ANZTCT ASM 2026: Oral Abstract Presentations

26–28 August 2026 • MCG, Melbourne

in order of presentation

Table of Contents

1. Katherine Cummins

Trial in progress - Early clinical data From "PLATYPS", a first-in-human clinical trial of an Australian-developed and manufactured CD19-targeting CAR-T cell product (PMCC-COE19)

Abstract:

Background:
Chimeric antigen receptor (CAR) T-cell therapies have revolutionised treatment paradigms for many haematological malignancies, however the majority of CAR T-cell products administered to Australian patients are developed and manufactured internationally. The "PLATYPS" study was designed to assess safety and feasibility of an Australian-developed and manufactured CD19-targeting CAR-T cell product (PMCC-COE19) in a first-in-human study.

Method:
PMCC-COE19 is a 2nd generation TCRζ-41BB co-stimulated CD19-targeting (FMC63) autologous CAR T-cell product, featuring shortened manufacture with cytokine fortification. PMCC-COE19 was designed and developed at the Peter MacCallum Cancer Centre (PMCC). Approval was granted by the Therapeutic Goods Administration (TGA) to evaluate PMCC-COE19 under the Clinical Trial Approval (CTA) scheme in the first-in-human "PLATYPS" study, which opened at PMCC in October 2025. Adult patients with relapsed/refractory CD19-expressing B-cell malignancies and no superior treatment options are potentially eligible, including central nervous system (CNS) disease. Patients receive standard lymphodepleting chemotherapy followed by a single infusion of PMCC-COE19, using an accelerated single patient dose escalation schema.

Results:
Three patients have been enrolled to date, with median age of 53 years (range 53-65) and 4 prior lines of therapy (range 4-6); see Table 1. The target dose was successfully manufactured in all patients, however one infusion didn't proceed due to clinical and radiological progression of CNS disease despite bridging radiotherapy. No dose limiting toxicity has been observed, nor cytokine release syndrome (CRS) greater than Grade 1; see Table 1. CAR T-cell engraftment was demonstrated by detection of PMCC-COE19 in peripheral blood. The best response to date is a partial response (Dose Level 1), and ongoing assessments are awaited.

Conclusion:
Preliminary data from "PLATYPS" indicates feasibility and safety of onshore manufacturing of an Australian-designed autologous CAR T-cell product, representing an important advancement of sovereign capability and capacity in the cellular therapy space. Patient accrual and dose escalation are ongoing.

Abstract Author/s:
Katherine D. Cummins(1,2,4);Jessica Li(1,2);Ingrid Potgieter(3);Rebecca C. Abbott(1,2);Antariksh Das(1);Patrick Constantinescu(1,2);Susan Jackson(1);Theresa Connor(1);Gretchen Poortinga(1,2); Nicole O'Leary(4);Mark Dowling(1,2,4);Sergio Farina(4)lSean Harrop(4);Philip A. Thompson(2,4); Michael Dickinson(2,4);Jane Oliaro(1,2);Simon J. Harrison(1,2,4)

Affiliations:
(1) Centre of Excellence in Cellular Immunotherapy, Peter MacCallum Cancer Centre, Melbourne, Australia
(2) Sir Peter MacCallum Department of Oncology, University of Melbourne, Melbourne, Australia
(3) Parkville Cancer Clinical Trials Unit, Peter MacCallum Cancer Centre, Melbourne, Australia
(4) Clinical Haematology Department, Peter MacCallum Cancer Centre and The Royal Melbourne Hospital, Melbourne, Australia

Conflict of Interest Statement (please specify in writing):
No conflict of interest to disclose

Link to supporting document

2. Nada Hamad

Allogeneic stem cell transplantation for sickle cell disease in Australia and New Zealand: outcomes, unmet demand and the arrival of gene therapy

Abstract:

Aim:
Sickle cell disease (SCD) is increasing in Australia and New Zealand with migration, yet curative allogeneic haematopoietic stem cell transplantation (allo-HSCT) appears markedly underused. We report national registry outcomes of allo-HSCT for SCD, frame them against anticipated population demand and emerging gene therapy, and describe how the true denominator of eligible patients will be established.

Method:
We retrospectively analysed all allo-HSCT for SCD recorded in the ANZTCT registry between January 2011 and June 2026. Outcomes included overall survival, event-free survival, engraftment, graft failure, acute and chronic graft-versus-host disease (GVHD), and transplant-related mortality. In parallel, a national health services study is collecting annualised data from paediatric centres across Australia and New Zealand on SCD prevalence, patients on chronic transfusion or red cell exchange, and those undergoing allo-HSCT, to define the population eligible for transplantation and gene therapy.

Result:
Twenty-one patients underwent allo-HSCT for SCD over the period (20 paediatric, one adult), with annual numbers rising from one in 2011 to four in 2024. Median age was 11 (range 3-25) years. Donor source was as follows: 17 matched siblings, 3, 2 or more HLA mismatched relative (> 2 HLA mismatches), 1 HLA matched other relative. Two transplant-related deaths occurred: deaths occurred both related to transplant: one 17yo at D160 from GVHD, one at D315 from EBV related lymphoproliferative disease, and rasburicase-induced methemoglobinemia.

Conclusion:
Allo-HSCT provides a curative option for SCD with excellent survival outcomes but is grossly underutilised relative to the SCD population in Australia. Demand will grow with demographic change and newborn screening, and licensed gene therapy will further expand curative options while intensifying the need for equitable, planned access. Defining the national denominator through health services research is critical to quantify unmet need and guide policy, culturally safe models of care and transplant and gene therapy service development.

Abstract Author/s:
Nada Hamad (1; 2); Vasant Chinnabhandar (3); Agnes Nsofwa (4); Shanti Ramachandran (3;5); Anthea Greenway (6); Madeleine Powys (7); David Deambrosis (8); Leonie Wilcox (1)

Affiliations:
(1) ANZTCT (2) St Vincent’s Hospital Sydney (3) Perth Children's Hospital (4) Australian Sickle Cell Advocacy; lived experience; PhD candidate (5) WA Paediatric and Adolescent TCT Program; UWA (6) Royal Children's Hospital, Melbourne (7) The Children’s Hospital at Westmead (8) Queensland Children’s Hospital

Conflict of Interest Statement (please specify in writing):
No conflict of interest to disclose

3. Elias Biris

Weight-adjusted ATG dosing improves relapse-free survival in obese allo-HSCT recipients

Abstract:

Background:
Anti-thymocyte globulin (ATG), combined with calcineurin inhibitor and methotrexate, is standard GVHD prophylaxis in matched unrelated donor (MUD) allo-HSCT. As ATG has limited distribution into adipose tissue, conventional total body weight (TBW)-based dosing may overexpose obese patients, impair immune reconstitution, and increase relapse and viral reactivation risk. We hypothesised that adjusted body weight (AdjBW25)-based dosing would optimise exposure and improve outcomes.

Method:
We performed a single-centre retrospective cohort study of obese MUD allo-HSCT recipients receiving ATG-based GVHD prophylaxis, comparing TBW-based dosing (n=47) with AdjBW25-based dosing (n=19). Outcomes included overall survival (OS), relapse-free survival (RFS), CMV and EBV reactivation, post-transplant lymphoproliferative disorder (PTLD), and acute/chronic GVHD. Minimum follow-up was 100 days. Survival outcomes were analysed using Kaplan-Meier estimates with log-rank testing, and other outcomes using Gray's test for competing risk endpoints.

Results:
Sixty-six obese patients underwent MUD allo-HSCT at our centre between 2017 and 2024, with comparable baseline characteristics between groups. Median ATG dose was lower with AdjBW25 dosing (327 mg vs. 450 mg; p <0.001). AdjBW25 was associated with significantly improved relapse-free survival (median not reached vs. 18 months; p = 0.038), with no relapse events observed at a median follow-up of 356 days. A trend toward improved overall survival was also observed (median not reached vs. 38 months; p = 0.097). EBV reactivation (16% vs. 34%; Gray's p = 0.135) and PTLD (11% vs. 21%; Gray's p = 0.296) were lower with AdjBW25, although not statistically significant. CMV reactivation and rates of acute, chronic, and severe GVHD were similar between groups.

Conclusion:
AdjBW25-based ATG dosing in obese MUD allo-HSCT recipients was associated with improved relapse-free survival without compromising GVHD prophylaxis. These findings suggest that a simple dosing optimisation strategy may improve disease control in this high-risk population and support prospective multicentre evaluation.

Abstract Author/s:
Elias Biris (1, 2); Philip Selby (1, 2); Alia Cibich (1, 2); Tahlia Meola (2); Ashanka Beligaswatte (1); Devendra Hiwase (1); Kevin Hung (1); Naranie Shanmuganathan (1); Deepak Singhal (1); Rebecca Wayte (1); Xiaowen Wu (1); David Yeung (1); Peter Bardy (1); Stephanie Reuter Lange (2)

Affiliations:
(1) Royal Adelaide Hospital, Adelaide, Australia; (2) Adelaide University, Adelaide, Australia

Conflict of Interest Statement (please specify in writing):
No conflict of interest to disclose

Link to supporting documents

4. Miles Horton

Multiplex prime editing enables safe, drug-controllable and immunosuppression-resistant T-cell therapies in vivo

Abstract:
Current cell and gene therapies lack clinically practical mechanisms to selectively promote or suppress therapeutic cells in vivo, a limitation that is particularly acute in patients requiring ongoing immunosuppression. This includes gene therapy for immune dysregulation syndromes, and antigen-specific or chimeric antigen receptor (CAR) T-cell therapy for patients requiring immunosuppression (e.g. transplant recipients), where both pathogenic and therapeutic cells may be suppressed. Here, we develop a multiplex prime-editing platform that safely converts commonly used immunosuppressive drugs into tools for in vivo control of T-cell therapies via defined, pathway-specific drug resistance. Focusing initially on gene therapy, prime editing efficiently edited loci of multiple pathogenic variants associated with immune dysregulation in primary human T-cells and corrected the HAVCR2 driver mutation in T-cells from multiple patients with subcutaneous panniculitis-like T-cell lymphoma (SPTCL). Comprehensive genomic, transcriptional, immunophenotypic, and clonal analyses demonstrated minimal off-target perturbation. Multiplexed gene correction and drug-resistance editing of T-cells from patients with SPTCL enabled selective in vivo expansion of corrected cells under immunosuppressive pressure in humanized mouse models, and exhibited retained sensitivity to alternative agents permitting rapid in vivo suppression. Extending this approach, prime-edited, drug-resistant antigen-specific and CAR T-cells retained effector function despite pharmacologic immunosuppression, demonstrating the generalizability of this platform to diverse cellular therapies. Together, these findings establish multiplex prime editing as a potentially clinically viable framework for generating drug-controllable T-cell therapies, enabling safe and selective in vivo modulation in settings where immunosuppression cannot be withdrawn.

Background:
Current cell and gene therapies lack practical mechanisms to selectively promote or suppress therapeutic cells in vivo. This challenge is particularly acute in gene therapy for immune dysregulation syndromes and antigen-specific or chimeric antigen receptor (CAR) T-cell therapy in transplant recipients, where immunosuppression may inhibit both pathogenic and therapeutic cells. While gene editing could address this limitation, existing approaches have significant drawbacks: lentiviral transduction risks insertional oncogenesis, CRISPR/Cas9 introduces genotoxic double-strand breaks, and base editing is restricted to transition mutations. In contrast, prime editing enables precise and versatile modifications without double-strand breaks.

Method:
Primary T-cells from healthy donors and patients with HAVCR2-driven subcutaneous panniculitis-like T-cell lymphoma (SPTCL) were prime edited using optimized pegRNAs. Editing efficiency was quantified by targeted sequencing. Off-target effects were evaluated using CIRCLE-seq, transcriptional profiling, immunophenotyping, and TCR sequencing. Drug-resistance variants were introduced into the targets of tacrolimus (FKBP1A), methotrexate (DHRF) and mycophenolate (IMPDH2). Functional validation was performed in vitro and in NSG xenografts models under immunosuppression. The platform was extended to CD19 CAR and CMV-specific virus-specific T-cells (VSTs).

Results:
Prime editing corrected multiple inborn error of immunity (IEI)-associated loci with 8–52% intended edits (mean 22%) minimal indels (mean 1.8%), and approximately 30-fold higher edit-to-indel ratios compared to Cas9/HDR. In SPTCL patient T-cells (n=3), optimized editing corrected 18.7–35.8% (mean 29.8%) of HAVCR2 alleles and restored TIM-3 surface expression. Genome-wide analyses revealed no detectable

exonic off-target editing and no significant alterations in immunophenotype, transcriptional profile, or clonal diversity.

Drug-resistance variants conferred resistance to tacrolimus, methotrexate, or mycophenolate while preserving sensitivity to alternative agents, providing an intrinsic safety mechanism. FKBP1A-edited T-cells maintained proliferation and IFN-γ production under tacrolimus exposure. Multiplex editing of HAVCR2 and FKBP1A enabled robust in vivo enrichment: corrected HAVCR2 alleles increased from approximately 10% at infusion to 76.8% in tacrolimus-treated mice, with no enrichment in vehicle-treated controls. Conversely, sensitivity of FKBP1A-edited cells to cyclosporin in vivo was comparable to unedited cells, confirming bidirectional drug control.

Tacrolimus-resistant CD19 CAR and CMV-specific T-cells exhibited preserved effector function under immunosuppression, demonstrating broad applicability of the platform.

Conclusion:
Multiplex prime editing enables precise correction of pathogenic T-cell variants and programmable resistance to widely used immunosuppressants without detectable off-target effects. This approach transforms standard immunosuppressants into clinically familiar tools for in vivo selection and control of therapeutic T-cells, supporting translation toward first-in-human clinical evaluation.

Abstract Author/s:
Bandala-Sanchez E (1,2); Ramsay K (1,2); Hilton A (1,2); White C (1,2); Bediaga NG (1,2): Li Wai Suen CS (1,2); Naik SH (1,2); van der Weyden C (3,4); Fox L (3,4); Ritchie D (3,4); Sutrave G (6,7); Micklethwaite K (6,7); Gottlieb D (6,7); Chan S (1,2,5,8); Roberts AW (1,2,3,4); Slade C (1,2,5); Lew TE (1,2,3,4); Horton MB (1,2)

Affiliations:
(1) Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia; (2) Department of Medical Biology, University of Melbourne, Melbourne, Australia; (3) Sir Peter MacCallum Department of Oncology, University of Melbourne, Melbourne, Australia; (4) Clinical Haematology, Peter MacCallum Cancer Centre and The Royal Melbourne Hospital, Melbourne, Australia; (5) Allergy and Immunology, The Royal Melbourne Hospital, Melbourne, Australia; (6) Department of Medicine, Sydney Medical School, University of Sydney, Sydney, NSW, Australia; (7) Department of Haematology, Westmead Hospital, Westmead, NSW, Australia; (8) Department of Infectious Diseases & Immunology, Austin Hospital, Heidelberg, Australia

Conflict of Interest Statement (please specify in writing):
No conflict of interest to disclose

Link to supporting documents

5. Lotte Fog *(on behalf of Sarah Li)*

Total Body Irradiation in Australia and New Zealand: A 2024 Practice Survey on Changing Patterns of Care

Abstract:

Background:
Total body irradiation (TBI) practice varies globally. The optimal technique for TBI has not yet been determined, although guidelines and recommendations are available. Five years after the initial Australia and New Zealand (ANZ) practice survey in 2019, we report updated 2024 TBI practice patterns from 19 ANZ centres who are members of the ANZ Transplant and Cellular Therapies (ANZTCT) TBI Special Interest Group (TBISIG).

Method:
The 2024 survey was distributed in November 2024. Survey questions covered patient cohorts and caseloads, TBI regimens and dose-–fractionations, TBI techniques, planning considerations, quality assurance, and treatment delivery. For all centres, one staff member from each discipline (Radiation Oncology, Medical Physics, and Radiation Therapy) was invited to respond.

Results:
Responses were received from all 19 centres. Seven centres use modulated techniques in 2024, whereas only one centre delivered modulated TBI in 2019. Twelve centres use large open fields in 2024, six of which are considering changing to volumetric modulated arc therapy (VMAT) TBI. Compared to large open fields, modulated techniques (1) require dedicated patient immobilisation equipment and treatment planning software, (2) reduce dose to organs at risk (such as lungs and kidneys) below the prescription dose, (3) have higher dose rates, and (4) require more time for planning and treatment delivery.

Conclusion:
The 2024 survey showed diverse TBI practice patterns in ANZ. Compared to 2019, more centres are using or actively considering the implementation of modulated techniques, such as VMAT TBI, which adds to the complexity of treatment planning and delivery.

Abstract Author/s:
Sarah Li (1); Nada Hamad (2,3,4,5); Trieumy Tran Le (6); Eloise Glassborow (7); Tom Kupfer (8); Richard Khor (8); Angela Viotto (8); Dane Pope (9); Kate Ford (9); Alicia Moggré (10); Alvin Kumar (10); Rachel Stensmyr (11); Verity Ahern (11,12,13); Julie Han (11); Monique Heinke (14); Leandi Moore (14); Colm Morrison (15); Yvonne Zissiadis (15,16); Melissa Gregory (15); Shrikant Deshpande (17); Eng-Siew Koh (17,18); Peta Lonski (19); Michael MacManus (19,20); Simon Downes (21); Robert Smee (21); David Stewart (21); Lucy Sim (1); Andrew Pullar (1,22,23,24); Carole Brady (1); Justin Shepherd (25); Hui Tee (25); Rosanna Crain (25); Craig Lancaster (26); Jemma Blyth (26); John Kipritidis (27); Susan Carroll (27); Rory Hartley (27); Malgorzata Skorska (28); Mandy Taylor (28); Clare Wan (28); Linda Marsh (29); Timothy Squire (29,30); Keeley Robinson (29); Omer Ali (31); Charles de Groot (31); Bimla Prakash (31); Leon Aldrovandi (32); Anna Nicholson (32); Vanessa Middleton (32); **Lotte Fog (2,6**); Robyn Cheuk (1,2,23,26)

Affiliations:
(1) Radiation Oncology Princess Alexandra Hospital Raymond Terrace (ROPART), Brisbane, Australia; (2) ANZTCT, Sydney, Australia; (3) St Vincent's Hospital, Sydney, Australia; (4) St Vincent's Clinical School, University of New South Wales, Sydney, Australia; (5) School of Medicine, University of Notre Dame, Sydney, Australia; (6) The Alfred Hospital, Melbourne, Australia; (7) Auckland City Hospital, Auckland, New Zealand; (8) Austin Hospital, Melbourne, Australia; (9) Chris O'Brien Lifehouse, Sydney, Australia; (10)

Christchurch Hospital, Christchurch, New Zealand; (11) Crown Princess Mary Cancer Centre, Westmead Hospital, Sydney, Australia; (12) Radiation Oncology Network, Western Sydney Local Health District, Sydney, Australia; (13) University of Sydney School of Medicine, Sydney, Australia; (14) GenesisCare Darlinghurst, Sydney, Australia; (15) GenesisCare Murdoch, Perth, Australia; (16) Curtin University, Perth, Australia; (17) Liverpool Hospital, Sydney, Australia; (18) Medicine and Health, South West Sydney Clinical Campus, University of New South Wales, Sydney, Australia; (19) Peter MacCallum Cancer Centre, Melbourne, Australia; (20) The Sir Peter MacCallum Department of Oncology, University of Melbourne, Melbourne, Australia; (21) Prince of Wales Hospital, Sydney, Australia; (22) Princess Alexandra Hospital, Brisbane, Australia; (23) The University of Queensland, Brisbane, Australia; (24) Queensland University of Technology, Brisbane, Australia; (25) Royal Adelaide Hospital, Adelaide, Australia; (26) Royal Brisbane and Women's Hospital, Brisbane, Australia; (27) Royal North Shore Hospital, Sydney, Australia; (28) Sir Charles Gairdner Hospital, Perth, Australia; (29) Townsville University Hospital, Townsville, Australia; (30) College of Medicine and Dentistry, James Cook University, Townsville, Australia; (31) Waikato Hospital, Hamilton, New Zealand; (32) Wellington Regional Hospital, Wellington, New Zealand

References:

(1) Wong, J. Y. C., Filippi, A. R., Dabaja, B. S., Yahalom, J. & Specht, L. Total Body Irradiation: Guidelines from the International Lymphoma Radiation Oncology Group (ILROG). International Journal of Radiation Oncology*Biology*Physics 101, 521–529 (2018).

(2) Esiashvili, N. et al. Higher Reported Lung Dose Received During Total Body Irradiation for Allogeneic Hematopoietic Stem Cell Transplantation in Children With Acute Lymphoblastic Leukemia Is Associated With Inferior Survival: A Report from the Children's Oncology Group. International Journal of Radiation Oncology*Biology*Physics 104, 513–521 (2019).

(3) Fog, L. S. et al. Total body irradiation in Australia and New Zealand: results of a practice survey. Phys Eng Sci Med 43, 825–835 (2020).

(4) Diesch-Furlanetto, T. et al. Late Effects After Haematopoietic Stem Cell Transplantation in ALL, Long-Term Follow-Up and Transition: A Step Into Adult Life. Front. Pediatr. 9, 773895 (2021).

(5) Hoeben, B. A. W. et al. Total Body Irradiation in Haematopoietic Stem Cell Transplantation for Paediatric Acute Lymphoblastic Leukaemia: Review of the Literature and Future Directions. Front. Pediatr. 9, 774348 (2021).

(6) Hoeben, B. A. W. et al. Towards homogenization of total body irradiation practices in pediatric patients across SIOPE affiliated centers. A survey by the SIOPE radiation oncology working group. Radiotherapy and Oncology 155, 113–119 (2021).

(7) Vogel, J. et al. Pulmonary Toxicity After Total Body Irradiation – Critical Review of the Literature and Recommendations for Toxicity Reporting. Front. Oncol. 11, 708906 (2021).

(8) Hoeben, B. A. W. et al. ESTRO ACROP and SIOPE recommendations for myeloablative Total Body Irradiation in children. Radiotherapy and Oncology 173, 119–133 (2022).

(9) Ehler, E. D. et al. Idiopathic Pneumonitis Syndrome After Total Body Irradiation in Pediatric Patients Undergoing Myeloablative Hematopoietic Stem Cell Transplantation: A PENTEC Comprehensive Review. International Journal of Radiation Oncology*Biology*Physics 119, 625–639 (2024).

(10) Hui, C. et al. Volumetric modulated arc therapy total body irradiation improves toxicity outcomes compared to 2D total body irradiation. Front. Oncol. 14, 1459287 (2024).

(11) Melton, M. K. et al. Acute Toxicity of Total Body Irradiation Using Volumetric Arc Therapy With a Focus on the Effect of Lung Dose Rate. Advances in Radiation Oncology 9, 101430 (2024).

(12) Seravalli, E. et al. Technical recommendations for implementation of Volumetric Modulated Arc Therapy and Helical Tomotherapy Total Body Irradiation. Radiotherapy and Oncology 197, 110366 (2024).

(13) Hoeben, B. A. W. et al. Rationale, implementation considerations, delineation and planning target objective recommendations for volumetric modulated arc therapy and helical tomotherapy total body irradiation, total marrow irradiation, total marrow and lymphoid irradiation and total lymphoid irradiation. Radiotherapy and Oncology 206, 110822 (2025).

(14) Webster, A. et al. ESTRO guidelines for developing questionnaires in survey-based radiation oncology research. Clinical and Translational Radiation Oncology 51, 100895 (2025).

Conflict of Interest Statement (please specify in writing):
Yes conflict of interest to disclose
Dear ANZTCT ASM Committee, this abstract with select references is from a published paper in the Journal of Medical Imaging and Radiation Oncology (https://doi.org/10.1111/1754-9485.70074) on 14/02/2026. The survey is from 2024, yet it has taken an entire year to publish the results, which reflects the complexity of TBI practice in ANZ. I, the submitting author, strongly feel the complexity and this achievement of the ANZTCT TBISIG needs to be known, and I am grateful and honoured to be part of it.

Link to supporting documents

6. Erica Patterson

Early Identification Matters: Feasibility and Early Outcomes of a Nutrition and Exercise Program in Allogeneic Versus Autologous Stem Cell Transplant Recipients

Abstract:

Background:
Nutrition and exercise interventions improve nutritional, functional and health-related quality of life (HRQOL) outcomes for stem cell transplant (SCT) recipients (1-3). Allogeneic SCT (AlloSCT) recipients experience greater treatment complexity than autologous SCT (AutoSCT) (4-6), but it is unclear whether a single prehabilitation model adequately meets the needs of both groups. This study aimed to compare feasibility, clinical outcomes, and health service utilisation between AutoSCT and AlloSCT recipients participating in a multimodal nutrition and exercise program.

Method:
Prospective single-site feasibility study at a quaternary public cancer centre (February–November 2024). Adults undergoing SCT were referred to a multimodal (in-person, telehealth, and home-based) nutrition and exercise program delivered pre- and post-transplant. Outcomes included feasibility (participation), health service utilisation (length of stay, ICU admission, unplanned readmission), and physical function (frailty, 6-minute walk test). Between-group comparisons were performed with statistical significance set at $p<0.05$.

Results:
Fifty-one patients underwent transplantation (AutoSCT n=26; AlloSCT n=25). Baseline characteristics were similar, including age (61 vs 62 years, p=0.69), sex (54% vs 64% male, p=0.46), and consent rates (81% vs 96%). AlloSCT recipients demonstrated greater health service utilisation, including longer median acute length of stay (30 [26–46] vs 19 [16–21] days, $p<0.001$), higher rates of ≥2 ICU admissions (16% vs 0%, p=0.070), and more unplanned readmissions before day-100 (10% vs 4%, p=0.007). They also had reduced time for prehabilitation (27 [27–50] vs 44 [27–70] days, p=0.047) and delayed access to post-transplant rehabilitation (21 [4–21] vs 9 [4–11] days, p=0.052). Clinically meaningful between group differences in frailty and functional capacity were observed.

Conclusion:
AlloSCT recipients experience poorer early recovery trajectories and greater health service utilisation than AutoSCT recipients. These findings support early identification and tailored integration of prehabilitation into transplant care pathways.

Abstract Author/s:
Erica P. Patterson (1); Nicole V. Vaughan (2); Eldho Paul (3); Cassie E. McDonald (1,4)

Affiliations:
(1) Physiotherapy Department, Bayside Health (Alfred Care Group), Melbourne, Australia
(2) Nutrition and Dietetic Department, Bayside Health (Alfred Care Group), Melbourne, Australia
(3) School of Public Health and Preventative Medicine, Monash University, Melbourne, Australia
(4) Department of Physiotherapy, The University of Melbourne, Melbourne, Australia

References:
1. Knols RH, de Bruin ED, Uebelhart D, Aufdemkampe G, Schanz U, Stenner-Liewen F, et al. Effects of an outpatient physical exercise program on hematopoietic stem-cell transplantation recipients: a randomized clinical trial. Bone Marrow Transplantation. 2011;46(9):1245-55.

2. Baumann FT, Kraut L, Schüle K, Bloch W, Fauser AA. A controlled randomized study examining the effects of exercise therapy on patients undergoing haematopoietic stem cell transplantation. Bone Marrow Transplantation. 2010;45(2):355-62.
3. Abo S, Denehy L, Ritchie D, Lin K-Y, Edbrooke L, McDonald C, et al. People With Hematological Malignancies Treated With Bone Marrow Transplantation Have Improved Function, Quality of Life, and Fatigue Following Exercise Intervention: A Systematic Review and Meta-Analysis. Physical Therapy. 2021;101(8):1.
4. Dillon HT, Saner NJ, Ilsley T, Kliman DS, Foulkes SJ, Brakenridge CJ, et al. Preventing Allogeneic Stem Cell Transplant–Related Cardiovascular Dysfunction: ALLO-Active Trial. Circulation. 2025:329-08.
5. Regazzoni R, Ferrante S, Morenghi E, Lopane D, Pastore M, Cattani D, et al. Evolution of Nutritional Status in Patients Undergoing Autologous and Allogeneic Hematopoietic Cell Transplantation or CAR-T Therapy: A Retrospective Observational Study. Cancers. 2025;17(1):79.
6. Baumann FT, Zopf EM, Nykamp E, Kraut L, Schüle K, Elter T, et al. Physical activity for patients undergoing an allogeneic hematopoietic stem cell transplantation: benefits of a moderate exercise intervention. European Journal of Haematology. 2011;87(2):148-56.

Conflict of Interest Statement (please specify in writing):
No conflict of interest to disclose

7. Cassie Abbott

Building a Skilled and Confident CAR-T Nursing Workforce: Assessing the Impact of Nurse-led CAR-T Education.

Abstract:

Background:
To evaluate the impact of a nurse-led CAR-T education day on participants' knowledge and confidence in caring for patients receiving CAR-T Cell therapy.

Method:
A multidisciplinary curriculum was developed to cover CAR-T mechanisms of action; leukapheresis and cell processing; clinical signs and management of toxicities; clinical trials; and medication management. A pre- and post-education survey assessed self-reported knowledge and confidence. Knowledge was measured using a 5-point Likert scale (1='Very poor understanding' to 5='Very good understanding') while confidence rated on a 10-point scale (0='Not at all confident'' to 10= 'Extremely confident'). Independent samples t-tests compared pre- and post- education scores, with a statistical significance set at 0.05.

Results:
Nine CAR-T education days were conducted between March 2023 to November 2025, involving 255 participants. Pre-education surveys were completed by 239 participants, and post-education surveys by 218 participants. Attendees included registered nurses (47.1%), clinical trial coordinators (21%), nurse managers (9.2%), clinical nurse specialists (6.2%), clinical nurse consultants (5%), nurse educators (2.5%), ICU liaison nurses (2.5%), scientists (1.5%), and others unspecified health professionals (5%).

Significant improvements in self-reported knowledge were observed across all domains, including CAR-T Cell mechanisms of action (median 3.04 to 4.49); patient eligibility criteria, workup, and apheresis (median 2.54 to 4.30); role of the cellular therapies unit (median 2.64 to 4.32); daily nursing care (median 3.17 to 4.53); CRS assessment and management (median 3.32 to 4.57); ICANS assessment and management (median 3.24 to 4.58); CAR-T medications (median 2.77 to 4.44); Discharge patient education (median 2.73 to 4.39); and Outpatient nursing care (median 2.66 to 4.36) (all $p<0.001$). Confidence in caring for patients receiving CAR-T therapy improved significantly (median 5.20 to 8.18, $p<0.001$).

Conclusion:
A structured, nurse-led CAR-T education program significantly improves nursing knowledge and confidence, directly supporting safe and effective CAR-T patient care.

Abstract Author/s:
Cassandra Abbott (1); Pippin Ellis (1); Olivia Cook (1,2); Ty Simpson (1); Georgina Lea (1); Caitlin Wesols (1); Madeleine Sloane (1); Yumei Lew (1), Elli Foley (1); Aaron Hill (1); Christina Kazzi (1,2); Miriam Wronski (1,2); Katherine Ko (1,2); Elizabeth Cole (1,2); Akshay Bapat (1); Nermen Tawfik (1); Jian Li (1,2); Shu Min Wong (1); Shafqat Inam (1); Shevon Fernando (1); Michael Swain (1); Mastura Monif (1,2); Danielle Lee (1); Ellen Heywood (1); Constantine Tam (1,2); Andrew Spencer (1,2)

Affiliations:
(1) Alfred Health, Melbourne, Australia; (2) Monash University, Melbourne, Australia

Conflict of Interest Statement (please specify in writing):
Yes conflict of interest to disclose
Speaker invitations and travel support from Gilead and Janssen.

8. Salvatore Fiorenza

Vispa-cel, an allogeneic anti-CD19 CAR-T cell therapy with a PD-1 knockout, in patients with relapsed/refractory B cell Non-Hodgkin Lymphoma (ANTLER phase 1 clinical trial)

Abstract:

Background:
Vispacabtagene regedleucel (vispa-cel, CB-010) is an allogeneic anti-CD19 CAR-T cell therapy manufactured from healthy donors. The ANTLER Phase 1 trial (NCT04637763) evaluated safety and efficacy of vispa-cel in r/r B-NHL.

Method:
Patients received lymphodepletion of sequential cyclophosphamide (60 mg/kg/day x 2 days) then fludarabine (25 mg/m2/day x 5 days) followed by a single vispa-cel infusion of 40 million [M], 80M, or 120M cells.

Results:
As of September 2, 2025, 84 pts received vispa-cel (63 2L LBCL, CD19-naive). The median age was 66 years. Vispa-cel was generally well tolerated with no GvHD. CRS occurred in 55% of pts (1% Gr ≥3), ICANS occurred in 14% of pts (4% Gr ≥3), infections occurred in 51% of pts (25% Gr ≥3), Gr ≥3 prolonged cytopenias occurred in 28% of pts, and IEC-HS occurred in 2% of pts (all Gr ≥3). By day 60, neutropenia and thrombocytopenia recovered to Gr ≤2 by 95% and 86%, respectively. Five deaths occurred due to AEs (1 related, 1 possibly related, 3 unrelated). The 80M cell dose was selected as the RP2D. Patients who received optimized vispa-cel (donor age <30 yrs; ≥2 HLA matched alleles; N=35) had 86% ORR and 63% CR rate. The median PFS and DOR were not reached, with 12-month PFS of 53%. Patients who received optimized vispa-cel at RP2D (N=27) had 82% ORR and 63% CR. Updated data from patients who received optimized vispa-cel will be presented.

Conclusion:
Vispa-cel demonstrates deep, durable responses, on par with approved autologous CAR-T cell therapies, with well-tolerated safety, in 2L LBCL. A randomized pivotal trial is planned for 2L LBCL patients not eligible for transplant and not candidates or not eligible for autologous CAR-T cell therapy based on access challenges or medical criteria, including the need for urgent therapy.

Abstract Author/s:
Salvatore Fiorenza (1,2,3); Houston Holmes (4); James Essell (5); Ayad Hamdan (6); Boyu Hu (7); Elizabeth Brem (8); Rushang D. Patel (9); Sunita Nasta (10); Costas K. Yannakou (11); Mohamad Cherry (12); Don A. Stevens (13); Umar Farooq (14); Kenneth Micklethwaite (15); Vamsi Kota (16); Abraham S. Kanate (17); Tatyana Feldman (18); Melhem M. Solh (19); David Lavie (20); Benedict Carnley (21); Muhammad Husnain (22); Cesar Gentille Sanchez (23); Fevzi Yalniz (24); Gary L. Simmons (25); Donna Marcy (26); Erin Mullane (26); Jim Peck (26); Chris Holland (26); Ashraf Garrett (26); Govind A. Shah (26); Pingping Mao (26); Eric W. Stawiski (26); Enrique Zudaire (26); Tonia Nesheiwat (26); Maria do Socorro Oliviera Portella (26); Stephen J. Schuster (10); Loretta J. Nastoupil (27); Susan O'Brien (8); Mehdi Hamadani (28)

Affiliations:
(1) Epworth Centre for Immunotherapies and Snowdome Laboratories, Richmond, Australia; (2) Faculty of Medicine and Health, University of Sydney, Sydney, Australia; (3) Department of Clinical Haematology, Alfred Hospital, Bayside Health, Melbourne, Australia; (4) Texas Oncology, Dallas, TX, USA; (5) Cincinnati Cancer Advisors, Cincinnati, OH, USA; (6) University of California San Diego, La Jolla, CA, USA; (7)

University of Utah, Salt Lake City, UT, USA; (8) University of California Irvine, Orange, CA, USA; (9) AdventHealth, Orlando, FL, USA, (10) University of Pennsylvania, Philadelphia, PA, USA; (11) Epworth HealthCare and Department of Clinical Pathology, The University of Melbourne, Melbourne, Australia; (12) Atlantic Health System, Morristown, NJ, USA; (13) Norton Cancer Institute, Louisville, KY, USA; (14) University of Iowa Hospitals and Clinics, Iowa City, IA, USA; (15) Westmead Hospital and NSWHP - ICPMR Westmead, Sydney, Australia; (16) Augusta University, Augusta, GA, USA; (17) HonorHealth, Scottsdale, AZ, USA; (18) Hackensack Meridian Health School of Medicine, Hackensack, NJ, USA; (19) Northside Hospital, Atlanta, GA, USA; (20) Hadassah Medical Center, Jerusalem, Israel; (21) Royal Perth Hospital and Cell and Tissue Therapies WA, Perth, Australia; (22) University of Arizona, Tucson, AZ, USA; (23) UAMS Cancer Institute, Little Rock, AR, USA; (24) University of Kentucky, Lexington, KY, USA; (25) Virginia Oncology Associates, Norfolk, VA, USA; (26) Caribou Biosciences, Inc., Berkeley, CA, USA; (27) CommonSpirit Oncology Mercy, Durango, CO, USA; (28) Medical College of Wisconsin, Milwaukee, WI, USA

Conflict of Interest Statement (please specify in writing):

Yes conflict of interest to disclose

Funding for this research and the preparation of this abstract was provided by Caribou Biosciences, Inc.

The authors disclose the following conflicts: SF: Patents for optimizing CAR T cell function, Bristol Myers Squibb, Arovella Therapeutics, and Prescient Therapeutics. HH: Kite Pharma, Juno Therapeutics, Novartis, Genentech, Janssen, Celgene, Caribou Bioscience, Adicet Bio, Incyte, Autolus, Bristol-Myers Squibb/Celgene, Allogene, Artiva, ADC Therapeutics, MorphoSys, Precision Biosciences, Poseida Therapeutics, Merck, and. JE: Abbvie/Genmab Speaker Bureau; Kite Speaker Bureau (now with Cincinnati Cancer advisors). BH: Abbvie, Kite, Pfizer, Bristol Myers Squibb, ADC therapeutics, Genentech, BeOne, CRISPR Therapeutics, Morphosys AG, Caribou Biosciences, Repare Therapeutics, Artiva Biotherapeutics, Newave, AstraZeneca, and Lyell Immunopharma. EB: AstraZeneca, AbbVie/Genmab, BMS, BeOne, ADC Therapeutics, Caribou Biosciences, Poseida Therapeutics, Incyte, Regeneron, and Genetech. RDP: Kite/Gilead, Johnson and Johnson, Pfizer, Adaptiv, and Genmab/Abbvie. SN: Takeda, Roche, Loxo/Lilly, Caribou, Pierre Fabre, Ono, Abbvie, Genmab, Deciphera, ADCT, and Merck. MC: BMS, Sanofi, Pfizer, and Caribou Biosciences. UF: Kite Pharma. VK: Novartis and Pfizer. ASK: Johnson & Johnson, Bristol Myers Squibb (BMS), and ADC Therapeutics. TF: ADC Therapeutics, AstraZeneca, BMS, Pfizer, AbbVie, Kite/Gilead, Seagen, Genmab, Ipsen Biopharmaceuticals, Syneos Health, Johnson & Johnson, Daiichi, Corvus,Merck, Genomic Testing Cooperative, Outcomes Matter Innovations LLC, Bioegen Inc, Kenvue, Heatlh Care ETF, and Bicycle Therapeutics. DL: Novartis, J&J, Medisson, and Abbvie. MH: Gilead. CGS: Beon and Acrotech. GS: McKesson. DM: Caribou Biosciences Inc. and Johnson and Johnson. EM, JP, CH, AG, GS, PM, EWS, EZ, TN, and SdSOP: Caribou Biosciences Inc. SS: Abbvie, ADC Therapeutics, AstraZeneca, BeiGene, BMS, Caribou Bio, Janssen, and Novartis. LN: AstraZeneca, BMS, Genentech/Roche, Novartis, and Regeneron. SO: Alliance, Caribou Biosciences, Nurix Therapeutics Inc, Regeneron, Abbvie, AstraZeneca, Autolus, Beigene Ltd, Bristol Myers Squibb, Eli Lilly and Company, GlaxoSmithKline, Janssen Oncology, Johnson and Johnson, Loxo Oncology Inc, Merck, Pfizer, Pharmacyclics, and Somitomo. MH: ADC Therapeutics, Spectrum Pharmaceuticals, Astellas Pharma, Autolus, Forte Biosciences, Byondis, Daiichi Sankyo, BMS, Caribou, Kite, Incyte, Abbvie, AstraZeneca, BeiGene, and Sobi. AH, CKY, DAS, KM, MMS, BC, and FY: No conflicts.

9. Nicole O'Leary

Intensive care unit utilisation amongst chimeric antigen receptor T-cell recipients: a single centre experience

Abstract:
Chimeric antigen receptor (CAR) T-cell therapy is now standard-of-care (SoC) for certain relapsed/refractory B cell leukemias, lymphomas and recently multiple myeloma. The therapy is complicated by immune-related toxicities, including cytokine release syndrome (CRS), immune effector cell associated neurotoxicity syndrome (ICANS), and immune effector cell-associated haematotoxicity (ICAHT), that may require intensive care unit (ICU) support. Here we describe ICU resource utilisation and outcomes amongst SoC CAR-T recipients within 28 days of infusion.

Background:
Chimeric antigen receptor (CAR) T-cell therapy has transformed treatment of haematological malignancies. Early pivotal trials reported high rates of severe toxicities and ICU utilisation; however, these findings may not reflect contemporary real-world practice, where improved toxicity recognition, risk stratification, and management protocols have evolved. Understanding current ICU resource utilisation, patterns of organ support, and outcomes in SoC CAR-T recipients is critical for optimising care pathways, informing resource allocation, and guiding decisions regarding appropriate monitoring environments. We therefore sought to characterise ICU utilisation and clinical outcomes among patients receiving commercial CAR-T therapy at our centre, hypothesising that ICU burden may be lower than historically reported and that opportunities exist to refine non-ICU management strategies.

Method:
We retrospectively reviewed all approved commercial CAR-T recipients at our centre between July 2019 and December 2025. Descriptive statistics were used to summarise ICU resource utilisation, and survival analyses were performed using the Kaplan-Meier method.

Results:
In contrast to the Pivotal trials only 58 (19%) of 308 CAR-T recipients were admitted to ICU, across a total of 79 episodes (13 patients were admitted twice; 4 three times). The median age was 65 (interquartile range 56–72); 69% were male; haematological diagnosis was diffuse large B-cell lymphoma (DLBCL) 90%, mantle cell lymphoma (MCL) 7% and B-cell acute lymphoblastic leukemia (B-ALL) 3%. 14 patients (24%) experienced grade≥3 CRS; 39 (66%) experienced grade≥3 ICANS; 14 (24%) experienced grade≥3 ICAHT. Median ICU length-of-stay was 2.7 days (range 0.5–58.0 days). Invasive mechanical ventilation (INV) was delivered in 18 (23%) of episodes, non-invasive ventilation in 6 (8%), vasopressor/inotrope in 31 (39%) and renal replacement therapy in 2 (3%). No specific organ support was delivered in 44 episodes (56%). Only 2 patients (3%) died in ICU/within days of ICU discharge. 12-month progression-free survival (PFS) was 42% and 12-month overall survival (OS) was 60%.

Conclusion:
ICU resource utilisation in CAR-T patients was significantly less than that reported in the pivotal trials, with acceptable short and long-term outcomes. Over half of ICU admissions did not require specific organ support, suggesting that there are opportunities to optimise ward-based protocols for heightened observation to reduce the need for ICU admissions.

Abstract Author/s:
Mark Dowling (1,2,3); Nicole O'Leary (3); Gretchen Poortinga (1,2,); Anastasia Edelkina (3); Jemma Stewart (3); Sergio Farina (3); Kerby Purcell (3); Michael Dickinson (1,2,3); Simon J. Harrison (1,2,3); Lewis

Hackenberger (4); Christopher Maclassac (4,5); Adam Deane (4,5); David Ritchie (1,2,3); Jeffrey Presneill (4,5)

Affiliations:
(1) Centre of Excellence in Cellular Immunotherapy, Peter MacCallum Cancer Centre, Melbourne, Australia;
(2) Sir Peter MacCallum Department of Oncology, University of Melbourne, Melbourne, Australia;
(3) Clinical Haematology Department, Peter MacCallum Cancer Centre and The Royal Melbourne Hospital, Melbourne, Australia;
(4) Intensive Care Unit, The Royal Melbourne Hospital, Melbourne Australia;
(5) Department of Critical Care, The University of Melbourne, Melbourne, Australia

Conflict of Interest Statement (please specify in writing):
No conflict of interest to disclose

10. Kate Graham

Shared Care: A nutrition care pathway for autologous stem cell transplant patients utilizing nutrition assistants and dietitians.

Abstract:

Background:
Autologous stem cell transplants (AuSCT), commonly used to treat lymphoma and myeloma, can result in suboptimal nutrition intake and malnutrition. At Peter MacCallum Cancer Centre nutrition care is provided to AuSCT patients using a defined care pathway. A care pathway review identified many AuSCT patients were well nourished at baseline and remained so throughout the transplant period. A shared care model utilising Nutrition Assistants (NA) with oversight by dietitians and handover as required was implemented in 2025 for patients identified as well-nourished during prehabilitation. This study aimed to evaluate the implementation of this shared care model.

Method:
A retrospective audit of AuSCT patients from care pathway implementation (April 2025) until April 2026 was conducted. Patients were identified through attendance at prehabilitation clinic, and NA care, dietetic care, nutrition interventions and nutrition status on discharge were extracted from the patient's medical record.

Results:
Fifty-seven patients were eligible for the shared care pathway. Of these, 45 proceeded to transplant with 16 (35.5%) cared for by NAs alone. Nutrition interventions included diet modifications and provision of oral nutrition supplements, and 94% remained well-nourished (MST <2) on discharge. Twelve patients required shared care between NAs and dietitians, with total parenteral nutrition (n=8; 66.6%) the main reason for handover. Care was shared for 17 patients (38%) due to unplanned NA leave, however only 2 of these patients would have required shared care if full staffing was available. Importantly, NAs expressed high satisfaction with the shared care model stating it promoted skill development and enhanced job satisfaction.

Conclusion:
Implementation of this shared nutrition care pathway allowed reallocation of dietetic time to higher risk patients without compromising AuSCT patients' nutrition care or outcomes, and improved NA job satisfaction. This model could be considered for other populations where simple nutrition care may prevent malnutrition.

Abstract Author/s:
Ailish Doyle(1); Robert Baird(1); Morgan Colwell(1); Sarah Waterhouse(1); Jane Stewart(1); Belinda Steer (1); Kate Graham(1)

Affiliations:
(1) Nutrition & Speech Pathology Department, Peter MacCallum Cancer Centre, Melbourne, Vic 3000

Conflict of Interest Statement (please specify in writing):
No conflict of interest to disclose

11. Karim Ibrahim

Evaluating the impact of a dedicated outpatient pharmacy clinic on medication safety and transitions of care for patients undergoing haematopoietic stem cell transplantation

Abstract:

Background:
Medication-related problems are common in haematopoietic stem cell transplantation (HSCT) due to complex polypharmacy, frequent dose adjustments, narrow therapeutic index medicines, and multiple care transitions. Dedicated transplant pharmacists play a vital role in improving medication safety and streamlining transitions of care, but evidence for outpatient pharmacy clinic models is limited. We established an outpatient HSCT pharmacy clinic service in May 2025 and evaluated its impact over the first eight months (30th of May to 31st of January 2026). The aims were to describe services delivered, quantify pharmacist interventions and assess early process outcomes.

Method:
A prospective service evaluation was conducted for all patients attending the pharmacist-led outpatient clinic between 30th of May and 31st of January 2026. The clinic aimed to review patients 7–10 days prior to planned transplant admission and 7–14 days after discharge, each consultation was allocated 30 minutes. During each visit, the pharmacist reviewed the upcoming conditioning chemotherapy protocol, discussed key side effects, documented allergies, completed a full medication history and medication reconciliation, identified drug interactions, reviewed relevant drug levels, screened for adherence issues, and assessed tolerability issues with prior chemotherapy. The clinic operated using trained HSCT pharmacists, aligned with FACT–JACIE standards for pharmacist competence, quality management, and record keeping. Data were obtained from the electronic medication management record and the cancer centre operational dashboard, capturing the number of visits, patient demographics, medication reconciliation activity, allergy documentation, and the number and type of pharmacist-led interventions. Interventions were categorised into four domains relevant to quality and safety: cessation or modification of inappropriate or interacting medicines, medication additions required to meet protocol-based recommendations, therapeutic drug monitoring (TDM)-guided dose changes, and chemotherapy dose optimisation based on patient-specific parameters. Descriptive statistics were used to summarise the clinic activity.

Results:
Over the eight-month period, 63 patients (19 autologous and 44 allogeneic transplant recipients), attended 95 outpatient visits, with 54 pre-transplant and 41 post-transplant consultations. Medication reconciliation and allergy documentation clarification were completed for all 63 patients, resulting in standardised medication lists that were directly accessible to inpatient teams. A total of 127 pharmacist interventions were recorded, of which 114 (89.8%) were accepted by the transplant team. This equated to an average of 2 interventions per patient, and 1.3 interventions per visit. The most frequent interventions involved cessation or modification of inappropriate or interacting medicines (n=63). Suggested medication additions as per transplant protocol (n=24), TDM-guided dose-change recommendations (n=23), suggested chemotherapy dose adjustments (n=17).

Conclusion:
During the first eight months of operation, the implementation of the outpatient pharmacy clinic enhanced medication safety, improved the accuracy and consistency of medication reconciliation and allergy documentation and strengthened transitions of care. The high proportion of accepted pharmacist interventions highlights meaningful clinical impact, opportunities for deprescribing, and strong multidisciplinary collaboration. Ongoing data collection will focus on broader quality indicators, including

reducing time to chemotherapy charting and ordering, patient and clinician satisfaction data, and reductions in readmission rates to further evaluate and quantify the clinic's contribution to overall transplant program quality.

Abstract Author/s:
Karim Ibrahim (1,2,3); Peter Samios (1); Barbara Withers (1,2,3); Annabel Mary Horne (1,2); Simone Kay Jensen (1,2); Phoebe Jeffery (1,2); Bashar Alani (1,2,3); Nabin Karki (1,2,3); Mao-Mao Yu (1,2)

Affiliations:
(1) St Vincent's Hospital Sydney, Darlinghurst, Australia
(2) The Kinghorn Cancer Centre, Darlinghurst, Australia, School of Medicine and Health
(3) University of New South Wales Sydney, Kensington, Australia

Conflict of Interest Statement (please specify in writing):
No conflict of interest to disclose

12. Marzia Rahman

Renal Function at Stem Cell Infusion Stratifies Risk of Cyclosporine Associated Acute Kidney Injury in PTCy Based AlloHSCT

Abstract:

Background:
Cyclosporine associated acute kidney injury (AKI) remains a major toxicity in allogeneic stem cell transplantation. As centres increasingly adopt post transplant cyclophosphamide (PTCy)–based GVHD prophylaxis, understanding organ specific toxicities is essential. Despite widespread use of PTCy–CsA, limited evidence guides how baseline renal function should influence prophylaxis selection or early conversion to renal sparing strategies. This study examines whether renal function at stem cell infusion (Day 0) predicts the severity of CsA associated AKI and the likelihood of requiring renal sparing immunosuppression. We hypothesised that lower Day 0 renal function identifies patients at high risk for severe AKI, informing risk adapted GVHD prophylaxis in PTCy based alloHSCT.

Method:
This retrospective cohort study included 112 adult alloHSCT recipients treated at a single tertiary centre (2015–2024), all receiving PTCy–cyclosporine GVHD prophylaxis. Baseline renal function at stem cell infusion (Day 0) was calculated using the CKD EPI 2021 race free equation (BSA adjusted). AKI was graded per KDIGO criteria, and clinical documentation was reviewed to identify reasons for cyclosporine cessation or conversion to renal sparing immunosuppression. CKD EPI categories (>90, 60–89, 30–59, <30 mL/min/1.73 m²) were predefined. Analyses included descriptive statistics, graded correlation between CKD EPI and AKI severity, and cumulative incidence of Stage 3 AKI and treatment related mortality.

Results:
Among 112 recipients (median age 60.9; 69% male), baseline renal function was generally preserved (median creatinine 68 µmol/L; CKD EPI 99 mL/min/1.73 m²). Day 0 CKD EPI categories were: >90 (60%), 60–89 (22%), 30–59 (18%), and <30 (<2%). AKI occurred in 41% of patients (Stage 1: 17%; Stage 2: 11%; Stage 3: 13%), typically within 3–6 weeks post transplant. A graded relationship was observed: patients with CKD EPI >90 mainly developed Stage 1 AKI, whereas those with CKD EPI 30–59 were over represented among Stage 3 events. Eight patients required conversion to sirolimus; 75% had baseline CKD EPI 30–59. Severe AKI correlated with increased treatment related mortality.

Conclusion:
Day 0 CKD EPI strongly predicts cyclosporine associated AKI severity. Patients with CKD EPI 30–59 are at high risk for Stage 3 AKI and require renal sparing immunosuppression. Incorporating baseline renal function into GVHD prophylaxis selection, including consideration of CNI free strategies, may reduce renal toxicity and improve transplant outcomes.

Abstract Author/s:
Marzia Rahman (1); Shevon Fernando (2); David Curtis (3)

Affiliations:
(1) Department of Haematology, Alfred Health, Melbourne, Australia.
(2) Department of Pharmacy, Alfred Health, Melbourne, Australia.
(3) Department of Haematology, Alfred Health, Melbourne, Australia;
Australian Centre for Blood Diseases, School of Translational Medicine, Monash University, Melbourne, Australia.

References:

1. Shulman H, Striker G, Kennedy M, et al. Nephrotoxicity of cyclosporin A after allogeneic marrow transplantation: glomerular thromboses and tubular injury. N Engl J Med. 1981;305:1392–1395.
2. da Silva JB, de Melo Lima MH, Secoli SR. Influence of cyclosporine on the occurrence of nephrotoxicity after allogeneic hematopoietic stem cell transplantation: a systematic review. Rev Bras Hematol Hemoter. 2014;36(5):363–368.
3. Alharbi R, Aljurf M, El Fakih R, et al. The impact of early post transplant cyclosporine induced acute nephrotoxicity on long term renal function in 2 year survivors of allogeneic hematopoietic stem cell transplantation: a cohort retrospective study. Blood. 2018;132(Suppl 1):3358.
4. Shi W, Qiu X, Huang L, Zeng L, et al. Correlation of cyclosporine A blood concentration with kidney injury for pediatric patients after hematopoietic stem cell transplantation: a retrospective cohort study. Eur J Clin Pharmacol. 2025;81(3):395–401.

Conflict of Interest Statement (please specify in writing):

No conflict of interest to disclose