Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Chronic Lymphocytic Leukemia

A Virtual CME Satellite Symposium Series in Conjunction with the Society of Hematologic Oncology 2021 Annual Meeting

Monday, August 30, 2021  
5:00 PM – 6:00 PM ET

Faculty
Jeff Sharman, MD  
Mitchell R Smith, MD, PhD  
Philip A Thompson, MB, BS

Moderator
Neil Love, MD
Faculty

**Jeff Sharman, MD**
Medical Director of Hematology Research
US Oncology Network
Willamette Valley Cancer Institute and Research Center
Eugene, Oregon

**Mitchell R Smith, MD, PhD**
Clinical Professor of Medicine
George Washington University
Washington, DC

**Philip A Thompson, MB, BS**
Assistant Professor, Department of Leukemia
Division of Cancer Medicine
The University of Texas
MD Anderson Cancer Center
Houston, Texas

**Moderator**
Neil Love, MD
Research To Practice
Miami, Florida
Commercial Support

This activity is supported by educational grants from AbbVie Inc, BeiGene Ltd and Bristol-Myers Squibb Company.
**Dr Love — Disclosures**

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

<table>
<thead>
<tr>
<th>Advisory Committee</th>
<th>AbbVie Inc, ADC Therapeutics, AstraZeneca Pharmaceuticals LP, BeiGene Ltd, Bristol-Myers Squibb Company, Genentech, a member of the Roche Group, Genmab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consulting Agreements</td>
<td>AbbVie Inc, AstraZeneca Pharmaceuticals LP, BeiGene Ltd, Genentech, a member of the Roche Group</td>
</tr>
</tbody>
</table>
## Dr Smith — Disclosures

<table>
<thead>
<tr>
<th>Role</th>
<th>Companies/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisory Committee</td>
<td>Janssen Biotech Inc</td>
</tr>
<tr>
<td>Consulting Agreements</td>
<td>Acrotech Biopharma, CytomX Therapeutics</td>
</tr>
<tr>
<td>Contracted Research</td>
<td>Karyopharm Therapeutics</td>
</tr>
<tr>
<td>Data and Safety Monitoring Board/Committee</td>
<td>ECOG-ACRIN Cancer Research Group</td>
</tr>
<tr>
<td>Speakers Bureau</td>
<td>Acrotech Biopharma, AstraZeneca Pharmaceuticals LP, EUSA Pharma</td>
</tr>
</tbody>
</table>
## Dr Thompson — Disclosures

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisory Committee</td>
<td>Adaptive Biotechnologies Corporation, Janssen Biotech Inc</td>
</tr>
<tr>
<td>Consulting Agreement</td>
<td>Janssen Biotech Inc</td>
</tr>
<tr>
<td>Contracted Research</td>
<td>AbbVie Inc, Adaptive Biotechnologies Corporation, Amgen Inc, Genentech,</td>
</tr>
<tr>
<td></td>
<td>a member of the Roche Group, Pharmacyclics LLC, an AbbVie Company</td>
</tr>
<tr>
<td>Educational talks</td>
<td>AbbVie Inc, Janssen Biotech Inc</td>
</tr>
</tbody>
</table>
We Encourage Clinicians in Practice to Submit Questions

Feel free to submit questions now before the program begins and throughout the program.
Familiarizing Yourself with the Zoom Interface

How to answer poll questions

When a poll question pops up, click your answer choice from the available options. Results will be shown after everyone has answered.
Familiarizing Yourself with the Zoom Interface

Expand chat submission box

Drag the white line above the submission box up to create more space for your message.
Familiarizing Yourself with the Zoom Interface

Increase chat font size

Press Command (for Mac) or Control (for PC) and the + symbol. You may do this as many times as you need for readability.
ONCOLOGY TODAY
WITH DR NEIL LOVE

Key Presentations on Chronic Lymphocytic Leukemia and Follicular Lymphoma from the 2020 ASH Annual Meeting

DR ANN LACASCE
DANA-FARBER CANCER INSTITUTE
BOSTON, MASSACHUSETTS

Listen on Apple Podcasts
Listen on Spotify
Listen on Google Podcasts
Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Non-Hodgkin Lymphoma
A Virtual CME Satellite Symposium Series in Conjunction with the Society of Hematologic Oncology 2021 Annual Meeting

Tuesday, August 31, 2021
7:00 PM – 8:00 PM ET

Faculty
Andrew M Evens, DO, MSc
Ian W Flinn, MD, PhD
Gilles Salles, MD, PhD

Moderator
Neil Love, MD
Meet The Professor
Immunotherapy and Novel Agents in Gynecologic Cancers

Wednesday, September 1, 2021
5:00 PM – 6:00 PM ET

Faculty
Joyce F Liu, MD, MPH

Moderator
Neil Love, MD
Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Acute Myeloid Leukemia and Myelodysplastic Syndromes

A Virtual CME Satellite Symposium During the Society of Hematologic Oncology 2021 Annual Meeting

Wednesday, September 8, 2021
7:30 PM – 9:00 PM Central Time

Faculty
Courtney D DiNardo, MD, MSCE
Daniel A Pollyea, MD, MS
David Sallman, MD
Eunice S Wang, MD

Moderator
Neil Love, MD
Exploring Key Issues Affecting the Care of Patients with Metastatic Colorectal Cancer with BRAF Mutations

A CME/MOC-Accredited Virtual Event

Thursday, September 9, 2021
5:00 PM – 6:00 PM ET

Faculty
Scott Kopetz, MD, PhD

Consulting Clinical Investigator
Wells A Messersmith, MD

Moderator
Neil Love, MD
Expert Second Opinion: Investigators Discuss Available Clinical Research in the Care of Patients with Early-Stage Non-Small Cell Lung Cancer

A Live Webinar Held as a Satellite CME/MOC Symposium During the IASLC 2021 World Conference on Lung Cancer Worldwide Virtual Event

Sunday, September 12, 2021

Faculty
Edward B Garon, MD, MS
Harvey I Pass, MD
Heather Wakelee, MD

Moderator
Neil Love, MD
Meet The Professor
Optimizing the Clinical Management of Hodgkin and Non-Hodgkin Lymphomas

Thursday, September 16, 2021
5:00 PM – 6:00 PM ET

Faculty
Loretta Nastoupil, MD

Moderator
Neil Love, MD
Thank you for joining us!

CME credit information will be emailed to each participant shortly.
Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Chronic Lymphocytic Leukemia

A Virtual CME Satellite Symposium Series in Conjunction with the Society of Hematologic Oncology 2021 Annual Meeting

Monday, August 30, 2021
5:00 PM – 6:00 PM ET

Faculty
Jeff Sharman, MD
Mitchell R Smith, MD, PhD
Philip A Thompson, MB, BS

Moderator
Neil Love, MD
Faculty

Jeff Sharman, MD
Medical Director of Hematology Research
US Oncology Network
Willamette Valley Cancer Institute and Research Center
Eugene, Oregon

Mitchell R Smith, MD, PhD
Clinical Professor of Medicine
George Washington University
Washington, DC

Phil A Thompson, MB, BS
Assistant Professor, Department of Leukemia
Division of Cancer Medicine
The University of Texas MD Anderson Cancer Center
Houston, Texas

Moderator
Neil Love, MD
Research To Practice
Miami, Florida
We Encourage Clinicians in Practice to Submit Questions

Feel free to submit questions now before the program begins and throughout the program.
Familiarizing Yourself with the Zoom Interface

How to answer poll questions

When a poll question pops up, click your answer choice from the available options. Results will be shown after everyone has answered.
ONCOLOGY TODAY
WITH DR NEIL LOVE

Key Presentations on Chronic Lymphocytic Leukemia and Follicular Lymphoma from the 2020 ASH Annual Meeting

DR ANN LACASCE
DANA-FARBER CANCER INSTITUTE
BOSTON, MASSACHUSETTS

Listen on
Apple Podcasts
Spotify
Google Podcasts
Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Non-Hodgkin Lymphoma

A Virtual CME Satellite Symposium Series in Conjunction with the Society of Hematologic Oncology 2021 Annual Meeting

Tuesday, August 31, 2021
7:00 PM – 8:00 PM ET

Faculty
Andrew M Evens, DO, MSc
Ian W Flinn, MD, PhD
Gilles Salles, MD, PhD

Moderator
Neil Love, MD
Meet The Professor
Immunotherapy and Novel Agents in Gynecologic Cancers

Wednesday, September 1, 2021
5:00 PM – 6:00 PM ET

Faculty
Joyce F Liu, MD, MPH

Moderator
Neil Love, MD
Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Acute Myeloid Leukemia and Myelodysplastic Syndromes

A Virtual CME Satellite Symposium During the Society of Hematologic Oncology 2021 Annual Meeting

Wednesday, September 8, 2021
7:30 PM – 9:00 PM Central Time

Faculty
Courtney D DiNardo, MD, MSCE
Daniel A Pollyea, MD, MS
David Sallman, MD
Eunice S Wang, MD

Moderator
Neil Love, MD
Exploring Key Issues Affecting the Care of Patients with Metastatic Colorectal Cancer with BRAF Mutations

A CME/MOC-Accredited Virtual Event

Thursday, September 9, 2021
5:00 PM – 6:00 PM ET

Faculty
Scott Kopetz, MD, PhD

Consulting Clinical Investigator
Wells A Messersmith, MD

Moderator
Neil Love, MD
Expert Second Opinion: Investigators Discuss Available Clinical Research in the Care of Patients with Early-Stage Non-Small Cell Lung Cancer

A Live Webinar Held as a Satellite CME/MOC Symposium During the IASLC 2021 World Conference on Lung Cancer Worldwide Virtual Event

Sunday, September 12, 2021

Faculty
Edward B Garon, MD, MS
Harvey I Pass, MD
Heather Wakelee, MD

Moderator
Neil Love, MD
Meet The Professor

Optimizing the Clinical Management of Hodgkin and Non-Hodgkin Lymphomas

Thursday, September 16, 2021
5:00 PM – 6:00 PM ET

Faculty
Loretta Nastoupil, MD

Moderator
Neil Love, MD
Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Chronic Lymphocytic Leukemia

A Virtual CME Satellite Symposium Series in Conjunction with the Society of Hematologic Oncology 2021 Annual Meeting

Monday, August 30, 2021
5:00 PM – 6:00 PM ET

Faculty
Jeff Sharman, MD
Mitchell R Smith, MD, PhD
Philip A Thompson, MB, BS

Moderator
Neil Love, MD
Agenda

Module 1: Treatment of CLL in 2021

• How do you think through first-line therapy for a patient with CLL who is younger and fit?
• How do you think through first-line therapy for a patient with CLL who is older and frail?
• How do you think through first-line therapy for a patient with high-risk CLL (eg, deletion 17p)?
• What is the most effective strategy to mitigate the risk of tumor lysis syndrome with venetoclax and/or obinutuzumab?
• How do you choose among the available BTK inhibitors for the treatment of CLL?
• What is the role of MRD assessment in the management of CLL?
• How do you approach COVID-19 prevention for patients with CLL?

Module 2: Future Treatment of CLL

• What is the future role of BTK inhibitors combined with venetoclax in the management of CLL?
• What is the future role of pirtobrutinib (LOXO 305) in the management of CLL?
• What is the current and future role of CAR T-cell therapy?
Beyond the Guidelines Survey Respondents

Jeremy Abramson, MD
John N Allan, MD
Bruce Cheson, MD
Steven Coutre, MD
Alexey V Danilov, MD, PhD
Matthew S Davids, MD, MMSc
Andrew M Evens, DO, MSc
Christopher R Flowers, MD, MS
Nathan H Fowler, MD
Jonathan W Friedberg, MD, MMSc
Brian T Hill, MD, PhD
Nitin Jain, MD
Brad S Kahl, MD
Ann S LaCasce, MD, MMSc
Anthony R Mato, MD, MSCE
Susan O’Brien, MD
John M Pagel, MD, PhD
Kerry Rogers, MD
Laurie H Sehn, MD, MPH
Jeff Sharman, MD
Mitchell R Smith, MD, PhD
Sonali M Smith, MD
Philip A Thompson, MB, BS
Julie M Vose, MD, MBA
William G Wierda, MD, PhD
Agenda

Module 1: Treatment of CLL in 2021

• How do you think through first-line therapy for a patient with CLL who is younger and fit?
• How do you think through first-line therapy for a patient with CLL who is older and frail?
• How do you think through first-line therapy for a patient with high-risk CLL (e.g., deletion 17p)?
• What is the most effective strategy to mitigate the risk of tumor lysis syndrome with venetoclax and/or obinutuzumab?
• How do you choose among the available BTK inhibitors for the treatment of CLL?
• What is the role of MRD assessment in the management of CLL?
• How do you approach COVID-19 prevention for patients with CLL?

Module 2: Future Treatment of CLL

• What is the future role of BTK inhibitors combined with venetoclax in the management of CLL?
• What is the future role of pirtobrutinib (LOXO 305) in the management of CLL?
• What is the current and future role of CAR T-cell therapy?
How do you think through first-line therapy for a patient with CLL who is younger and fit? (Do you continue to use the “pre-novel therapy era” criteria when initiating treatment for CLL?)
What is your usual preferred initial regimen for a 60-year-old patient with IGHV-unmutated chronic lymphocytic leukemia without del(17p) or TP53 mutation who requires treatment?

1. FCR
2. Ibrutinib +/- CD20 antibody
3. Acalabrutinib +/- CD20 antibody
4. Zanubrutinib
5. Venetoclax + obinutuzumab
6. Venetoclax + ibrutinib
7. Other
What is your usual preferred initial regimen for a 60-year-old patient with IGHV-unmutated CLL without del(17p) or TP53 mutation who requires treatment?

Survey of 25 US-based clinical investigators

- Venetoclax + obinutuzumab: 15
- Acalabrutinib: 5
- Acalabrutinib + obinutuzumab: 2
- Ibrutinib: 2
- Acalabrutinib or venetoclax + obinutuzumab: 1
What is your usual preferred initial regimen for a 60-year-old patient with IGHV-mutated chronic lymphocytic leukemia without del(17p) or TP53 mutation who requires treatment?

1. FCR
2. Ibrutinib +/- CD20 antibody
3. Acalabrutinib +/- CD20 antibody
4. Zanubrutinib
5. Venetoclax + obinutuzumab
6. Venetoclax + ibrutinib
7. Other
What is your usual preferred initial regimen for a 60-year-old patient with IGHV-mutated CLL without del(17p) or TP53 mutation who requires treatment?

- **Venetoclax + obinutuzumab**: 15
- **Fludarabine/cyclophosphamide/rituximab (FCR)**: 4
- **Acalabrutinib**: 4
- **Acalabrutinib or venetoclax + obinutuzumab**: 1
- **Ibrutinib**: 1

Survey of 25 US-based clinical investigators
Case Presentation: Dr Smith – 64-year-old man with IGHV-unmutated CLL

- 64-year-old man, evaluated for increasing fatigue, found to have on exam bilateral neck and axillary adenopathy 2-3 cm, palpable spleen tip.
- Labs showed WBC 32.9, 90% small lymphocytes. Hgb 11.5, platelets 175. Chemistry panel normal, LDH normal. Immunoglobulins normal. Thyroid function normal.
- Flow cytometry consistent with CLL.
- FISH trisomy 12, no del17p.
- IGHV unmutated.
- Two months later, worsening fatigue though still working (senior partner in a law firm), so ECOG PS 1, nodes on exam significantly increased in number and size, bilateral neck/supraclavicular.
- WBC 40.2, ALC 36, Hgb 11.3 platelets 179.
- CT with multiple bilateral 3-4 cm cervical and supraclavicular, 5 cm axillary nodes, 2-3 cm retroperitoneal nodes.
- Discussed whether to start treatment and, if so, options.
- Elected venetoclax-obinutuzumab per CLL14 regimen.
- Has had good response, minimal toxicity.
- Managed the initial 8 weeks in terms of TLS risk and tried to minimize visits to the clinic.
Case Presentation: Dr Thompson – 36-year-old man with IGHV-unmutated CLL

• 36M, diagnosed in 2011, aged 27. Asymptomatic, WBC 52.
• Came to MDA for discussion of treatment options in early 2020 just at the dawn of the COVID-19 pandemic.
• WBC 366.9, Hgb 10.4, Plt 129.
• Asymptomatic. Keen outdoorsman. Minimal lymphadenopathy, but spleen palpable 8-10cm below costal margin in mid-clavicular line.
• Unmutated $IGHV$ (VH3-21, 0%). Negative FISH, no mutations on NGS panel.
Case Presentation: Dr Thompson – 36-year-old man with IGHV-unmutated CLL (continued)

- Chemotherapy not considered due to unmutated IGHV.
- Discussed:
  1. Time-limited venetoclax + obinutuzumab.
  2. Ibrutinib +/- rituximab or obinutuzumab.
  3. Acalabrutinib +/- obinutuzumab.
- Patient desired a “low-touch” therapy with minimal immunosuppression due to COVID-19 pandemic.
- Proceeded with acalabrutinib monotherapy.
- Currently doing very well, with mild residual lymphocytosis, normalization of hemoglobin and platelet count, resolution of splenomegaly.
- Advised to avoid double black diamond runs when snowboarding (!)
Case Presentation: Dr Sharman – 67-year-old woman with IGHV-mutated, trisomy 12, TP53 wild-type CLL

Unusual presentation of symptomatic CLL treated with obinutuzumab/venetoclax:
• 67-year-old woman followed for several years with asymptomatic CLL.
• IGHV mutated, trisomy 12, TP53 wt.
• Stable blood counts with WBC 50K, Hgb 12, Plt 240k.
• Interestingly, developed myositis with elevated CPK and proximal weakness.
• Difficulty rising from chair or lifting arms above head. Seen by neurology – unclear relationship to CLL.
• Elected to treat in case there was relationship – symptoms improved with treatment.
How do you think through first-line therapy for a patient with CLL who is older and frail?
What is your usual preferred initial regimen for a 75-year-old patient with IGHV-unmutated chronic lymphocytic leukemia without del(17p) or TP53 mutation who requires treatment?

1. FCR
2. Ibrutinib +/- CD20 antibody
3. Acalabrutinib +/- CD20 antibody
4. Zanubrutinib
5. Venetoclax + obinutuzumab
6. Venetoclax + ibrutinib
7. Other
What is your usual preferred initial regimen for a 75-year-old patient with IGHV-unmutated CLL without del(17p) or TP53 mutation who requires treatment?

Survey of 25 US-based clinical investigators

- Venetoclax + obinutuzumab: 14
- Acalabrutinib: 6
- Ibrutinib: 1
- Ibrutinib + rituximab: 1
- Acalabrutinib + obinutuzumab: 1
- Acalabrutinib or venetoclax + obinutuzumab: 1
- Zanubrutinib: 1
What is your usual preferred initial regimen for a 75-year-old patient with IGHV-mutated chronic lymphocytic leukemia without del(17p) or TP53 mutation who requires treatment?

1. FCR
2. Ibrutinib +/- CD20 antibody
3. Acalabrutinib +/- CD20 antibody
4. Zanubrutinib
5. Venetoclax + obinutuzumab
6. Venetoclax + ibrutinib
7. Other
What is your usual preferred initial regimen for a 75-year-old patient with CLL with IGHV mutation but no del(17p) or TP53 mutation who requires treatment?

- Venetoclax + obinutuzumab: 14
- Acalabrutinib: 5
- Ibrutinib: 3
- Zanubrutinib: 1
- Acalabrutinib or venetoclax + obinutuzumab: 1
- Obinutuzumab: 1

Survey of 25 US-based clinical investigators
Case Presentation: Dr Thompson – 70-year-old man with IGHV-unmutated CLL

- 70M
- FCR x6 2005. Achieved CR.
- Rapid clinical response with resolution of lymphadenopathy and normalization of hematologic parameters.
- 5/2015, developed paroxysmal AF, with rapid ventricular rate, but no other symptoms. Continued to have episodes with ventricular rate in the 130—140s. Treated with escalating doses of metoprolol succinate (up to 150mg/d), then stopped ibrutinib 6/2015 due to persistent AF with uncontrolled ventricular rate.
- Structurally normal heart on echo. No significant symptoms other than palpitations. Normal TFTs, electrolytes.
- CHA2-DS2-Vasc score of 1 (hypertension) – no anticoagulation.
Case Presentation: Dr Thompson – 70-year-old man with IGHV-unmutated CLL (continued)

• 7/2015. After >1 month with no recurrence, resumed at 140mg/d. Continued metoprolol succinate 150mg/d.

• Continued to have PAF, ~1/month, mostly at night. No symptoms other than palpitations. Rate well controlled (80-90).

• 12/2015. Escalated dose back to 280mg/d.

• 2/2016. Escalated dose to 420mg/d. 2 days later, had an episode of AF with rate 130, associated with atypical chest pain.

• Serial troponin negative. Coronary arteries normal.

• Patient unwilling to resume ibrutinib at low dose given resolution of problematic migratory arthralgias since stopping drug.

• Current status (2021) – gradual, asymptomatic disease progression (LDT ~18m, low-volume lymphadenopathy). Continues in observation with no disease-related symptoms 5y after ibrutinib cessation.
How do you think through first-line therapy for a patient with high-risk CLL (eg, deletion 17p)?
What is your usual preferred initial regimen for a 60-year-old patient with del(17p) CLL who requires treatment?

1. FCR
2. Ibrutinib +/- CD20 antibody
3. Acalabrutinib +/- CD20 antibody
4. Zanubrutinib
5. Venetoclax + obinutuzumab
6. Venetoclax + ibrutinib
7. Other
What is your usual preferred initial regimen for a 60-year-old patient with del(17p) CLL who requires treatment?

- **Acalabrutinib**: 11
- **Acalabrutinib + obinutuzumab**: 7
- **Ibrutinib**: 4
- **Venetoclax + obinutuzumab**: 2
- **Zanubrutinib**: 1

Survey of 25 US-based clinical investigators
What is the most effective strategy to mitigate the risk of tumor lysis syndrome (TLS) with venetoclax and/or obinutuzumab?
Case Presentation: Dr Smith – 68-year-old woman with IGHV-unmutated CLL

- 68-year-old woman with CLL, WBC 140,000, ANC 1.9, Hgb 10.9, platelets 101,000, del11q on FISH, unmutated IGHV, diffuse small adenopathy. Counts had been falling over 12 months.

- Started on venetoclax-obinutuzumab. During initial obinutuzumab, ALC fell to 16,000 but ANC to 0.9, Hgb and platelets stable.

- We delayed start of venetoclax 1 week, still had persistent borderline ANC during ramp-up that prolonged that process and required G-CSF.

- Was able to get to full dose.

- Month 3, ALC normal, Hgb 12.0 and platelets 155,000, but ANC 1.4 and hospitalized with pneumococcal pneumonia.

- Responded to antibiotic therapy and a dose of IVIG for hypogammaglobulinemia.

- Now continues on CLL therapy, ANC 2-3, no additional infections.
Case Presentation: Dr Sharman – 71-year-old man with IGHV-unmutated, trisomy 12, NOTCH1-mutated, TP53 wild-type CLL

- 71-year-old attorney with disabling fatigue.
- Had to cut back on work hours due to his CLL.
- Diagnosed in 2017 with CLL, IGHV unmutated, trisomy 12, TP53 wild type, NOTCH1 mutated.
- Developed progressive adenopathy, bulky retroperitoneal disease >10cm. WBC only 24K, Hgb 11, Plt 100K.
- Started on “debulking protocol” with obinutuzumab for 2 months and re-staging prior to initiating venetoclax.
- Required 4 months of obi prior to starting ven.
- After venetoclax ramp up, which was done as outpatient, developed neutropenia. Responded well to WBC growth factors. No dose reduction needed.
How do you choose among the available BTK inhibitors for the treatment of CLL?
Regulatory and reimbursement issues aside, when you are going to administer a BTK inhibitor as initial treatment for a patient with CLL, which would you generally prefer?

- Acalabrutinib: 15
- Zanubrutinib: 7
- Ibrutinib: 3

Survey of 25 US-based clinical investigators
Which second-line systemic therapy would you recommend for a 60-year-old patient with IGHV-unmutated CLL without del(17p) or TP53 mutation who responds to ibrutinib and then experiences disease progression 3 years later?

1. FCR
2. Acalabrutinib
3. Acalabrutinib + obinutuzumab
4. Venetoclax
5. Venetoclax + rituximab
6. Venetoclax + obinutuzumab
7. A PI3K inhibitor
8. Other
Which second-line systemic therapy would you recommend for a 60-year-old patient with IGHV-unmutated CLL without del(17p) or TP53 mutation who responds to ibrutinib and then experiences disease progression 3 years later?

- Venetoclax + rituximab: 15 votes
- Venetoclax + obinutuzumab: 7 votes
- Acalabrutinib: 1 vote
- Venetoclax: 1 vote
- Venetoclax + BTK inhibitor: 1 vote

Survey of 25 US-based clinical investigators
What is the role of MRD assessment in the management of CLL?
For patients with CLL who are receiving obinutuzumab/venetoclax as initial therapy, do you generally order a minimal residual disease (MRD) assay at the end of 12 months?

Yes 20

What would be your most likely approach for a patient with newly diagnosed CLL who receives up-front venetoclax/obinutuzumab and 1 year after completing treatment has...

Detecatable MRD
- Continue treatment 13
- Discontinue treatment 12

Undetectable MRD
- Discontinue treatment 25

Survey of 25 US-based clinical investigators
How do you approach COVID-19 prevention for patients with CLL?
How do you manage patients with CLL who develop COVID-19?
Key Recent Data Sets
Venetoclax plus obinutuzumab versus chlorambucil plus obinutuzumab for previously untreated chronic lymphocytic leukaemia (CLL14): follow-up results from a multicentre, open-label, randomised, phase 3 trial

CLL14: Updated 4-Year PFS

Median observation time: 52.4 months

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

4-year PFS rate
Ven-Obi: 74.0%
Clb-Obi: 35.4%

HR 0.33, 95% CI [0.25-0.45]
P<0.0001

Al-Sawaf O et al. ASH 2020;Abstract 127.
MRD by NGS at EOT

- About 1/3 of patients had a continued reduction in MRD from C7 onward
- Some patients have deep responses that deepen even further
- At EOT some were MRD+ (black box) – would more treatment help?

Of 20 pts with known PB MRD+ status at EOT:

- ca. 50% of those patients had positive growth while on venetoclax, i.e., venetoclax treatment extension unlikely to produce uMRD.
- ca. 50% of those patients had negative growth, i.e., could benefit from venetoclax treatment extension to achieve uMRD levels eventually.

Courtesy of Prof John G Gribben, MD, DSc, FMedSci
TLS Risk with Venetoclax Is a Continuum Based on Multiple Factors

- **Low Tumor Burden**: All LN < 5 cm and ALC < 25 × 10⁹/L
- **Medium Tumor Burden**: Any LN 5 cm to < 10 cm or ALC ≥ 25 × 10⁹/L
- **High Tumor Burden**: Any LN > 10 cm or ALC ≥ 25 × 10⁹/L and LN ≥ 5 cm

Assess risk factors for TLS

Renal Function
Creatinine clearance < 80 ml/min increases the risk

Other Co-morbidities:
Including splenomegaly, abnormal baseline blood chemistry labs, dehydration, and ability to tolerate oral hydration.

Establish TLS risk

At risk

At greater risk

ALC: absolute lymphocyte count; CrCl: creatinine clearance; LN: lymph node; TLS: tumor lysis syndrome

Courtesy of Matthew S Davids, MD, MMSc
Venetoclax Dose Initiation

- **Combination therapy:** venetoclax should be taken for 24 months from Cycle 1 Day 1 of rituximab
- **Monotherapy:** treatment should be continued until disease progression or no longer tolerated by the patient

The 5-week dose-titration schedule is designed to gradually reduce tumour burden and decrease the risk of TLS.

**Combination therapy:** recommended dose of venetoclax in combination with rituximab is 400 mg once daily; rituximab should be administered after the patient has completed the dose-titration schedule and has received the recommended daily dose of 400 mg venetoclax for 7 days.

**Monotherapy:** the recommended dose of venetoclax is 400 mg once daily.

### Venetoclax: TLS Prophylaxis and Monitoring

#### HYDRATION
- **Oral (1.5 – 2 L); start 2 days prior to treatment start.**
- **IV if needed due to higher TLS risk**

#### ANTI-HYPERURICAEMIC AGENTS
- Patients with high uric acid or TLS risk should be administered with anti-hyperuricaemic agents
- **2 to 3 days prior** to treatment start

#### LABORATORY MONITORING
- **Pre-dose, 6–8, 24 hours**
  - (at 1<sup>st</sup> dose of 20 mg and 50 mg, and for patients who continue to be at risk)
  - Pre-dose at subsequent ramp-up doses
- Evaluate blood chemistries and review in real time

#### HOSPITALIZATION
- Based on physician assessment, some patients consider hospitalisation on first dose of venetoclax for more intensive prophylaxis and monitoring during the first 24 hours.

---

*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.*


---

Courtesy of Matthew S Davids, MD, MMSc
Overview of BTK Inhibitors in CLL

Irreversible

Reversible

Courtesy of Matthew S Davids, MD, MMSc
Acalabrutinib with or without obinutuzumab versus chlorambucil and obinutuzumab for treatment-naive chronic lymphocytic leukaemia (ELEVATE-TN): a randomised, controlled, phase 3 trial


ELEVATE-TN: PFS (IRC)

Progression-free survival (%)

0 6 12 18 24 30 36 42

Acala + obin
Acala
Clb + obin

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Median (95% CI)</th>
<th>Hazard ratio</th>
<th>( p )-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acala + obin</td>
<td>NR (NE–NE)</td>
<td>0.10</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Acala</td>
<td>NR (34.2–NE)</td>
<td>0.20</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Clb + obin</td>
<td>22.6 (20.2–27.6)</td>
<td>..</td>
<td>..</td>
</tr>
</tbody>
</table>

Acalabrutinib Versus Ibrutinib in Previously Treated Chronic Lymphocytic Leukemia: Results of the First Randomized Phase III Trial

John C. Byrd, MD1; Peter Hillmen, MD, MBChB, PhD2; Paolo Ghia, MD, PhD3,4; Amon P. Kater, MD, PhD5; Asher Chanan-Khan, MD6; Richard R. Furman, MD7; Susan O’Brien, MD8; Mustafa Nuri Yenerel, MD9; Arpad Illés, MD10; Neil Kay, MD11; Jose A. Garcia-Marco, MD, PhD12; Anthony Mato, MD13; Javier Pinilla-Ibarz, MD, PhD14; John F. Seymour, PhD15; Stephane Lepetre, MD16,17; Stephan Stilgenbauer, MD18; Tadeusz Robak, PhD19; Wayne Rothbaum, MS20; Raquel Izumi, PhD20; Ahmed Hamdy, MD20; Priti Patel, MD21; Kara Higgins, MS21; Sophia Sohoni, MD21; and Wojciech Jurczak, MD, PhD22

J Clin Oncol 2021;[Online ahead of print].
ELEVATE-RR: Primary Endpoint – Noninferiority Met on IRC-Assessed PFS

ELEVATE-RR: Cumulative Incidences of Atrial Fibrillation and Hypertension with Acalabrutinib versus Ibrutinib

Atrial Fibrillation

Hypertension

Acalabrutinib:Ibrutinib
HR (95% CI): 0.52 (0.32 to 0.86)

Acalabrutinib:Ibrutinib
HR (95% CI): 0.34 (0.21 to 0.54)

# ELEVATE-RR: Adverse Events of Special Interest

<table>
<thead>
<tr>
<th>Adverse events (AEs)</th>
<th>Acalabrutinib (n = 266)</th>
<th>Ibrutinib (n = 263)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any grade</td>
<td>Grade ≥3</td>
</tr>
<tr>
<td>Cardiac events</td>
<td>24.1%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Atrial fibrillation</td>
<td>9.4%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Ventricular tachyarrhythmias</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hypertension</td>
<td>9.4%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Bleeding events</td>
<td>38.0%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Major bleeding events</td>
<td>4.5%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Infections</td>
<td>78.2%</td>
<td>30.8%</td>
</tr>
<tr>
<td>SPMs</td>
<td>9.0%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Headache</td>
<td></td>
<td>34.6%</td>
</tr>
<tr>
<td>AEs leading to treatment discontinuation</td>
<td>14.7%</td>
<td></td>
</tr>
</tbody>
</table>

SPMs = Second primary malignancies, excluding nonmelanoma skin cancers

Byrd JC et al. ASCO 2021;Abstract 7500.
“The SEQUOIA trial met the primary endpoint at interim analysis, with zanubrutinib significantly prolonging progression-free survival compared to chemoimmunotherapy, and safety and tolerability consistent with its known profile. SEQUOIA is the second positive global Phase 3 trial of zanubrutinib in chronic lymphocytic leukemia, following ALPINE in the relapsed or refractory setting.

With a median follow-up of 25.8 months, the SEQUOIA trial met the primary endpoint of progression-free survival (PFS) as assessed by independent review committee (IRC), as zanubrutinib achieved a highly statistically significant improvement in PFS compared to B + R.

In addition, the trial demonstrated a statistically significant improvement in PFS per investigator assessment, a secondary endpoint. Zanubrutinib was also generally well-tolerated, consistent with its known safety profile.”
FIRST INTERIM ANALYSIS OF ALPINE STUDY: RESULTS OF A PHASE 3 RANDOMIZED STUDY OF ZANUBRUTINIB VS IBRUTINIB IN PATIENTS WITH RELAPSED/REFRACTORY CHRONIC LYMPHOCYTIC LEUKEMIA/Small LYMPHOCYTIC LYMPHOMA

Peter Hillmen, MBChB, PhD; Barbara Elchhorst, MD; Jennifer R. Brown, MD, PhD; Nicole Lamanna MD; Susan O’Brien, MD; Constantine S. Tam, MBBS, MD; Luigi Qiu, MD, PhD; Maciej Kazmierczak, MD, PhD; Keshu Zhou, MD, PhD; Martin Simkovic, MD, PhD; Jiri Mayer, MD; Amanda Gillespie-Twardy, MD; Mazayr Shadman, MD, MPh; Alessandra Ferrajoli, MD; Peter S. Gany, BMChB, PhD; Robert Weinkove, MBBS, PhD; Tommi Salmi, MD; Meng Ji, MD; Jessica Yecies, PhD; Kenneth Wu, PhD; William Novotny, MD; Jane Huang, MD; Wojciech Jurcza, MD, PhD

1: St. James’ University Hospital, Leeds, United Kingdom; 2: Department of Internal Medicine, University of Cologne, Cologne, Germany; 3: Department of Medical Oncology, Dana-Farber Cancer Institute, Boston, MA, USA; 4: Herbert Irving Comprehensive Cancer Center, Columbia University, New York, NY, USA; 5: Chao Family Comprehensive Cancer Center, University of California, Irvine, CA, USA; 6: Peter MacCallum Cancer Centre, Melbourne, Victoria, Australia; 7: University of Melbourne, Parkville, Victoria, Australia; 8: Royal Melbourne Hospital, Parkville, Victoria, Australia; 9: Chinese Academy of Medical Sciences, Peking Union Medical College, Tianjin, China; 10: Department of Hematology and Bone Marrow Transplantation, Poznan University of Medical Sciences, Poznan, Poland; 11: Affiliated Cancer Hospital of Zhengzhou University, Henan Cancer Hospital, Zhengzhou, China; 12: Department of Internal Medicine-Hematology, University Hospital, Hradec Králové, Czech Republic; 13: Faculty of Medicine, Charles University, Prague, Czech Republic; 14: Department of Internal Medicine-Hematology and Oncology, Masaryk University and University Hospital, Brno, Czech Republic; 15: Blue Ridge Cancer Care, Roanoke, VA, USA; 16: Fred Hutchinson Cancer Research Center, Seattle, WA, USA; 17: Department of Medicine, University of Washington, Seattle, WA, USA; 18: Department of Leukemia, The University of Texas MD Anderson Cancer Center, Houston, TX, USA; 19: Department of Hematology, Christchurch Hospital, Christchurch, New Zealand; 20: Department of Pathology and Biomedical Science, University of Otago, Christchurch, New Zealand; 21: Wellington Blood and Cancer Centre, Capital and Coast District Health Board, Wellington, New Zealand; 22: Malmo Institute of Medical Research, Wellington, New Zealand; 23: BeiGene (Beijing) Co., Ltd., Beijing, China and BeiGene USA, Inc, San Mateo, CA, USA; and 24: Maria Sklodowska-Curie National Institute of Oncology, Krakow, Poland

June 11, 2021
Presidential Symposium (Abstract LB1900)
### ALPINE: Primary Endpoint – ORR by Investigator Assessment

<table>
<thead>
<tr>
<th>Primary endpoint: ORR (PR + CR)</th>
<th>Zanubrutinib (n = 207), n (%)</th>
<th>Ibrutinib (n = 208), n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORR (PR + CR)</td>
<td>162 (78.3) 95% CI: 72.0, 83.7</td>
<td>130 (62.5) 95% CI: 55.5, 69.1</td>
</tr>
<tr>
<td>Superiority 2-sided $p = 0.0006$ compared with prespecified alpha of 0.0099</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR/CRi</td>
<td>4 (1.9)</td>
<td>3 (1.4)</td>
</tr>
<tr>
<td>nPR</td>
<td>1 (0.5)</td>
<td>0</td>
</tr>
<tr>
<td>PR</td>
<td>157 (75.8)</td>
<td>127 (61.1)</td>
</tr>
<tr>
<td>ORR (PR-L + PR + CR)</td>
<td>183 (88.4)</td>
<td>169 (81.3)</td>
</tr>
<tr>
<td>PR-L</td>
<td>21 (10.1)</td>
<td>39 (18.8)</td>
</tr>
<tr>
<td>SD</td>
<td>17 (8.2)</td>
<td>28 (13.5)</td>
</tr>
<tr>
<td>PD</td>
<td>1 (0.5)</td>
<td>2 (1.0)</td>
</tr>
<tr>
<td>Discontinued or new therapy prior to first assessment</td>
<td>6 (2.9)</td>
<td>9 (4.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary endpoint: ORR (PC + CR)</th>
<th>Del(17p) (n = 24), n (%)</th>
<th>Del(17p) (n = 26), n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORR (PC + CR)</td>
<td>20 (83.3)</td>
<td>14 (53.8)</td>
</tr>
</tbody>
</table>

Hillmen P et al. EHA 2021;Abstract LB1900.
ALPINE: PFS by Investigator Assessment

- Although not a pre-specified analysis, the overall 12-month PFS was higher with zanubrutinib vs ibrutinib (94.9% vs 84.0%).

<table>
<thead>
<tr>
<th>Patients at Risk</th>
<th>Zanubrutinib</th>
<th>Ibrutinib</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>207</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>196</td>
</tr>
<tr>
<td></td>
<td>194</td>
<td>188</td>
</tr>
<tr>
<td></td>
<td>190</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>152</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>8</td>
</tr>
</tbody>
</table>

12-month landmark event free rate:
- Zanubrutinib 94.9%
- Ibrutinib 84.0%

HR 0.40 (95% CI 0.23-0.69)
2-sided $p = 0.0007^*$

*Not a prespecified analysis; formal analysis of PFS will be based on all patients when the target number of events are reached.

Hillmen P et al. EHA 2021;Abstract LB1900.
ALPINE: Incidence of Atrial Fibrillation with Zanubrutinib versus Ibrutinib

Zanubrutinib 2.5%
Ibrutinib 10.1%
2-sided $p = 0.0014$
Compared with prespecified alpha of 0.0099 for interim analysis

Hillmen P et al. EHA 2021;Abstract LB1900.
### ALPINE: Adverse Events of Special Interest

<table>
<thead>
<tr>
<th>Safety Analysis Population</th>
<th>Zanubrutinib (n=204), n (%)</th>
<th>Ibrutinib (n=207), n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any grade</td>
<td>Grade ≥3</td>
</tr>
<tr>
<td>Cardiac disorders&lt;sup&gt;a&lt;/sup&gt;</td>
<td>28 (13.7)</td>
<td>5 (2.5)</td>
</tr>
<tr>
<td>Atrial fibrillation and flutter (key 2&lt;sup&gt;o&lt;/sup&gt; endpoint)</td>
<td>5 (2.5)</td>
<td>2 (1.0)</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>73 (35.8)</td>
<td>6 (2.9)</td>
</tr>
<tr>
<td>Major hemorrhage&lt;sup&gt;b&lt;/sup&gt;</td>
<td>6 (2.9)</td>
<td>6 (2.9)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>34 (16.7)</td>
<td>22 (10.8)</td>
</tr>
<tr>
<td>Infections</td>
<td>122 (59.8)</td>
<td>26 (12.7)</td>
</tr>
<tr>
<td>Neutropenia&lt;sup&gt;c&lt;/sup&gt;</td>
<td>58 (28.4)</td>
<td>38 (18.6)</td>
</tr>
<tr>
<td>Thrombocytopenia&lt;sup&gt;c&lt;/sup&gt;</td>
<td>19 (9.3)</td>
<td>7 (3.4)</td>
</tr>
<tr>
<td>Secondary primary malignancies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin cancers</td>
<td>17 (8.3)</td>
<td>10 (4.9)</td>
</tr>
<tr>
<td></td>
<td>7 (3.4)</td>
<td>3 (1.5)</td>
</tr>
</tbody>
</table>

<sup>a</sup>Cardiac disorders leading to treatment discontinuation: zanubrutinib 0 patients and ibrutinib 7 (3.4%) patients.

<sup>b</sup>Includes serious or Grade ≥3 hemorrhage or any Grade CNS hemorrhage

<sup>c</sup>Pooled terms including neutropenia, neutrophil count decreased, and febrile neutropenia; thrombocytopenia and platelet count decreased.
Abstract 125

Five-year Analysis of MURANO Study Demonstrates Enduring Undetectable Minimal Residual Disease (uMRD) in a Subset of Relapsed/Refractory Chronic Lymphocytic Leukemia (R/R CLL) Patients Following Fixed-Duration Venetoclax-Rituximab (VenR) Therapy

Arnon P. Kater¹, Thomas J. Kipps², Barbara F. Eichhorst³, Peter Hillmen⁴, James D'Rozario⁵, Carolyn Owen⁶, Sarit Assouline⁷, Nicole Lamanna⁸, Tadeusz Robak⁹, Javier de la Serna¹⁰, Ulrich Jaeger¹¹, Guillaume Cartron¹², Marco Montillo¹³, Clemens Mellink¹, Brenda Chyla¹⁴, Cameron Wilson¹⁵, Jenny Wu¹⁶, Yanwen Jiang¹⁶, Marcus Lefebvre¹⁵, Michelle Boyer¹⁵, John F. Seymour¹⁷

¹Cancer Center Amsterdam, Amsterdam University Medical Centers, University of Amsterdam, Amsterdam, Netherlands; ²UCSD Moores Cancer Center, San Diego, CA, USA; ³University of Cologne, Department I of Internal Medicine and Center of Integrated Oncology Aachen, Bonn, Cologne, Dusseldorf, German CLL Study Group, Cologne, Germany; ⁴St. James's University Hospital, Leeds, United Kingdom; ⁵The John Curtin School of Medical Research, Australian National University, Canberra, Australia; ⁶University of Calgary, Calgary, Canada; ⁷Segal Cancer Center, Lady Davis Institute, Jewish General Hospital, Montreal, Canada; ⁸Herbert Irving Comprehensive Cancer Center, Columbia University Medical Center, New York, NY, USA; ⁹Medical University of Lodz, Copernicus Memorial Hospital, Lodz, Poland; ¹⁰Hospital Universitario 12 de Octubre, Madrid, Spain; ¹¹Dept. of Medicine I, Division of Hematology and Hemostaseology, Medical University of Vienna, Vienna, Austria; ¹²Centre Hospitalier Universitaire de Montpellier, Montpellier, France; ¹³Department of Hematology, 12 Hematology, Niguarda Cancer Center, ASST Grande Ospedale Metropolitano Niguarda, Milano, Italy; ¹⁴Abbvie, North Chicago, IL, USA; ¹⁵Roche Products Ltd, Welwyn, United Kingdom; ¹⁶Genentech, Inc., South San Francisco, CA, USA; ¹⁷Royal Melbourne Hospital, Peter MacCallum Cancer Centre and University of Melbourne, Melbourne, Australia.

Accepted as an Oral Presentation at the 62nd ASH Annual Meeting and Exposition
MURANO: Survival

- With this 5-year update we can now accurately define the median PFS of VenR-treated patients.
- No new safety signals were identified 3 years after EOT with longer follow up and patients are outside of the adverse event reporting window.

Kater AP et al. ASH 2020;Abstract 125.
MURANO: Conclusions

- Most patients who completed Ven monotherapy had uMRD at EOT and MRD status continued to be a robust predictor of outcomes. Patients in the VenR arm with uMRD at EOT had a 61.3% PFS rate at 36 months post-EOT.

- Median time to MRD conversion was 19 months and median time to PD from MRD conversion was a further 25 months for patients with uMRD at EOT. A significant proportion of patients remained with uMRD at this follow-up.

- Poor baseline characteristics are associated with faster MRD doubling rates.

- Deep and durable initial response alongside favorable baseline characteristics predict sensitivity to re-treatment.

- Sustained uMRD, PFS and OS benefits provide further support for the use of fixed duration VenR in patients with relapsed/refractory CLL.

Kater AP et al. ASH 2020;Abstract 125.
Efficacy of Subsequent Novel Targeted Therapies, Including Repeated Venetoclax-Rituximab (VenR), in Patients with Relapsed/Refractory Chronic Lymphocytic Leukemia (R/R CLL) Previously Treated with Fixed-Duration VenR in the MURANO Study

Harrup R et al.
ASH 2020;Abstract 3139.
**MURANO: TTNT with VenR versus BR**

<table>
<thead>
<tr>
<th>Time from Study Entry (Months)</th>
<th>Time to Next anti-CLL Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>80</td>
</tr>
<tr>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>18</td>
<td>40</td>
</tr>
<tr>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>36</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td></td>
</tr>
<tr>
<td>66</td>
<td></td>
</tr>
<tr>
<td>72</td>
<td></td>
</tr>
</tbody>
</table>

**Median + 95% CI**
- **VenR (N=194):** 57.8 months (55.1, NE)
- **BR (N=195):** 23.9 months (20.7, 25.5)

**Hazard Ratio + 95% CI**
- 0.26 (0.20, 0.35)

**Caption:** Harrup R et al. ASH 2020;Abstract 3139.
Venetoclax Re-Treatment of Chronic Lymphocytic Leukemia Patients after a Previous Venetoclax-based Regimen

Meghan C. Thompson, MD1, John N. Allan, MD2, Kavita Sail, PhD3, Beenish S. Manzoor, PhD, MPH4, Jeffrey J. Pu, MD, PhD5, Paul M. Barr, MD6, Callie C. Coombs, MD7, Stephen J. Schuster, MD8, Alan Skarbnik, MD9, Joanna M Rhodes, MD10, Jacqueline C. Barrientos, MD10, Lindsey E Roeker, MD11, Lori A. Leslie, MD11, Manali Kamdar, MD12, Michael Y. Choi, MD13, Martin Simkovic, MD, PhD14, Frederick Lansigan, MD15, Brittany Jane Hale, MD15, Andrew D Zelenetz, MD, PhD16, Alison J. Moskowitz, MD1, Kurt S. Bantilan, MPH1, Celina J. Komari, BS1, Andre H. Goy, MD1, Tatyana A. Feldman, MD11, Richard R. Furman, MD2 and Anthony R. Mato, MD1
Study Design and Endpoints

- Multicenter, retrospective study
- 13 centers and the CLL Collaborative Study of Real-World Evidence (CORE) database
- Eligibility:
  - CLL patients treated with Ven-based regimen (any line of therapy, Ven1)
  - Then re-treated with second Ven-based regimen (Ven2) in a later line of therapy
- Data collected by investigators at individual sites
  - Demographics, prognostic disease characteristics, tumor lysis syndrome risk and incidence, clinical response and reasons for treatment discontinuation

- Primary endpoint:
  - Investigator-assessed ORR
  - CR: complete response, PR: partial response, SD: stable disease, PD: progression of disease, iwCLL 2018
- PFS estimated by Kaplan-Maier method
- All other analyses descriptive

Thompson MC et al. ASH 2020;Abstract 3136.
Conclusions

**ORR:** High ORR of 72.2% for Ven re-treatment

**Heavily pretreated population:** Cohort studied had median 2 prior therapies, majority R/R (88%), BTKi exposed (60%)

**Safety:** TLS rare event and majority were able to tolerate 400 mg daily

**Improved outcomes with time:** Patients with CR to Ven re-treatment had a longer median follow-up than PR or SD patients

  • Potential for better responses with longer time on therapy?

**Next steps:** Longer follow-up and prospective validation of Ven re-treatment → potential role of Ven re-treatment in sequencing algorithms

Thompson MC et al. ASH 2020;Abstract 3136.
Agenda

Module 1: Treatment of CLL in 2021

• How do you think through first-line therapy for a patient with CLL who is younger and fit?
• How do you think through first-line therapy for a patient with CLL who is older and frail?
• How do you think through first-line therapy for a patient with high-risk CLL (eg, deletion 17p)?
• What is the most effective strategy to mitigate the risk of tumor lysis syndrome with venetoclax and/or obinutuzumab?
• How do you choose among the available BTK inhibitors for the treatment of CLL?
• What is the role of MRD assessment in the management of CLL?
• How do you approach COVID-19 prevention for patients with CLL?

Module 2: Future Treatment of CLL

• What is the future role of BTK inhibitors combined with venetoclax in the management of CLL?
• What is the future role of pirtobrutinib (LOXO 305) in the management of CLL?
• What is the current and future role of CAR T-cell therapy?
What is the future role of BTK inhibitors combined with venetoclax in the management of CLL?
Have you administered or would you administer ibrutinib or acalabrutinib in combination with venetoclax to a patient with CLL outside of a clinical trial setting?

1. I haven’t and would not
2. I haven’t but would for the right patient
3. I have
Have you administered or would you administer ibrutinib or acalabrutinib in combination with venetoclax to a patient with CLL outside of a clinical trial setting?

- I have: 10
- I haven’t but would for the right patient: 9
- I haven’t and would not: 6

Survey of 25 US-based clinical investigators
Do you believe there is a benefit to administering a BTK inhibitor in combination with venetoclax as opposed to sequentially for patients with CLL?

Survey of 25 US-based clinical investigators

Yes 14

No 11
What is the future role of pirtobrutinib (LOXO 305) in the management of CLL?
What is the current and future role of CAR T-cell therapy?
Case Presentation: Dr Thompson – 54-year-old woman with multiregimen-relapsed CLL

• 54F (born 1967).
• Dx 2004 age 37. Unknown IGHV mutation status (non-productive PCR), del(13q) by FISH.
• Treatment:
  1. 2009 – FCR x3. PR, MRD 0.5%. Stopped due to fatigue/abdominal pain (intermittent intussusception of small bowel without clear etiology).
  2. 1/2012 – rituximab + lenalidomide. Stopped due to neutropenia.
  3. 12/2012 – ofatumumab x8 – transient response.
  4. 12/2013 – ibrutinib. Dose reduced 7/2014 due to arthralgia, rash, then developed PD 2/2015 (sequencing not available for BTK mutations).
  5. 4/2015 – venetoclax on clinical trial. CR with U-MRD. Continued venetoclax 400mg/d until 2019, when she required recurrent dose reduction for neutropenia (G-CSF very poorly tolerated) and she then developed PD. BCL2 mutation analysis not yet available.
  6. 10/2019 – ibrutinib + JCAR017 on TRANSCEND CLL 004 study. CR with U-MRD.
Case Presentation: Dr Sharman – 69-year-old woman with multiregimen-relapsed CLL

- Transferred to my clinic when that provider left practice.
- Relapsed with del11q, IGHV unmutated disease. Treated on protocol with AVL-292 (early second generation BTK inhibitor) prior to commercial availability of ibrutinib. Stayed on therapy for about a year.
- Enrolled on study with obinutuzumab/venetoclax. Interestingly – got one dose of venetoclax when study abruptly closed due to TLS in other early studies of venetoclax. One pill provided several months of disease control.
- In 2013 proceeded to bendamustine/rituximab with PR. Subsequently enrolled on study of ibrutinib/ublituximab and had several years of benefit.
- Progressed with massive retroperitoneal adenopathy and del17P. Received idelalisib/rituximab with PR followed by progression.
- After several years, developed recurrent lymphocytosis and was treated with lisocabtagene maraleucel CAR-T cell therapy to which she maintains a CR today. On replacement IVIG.
Case Presentation: Dr Smith – 58-year-old man with multiregimen-relapsed CLL

• 58-year-old man, CLL x 8 years. IGHV unmutated. Initial FiSH normal.
• Treated with initial FCR, tolerated well and achieved remission.
• Relapse 3 years later, now del17p positive.
• Started ibrutinib, did well for 18 months. ALC started to rise. Otherwise well with normal counts.
• Received tisagenlecleucel CAR T-cell therapy on research study at UPenn.
• Remains in remission, clinically well, continues on ibrutinib and requires replacement IVIg.
Key Recent Data Sets
Fixed-Duration (FD) First-Line Treatment With Ibrutinib Plus Venetoclax for Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma: Primary Analysis of the FD Cohort of the Phase 2 CAPTIVATE Study

Paolo Ghia, MD, PhD1; John N. Allan, MD2; Tanya Siddiqi, MD3; Thomas J. Kipps, MD, PhD4; Ryan Jacobs, MD5; Stephen Opat, FRACP, FRCPA, MBBS6; Paul M. Barr, MD7; Alessandra Tedeschi, MD8; Livio Trentin, MD9; Rajat Bannerji, MD, PhD10; Sharon Jackson, MD11; Bryone Kuss, MBBS, PhD, FRACP, FRCPA12; Carol Moreno, MD, PhD13; Edith Szafer-Glusman, PhD14; Kristin Russell, BS14; Cathy Zhou, MS14; Joi Ninomoto, PharmD14; James P. Dean, MD, PhD14; William G. Wierda, MD, PhD15; Constantine Tam, MBBS, MD16

1Division of Experimental Oncology, Università Vita-Salute San Raffaele and IRCCS Ospedale San Raffaele, Milan, Italy; 2Weill Cornell Medicine, New York, NY, USA; 3City of Hope National Medical Center, Duarte, CA, USA; 4UCSD Moores Cancer Center, San Diego, CA, USA; 5Levine Cancer Institute, Charlotte, NC, USA; 6Monash University, Clayton, VIC, Australia; 7Wilmot Cancer Institute, University of Rochester Medical Center, Rochester, NY, USA; 8ASST Grande Ospedale Metropolitano Niguarda, Milan, Italy; 9Hematology and Clinical Immunology Unit, Department of Medicine, University of Padova, Padova, Italy; 10Rutgers Cancer Institute of New Jersey, New Brunswick, NJ, USA; 11Middlemore Hospital, Auckland, New Zealand; 12Flinders University and Medical Centre, Bedford Park, SA, Australia; 13Hospital de la Santa Creu i Sant Pau, Autonomous University of Barcelona, Barcelona, Spain; 14Pharmacyclics LLC, an AbbVie Company, Sunnyvale, CA, USA; 15Department of Leukemia, University of Texas MD Anderson Cancer Center, Houston, TX, USA; 16Peter MacCallum Cancer Center & St. Vincent’s Hospital and the University of Melbourne, Melbourne, VIC, Australia
Rationale: Ibrutinib and Venetoclax Have Distinct and Complementary Modes of Action That Work Synergistically¹-³

- Ibrutinib, a once-daily oral Bruton tyrosine kinase inhibitor, is the only targeted therapy to demonstrate significant OS benefit in randomized phase 3 studies in first-line CLL⁴,⁵

- Venetoclax, an oral BCL-2 inhibitor approved for the treatment of CLL as a single agent or combined with anti-CD20 monoclonal antibodies, achieves high rates of uMRD⁶

---

CLL, chronic lymphocytic leukemia; OS, overall survival; uMRD, undetectable minimal residual disease.

Ghia P et al. ASCO 2021;Abstract 7501.
Primary Endpoint of CR Rate\(^a\): Fixed-Duration Treatment with Ibrutinib + Venetoclax Provides Deep, Durable Responses

**Best Overall Response\(^b\)**

- **Patients without del(17p)**
  - CR 54.4\%
  - PR 39.0\%
  - nPR 0.7\%
  - CRi 1.5\%
- **All treated patients**
  - CR 52.2\%
  - PR 40.3\%
  - nPR 0.6\%
  - CRi 3.1\%

- **Primary endpoint was met:** 56\% (95% CI, 48–64) CR rate\(^a\) in patients without del(17p)
  - Significantly excludes 37\% minimum rate ($P<0.0001$)
  - Meaningful improvement over 40\% rate of historical comparator of FCR in CLL\(^1\)

---

**DOCR ≥12 cycles**

- n/N (%)
  - Patients without del(17p), n=136: 66/76 (87)\%
  - All treated patients, N=159: 78/88 (89)\%*

*After achieving CR\(^3\), 9 patients with <1 year of follow-up were not evaluable; 1 patient died 7 months after CR and completion of therapy.

nPR, nodular partial response; PR, partial response; DOCR, duration of complete response.

*Proportion of patients with CR or CRi. Overall response was assessed at the end of Cycle 3, on Day 1 of Cycles 7, 10, 13, 19, 25, 28, and 31, and every 6 months thereafter.


Ghia P et al. ASCO 2021;Abstract 7501.
FIXED-DURATION IBRUTINIB PLUS VENETOCLAX (I+V) VERSUS CHLORAMBUCIL PLUS OBINUTUZUMAB (CLB+O) FOR FIRST-LINE TREATMENT OF CHRONIC LYMPHOCYTIC LEUKEMIA (CLL): PRIMARY ANALYSIS OF THE PHASE 3 GLOW STUDY

Arnon P. Kater,1 Carolyn Owen,2 Carol Moreno,3 George Follows,4 Talha Munir,5 Mark-David Levin,6 Ohad Benjamini,7 Ann Janssens,8 Anders Osterborg,9 Tadeusz Robak,10 Martin Simkovic,11 Don Stevens,12 Sergey Voloshin,13 Vladimir Vorobyev,14 Munci Yagci,15 Loic Ysebaert,16 Rui Qin,17 Sriram Balasubramanian,18 Natasha Schuier,19 Kurt Baeten,20 Donne Bennett Caces,17 Carsten U. Niemann21

1Amsterdam University Medical Centers, Amsterdam, Netherlands; 2Tom Baker Cancer Centre, Calgary, Canada; 3Hospital de la Santa Creu i Sant Pau, Autonomous University of Barcelona, Spain; 4Addenbrookes Hospital, Cambridge, UK; 5St James’s Hospital, Leeds, UK; 6Albert Schweitzer Hospital, Dordrecht, Netherlands; 7Sheba Medical Center, Ramat Gan, Israel; 8UZ Leuven Gaetuisberg, Leuven, Belgium; 9Karolinska University Hospital, Stockholm, Sweden; 10Medical University of Lodz, Copernicus Memorial Hospital, Lodz, Poland; 11University Hospital Hradec Kralove, Hradec Kralove, Czech Republic; 12Norton Cancer Institute, Louisville, KY, USA; 13Russian Scientific and Research Institute of Hematology and Transfusiology, St. Petersburg, Russia; 14S.P. Botkin Moscow City Clinical Hospital, Moscow, Russia; 15Gazi Universitesi Tip Fakultesi, Ankara, Turkey; 16Institut Universitaire du Cancer Toulouse OncoPole, Toulouse, France; 17Janssen Research & Development, Raritan, NJ, USA; 18Janssen Research & Development, San Diego, CA, USA; 19Janssen Research & Development, Düsseldorf, Germany; 20Janssen Research & Development, Beerse, Belgium; 21Rigshospitalet Copenhagen University Hospital, Copenhagen, Denmark

Kater AP et al. EHA 2021;Abstract LB1902.
GLOW: Progression-Free Survival by IRC

- With a median follow up of 27.7 months, IRC-assessed PFS for I + V was superior to Clb + O
- I + V reduced the risk of progression or death by 78% vs Clb + O
  - HR 0.216 (95% CI, 0.131-0.357; p < 0.0001)
- PFS by INV assessment was consistent with IRC
  - HR 0.207 (95% CI, 0.120-0.357; p < 0.0001)
GLOW: Overall Response Rates

Response by IRC

- CR/CRi rates were significantly higher for I + V vs Clb + O by both IRC and INV assessments:
  - 38.7% vs 11.4% by IRC ($p < 0.0001$)
  - 45.3% vs 13.3% by IRC ($p < 0.0001$)

- Responses to I + V were more durable:
  - 90% of responders in the I + V arm sustained IRC response 24 months after initial response vs 41% in Clb + O arm

* $p < 0.0001$
GLOW: Summary of Adverse Events and TLS Risk

<table>
<thead>
<tr>
<th></th>
<th>I + V (N = 106)</th>
<th>Clb + O (N = 105)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median exposure, mo</td>
<td>13.8 (0.7-19.5)</td>
<td>5.1 (1.8-7.9)</td>
</tr>
<tr>
<td>Any, %</td>
<td>75.5</td>
<td>69.5</td>
</tr>
<tr>
<td>Neutropenia</td>
<td>34.9</td>
<td>49.5</td>
</tr>
<tr>
<td>Infections</td>
<td>17.0</td>
<td>11.4</td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>5.7</td>
<td>20.0</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>10.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Hypertension</td>
<td>5.7</td>
<td>0</td>
</tr>
<tr>
<td>TLS</td>
<td>0</td>
<td>5.7</td>
</tr>
</tbody>
</table>

- After 3 cycles of ibrutinib lead-in, <2% of patients remained at risk for TLS based on high tumor burden
- 2 (1.9%) patients in I + V arm discontinued ibrutinib due to atrial fibrillation
- SAEs in ≥5% of patients for I + V vs Clb + O: Infections (12.3% vs 8.6%) and atrial fibrillation (6.6% vs 0%)
- Rate of secondary malignancies at time of analysis: 8.5% for I + V vs 10.5% for Clb + O
  - NMSC: 3.8% vs 1.9%
  - Other: 4.7% vs 8.6%
Phase III EA9161 Schema

Arm A
- Ibrutinib: Cycles 1-19, d1-28 420mg PO daily
- Obinutuzumab: C1: D1: 100 mg IV, D2: 900 mg IV, D8: 1000 mg IV, D15: 1000 mg IV; C2-6: D1 1000 mg IV
- Venetoclax: C3 D1-7 20mg PO daily, D8-14 50mg PO daily, D15-21 100mg PO daily; D22-28 200 mg PO daily; C4-14: D1-28 400mg PO daily

Arm B
- Ibrutinib: Cycles 1-19+, d1-28 420mg PO daily
- Obinutuzumab: C1: D1: 100 mg IV, D2: 900 mg IV, D8: 1000 mg IV, D15: 1000 mg IV; C2-6: D1 1000 mg IV

Stratifications
- Age: <65 yr vs ≥ 65 yr and <70 yr
- PS: 0, 1, vs 2
- Stage: 0, 1, or 2 vs 3, 4
- Del11q22.3 vs others

Clinicaltrials.gov/ct2/show/NCT03701282?term=EA9161&draw=2&rank=1, Accessed March 1, 2021
LOXO-305, a Next Generation, Highly Selective, Non-Covalent BTK Inhibitor in Previously Treated CLL/SLL: Results from the Phase 1/2 BRUIN Study

Mato AR et al.
ASH 2020;Abstract 542.
LOXO-305 is a Highly Potent and Selective Non-Covalent BTK Inhibitor

**Kinome selectivity**
Highly selective for BTK

**Xenograft models**
*In vivo* activity similarly efficacious as ibrutinib in WT; superior in C481S

- Nanomolar potency against WT & C481-mutant BTK in cell and enzyme assays
- >300-fold selectivity for BTK vs 370 other kinases
- Due to reversible binding mode, BTK inhibition not impacted by intrinsic rate of BTK turnover
- Favorable pharmacologic properties allow sustained BTK inhibition throughout dosing interval

BRUIN: Pirtobrutinib (LOXO-305) for Previously Treated CLL/SLL
(Median prior therapies: 4)

ORR: 57%

Only TEAEs in ≥10% of pts: Fatigue 16%, diarrhea 15%

*11 efficacy-evaluable pts are not included in the waterfall plot, including 1 pt who discontinued prior to first response assessment, and 10 pts (4 pts with PR/PR-L and 6 pts with SD) with incomplete tumor lesion measurement data at the time of data cut

Mato AR et al. ASH 2020;Abstract 542.
Umbralisib plus Ublituximab (U2) Is Superior to Obinutuzumab plus Chlorambucil (O + Chl) in Patients with Treatment Naïve (TN) and Relapsed/Refractory (R/R) Chronic Lymphocytic Leukemia (CLL): Results from the Phase 3 Unity-CLL Study

Gribben JG et al.
ASH 2020;Abstract 543.
Umbralisib – Dual Inhibitor of PI3Kδ and CK1ε

<table>
<thead>
<tr>
<th>Isoform</th>
<th>Umbralisib&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Idelalisib&lt;sup&gt;3&lt;/sup&gt;</th>
<th>Duvelisib&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Copanlisib&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI3kα</td>
<td>&gt;10000</td>
<td>600</td>
<td>40</td>
<td>0.04</td>
</tr>
<tr>
<td>PI3Kβ</td>
<td>&gt;10000</td>
<td>19</td>
<td>0.89</td>
<td>1.5</td>
</tr>
<tr>
<td>PI3Kγ</td>
<td>1400</td>
<td>9.1</td>
<td>0.21</td>
<td>0.31</td>
</tr>
<tr>
<td>PI3Kδ</td>
<td>6.2</td>
<td>1.2</td>
<td>0.047</td>
<td>0.068</td>
</tr>
<tr>
<td>CK1ε</td>
<td>180</td>
<td>&gt;30,000</td>
<td>&gt;30,000</td>
<td>&gt;6,000</td>
</tr>
</tbody>
</table>

- Umbralisib is an oral, once daily, dual inhibitor of PI3Kδ and CK1ε.
- Umbralisib has >1000-fold greater selectivity for PI3Kδ compared to α and β isoforms.<sup>3</sup>
- Umbralisib is also >200-fold more selective for PI3Kδ relative to PI3Kγ.

Gribben JG et al. ASH 2020;Abstract 543.
UNITY-CLL: PFS with Umbralisib/Ublituximab (U2) versus Obinutuzumab/Chlorambucil

Gribben JG et al. ASH 2020;Abstract 543.
TRANSCEND CLL 004: Phase 1 Cohort of Lisocabtagene Maraleucel (liso-cel) in Combination with Ibrutinib for Patients with Relapsed/Refractory (R/R) Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma (CLL/SLL)

William G. Wierda,1 Kathleen A. Dorritie,2 Javier Munoz,3 Deborah M. Stephens,4 Scott Solomon,5 Heidi H. Gillenwater,6 Lucy Gong,6 Lin Yang,6 Ken Ogasawara,7 Jerill Thorpe,6 Tanya Siddiqi8

1The University of Texas MD Anderson Cancer Center, Houston, TX, USA; 2UPMC Hillman Cancer Center, University of Pittsburgh, Pittsburgh, PA, USA; 3Banner MD Anderson Cancer Center, Gilbert, AZ, USA; 4Huntsman Cancer Institute, University of Utah, Salt Lake City, UT, USA; 5Immunotherapy Program, Northside Hospital Cancer Institute, Atlanta, GA, USA; 6Bristol Myers Squibb, Seattle, WA, USA; 7Bristol Myers Squibb, Princeton, NJ, USA; 8City of Hope National Medical Center, Duarte, CA, USA

Presentation 544

Updated Follow-Up of Patients with Relapsed/Refractory Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma Treated with Lisocabtagene Maraleucel in the Phase 1 Monotherapy Cohort of TRANSCEND CLL 004, Including High-Risk and Ibrutinib-Treated Patients

Tanya Siddiqi,1 Jacob D. Soumerai,2 Kathleen A. Dorritie,3 Deborah M. Stephens,4 Peter A. Riedell,5 Jon Arnason,6 Thomas J. Kipps,7 Heidi H. Gillenwater,8 Lucy Gong,8 Lin Yang,6 Ken Ogasawara,9 William G. Wierda10

1City of Hope National Medical Center, Duarte, CA, USA; 2Center for Lymphoma, Massachusetts General Hospital Cancer Center, Boston, MA, USA; 3UPMC Hillman Cancer Center, University of Pittsburgh, Pittsburgh, PA, USA; 4Huntsman Cancer Institute, University of Utah, Salt Lake City, UT, USA; 5University of Chicago Medical Center, Chicago, IL, USA; 6Beth Israel Deaconess Medical Center, Boston, MA, USA; 7Moores Cancer Center, University of California San Diego Health, San Diego, CA, USA; 8Bristol Myers Squibb, Seattle, WA, USA; 9Bristol Myers Squibb, Princeton, NJ, USA; 10The University of Texas MD Anderson Cancer Center, Houston, TX, USA

Presentation 546
TRANSCEND CLL 004: Study Design

Key Eligibility for Monotherapy Cohort
- R/R CLL/SLL
- Ineligible for BTKi or prior BTKi failure
- High-risk disease: ≥2 prior therapies failed
- Standard-risk disease: ≥3 prior therapies failed
- ECOG PS of 0–1

Dose Escalation: mTP1-2 Design
- 28-day dose-limiting toxicity period
- Primary objectives
  - Safety
  - Determine recommended dose
- Exploratory objectives
  - Antitumor activity (IWCLL 2018)
  - Testing for MRD
  - Cellular kinetic profile (qPCR)

Wierda WG et al. ASH 2020;Abstract 544; Siddiqi T et al. ASH 2020;Abstract 546.
TRANSCEND CLL 04: Liso-cel Monotherapy Cohort

- ORR/CR = 82%/68%
- Median PFS 13 mo and DOR 50% at 12 mo
- Gr 3 CRS= 9% and NE 22% (No Grade 4/5)
- 4 of 6 progressions due to RT

Siddiqi T et al. ASH 2020;Abstract 546.
TRANSCEND CLL 04: Liso-cel and Ibrutinib Cohort

Best Overall Response

- CR/CRI: 63% (n = 12)
- PR: 32% (n = 6)

- DL1 (n = 4)
  - CR/CRI: 50% (n = 2)
  - PR: 25% (n = 1)

- DL2 (n = 15)
  - CR/CRI: 67% (n = 10)
  - PR: 33% (n = 5)

Undetectable Minimal Residual Disease

- uMRD, blood, flow: 89% (n = 17), 79% (n = 15), 75% (n = 3), 75% (n = 3)
- uMRD, marrow, NGS: 93% (n = 14), 80% (n = 12)

- All Patients (N = 19)
- DL1 (n = 4)
- DL2 (n = 15)

- No patients had PD during the first month after liso-cel
- One patient at DL1 had SD for 6 months but later progressed

Weirda WG et al. ASH 2020;Abstract 544.
Data + Perspectives: Clinical Investigators Discuss the Current and Future Management of Non-Hodgkin Lymphoma

A Virtual CME Satellite Symposium Series in Conjunction with the Society of Hematologic Oncology 2021 Annual Meeting

Tuesday, August 31, 2021
7:00 PM – 8:00 PM ET

Faculty
Andrew M Evens, DO, MSc
Ian W Flinn, MD, PhD
Gilles Salles, MD, PhD

Moderator
Neil Love, MD
Thank you for joining us!

CME credit information will be emailed to each participant shortly.