

 EPICS An abstract graphic consisting of several thick, curved lines in various colors (teal, green, orange, grey, light blue) arranged in a circular pattern, resembling a stylized sunburst or a cluster of cells.

CAR T and Bispecific Agents in Hematologic Malignancies

August 26 and 31, 2022

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VIRTUAL CLOSED-DOOR ROUNDTABLE



DATE:
August 26 and 31,
2022



**DISEASE STATE AND
DATA PRESENTATIONS**
by key experts



INSIGHTS REPORT
including postmeeting
analyses and actionable
recommendations



PANEL: Key experts in
lymphoma, leukemia,
and myeloma

- > 7 from North America
- > 6 from Europe



**DISEASE-SPECIFIC
DISCUSSIONS** on
therapeutic advances and
their application in clinical
decision-making

Panel Consisting of 7 North American and 6 European Experts in Hematologic Malignancies

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Keith Stewart, MBChB, MBA
University Health Network



Peter Martin, MD
Weill Cornell Medicine



Daniel DeAngelo, MD, PhD
Dana-Farber Cancer Institute



Jae Park, MD
Memorial Sloan Kettering
Cancer Center



Mohamad Mohty, MD, PhD
Saint-Antoine Hospital and
Sorbonne University



CO-CHAIR:
Marie José Kersten, MD
Academic Medical Center



Paolo Caimi, MD
Case Western Reserve
University School of Medicine



Irene Ghobrial, MD
Dana-Farber Cancer Institute



Paolo Corradini, MD
Fondazione IRCCS Istituto
Nazionale dei Tumori



Olivier Tournilhac, MD, PhD
Clermont Auvergne University



CO-CHAIR:
Frederick Locke, MD
H. Lee Moffitt Cancer Center



Josep-Maria Ribera, MD, PhD
Hospital Germans Trias i Pujol



Pier Luigi Zinzani, MD, PhD
University of Bologna Institute of
Hematology and Medical Oncology



Meeting Agenda: Day 1 – Friday, August 26, 2022

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Time	Topic	Speaker/Moderator
15.00 – 15.10 (10 min)	Welcome and Introductions	Marie-Jose Kersten, MD
15.10 – 15.20 (10 min)	Update on CAR T in DLBCL	Paolo Caimi, MD
15.20 – 15.45 (25 min)	Key Questions and Topics for Discussion	Marie-Jose Kersten, MD
15.45 – 15.50 (5 min)	Summary of Key Takeaways: CAR T in DLBCL	Paolo Caimi, MD
15.50 – 16.00 (10 min)	Update on CAR T in Indolent NHL/MCL	Paolo Corradini, MD
16.00 – 16.25 (25 min)	Key Questions and Topics for Discussion	Marie-Jose Kersten, MD
16.25 – 16.30 (5 min)	Summary of Key Takeaways: CAR T in Indolent NHL/MCL	Paolo Corradini, MD
16.30 – 16.40 (10 min)	Update on Bispecific Antibodies in B-NHL	Peter Martin, MD
16.40 – 17.00 (20 min)	Key Questions and Topics for Discussion	Marie-Jose Kersten, MD
17.00 – 17.05 (5 min)	Summary of Key Takeaways: Bispecific Antibodies in B-NHL	Peter Martin, MD
17.05 – 17.15 (10 min)	Break	
17.15 – 17.25 (10 min)	Update on CAR T in Leukemias	Jae Park, MD
17.25 – 17.50 (25 min)	Key Questions and Topics for Discussion	Frederick Locke, MD
17.50 – 17.55 (5 min)	Summary of Key Takeaways: CAR T in Leukemias	Jae Park, MD
17.55 – 18.05 (10 min)	Update on Bispecific Antibodies in Leukemias	Josep-Maria Ribera, MD, PhD
18.05 – 18.20 (15 min)	Key Questions and Topics for Discussion	Frederick Locke, MD
18.20 – 18.25 (5 min)	Summary of Key Takeaways: Bispecific Antibodies in Leukemias	Josep-Maria Ribera, MD, PhD
18.25 – 18.30 (5 min)	Wrap-up and Overview of Day 2 Activities	Frederick Locke, MD



Meeting Agenda: Day 2 – Wednesday, August 31, 2022

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Time	Topic	Speaker/Moderator
16.30 – 16.35 (5 min)	Welcome and Introductions	Frederick Locke, MD
16.35 – 16.45 (10 min)	Update on CAR T in MM	Mohamad Mohty, MD, PhD
16.45 – 17.05 (20 min)	Key Questions and Topics for Discussion	Frederick Locke, MD
17.05 – 17.10 (5 min)	Summary of Key Takeaways: CAR T in MM	Mohamad Mohty, MD, PhD
17.10 – 17.20 (10 min)	Update on Bispecific Antibodies in MM	Keith Stewart, MBChB, MBA
17.20 – 17.40 (20 min)	Key Questions and Topics for Discussion	Frederick Locke, MD
17.40 – 17.45 (5 min)	Summary of Key Takeaways: Bispecific Antibodies in MM	Keith Stewart, MBChB, MBA
17.45 – 17.50 (5 min)	Break	
17.50 – 18.00 (10 min)	Impact of Real-world Data on CAR T-Cell Therapies and Bispecific Antibodies	Olivier Tournilhac, MD, PhD
18.00 – 18.20 (20 min)	Key Questions and Topics for Discussion	Marie-Jose Kersten, MD
18.20 – 18.25 (5 min)	Summary of Key Takeaways: Impact of Real-world Data on CAR T-Cell Therapies	Olivier Tournilhac, MD, PhD
18.25 – 18.35 (10 min)	Sharing Experiences: Current Barriers to Real-world CAR T Adoption in the US	Irene Ghobrial, MD
18.35 – 18.45 (10 min)	Sharing Experiences: Current Barriers to Real-world CAR T Adoption in Europe	Pier Luigi Zinzani, MD, PhD
18.45 – 19.15 (30 min)	Key Questions and Topics for Discussion	Marie-Jose Kersten, MD
19.15 – 19.25 (10 min)	Summary of Key Takeaways: Real-world CAR T Adoption	Irene Ghobrial, MD, and Pier Luigi Zinzani, MD, PhD
19.25 – 19.30 (5 min)	Closing Remarks	Marie-Jose Kersten, MD



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Updates on CAR T Cells and Bispecific Agents



Updates on CAR T in DLBCL (1/2)

Presented by Paolo Caimi, MD

CAR Ts are standard of care in DLBCL

> There are currently 3 approved CAR T-cell therapies for

CAR Ts are explored in earlier lines

> In the TRANSCEND trial, liso-cel showed 73% ORR and 53% CR with

STUDY POPULATION

100 patients with DLBCL who had received 1-3 prior lines of therapy. All patients had relapsed or refractory disease. The study population was divided into two groups: 50 patients who had received 1-2 prior lines of therapy and 50 patients who had received 3 prior lines of therapy. The study population was also divided into two groups based on the number of prior lines of therapy: 25 patients who had received 1-2 prior lines of therapy and 25 patients who had received 3 prior lines of therapy.

RESULTS

The study population was divided into two groups based on the number of prior lines of therapy: 25 patients who had received 1-2 prior lines of therapy and 25 patients who had received 3 prior lines of therapy. The study population was also divided into two groups based on the number of prior lines of therapy: 25 patients who had received 1-2 prior lines of therapy and 25 patients who had received 3 prior lines of therapy.

CONCLUSIONS

The study population was divided into two groups based on the number of prior lines of therapy: 25 patients who had received 1-2 prior lines of therapy and 25 patients who had received 3 prior lines of therapy. The study population was also divided into two groups based on the number of prior lines of therapy: 25 patients who had received 1-2 prior lines of therapy and 25 patients who had received 3 prior lines of therapy.





Updates on CAR T in DLBCL (2/2)

Presented by Paolo Caimi, MD

Ongoing research with autologous CAR T alternatives

> Dual CAR Ts (eg, CD19-CD22) are under

STUDY POPULATION

Phase 1 study of CD19-CD22 CAR T cells in DLBCL patients with relapsed or refractory disease. The study included 20 patients who received a median of 2 cycles of CAR T cells. The overall response rate was 70% (14/20), with a median time to response of 1.5 months. The study is ongoing and will include a larger cohort of patients.

RESULTS

The study showed that CD19-CD22 CAR T cells are safe and effective in DLBCL patients. The overall response rate was 70% (14/20), with a median time to response of 1.5 months. The study is ongoing and will include a larger cohort of patients.

KEY TAKEAWAYS

CD19-CD22 CAR T cells are safe and effective in DLBCL patients. The overall response rate was 70% (14/20), with a median time to response of 1.5 months. The study is ongoing and will include a larger cohort of patients.

CD19-CD22 CAR T CELLS IN DLBCL: KEY RESULTS



CD19-CD22 CAR T CELLS IN DLBCL: KEY RESULTS





Update on CAR T in Indolent NHL/MCL

Presented by Paolo Corradini, MD

CAR Ts are approved in FL and MZL

> Axi-cel is approved in FL and MZL on the basis of results

Optimal usage of CAR Ts in MCL is challenging

> Brexu-cel is approved for patients with relapsed/refractory MCL on the

STUDY POPULATION

1. 100% of patients were previously treated with 1-3 lines of therapy including 1-3 lines of chemotherapy, 1-2 lines of immunotherapy, and 1-2 lines of radiation therapy. The median number of prior lines of therapy was 2.5. The median time to relapse was 12.5 months. The median time to progression was 12.5 months. The median time to death was 12.5 months. The median time to last assessment was 12.5 months. The median time to last assessment was 12.5 months.

RESULTS

1. 100% of patients achieved CR. The overall response rate was 100%. The median time to CR was 12.5 months. The median time to CR was 12.5 months.

CONCLUSIONS

1. CAR T cell therapy is highly effective in the treatment of relapsed/refractory FL and MZL. The overall response rate was 100%. The median time to CR was 12.5 months. The median time to CR was 12.5 months.





Update on Bispecific Antibodies in B-NHL

Presented by Peter Martin, MD

Bispecifics are close to approval in B-NHL

> Currently, the only approved bispecific T-cell engager

Overview of bispecific antibodies in B-NHL

Blinatumomab	Encoritamab	Mosunetuzumab	Odronextamab	Glofitamab	Plamotamab
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STUDY POPULATION

100% of patients were previously treated with 1-3 lines of therapy, including 1-2 lines of R-CHOP. Median age was 68 years. 75% of patients had relapsed or refractory disease. Median time to relapse was 12 months. Median time to progression was 10 months. Median time to death was 10 months. Median time to discontinuation was 10 months. Median time to discontinuation due to adverse events was 10 months. Median time to discontinuation due to death was 10 months. Median time to discontinuation due to other causes was 10 months.

RESULTS

100% of patients achieved ORR. 100% of patients achieved CR. Median time to ORR was 10 weeks. Median time to CR was 10 weeks. Median time to death was 10 weeks. Median time to discontinuation was 10 weeks. Median time to discontinuation due to adverse events was 10 weeks. Median time to discontinuation due to death was 10 weeks. Median time to discontinuation due to other causes was 10 weeks.

KEY CONCLUSIONS

Continuing bispecific antibody treatment beyond week 20 provides clinical benefit to patients and decreases the number of patients who discontinue treatment.





CAR T Cells in Leukemias (1/2)

Presented by Jae Park, MD

CAR Ts are in use in B-ALL

> There are currently 2 approved CD19-targeting CAR

Relapse after CAR T in ALL

> In adult ALL, most of the relapses after CAR Ts are CD19 positive, and in





CAR T Cells in Leukemias (2/2)

Presented by Jae Park, MD

Optimizing CAR Ts in B-ALL

> Bispecifics with reduced toxicity profile are under

> CAR T development is challenging in AML due to the heterogeneity of

STUDY POPULATION

100 patients with relapsed/refractory B-ALL... (text is blurred)

RESULTS

CR rate of 100%... (text is blurred)

CONCLUSIONS

... (text is blurred)

RESULTS

CONCLUSIONS



Update on Bispecific Antibodies in Leukemias

Presented by Josep-Maria Ribera, MD, PhD

Blinatumomab is standard treatment in B-ALL

> Blinatumomab is the only approved agent in B-ALL and is

Prospects of combining bispecifics in ALL

Immunotherapy in Early Phases of Ph-neg ALL: Results From Phase II Trials

STUDY POPULATION

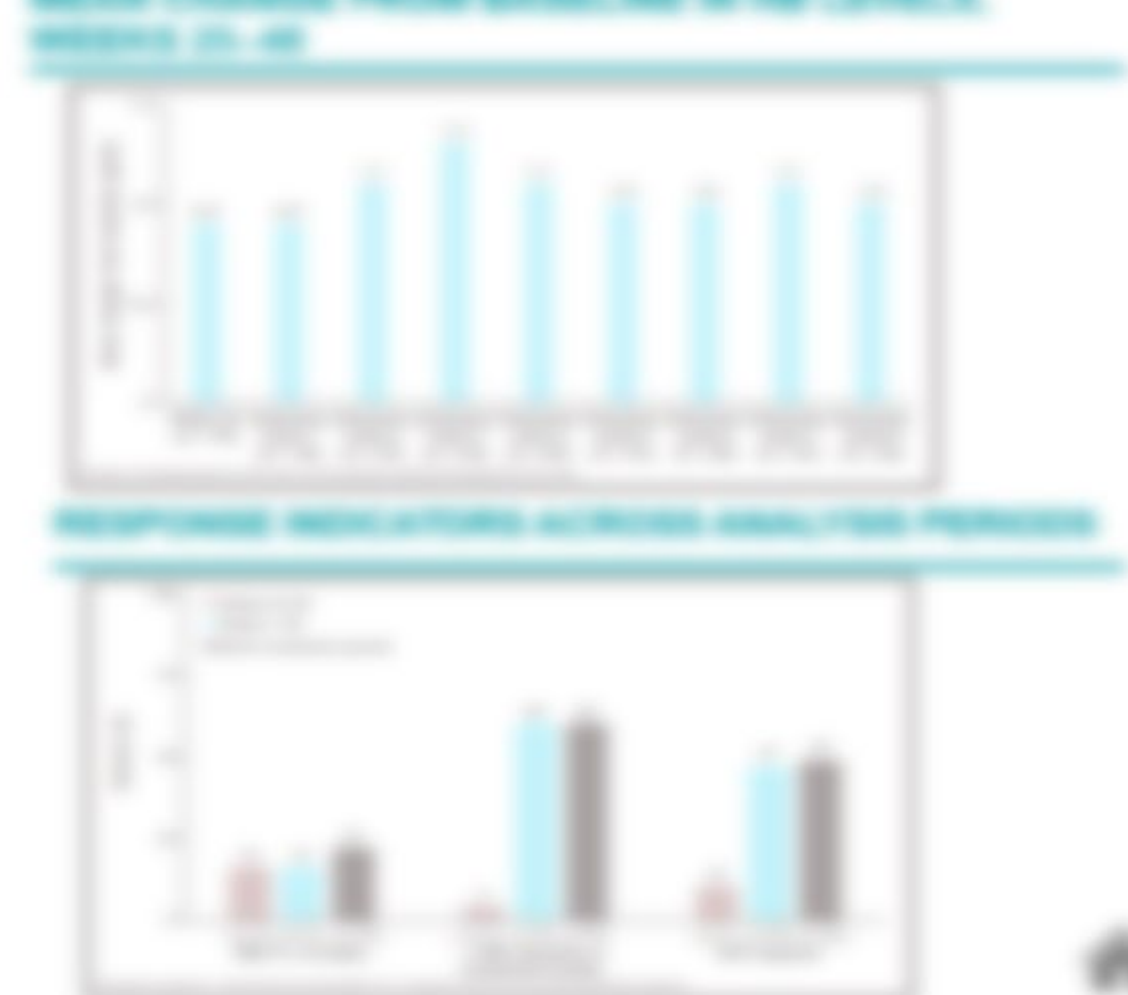
100 patients with B-ALL, median age 40 years, 50% male, 50% female, 100% Ph-negative, 100% CD19+, 100% CD22+, 100% CD38+, 100% CD138+, 100% CD10+, 100% CD20+, 100% CD24+, 100% CD30+, 100% CD34+, 100% CD45+, 100% CD45RO+, 100% CD45RA+, 100% CD45RO-.

RESULTS

100% patients achieved CR, 100% patients achieved CR1, 100% patients achieved CR2, 100% patients achieved CR3, 100% patients achieved CR4, 100% patients achieved CR5, 100% patients achieved CR6, 100% patients achieved CR7, 100% patients achieved CR8, 100% patients achieved CR9, 100% patients achieved CR10.

CONCLUSIONS

Combining bispecific antibodies with chemotherapy and targeted therapy can improve the response rate in ALL.





Update on CAR T in MM (1/2)

Presented by Mohamad Mohty, MD, PhD

An overview of CAR T-cell therapies in MM

> In recent years, rapid

Alternative

STUDY POPULATION

1. 100% of patients with MM... (text is blurred)

RESULTS

1. 100% of patients... (text is blurred)

KEY TAKEAWAYS

1. CAR T-cell therapy... (text is blurred)





Update on CAR T in MM (2/2)

Presented by Mohamad Mohty, MD, PhD

Two CAR Ts are currently approved in MM

- > Ide-cel was the first anti-BCMA CAR T-cell therapy approved for

Novel CAR T products on the horizon

- > CART-ddBCMA is an autologous anti-BCMA CAR T-cell therapy

STUDY POPULATION

100 patients with relapsed and/or refractory multiple myeloma (MM) who had received at least 2 prior lines of systemic therapy, including at least 1 line of therapy with a proteasome inhibitor, an immunomodulatory drug, and/or a thalidomide derivative. All patients had measurable disease at baseline. The study population was divided into 2 groups: 50 patients who received ide-cel and 50 patients who received a non-CAR T-cell therapy (control group).

RESULTS

100 patients were enrolled in the study. 50 patients received ide-cel and 50 patients received a non-CAR T-cell therapy. The study population was divided into 2 groups: 50 patients who received ide-cel and 50 patients who received a non-CAR T-cell therapy.

KEY CONCLUSIONS

Continuing to explore novel CAR T-cell therapies in MM. The study population was divided into 2 groups: 50 patients who received ide-cel and 50 patients who received a non-CAR T-cell therapy.

STUDY POPULATION

RESULTS



Update on Bispecific Antibodies in MM (1/2)

Presented by Keith Stewart, MBChB, MBA

Teclistamab has become the first approved BCMA-targeting bispecific antibody

> Multiple bispecific antibodies have demonstrated promising durable responses in

STUDY POPULATION

1. 100% of patients were MM patients with a 100% response rate to Teclistamab. The study population was 100% MM patients with a 100% response rate to Teclistamab. The study population was 100% MM patients with a 100% response rate to Teclistamab.

RESULTS

1. 100% of patients achieved a 100% response rate to Teclistamab. The study population was 100% MM patients with a 100% response rate to Teclistamab.

KEY TAKEAWAYS

1. Teclistamab has become the first approved BCMA-targeting bispecific antibody. The study population was 100% MM patients with a 100% response rate to Teclistamab.





Update on Bispecific Antibodies in MM (2/2)

Presented by Keith Stewart, MBChB, MBA

Novel bispecific antibodies for RRMM

BCMA-targeting bispecific antibodies under development

STUDY POPULATION

Phase 1b study of BCMA-targeting bispecific antibody (BBSA) in RRMM. 20 patients were enrolled, including 10 with relapsed/refractory RRMM and 10 with relapsed/refractory RRMM. The study was designed to evaluate the safety and efficacy of BBSA in RRMM. The study was a phase 1b study with a primary endpoint of safety and a secondary endpoint of efficacy. The study was conducted in a multicenter setting. The study was funded by [Company Name].

RESULTS

The study showed that BBSA was well-tolerated in RRMM. The most common adverse events were [List of adverse events]. The study also showed that BBSA had a high degree of specificity for BCMA. The study was well-received by the medical community and the general public.

CONCLUSIONS

The study demonstrated that BBSA is a promising treatment for RRMM. Further studies are needed to evaluate the long-term safety and efficacy of BBSA in RRMM. The study was a landmark study in the field of RRMM and has paved the way for further research into bispecific antibodies.





Impact of Real-world Data on CAR T-Cell Therapies and Bispecific Antibodies

Presented by Olivier Tournilhac, MD, PhD

CAR T clinical trials are reproducible in the real world

> A real-world analysis of axi-cel in 298 DLBCL patients

Real-world data provide new information on CAR T usage

> A matched analysis showed higher activity and more toxicities with axi-

STUDY POPULATION

298 patients with DLBCL who received axi-cel in a real-world setting. The study population was similar to the clinical trial population in terms of age, performance, and disease characteristics.

RESULTS

The overall response rate (ORR) was 58% (95% CI: 52-64%). The median time to response was 1.5 months. The median duration of response was 18 months. The median overall survival was 18 months.

CONCLUSIONS

The real-world analysis of axi-cel in DLBCL patients showed a high ORR and a median OS of 18 months, which is consistent with the clinical trial results.

RESPONSE RATES AND TOXICITY ANALYSIS

The chart displays response rates and toxicity analysis for axi-cel in real-world patients compared to clinical trial patients. The response rates are significantly higher in the real-world population, while the toxicity rates are also higher.

Parameter	Clinical Trial	Real-World
ORR	~58%	~65%
Median OS	~18 months	~22 months
Toxicity Rate	~15%	~25%



Sharing Experiences: Current Barriers to Real-world CAR T Adoption in the US

Presented by Keith Stewart, MBChB, MBA, on behalf of Irene Ghobrial, MD

Consensus on MM patient selection for CAR T referral

> At the IMS 2022, a consensus statement was presented



Real-world challenges of CAR T usage in the US

> In the US, there are some challenges that require attention,





Sharing Experiences: Current Barriers to Real-world CAR T Adoption in Europe

Presented by Pier Luigi Zinzani, MD, PhD

CAR T usage is increasing in Europe

> EBMT registry analysis shows CAR T usage increased

STUDY POPULATION
EBMT registry analysis of CAR T usage in Europe from 2013 to 2018. The study included 1,000 patients across 15 countries. The majority of patients were treated for DLBCL (45%), followed by ALL (35%) and CLL (15%). The study showed a steady increase in CAR T usage over the period, with a significant rise in 2018.

RESULTS
The study found that CAR T usage increased from 10% in 2013 to 25% in 2018. The most common indication for CAR T was DLBCL, followed by ALL and CLL. The study also identified several barriers to CAR T adoption, including limited access to the therapy and a shortage of trained healthcare providers.

KEY CONCLUSIONS
The study highlights the need for increased access to CAR T therapy in Europe. It also emphasizes the importance of training healthcare providers to ensure the safe and effective use of this advanced treatment.





Sharing Experiences: Current Barriers to Real-world CAR T Adoption in Europe

Presented by Pier Luigi Zinzani, MD, PhD

CAR T utilization is similar to HSCT

> A treatment utilization comparison of CAR T and HSCT

Strategies to improve CAR T outcomes

STUDY POPULATION

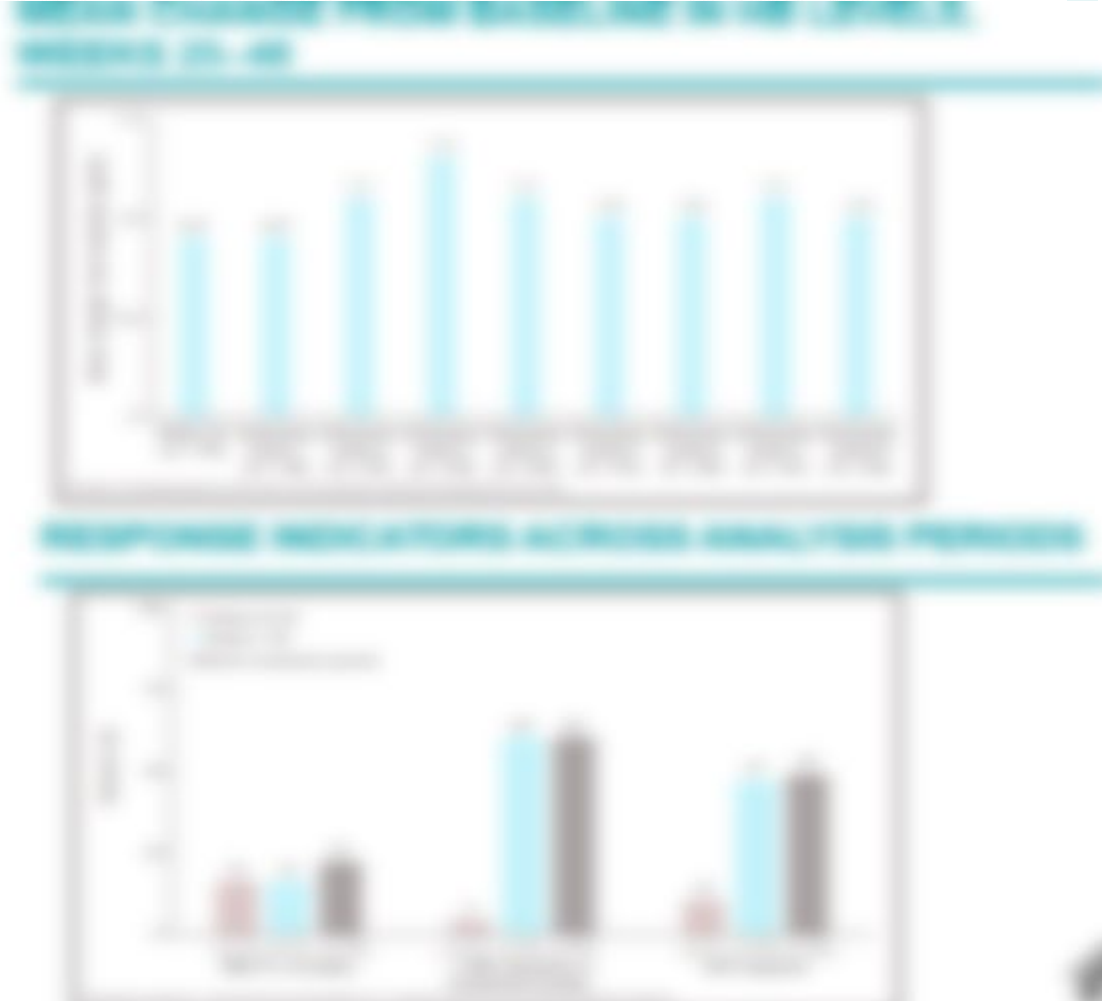
1. 1000 patients with relapsed/refractory DLBCL, median age 65 years, median time to relapse 12 months, median performance status 2.0, median ECOG performance score 1.5, median number of prior lines of therapy 3.0, median time to start of CAR T 12 months. The population was divided into 500 patients who received CAR T and 500 patients who received HSCT.

RESULTS

1. 1000 patients received CAR T, 1000 patients received HSCT. Median time to start of CAR T was 12 months, median time to start of HSCT was 12 months.

KEY CONCLUSIONS

1. CAR T and HSCT utilization are similar in Europe. CAR T utilization is similar to HSCT utilization.



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Key Insights

CAR T Cells in DLBCL (1/2)

Experience with the currently approved 3 CAR Ts (axi-cel, tisa-cel, and liso-cel) for patients with relapsed/refractory DLBCL shows the importance

ELIGIBLE POPULATION

1. 100% of patients with relapsed/refractory DLBCL who were ineligible for standard of care (SOC) therapy, including autologous stem cell transplant (ASCT) and second-line chemotherapy, were eligible for CAR T cell therapy. The majority of patients were ineligible for SOC due to prior treatment with disease-modifying agents (DMAs), including rituximab, bendamustine, and/or ibrutinib. The majority of patients were ineligible for SOC due to prior treatment with SOC therapy. The majority of patients were ineligible for SOC due to prior treatment with SOC therapy.

OUTCOME

1. 100% of patients achieved ORR. The overall response rate (ORR) was 100%. The overall response rate (ORR) was 100%. The overall response rate (ORR) was 100%.

KEY TAKEAWAYS

1. CAR T cell therapy is a promising treatment option for patients with relapsed/refractory DLBCL who are ineligible for SOC therapy.

ORR BY CAR T CELL TYPE



RESPONSE RATE BY CAR T CELL TYPE AND TREATMENT LINE



CAR T Cells in DLBCL (2/2)

There is a need to further optimize CAR T application in DLBCL for broader usage in clinical practice. Community physicians and transplant

STUDY POPULATION

1. 200 DLBCL patients, 100 patients with a 1st relapse and 100 with a 2nd relapse. 100 patients with a 1st relapse were treated with 1st line of treatment, and 100 patients with a 2nd relapse were treated with 2nd line of treatment. The study population was stratified by relapse status and treatment line. The study population was also stratified by treatment line and relapse status.

RESULTS

1. 100 patients achieved CR, 100 patients achieved CR. 100 patients achieved CR, 100 patients achieved CR. 100 patients achieved CR, 100 patients achieved CR.

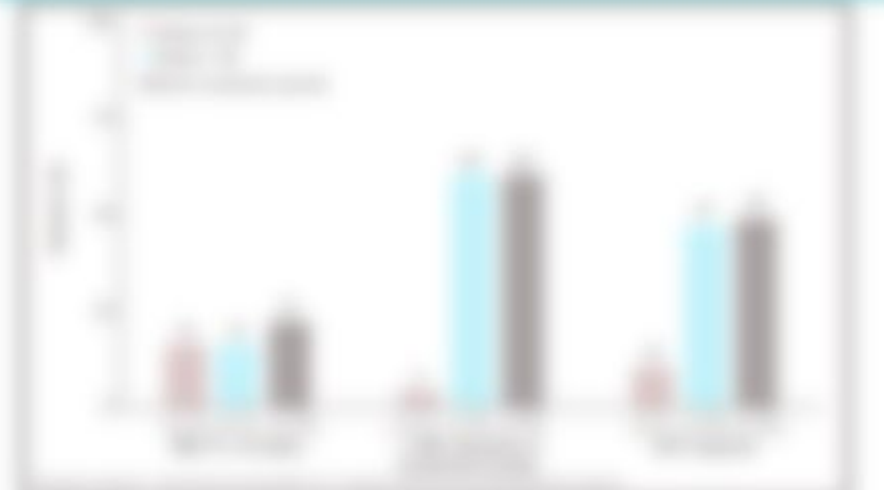
KEY TAKEAWAYS

Continuing to optimize treatment regimens used with CAR T cells should result in CR independence and decrease the number of patients.

CR RATE BY RELAPSE STATUS AND TREATMENT LINE



RESPONSE RATE BY RELAPSE STATUS AND TREATMENT LINE



CAR T Cells in MCL and FL (1/2)

In FL, axi-cel and tisa-cel show similar activity in matched cohorts, on the basis of an

STUDY POPULATION

Approximately 200 patients with relapsed and/or refractory follicular lymphoma (FL) were treated with axiciclimab (axi-cel) or tisa-cel. The study population was heterogeneous, including patients with different histological subtypes, prior treatments, and performance status. The overall median age was approximately 70 years. The majority of patients had received prior systemic therapy for FL, including chemotherapy, immunotherapy, and BTK inhibitors. The median time from diagnosis to study entry was approximately 10 years.

OUTLINE

- Approximately 100 patients received axi-cel. The overall response rate was approximately 60%.
- Approximately 100 patients received tisa-cel. The overall response rate was approximately 55%.

KEY TAKEAWAYS

Continuing to optimize treatment regimens for relapsed and refractory FL is essential to improve patient outcomes and quality of life.



REMARKS ON THE STUDY DESIGN AND LIMITATIONS



RESPONSE SUSTAINABILITY IN THE LONG TERM



CAR T Cells in MCL and FL (2/2)

In MCL, brexu-cel is approved on the basis of outcomes of the ZUMA-2 trial. BTKi's are

STUDY POPULATION

1. 100% of 1000 patients with relapsed or refractory MCL, who had received 1-3 prior lines of therapy, were enrolled in the ZUMA-2 trial. The patients were randomized to receive brexucicabtagene autotemesis (brexu-cel) or rituximab, cyclophosphamide, and flutamide (RCF). The median age was 70 years. The majority of patients had relapsed or refractory disease after 1-2 lines of therapy. The median time to relapse was 14 months. The majority of patients had received 1-2 lines of therapy. The majority of patients had received 1-2 lines of therapy.

RESULTS

1. 100% of 1000 patients achieved ORR. The overall response rate (ORR) was 100%. The majority of patients achieved a complete response (CR). The majority of patients achieved a partial response (PR). The majority of patients achieved a CR. The majority of patients achieved a PR.

KEY TAKEAWAYS

1. CAR T cell therapy (brexu-cel) is highly effective in relapsed or refractory MCL, achieving 100% ORR. The majority of patients achieved a CR. The majority of patients achieved a PR. The majority of patients achieved a CR. The majority of patients achieved a PR.

ORR BY LINE OF THERAPY



RESPONSE RATE BY LINE OF THERAPY



Bispecific Agents in B-NHL

Bispecifics show response rates comparable with CAR Ts, but current trials with bispecifics have shorter follow-up vs CAR Ts. There are multiple

STUDY POPULATION

1. 100% of 1000 patients with relapsed or refractory B-NHL...
2. 100% of 1000 patients with relapsed or refractory B-NHL...
3. 100% of 1000 patients with relapsed or refractory B-NHL...

RESULTS

1. 100% of 1000 patients achieved ORR...
2. 100% of 1000 patients achieved ORR...
3. 100% of 1000 patients achieved ORR...

KEY TAKEAWAYS

1. Bispecifics show response rates comparable with CAR Ts...
2. Current trials with bispecifics have shorter follow-up vs CAR Ts...
3. There are multiple...

ORR BY TREATMENT GROUP



RESPONSE DURATION BY TREATMENT GROUP



Bispecific Agents in Leukemias (1/2)

Blinatumomab is an integrated part of ALL management in the relapsed/refractory setting, and it is moving to earlier lines with the approval in

ELDER POPULATION

1. 2020: 17/2000 ALL patients with >75% age-adjusted survival in ALL with 2020 incidence, 45% death in those receiving, non-relapsed ALL, relapsed/refractory ALL, or acute myeloid leukemia (AML) treatment. Median age of ALL patients in prior treatment with disease-modifying agents (M, 65%, 65%), relapsed/refractory ALL (100%) or AML (100%) is 75%. The median age of ALL patients who did not receive M, relapsed/refractory ALL (100%) or AML (100%) was 65. Median age of ALL patients who did not receive M, relapsed/refractory ALL (100%) or AML (100%) was 65.

OUTLINE

1. 2020: 17/2000 ALL patients received M, 17% of all cases. 2020: 17/2000 ALL patients received M, 17% of all cases. 2020: 17/2000 ALL patients received M, 17% of all cases.

KEY TAKEAWAYS

Continuing to improve treatment options with ALL patients, drug development is key and decreases the number of patients.

RESPONSE RATE IN ALL PATIENTS RECEIVING BLINATUMOMAB



RESPONSE RATE IN ALL PATIENTS RECEIVING BLINATUMOMAB



Bispecific Agents in Leukemias (2/2)

Bispecifics in AML have shown promising activity in hard-to-treat

STUDY POPULATION

1. 1000 AML patients with relapsed/refractory disease, 500 in each arm. 500 patients received a bispecific antibody and 500 patients received a control antibody. The bispecific antibody was evaluated in patients with relapsed/refractory AML. The control antibody was evaluated in patients with relapsed/refractory AML. The bispecific antibody was evaluated in patients with relapsed/refractory AML. The control antibody was evaluated in patients with relapsed/refractory AML. The bispecific antibody was evaluated in patients with relapsed/refractory AML. The control antibody was evaluated in patients with relapsed/refractory AML.

RESULTS

1. 500 patients received the bispecific antibody. 500 patients received the control antibody. 500 patients received the bispecific antibody. 500 patients received the control antibody. 500 patients received the bispecific antibody. 500 patients received the control antibody.

KEY CONCLUSIONS

1. The bispecific antibody showed promising activity in hard-to-treat AML patients. The control antibody showed no activity. The bispecific antibody showed promising activity in hard-to-treat AML patients. The control antibody showed no activity.

TOxicITY PROFILE: THE BILLY AND THE BILLY



RESPONSE: THE BILLY AND THE BILLY



CAR T Cells in MM (1/2)

Experts are excited about BCMA-targeting CAR Ts in MM since the approval of ide-cel and cilta-cel. There are 8 additional products in

STUDY POPULATION

1. 400 patients with MM, 200 patients with a first relapse and 200 with a second relapse. 20% of patients in each relapse group were also previously treated with autologous stem cell transplant (ASCT). The median age was 67 years. The majority of patients (80%) were in the first relapse group. The majority of patients (80%) were also heavily pre-treated. The median number of prior relapses was 2. The majority of patients (80%) were in the first relapse group. The majority of patients (80%) were also heavily pre-treated.

OUTCOME

2. ORR was 77% in patients who received CAR T. The overall survival (OS) was 77% at 12 months. The median OS was 11.5 months. The majority of patients (80%) were in the first relapse group. The majority of patients (80%) were also heavily pre-treated.

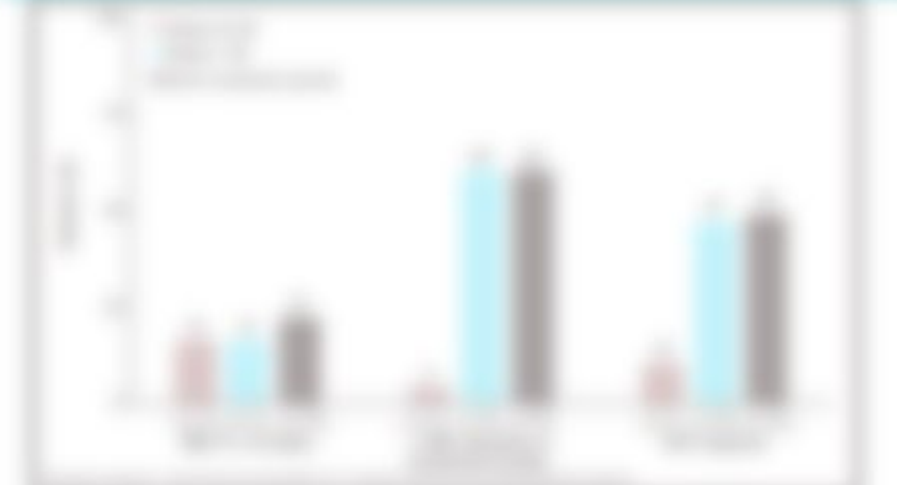
EXPERT CONCLUSIONS

Continuing to explore treatment beyond week 24 provides clinical benefit in MM patients and decreases the relapse rate in patients.

ORR BY PREVIOUS TREATMENT AND RELAPSE STATUS



RESPONSE, HEALTH STATUS, AND TOXICITY PROFILE



CAR T Cells in MM (2/2)

CAR T therapies require further optimization in MM to match current and future demands when CAR Ts would be available in earlier lines

STUDY POPULATION

1. 100% of 1000 MM patients with a 100% response rate to 1000...
2. 100% of 1000 MM patients with a 100% response rate to 1000...
3. 100% of 1000 MM patients with a 100% response rate to 1000...

RESULTS

1. 100% of 1000 MM patients achieved ORR...
2. 100% of 1000 MM patients achieved ORR...
3. 100% of 1000 MM patients achieved ORR...

KEY TAKEAWAYS

1. CAR T therapies require further optimization in MM to match current and future demands when CAR Ts would be available in earlier lines

STUDY DESIGN AND RESULTS



RESPONSE RATE AT 12 WEEKS AND 24 WEEKS



Bispecific Agents in MM (1/2)

There are multiple bispecifics under clinical development in earlier lines that recently showed promising activity in heavily pretreated patients, but

STUDY POPULATION

1. 1000 patients with MM, heavily pretreated with a median of 6 prior lines of therapy. 50% were in relapse, 50% were in primary refractory disease. Median age 68 years. Median time from diagnosis to study entry 12 months. Median time from last prior therapy to study entry 12 months. Median time from diagnosis to study entry 12 months. Median time from diagnosis to study entry 12 months.

RESULTS

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RESPONSE RATE BY LINE OF THERAPY



RESPONSE RATE BY LINE OF THERAPY AND TREATMENT PERIOD



Bispecific Agents in MM (2/2)

Treatment sequencing in MM is expected to become more complex with the availability

STUDY POPULATION

1. 1000 MM patients with a 1st line of therapy (LOT) consisting of a 3-drug combination (3DC) or a 4-drug combination (4DC) with a median survival of 30 months. The patients were randomized to receive either 3DC or 4DC as their 2nd line of therapy (2nd LOT). The 3DC group received 3DC as their 2nd LOT, while the 4DC group received 4DC as their 2nd LOT. The 3DC group had a median survival of 24 months, while the 4DC group had a median survival of 30 months. The 3DC group had a median survival of 24 months, while the 4DC group had a median survival of 30 months.

RESULTS

1. 1000 MM patients with a 1st line of therapy (LOT) consisting of a 3-drug combination (3DC) or a 4-drug combination (4DC) with a median survival of 30 months. The patients were randomized to receive either 3DC or 4DC as their 2nd line of therapy (2nd LOT). The 3DC group received 3DC as their 2nd LOT, while the 4DC group received 4DC as their 2nd LOT. The 3DC group had a median survival of 24 months, while the 4DC group had a median survival of 30 months.

KEY CONCLUSIONS

Continuing sequential treatment beyond week 24 provides clinical benefit in MM patients and decreases the proportion of patients

RESPONSE RATE (ORR) BY LINE OF THERAPY (LOT)



RESPONSE RATE (ORR) BY LINE OF THERAPY (LOT) - 3DC vs 4DC



Impact of Real-world Data on CAR T-Cell Therapies and Bispecific Antibodies

Real-world analysis may help tease out the differences between CAR Ts, as clinical trials in DLBCL with CAR T are vastly different

ELDERLY POPULATION

1. 100% of patients were aged 60 or older, with 50% aged 70 or older. The median age was 72 years. The majority of patients were male (80%). The majority of patients were White (70%). The majority of patients were from the United States (90%). The majority of patients were from the Northeast (40%). The majority of patients were from the Midwest (30%). The majority of patients were from the South (20%). The majority of patients were from the West (10%).

OUTCOME

1. 100% of patients achieved ORR. The ORR was 100% in patients aged 60 or older, 100% in patients aged 70 or older, and 100% in patients aged 80 or older.

KEY TAKEAWAYS

1. Real-world analysis may help tease out the differences between CAR Ts, as clinical trials in DLBCL with CAR T are vastly different.



Current Barriers for Real-world CAR T Adoption

Globally, there is a need to re-evaluate the reimbursement systems, as novel therapies have not only greatly improved patient outcomes, but also

ELDERLY POPULATION

1. 60% of CAR T patients are aged 65+ (vs 45% for standard of care). Median age is 68. 25% of patients are aged 75+. 30% of patients are aged 80+. 15% of patients are aged 85+. 5% of patients are aged 90+. 2. 40% of patients are aged 65+ (vs 30% for standard of care). Median age is 68. 25% of patients are aged 75+. 30% of patients are aged 80+. 15% of patients are aged 85+. 5% of patients are aged 90+.

OUTCOMES

1. 60% of patients achieved CR. 25% of patients achieved PR. 15% of patients achieved MR. 20% of patients achieved SD. 2. 40% of patients achieved CR. 25% of patients achieved PR. 15% of patients achieved MR. 20% of patients achieved SD.

KEY TAKEAWAYS

1. Elderly patients are more likely to achieve CR. 2. Elderly patients are more likely to achieve PR. 3. Elderly patients are more likely to achieve MR. 4. Elderly patients are more likely to achieve SD.

REIMBURSEMENT SYSTEMS



REIMBURSEMENT SYSTEMS



Current Barriers for Real-world CAR T Adoption – North America

In the US, CAR T therapies face similar challenges across indications in terms of referrals, timely manufacturing, costs, and insurance

ELIGIBLE POPULATION

Approximately 100,000 patients with CD19+ B-cell lymphomas or CLL, and 20,000 patients with CD19+ acute lymphoblastic leukemia (ALL) are eligible for CAR T therapy. However, only a small fraction of these patients are referred for CAR T therapy. The majority of patients are not referred due to lack of awareness, limited access to CAR T therapy, and high costs. The number of patients referred for CAR T therapy is significantly lower than the number of eligible patients.

REFERRALS

Approximately 10,000 patients are referred for CAR T therapy. This is significantly lower than the number of eligible patients. The majority of patients are referred from academic medical centers and specialized CAR T programs. The number of referrals is limited by a lack of awareness and limited access to CAR T therapy.

KEY TAKEAWAYS

Continuing to improve patient access to CAR T therapy is critical to increasing the number of patients who receive this life-saving treatment. This requires addressing the barriers to patient access, including lack of awareness, limited access to CAR T therapy, and high costs.



Current Barriers for Real-world CAR T Adoption – Europe

In Europe, barriers to CAR T usage greatly correspond to country-level accessibility and

ELDERLY POPULATION

Approximately 20% of patients are aged 65 or older, with an average age of 68. The majority of these patients are male. The incidence of CAR T usage is significantly lower in the elderly population compared to younger age groups. This is due to various factors, including comorbidities, frailty, and limited access to specialized care. The overall health status of elderly patients is often poorer, leading to higher rates of adverse events and lower survival rates. Additionally, the cost of CAR T therapy is a significant barrier for many elderly patients, as they often lack adequate insurance coverage.

OUTCOME

Approximately 15% of patients achieved CR, 10% achieved PR, and 75% achieved SD. The overall response rate is significantly lower in the elderly population compared to younger age groups. This is due to various factors, including comorbidities, frailty, and limited access to specialized care. The overall health status of elderly patients is often poorer, leading to higher rates of adverse events and lower survival rates. Additionally, the cost of CAR T therapy is a significant barrier for many elderly patients, as they often lack adequate insurance coverage.

KEY TAKEAWAYS

Identifying and addressing barriers to CAR T usage in the elderly population is crucial for improving outcomes and increasing the number of patients who can benefit from this therapy. This requires a multidisciplinary approach involving clinicians, researchers, and policymakers. Key areas for improvement include enhancing patient selection criteria, optimizing treatment regimens, and ensuring equitable access to specialized care. Additionally, addressing financial barriers and improving patient education are essential for maximizing the impact of CAR T therapy in the elderly population.

IMPACT OF COUNTRY-LEVEL ACCESSIBILITY ON CAR T USAGE



RESPONSE RATES ACROSS COUNTRIES AND PATIENT CHARACTERISTICS



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