



# Pharmacy Grand Rounds

200 First Street SW  
Rochester, Minnesota 55905  
<https://ce.mayo.edu/pharmacy-grandrounds2021>

## When Drugs BITE Back: Managing Toxicities of Bispecific T-Cell Engagers

**Session Date:** 9/12/2023

**Session Time:** 11:00 – 11:45 AM (CST)

### Target Audience

This continuing education (CE) session was planned to meet the needs of professional staff who deal with the selection and monitoring of medication(s) as part of their patient care duties, including pharmacists, RNs, APRNs, PAs, MDs.

### Activity Overview

Bispecific antibodies (bsAbs) are getting all the buzz in immuno-oncology with their novel approach to treating hematological malignancies, including leukemias, lymphomas, and multiple myeloma. The mechanism of bsAbs may be described similarly to the well-known monoclonal antibodies; however, they contain two distinct domains, rather than one, that work synergistically to enhance immune cells to ultimately target cancer cells. Their ability to enhance immune cells also increases the opportunity for immune related adverse effects, including cytokine release syndrome, immune effector cell associated neurotoxicity, tumor flare, and infections. With 9 bsAbs currently FDA approved, over 100 in the pipeline, and the opportunity for outpatient administration in some cases, the use of bsAbs is increasing. Therefore, comprehension of immunological alterations caused by bsAbs and having established monitoring strategies are vital to identifying and managing bsAB related adverse effects and toxicities.

### Learning Objectives

At the conclusion of this knowledge-based CE session, participants should be able to:

1. Describe the mechanisms and efficacy of bispecific therapy for advancing malignant diseases
2. Discuss the etiology of bispecific related adverse effects, toxicity, and infection risk
3. Design a supportive care plan to prevent and manage toxicities associated with bispecific T-cell engagers

### Faculty Information

Jenna Puttkammer, PharmD  
PGY2 Hematology/Oncology Pharmacy Resident  
Mayo Clinic Hospital - Rochester, MN

Dr. Puttkammer received a Doctor of Pharmacy degree from the University of Minnesota – Duluth College of Pharmacy and is a current PGY2 hematology/oncology pharmacy resident at Mayo Clinic Hospital – Rochester. Her practice interests include malignant and non-malignant hematology, and cellular therapy.



## Approved Provider Statement



JOINT ACCREDITATION™  
INTERPROFESSIONAL CONTINUING EDUCATION

In support of improving patient care, this activity is planned and implemented by Mayo Clinic College of Medicine and Science. Mayo Clinic College of Medicine and Science is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

### Credit Statements

#### AMA

Mayo Clinic College of Medicine and Science designates this live activity for a maximum of 0.75 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

#### ACPE



**ACPE Universal Activity Number (UAN):** JA0000238-0000-22-139-L01-P

Mayo Clinic College of Medicine and Science designates this educational activity for a maximum of 0.75 ACPE Knowledge-based contact hours. Participants should claim only the credit commensurate with the extent of their participation in the activity

#### ANCC

Mayo Clinic College of Medicine and Science designates this activity for a maximum of 0.75 ANCC contact hours. Nurses should claim only the credit commensurate with the extent of their participation in the activity.

#### AAPA



Mayo Clinic College of Medicine and Science has been authorized by the American Academy of PAs (AAPA) to award AAPA Category 1 CME credit for activities planned in accordance with AAPA CME Criteria. This activity is designated for 0.75 AAPA Category 1 CME credits. PAs should only claim credit commensurate with the extent of their participation.

## Educational Format and CE Requirements

This CE session is available as a live presentation, including live webcast.

Participants must complete the following to record attendance and obtain CE credit:

1. Attend the entire session.
2. Text the session code to 507-200-3010 within 48 hours of the live presentation to record attendance.
  - a. This number is only used for receiving text messages related to tracking attendance
  - b. Employees are encouraged to create a contact in their mobile phone, as the same number is used to record attendance for every session
3. Complete the online evaluation for the respective session within 2 weeks of live presentation.

Pharmacist CE credit is electronically transferred to the National Association of Boards of Pharmacy CPE Monitor. To track CE, please go to [NABP CPE Monitor](#).

Non-pharmacist attendees can print out a record of attendance at [ce.mayo.edu](https://ce.mayo.edu) after completing the evaluation and claiming credit.

[Live Webcast](#) - access during presentation times

## Disclosure Summary

As a provider accredited by Joint Accreditation for Interprofessional Continuing Education, Mayo Clinic College of Medicine and Science must ensure balance, independence, objectivity and scientific rigor in its educational activities. All who are in a position to control the content are required to disclose all financial relationships with any ineligible company. Faculty will also identify any off-label and/or investigational use of pharmaceuticals or instruments discussed in their content for FDA compliance.

Listed below are individuals with control of the content of this program:

The faculty report the following relationships:

- Jenna Puttkammer, PharmD
  - Declares no financial relationship(s) pertinent to this session
  - Off-label discussion of the following: Anakinra, basiliximab, cyclosporine, emapalumab, etanercept, etoposide, tocilizumab, siltuximab

Course Director and Planning Committee Members declare no relevant financial relationship(s) pertinent to this session. Members include:

- |   |  |
|---|--|
| • Jennifer Elmer, DNP, APRN, CCNS             | • Wayne Nicholson, MD, PharmD, BCPS    |
| • Andrew Herber, PA-C                         | • Garrett Schramm, PharmD, FASHP, FCCP |
| • Sarah Jane Kotval, BSW                      | • Sara Thompson, PharmD, BCACP         |
| • Scott Nei, PharmD, BCPS, BCCCP, FCCM, FMSHP |  |

All relevant financial relationships have been mitigated.

For additional disclosure information regarding Mayo Clinic School of Continuous Professional Development accreditation review committee members visit [ce.mayo.edu](https://ce.mayo.edu), About Us, Disclosures - or - <https://ce.mayo.edu/content/disclosures>

## System and Technical Requirements

For participants viewing the webcast, sessions are delivered via Mayo Clinic intranet web browser and Adobe® PDF. For participants viewing outside the Mayo Clinic firewall, a VPN connection is required for remote access. Recommended web browser includes Google Chrome. This session is planned and coordinated by **the Department of Pharmacy, Mayo Clinic.**