(05)

BiTEs vs CART：血液疾病治療最新進展

BiTEs vs CART: the Recent Advances in the Treatment of Hematological Malignancies

時　　間：114 年 6 月 28 日(星期六) 08:30~12:00
地　　點：臺北榮民總醫院 致德樓五會議室

13:30-13:40	***Opening Remarks***	蕭樑材醫師 Liang-Tsai Hsiao
	座長：陳博明 醫師 (Po-Min Chen)	
08:30-09:10	【ALL】Blincyto 在前線治療和 MRD 導引治療的角色 The Role of Blincyto in Frontline and MRD-Guided Therapy	Prof. Yoon, Jae-Ho (韓國)
	座長：徐會棋 醫師 (Hui-Chi Hsu)	
09:10-09:35	【ALL】CAR T 細胞治療在急性淋巴球性白血病的最新進展 Recent Advances of CAR T-cell Therapy in acute Lymphoblastic Leukemia	林庭安醫師 Ting-An Lin
	座長：邱宗傑 醫師 (Tzeon-Jye Chiou)	
09:35-10:15	【DLBCL】適合患者的 CAR-T 治療：透過早期治療規劃提升治療效果: 病例分享 Early Treatment Planning to Enhance Treatment Outcome with CAR T Treatment for Suitable Patients in DLBCL: Insights from Case Sharing	Prof. Yoon Seok Choi (韓國)
10:15-10:30	***Coffee Break***	
	座長：劉俊煌 醫師 (Jin-Hwang Liu)	
10:30-10:55	【DLBCL】利用雙特異性抗體優化瀰漫性巨大 B 細胞淋巴瘤治療策略 Enhancing Treatment Strategies with Bispecifics in DLBCL	王浩元醫師 Hao-Yuan Wang
	座長：高志平 醫師 (Jyh-Pyng Gau)	
10:55-11:35	MM: 新一代雙特異性抗體在多發性骨髓瘤的治療應用：從研究到臨床 New Generation of Treatment with Bispecific Antibodies in Multiple Myeloma: From Research to Clinical Application	Dr. Adam Jacob Bryant (澳洲)
	座長：劉嘉仁 醫師 (Chia-Jen Liu)	
11:35-12:00	MM: 多發性骨髓瘤 CAR-T 細胞治療的最新進展 Recent advances in CAR-T cell therapy in Multiple Myeloma	蔡淳光醫師 Chun-Kuang Tsai
12:00-12:10	***Closing Remarks***	劉耀中醫師 Yao-Chung Liu

The role of Blincyto in frontline and MRD-guided therapy

Blincyto 在前線治療和 MRD 導引治療的角色

Yoon Jae-Ho

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MRD has emerged as a critical prognostic marker in ALL, transforming treatment strategies and driving personalized care. This presentation explores the evolving role of blinatumomab, a bispecific T-cell engager, in both frontline consolidation therapy and MRD-guided treatment pathways.

We will begin by examining key clinical evidence, which demonstrated a significant survival benefit when blinatumomab was incorporated into frontline consolidation patients. The session will highlight how MRD status can inform treatment sequencing.

By the end of the session, attendees will gain a clear understanding of:

- The clinical rationale for early integration of blinatumomab in ALL treatment
- How MRD testing can refine risk stratification and guide therapeutic decisions
- Practical strategies to incorporate blinatumomab into frontline and MRD-driven care

Recent advances of CAR T-cell therapy in acute lymphoblastic leukemia

CAR T 細胞治療在急性淋巴球性白血病的最新進展

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Chimeric Antigen Receptor (CAR) T-cell therapy has emerged as a transformative treatment for relapsed or refractory acute lymphoblastic leukemia (ALL), particularly in pediatric and young adult populations. By genetically modifying a patient's own T cells to express CARs targeting specific antigens—most commonly CD19—this immunotherapy enables robust and targeted cytotoxic activity against leukemic blasts. Recent clinical trials have demonstrated remarkable remission rates, with some studies reporting complete response rates exceeding 80%. Despite these successes, challenges remain, including antigen escape, limited durability of response, and treatment-related toxicities such as cytokine release syndrome (CRS) and immune effector cell-associated neurotoxicity syndrome (ICANS).

To address these hurdles, several innovative strategies are under development. These include dual-targeted CAR constructs (e.g., CD19/CD22), switchable CAR systems to improve safety control, and "armored" CAR T cells engineered to resist the immunosuppressive tumor microenvironment. In addition, allogeneic (off-the-shelf) CAR T-cell platforms are being explored to improve accessibility and reduce manufacturing time. Advances in patient selection, lymphodepletion regimens, and post-infusion monitoring have also contributed to improved clinical outcomes and management of adverse events.

This section summarizes the latest clinical and translational advancements in CAR T-cell therapy for ALL, highlighting ongoing efforts to overcome current limitations and expand its therapeutic potential. Continued innovation in CAR design, delivery platforms, and combination strategies is expected to further enhance efficacy, safety, and accessibility in the treatment of ALL.

Early treatment planning to enhance treatment outcome with CAR-T treatment for suitable patients in DLBCL: Insights from case sharing

【DLBCL】適合患者的 CAR-T 治療：透過早期治療規劃提升治療效果：病例分享

Yoon Seok Choi

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Diffuse large B-cell lymphoma (DLBCL) is one of the most common and aggressive forms of non-Hodgkin lymphoma. Despite advances in treatment, a substantial proportion of patients with relapsed or refractory (R/R) disease fail to achieve lasting remission through standard chemoimmunotherapy. Chimeric antigen receptor T-cell (CAR T) therapy has emerged as a transformative treatment option, offering substantial clinical benefits for patients with R/R DLBCL. However, to achieve optimal outcomes, early and strategic treatment planning is essential.

This presentation emphasizes the critical role of timely identification and systematic planning for CAR T-cell therapy in improving treatment efficacy for suitable DLBCL patients. It highlights the importance of determining patient eligibility early in the disease course and coordinating efforts across multidisciplinary teams to ensure efficient and seamless care pathways. Additionally, integrating bridging therapy options, optimizing the timing of CAR T-cell infusion, and addressing logistical challenges are key components of early planning that can greatly influence therapeutic success.

The insights shared will include real-world treatment experiences from South Korea, illustrating practical approaches to implementing CAR T-cell therapy within local healthcare systems. Cases from South Korea demonstrate the importance of initiating treatment discussions early, tailoring treatment plans according to individual patient profiles, and leveraging institutional expertise to facilitate efficient treatment transitions.

Early and rigorous CAR T-cell therapy planning is pivotal in optimizing clinical outcomes and transforming the treatment landscape for R/R DLBCL. By combining evidence-based practices and lessons learned from Korean clinical experiences, this presentation underscores the importance of proactive planning to deliver the best possible care for patients facing this challenging disease.

Enhancing treatment strategies with bispecifics in DLBCL

利用雙特異性抗體優化瀰漫性巨大 B 細胞淋巴瘤治療策略

Hao-Yuan Wang

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Diffuse large B-cell lymphoma (DLBCL) is the most common subtype of non-Hodgkin lymphoma and exhibits a highly heterogeneous clinical course. While standard chemoimmunotherapy regimens such as R-CHOP achieve long-term remission in many patients, a significant proportion experience relapse or refractory disease, underscoring the need for novel therapeutic approaches. Bispecific antibodies (bsAbs), which simultaneously target CD3 on T cells and tumor-associated antigens such as CD20 or CD19 on B cells, have emerged as a promising class of immunotherapy in relapsed/refractory (R/R) DLBCL. By redirecting cytotoxic T cells toward malignant B cells, bsAbs offer a T-cell–engaging mechanism that is independent of the patient's native immune response.

Recent clinical trials have demonstrated encouraging efficacy and manageable safety profiles with bispecifics such as glofitamab, epcoritamab, and odronextamab, particularly in heavily pretreated patients. Furthermore, combinations of bsAbs with existing immunochemotherapy or novel agents such as checkpoint inhibitors and antibody-drug conjugates are being actively explored to deepen responses and overcome resistance mechanisms.

This section reviews the current landscape of bispecific therapies in DLBCL, highlighting clinical trial outcomes, mechanisms of action, and evolving strategies to integrate these agents earlier in treatment algorithms. We also discuss key considerations in patient selection, toxicity management, and future directions including potential for fixed-duration therapy and curative intent in high-risk populations. As bispecifics move beyond the R/R setting, they may redefine the standard of care and offer new hope for patients with this aggressive lymphoma.

New generation of treatment with bispecific antibodies in multiple myeloma: From research to clinical application

新一代雙特異性抗體在多發性骨髓瘤的治療應用：從研究到臨床

Adam Jacob Bryant

Liverpool Hospital, NSW, Australia

Despite significant advances in frontline treatment for multiple myeloma, an increasing proportion of patients are becoming multi-class refractory early in their disease course. This has driven the rapid development and approval of novel immunotherapies, particularly bispecific antibodies (BsAbs), targeting BCMA and GPRC5D. BsAbs offer high response rates comparable to CAR-T therapies but with greater accessibility and immediacy.

This presentation reviews key efficacy and toxicity data from pivotal trials of teclistamab, elranatamab, and talquetamab. Mechanisms of action, response durability, and strategies to mitigate toxicities, especially cytokine release syndrome (CRS), neurotoxicity, cytopenias, infection, and off-tumour effects, are discussed. Differences in toxicity profiles between BCMA and GPRC5D targeted agents are highlighted, with emphasis on oral and dermatologic adverse effects unique to the latter.

Clinical implementation issues, including hospitalisation for step-up dosing, supportive care infrastructure, and infection prophylaxis, are reviewed. Practical management tips are provided to help general haematologists and inpatient teams safely deliver these therapies.

The talk concludes by exploring the future role of bispecifics in frontline therapy and time-limited strategies, underscoring their potential to reshape long-term myeloma care.

Recent advances in CAR-T cell therapy in multiple myeloma

多發性骨髓瘤 CAR-T 細胞治療的最新進展

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Chimeric antigen receptor (CAR)-T cell therapy has emerged as a groundbreaking treatment modality in hematologic malignancies, particularly relapsed or refractory multiple myeloma (RRMM). Recent clinical trials have demonstrated impressive response rates and durable remissions in heavily pretreated myeloma patients, marking a significant shift in the therapeutic landscape. BCMA (B-cell maturation antigen)-targeted CAR-T products, such as idecabtagene vicleucel (ide-cel) and ciltacabtagene autoleucel (cilta-cel), have shown overall response rates exceeding 80% and complete response rates in a substantial proportion of patients. Despite these advances, several challenges remain, including disease relapse due to antigen escape, limited CAR-T cell persistence, and the risk of cytokine release syndrome and neurotoxicity.

To address these limitations, next-generation CAR-T strategies are under active investigation. These include dual-targeted CAR-T cells aiming at antigens such as BCMA and GPRC5D or CD19, the incorporation of safety switches and enhanced co-stimulatory domains, and the development of allogeneic "off-the-shelf" CAR-T products. Moreover, efforts to improve manufacturing efficiency and reduce time-to-treatment are critical to broadening accessibility. Integration of CAR-T therapy into earlier lines of treatment and its combination with immune-modulatory agents or checkpoint inhibitors are also being explored to enhance efficacy and durability of response.

This section summarizes the current state of CAR-T therapy in multiple myeloma, highlights recent clinical and translational advancements, and discusses future directions aimed at overcoming resistance and optimizing patient outcomes.