What I Tell My Patients: **Integrating New Research Information into Current Clinical Care** A Complimentary NCPD Hybrid Symposium Series Held During the 49<sup>th</sup> Annual ONS Congress **Chronic Lymphocytic Leukemia and Bispecific Antibodies in the Management of Lymphoma** Thursday, April 25, 2024 6:00 PM - 8:00 PM Faculty John N Allan, MD **Brad S Kahl, MD** Robin Klebig, MSN, APRN, CNP, AOCNP Mollie Moran, APRN-CNP, AOCNP **Moderator** Neil Love, MD

## Faculty



John N Allan, MD Associate Professor of Clinical Medicine Weill Cornell Medicine New York, New York



Mollie Moran, APRN-CNP, AOCNP Nurse Practitioner The James Cancer Hospital and Solove Research Institute The Ohio State University Columbus, Ohio



**Brad S Kahl, MD** Professor of Medicine Washington University School of Medicine Director, Lymphoma Program Siteman Cancer Center St Louis, Missouri



Robin Klebig, MSN, APRN, CNP, AOCNP Hematology Outpatient APP Supervisor Assistant Professor of Medicine Nurse Practitioner, Lymphoma Group Division of Hematology Mayo Clinic Rochester, Minnesota



Moderator Neil Love, MD Research To Practice Miami, Florida



## **Dr Allan — Disclosures**

Advisory Committee	NeoGenomics
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Data and Safety Monitoring Board/Committee	Merck
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## **Dr Kahl — Disclosures**

Consulting Agreements	AbbVie Inc, Acerta Pharma — A member of the AstraZeneca Group, ADC Therapeutics, AstraZeneca Pharmaceuticals LP, BeiGene Ltd, Celgene Corporation, Genentech, a member of the Roche Group, Genmab US Inc, Janssen Biotech Inc, Kite, A Gilead Company, Lilly, Novartis, Roche Laboratories Inc
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## Ms Klebig — Disclosures

No relevant conflicts of interest to disclose



## Ms Moran — Disclosures

No relevant conflicts of interest to disclose



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## Research To Practice NCPD Planning Committee Members, Staff and Reviewers

Planners, scientific staff and independent reviewers for Research To Practice have no relevant conflicts of interest to disclose.



This educational activity contains discussion of non-FDA-approved uses of agents and regimens. Please refer to official prescribing information for each product for approved indications.



## **Clinicians in the Meeting Room**

#### Networked iPads are available.



Review Program Slides: Tap the Program Slides button to review speaker presentations and other program content.



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## **Clinicians, Please Complete the Pre- and Postmeeting Surveys**





## **About the Enduring Program**

- The live meeting is being video and audio recorded.
- The proceedings from today will be edited and developed into an enduring web-based video/PowerPoint program.



An email will be sent to all attendees when the activity is available.

 To learn more about our education programs, visit our website, <u>www.ResearchToPractice.com</u>



## "What I Tell My Patients" Sixteenth Annual RTP-ONS NCPD Symposium Series

Wednesday April 24	Hormone Receptor-Positive Breast Cancer 6:00 PM - 8:00 PM ET	
Thursday April 25	Endometrial Cancer 6:00 AM - 7:30 AM ET	
	Antibody-Drug Conjugates 12:15 PM - 1:45 PM ET	
	Chronic Lymphocytic Leukemia and Bispecific Antibodies in Lymphoma 6:00 PM – 8:00 PM ET	
Friday April 26	Head and Neck Cancer 6:00 AM - 7:30 AM ET	
	Non-Small Cell Lung Cancer with an EGFR Mutation 12:15 PM - 1:45 PM ET	
	<b>Ovarian Cancer</b> 6:00 PM – 7:30 PM ET	
Saturday April 27	Hepatobiliary Cancers 6:00 AM - 7:30 AM ET	
	Myelofibrosis 12:15 PM – 1:45 PM ET	
	Gastroesophageal and Colorectal Cancers 6:00 PM - 8:00 PM ET	
Wednesday, May 1	LIVE WEBINAR — Prostate Cancer 7:00 PM - 8:00 PM ET	



How was it different to take care of this patient versus another patient in the same oncologic setting?

What unique biopsychosocial factors (eg, attitude, comorbidities, social support) were considered in the overall management of this case?



## **Consulting Nurse Faculty**



Jacqueline Broadway-Duren, PhD, DNP, APRN, FNP-BC The University of Texas MD Anderson Cancer Center Houston, Texas



Kathleen D Burns, RN, MSN, AGACNP-BC, OCN City of Hope Comprehensive Cancer Center Duarte, California



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Kimberly A Spickes, MNSc, RN, APRN, OCN, ACNP-BC University of Arkansas for Medical Sciences Little Rock, Arkansas



**Ronald Stein, JD, MSN, NP-C, AOCNP** USC Norris Comprehensive Cancer Center Los Angeles, California

## https://www.ResearchToPractice.com/ONS2024Clips



## **Oncology clinical trial terminology**

- Waterfall plot
- Kaplan-Meier curve
- Overall survival
- Progression-free survival
- Disease-free survival

- Objective response rate
- Hazard ratio
- Phase I/II/III
- Minimal residual disease
- Circulating tumor DNA



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**Module 1:** Biology of Chronic Lymphocytic Leukemia (CLL)

**Module 2:** Venetoclax-Based Up-Front Treatment for CLL

**Module 3:** BTK Inhibition Alone or in Combination with Venetoclax for CLL

Module 4: Bispecific Antibodies as a Treatment Option for Non-Hodgkin Lymphoma

Module 5: Bispecific Antibodies in the Management of Follicular Lymphoma Module 6: Bispecific Antibodies for the Treatment of Diffuse Large B-Cell Lymphoma

**Module 7:** Practical Considerations and Tolerability of Bispecific Antibodies



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**Module 7:** Practical Considerations and Tolerability of Bispecific Antibodies



## **Consulting Nursing Faculty Comments**

## Patient self-advocacy and treatment decision-making



Jacqueline Broadway-Duren, PhD, DNP, APRN, FNP-BC



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- Implications of various biomarkers, such as IGHV mutation, deletion 17p and TP53 mutation, for prognosis and therapeutic selection
- Indications for initiating active therapy for patients with previously untreated CLL
- Relevant comorbidities, such as hypertension, preexisting cardiac arrhythmias and chronic kidney disease, that can influence clinical decision-making for patients with CLL
- Risk of infection and timing of vaccinations for patients with CLL



## Robin Klebig, MSN, APRN, CNP, AOCNP



# What I tell my patients with newly diagnosed CLL who are going to be observed rather than starting active therapy



## **CLL Affects a Significant Number of Patients Worldwide,** and Predominantly Older Patients

With an estimated 191,000 new cases globally, CLL represents 22% to 30% of all leukemia worldwide, being the most common leukemia in Western countries<sup>1,2</sup>

#### Median age at diagnosis<sup>3</sup>:



~90% of patients diagnosed with CLL are >55 years old<sup>4</sup>

#### Men are ~2X more likely to develop CLL<sup>5</sup>



1. Union for International Cancer Control. 2. Combest AJ, et al. J Hematol Oncol Pharm. 2016;6(2):54-56. 3. Eichhorst B, et al. Ann Oncol. 2015;26(suppl 5):v78-v84. 4. Lymphoma Coalition. 5. Scarfò L, et al. Crit Rev Oncol Hematol. 2016;104:169-182.



# Indications for treatment:

- Disease-related symptoms
  - Fatigue can be tricky
- Progressive bulky disease
  - Spleen > 6 cm below costal margin; LN > 10 cm
- Progressive bone marrow failure, manifesting as anemia or thrombocytopenia
- Autoimmune complications poorly responsive to steroids
- Progressive lymphocytosis: Lymphocyte doubling time < 6 months, or increase in ≥ 50% in a two-month period

\*Note: Absolute lymphocyte count alone not an indication for treatment

#### Courtesy of Brad S Kahl, MD

# **CLL** special considerations

- High frequency of AI complications
  - ITP, AIHA, neutropenia
- High frequency of infections
  - Check Ig levels
  - Consider IVIg replacement therapy if recurrent infections and IgG < 300
- High rate of skin cancer
  - Low threshold to send to Dermatology

Courtesy of Brad S Kahl, MD

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**Dr Allan** New York, New York

## Venetoclax-Based Up-Front Treatment



**Dr Kahl** St Louis, Missouri

- Outcomes observed with venetoclax-based up-front treatment for patients with CLL
- Key factors placing patients at risk for tumor lysis syndrome (TLS) with venetoclax; approaches to monitoring for and management of laboratory and clinical TLS
- Spectrum, incidence, severity and management of other toxicities reported with venetoclax, such as neutropenia, infections and gastrointestinal disorders
- Definition and clinical significance of minimal residual disease (MRD)
- Current role, if any, of MRD assessment in the management of CLL; implications for the duration of venetoclax-based treatment





# What I tell my patients about to begin treatment with venetoclax/obinutuzumab



## **Mechanism of Action of Venetoclax**



- Bcl-2 functions to prevent cell death by apoptosis
- Venetoclax is specific for Bcl-2 and inhibits its function, thereby removing the block on apoptosis



Adapted from Davids MS, Letai A. Cancer Cell 2013;23(2):139-41.

## Venetoclax

#### **Mechanism of action**

• Bcl-2 inhibitor

#### Indication

#### • For patients with CLL or SLL



- In combination with obinutuzumab: After ramp-up, continue venetoclax 400 mg once daily until the last day of cycle 12
- In combination with rituximab: After ramp-up, continue venetoclax 400 mg once daily for 24 months
- As monotherapy: After ramp-up, continue venetoclax 400 mg once daily until disease progression or unacceptable toxicity



Venetoclax package insert, 6/2022.

## **Patient Education: Venetoclax**

- Pharmacy consultation re potential drug interactions
  - CYP3A4 interactions Avoid strong inhibitors and inducers
    - Azole antifungals, mycin antibiotics, protease inhibitors, etc
    - Moderate Consider dose adjustment
    - Avoid grapefruit/juice, Seville oranges, and starfruit
- Take with food and water, same time each day



## **Patient Education: Venetoclax (Continued)**

#### Potential for tumor lysis syndrome (TLS)

- 5-week ramp-up to goal dose
- Hospitalization for weekly ramp up (bulky)
- TLS lab monitoring q8h x 24 hours
- Allopurinol
- Hydration

#### Nausea

• Antiemetic as needed

#### Diarrhea

- Loperamide as needed
- Record # stools per day at baseline

#### **Cytopenias**

- Neutropenia
  - Increased infection risk
- Thrombocytopenia
  - Bleeding risk
- Anemia
  - Typically not transfusion requiring



## **TLS Risk with Venetoclax Is a Continuum Based on Multiple Factors**



1. Venetoclax SmPC: https://www.medicines.org.uk/emc/product/2267/smpc (accessed October 2019); 2. Stilgenbauer S, et al. Lancet Oncol 2016;17:768-778.



Courtesy of Matthew S Davids, MD, MMSc

## **Venetoclax: TLS Prophylaxis and Monitoring**



Administer intravenous hydration for any patient who cannot tolerate oral hydration; Evaluate blood chemistries (potassium, uric acid, phosphorus, calcium, and creatinine); review in real time; For patients at risk of TLS, monitor blood chemistries at 6–8 hours and at 24 hours at each subsequent ramp-up dose. Changes in blood chemistries consistent with TLS that require prompt management can occur as early as 6-8 hours following the first dose of venetoclax, and at each dose increase. LN, lymph node; ALC, absolute lymphocyte count; TLS, tumour lysis syndrome; VEN, venetoclax

1. Venetoclax SPC https://www.medicines.org.uk/emc/product/2267/smpc (accessed October 2019); 2. Stilgenbauer S, et al. Lancet Oncol. 2016; 17:768–778



#### Courtesy of Matthew S Davids, MD, MMSc

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Available Bruton Tyrosine Kinase (BTK) Inhibitors

**Dr Allan** New York, New York



**Dr Kahl** St Louis, Missouri

- Long-term findings from Phase III studies assessing ibrutinib-, acalabrutinib- and zanubrutinibbased therapy for patients with treatment-naïve CLL
- Incidence and severity of cardiac arrhythmias, including atrial fibrillation or flutter, documented with approved BTK inhibitors
- Probability of other cardiovascular toxicities, such as stroke, hypertension and bruising or bleeding
- Spectrum and frequency of clinically relevant noncardiovascular toxicities, including cytopenias, infections, headache, dermatologic symptoms, arthralgias or myalgia and gastrointestinal-related events
- Appropriate monitoring for and management of treatment-related cardiovascular and noncardiovascular events in patients receiving BTK inhibitors



## Robin Klebig, MSN, APRN, CNP, AOCNP



# What I tell my patients about to begin treatment with a BTK inhibitor



## **Irreversible and Reversible BTK Inhibitors for CLL**

BTK inhibitor	Binding	T1/2 (hours)	IC50 (nM)	Dosing
Ibrutinib	Covalent irreversible C481	4-8	0.5	420 mg
Acalabrutinib	Covalent irreversible C481	0.9	5.1	100 mg BID
Zanubrutinib	Covalent irreversible C481	2-4	0.5	160 or 320 mg BID
Pirtobrutinib	Noncovalent reversible	Not available	0.85	200 mg





## Ibrutinib

#### **Mechanism of action**

• BTK inhibitor

#### Indication

• For patients with CLL or small lymphocytic lymphoma (SLL)

#### **Recommended dose**

• 420 mg po qd swallowed whole with water

#### **Key issues**

• Dose reduction guidelines



## Acalabrutinib

#### **Mechanism of action**

• BTK inhibitor

#### Indication

• For patients with CLL or SLL

#### **Recommended dose**

 100 mg po approximately every 12 hours swallowed whole with water, with or without food

#### **Key issues**

• Dose reduction guidelines



## Zanubrutinib

#### **Mechanism of action**

• BTK inhibitor

#### Indication

• For patients with CLL or SLL

#### **Recommended dose**

 160 mg po twice daily or 320 mg po once daily, swallowed whole with water, with or without food

#### **Key issues**

Dose reduction guidelines



## **Summary of Adverse Events with BTK Inhibitors**





Courtesy of Matthew S Davids, MD, MMSc



#### **Dr Allan** New York, New York

## Potential Role of BTK Inhibitors with Venetoclax



**Dr Kahl** St Louis, Missouri

- Mechanistic rationale for combining BTK inhibitors and venetoclax with and without CD20 antibodies for CLL
- Published data sets evaluating ibrutinib/venetoclax for newly diagnosed and relapsed/refractory (R/R) CLL
- Available data with acalabrutinib or zanubrutinib in combination with venetoclax with or without an anti-CD20 antibody
- Ongoing Phase III studies assessing novel doublet and triplet combinations for previously untreated and R/R disease; potential clinical role of this strategy
- Incidence and severity of clinically relevant toxicities encountered when combining BTK inhibitors and venetoclax





# What I tell my patients about to begin treatment with a BTK inhibitor in combination with venetoclax





**Dr Allan** New York, New York

## Selection and Sequencing of Therapies for R/R CLL



**Dr Kahl** St Louis, Missouri

- Long-term follow-up from Phase III trials evaluating BTK inhibitors and venetoclax for R/R CLL
- Role of rechallenging with agents used in a prior line of treatment
- Antitumor activity documented with pirtobrutinib in patients with R/R CLL; current clinical role
- Biological rationale for and available data with CD19-directed chimeric antigen receptor (CAR) T-cell therapy for CLL; recent FDA approval



## **Pirtobrutinib**

#### **Mechanism of action**

• BTK inhibitor

#### Indication

• For patients with CLL or SLL who have received at least 2 prior lines of therapy, including a BTK inhibitor and a Bcl-2 inhibitor

#### **Recommended dose**

• 200 mg orally once daily; swallow whole with water, with or without food. Do not cut, crush or chew tablets

#### **Key issues**

• Dose reduction guidelines



Pirtobrutinib package insert, 12/2023.

## **Chimeric Antigen Receptor (CAR) Modified T Cells**



 Genetically engineered T cells altered to express an artificial receptor, CAR



Courtesy of Sattva S Neelapu, MD

## **CAR T Cells: Mechanism of Action**





#### **Overview of CAR T-Cell Therapy**





#### U.S. FDA Approves Liso-Cel as the First and Only CAR T Cell Therapy for Adults with Relapsed or Refractory Chronic Lymphocytic Leukemia (CLL) or Small Lymphocytic Lymphoma (SLL) Press Release: March 14, 2024

"...the U.S. Food and Drug Administration (FDA) has granted accelerated approval of lisocabtagene maraleucel (liso-cel), a CD19-directed chimeric antigen receptor (CAR) T cell therapy, for the treatment of adult patients with relapsed or refractory chronic lymphocytic leukemia (CLL) or small lymphocytic lymphoma (SLL) who have received at least two prior lines of therapy, including a Bruton tyrosine kinase (BTK) inhibitor and a B-cell lymphoma 2 (BCL-2) inhibitor. This indication is approved under accelerated approval based on response rate and duration of response.

TRANSCEND CLL 004 (NCT03331198) is a Phase 1/2 open-label, single-arm, multicenter study evaluating lisocel in patients with relapsed or refractory chronic lymphocytic leukemia or small lymphocytic lymphoma. The Phase 1 dose escalation portion of the study assessed the safety and recommended dose for the subsequent Phase 2 expansion cohort. The Phase 2 portion of the study is evaluating liso-cel at the recommended dose from the Phase 1 monotherapy arm. The primary endpoint of the Phase 2 portion of the study is complete response rate, including complete remission with incomplete bone marrow recovery, based on independent review committee according to the International Workshop on Chronic Lymphocytic Leukemia (iwCLL) 2018 guidelines.."

https://news.bms.com/news/corporate-financial/2024/U.S.-FDA-Approves-Bristol-Myers-Squibbs-Breyanzi--as-the-First-and-Only-CAR -T-Cell-Therapy-for-Adults-with-Relapsed-or-Refractory-Chronic-Lymphocytic-Leukemia-CLL-or-Small-Lymphocytic-Lymphoma-SLL/default.aspx



## **Approved CAR T Cell Therapies in Lymphoma**

Agent	Approved Indications	
Axicabtagene Ciloleucel	<ul> <li>Large B-Cell Lymphoma refractory to 1L chemoimmunotherapy or relapsed within 12 months of 1L chemoimmunotherapy</li> <li>R/R Large B-Cell Lymphoma after 2+ lines of systemic therapy</li> <li>R/R FL after 2+ lines of systemic therapy</li> </ul>	
Brexucabtagene Autoleucel	<ul> <li>R/R MCL after prior chemotherapy, anti-CD20 therapy, and a BTK inhibitor</li> </ul>	
Lisocabtagene Maraleucel	<ul> <li>Large B-Cell Lymphoma refractory to 1L chemoimmunotherapy or relapsed within 12 months of 1L chemoimmunotherapy</li> <li>R/R Large B-Cell Lymphoma after 2+ lines of systemic therapy</li> <li>R/R CLL or SLL after 2+ lines of therapy, including a BTKi and a BCL-2 inhibitor</li> </ul>	
Tisagenlecleucel	<ul> <li>R/R Large B-Cell Lymphoma after 2+ lines of systemic therapy</li> <li>R/R FL after 2+ lines of systemic therapy</li> </ul>	









## **Consulting Nursing Faculty Comments**

## Interactions between community oncologists and tertiary care centers



Amy Goodrich, CRNP



## **Consulting Nursing Faculty Comments**

## **Bispecific immunotherapy and risk for infection**



Amy Goodrich, CRNP



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**Dr Allan** New York, New York

## Bispecific Antibodies as a Treatment Option for Non-Hodgkin Lymphoma (NHL)



**Dr Kahl** St Louis, Missouri

- Potential therapeutic advantages over traditional monoclonal antibodies of using bispecific antibodies to engage 2 disease targets with 1 molecule
- Scientific rationale for the selection of CD20 and CD3 as targets for bispecific antibodies in NHL
- Mechanistic similarities and differences among the various approved and investigational CD20 x CD3 bispecific antibodies, such as epcoritamab, glofitamab, mosunetuzumab and odronextamab
- Potential practical advantages of the "off-the-shelf" nature of bispecific antibodies relative to CAR T-cell therapy



## Robin Klebig, MSN, APRN, CNP, AOCNP



## What I tell my patients about what bispecific antibodies are and how they work



## **Approved and Investigational Bispecific Antibodies for NHL**

Drug Name	Route of Administration	Investigational Status	
Mosunetuzumab	Intravenous	Approved (R/R FL)	
Glofitamab	Intravenous	Approved (R/R DLBCL)	
Epcoritamab	Subcutaneous	Approved (R/R DLBCL)	
Odronextamab	Intravenous	Investigational (R/R FL, DLBCL)* *03/2024: FDA issued CRLs	



Radhakrishnan VS, Davies AJ. Front Immunol 2024 January 11:14:1295599.

## **Structure of Select Bispecific Antibodies**

<b>Bi-Specific Antibody</b>	Targets	Design	Ig Fragment Formats
blinatumomab	CD19 x CD3	CDD	<ul> <li>two murine scFv joined by a glycine-serine linker</li> <li>monovalent CD19 and monovalent CD3 binding</li> <li>cloned from anti-CD19 (clone HD37) and anti-CD3 (clone L2K-07) murine mAbs</li> </ul>
mosunetuzumab	CD20 x CD3		<ul> <li>humanized mouse heterodimeric IgG1-based antibody</li> <li>monovalent CD20 and monovalent CD3ε binding</li> <li>modified Fc devoid of FcγR and complement binding</li> </ul>
glofitamab	(CD20) <sub>2</sub> x CD3		<ul> <li>humanized mouse IgG1-based antibody</li> <li>bivalent CD20 and monovalent CD3ε binding</li> <li>modified Fc devoid of FcγR and complement binding</li> </ul>
odronextamab	CD20 x CD3		<ul> <li>fully human IgG4-based heterodimeric antibody</li> <li>monovalent CD20 and monovalent CD3ε binding</li> <li>Fc-dependent effector function-minimized antibody with Fc of the anti-CD3ε heavy chain modified to reduce Protein A binding</li> <li>common κ light chain from anti-CD3ε mAb</li> </ul>
epcoritamab	CD20 x CD3		<ul> <li>humanized mouse IgG1-based heterodimeric antibody</li> <li>monovalent CD20 and monovalent CD3 binding</li> <li>IgG1 Fc modified to minimize Fc-dependent effector functions and to control Fab-arm exchange of mAb half-molecules, resulting in high bispecific product yield</li> </ul>

Ig, immunoglobulin; scFv, single-chain variable fragment; mAb, monoclonal antibody; Fc, fragment crystallizable; FcyR, Fc gamma receptor



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**Dr Allan** New York, New York

## Bispecific Antibodies in the Management of Follicular Lymphoma (FL)



**Dr Kahl** St Louis, Missouri

- Frequency, depth and durability of responses to mosunetuzumab in patients with R/R FL
- Recent FDA approval of mosunetuzumab for patients with FL after 2 or more lines of systemic therapy
- Optimal integration of mosunetuzumab into FL treatment algorithms
- Available data and ongoing research with other CD20 x CD3 bispecific antibodies for FL, such as epcoritamab, glofitamab and odronextamab



## Mosunetuzumab

#### **Mechanism of action**

• Bispecific CD20-directed CD3 T-cell engager

#### Indication

• For patients with relapsed or refractory FL after 2 or more lines of systemic therapy

#### **Recommended administration**

Intravenous infusion

#### **Key issues**

 Boxed warning for serious or life-threatening CRS; warnings and precautions include neurologic toxicity, infections, cytopenias and tumor flare



## **Mosunetuzumab: Mechanism of Action**

- Mosunetuzumab (first-in-class) is approved in the EU and is under Priority Review by the FDA, for the treatment of relapsed/refractory follicular lymphoma (R/R FL) after ≥2 prior systemic therapies<sup>1,2</sup>
  - ORR 80%, CR 60%, majority maintaining response after 18 months<sup>3</sup>
  - Consistent benefit in patients with double-refractory disease and POD24<sup>3</sup>
  - Off-the-shelf, fixed-duration treatment that can be administered in the outpatient setting<sup>3</sup>

Mosunetuzumab: CD20xCD3 T-cell-engaging bispecific antibody that redirects T cells to engage and eliminate malignant B cells<sup>4,5</sup>





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**Dr Allan** New York, New York

## Bispecific Antibodies in the Management of Diffuse Large B-Cell Lymphoma (DLBCL)



**Dr Kahl** St Louis, Missouri

- Pivotal clinical trial results with glofitamab and with epcoritamab for multiregimen-relapsed DLBCL
- FDA-approved indications for glofitamab and epcoritamab in patients with DLBCL
- Optimal sequencing of bispecific antibodies relative to other available therapies for DLBCL; patient and disease-related factors



## **Epcoritamab: Mechanism of Action of Subcutaneous Bispecific Antibody**





Falchi L et al. ASCO 2022; Abstract 7524.

## **Epcoritamab**

#### **Mechanism of action**

• Bispecific CD20-directed CD3 T-cell engager

#### Indication

 For patients with relapsed or refractory DLBCL not otherwise specified, including DLBCL arising from indolent lymphoma, and high-grade B-cell lymphoma after 2 or more lines of systemic therapy

#### **Recommended administration**

Subcutaneous injection

#### **Key issues**

 Boxed warning for serious or life-threatening CRS and ICANS (immune effector cell-associated neurotoxicity syndrome); warnings and precautions include infections, cytopenias and embryo-fetal toxicity



## **Glofitamab: Mechanism of Action**





https://www.columvi-hcp.com/about/how-columvi-works.html.

## Glofitamab

#### **Mechanism of action**

• Bispecific CD20-directed CD3 T-cell engager

#### Indication

• For patients with relapsed or refractory DLBCL not otherwise specified or large B-cell lymphoma arising from FL, after 2 or more lines of systemic therapy

#### **Recommended administration**

• Intravenous infusion

#### Key issues

 Boxed warning for serious or fatal CRS; warnings and precautions include neurologic toxicity, serious infections, tumor flare and embryo-fetal toxicity



## **Glofitamab: Background and Mechanism of Action**

- Patients with R/R DLBCL (≥2 prior therapies) have a poor prognosis<sup>1,2</sup>
  - poor outcomes are reported in patients with treatment failure after R-CHOP, particularly in those with refractory disease<sup>3</sup>
  - CAR T-cell therapy is an option for patients with R/R DLBCL but its use may be limited by logistical challenges<sup>4,5</sup>

#### Glofitamab

- off-the-shelf and fixed duration treatment<sup>6,7</sup>
- Phase I experience (NCT03075696)<sup>7</sup>
  - encouraging efficacy and manageable safety with glofitamab monotherapy in patients with R/R B-cell NHL<sup>6,7</sup>
  - established a step-up dosing schedule and target dose
     (30mg) in patients with B-cell NHL in multiple cohorts<sup>8</sup>

**Glofitamab:** CD20xCD3 bispecific monoclonal antibody with 2:1 format for increased potency vs 1:1 format<sup>6</sup>





Dickinson M et al. ASCO 2022; Abstract 7500; EHA 2022; Abstract S220.

### Glofitamab Meets Primary Endpoint of Overall Survival for Relapsed or Refractory DLBCL in Phase III STARGLO Study Press Release: April 14, 2024

"The Phase III STARGLO study met its primary endpoint of overall survival.

The study demonstrated that people with relapsed or refractory (R/R) diffuse large B-cell lymphoma (DLBCL), who have received at least one prior line of therapy and are not candidates for autologous stem cell transplant, lived longer when treated with glofitamab-gxbm in combination with gemcitabine and oxaliplatin (GemOx) versus rituximab in combination with GemOx.

Safety of the combination appeared consistent with the known safety profiles of the individual medicines. The data will be submitted to health authorities and shared at an upcoming medical meeting."


#### **Odronextamab: Mechanism of Action**

#### Odronextamab Hinge-stabilized CD20×CD3 bispecific antibody



Binds CD20 on malignant B-cells and CD3 on T cells, to elicit T-cell-mediated cytotoxicity



#### **Odronextamab**

#### **Mechanism of action**

- Bispecific antibody directed against CD20 on B cells and CD3 on T cells
- Indication
- Investigational

#### **Key trial data**

• Phase II ELM-2 study evaluating odronextamab for patients with relapsed or refractory DLBCL



#### FDA Issues Complete Response Letters for Odronextamab for R/R FL and R/R DLBCL Press Release: March 25, 2024

"The US Food and Drug Administration (FDA) has issued Complete Response Letters (CRLs) for the Biologics License Application (BLA) for odronextamab in relapsed/refractory (R/R) follicular lymphoma (FL) and in R/R diffuse large Bcell lymphoma (DLBCL), each after two or more lines of systemic therapy. The only approvability issue is related to the enrollment status of the confirmatory trials. The CRLs – one for R/R FL and one for R/R DLBCL – did not identify any approvability issues with the odronextamab clinical efficacy or safety, trial design, labeling or manufacturing.

[The manufacturer] has been actively enrolling patients in multiple Phase 3 trials for odronextamab as part of the OLYMPIA program – one of the largest clinical programs in lymphoma. As the OLYMPIA program is intended to change the treatment paradigm of several B-cell non-Hodgkin lymphoma subtypes – including in earlier lines of therapy – in agreeing to the program, the FDA required that the trials include both dose-finding and confirmatory portions. Enrollment in the dose-finding portion has begun, but the CRLs indicate that the confirmatory portions of these trials should be underway and that the timelines to completion be agreed prior to resubmission. [The company] is committed to working closely with the FDA and investigators to bring odronextamab to patients with R/R FL and R/R DLBCL as quickly as possible. [The company] plans on sharing updates on enrollment and regulatory timelines later this year.

Regulatory review of odronextamab remains ongoing by the European Medicines Agency (EMA) for the treatment of R/R DLBCL and R/R FL. In the European Union, odronextamab was granted Orphan Drug Designation in DLBCL and FL."



### Agenda

#### Introduction

**Module 1:** Biology of Chronic Lymphocytic Leukemia (CLL)

**Module 2:** Venetoclax-Based Up-Front Treatment for CLL

**Module 3:** BTK Inhibition Alone or in Combination with Venetoclax for CLL

Module 4: Bispecific Antibodies as a Treatment Option for Non-Hodgkin Lymphoma

Module 5: Bispecific Antibodies in the Management of Follicular Lymphoma Module 6: Bispecific Antibodies for the Treatment of Diffuse Large B-Cell Lymphoma

Module 7: Practical Considerations and Tolerability of Bispecific Antibodies





**Dr Allan** New York, New York

## Practical Considerations with the Use of Bispecific Antibodies



**Dr Kahl** St Louis, Missouri

- Routes of administration and step-up dosing schedules of various bispecific antibodies
- Recommended premedication and prophylaxis for patients with NHL about to begin treatment with bispecific antibodies
- Educating patients about the need for hospitalization with specific bispecific antibody therapies; timing and duration of hospitalization
- Anticipated duration of treatment with bispecific antibody therapy





**Dr Allan** New York, New York

## Cytokine Release Syndrome (CRS) and Neurotoxicity with Bispecific Antibodies



**Dr Kahl** St Louis, Missouri

- Incidence and severity of CRS and neurotoxicity with bispecific antibody therapy in patients with NHL
- Time course for and common signs and symptoms of CRS and neurotoxicity
- Optimal monitoring of patients for early detection of CRS and neurotoxicity
- Guideline-endorsed approaches to the mitigation and management of CRS and neurotoxicity





**Dr Allan** New York, New York

## Other Tolerability and Toxicity Issues with Bispecific Antibody Therapy



**Dr Kahl** St Louis, Missouri

- Incidence of cytopenias, infections and tumor flare with bispecific antibody therapy in pivotal clinical trials
- Spectrum, frequency and severity of other common adverse events with bispecific antibodies among patients with NHL, such as fatigue, rash, musculoskeletal pain and laboratory anomalies
- Counseling patients about the importance of monitoring for and reporting symptoms of common and less common adverse events with bispecific antibodies
- Strategies to manage side effects of bispecific antibodies in routine practice; appropriate thresholds for dose modification and treatment discontinuation





What I tell my patients about logistical considerations with bispecific antibodies, such as premedications/prophylaxis, the need for hospitalization, step-up dosing and duration of treatment



## Robin Klebig, MSN, APRN, CNP, AOCNP



# What I tell my patients about CRS and neurotoxicity associated with bispecific antibodies





What I tell my patients about other toxicities associated with bispecific antibodies, such as cytopenias and infections, tumor flare, fatigue, rash, musculoskeletal pain and laboratory anomalies



#### **Consulting Nursing Faculty Comments**

## Entering the oncology field and managing burnout



Sonia Glennie, ARNP, MSN, OCN



#### **Consulting Nursing Faculty Comments**

### Choosing oncology work over other clinical roles



Sonia Glennie, ARNP, MSN, OCN





## **APPENDIX**



#### **CLL14 Trial: First-Line Venetoclax/Obinutuzumab**





Abstract S148

#### Venetoclax-Obinutuzumab for previously untreated chronic lymphocytic leukemia: 5-year results of the randomized CLL14 study

Othman Al-Sawaf, Can Zhang, Sandra Robrecht, Alex Kotak, Naomi Chang, Anna Maria Fink, Eugen Tausch, Christof Schneider, Matthias Ritgen, Karl-Anton Kreuzer, Brenda Chyla, Barbara Eichhorst, Yanwen Jiang, Stephan Stilgenbauer, Michael Hallek, Kirsten Fischer

> June 12th, 2022 Clinical CLL Session



**Othman Al-Sawaf** 

#### **CLL14 Trial Design**





#### **CLL14: Most Frequent Grade ≥3 Adverse Events**

	Venetoclax-obinutuzumab (N=212)		Chlorambucil-obinutuzumab (N=214)	
	During Treatment	After Treatment	During Treatment	After Treatment
Neutropenia	51.9%	4.0%	47.2%	1.9%
Thrombocytopenia	14.2%	0.5%	15.0%	0.0%
Anemia	7.5%	2.0%	6.1%	0.5%
Febrile neutropenia	4.2%	1.0%	3.3%	0.5%
Leukopenia	2.4%	0.0%	4.7%	0.0%
Pneunomia	3.8%	3.0%	3.3%	1.4%
Infusion-related reaction	9.0%	0.0%	9.8%	0.5%
Tumour lysis syndrome	1.4%	0.0%	3.3%	0.0%



#### **CLL14: Progression-Free Survival (PFS)**



Median PFS Ven-Obi: not reached Clb-Obi: 36.4 months

5-year PFS rate Ven-Obi: 62.6% Clb-Obi: 27.0%

HR 0.35, 95% CI [0.26-0.46] P<0.0001



Al-Sawaf O et al. EHA 2022; Abstract S148.

#### **CLL14: Overall Survival (OS)**



Median OS Ven-Obi: not reached

Clb-Obi: not reached

#### 5-year OS rate

Ven-Obi: 81.9% Clb-Obi: 77.0%

HR 0.72, 95% CI [0.48-1.09] P=0.12



Al-Sawaf O et al. EHA 2022; Abstract S148.

#### Mosunetuzumab



#### Safety and efficacy of mosunetuzumab, a bispecific antibody, in patients with relapsed or refractory follicular lymphoma: a single-arm, multicentre, phase 2 study

Lihua E Budde, Laurie H Sehn, Matthew Matasar, Stephen J Schuster, Sarit Assouline, Pratyush Giri, John Kuruvilla, Miguel Canales, Sascha Dietrich, Keith Fay, Matthew Ku, Loretta Nastoupil, Chan Yoon Cheah, Michael C Wei, Shen Yin, Chi-Chung Li, Huang Huang, Antonia Kwan, Elicia Penuel, Nancy L Bartlett

Lancet Oncol 2022 August;23(8):1055-65.

Mosunetuzumab Safety Profile in Patients With Relapsed/Refractory B-cell Non-Hodgkin Lymphoma: Clinical Management Experience From a Pivotal Phase I/II Trial

Matthew Matasar,<sup>1</sup> Nancy L. Bartlett,<sup>2</sup> Mazyar Shadman,<sup>3</sup> Lihua E. Budde,<sup>4</sup> Ian Flinn,<sup>5</sup> Gareth P. Gregory,<sup>6</sup> Won Seog Kim,<sup>7</sup> Georg Hess,<sup>8</sup> Dima El-Sharkawi,<sup>9</sup> Catherine S. Diefenbach,<sup>10</sup> Huang Huang,<sup>11</sup> Iris To,<sup>12</sup> Joana Parreira,<sup>13</sup> Mei Wu,<sup>12</sup> Antonia Kwan,<sup>12</sup> Sarit Assouline<sup>14</sup>

*Clin Lymphoma Myeloma Leuk* 2024 April;24(4):240-53.



#### **Mosunetuzumab: Efficacy and CRS Events in R/R FL**



#### **CRS Events by Mosunetuzumab Dose Cycle**



**Reduction in Tumor Size with** 

Mosunetuzumab



Budde LE et al. Lancet Oncol 2022 August; 23(8): 1055-65; Matasar M et al. Clin Lymphoma Myeloma Leuk 2024 April; 24(4): 240-53.

#### **Epcoritamab**



#### **Epcoritamab, a Novel, Subcutaneous** orig **CD3xCD20 Bispecific T-Cell–Engaging Antibody**, ina in Relapsed or Refractory Large B-Cell Lymphoma: Dose Expansion in a Phase I/II Trial rep

Catherine Thieblemont, MD, PhD<sup>1</sup>; Tycel Phillips, MD<sup>2</sup>; Herve Ghesquieres, MD, PhD<sup>3</sup>; Chan Y. Cheah, MBBS, DMSc<sup>4,5</sup>;

ort Michael Roost Clausen, MD, PhD<sup>6</sup>; David Cunningham, MD<sup>7</sup>; Young Rok Do, MD, PhD<sup>8</sup>; Tatyana Feldman, MD<sup>9</sup>;

 $\mathcal{O}$ Robin Gasiorowski, MBBS, PhD<sup>10</sup>; Wojciech Jurczak, MD, PhD<sup>11</sup>; Tae Min Kim, MD, PhD<sup>12</sup>; David John Lewis, MD<sup>13</sup>; Marjolein van der Poel, MD, PhD<sup>14</sup>; Michelle Limei Poon, MD<sup>15</sup>; Mariana Cota Stirner, MD, PhD<sup>16</sup>; Nurgul Kilavuz, MSc<sup>17</sup>; Christopher Chiu, PhD<sup>17</sup>; Menghui Chen, PhD<sup>17</sup>; Mariana Sacchi, MD<sup>17</sup>; Brian Elliott, MD<sup>17</sup>; Tahamtan Ahmadi, MD, PhD<sup>17</sup>; Martin Hutchings, MD, PhD<sup>18</sup>; and Pieternella J. Lugtenburg, MD, PhD<sup>19</sup>

*J Clin Oncol* 2023 April 20;41(12):2238-47.



### **Epcoritamab: Efficacy and Select Adverse Events in R/R DLBCL**

#### **Reduction in Tumor Size with Epcoritamab**



#### **Select Adverse Events**

Patient	Any Grade (N = 157), No. (%)	Grade ≥ 3 (N = 157), No. (%)
Any AE	156 (99.4)	96 (61.1)
Any treatment-related AE	130 (82.8)	42 (26.8)
SAE	89 (56.7)	—
Serious treatment-related AE	55 (35.0)	_
Treatment-emergent AE leading to treatment discontinuation	12 (7.6)	11 (7.0)
Treatment-emergent AE in $\geq 10\%$ of patients^a		
CRS	78 (49.7)	4 (2.5)
Pyrexia <sup>b</sup>	37 (23.6)	0
Fatigue	36 (22.9)	3 (1.9)
AEs of special interest		
CRS℃	78 (49.7)	4 (2.5)
ICANS <sup>d</sup>	10 (6.4)	1 (0.6)
Clinical tumor lysis syndrome	2 (1.3)	2 (1.3)

ICANS = immune effector cell-associated neurotoxicity syndrome

Thieblemont C et al. J Clin Oncol 2023 April 20;41(12):2238-47.



#### Glofitamab



#### ORIGINAL ARTICLE

## Glofitamab for Relapsed or Refractory Diffuse Large B-Cell Lymphoma

Michael J. Dickinson, M.B., B.S., D.Med.Sc., Carmelo Carlo-Stella, M.D., Franck Morschhauser, M.D., Ph.D., Emmanuel Bachy, M.D., Ph.D., Paolo Corradini, M.D., Gloria Iacoboni, M.D., Cyrus Khan, M.D.,
Tomasz Wróbel, M.D., Fritz Offner, M.D., Ph.D., Marek Trněný, M.D., Shang-Ju Wu, M.D., Ph.D., Guillaume Cartron, M.D., Ph.D., Mark Hertzberg, M.B., B.S., Ph.D., Anna Sureda, M.D., Ph.D.,
David Perez-Callejo, Ph.D., Linda Lundberg, Ph.D., James Relf, M.D., Mark Dixon, M.Sc., Emma Clark, M.Sc., Kathryn Humphrey, B.Sc., and Martin Hutchings, M.D., Ph.D.



### **Glofitamab: Efficacy and Select Adverse Events in R/R DLBCL**



32 (21)
6 (4)
5 (3)
5 (3)
4 (3)
24 (16)
28 (18)
59 (38)
23 (15)
12 (8)
11 (7)
11 (7)
4 (3)
2 (1)



Dickinson MJ et al. N Engl J Med 2022 December 15;387(24):2220-31.

What I Tell My Patients: **Integrating New Research Information into Current Clinical Care** A Complimentary NCPD Hybrid Symposium Series Held During the 49<sup>th</sup> Annual ONS Congress **Chronic Lymphocytic Leukemia and Bispecific Antibodies in the Management of Lymphoma** Thursday, April 25, 2024 6:00 PM - 8:00 PM Faculty John N Allan, MD **Brad S Kahl, MD** Robin Klebig, MSN, APRN, CNP, AOCNP Mollie Moran, APRN-CNP, AOCNP **Moderator** Neil Love, MD

## What I Tell My Patients: Integrating New Research Information into Current Clinical Care

A Complimentary NCPD Hybrid Symposium Series Held During the 49<sup>th</sup> Annual ONS Congress

## **Head and Neck Cancer**

Friday, April 26, 2024 6:00 AM – 7:30 AM

Faculty Meetal Dharia, NP-C, AOCNP Robert L Ferris, MD, PhD Robert Haddad, MD Lynsey P Teulings, APRN Moderator Neil Love, MD



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