WVUMedicine

Taking a BiTE Out of the CAR T-Cell Therapy Space

Konstantinos Sdrimas, MD
Spencer K. Yingling, PharmD, BCOP
Stephen Yu, MD
Crystal Peck, RN, OCN, BMTCN

Objectives

- Summarize CAR T-cell therapy and bispecific T-cell engager (BiTE) therapy literature and toxicities
- Compare logistical considerations pertaining to CAR T-cell therapies and BiTE therapies
- Review patient cases assessing the need for specific cellular therapy treatments

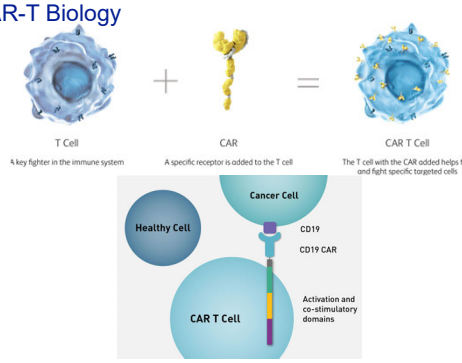
WVUMedicine

Lymphoma
Axicabtagene ciloleucel (YESCARTA™)
Brexucabtagene autoleucel (TECARTUS™)
Tisagenlecleucel (KYMRIAH™)
Lisocabtagene maraleucel (BREYANZI®)

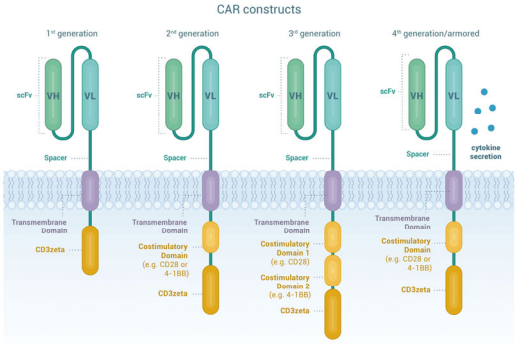
Multiple Myeloma
Idecabtagene vicleucel (ABECMA®)
Ciltacabtagene autoleucel (CARVYKTI™)

WVUMedicine

CAR-T Biology

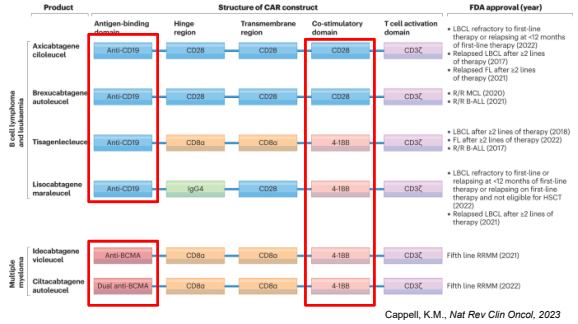


WVUMedicine



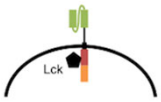
Benedetto et al, Haematologica, 2021

WVUMedicine



Cappell, K.M., *Nat Rev Clin Oncol, 2023*

WVUMedicine



CD28/CD3z CART T cells

- Rapid and strong signaling
- Effector cell-like phenotype
- Exhaust in an in vivo model of disseminated lymphoma
- Intense signal generation

Axi-cel (Yescarta)
<6 weeks persistence

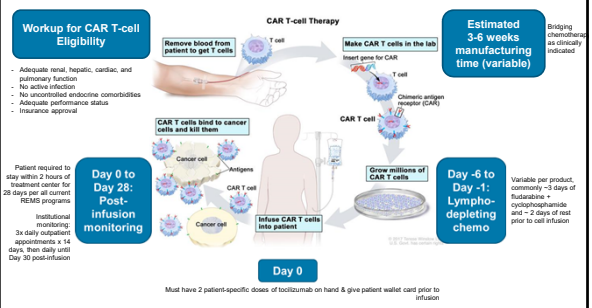
4-1BB/CD3z CART T cells

- Slow and weaker signaling
- Memory cell-like phenotype
- Resist exhaustion and prolong survival in an in vivo model of disseminated lymphoma

Tisa-cel (Kymriah)
Long term persistence
>1-7 years

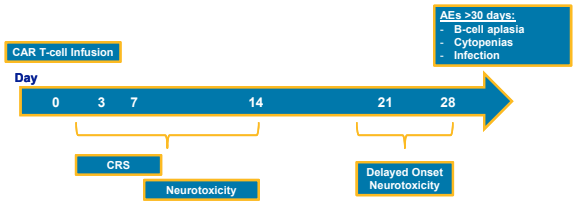
WVUMedicine

Manufacturing and Infusion



WVUMedicine

General Toxicity Timeline



*Patients instructed to avoid driving or operating heavy machinery for 8 weeks after cell infusion per REMS requirements

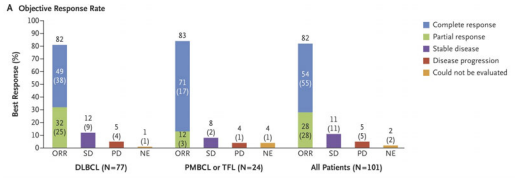
WVUMedicine

CAR-T Cell Product Name and FDA Approved Date	Indication(s)	Target Antigen
Kymriah® (tisagenlecleucel) - Approved by FDA in 2017	• Patients up to 25 years of age with B-cell precursor acute lymphoblastic leukemia (ALL) that is refractory or in second or later relapse. • Adult patients with relapsed or refractory (r/r) large B-cell lymphoma after two or more lines of systemic therapy, including diffuse large B-cell lymphoma (DLBCL) not otherwise specified, high grade B-cell lymphoma and DLBCL arising from follicular lymphoma. • Adult patients with relapsed or refractory follicular lymphoma (FL) after two or more lines of systemic therapy.	CD19
Yescarta® (axicabtagene ciloleucel) - Approved by FDA in 2017	• Adult patients with large B-cell lymphoma that is refractory to first-line chemoimmunotherapy or that relapses within 12 months of first-line chemoimmunotherapy. • Adult patients with relapsed or refractory large B-cell lymphoma after two or more lines of systemic therapy, including diffuse large B-cell lymphoma (DLBCL) not otherwise specified, primary mediastinal large B-cell lymphoma, high grade B-cell lymphoma, and DLBCL arising from follicular lymphoma. • Adult patients with relapsed or refractory follicular lymphoma (FL) after two or more lines of systemic therapy.	CD19
Tecartus® (brexucabtagene autoleucel) - Approved by FDA in 2020	• Adult patients with relapsed or refractory mantle cell lymphoma (MCL). • Adult patients with relapsed or refractory B-cell precursor acute lymphoblastic leukemia (ALL).	CD19
Breyanzi® (lisocabtagene maraleucel) - Approved by FDA in 2021	Adult patients with large B-cell lymphoma (LBCL), including diffuse large B-cell lymphoma (DLBCL) not otherwise specified (including DLBCL arising from indolent lymphoma), highgrade B-cell lymphoma, primary mediastinal large B-cell lymphoma, and follicular lymphoma grade 3B, who have: • refractory disease to first-line chemoimmunotherapy or relapse within 12 months of first-line chemoimmunotherapy; or • refractory disease to first-line chemoimmunotherapy or relapse after first-line chemoimmunotherapy and are not eligible for hematopoietic stem cell transplantation (HSCT) due to comorbidities or age; or • relapsed or refractory disease after two or more lines of systemic therapy.	CD19
Abecma® (idecabtagene vicleucel) - Approved by FDA in 2021	Adult patients with relapsed or refractory multiple myeloma after four or more prior lines of therapy, including an immunomodulatory agent, a proteasome inhibitor, and an anti-CD38 monoclonal antibody.	BCMA
Carvykti® (ciltacabtagene autoleucel) - Approved by FDA in 2022	Adult patients with relapsed or refractory multiple myeloma after four or more prior lines of therapy, including a proteasome inhibitor, an immunomodulatory agent, and an anti-CD38 monoclonal antibody.	BCMA

WVUMedicine

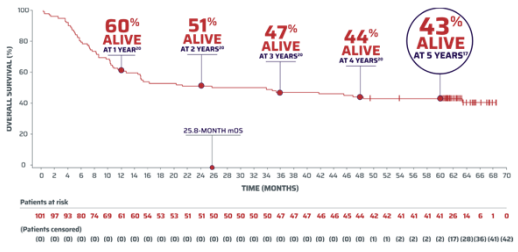
Yescarta (axi-cel)
ZUMA-1 trial, 2017

Approved for refractory or relapsed large B cell lymphoma after two or more lines of treatment, including DLBCL NOS, primary mediastinal lymphoma, transformed FL



WVUMedicine

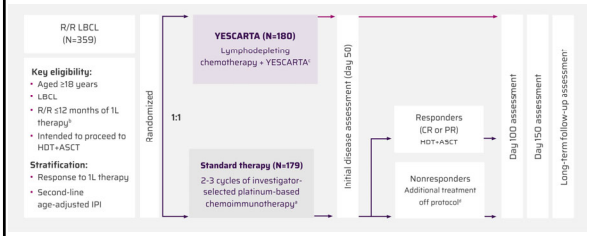
Yescarta (axi-cel)
ZUMA-1 trial, 2017



WVUMedicine

Yescarta (axi-cel)
ZUMA-7 trial, 2022

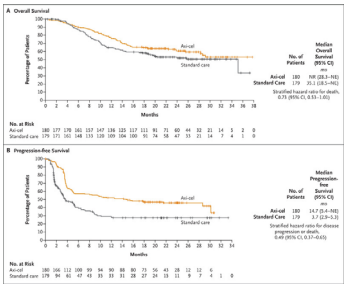
Approved for refractory or relapsed within 12 months large B cell lymphoma



WVUMedicine

Yescarta (axi-cel)
ZUMA-7 trial, 2022

Approved for refractory or relapsed within 12 months large B cell lymphoma

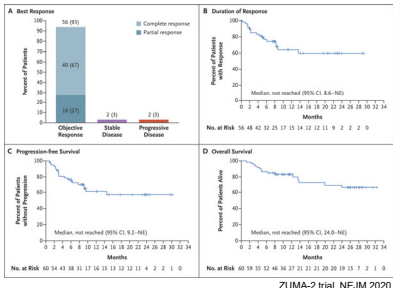


ZUMA-7. *NEJM*, 2022

WVUMedicine

Tecartus (brexu-cel)
ZUMA-2 trial, 2020

Approved for relapsed or refractory mantle cell lymphoma, adults with refractory or relapsed B-cell ALL

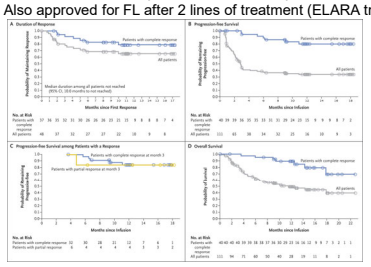


ZUMA-2 trial, NEJM 2020

WVUMedicine

Kymriah (tisa-cel)
JULIET trial, 2018

Approved for refractory or relapsed large B cell lymphoma after two or more lines of treatment.
Approved for refractory B cell ALL up to 25 yo or after second relapse.
Also approved for FL after 2 lines of treatment (ELARA trial).

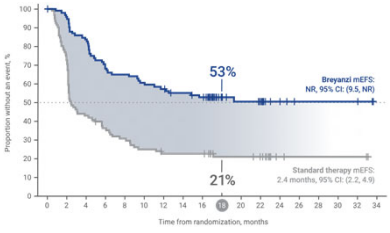


JULIET. *NEJM*, 2019

WVUMedicine

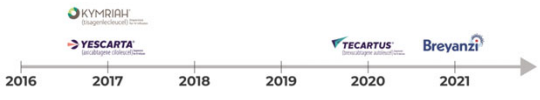
Breyanzi (liso-cel)
TRANSFORM trial, 2021

Approved for refractory or relapsed large B cell lymphoma after two or more lines of treatment, including DLBCL NOS, primary mediastinal lymphoma, transformed FL.
Approved for refractory or relapsed within 12 months large B cell lymphoma.



WVUMedicine

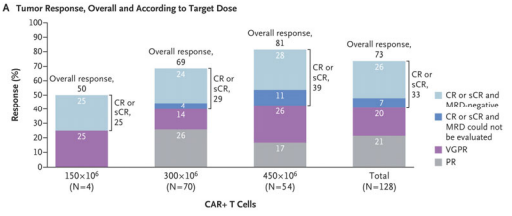
FDA approved CAR T-cell therapies



WVUMedicine

Abecma (ide-cel) KarMMa trial, 2021

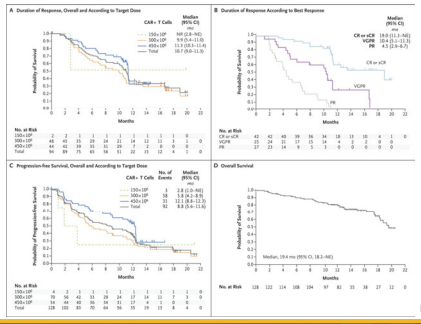
Approved for relapsed of refractory multiple myeloma after 4 lines of treatment



KarMMa. *NEJM*, 2021

WVUMedicine

Abecma (ide-cel) KarMMa trial, 2021

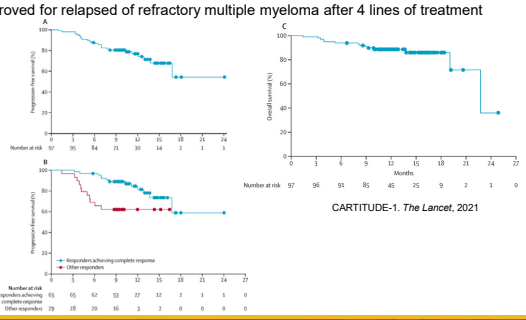


KarMMa. *NEJM*, 2021

WVUMedicine

Carvykti (cilta-cel) CARTITUDE trial, 2022

Approved for relapsed of refractory multiple myeloma after 4 lines of treatment



CARTITUDE-1. *The Lancet*, 2021

WVUMedicine

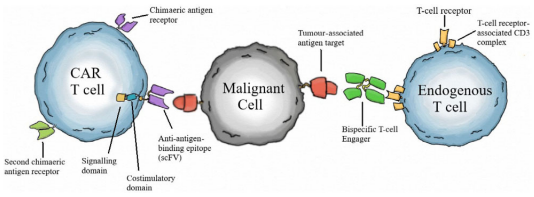
CAR T-Cell Therapy Logistics

- Finite treatment duration is great for some patients – "one and done" for now
- Social determinants of health may restrict some patients from receiving CAR T-cell therapy
- Manufacturing – possible delays (may not be great for those rapidly progressing)
- Possible needing for bridging chemo (may not be great for frail patients)
- Need for lymphodepleting chemotherapy
- Administration – recommended inpatient though many centers follow outpatient protocols

WVUMedicine

CAR T-Cell vs. BiTE Mechanisms

- CAR T-cells are retro-fitted with chimeric antigen receptors containing an antigen-binding epitope
- BiTEs connect patient's endogenous T-cell receptor with associated CD3 complex to tumor-specific antigens to lead to tumor cell death



WVUMedicine

Patel A, Olusola O, Savani B, Dholaria B. Taking a BiTE out of the CAR T space race. Br J Haematol. 2021 Dec;195(5):689-697. doi: 10.1111/bjh.17522. Epub 2021 Jun 15.

Paving the Way

Trial and Regimen	Patient Population	Dose	Results	FDA Approval
TOWER Phase 3 Blinatumomab vs. standard-of-care (SOC) chemotherapy	405 patients with R/R B-cell ALL	Continuous infusion Cycle 1: 9 mcg/day on days 1-7 28 mcg/day on days 8-28 of 42-day cycle Cycles 2-5: 28 mcg/day on days 1-28 of 42-day cycles Cycles 6-9: 28 mcg/day on days 1-28 of 84-day cycle	Median overall survival (OS): 7.7 months vs. 4.0 months (P=0.01) Complete remission (CR) with full hematologic recovery: 34% vs. 16% (P<0.001) Longer median duration of remission: 7.3 vs. 4.6 months Adverse events ≥grade 3: 87% vs. 92%	**First BiTE approved** December 3, 2014
GO29781 Phase 2 Mosunetuzumab-axgb	90 R/R follicular lymphoma patients s/p ≥2 lines of therapy, including anti-CD20 and alkylating agents	Intravenous Step-up dosing C1D1: 1 mg C1D8: 2 mg C1D15: 60 mg C2D1: 60 mg C3 and beyond: 30 mg	Objective response rate: 80% CR: 60% Median duration of response: 22.8 months Most common grade 3–4 adverse events: neutropenia, hypophosphatemia, hyperglycemia, and anemia	December 22, 2022

WVUMedicine

Przepiorka D, Ko CW, Deisseroth A, et al. FDA Approval: Blinatumomab. Clin Cancer Res. 2015 Sep 15;21(18):4035-9. doi: 10.1158/1078-0432.CCR-15-0612.
Kantarjian H, Stein A, Gökbuget N, et al. Blinatumomab versus Chemotherapy for Advanced Acute Lymphoblastic Leukemia. N Engl J Med. 2017 Mar 2;376(9):836-847. doi: 10.1056/NEJMoa1609783. PMID: 28249141; PMCID: PMC5881572
Budde LE, Sehn LH, Matasar M, et al. Safety and efficacy of mosunetuzumab, a bispecific antibody, in patients with relapsed or refractory follicular lymphoma: a single-arm, multicentre, phase 2 study. Lancet Oncol. 2022;23(8):1055-1065. doi: 10.1016/S1470-2045(22)00351-9

Lymphoma

Epcoritamab-bysp (Epkinly™)

Glofitamab-gxbm (Columvi™)

Multiple Myeloma

Teclistamab-cqyv (Tecvayli ®)

Talquetamab-tgvs (Talvey™)

Elranatamab-bcmm (Elrexfio™)

WVUMedicine

Additional BiTE Therapy Approvals

Approval Date	Agent	Target	Indication	Trial
October 25, 2022	**Teclistamab-cqyv (Tecvayli ®)**	BCMA	R/R multiple myeloma (MM) having received > 4 prior lines of therapy, including a proteasome inhibitor (PI), an immunomodulatory agent (IMiD), and an anti-CD38 monoclonal antibody	MajesTEC-1
May 19, 2023	**Epcoritamab-bysp (Epkinly™)**	CD20	R/R diffuse large B-cell lymphoma (DLBCL) not otherwise specified (NOS), including DLBCL arising from indolent lymphoma, and high-grade B-cell lymphoma (HGBL) after ≥ 2 lines of systemic therapy	EPCORE NHL-1
June 15, 2023	**Glofitamab-gxbm (Columvi™)**	CD20	R/R DLBCL-NOS or large B-cell lymphoma arising from follicular lymphoma (FL) after ≥ 2 lines of systemic therapy	NP30179
August 9, 2023	**Talquetamab-tgvs (Talvey™)**	GPRC5D	R/R MM having received > 4 prior lines of therapy, including a PI, IMiD, and an anti-CD38 monoclonal antibody	MMY1001 (MonumenTAL-1)
August 14, 2023	**Elranatamab-bcmm (Elrexfio™)**	BCMA	R/R MM having received > 4 prior lines of therapy, including a PI, IMiD, and an anti-CD38 monoclonal antibody	MagnetisMM-3

Center for Drug Evaluation and Research. Oncology (cancer) / hematologic malignancies approval notifications. U.S. Food and Drug Administration. https://www.fda.gov/drugs/resources-information-approved-drugs/oncology-cancer-hematologic-malignancies-approval-notifications

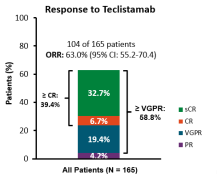
WVUMedicine

Teclistamab-cqyv (Tecvayli®)

MajesTEC-1	
Objective	Assess the efficacy and safety of teclistamab in patients with R/R MM
Methods	Phase 1-2 study in RRMM after ≥3 lines of therapy including triple-class exposure to IMiD, PI, and anti-CD38 antibody
Patients	N=165 • Median age: 64 years (33-84) • Median number of prior lines of therapy: 5 • 77.6% triple-class refractory • 26% high-risk cytogenetics • 17% extramedullary disease
Outcomes	Primary: overall response rate (ORR) (partial response or better)

WVUMedicine

MajesTEC-1: Results



Outcomes	Patients (N=165)
MRD negativity at 10^{-5}, n (%)	44 (26.7)
Median DoR, mo	18.4
Median PFS, mo	11.3
Median OS, mo	18.3
TTR, mo	First: 1.2 months Best: 3.8 months

MRD, minimal residual disease; DoR, duration of response; PFS, progression free survival; OS, overall survival; TTR, time to response

Safety	
Neutropenia, 70.9%	**CRS**, 72.1% (grade 3/4, 0.6%)
Anemia, 52.1%	**Neurotoxic event**, 14.5% (grade 3/4, 0.6%)
Thrombocytopenia, 40%	**Infections**, 76.4%

CRS, cytokine release syndrome

WVUMedicine

Talquetamab-tgvs (Talvey™)

MonumenTAL-1	
Objective	Assess the efficacy and safety of talquetamab in patients with R/R MM
Methods	Phase 1-2 study in RRMM after ≥3 lines of therapy including triple-class exposure to IMiD, PI, and anti-CD38 antibody
Patients	N=130 • Median age: 64 years (34-84) • Median number of prior lines of therapy: 6 • 75% triple-class refractory • 16% high-risk cytogenetics • 32% extramedullary disease
Outcomes	Primary: frequency and type of dose-limiting toxic effects (study part 1 only)

Subcutaneous administration

TALVEY™ WEEKLY DOSING SCHEDULE

Dosing schedule	Day	Dose*
Step-up dosing schedule	Day 1	Step-up dose 1: 0.01 mg/kg
	Day 4*	Step-up dose 2: 0.06 mg/kg
	Day 7*	First treatment dose: 0.4 mg/kg
Weekly dosing schedule	One week after first treatment dose and weekly thereafter†	Subsequent treatment doses: 0.4 mg/kg once weekly

OR

TALVEY™ BIWEEKLY (EVERY 2 WEEKS) DOSING SCHEDULE

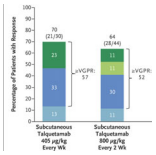
Dosing schedule	Day	Dose*
Step-up dosing schedule	Day 1	Step-up dose 1: 0.01 mg/kg
	Day 4*	Step-up dose 2: 0.06 mg/kg
	Day 7*	Step-up dose 3: 0.4 mg/kg
	Day 10*	First treatment dose: 0.8 mg/kg
Biweekly (every 2 weeks) dosing schedule	Two weeks after first treatment dose and every 2 weeks thereafter†	Subsequent treatment doses: 0.8 mg/kg every 2 weeks

WVUMedicine

MonumenTAL-1 Results

Safety		
Common Adverse Events	**Weekly Dosing (n=30)** *Any grade | Grade 3-4*	**Biweekly Dosing (n=44)** *Any grade | Grade 3-4*
CRS	77% | 3%	80% | 0%
Neurotoxicity	10% | 0%	5% | 0%
Skin-related events	67% | 0%	70% | 2%
Nail-related events	57% | 0%	27% | 2%
Dysgeusia	63% | N/A	57% | N/A
Neutropenia	67% | 60%	36% | 32%

CRS, cytokine release syndrome



Outcomes	Patients (N=74)
Median DoR, mo	Weekly: 10.2 Biweekly: 7.8
Median TTR, mo	Weekly: 0.9 Biweekly: 1.2

DoR, duration of response; TTR, time to response

WVUMedicine

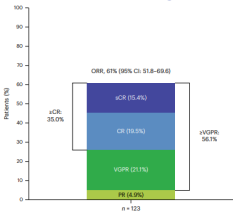
Elranatamab-bcmm (Elrexfio™)

MagnetisMM-3	
Objective	Assess the efficacy and safety of elranatamab in patients with R/R MM
Methods	Phase 2 study in RRMM after ≥3 lines of therapy including triple-class refractory to IMiD, PI, and anti-CD38 antibody
Patients	N=123 • Median age: 68 years (36-89) • Median number of prior lines of therapy: 5 • 96.7% triple-class refractory • 25.2% high-risk cytogenetics • 31.7% extramedullary disease
Outcomes	Primary: ORR

Subcutaneous administration

WVUMedicine

MagnetisMM-3 Results



Outcomes	
MRD negativity at 10^{-5}, n (%)	23 (92)
Median DoR	Not reached (71.5% probability of maintaining response at 15 months)
Median PFS and OS	Not reached at 12 months
PFS Rate	57.1% at 12 months
OS Rate	62% at 12 months
TTR	1.7 months

Safety (n=123), Any Grade	
Neutropenia, 60 (48.8)	**Thrombocytopenia**, 38 (30.9)
Anemia, 60 (48.8)	**Injection site reaction**, 33 (26.8)

Safety (n=119)	
CRS	**ICANS**
67 (56.3)	4 (3.4)
Time to Onset, 2 days	Time to Onset, 2.5 days

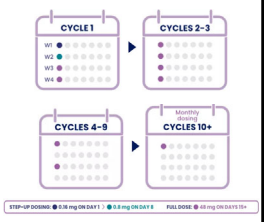
CRS, cytokine release syndrome; ICANS, immune effector cell-associated neurotoxicity syndrome

WVUMedicine

Epcoritamab-bysp (Epkinly™)

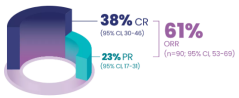
EPCORE NHL-1	
Objective	Assess the efficacy and safety of epcoritamab in patients with R/R DLBCL, NOS, including DLBCL arising from indolent lymphoma, and HGBL
Methods	Phase 1-2 study in patients with LBCL ≥ 2 lines of systematic therapy including at least one anti-CD20 monoclonal antibody-containing therapy
Patients	N=157 • Median age: 65 years (22-83) • Median number of prior lines of therapy: 3 • 60% primary refractory • 18% prior autologous stem cell transplant • 39% prior CAR T-cell therapy
Outcomes	Primary: ORR

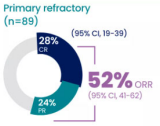
Subcutaneous administration



WVUMedicine

EPCORE NHL-1 Results





Outcomes (n=148)	
MRD negativity at 10^{-5}, n (%)	52/112 (46.4)
Median DoR (CR)	20.8 months
Median PFS	Not reached
Median OS	18.5 months
TTR	2.7 months

Safety, Any Grade	
Neutropenia, 24%	**Fatigue**, 23%
Pyrexia, 24%	**Nausea**, 22%
Diarrhea, 21%	**CRS**, 51% (grade 3, 3%)

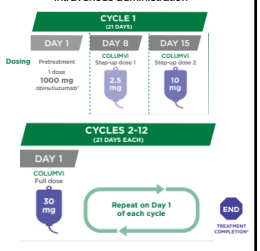
CRS, cytokine release syndrome

WVUMedicine

Glofitamab-gxbm (Columvi™)

NP30179	
Objective	Assess the efficacy and safety of glofitamab in patients with R/R DLBCL NOS, transformed FL, HGBL, or primary mediastinal large B-cell lymphoma
Methods	Phase 2 study in patients with LBCL ≥ 2 lines of systematic therapy including at least one anti-CD20 monoclonal antibody-containing therapy and one anthracycline-containing regimen
Patients	N=155 • Median age: 66 years (21-90) • Median number of prior lines of therapy: 3 • 58% primary refractory • 30% prior CAR T-cell therapy
Outcomes	Primary: CR

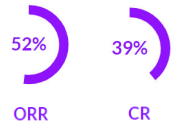
Intravenous administration



~8.5-month fixed-duration therapy

WVUMedicine

NP30179 Results



Outcomes (n=155)	
Median DoR	18.4 months
Median PFS	4.9 months
Median OS	11.5 months*
TTR	42 days

*Per investigator, not independent review committee

Safety, Any Grade (n=154)	
Neutropenia, 38%	**Fatigue**, 23%
Anemia, 31%	**Thrombocytopenia**, 25%

Safety Continued		
Event	**CRS**	**Neurologic**
Occurrence	63%* (≥ grade 3, 4%)	8% (≥ grade 3, 3%)
Onset	13.5 hours^	N/A

*Per ASTCT grading; ^From cycle 1, day 8 dose

CRS, cytokine release syndrome

WVUMedicine

BiTE Therapy Logistics

Available off-the-shelf
Ready-to-use, single-dose vials
Rapid subcutaneous administration for most products
Extended dosing intervals for most products
Fixed dose options available
Inpatient versus outpatient administration

BiTE Therapy Costs

- Overall cost of a CAR T-cell therapies can potentially reach $450,000
  - Depending on presence/severity of adverse effects, inpatient vs. outpatient administration, nursing/infusion center costs, pharmaceutical company
- $2,554.74 per vial of glofitamab
  - $30,656.88 for 12 cycles
- What about continuous duration administration?

BiTE Therapy Costs

- Elranatamab's total Wholesale Acquisition Cost (WAC):

	One 76 mg/1.9 mL (40 mg/mL) single-dose vial in a carton	One 44 mg/1.1 mL (40 mg/mL) single-dose vial in a carton
NDC	0069-4494-02	0069-2522-02
WAC	$13,050.72 per 1.9 mL vial	$7,555.68 per 1.1 mL vial

Months 1-6	Months 7-12
Average: ~$54.7K / mo.	Average: ~$28.3K / mo.

Average total cost of treatment for Year 1: ~$41.5K / month

- Pfizer will provide elranatamab-bcmm 44 mg vials free of charge to support inpatient administration and monitoring for first two step-up doses

Sequencing

Agent	Trial	Results
Teclistamab	MajesTEC-1, cohort C	40 patients with prior BCMA-directed therapies - 52.5% ORR - 15 prior CAR T patients → 53.3% ORR
Talquetamab	MonumenTAL-1	16 patients with prior BCMA-directed therapies - 50% ORR
Elranatamab	MagnetisMM-3, cohort B	87 patients with prior BCMA-directed therapies - 46% ORR - 36 prior CAR T patients → 52.8% ORR
Epcoritamab	EPCORE NHL-1	61 patients with prior CAR T-cell therapy - 54.1% ORR, 34.4% CR rate, 9.7 months mDOR
Glofitamab	NP30179	51 patients with prior CAR T-cell therapy - 35% CR

Patient Cases

63 Male with Multiple Myeloma

- Presented with rib pain and renal failure (creatinine of 4.35)
- Work up showed concern for multiple myeloma
  - Lambda light chain 9996.9
  - Durie-Salmon Stage IIIb
- Underwent bone marrow biopsy confirming multiple myeloma with 24% plasma cells and multiple areas of bone involvement on skeletal survey
- Initially started on Velcade (Bortezomib) and Dexamethasone and later had improved kidney function so added on Cytoxan (Cyclophosphamide)
- Completed 4 cycles of Cyclophosphamide + Bortezomib + Dexamethasone then referred for autologous hematopoietic transplant

63 Male with Multiple Myeloma (continued)

- Post-treatment bone marrow biopsy showed no morphologic or immunophenotypic evidence of residual plasma cell myeloma
  - FISH showed residual complex cytogenetics
- Underwent conditioning with melphalan and received autologous hematopoietic transplant
- Post-transplant course uncomplicated and was started on Revlimid (Lenalidomide), Velcade (Bortezomib) and Dexamethasone for maintenance therapy
  - Developed generalized blisters and purplish rash thought to be from Revlimid
  - Changed therapy to Pomalyst (Pomalidomide) + Velcade + Dexamethasone for 2 weeks, but had to discontinue Pomalidomide due to increasing creatinine.
  - Continued on Velcade + Dexamethasone
- No evidence of progression for 1 year after his autologous transplant and continued to follow with local oncologist

WVUMedicine

63 Male with Multiple Myeloma (continued)

- 1 year and 2 months after his transplant, lambda light chain levels started to rise
- Local oncologist started patient on Daratumumab + Pomalidomide + Dexamethasone for relapsed/refractory disease, but still continued to see progression based on light chain levels
- Switched to Carfilzomib + Xpovio (Selinexor), but continued to see progression in 6/2020
- Started on Cyclophosphamide + Bortezomib + Dexamethasone, but continue to see progression of disease
- Switched treatment to Blenrep (Belantamab) which showed response, but had patient experienced decreased visual acuity few months after initiation
- Started on Elotuzumab + Pomalidomide + Dexamethasone with evidence of progression of disease, rapid increase in light chains and worsening creatinine

WVUMedicine

What would you do?

Chimeric antigen receptor T-cell (CAR-T) therapy

Or

Bispecific T-cell engager (BiTE) therapy

WVUMedicine

60 Male with Diffuse Large B-cell Lymphoma

- Initially underwent cholecystectomy for cholecystitis but persisted to have pain for few months
- CT abdomen showed hepatic and pulmonary lesions and surrounding lymphadenopathy
- PET-CT showed activity in the liver, lungs, and lymph nodes
- Hepatic lesion biopsy showed diffuse large B-cell lymphoma
- Underwent treatment with Rituximab, Cyclophosphamide, Doxorubicin, Vincristine and Prednisone (R-CHOP) for 6 cycles

WVUMedicine

60 Male with Diffuse Large B-cell Lymphoma (continued)

- Referred for salvage therapy and autologous hematopoietic transplant evaluation
- Patient received 2 cycles of Rituximab, Ifosfamide, Carboplatin, Etoposide (R-ICE) with partial response
- Plan for autologous hematopoietic transplant
- Collection was unsuccessful despite best attempt for stem cell mobilization with Plerixafor

WVUMedicine

What would you do?

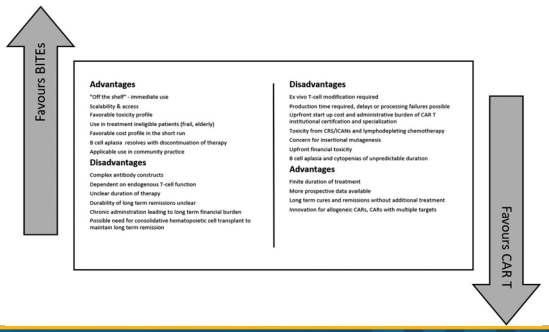
Chimeric antigen receptor T-cell (CAR-T) therapy

Or

Bispecific T-cell engager (BiTE) therapy

WVUMedicine

Conclusions



WVUMedicine

Patel A, Olowole O, Savani B, Dholaria B. Taking a BiTE out of the CAR T space race. Br J Haematol. 2021 Dec;195(5):689-697. doi: 10.1111/bjh.17522. Epub 2021 Jun 15.

Questions?

WVUMedicine

WVUMedicine

Taking a BiTE Out of the CAR T-Cell Therapy Space

Konstantinos Sdrimas, MD
Spencer K. Yingling, PharmD, BCOP
Stephen Yu, MD
Crystal Peck, RN, OCN, BMTCN