THE UNIVERSITY OF KANSAS
CANCER CENTER

REMS at a Crossroads: What Real-World Practice Tells Us About Bispecific Safety

Zahra Mahmoudjafari, PharmD, MBA, BCOP, FHOPA
Clinical Pharmacy Manager
Division of Hematologic Malignancies & Cellular Therapeutics

Background

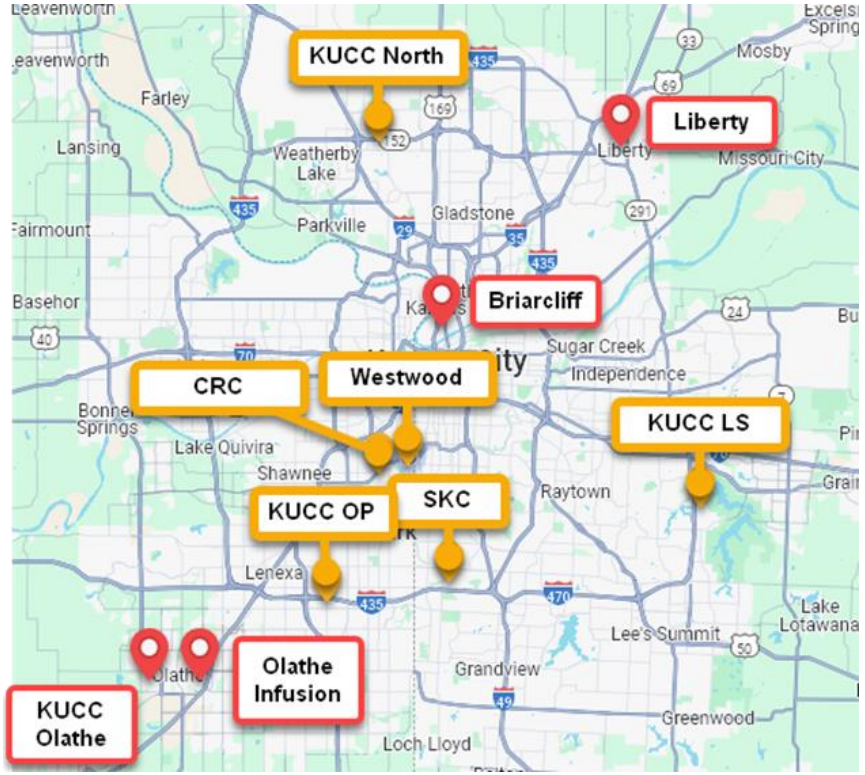
- Clinical pharmacy manager since 2019 within the Division of Hematologic Malignancies & Cellular Therapeutics (HMCT)
- Authorized representative for all REMS programs (HMCT)
  - CAR-T (previously)
  - Bi-specifics (BsAbs)
    - Teclistamab
    - Talquetamab
    - Elranatamab
    - Linvoseltamab
  - Belantamab
  - Quizartinib

By the end of this session, my goal is to have a dialogue about continued partnership to ensure patient safety and compliance based on real-world experience at a large academic medical center administering bispecific therapies

THE UNIVERSITY OF KANSAS
CANCER CENTER

The University of Kansas Health System

- Leading academic medical center in Kansas City, KS
- Only National Cancer Institute designated comprehensive cancer center in the state of KS
- >1000 acute care beds (3 acute care hospitals)
- Varying delivery models but one medical record & access to resources
  - 7 ambulatory sites for patients with cancer
    - Main ambulatory location→ Westwood
    - Satellite/community sites throughout the metropolitan area



Overview

- Orientation to multiple myeloma & BsAbs
- REMS for myeloma BsAbs and requirements
- Real world burden & misalignment with practice
- How centers build safe systems that are REMS agnostic
- Where REMS should evolve to support and not hinder care

Introduction

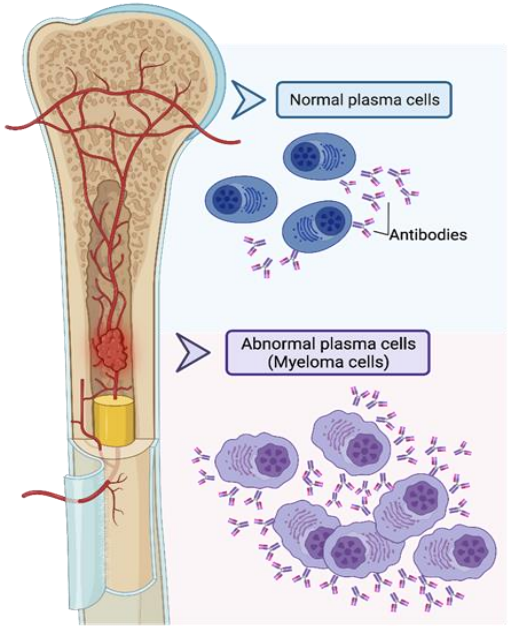
- BsAbs have reshaped the treatment landscape for a number of disease states including multiple myeloma, bringing efficacy alongside unique toxicities including cytokine release syndrome (CRS) & immune effector-cell associated neurotoxicity syndrome (ICANS)

- As a result of these toxicities in multiple myeloma, a risk evaluation and mitigation strategies (REMS) program was implemented to standardize monitoring and ensure safe administration-**but is it still needed**?

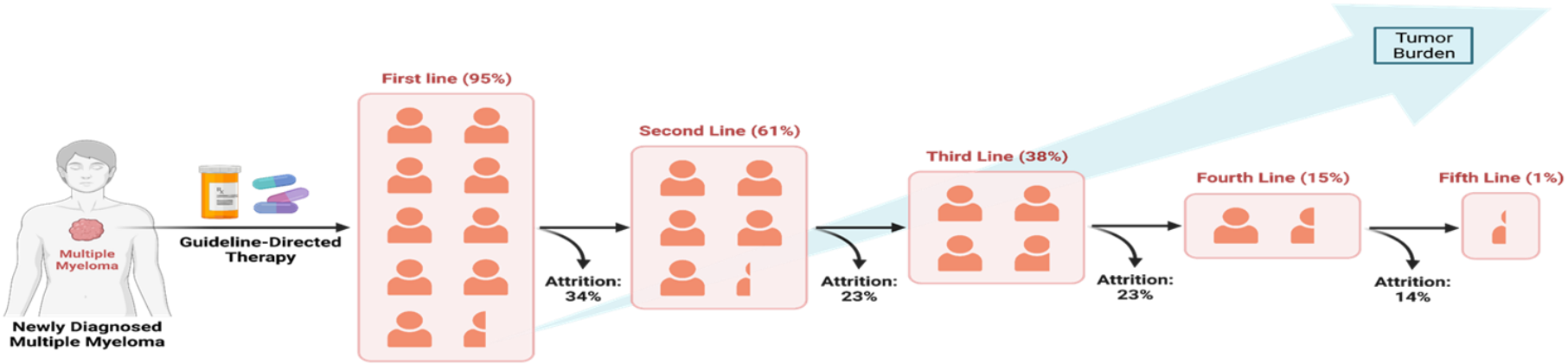
Multiple Myeloma: Background and Introduction to Bispecifics

THE UNIVERSITY OF KANSAS
CANCER CENTER

Overview of Multiple Myeloma



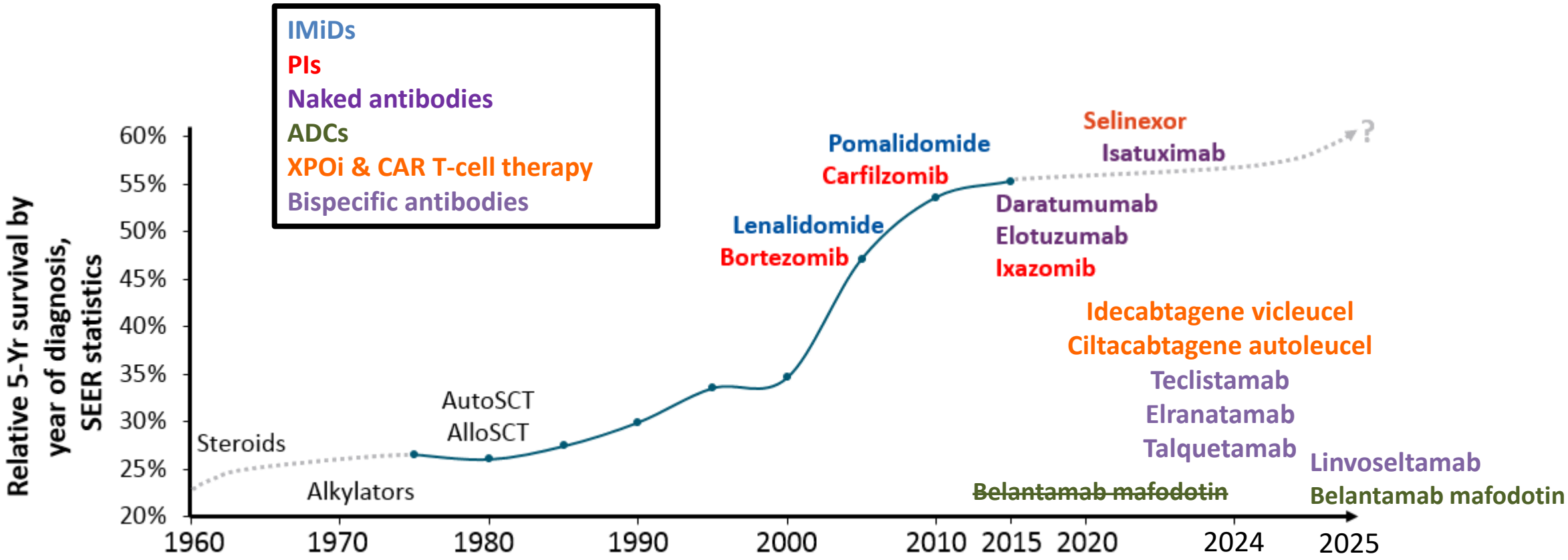
- Hematologic malignancy characterized by uncontrolled proliferation of plasma cells
- Typical events include hypercalcemia, bone disease, anemia, and renal dysfunction
- US prevalence in 2026: estimated 36,000 new cases
  - 1.8% of all cancers and 10% of all hematologic cancers



Rajkumar SV. Am J Hematol. 2022;97:1086-1107; National Cancer Institute. SEER Cancer Stat Facts: Myeloma, American Cancer Society. Key statistics about multiple myeloma. Published January 12, 2023. www.cancer.org/cancer/multiple-myeloma/about/key-statistics.html; Image created with BioRender.com; Yong K, et al. Br J Haematol. 2016;175(2):252-264.

THE UNIVERSITY OF KANSAS CANCER CENTER

Myeloma Approval Timeline



IMID: immunomodulatory agents; PI: proteasome inhibitors; ADC: antibody drug conjugate, XPOi: nuclear export protein inhibitor

Shah UA, Mailankody S. *BMJ.* 2020;370:m3176.; Howlader NA et al (eds). *SEER cancer statistics review. 1975-2017*. NCI. Bethesda, MD. 2020.

Relapsed/Refractory Management

- Currently no universal standard for optimal therapy sequence in relapsed/refractory disease

- Split into early relapse (1-3 prior therapies) with preferred regimens versus late relapse (>3 prior therapies)

- Various combinations of proteasome inhibitors, immunomodulatory agents, monoclonal antibodies, and **drugs with novel mechanisms of action**

NCCN Clinical Practice Guidelines in Oncology. Multiple myeloma, v5.2026.

THE UNIVERSITY OF KANSAS CANCER CENTER

BsAb Summary Table: Myeloma

Subject to change

	Teclistamab	Elranatamab	Linvoseltamab	Talquetamab
Route	SC	SC	IV	SC
Dosing	Step-up: 0.06 mg/kg > 0.3 mg/kg > 1.5 mg/kg Treatment: 1.5 mg/kg Qwk; transition to biweekly if in CR after 6 mo	Step-up: 12 mg > 32 mg > 76 mg Treatment: 76 mg Qwk; transition to biweekly if PR or better after 6 cycles→Q4wk	Step-up: 5 mg > 25 mg >200 mg Treatment: 200 mg Qwk (week 4-13), biweekly until week 24, change to monthly if ≥VGPR	Step-up: 0.01 mg/kg > 0.06 mg/kg > 0.4 mg/kg > 0.8 mg/kg (for biweekly dose) Treatment: 0.4 mg/kg Qwk or 0.8 mg/kg biweekly
Inpatient step-up dosing?	Y	Y	Y	Y
Pivotal Trial	MajesTEC-1	MagnetisMM-3	LINKER-MM1	MonumenTAL-1
Efficacy	ORR 63% >CR: 39.4%	ORR: 61% >CR: 35%	ORR: 71% >CR: 50%	ORR: 74% (Qwk), 69% (QOwk)
CRS	72.1%	56.3%	46%	77-80%
Neurotoxicity **ICANS**	57% 6%	59% 3.4%	54% 8%	55% 9%

Subject to change

SC: subcutaneous, IV: intravenous, ORR: overall response rate: CR: complete response,

Tecvayli. [package insert]. Horsham, PA: Janssen Biotech, Inc.; 2022; Moreau P, et al. N Engl J Med. 2022; 387:495-505; Elrexfio. [package insert]. New York, NY. Pfizer, Inc; 2023; Lesokhin A, et al. Nature Medicine. 2023; DOI:10.1038/s41591-023-02528-9; Talvey. [package insert]. Horsham, PA: Janssen Biotech, Inc; 2023.; Chari A, et al. N Engl J Med. 2022;387:2232-2244. Lynozyfic. Tarrytown, NY. Regeneron;2025.

THE UNIVERSITY OF KANSAS
CANCER CENTER

Seamless Navigation of Bispecific Therapies: Optimizing Management and Outpatient Access With a Focus on Coordination

ZAHRA MAHMOUDJAFARI,[1] PharmD, MBA, BCOP, FHOPA, AMIR ALI,[2] PharmD, BCOP, JAMES DAVIS,[3] PharmD, BCOP, TYLER SANDAHL,[4] PharmD, BCOP, VICTORIA NACHAR,[5] PharmD, BCOP, and ROBERT MANCINI,[6] PharmD, BCOP, FHOPA

frontiers | Frontiers in Oncology

TYPE Perspective
PUBLISHED 30 July 2025
DOI 10.3389/fonc.2025.1630146

OPEN ACCESS

EDITED BY
Nicola Sgherza,
AOU Policlinico Consorziale di Bari, Italy

REVIEWED BY
Giuseppe Mele,
Antonio Perrino Hospital, Italy
Bernardo Rossini,
National Cancer Institute (IRCCS), Italy
Daniele Derudas,
G. Brotzu Hospital, Italy

*CORRESPONDENCE
Elena Zamagni

A roadmap to implementing outpatient administration of bispecific antibodies in multiple myeloma

Alfred L. Garfall[1], Rahul Banerjee[2], Laurent Frenzel[3], Cyrus Khandanpour[4,5,6], Yi Lin[7], Erica Ottoni[8], Robert Rifkin[9], Sarah Rockwell[10], Cesar Rodriguez[11], Humberto Villefort[12] and Elena Zamagni[13,14]*

ORIGINAL RESEARCH

Operationalization and Use of Bispecific T-Cell–Engaging Antibodies in Community Practices: Multidisciplinary Perspectives on Developing Logistics and Workflow for Cytokine Release Syndrome Management

WILLIAM DONNELLAN,[1] MD, SHIH-WEN LIN,[2] PhD, JONATHAN ABBAS,[1] MD, JESUS G. BERDEJA,[1] MD, LOURENIA CASSOLI,[2] MD, JASON C. CHANDLER,[3] MD, BRANNON FLORES,[2] PharmD, SARA HALL,[4] PharmD, ARLIENE RAVELO,[2] MPH,

European Journal of Haematology

WILEY

European Journal of Haematology

ORIGINAL ARTICLE OPEN ACCESS

European Expert Panel Consensus on Outpatient Administration of Teclistamab and Talquetamab in Patients With Multiple Myeloma: Feasibility, Key Considerations, and Future Directions

Thomas Lund[1,2] | Cyrus Khandanpour[3] | Sébastien Anguille[4] | Jens Kisro[5] | Maria Theresa Krauth[6] | Johan Lund[7] | Inger Nijhof[8] | Enrique M. Ocio[9] | Elena Zamagni[10] | Matthieu Javelot[11] | Claire Albrecht[11] | Cristina Entrala Cerezo[12] | Aurore Perrot[13]

CRS

- Systemic inflammatory response triggered by factors that cause acute-onset distress and possible organ dysfunction
- Risk factors
  - High disease burden
  - Presence of pre-existing state of inflammation
- Symptoms: fever ≥38 °C, hypotension, hypoxia

Immune Effector Cell Associated Neurotoxicity Syndrome

- Release of inflammatory cytokines causing disruption in the blood-brain barrier
- Risk factors
  - CRS severity
  - Higher disease burden & baseline inflammatory state
  - Thrombocytopenia and/or high ferritin
  - Higher T-cell dose
- Can occur simultaneously, consecutively, or independently of CRS

CRS/ICANS isn't new, but now we introduced subcutaneous use outpatient.
Highest risk of CRS/ICANS with BsAbs is during step-up dosing and with first treatment dose

ICANS = immune effector cell-associated neurotoxicity syndrome

Shimabukuro-Vornhagen A, et al. J Immunother Cancer. 2018;6:56; Munshi NC, et al. N Engl J Med. 2021;384:705-716; Berdeja JG, et al. Lancet. 2021;398:314-324; NCCN Clinical Practice Guidelines in Oncology. Management of immunotherapy-related toxicities, v1.2024.

THE UNIVERSITY OF KANSAS
CANCER CENTER

Prevention and management of adverse events during treatment with bispecific antibodies and CAR T cells in multiple myeloma: a consensus report of the European Myeloma Network

Heinz Ludwig, Evangelos Terpos, Niels van de Donk, Maria-Victoria Mateos, Philippe Moreau, Melitios-Athanasios Dimopoulos, Mich
Paula Rodriguez-Otero, Jesús San-Miguel, Kwee Yong, Francesca Gay, Hermann Einsele, Roberto Mina, Jo Caers, Christoph Driessen,
Pellegrino Musto, Sonja Zweegman, Monika Engelhardt, Gordon Cook, Katja Weisel, Annemiek Broijl, Meral Beksac, Jelena Bila, Fredri
Michele Cavo, Roman Hajek, Cyrille Touzeau, Mario Boccadoro, Pieter Sonneveld

blood®
Volume 143, Issue 16, 18 April 2024, Pages 1565-1575

Special Report

Consensus recommendations on the management of toxicity associated with CD3×CD20 bispecific antibody therapy *, †

Jennifer L. Crombie [*1], Tara Graff [*2], Lorenzo Falchi [*3] ✉, Yasmin H. Karimi [*4], Rajat Bannerji [5], Loretta Nastoupil [6], Catherine Thieblemont [7], Renata Ursu [8], Nancy Bartlett [9], Victoria Nachar [4], Jonathan Weiss [4], Jane Osterson [2], Krish Patel [10], Joshua Brody [11], Jeremy S. Abramson [12], Matthew Lunning [13], Nirav N. Shah [14], Ayed Ayed [15], Manali Kamdar [16], Benjamin Parsons [17]...Michael Dickinson [†24]

NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)

Management of CAR T-Cell and Lymphocyte Engager-Related Toxicities

Version 2.2026 — November 11, 2025

NCCN Guidelines for Patients®

THE UNIVERSITY OF KANSAS
CANCER CENTER

Real-World Management & Emerging Trends

Blood Cancer J. 2025 Mar 4;15(1):32. doi: 10.1038/s41408-025-01222-y.

Dexamethasone for the management of CRS Related to teclistamab in patients with relapsed/refractory multiple myeloma

James A Davis [1], Jordan Snyder [2], Mikhaila Rice [3], Donald C Moore [4], Christo
Kelley Julian [5], Charlotte B Wagner [5], Katelynn Granger [6], Kimberly M Green [6]
Hailey Hill [4], Jessica McElwee [4], Grace Elsey [4], Jack Khouri [3], Joslyn Rudoni [3],
Zahra Mahmoudjafari [2], Victoria R Nachar [7]

CURRENT MEDICAL RESEARCH AND OPINION
https://doi.org/10.1080/03007995.2026.2626367
Article /2626367

Taylor & Francis
Taylor & Francis Group

RESEARCH ARTICLE

OPEN ACCESS Check for updates

Experiences with real-world teclistamab administration in community and outpatient settings: a mixed-methods study of hematology providers

Benjamin Derman[a], Jane Jijun Liu[b], Nicholas Bouchard[c], Lindsay Figg[d], Justin LaPorte[e], Salil Goorha[f], Kaley Pagan[g], Anand Tandra[h], Asya Varshavsky[i], Gilbert Ko[j], Dee Lin[j], Agne Paner-Straseviciute[j], Meaghan Roach[k], Richard Murphy[k], Amal Jamaleddine[k], Nicole Bariahtaris[k], Jessica Fowler[j], Niodita Gupta-Werner[j] and Muhamed Baljevic[l]

Bispecific Antibody Therapy for Multiple Myeloma: A Practical Toolkit

Cesar Rodriguez,[1] Cyrille Touzeau,[2] Edvan de Queiroz Crusoe,[3]
Fernando Vieira Pericole,[4] Vania Hungria[5]

THE UNIVERSITY OF KANSAS
CANCER CENTER

REMS

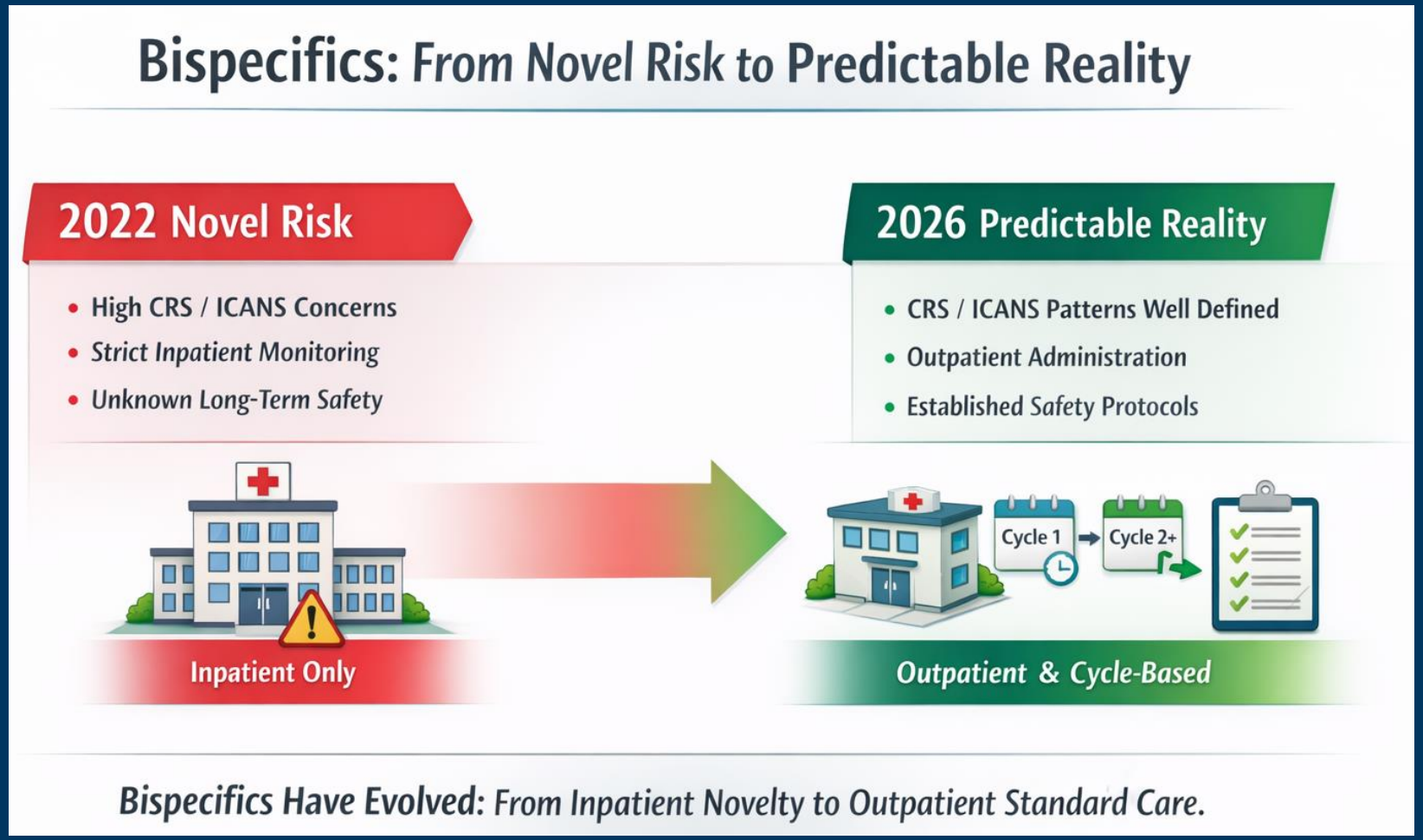


Image created with AI

Why Bispecifics in Myeloma Received REMS: Early Risk, Unknowns & Limited Data

- **Rationale**
  - To prevent or reduce serious risks
  - To ensure safe conditions
  - To educate prescribers, pharmacists and patients
  - To monitor outcomes and ensure compliance
- **Why for Bispecfics (in Myeloma)**
  - At the time, first-in-class therapies
  - Educate providers on monitoring for signs and symptoms of CRS/ICANS
  - Uncertainty around outpatient safety
  - Limited post-market data

THE UNIVERSITY OF KANSAS CANCER CENTER

Other entrants have similar risks, but no REMS

Hematology

	Blinatumomab	Mosunetuzumab	Epcoritamab	Glofitamab
Disease State	Acute lymphoblastic leukemia	Lymphoma	Lymphoma	Lymphoma
CRS	7-15%	30-44%	49-51%	70%
Neurotoxicity **ICANS**	65% 8%	39% 3%	51% 6%	70% 5%
REMS	**No**	**No**	**No**	**No**

Oncology

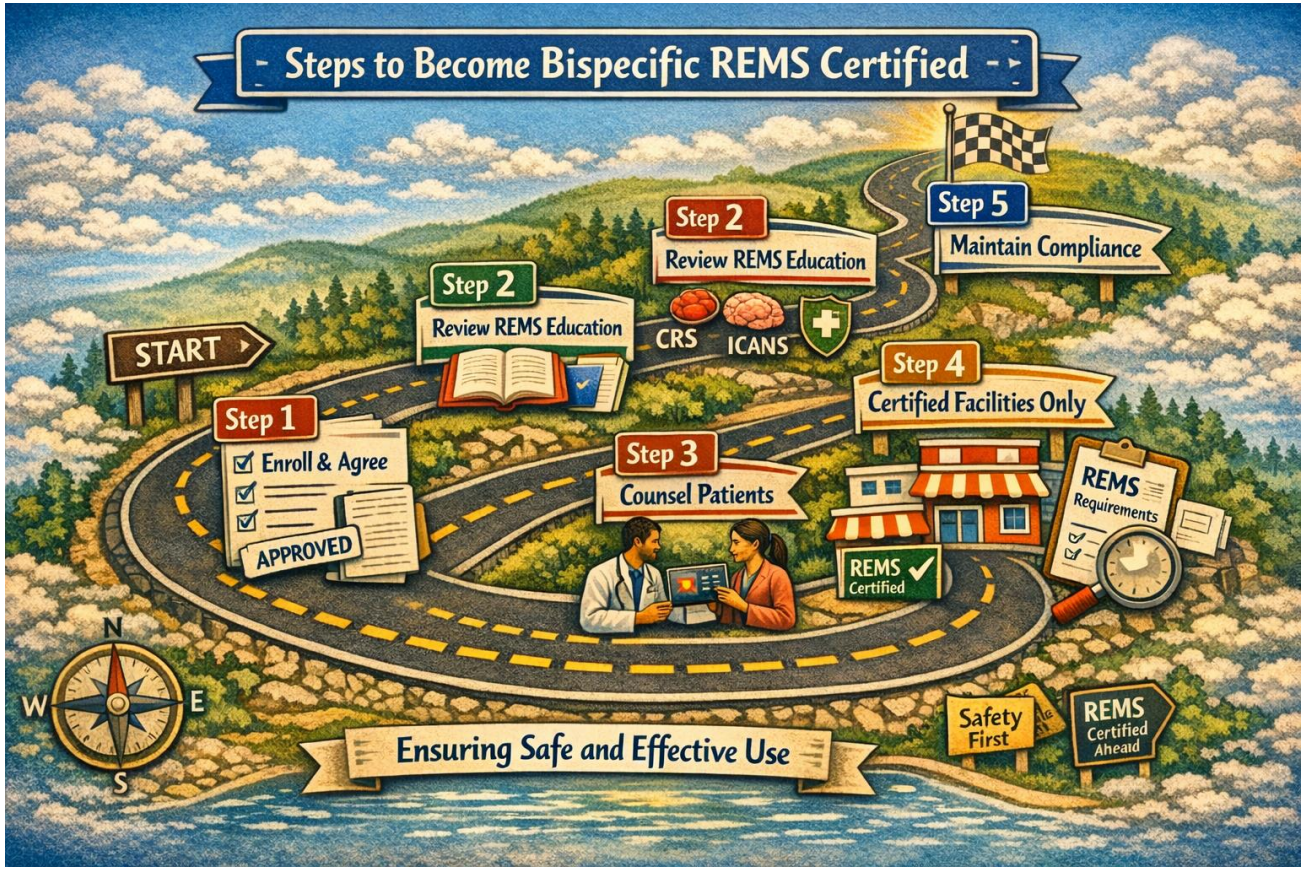
	Tebentafusp	Tarlatamab
Disease State	Uveal Melanoma	Small cell lung cancer
CRS	89%	57%
Neurotoxicity **ICANS**	Not reported	65% 10%
REMS	**No**	**No**

Lexi-Comp. 2026

THE UNIVERSITY OF KANSAS
CANCER CENTER

REMS

- **Requirements include:**
  - Completion of prescriber training, knowledge assessment and prescriber enrollment form
  - Enrollment by the pharmacy/healthcare setting
  - Designation of an authorized representative
  - Provide patient with education regarding CRS and ICANS symptoms
  - Patient wallet card provided prior to first dose

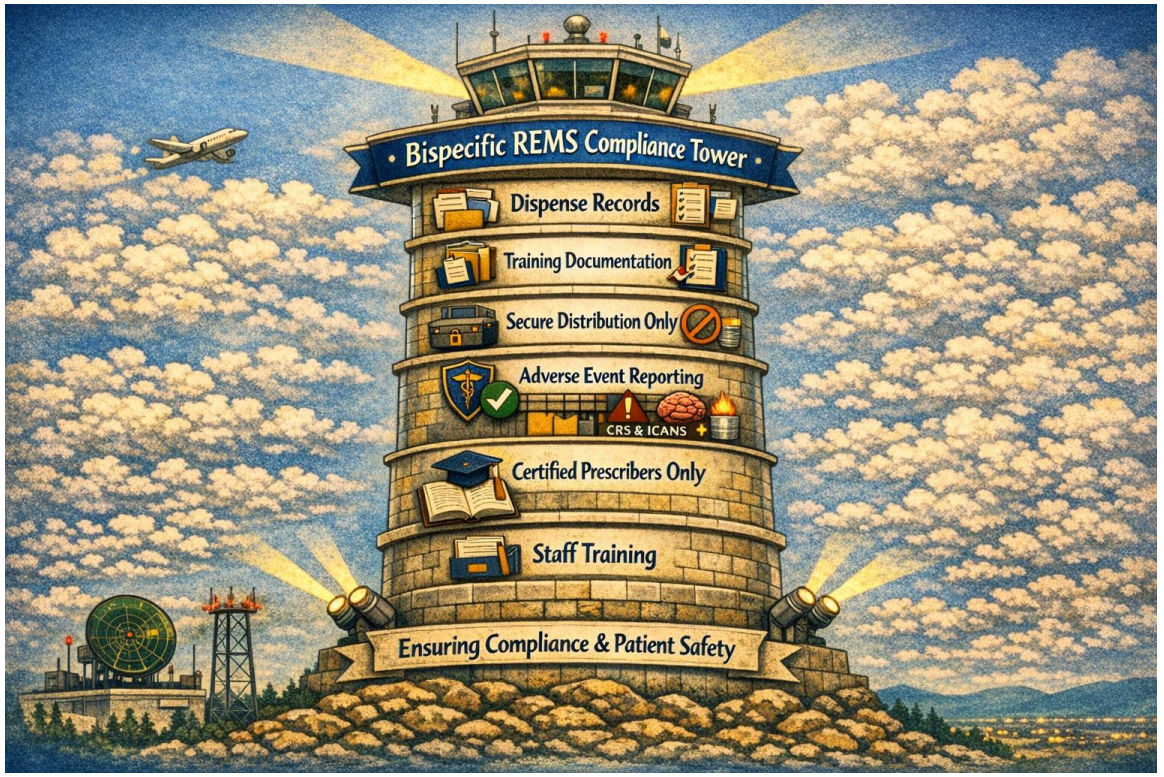


Tecyvali, Talvey, Elrexfio, Lynozyfic REMs. Accessed 8/31/24, Mahmoudjafari Z, et al. JADPRO. 2024, 10.6004/jadpro.2024.15.8.15. Image created using AI.

THE UNIVERSITY OF KANSAS
CANCER CENTER

REMS

- **Audit requirements**
  - Ensuring staffing training and provide documentation of training
  - Only orders/prescriptions written by certified Healthcare Providers are dispensed
  - Ensuring any serious adverse events suggestive of CRS or neurologic toxicity, including ICANS are reported
  - Ensure product is not distributed, transferred, loaned, or sold except to certified settings
  - Document quantity per site
  - Provide dispense records, inclusive of REMS dispense authorization (RDA) code, ordering prescriber, location of administration, dispense date/administration date, and medication name

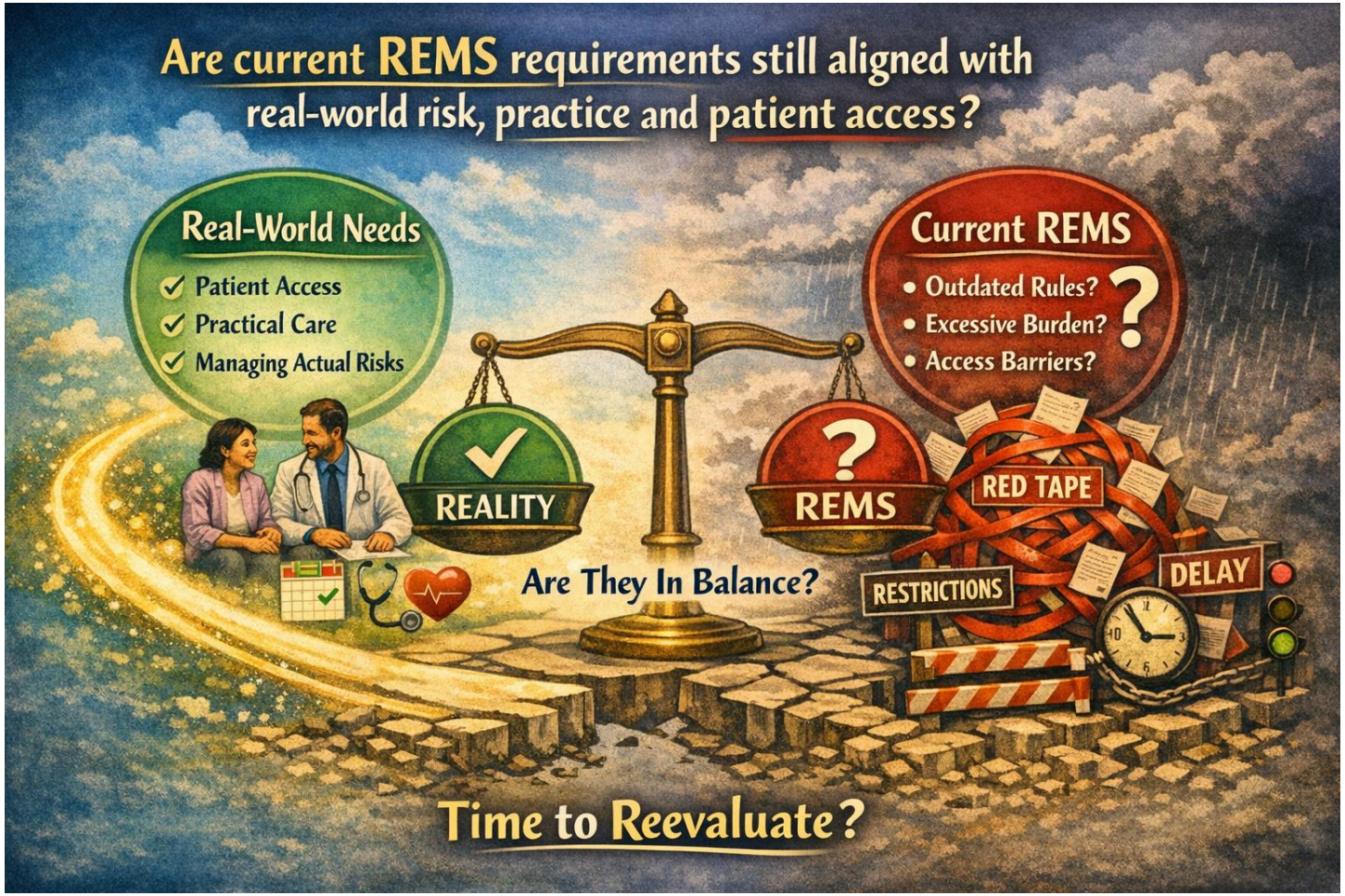


Major burden on healthcare settings & authorized representatives to ensure compliance

Tecyvali, Talvey, Elrexfio, Lynozyfic REMs, Image created using AI

THE UNIVERSITY OF KANSAS CANCER CENTER

The Central Question



- Bispecific antibodies are no longer novel
- Widespread use across myeloma lines of therapy
- Increasing outpatient administration
- Concerns by site–onerous, unsustainable and duplicative

REMs was designed for early unknown risk, not chronic, well characterized real-world practice.

Image created using AI.

The Reality of REMS in the Real-World

THE UNIVERSITY OF KANSAS
CANCER CENTER

REMS (The Reality): Prescriber Training & Enrollment

- Two required components
- Missed steps→ delays in provider enrollment→ patient start delays
- Repeat per product despite overlapping content (redundant)

Reality→ Impact: Redundant steps & frequent misses delay therapy starts

Tecyvali, Talvey, Elrexfio, Lynozyfic REMs. Accessed 8/31/24, Mahmoudjafari Z, et al. JADPRO. 2024, 10.6004/jadpro.2024.15.8.15.

THE UNIVERSITY OF KANSAS
CANCER CENTER

REMS (The Reality): Site Enrollment & Recognition

- Multiple legal addresses→ mismatches across REMS portals
- Wholesaler not recognizing site→ product ordering blocked
- Each location enrolls separately within one health system (duplicative)

Reality→ Impact: Address/wholesaler mismatches cause ordering holds and start-of-care delays

Tecyvali, Talvey, Elrexfio, Lynozyfic REMs. Accessed 8/31/24, Mahmoudjafari Z, et al. JADPRO. 2024, 10.6004/jadpro.2024.15.8.15.

THE UNIVERSITY OF KANSAS
CANCER CENTER

REMS (The Reality): AR Burden & RDA Generation

- Responsible for training using the product specific training program for each product → unclear
- Manually add staff to each portal for each site enrolled→ variability across portals, duplicative

Reality → Impact: Creates avoidable workload

Tecyvali, Talvey, Elrexfio, Lynozyfic REMs. Accessed 8/31/24, Mahmoudjafari Z, et al. JADPRO. 2024, 10.6004/jadpro.2024.15.8.15.

THE UNIVERSITY OF KANSAS
CANCER CENTER

REMS (The Reality): AR Burden & RDA Generation

- AR/designated staff has to create RDA for every cycle despite same prescriber & decreased toxicity risk *inconsistent across programs*
- Separate inpatient/outpatient RDA must be generated for the same patient
- Separate RDA codes for outpatient sites if patient receiving in multiple locations
- RDA generation must be transcribed into the electronic medical record (EMR)→ error/over-propagation risk

Reality → Impact: Manual RDA process creates error risk

Tecyvali, Talvey, Elrexfio, Lynozyfic REMs. Accessed 8/31/24, Mahmoudjafari Z, et al. JADPRO. 2024, 10.6004/jadpro.2024.15.8.15.

THE UNIVERSITY OF KANSAS CANCER CENTER

Example

Please select the pharmacy/healthcare setting you wish to work with. You may enter the REMS ID, NPI, Name or Type, then se
the pharmacy/healthcare setting.

* Pharmacy/Healthcare Setting

-- Please Select --

-- Please Select --
8566967161 1649259656 The University of Kansas Health System-Bell hospital - Inpatient Hospital Pharmacy
0547633034 1417245192 University of Kansas Cancer Center - Lees Summit - Oncology Infusion Center
4663133093 1093003675 University of Kansas Cancer Center-Overland Park - Community Oncology Physician Office
8793014263 1063795896 UNIVERSITY OF KANSAS Health system West Wood - Oncology Infusion Center

Prescriber Information

* Search By

(•) Prescriber NPI ( ) Prescriber Name

* NPI

You must generate a REMS Dispense Authorization Code before dispensing ELREXFIO.

Generate Authorization Code

CANCEL RETURN

PRESCRIBER

First Name: AL-OLA
Last Name: ABDALLAH
NPI#: 1386837151
City: Westwood
State: KS

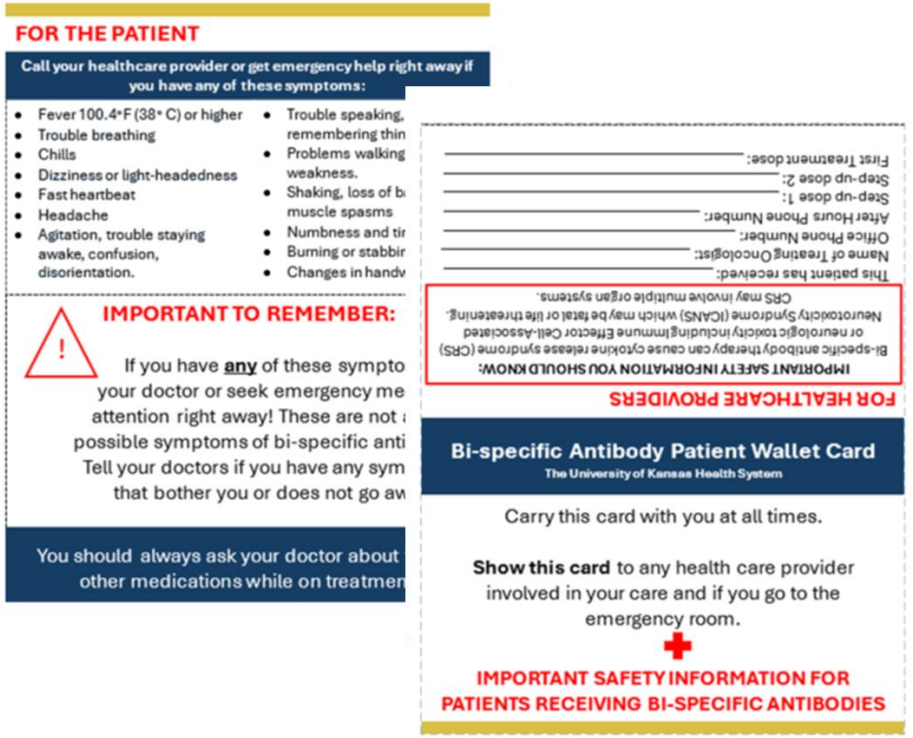
Certified

Challenge: Team members must select the correct site of administration for auditing purposes and must create multiple RDAs for patients being treated in multiple locations, despite the same provider

THE UNIVERSITY OF KANSAS
CANCER CENTER

REMS (The Reality): Patient Education in Practice

- Centers create own handouts for CRS/ICANS recognition
- Custom wallet cards reduce tracking burden
- Materials tailored to literacy and institutional workflows



Reality → Impact: Center-built tools outperform general materials for real uptake

Tecyvali, Talvey, Elrexfio, Lynozyfic REMs. Accessed 8/31/24, Mahmoudjafari Z, et al. JADPRO. 2024, 10.6004/jadpro.2024.15.8.15. Image captured from the University of Kansas Cancer Center Bispecific Wallet Card on 2/21/26

REMS (The Reality): Audit & Training Burden (AR-Led)

- Redundant training across products
- Audits are annual and variable per site → Increased administrative burden
- Team exposure > prescriber → training gap beyond AR
- Event reporting is unclear → misses longitudinal, low-grade trends
- Audits must be completed on a regular basis and is site specific not system specific
- Audit burden is not sustainable, and more standardization is desired

Reality → Impact: Audits center on paper compliance, not real-world safety signals

THE UNIVERSITY OF KANSAS
CANCER CENTER

REMS (The Reality): Distribution Controls & Record Pulls

- Distribution limits don't verify site infrastructure
- Dispense record pulls→ manual, time-sensitive
- No standard data method across programs→ rework

Reality→ Impact: High admin burden without added patient safety yield

Tecyvali, Talvey, Elrexfio, Lynozyfic REMs

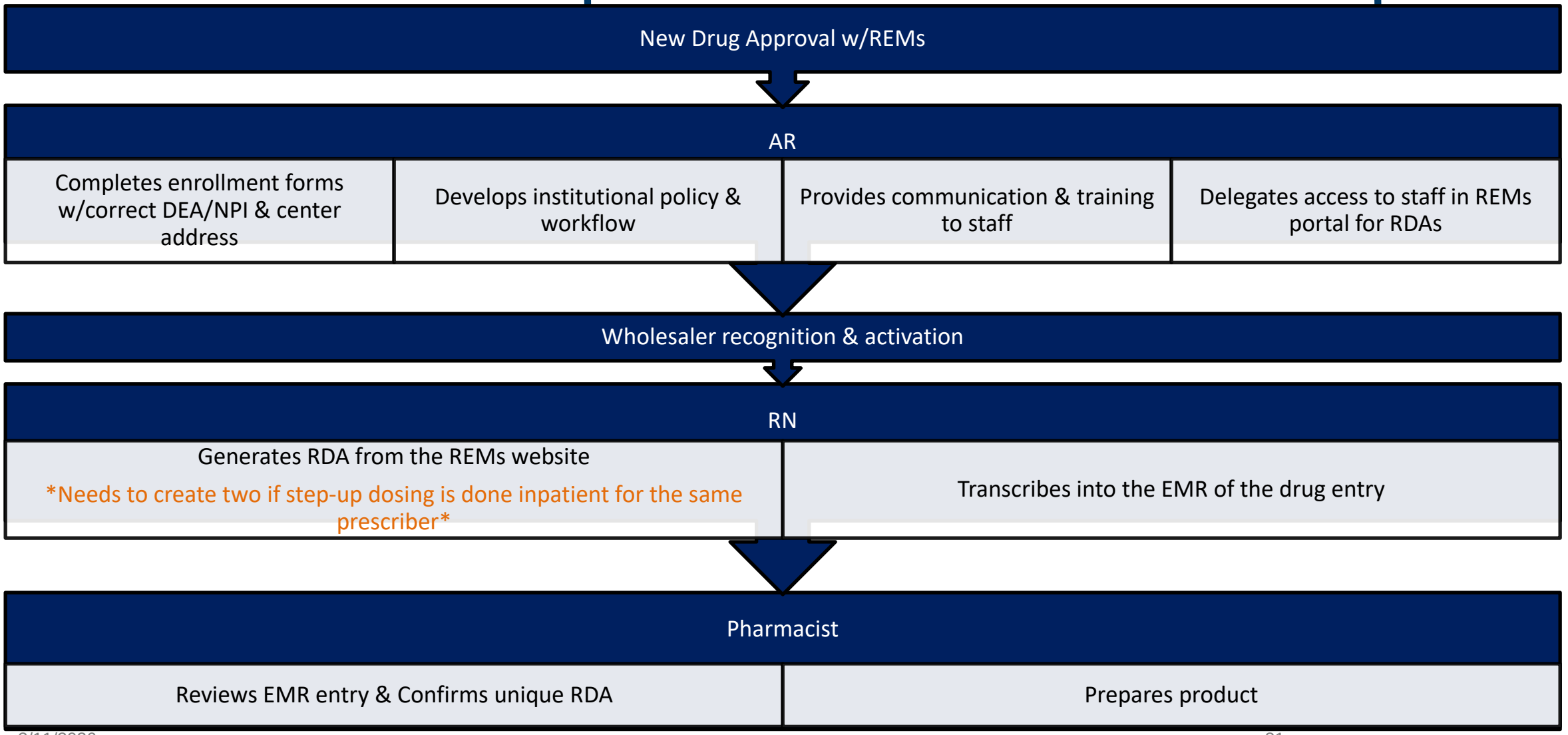
Role of CAR-T REMS

- Removed after:
  - Improved understanding of adverse effects
  - Management of risks
  - Reduced burden on healthcare systems
  - Real-world experience

Sound Familiar?

FDA. FDA Eliminates Risk Evaluation and Mitigation Strategies (REMS) for Autologous Chimeric Antigen Receptor (CAR) T cell Immunotherapies | FDA. Published 6/26/25. Accessed 2/21/26.

REMS-The Hidden Operational Work Behind Compliance



Where the Process Breaks Down

- Fragmented and manual workflows
- Wholesaler recognition failures
- Staff turnover and access lapses
- Manual transcription errors & inefficiencies
- No EHR integration
- Cycle-level versus regimen-level RDA mismatches
- Unclear accountability
- REMS program vendor variability
- Reduced safety monitoring accuracy

THE UNIVERSITY OF KANSAS
CANCER CENTER

What Do Centers Do When a New Drug Class is Approved With a Unique Toxicity Profile?

Our institutional experience demonstrates the level of infrastructure required when a new drug class with unique toxicity enters practice

THE UNIVERSITY OF KANSAS
CANCER CENTER

Our Standard Onboarding Process Upon New Drug Approval

Clinical Trial Experience (+/-)

Pre-Information Exchange w/ Industry Prior to Prescription Drug User Fee Amendment (PDUFA) date

Food and Drug Administration (FDA) Approval

Pharmacy & Therapeutics Review

EMR Work

- Drug Entry Created
- Treatment Plan Created w/parameters, supportive care medications, monitoring instructions
- Creation of Orders for Admission and Toxicity Management

Prep

- Patient Workflow
- Education Materials
  - Patients & Caregivers
  - Staff
- Toxicity Management Algorithm

Rollout & Staff Education

THE UNIVERSITY OF KANSAS
CANCER CENTER

Typical Treatment Plan in the EMR

- Labs to be checked
- Prescriber Instructions
- Nursing Orders
- Prescriptions
- Pre-Medications
- Chemotherapy

Oncology Provider Communication #6

Teclistamab is available only through a restricted program under a REMS. Notable requirements of the REMS program include:
-Prescribers must be certified by enrolling and completing training.
-Prescribers must counsel patients about the risk of Cytokine Release Syndrome (CRS) and Neurologic Toxicity, including Immune Effector Cell-Associated Neurotoxicity Syndrome (ICANS).
-A REMS authorization number is required prior to EACH Cycle of Teclistamab. Please provide authorization number in EACH dose in the administration instructions of the drug entry.

Oncology Provider Communication #3

Premedications are required during the Step-Up Dose schedule (Cycle 1, Days 1 and 3) and Cycle 2, Day 1 to reduce the risk and severity of Cytokine Release Syndrome (CRS). Administration of premedications may be required for subsequent doses after dose delays or previous CRS. Please add premedications prior to subsequent doses of Elranatamab if indicated.

Treatment Plan Meds Communication #24

Perform an Immune Effector Cell-Associated Encephalopathy (ICE) score and complete a sentence log prior to chemotherapy. Notify provider for ICE score less than 10.

teclistamab-cqyv (TECVAYLI) syringe 5 mg [1541429517]

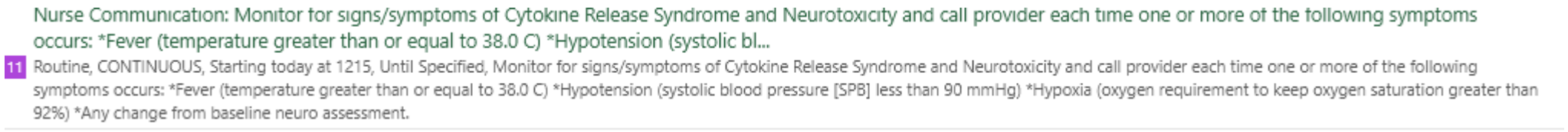
Ordered Dose: **0.06 mg/kg × 83.4 kg (Treatment Plan Recorded)**
Route: **Subcutaneous**
Dose Calculation Information:
0.06 mg/kg × 83.4 kg (Treatment plan recorded weight as of 2/17/2026)
= 5.004 mg × 1 mL/10 mg
= 0.5 mL × 10 mg/mL (rounded to the nearest 0.01 mL from 0.5004 mL)
= 5 mg
Duration: 1 days
Dispense As Written: No
Admin Dose: 5 mg
Planned Start (Original Order): 02/24/26
End Date/Time: 02/24/26 1231 after 1 doses
Scheduled Start Date/Time: 02/24/26 1230
Admin Instructions:
REMS Approval Number: 46148516
Inject into the subcutaneous tissue of the abdomen (preferred) or other sites (e.g. thigh). If multiple injections are required, injections should be at least 2 cm apart.
NURSING: Administration required by chemotherapy credentialed nurse when ordered for a cancer indication
NOTE: This is a HIGH ALERT Medication.

University of Kansas Health System. Epic Hyperspace® August 2025.

THE UNIVERSITY OF KANSAS
CANCER CENTER

Contents of a Typical Order Set

- Admission
  - Vital signs
  - Nursing Communication
  - Notify Provider Parameters
  - Labs
  - Consults
  - Medications
  - Standing Protocols
- Toxicity Management (reflective of our algorithm)
  - Diagnostic tests
  - Consults
  - Medications

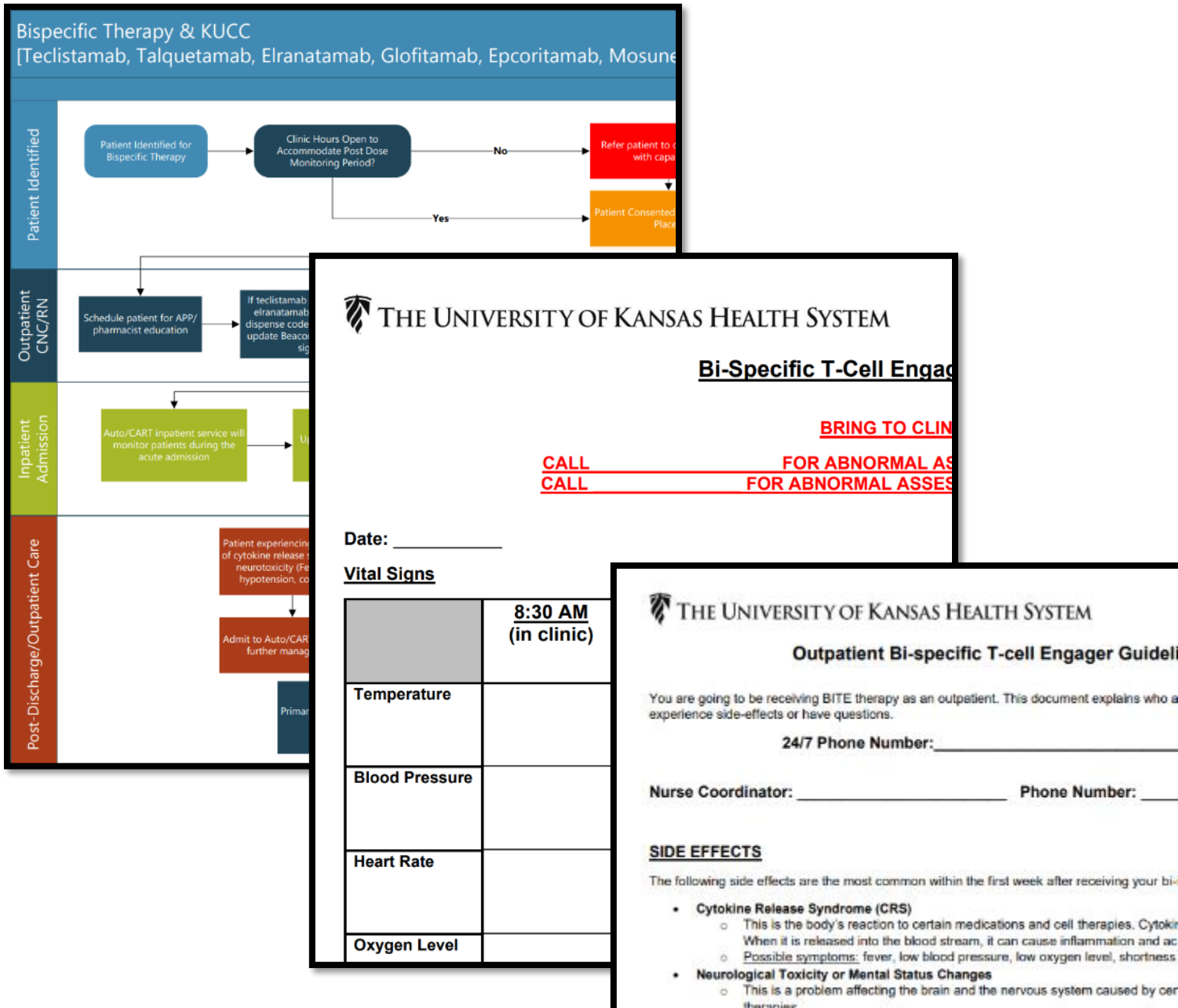


University of Kansas Health System. Epic Hyperspace® August 2025.

THE UNIVERSITY OF KANSAS CANCER CENTER

Patient Workflows Developed

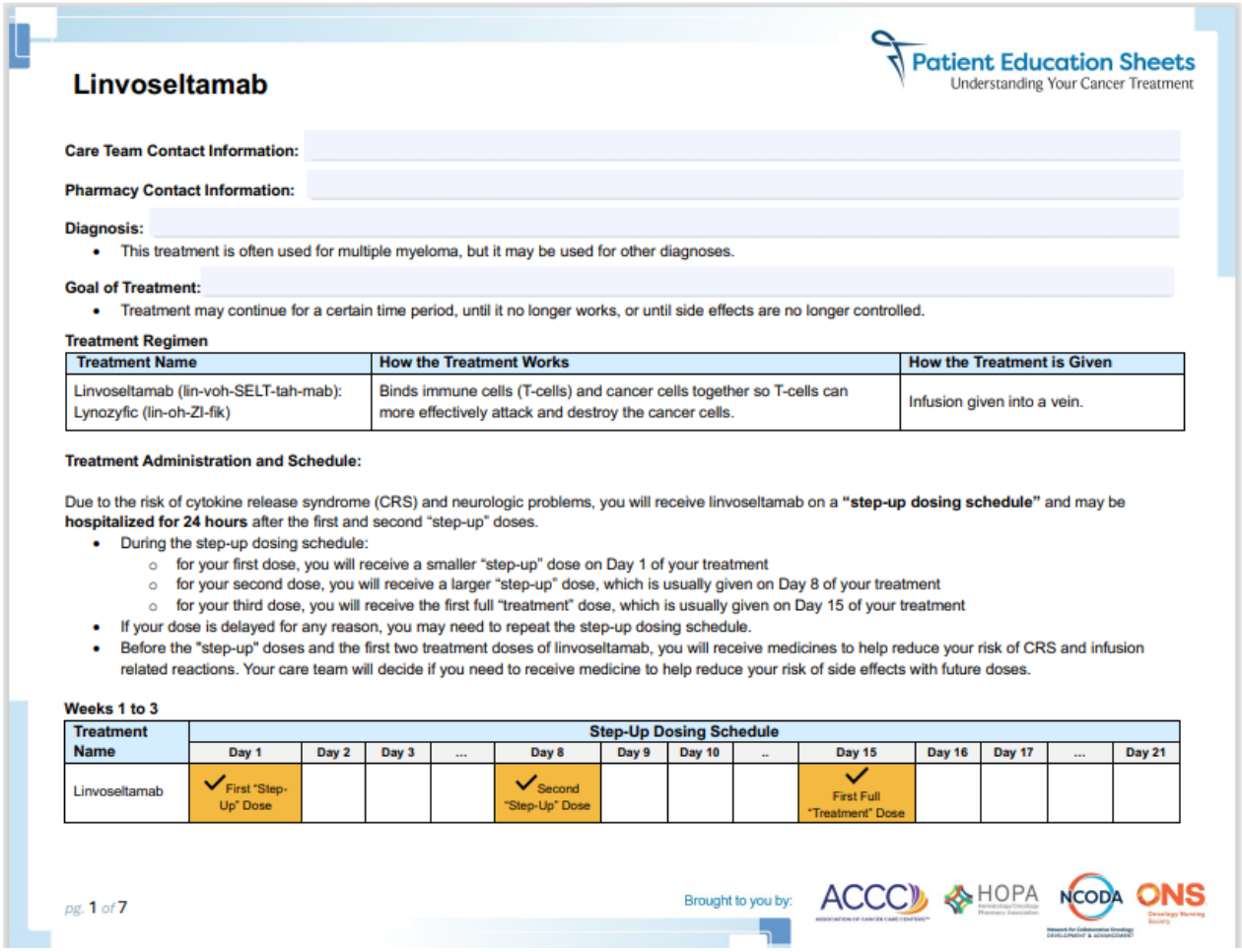
- Agnostic of Product
- Workflows
  - Patient identification
  - Outpatient
  - Inpatient
  - Post-discharge/Outpatient Care
- Monitoring logs
- Patient Guidelines
  - Side effects
  - When to call



University of Kansas Health System.

Patient Education

- Sponsored education through NCODA, Hematology/Oncology Pharmacy Association (HOPA) and other partners
- Inclusive of:
  - Treatment administration & schedule
  - Supportive care
  - Common side effects
  - Select rare and serious side effects
  - Intimacy, pregnancy & breast feeding
  - Additional information



Patient Education Sheets
Understanding Your Cancer Treatment

Linvoseltamab

Care Team Contact Information:

Pharmacy Contact Information:

Diagnosis:

- This treatment is often used for multiple myeloma, but it may be used for other diagnoses.

Goal of Treatment:

- Treatment may continue for a certain time period, until it no longer works, or until side effects are no longer controlled.

Treatment Regimen

Treatment Name	How the Treatment Works	How the Treatment is Given
Linvoseltamab (lin-voh-SELT-tah-mab): Lynozyfic (lin-oh-ZI-fik)	Binds immune cells (T-cells) and cancer cells together so T-cells can more effectively attack and destroy the cancer cells.	Infusion given into a vein.

Treatment Administration and Schedule:

Due to the risk of cytokine release syndrome (CRS) and neurologic problems, you will receive linvoseltamab on a **"step-up dosing schedule"** and may be **hospitalized for 24 hours** after the first and second "step-up" doses.

- During the step-up dosing schedule:
  - for your first dose, you will receive a smaller "step-up" dose on Day 1 of your treatment
  - for your second dose, you will receive a larger "step-up" dose, which is usually given on Day 8 of your treatment
  - for your third dose, you will receive the first full "treatment" dose, which is usually given on Day 15 of your treatment
- If your dose is delayed for any reason, you may need to repeat the step-up dosing schedule.
- Before the "step-up" doses and the first two treatment doses of linvoseltamab, you will receive medicines to help reduce your risk of CRS and infusion related reactions. Your care team will decide if you need to receive medicine to help reduce your risk of side effects with future doses.

Weeks 1 to 3

Treatment Name	Step-Up Dosing Schedule												
	Day 1	Day 2	Day 3	...	Day 8	Day 9	Day 10	..	Day 15	Day 16	Day 17	...	Day 21
Linvoseltamab	✓ First "Step-Up" Dose				✓ Second "Step-Up" Dose				✓ First Full "Treatment" Dose				

pg. 1 of 7

Brought to you by: ACCC HOPA NCODA ONS

www.Patienteducationsheets.com. Linvoseltamab. Accessed 2/27/26.

Toxicity Management Protocols

- Institutionally defined & well published

- **Management:**

CRS Grade	Signs or Symptoms	General Management	Teclistamab	Talquetamab	
Grade 1	Fever or grade 1 organ toxicity	▪ Symptomatic management of constitutional symptoms & organ toxicities [IV fluids, antibiotics PRN] ▪ Consider checking a DIC panel and replacing mg/dL as needed ▪ Consider tocilizumab 8 mg/kg (max 800 mg/ fever (Refractory to supportive management lasting greater than 3 days). Can be repeated up to 3 doses in a 24-hr period, max 4 doses	▪ Withhold until CRS resolves	▪ Withhold until CRS resolves.	▪
Grade 2	Hypotension	▪ IV fluid bolus 500-1000 mL normal saline, ma necessary to keep SBP >90 mmHg ▪ If hypotension unchanged after 2 fluid boluses consider additional intervention ▪ Consider rapid response and possible ICU tra norepinephrine ▪ Obtain ECHO ▪ Administer Tocilizumab 8 mg/kg (max 800 mg Tocilizumab can be repeated every 8 hours fo 24-hr period, max 4 doses total ○ Consider methylprednisolone 1mg (or dex equivalent, 10mg IV every improvement within 24 hours of sta Continue corticosteroids until even then taper over 3 days ○ If no improvement on tocilizumab 24 hrs or rapid deterioration: anaki every 12 hours x 7 days (renally d ml/min), if not responding may incr			

The University of Kansas Cancer Center
Division of Hematologic Malignancies and Cellular Therapeutics

ICANS	General Management	Teclistamab	
Grade 1	▪ Low doses of lorazepam 0.25-0.5 mg IV Q8H or haloperidol (0.5 mg IV Q6H) can be used for agitated patients ▪ *Consider tocilizumab* IV if associated with concurrent Grade 2 or greater CRS* ▪ Supportive care; consider levetiracetam for seizure prophylaxis until resolution of ICANS	▪ Withhold until ICANS resolves	▪
Grade 2	▪ Manage as per Grade 1 ▪ Consider rapid response and possible ICU transfer if associated with Grade 2 or greater CRS ▪ *Consider tocilizumab* IV if associated with concurrent Grade 2 or greater CRS* ▪ Administer dexamethasone 10mg IV every 12 hours, Can increase to 20 mg every 6 hours if no improvement. Continue until resolution to Grade 1 or less, then taper ▪ Supportive care as per Grade 1	▪ Withhold until ICANS resolves ▪ Patients must be hospitalized for 48 hours following next dose for first occurrence of Grade 2 ICANS	▪ ▪
Grade 3	▪ Manage as per Grade 1 ▪ Consider rapid response and possible ICU transfer if associated with Grade 2 or greater CRS	▪ Withhold until ICANS resolves ▪ Patients must be	▪

THE UNIVERSITY OF KANSAS
CANCER CENTER

Real World Application and Education

Staff training (role-specific)

Webinars, simulation training, micro-learning

In-services: both internal and industry sponsored

Annual competencies

Education upon consent

Tailored patient education

Patient-facing toxicity recognition sheets

- Home monitoring instructions
- Caregiver instructions

Toxicity Management Protocols

Defined management of unique toxicities with frequency and triage workflows

Order sets created with pre-medications, monitoring frequencies & toxicity management

Smart phrase bundles

Our processes are significantly more thorough regardless of practice setting & are designed with safety and collaboration in mind and is REMS agnostic

How Can We Get from Current State (REMS driven) to an Evolved State (Center-Led)

Current State (REMS Driven)

- Redundancy in processes
- Role fragmentation & bottlenecks
- Manual processes & errors
- Operational inefficiency

Evolved State (Center Led)

- Unified credentialing system
- EHR as an authoritative source
- Cycle-aware logic
- Improved safety & efficiency

Summary

- The risks of BsAbs in multiple myeloma are now well understood
  - CRS/ICANs patterns are predictable with highest risk with care initiation in cycle 1
  - Outpatient administration has been proven safe at scale
- REMS requirements no longer reflect real-world practice & centers have developed more effective systems
- Our path forward should reflect real-world experiences and REMS should be aligned with actual ongoing risk (not historic concerns)

Bottom Line: REMS should evolve from a front-end barrier to a long-term safety partner

THE UNIVERSITY OF KANSAS
CANCER CENTER

Thank You

Ideas for further discussion

Could industry work with professional societies to host “neutral” training material?

- Status of FHIR REMS accelerator?

Could one REMS system be sufficient to cover all the FDA approved myeloma bispecific products?