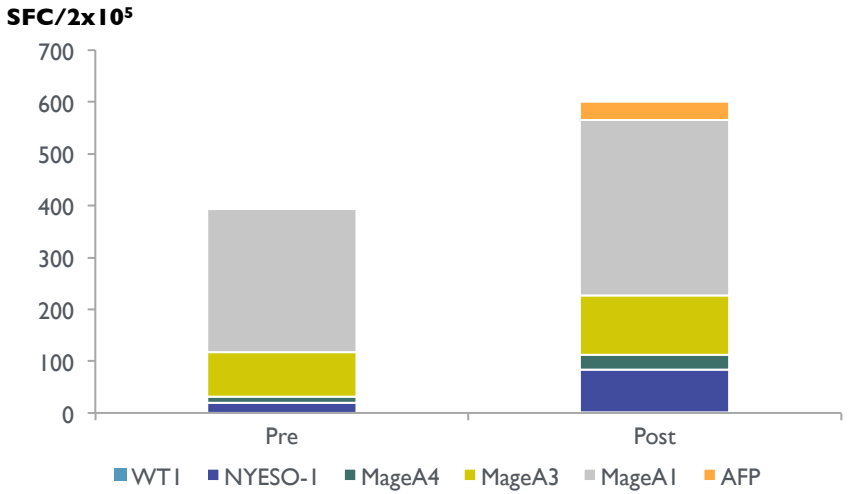
Post-Infusion



Targeted Antigens



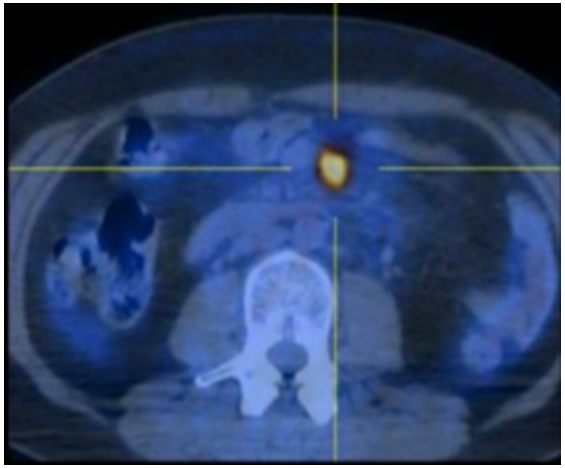
Non-Targeted Antigens



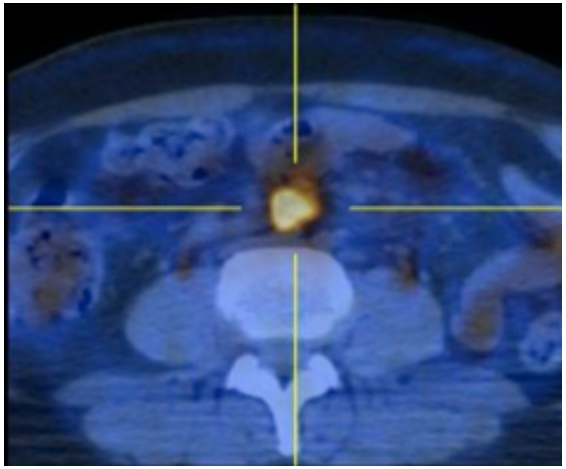
Case #3 Response in Lymphoma Trial (Patient #6)

Data demonstrate clinical benefit as post-infusion T cells exhibit antigen spreading

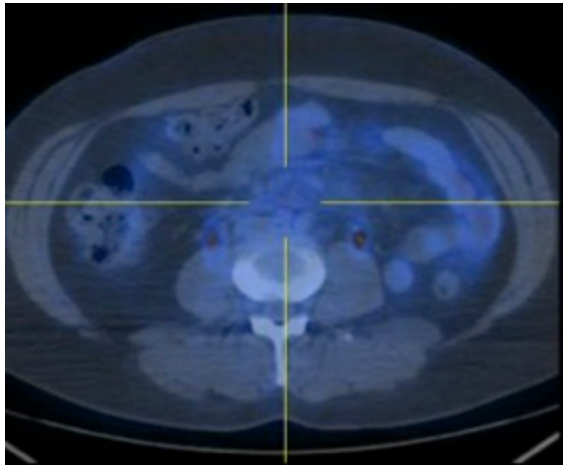
Pre-Infusion



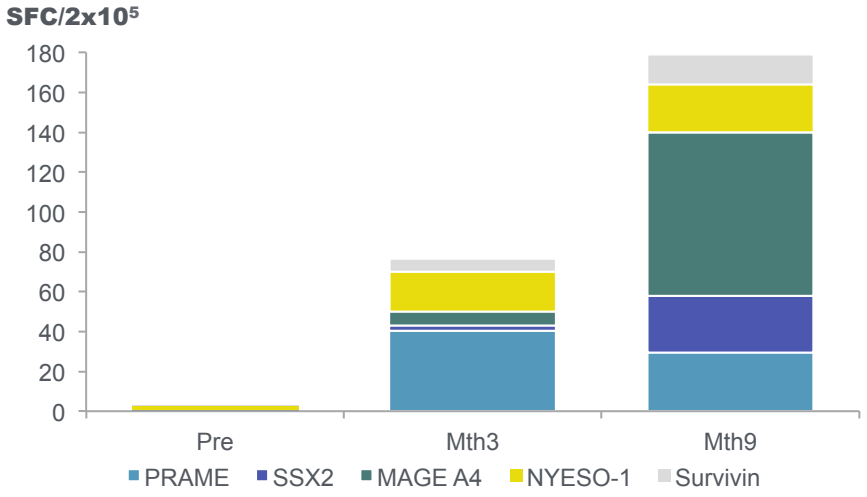
Post-Infusion Month 3



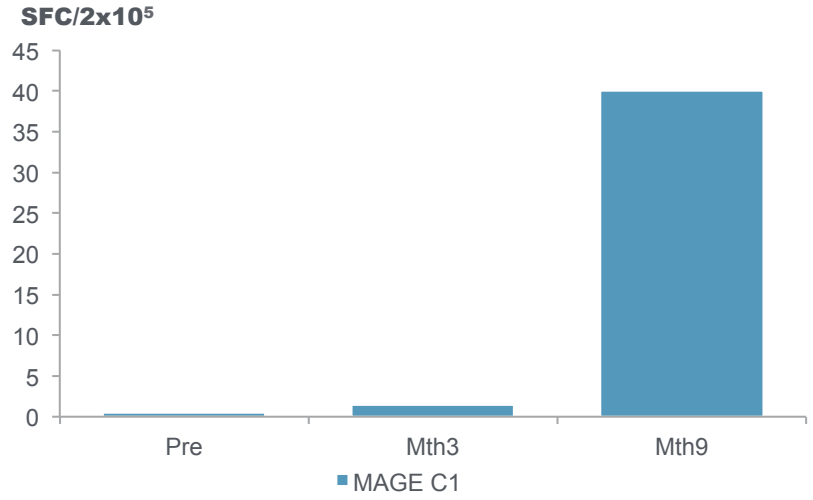
Post-Infusion Month 9



Targeted Antigens



Non-Targeted Antigens



AML / MDS Phase I Interim Clinical Results

12 patients treated to date

No SAEs
No CRS

Dose levels 1 & 2 tested to date

Active Disease Treatment

5 patients treated with active disease

- 5 Evaluable patients (> 3 months follow-up)

Results:

- Overall ongoing responses: 2/5
  (1 CR1 – 11 months; 1 PR – 7 months)
- 1 patient with stable disease (6 months)
- 2 patients with progression
  (occurring at 1 month and 4 months)

Adjuvant Treatment

8 patients treated while in remission

- 7 Evaluable patients (> 3 months follow-up)
- All patients with prior SCT
- At least 2 prior treatments; median 3 prior treatments

Results:

- Overall continued CR rate: 5/7 (71%)
- Duration of 8 – 20 months

1. One patient relapsed in the adjuvant group and was then treated in the active group and achieved a CR

AML / MDS Clinical Trial Patient Profiles

Group A: Adjuvant – 8 patients infused

ID	Age/G	Disease	DL	Prior Treatments
1	57/F	FLT3-ITD	1	CIA → Sorafenib → CIAx2 → RIC-SCT
2	18/F	FLT3-ITD	1	Bortezomib/Dauno EC → sorafenib → MAC-SCT
3	54/F	MDS	1	5-aza → RIC-SCT
4	55/F	MLL-*r*	1	7+3 → HiDAC → MAC-SCT
5	70/F	AML CR3	2	7+3 → HiDAC → CIA → RIC-SCT-***Relapse*** → 7+3
6	53/F	DNMT3a	2	7+3 → HiDAC → MAC-SCT
9	58/M	MDS → AML	2	Decitabine → RIC-SCT-***Relapse*** → CIA → ***MDS relapse*** → DLIx4
10	65/M	MLL-*r*	2	7+3x2 → 5-Azax11 → RIC-SCT

Group B: Active – 5 patients treated

ID	Age/G	Disease	DL	Prior Treatments
7	70/M	IDH1*mut*	1	7+3 → decitabine → IDH inhib → cutis relapse → CIA → RIC-SCT→ ***Relapse***
8	16/M	MDS→ AML	1	Double cord SCT → AML ***Relapse*** → C → haplo-SCTx2 → ***Relapse***
1	57/F	FLT3-ITD	1	CIA → Sorafenib → CIAx2 → RIC-SCT → mTAA-T cells → steroids → ***Relapse***
10	55/M	Induc. failure	2	7+3 →HiDAC x4 →RIC-SCT →***Relapse*** → DLIx4 → MEC → 5-aza → ***Relapse***
11	23/M	Del 17p	2	CIAx3 → haplo-SCT → ***Relapse*** → CIA-decitabine → haplo-SCT → 5-aza → Nivolumab → CD123 BiTE →MEC-decitabine → midostaurin → ***Relapse***

Data as of Oct 2017

AML / MDS Clinical Trial Outcomes

Group A: Adjuvant – 8 patients infused

ID	Age/G	DL	Outcome (CR months)
			2 4 6 8 10 12 14 16 18
1	57/F	1	Continued CR — Relapsed, treated on Group B
2	18/F	1	Continued CR
3	54/F	1	Continued CR
4	55/F	1	Continued CR — Isolated CNS relapse
5	70/F	2	Continued CR
6	53/F	2	Continued CR
9	58/M	2	Continued CR
10	65/M	2	Too Early

Group B: Active – 5 patients treated

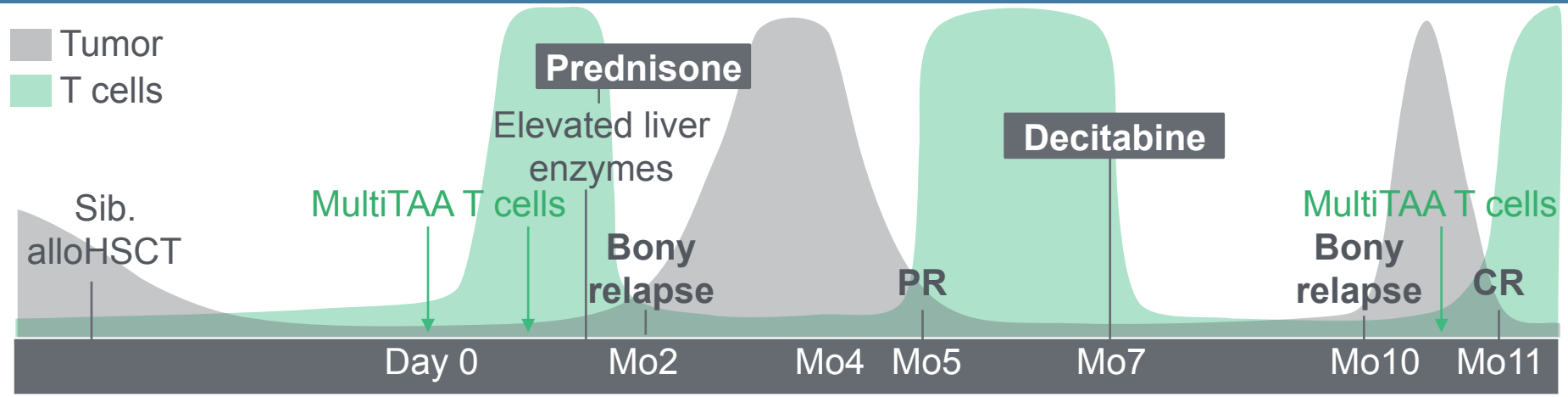
ID	Age/G	DL	Outcome (CR months)
			2 4 6 8 10 12 14 16 18
7	70/M	1	SD — Isolated relapse in skin
8	16/M	1	PD
1	57/F	1	Complete Remission[1]
10	55/M	2	Partial Remission[2]
11	23/M	2	SD

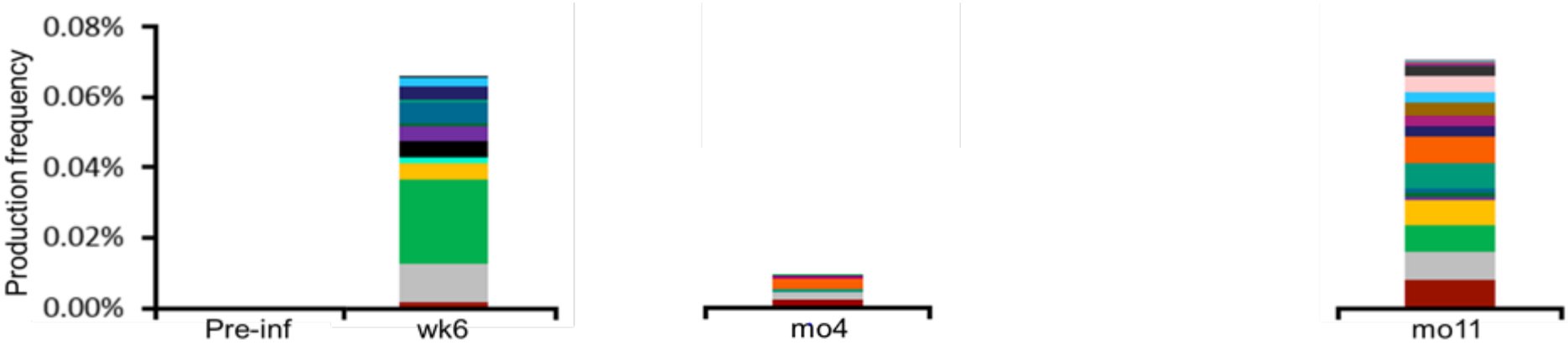
Data as of Oct 2017

1. Complete Remission within 4 weeks
2. Partial Remission within 4 weeks

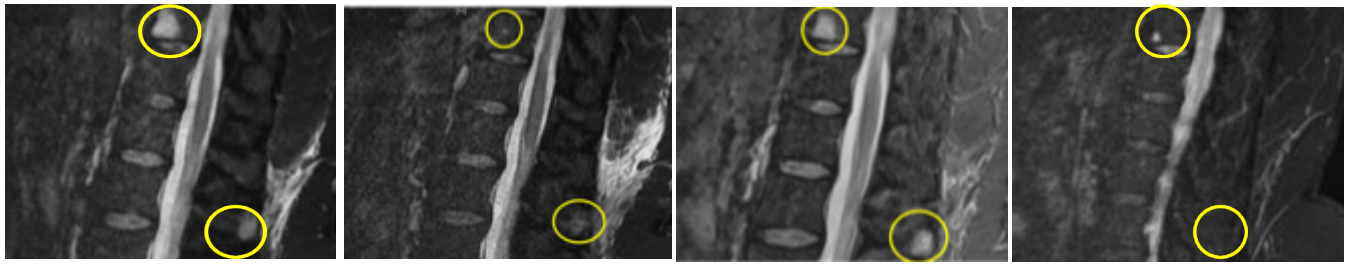
Complete Response | Partial Response | Stable Disease | Progressive Disease | Early

Patient #1 AML Clinical Course





57yo female with AML post multiple courses of chemoRx and allo-HSCT. First Rx with MultiTAA T cells during remission. Elevated AST was Rx with prednisone, causing relapse that resolved once prednisone was DC'd. Rx with decitabine led to a relapse. Rx with MultiTAA T cells led to CR.



Relapse | PR (Mo.5) | Post-decitabine | CR Post-T cell

Multiple Myeloma Phase I Interim Clinical Results

14 patients infused to date

No SAEs
No CRS

Active Disease Treatment

7 patients with Active Disease after ASCT

- 6 Evaluable patients (> 3 months follow-up)

Results:

- Overall responses: 4/6 (2CR; 2PR)
- Duration of 4 – 22 months (median 14 months)
- No disease progression to date
- 2 patients with stable disease (duration 3 – 8 months)

Adjuvant Treatment

7 Patients Treated In Remission after ASCT

- 4 patients treated <90 days after ASCT
- 3 patients treated >90 days after ASCT
- All Pts Evaluable (> 3 months follow-up)

Results:

- 7/7 patients with CR
- Duration of 4 – 22 months

Multiple Myeloma Clinical Trial Patient Profiles

Group A: > 90 days post autologous or syngeneic transplant

ID	Age/G	Status	Disease	Prior Treatments
1	53/M	Active	IgG-kappa	Bor/Dex → ASCT
5	61/M	In remission	IgG-kappa	RVD → ASCT
6	44/M	In remission	IgG-kappa	CyBorD → ASCT
13	47/M	In remission	IgG-kappa	RVD → ASCT
12	31/F	Active	IgG-kappa	VD
9	69/F	Active	IgG-kappa	VD → ASCT→ R→ Pom/Carf/D
15	70/M	Active	IgA-kappa	RVD → ASCT → R-vidaza → Pom/D → ibrutinib/Carf → dinaciclib/VD → CyBorD → Daratumumab → RD-Elot → Ixa/RD

Group B: < 90 days post autologous or syngeneic transplant

ID	Age/G	Status	Disease	Prior Treatments
2	40/M	Active	Free lambda	RVD → ASCT → Pom/Carf/D→ASCT
3	65/F	Active	IgG-kappa	RVD → ASCT → CyBorD → Carf/D→ ASCT
4	76/M	Active	IgG-kappa	CyBorD →ASCT
7	57/M	In remission	IgA-kappa	VTD → ASCT → Rd → Cy/Carf/D → ASCT
8	50/F	In remission	IgG-kappa	RVD → ASCT
10	53/M	In remission	IgG-lambda	VD→ RVD → ASCT
11	54/M	In remission	Free lambda	RVD/rituximab → Rd → ASCT

Data as of Oct 2017

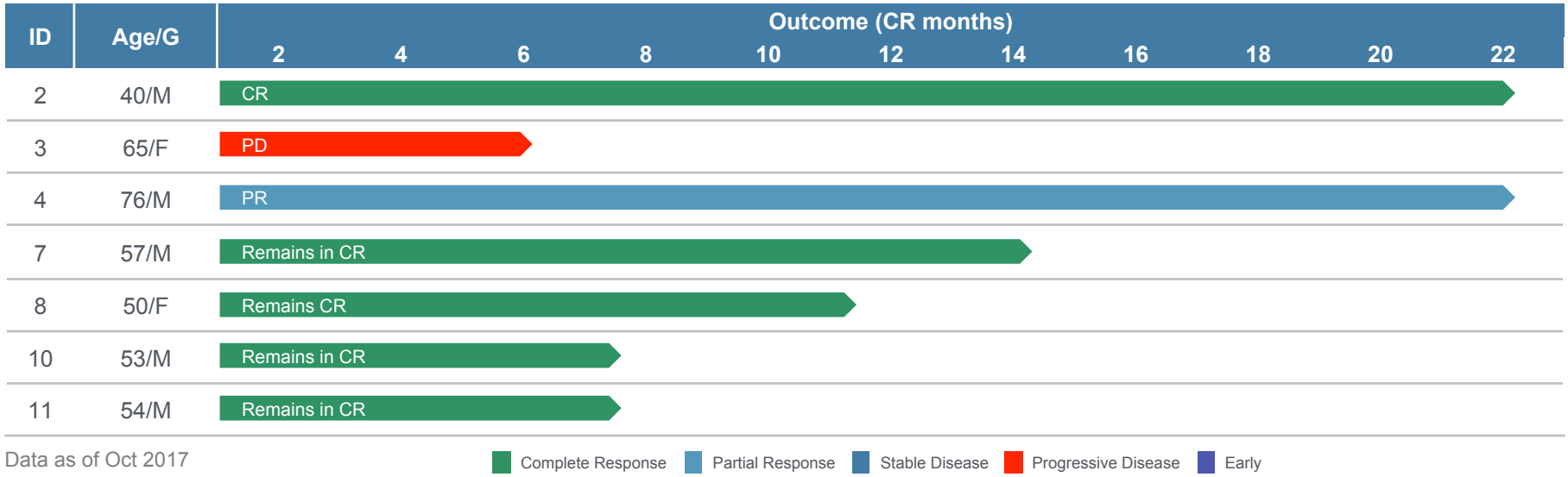
Multiple Myeloma Clinical Trial Outcomes

Group A: > 90 days post autologous or syngeneic transplant

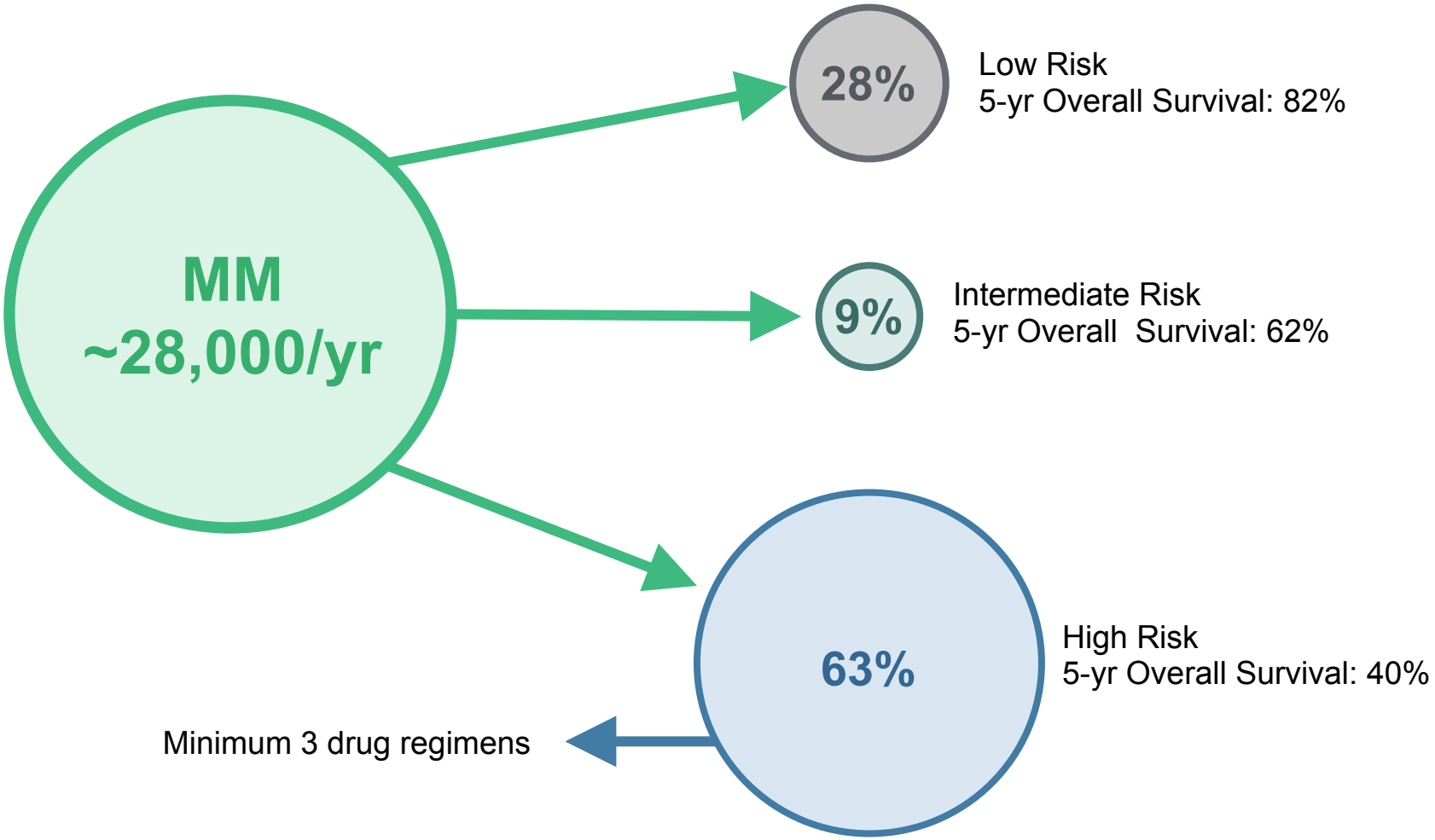
ID	Age/G	Outcome (CR months)
1	53/M	PR
5	61/M	Remains in CR
6	44/M	Remains in CR
13	47/M	Remains in CR
12	31/F	SD
9	69/F	SD
15	70/M	Too Early

Group B: < 90 days post autologous or syngeneic transplant

ID	Age/G	Outcome (CR months)
2	40/M	CR
3	65/F	PD
4	76/M	PR
7	57/M	Remains in CR
8	50/F	Remains CR
10	53/M	Remains in CR
11	54/M	Remains in CR



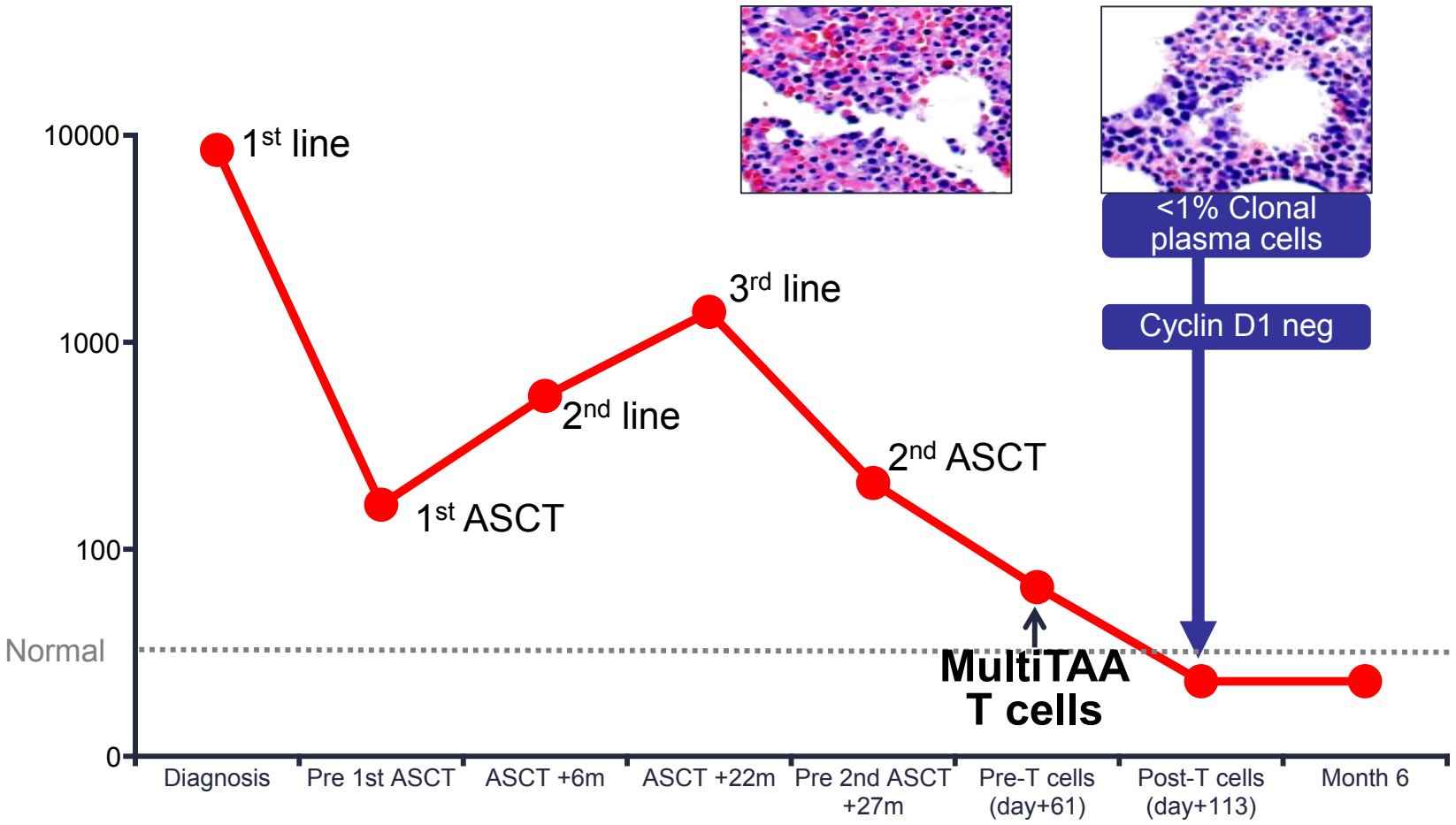
Multiple Myeloma Standard Therapy



Palumbo et al J *Clin Oncol* 2015

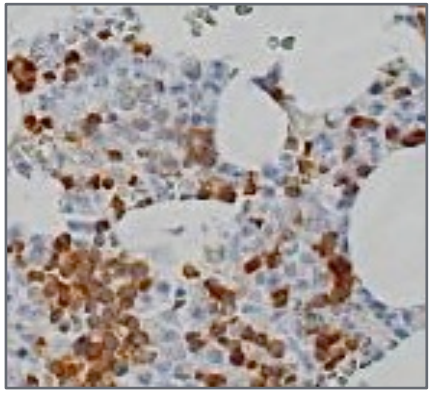
Patient #2 MM Clinical Course

Patient #2 received prior treatments including two stem cell transplants. After receiving a dose of Marker's T cells, the patient has been in complete remission



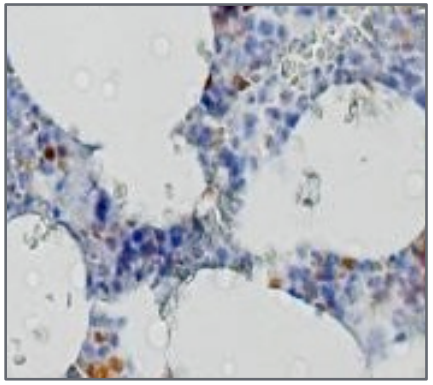
Patient #2 MM Clinical Course (cont'd)

Pre-Infusion (MAGE-A4)



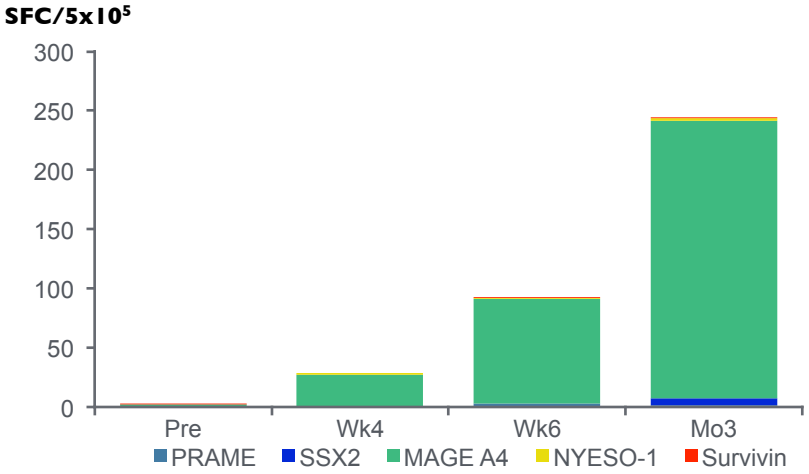
3+

8 Week Post-Infusion (MAGE-A4)

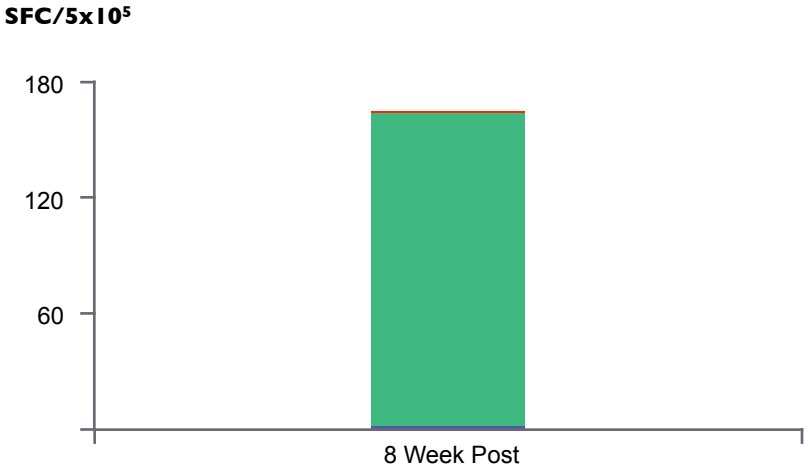


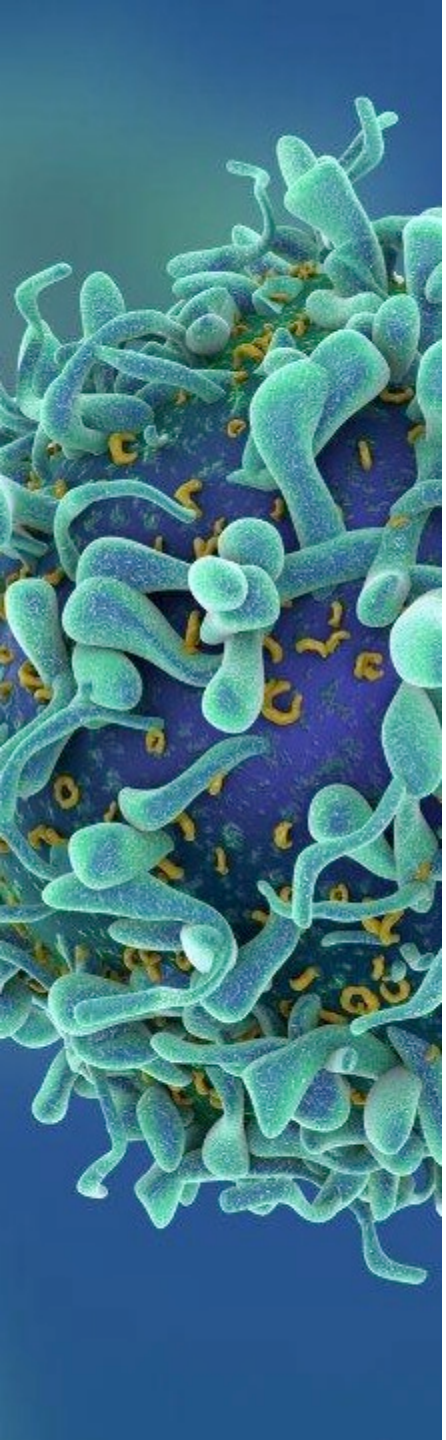
1+

PBMCs – Targeted Antigens



Marrow





Corporate & Proposed Transaction

Broad, Highly Synergistic Platform

TapImmune
Intellectual Property

- Nucleic Acid expression vector
- Nucleic acid-based vaccine compositions
- Prime / boost capability, peptide / nucleic acid
- Pre-clinical

+

TapImmune
Licensed, Mayo

- Antigenic Peptides (pre-screened)
- Peptide-based vaccine compositions
- Solid cancer indications
- Phase I and II Clinical Trials
- *In vivo*

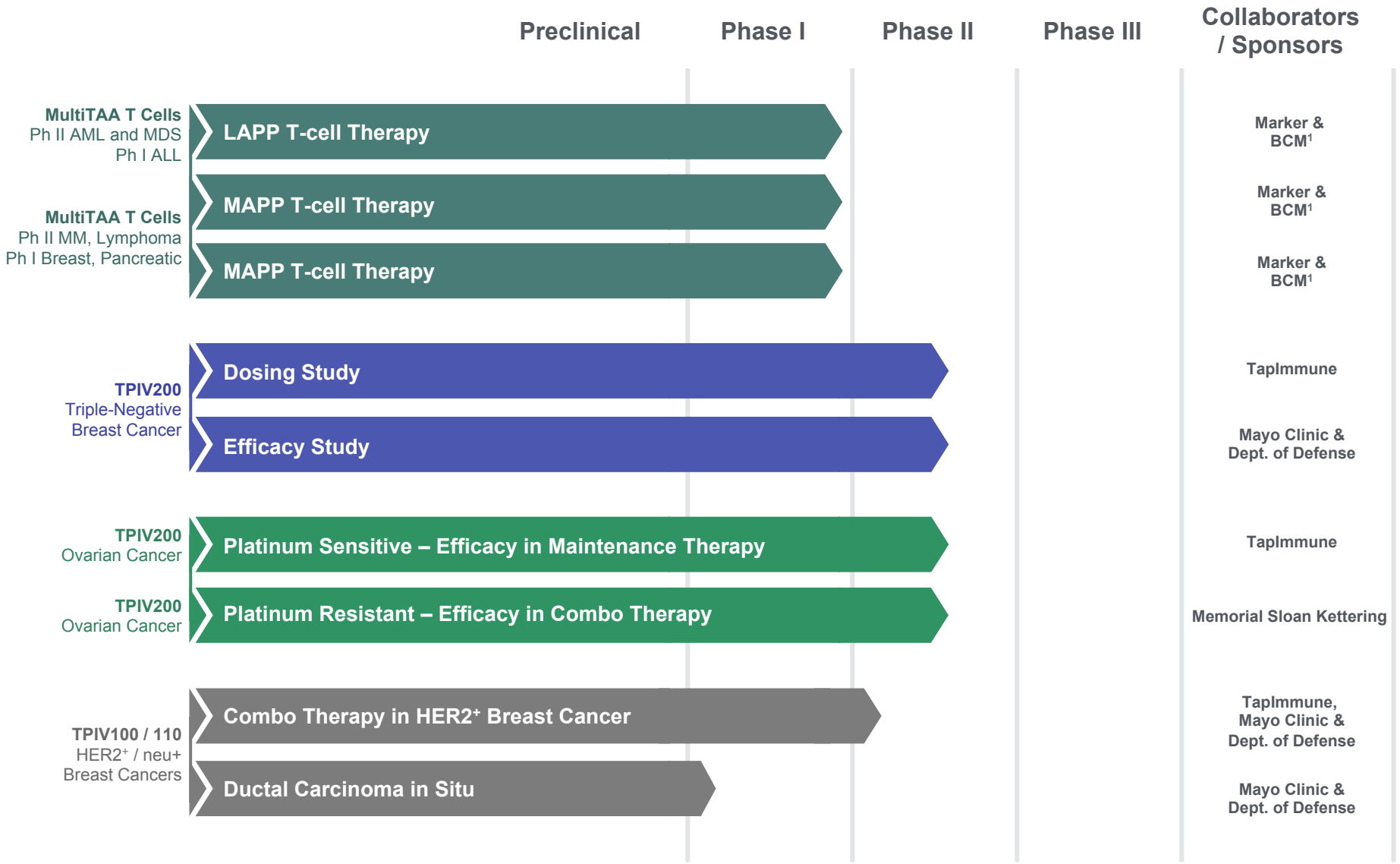
+

Marker
Licensed, BCM[1]

- Full length TAA / overlapping peptides
- Culture device / methodologies
- Hematologic cancer indications
- Phase I clinical trials
- Trade secrets and know how
- *ex vivo*, non-engineered T cell transfer
- Autologous or allogeneic

1. Baylor College of Medicine

Merger Creates Leading Combined Oncology Pipeline



1. Baylor College of Medicine

Strong Management Team

Peter Hoang

President & Chief Executive Officer

Mr. Hoang has twenty years of immuno-oncology, public company executive management, investment banking, and venture capital experience. Previously he was the SVP of Development and Strategy at Bellicum Pharmaceuticals , Inc. (NASDAQ:BLCM).

Michael Loiacono

Chief Financial Officer & Chief Accounting Officer

Mr. Loiacono has over 25 years of financial management experience. Previously, Michael was responsible for strategic development at FCTI, Inc. In 2013, FCTI, Inc. acquired Global Axcess Corp, a publicly-traded company, where Michael served as CFO since 2006. Michael oversaw the overall financial strategy of that Company.

Richard Kenney, MD

Chief Medical Officer

Dr. Kenney has 23 years of vaccine development experience. Prior to serving as CMO, Dr. Kenney was the CMO at Immune Design, where he led the clinical development of and regulatory interactions for the company's prime-boost immuno-therapeutics and cancer vaccines. Previously, Dr. Kenney led the clinical effort at various biotech companies after training at Duke, NIH, and FDA.

Juan Vera, MD

Chief Development Officer

Dr. Vera has 12 years of experience developing T cell therapies and optimizing manufacturing processes for clinical applications. He has been instrumental in the design and testing of the G-Rex cell culture platform and pioneered its use for large-scale production of T cells. Dr. Vera is an assistant professor at Baylor College of Medicine.

Ann Leen, PhD

Chief Scientific Officer

Dr. Leen is a distinguished immunologist who has over 15 years of experience utilizing immunogenic viral antigens in developing T cell-based therapies, receiving recognition by both the American Society of Bone Marrow Transplantation and Gene and Cell Therapy for her work in the field. Dr. Leen is an assistant professor at Baylor College of Medicine.

Seasoned Advisors with Subject Matter Expertise

Glynn Wilson, PhD

Dr. Wilson brings an extensive background of success in corporate management and product development with tenures in both major multinational pharmaceutical companies and start-up pharmaceutical / biotech organizations.

Malcom Brenner, MD, PhD

Dr. Brenner has devoted his career as a physician-scientist to the field of stem cell transplantation through the therapeutic use of T cell immunologic approaches and genetic engineering strategies. He is also a founding director of the Center for Cell and Gene Therapy at Baylor College of Medicine.

Cliona Rooney, PhD

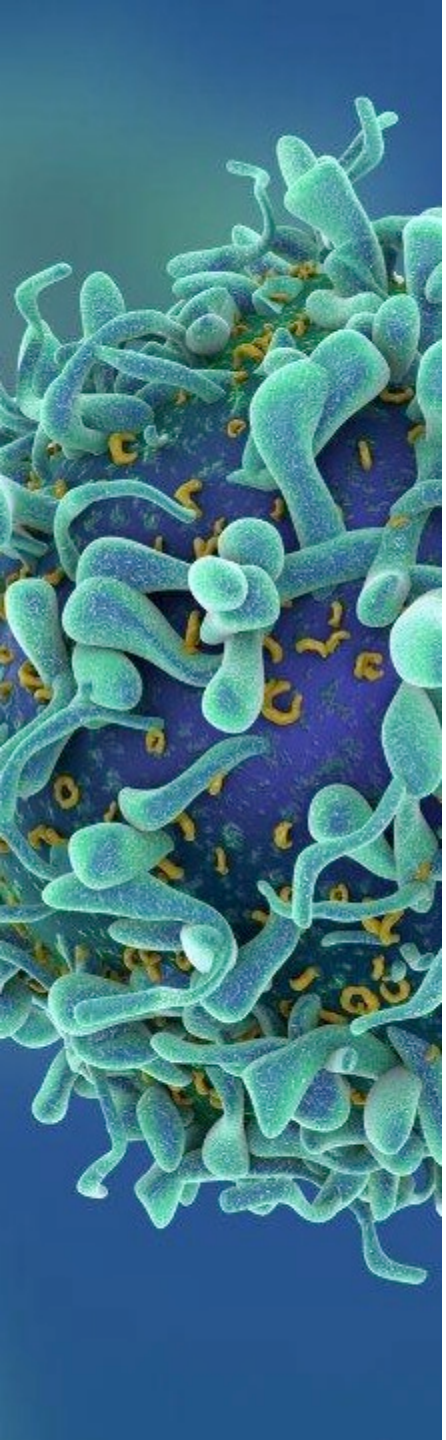
Dr. Rooney is a renowned virologist and immunologist as well as a Professor at the Baylor School of Medicine. She has conducted revolutionary studies involving antigen-specific T cells and received her PhD from the University of Cambridge.

Robert Florkiewicz, PhD

Dr. Florkiewicz has experience in both academic and biotechnology environments. Most recently he conducted research on human embryonic stem cell-based therapies at the University of Washington.

Ken Moseley

Mr. Moseley has over 25 years of licensing and patent experience. Previously, Ken served as General Counsel at Bellicum Pharmaceuticals , Inc. (NASDAQ:BLCM) where he also served as SVP of Intellectual Property & Legal Affairs.



Appendix

Lymphoma Clinical Trial Design

Present
(Phase I)

Eligibility

- Any patient > 18 years old with HL or NHL
- No lymphodepletion required
- Group A: Active disease or Group B: post-transplant (adjuvant)
- In 1st relapse for indolent lymphoma after 1st line
- In 1st relapse if chemotherapy contraindicated
- Primary refractory or persistent disease after 1st line therapy
- In 2nd or subsequent relapse
- Multiply relapsed patients in remission at a high risk of relapse
- Lymphoma as a second malignancy (e.g., Richter's)

Dosing

- 2 infusions 14 days apart (Day 0 and 14)
- Dose Levels:
  - DL1: $5x10^6$ cells / m^2
  - DL2: $1x10^7$ cells / m^2
  - DL3: $2x10^7$ cells / m^2

Future
(Phase II)

Patient Enrollment

- 45 active patients
- 60 adjuvant patients

Endpoints

- Primary: ORR at 1 month in active disease, 12 month RFS in adjuvant disease
- Secondary: 6 month CR in active patients

AML / MDS Clinical Trial Design

Present
(Phase I)

Eligibility

- Any patient with AML / MDS post allo-HSCT
- Donor-derived multiTAA T cells produced
- Group A: Adjuvant
  - Patients ≥ 30 days post allo-HSCT
- Group B: Active disease
  - Patients ≤ 30 days post allo-HSCT

Dosing

- DL1: $5x10^6$ cells / m^2
- DL2: $1x10^7$ cells / m^2
- DL3: $2x10^7$ cells / m^2

Future
(Phase II)

Patient Enrollment

- 30 on active disease arm
- 60 on adjuvant arm

Endpoints

- Primary: Overall response rate (ORR) @ 1 month in active, GRFS (GvHD / relapse free survival) @ 12 months in adjuvant
- Secondary: OS @ 6 months in active

Multiple Myeloma Clinical Trial Design

Present (Phase I)

Eligibility

- Any patient ≥ 18 years old with multiple myeloma (post completion of at least 1 treatment regimen)
- Group A: > 90 days post autologous or syngeneic transplant or no transplant
- Group B: < 90 days post autologous or syngeneic transplant
- No lymphodepletion before treatment

Dosing

- 2 infusions 14 days apart (Day 0 and 14)
- Dose Levels:
  - DL1: $5x10^6$ cells / m^2
  - DL2: $1x10^7$ cells / m^2
  - DL3: $2x10^7$ cells / m^2
  - DL4: $4x10^7$ cells / m^2

Future (Phase II)

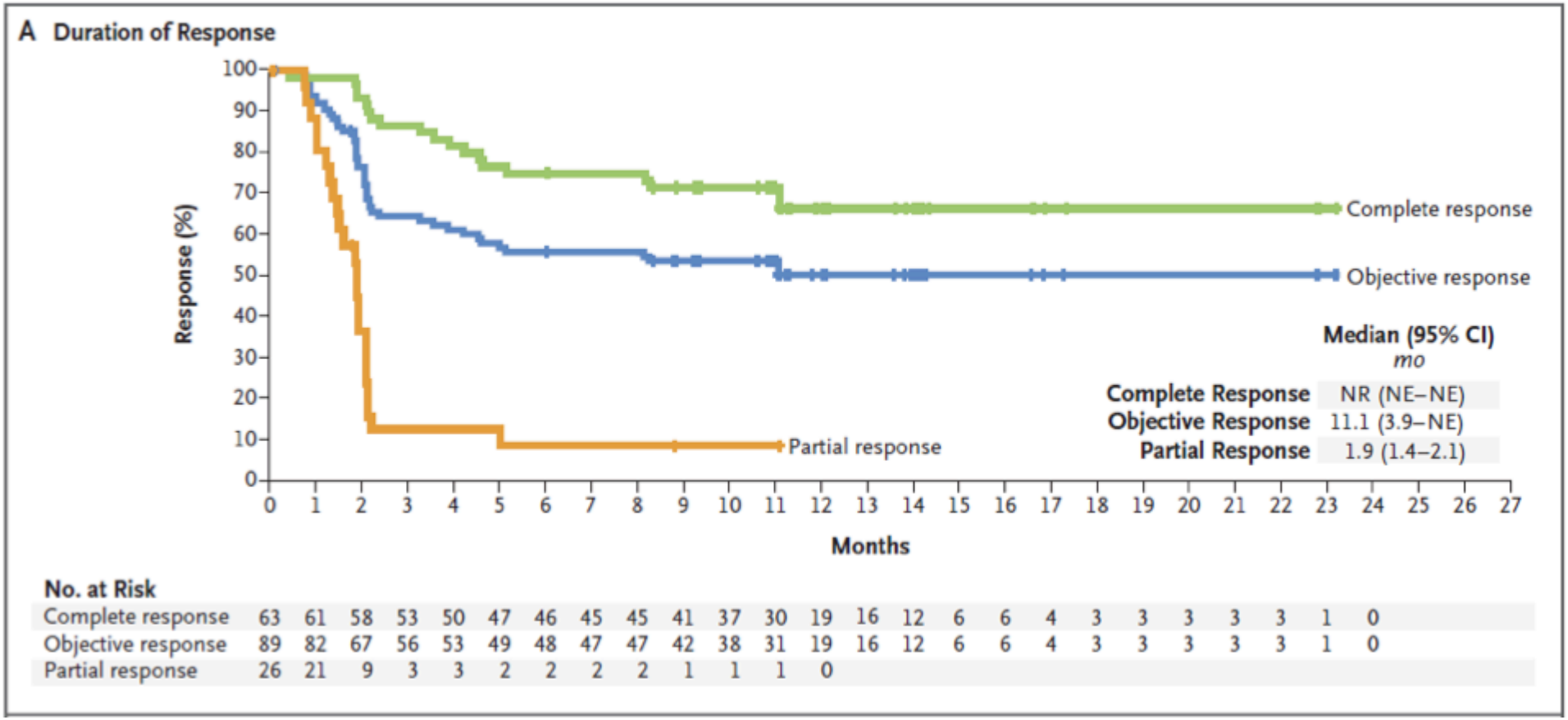
Patient Enrollment

- 60 patients, compare with historical controls

Endpoints

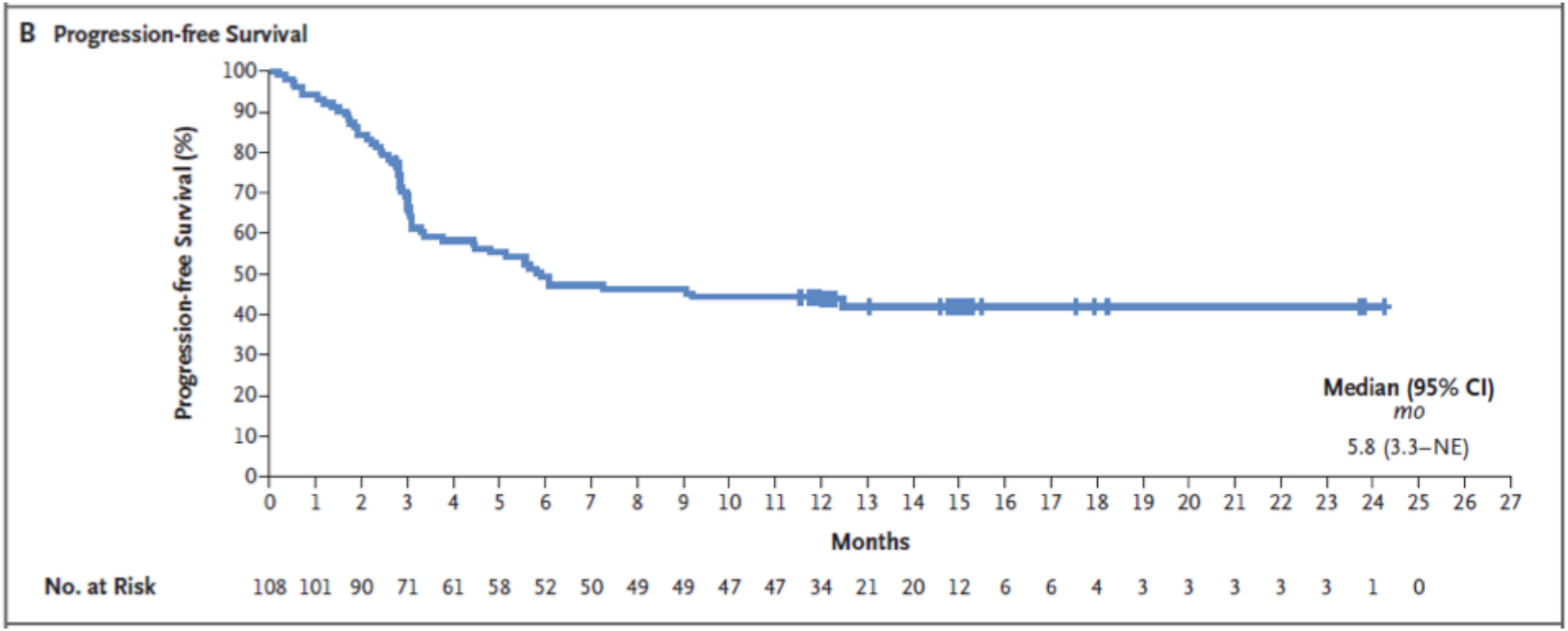
- Primary: MRD negative rate
- Secondary: PFS and OS

Kite's CAR-T Results: Duration of Response



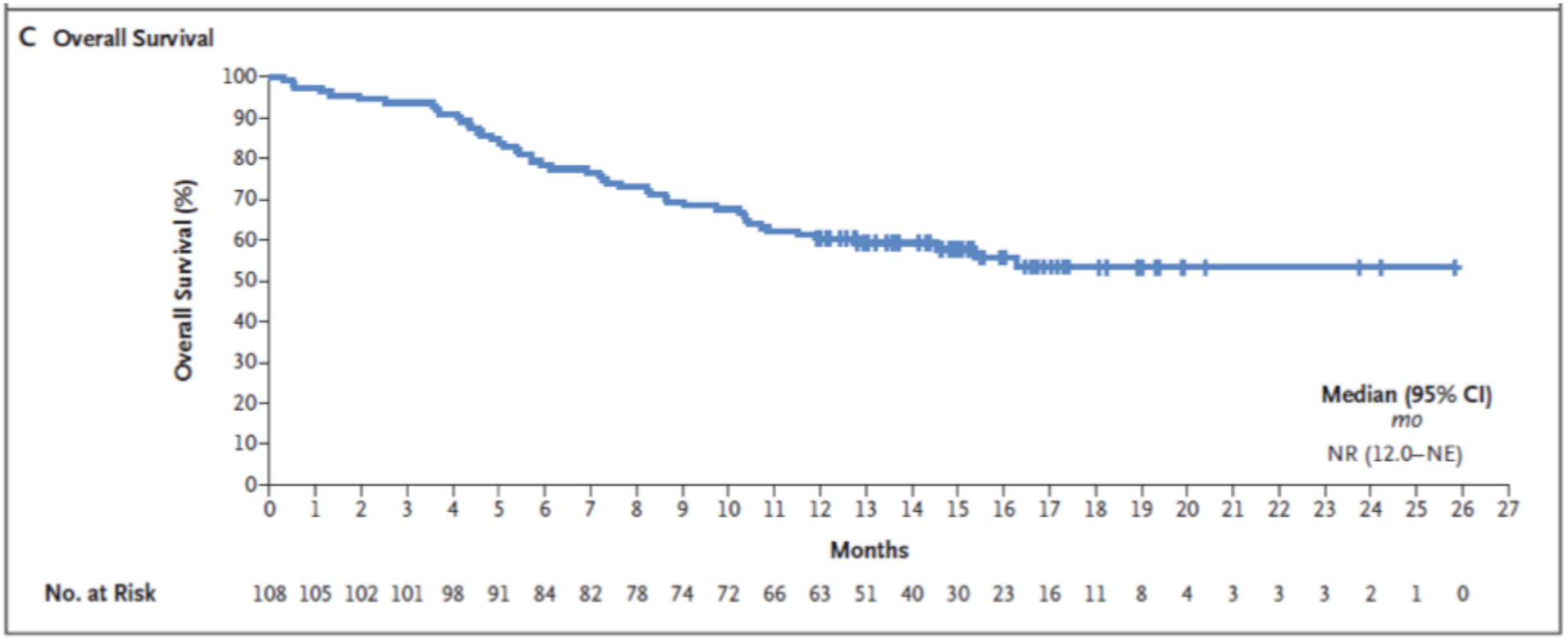
Source: NEJM Dec 28, 2017 (377.26) "Axicabtagene Ciloleucel CAR T-Cell Therapy in Refractory Large B-Cell Lymphoma"

Kite's CAR-T Results: Progression-free Survival



Source: NEJM Dec 28, 2017 (377.26) "Axicabtagene Ciloleucel CAR T-Cell Therapy in Refractory Large B-Cell Lymphoma"

Kite's CAR-T Results: Overall Survival



Source: NEJM Dec 28, 2017 (377.26) "Axicabtagene Ciloleucel CAR T-Cell Therapy in Refractory Large B-Cell Lymphoma"


Thank You