ANZTCT ASM 2025: Oral Abstract Presentations

Wednesday 6 - Friday 8 August 2025

In order of presentation

1. Alia Cibich

Improved survival after allogeneic HSCT over the last 35 years is driven by reduced non-relapse mortality: A Statewide Australian cohort analysis

Abstract:
Background: The practice of allogeneic haematopoietic stem cell transplant (alloHSCT) has evolved substantially in recent decades—with expanding patient access through widespread adoption of increased age limits, alternate HLA-disparate donors, reduced intensity conditioning (RIC), and novel GVHD prophylaxis strategies. We investigated whether these changes have translated into real-world survival benefit.

Aim:
To evaluate long-term alloHSCT outcome trends in a Statewide Australian adult cohort, reflective of evolving contemporary practice.

Method:
We retrospectively analysed 864 consecutive alloHSCT performed from 1990–2023 in South Australia. Patients were grouped by transplant decade. Intergroup comparison of patient and transplant characteristics were performed by Chi-square and Kruskal-Wallis tests. Outcomes included overall survival (OS), progression-free survival (PFS), GVHD-relapse-free survival (GRFS), non-relapse mortality (NRM), and morphological relapse—analysed by Kaplan-Meier, competing risk, and multivariable Cox regression methods.

Results:
Over the last 35 years, Statewide patient and transplant characteristics evolved substantially (Table 1). Median age increased from 41 to 54 years, with ≥60-year-olds now comprising over 41% of patients versus <15% before 2020. Alternate donor use exceeded 25% in recent years, and RIC utilisation surpassed 70%. Despite these changes, survival outcomes improved significantly across the consecutive decades (Figure 1). Three-year OS increased from 40.5% in 1990-1999 to 58.0% in 2020-2023 (P=0.0005)—primarily driven by a >50% reduction in NRM: 55.3% to 24.6% (P<0.0001). GRFS improved modestly in the most recent decade (31.9%, P=0.05)—constrained by a persistent relapse incidence of ~30% since the 2000s. Most recent alloHSCT decade independently predicted improved OS (HR 0.5), PFS (HR 0.6), and reduced NRM (HR 0.4)—but not relapse (Figure 2). Age ≥60 years, active disease, and second transplant predicted adverse outcomes.

Conclusion:
Survival following alloHSCT has improved significantly over the last 35 years in this entire Statewide cohort, despite increasing clinical complexity and recipient risk. These gains are driven by reduced NRM—not relapse. Optimising disease control remains a defining challenge for the contemporary era of alloHSCT.

Figures: (uploaded to Dropbox)
Table 1. Patient and transplant characteristics, by decade.
Figure 1. Comparison of 3-year transplant outcomes, by decade.
Figure 2. Multivariate analysis of transplant outcomes.

Abstract Author/s:
1. Alia Cibich (Haematology Department, Royal Adelaide Hospital; Adelaide Medical School, University of Adelaide)
2. Gauri Wechalekar (Haematology Department, Royal Adelaide Hospital; Adelaide Medical School, University of Adelaide)
3. Dr Naranie Shanmuganathan (Haematology Department, Royal Adelaide Hospital; Adelaide Medical School, University of Adelaide; Precision Cancer Medicine, South Australian Health and Medical Research Institute)
4. Dr Deepak Singhal (Haematology Department, Royal Adelaide Hospital; Adelaide Medical School, University of Adelaide)
5. Dr Ashanka Beligaswatte (Haematology Department, Royal Adelaide Hospital and Flinders Medical Centre)
6. Dr Rebecca Wayte (Haematology Department, Royal Adelaide Hospital)
7. Dr Phil Selby (SA Pharmacy, Royal Adelaide Hospital; Clinical and Health Sciences, University of South Australia; Adelaide Medical School, University of Adelaide)
8. Prof David Yeung (Haematology Department, Royal Adelaide Hospital; Adelaide Medical School, University of Adelaide; Precision Cancer Medicine, South Australian Health and Medical Research Institute)
9. A/Prof Peter Bardy (Haematology Department, Royal Adelaide Hospital)
10. A/Prof Devendra Hiwase (Haematology Department, Royal Adelaide Hospital; Adelaide Medical School, University of Adelaide; Precision Cancer Medicine, South Australian Health and Medical Research Institute)

Link to supporting documents / other documents / notes
Alia Cibich - Improved-statewide-outcomes_table+figure-panel.png

2. Daniel Kilmartin

Let's make Quality great again

Abstract:
Do you know what a quality manager is, or does? It seems such a simple question, and one that you probably can almost immediately provide a simple answer to. But are you correct? Or perhaps more accurately, should that answer be correct? Quality managers within TCT are seen as keepers of the code, experts in standards and rules and chief maintainers of accreditation. In an even more simplified answer, you might simply say that for FACT or other accreditation, we need one, so we have one and they must do something. A quality manager can and should be so much more.

So, what should a quality manager be? What do they represent? These individuals are well placed to be pivotal leaders within a TCT programme. Quality managers (hopefully) see and hear virtually everything and are positioned to identify deficits and opportunities for improvement. Too often this is pseudo-achieved through investigation of occurrences, which are often received negatively by clinical staff. Quality managers regularly have to inform members of the service that something was not done well, that a problem occurred, that there was an issue. This could instead be a conversation about change and improvement. The role and potential of quality managers needs to be explored and indeed exploited to their full potential.

Evidence suggests that adoption of principles and ideals of quality and improvement at the highest level promotes adoption at all organisational levels. Programmes and institutions need to recognise the vital importance of these roles, to provide sufficient FTE for quality and to get on board with the concept of total quality management.

Organisations must promote a culture of quality, enabling and supporting quality managers to become effectors of change, educators, project managers, liberators of bureaucracy. The outcome of this can only be beneficial.

Abstract Author/s:
Daniel Kilmartin (Children's Health Queensland)

3. Nancy Kim

Health resource utilisation and costs of allogeneic hematopoietic stem cell transplantation: an Australian data linkage study

Abstract:

Aim:
This study aimed to investigate the healthcare costs and health resource utilisation (HRU) associated with allogeneic hematopoietic stem cell transplantation (allo-HSCT).

Method:
The study cohort was identified through the Australia and New Zealand Transplant & Cellular Therapies (ANZTCT) registry, which consisted of adult (≥ 18 years) allo-HSCT recipients transplanted in New South Wales. Participant records were linked to state and federal administrative health records, including emergency department (ED) presentations, hospital admissions, primary and secondary healthcare services, and medication use.

Kaplan-Meier estimates for overall survival (OS), progression-free survival (PFS), and non-relapse mortality were analysed. HRU and costs were analysed based on survival duration post-allo-HSCT. Regression modelling was used to investigate post-transplant characteristics affecting HRU and cost (2022 AUD) outcomes.

Results:
Between 2006 and 2016, 1,325 allo-HSCT recipients were identified, with a median follow-up period of 8.4 years. The median PFS and OS were 4.7 and 6.1 years, respectively.

The mean length of the primary allo-HSCT admission was 33.7 days, costing $101,612. Overall, the allo-HSCT admission accounted for at least 35.3% of the total costs associated with allo-HSCT across the various survival cohorts.

During the study period, the mean number of ED presentations was 6.1, with 10.0 hospital admissions per patient. The mean total length of stay was 79.3 days, leading to a total admission cost of $ 180,048 per patient. The mean total cost of allo-HSCT was $246,855 per patient.

Allo-HSCT recipients who experienced complications post-transplant had increased HRU and substantially higher overall costs. Patients with chronic graft-versus-host disease incurred costs that were $51,556 higher ($p<0.01$) than those without post-transplant complications. Additionally, individuals experiencing relapse and secondary malignancies incurred costs that were $72,569 and $77,258 higher, respectively ($p<0.01$).

Conclusion:
This study provides the most comprehensive account of HRU and costs associated with allo-HSCT in Australia, where the majority of health services are government-subsidised. Our findings confirm that allo-HSCT is a costly and resource-intensive therapy, with post-transplant complications being major contributors to the significantly increased costs. The results from this study can offer valuable insights for

government and policymakers in planning health services and allocating healthcare resources more effectively to meet the needs of this vulnerable and high-cost patient population.

Abstract Author/s:

- Nancy Kim (Centre for Health Economics Research and Evaluation, University of Technology Sydney)
- Serena Yu (Centre for Health Economics Research and Evaluation, University of Technology Sydney)
- Ian Kerridge (Department of Haematology Royal North Shore Hospital; Northern Blood Research Centre Kolling Institute; University of Sydney of Sydney)
- Matthew Greenwood ((Department of Haematology Royal North Shore Hospital; Northern Blood Research Centre Kolling Institute; University of Sydney of Sydney)
- Gemma McErlean (School of Nursing University of Wollongong; Ingham Institute for Allied Health Research; St George Hospital)
- Gaurav Sutrave (Department of Haematology Westmead Hospital; Westmead Clinical School; University of Sydney of Sydney)
- David Gottlieb (Department of Haematology Westmead Hospital; Westmead Clinical School; University of Sydney of Sydney)
- Stephen Larsen (Department of Haematology Royal Prince Alfred Hospital; University of Sydney of Sydney)
- Nada Hamad (Department of Haematology St Vincent's Hospital Sydney; University of New South Wales)
- John Moore (Department of Haematology St Vincent's Hospital Sydney; University of New South Wales)
- Anne-Marie Watson (Department of Haematology Liverpool Hospital)
- Richard De Abreu Lourenco (Centre for Health Economics Research and Evaluation, University of Technology Sydney)

4. Clair Scott

Validation of a Mononuclear Cell (MNC) Collection calculation to optimise CAR-T Leukapheresis. Fiona Stanley Hospital (FSH) experience

Abstract:

Aim:
Chimeric Antigen Receptor T-cell (CAR-T) therapy has advanced the treatment of hematologic malignancies; this therapy depends on the efficient collection of mononuclear cells (MNCs) through leukapheresis. Accurate prediction of MNC yield is critical for optimising collection efficiency, minimising patient toxicities, and ensuring adequate starting material for CAR-T cell manufacturing. This study aimed to validate a predictive calculation tool for MNC yield to optimise leukapheresis procedures for CAR-T therapy recipients

Method:
We retrospectively reviewed apheresis data from consecutive patients who underwent leukapheresis for CAR-T cell treatment at our centre from October 2022 to May 2025.

Apheresis were performed on the Spectra Optia, using the CMNC collection protocol. peripheral collection was used if patients had adequate venous access, otherwise central venous access was used. Peripheral blood flow cytometry was done prior to apheresis.
The MNC calculation tool used was:

Target MNC+ (IEV)* =Litres to process
0.6 x (Lymphocytes + monocytes)
*Interface Establishment Volume

Results:
47 CAR-T leukapheresis procedures were analysed, 100% (n=47) of the leukapheresis collections using the MNC calculation tool met the prescription targets. 64% (N=30) of the Leukapheresis collections processed <12L to achieve the MNC target.

Conclusion:
This validation supports the incorporation of the MNC calculation tool into routine clinical practice for CAR-T leukapheresis. It also appears to have Improved the overall efficiency of CAR-T MNC collections at our centre. Larger, prospective studies are needed to validate our results.

Abstract Author/s:
C. Scott, P. Chiapinni, J. Dungate, S.Belbachir, S. Gangatharan, D. Purtill, A.Barraclough

5. Sarah Andersen

Enteral prebiotic fibre supplementation and the impact on the microbiome post allogeneic transplantation

Abstract:

Aim:
The colonisation of multidrug resistant organisations in patients undergoing allogeneic stem cell transplantation (SCT) and the frequent decline in the gastrointestinal microbiome have been associated with increased risk of infections and mortality. This pilot trial aimed to compare the clinical, microbiome and metabolomic outcomes with provision of prebiotic fibre enteral nutrition (EN) compared to standard fibre free EN.

Method:
Enteral nutrition commenced day one post transplant as per usual care. 20 patients received prebiotic EN and 10 standard EN. Stool samples were collected at baseline and at peri-engraftment and were analysed with shotgun metagenomic sequencing. Analysis included ANOVA, linear mixed effect regression and Fisher's exact test.

Results:
There was no difference in tolerance or duration of EN between groups. Both groups received EN for a median 14 days. The relative abundance of faecalicatena gnavus increased in the standard group and declined in the prebiotic group over time (p=0.0027). Functional analysis of the microbial genome showed decreased expression of antibiotic resistance genes in the prebiotic group only, post EN provision (p = 0.00035). There was a significantly higher faecal ethanol level in the control group compared to the prebiotic group at the post-feeding timepoint (4.5 umol/L vs 1.097 umol/L, p = 0.0021). There were no differences in clinical outcomes between groups including infection and graft versus host disease.

Conclusion:
Provision of prebiotic EN was associated with lower faecal ethanol levels post feeding and reduced abundance of the ethanol producing, mucus utilising faecalicatena gnavus species. This may have positive implications for gastrointestinal barrier function. Prebiotic EN may also reduce antimicrobial resistance pathways expressed by the gut microbiome. Larger trials are required to evaluate if prebiotic fibre can reduce infection rates during transplant.

Abstract Author/s:
Sarah Andersen (Royal Brisbane and Women's Hospital, The University of Queensland)
Glen Kennedy (Royal Brisbane and Women's Hospital)
Merrilyn Banks (Royal Brisbane and Women's Hospital)
Bernadine Flanagan (The University of Queensland)
Andrea Henden (Royal Brisbane and Women's Hospital, QIMR Berghofer)

Link to supporting documents / other documents / notes

- Sarah Andersen - Abstract figure.docx

6. Lily Rush

Post-transplant cyclophosphamide dosed by total body weight leads to delay of platelet engraftment in the obese

Abstract:

Aim:
Post transplant cyclophosphamide (PTCy) is used for graft versus host disease (GvHD) prophylaxis. At this institution PTCy 50 mg/kg on day +3 and +4 is dosed on total body weight (TBW) with no adjustment for obesity, despite using adjusted body weight (AjBW) for high dose cyclophosphamide in the conditioning regimen. There is limited data to support dose modifications of PTCy in obesity, however trials such as the CTN1703 study have used AjBW. To better inform practice, we examined the outcomes and complications of PTCy dosed according to TBW.

The aim was to compare selected outcomes and complications for patients who received PTCy in the obese (body mass index ≥ 30kg/m2) and non-obese populations.

Method:
A retrospective analysis of patients who received PTCy between Feb 2015 and Dec 2023 was conducted. Data to day +100 was collected from the electronic medical record. The primary outcome was engraftment (neutrophils >0.5x109/L; platelets >20x109/L), and secondary outcomes were incidence of acute GvHD, cytomegalovirus (CMV) reactivation, bacterial viral or fungal infection, heamorrhagic cystitis, sinusoidal obstructive syndrome (SOS), cardiac complications, and day +100 survival.

Data were summarised and compared using descriptive statistics, the Mann-Whitney U test for continuous variables and the chi-square test for categorical variables.
The study was approved by relevant Ethics Committee.

Results:
Population characteristics and outcome measures are described in the table.
Median time to platelet engraftment was delayed by 5 days in the obese patients. There were no differences observed for acute GvHD, CMV reactivation, infections, haemorrhagic cystitis, SOS, cardiac complications or day +100 survival.

Conclusion:
PTCy dosed using TBW was found to delay time to platelet engraftment in the obese cohort. There were no differences observed for acute GvHD or other complications. Dosing PTCy on AjBW for obese patients should be considered in practice to minimise delayed engraftment.

Abstract Author/s:
Lily Rush (Pharmacy Department Alfred Health), John Coutsouvelis (Pharmacy Department Alfred Health, Monash University), Shevon Fernando (Pharmacy Department Alfred Health), Susan Poole (Pharmacy Department Alfred Health), Joanne Tan (Department of Haematology Alfred Health), Jenny Muirhead (Department of Haematology Alfred Health), Shafqat Inam (Department of Haematology Alfred Health), David Curtis (Department of Haematology Alfred Health, Monash University)

Link to supporting documents / other documents / notes

- Lily Rush - Post-transplant cyclophosphamide Table.pdf

7. Heather Weerdenburg

Posaconazole in Paediatrics: Are We Hitting the Mark or Missing the Target?

Abstract:

Aim:
Invasive fungal infections (IFIs) pose a significant risk to immunocompromised children undergoing cancer treatment or haematopoietic cell transplantation (HCT). Posaconazole is widely used for prophylaxis and treatment, but paediatric data on optimal dosing remain limited. This study evaluates posaconazole dosing, therapeutic drug monitoring, and clinical outcomes of prophylaxis and treatment in children.

Method:
This 8-year retrospective audit included children (≤18 years) receiving cancer therapies or HSCT at the Royal Children's Hospital, Melbourne. Data on posaconazole dosing, serum concentrations, efficacy, and adverse effects were collected. The non-parametric Mann–Whitney U-test test was used to compare continuous variables. Statistical analysis was performed using IBM SPSS Statistics for Windows, Version 29.0 (IBM Corp., Armonk, NY, USA).

Results:
Eighty children (median age 12.8 years) received 106 posaconazole courses: two-thirds were for prophylaxis, and the remainder were for IFI treatment. The majority had haematological malignancies (71%), with 36% undergoing allogenic HCT. Therapeutic concentrations (prophylaxis ≥0.7µg/mL; treatment ≥1.0µg/mL) were achieved in 92% and 76% of courses, respectively. The IV formulation achieved target concentrations in all patients with a median dose of 7 mg/kg/day. For the delayed release tablet, 97% (median dose 7mg/kg/day) and 83% (median dose 10mg/kg/day) achieved the prophylaxis and treatment target, respectively. While for oral suspension, only 67% of prophylaxis courses (median dose 7mg/kg every 8 hours) and 29% of treatment courses (median dose 8 mg/kg/day) achieved target concentrations. Children receiving oral suspension via a nasogastric tube had a lower success rate compared patients receiving doses orally (median 0.9 µg/mL, range 0.4-2.2 vs. 0.6 µg/mL, range 0.1-1.2, $p < 0.05$). Treatment of proven/probable IFIs was successful in all cases (median trough concentration 1.7µg/mL). Adverse events occurred in 21% of patients with hepatotoxicity occurring in 16%.

Conclusion:
Posaconazole is effective in preventing and treating IFIs in children on cancer therapy or recipients of HCT but requires higher than recommended doses to achieve therapeutic targets for treatment.

Abstract Author/s:
Heather Weerdenburg *, 1,2,3 Theresa Cole,1,3 Nigel Curtis,1,2,3 Stephen Duffull,4 Gabrielle M Haeusler,1,2,3,5,6,7 Amanda Gwee 1,2,3

1. Department of Pharmacy, Children's Cancer Centre, General Medicine and Allergy and Immunology, Royal Children's Hospital, Parkville, Australia. 2. Antimicrobials, Clinical Paediatrics Group and Infectious Diseases Groups, Murdoch Children's Research Institute, Parkville, Australia. 3. Department of Paediatrics, The University of Melbourne, Parkville, Australia. 4. Certara, NJ, USA. 5. Department of

Infectious Diseases, Peter MacCallum Cancer Centre, Parkville, Australia. 6. NHMRC National Centre for Infections in Cancer, Sir Peter MacCallum Department of Oncology, University of Melbourne, Melbourne, Australia 7. The Victorian Paediatric Integrated Cancer Service, Victoria State Government, Melbourne, Australia.

References:

1. Yeoh DK, Blyth CC, Clark JE, et al. Invasive fungal disease and antifungal prophylaxis in children with acute leukaemia: a multicentre retrospective Australian cohort study. Lancet Reg Health West Pac. 2024;52:101201.
2. Yeoh DK, Moore AS, Kotecha RS, et al. Invasive fungal disease in children with acute myeloid leukaemia: An Australian multicentre 10-year review. Pediatric Blood and Cancer. 2021;68(11) (no pagination).
3. Bartlett AW, Cann MP, Yeoh DK, et al. Epidemiology of invasive fungal infections in immunocompromised children; an Australian national 10-year review. Pediatric Blood and Cancer. 2019;66(4) (no pagination).
4. Groll AH, Pana D, Lanternier F, et al. 8th European Conference on Infections in Leukaemia: 2020 guidelines for the diagnosis, prevention, and treatment of invasive fungal diseases in paediatric patients with cancer or post-haematopoietic cell transplantation. Lancet Oncol. 2021;22(6):e254-e269.
5. Corp MSD. Noxafil; highlights of prescribing information In:2022.
6. Weerdenburg H, Walker H, Curtis N, et al. Posaconazole in paediatric malignancy and haematopoietic stem cell transplant: dosing to achieve therapeutic concentration. J Antimicrob Chemother. 2024.

Conflict of Interest Statement (please specify in writing):

B. The author declares no conflicts of interest related to the content of this abstract. Travel support to attend a separate conference was provided by Jazz Pharmaceuticals.

8. Xiaowen Wu

The effectiveness of pre-transplant interventions in ABO mismatched allogeneic stem cell transplant – a single centre review

Abstract:
Recipient-donor ABO mismatch is present in 40-50% of allogeneic haematopoietic stem cell transplants (alloHSCT). In major/bidirectional ABO mismatch, high baseline anti-donor isoagglutinin titre is associated with increased risk of haemolysis, delayed erythroid engraftment and pure red cell aplasia (PRCA). The role of pre-HSCT isoagglutinin reduction in the recipient is actively debated, without consensus concerning mitigating strategies.

Aim:
To evaluate effectiveness of pre-transplant isoagglutinin titre reduction interventions; red blood cell (RBC) transfusion requirement; and incidence of PRCA.

Method:
We performed a retrospective analysis of all alloHSCT performed at the Royal Adelaide Hospital between January 2012 and December 2021. Data collected included: recipient-donor ABO group, recipient isoagglutinin titre, pre-alloHSCT interventions, RBC transfusions, and episodes of PRCA. We utilised t-tests for intergroup statistical analysis.

Results:
A total of 382 alloHSCT were performed, including 178 (47%) ABO mismatch alloHSCT. In the major/bidirectional mismatch group (n=81), 54 patients (67%) had baseline isoagglutinin titre ≥32; 44 (81%) received pre-transplant titre reducing interventions per institutional protocol. Following intervention, titre reduction was observed in 93% of patients within the first month post-alloHSCT, with titre reaching <32 in 60% of patients (Figure 1). RBC transfusion requirement was not statistically different between the intervention (high titre) and non-intervention (low titre) group during the first 100 days post-HSCT (Figure 2). PRCA was diagnosed in 2 patients with major recipient-donor ABO mismatch; both had baseline isoagglutinin titre of 2024 and slow titre reduction following interventions.

Conclusion:
In summary, titre reducing intervention was effective in nearly all indicated patients. We saw no difference in RBC transfusion requirement between patients with high or low isoagglutinin titres pre-HSCT. PRCA was rare, with key predictors including baseline titre ≥2024 and poor response to titre-reducing intervention. These data suggest our current practice of pre-HSCT titre reduction in major/bidirectional ABO mismatch recipients is effective.

Abstract Author/s:
Dr Xiaowen Wu (Royal Adelaide Hospital, South Australia)
A/Prof Devendra Hiwase (Royal Adelaide Hospital, South Australia)
Ms Alia Cibich (Royal Adelaide Hospital, South Australia)
Dr Naranie Shanmuganathan (Royal Adelaide Hospital, South Australia)

Link to supporting documents / other documents / notes

- Xiaowen Wu - Figure 1.png
- Xiaowen Wu - Figure 2.png

9. Genevieve Douglas

The Australian Index of Relative Socioeconomic Disadvantage Predicts Long-term Health-Related Quality of Life Outcomes in Allogeneic Haematopoietic Stem Cell Transplant Survivors

Abstract:

Aim:
Socioeconomic disadvantage impacts health-related quality-of-life (HRQoL) in allogeneic haematopoietic stem cell transplant (alloHSCT) recipients. The Index of Relative Disadvantage (IRSD), derived from postcode-specific census data, rates socioeconomic disadvantage from 1 (most disadvantaged) to 10 (least disadvantaged). There are no existing data linking HRQoL outcomes and IRSD in alloHSCT recipients. This study aimed to determine whether IRSD could identify alloHSCT recipients at higher risk of adverse HRQoL. Identifying such patients may enable development of targeted interventions.

Method:
We conducted a single-centre, retrospective analysis of HRQoL in alloHSCT recipients >16 years with malignant haematologic diseases at the Royal Melbourne Hospital transplanted between 2009-2020. Evaluated in the long-term follow-up clinic 2-5 years post-alloHSCT, patients routinely completed HRQoL surveys including FACT-BMT, EORTC-QLQ-C30, FACIT-F, and Hospital Anxiety and Depression Scale (HADS). Patients were categorised by IRSD, and HRQoL scores were compared between IRSD categories (1-5 versus 6-10) using the Kruskal Wallace test (significance level $p<0.05$). K-means cluster analysis evaluated IRSD's ability to predict patient membership to adverse HRQoL clusters. Statistics were performed using SPSS version 29 (IBM Corp, 2024).

Results:
A total of 518 survey respondents were included (n=251 in IRSD 1-5 versus n=267 in IRSD 6-10). HRQoL scores in IRSD 1-5 patients were more adverse than in IRSD 6-10 (Figure 1), with significant increases in depressive symptoms, fatigue and financial difficulty (defined by HADS, FACIT-F and EORTC-QLQ-C30), alongside worse global HRQoL, physical, role, cognitive and social functioning (EORTC-QLQ-C30). Cluster analysis identified 2 statistically distinct HRQoL clusters: C1 (more adverse) and C2 (better HRQoL). IRSD 1-5 patients comprised 59.1% of those in the C1 cluster, compared to 36.7% in the C2 cluster ($p<0.001$).

Conclusion:
The IRSD may serve as a socioeconomic marker to identify Australians at higher risk of adverse long-term HRQoL post-alloHSCT, aiding in the development of targeted interventions to enhance HRQoL.

Abstract Author/s:
Genevieve Douglas (1. Department of Clinical Haematology and Bone Marrow Transplant Service, Peter MacCallum Cancer Centre and The Royal Melbourne Hospital, Melbourne 2. Clinical Haematology, Austin Health, Melbourne), Eric Wong (1. Department of Clinical Haematology and Bone Marrow Transplant Service, Peter MacCallum Cancer Centre and The Royal Melbourne Hospital, Melbourne 2. Clinical Haematology, Austin Health, Melbourne), David Ritchie (1. Department of Clinical Haematology and Bone Marrow Transplant Service, Peter MacCallum Cancer Centre and The Royal Melbourne Hospital, Melbourne, 2. 4. Department of Medicine, University of Melbourne), Teresa Garcia (1. Department of Clinical Haematology and Bone Marrow Transplant Service, Peter MacCallum Cancer Centre and The Royal Melbourne Hospital, Melbourne), Yvonne Panek-Hudson (1. Department of Clinical Haematology and Bone Marrow Transplant Service, Peter MacCallum Cancer Centre and The Royal Melbourne Hospital, Melbourne)

References:

1. Wolfson JA, Bhatia S, Hageman L, Ross ES, Balas N, Bosworth A, et al. Neighborhood disadvantage, health status, and health care utilization after blood or marrow transplant: BMTSS report. Blood Adv. 2023;7(3):293-301.
2. Brice L, Gilroy N, Dyer G, Kabir M, Greenwood M, Larsen S, et al. Predictors of quality of life in allogeneic hematopoietic stem cell transplantation survivors. J Psychosoc Oncol. 2021;39(4):534-52.
3. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016 Australian Bureau of Statistics; [Available from: https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/2033.0.55.0012016?OpenDocument.

Link to supporting documents / other documents / notes

- Genevieve Douglas - IRSD abstract Figure 1

10. Salvatore Fiorenza

A CRISPR-edited allogeneic anti-CD19 CAR-T cell therapy with a PD-1 knockout (CB-010) in patients with relapsed/refractory B cell non-Hodgkin lymphoma (r/r B-NHL): Updated phase 1 results from the ANTLER trial

Abstract:

Aim:
CB-010 is an allogeneic anti-CD19 CAR-T cell therapy derived from healthy donor T cells using CRISPR hybrid RNA-DNA (chRDNA) technology. This technology is used to introduce 3 genome edits: (1) knockout of TRAC to eliminate TCR expression and reduce risk of GvHD, (2) insertion of a CD19-specific CAR (scFv FMC63) into the TRAC locus, and (3) knockout of PD-1 to prevent premature CAR-T cell exhaustion and potentially enhance antitumor activity. ANTLER is a Phase 1 clinical trial with 3+3 dose escalation and expansion phases evaluating the safety, tolerability, and antitumor activity of CB-010 in r/r B-NHL and determining RP2D.

Method:
In dose escalation, patients had ≥2 prior lines of chemoimmunotherapy or primary refractory disease. In dose expansion, patients had LBCL and 1 prior line of therapy. Patients underwent lymphodepletion with cyclophosphamide (60 mg/kg/day×2 days) and fludarabine (25 mg/m²/day×5 days) followed by a single CB-010 infusion.

Results:
As of the data cutoff date of April 1, 2024, 46 patients with r/r B-NHL (40 LBCL, 3 MCL, 2 FL with POD24, 1 MZL) received CB-010 across 3 dose levels (40, 80, 120 million CAR-T cells). Median age: 65 years. Median prior lines of therapy: 1. CB-010 was generally well tolerated. No GvHD was observed. CRS occurred in 56.5% of patients (no grade ≥3). ICANS occurred in 21.7% of patients (6.5% grade ≥3). Most common grade ≥3 TEAEs: thrombocytopenia (63%), anemia (52.2%), neutropenia (41.3%). Five patients died due to AEs following CB-010 infusion, one of which was possibly related to CB-010 per investigator.

ORR was 76.1%; CR rate: 45.7%. Median time to CR: 28 days. Patients who received CB-010 manufactured from a donor with at least 4 matched HLA alleles achieved longer PFS (Figure 1).

Conclusion:
CB-010 demonstrated manageable safety and promising efficacy for treatment of r/r B-NHL, including aggressive subtypes. A cohort of 2L LBCL patients treated with partially matched HLA product is ongoing. Clinical trial information: NCT04637763.

Abstract Author/s:
Salvatore Fiorenza (Epworth HealthCare, Melbourne, VIC, Australia; Faculty of Medicine and Health, University of Sydney, Camperdown, NSW, Australia), Boyu Hu (Huntsman Cancer Institute, Salt Lake City, UT, USA), Houston Holmes (Texas Oncology - Baylor Sammons Cancer Center, Dallas, TX, USA), Ayad Hamdan (University of California, San Diego Health, San Diego, CA, USA), Abraham Kanate (HonorHealth, Scottsdale, AZ, USA), Umar Farooq (University of Iowa Hospitals and Clinics, Iowa City, IA, USA), Mohamad Cherry (Morristown Medical Center, Morristown, NJ, USA), Elizabeth Brem (University of California, Irvine, Irvine, CA, USA), Lauren C. Pinter-Brown (University of California, Irvine, Irvine, CA, USA), Daniel Arthur Ermann (Huntsman Cancer Institute, Salt Lake City, UT, USA),

Muhammad Husnain (University of Arizona Cancer Center, Tucson, AZ, USA), Kenneth Micklethwaite (New South Wales Health, St Leonards, NSW, Australia, St Leonards, NSW, Australia), Tina Albertson (Caribou Biosciences, Inc., Berkeley, CA, USA), Enrique Zudaire (Caribou Biosciences, Inc., Berkeley, CA, USA), Socorro Portella (Caribou Biosciences, Inc., Berkeley, CA, USA), Donna Marcy (Caribou Biosciences, Inc., Berkeley, CA, USA), Ashraf Garrett (Caribou Biosciences, Inc., Berkeley, CA, USA), Govind A. Shah (Caribou Biosciences, Inc., Berkeley, CA, USA), Mehdi Hamadani (Medical College of Wisconsin Cancer Center, Milwaukee, WI, USA), James Essell (Oncology Hematology Care, Inc., Cincinnati, OH, USA), Susan Mary O'Brien (University of California, Irvine, Irvine, CA, USA)

References:

Conflict of Interest Statement (please specify in writing):
S.F.
Holds patents for optimizing CAR T cell function
Research Funding: Bristol Myers Squibb
Advisory/consulting: Arovella Therapeutics, Prescient Therapeutics

B.H.
Honoraria - Guidepoint Inc
Consulting or Advisory Role - ADC Therapeutics; BeiGene; Bristol-Myers Squibb/Celgene; Caribou Biosciences; Genmab; ImmPACT Bio; Lilly; Novartis; Regeneron; Seagen
Speakers' Bureau - Binacea; Curio Science; OncLive/MJH Life Sciences; Patient Power; Total Health Conferencing
Research Funding - Artiva (Inst*); AstraZeneca (Inst); Caribou Biosciences (Inst); Celgene (Inst); crispr therapeutics (Inst); ImmPACT Bio (Inst); MorphoSys/Incyte (Inst); Newave Pharmaceutical (Inst); Repare Therapeutics (Inst); Roche/Genentech (Inst)
Travel, Accommodations, Expenses - DAVA Oncology

H.H.
Leadership - Exuma Biotech
Consulting or Advisory Role - ADC Therapeutics; AstraZeneca; Bayer; Bristol-Myers Squibb/Celgene/Juno; Celgene; crispr therapeutics; Epizyme; Genentech; Janssen; Karyopharm Therapeutics; Kite/Gilead; Rigel; TG Therapeutics
Speakers' Bureau - Dova Pharmaceuticals; Karyopharm Therapeutics; Kite, a Gilead company; Rigel; Seagen
Research Funding - ADC Therapeutics (Inst); Adicet Bio (Inst); Allogene Therapeutics (Inst); Artiva (Inst); Autolus (Inst); Bristol-Myers Squibb/Celgene (Inst); Caribou Biosciences (Inst); Celgene (Inst); Genentech (Inst); Incyte (Inst); Janssen (Inst); Juno Therapeutics (Inst); Kite, a Gilead company (Inst); MorphoSys (Inst); Novartis (Inst); Precision Biosciences (Inst); Viracta Therapeutics (Inst)

A.H.
No Relationships to Disclose

A.K.
Stock and Other Ownership Interests - Iovance Biotherapeutics
Speakers' Bureau - Kite, a Gilead company

U.F.
Honoraria - Caribou Biosciences; Kite, a Gilead company; Morphosys

Research Funding - Checkmate Pharmaceuticals (Inst)
Travel, Accommodations, Expenses - Kite, a Gilead company

M.C.
Honoraria - Epizyme; Genentech
Consulting or Advisory Role - Genentech; Pharmacosmos
Speakers' Bureau - BMS; Sanofi; Secura bio

E.B.
Consulting or Advisory Role - AstraZeneca; Bayer; BeiGene; Celgene; Celgene; Genentech; Janssen; Karyopharm Therapeutics; Kite, a Gilead company; MorphoSys; Pfizer; Pharmacyclics; Sanofi; TG Therapeutics
Speakers' Bureau - AstraZeneca; BeiGene; Celgene; MorphoSys; Pharmacyclics; Seagen
Research Funding - AstraZeneca; Genmab; Kowa Pharmaceutical; Viracta Therapeutics

L.C.P.
Consulting or Advisory Role - Kyowa Hakkko Kirin; Secura Bio

D.A.E.
Stock and Other Ownership Interests - Pfizer; Roche

M.H.
Consulting or Advisory Role - Caribou Biosciences

K.M.
No Relationships to Disclose

T.A
Employee/equity: Caribou Biosciences

E.Z.
Employee/equity: Caribou Biosciences

S.P.
Employee/equity: Caribou Biosciences
Stock and Other Ownership Interests: Novartis

D.M.
Employee/equity: Caribou Biosciences

A.G.
Employee/equity: Caribou Biosciences

G.S.
Employee/equity: Caribou Biosciences

M.H.
Honoraria - Celgene

Consulting or Advisory Role - Abbvie; ADC Therapeutics; AstraZeneca; BeiGene; Bristol-Myers Squibb/Celgene; Caribou Biosciences; crispr therapeutics; Gamida Cell; Genentech; Genmab; Incyte; Kite/Gilead; MorphoSys; Myeloid Therapeutics; Novartis; Omeros; Puma Biotechnology (I); Sanofi; Seagen; Verastem
Speakers' Bureau - ADC Therapeutics; AstraZeneca; BeiGene; Genzyme; Kite/Gilead
Research Funding - Astellas Pharma; Genzyme; Genzyme; Otsuka; Spectrum Pharmaceuticals; Takeda

J.E.
Consulting or Advisory Role - Bristol-Myers Squibb
Speakers' Bureau - Genmab; Kite, a Gilead Company
Travel, Accommodations, Expenses - Caribou Biosciences

S.M.O.
Employment - University of California, Irvine
Honoraria - Abbvie; Amgen; Caribou Biosciences; Celgene; Gilead Sciences; GlaxoSmithKline; Janssen; Pfizer; Pharmacyclics; Secura Bio; TG Therapeutics; Vaniam Group
Consulting or Advisory Role - Abbvie/Genentech; Amgen; Caribou Biosciences; Celgene; Gilead Sciences; GlaxoSmithKline; Janssen Oncology; Pfizer; Pharmacyclics; Secura Bio; TG Therapeutics; Vaniam Group
Research Funding - Caribou Biosciences (Inst); MustangBio (Inst); Nurix (Inst); Pharmacyclics (Inst); Regeneron (Inst)
Travel, Accommodations, Expenses - Abbvie/Genentech; Celgene; Gilead Sciences; Janssen; Janssen Oncology; Regeneron

*Inst indicates institutional research funding

Link to supporting documents / other documents / notes
https://www.dropbox.com/scl/fi/ejj2b5dvq2qoddp827310/Fiorenza-et-al-Abstract-Figure-Govind-Shah.tiff?rlkey=ei9sd01j4ddfg4ogi41g6a8vv&st=m9qc34l2&dl=0

11. Teresa Garcia

Long-term follow up care after allogeneic bone marrow transplant: 10-year retrospective analysis of a single centre Australian nurse-led (NP and CNC) long-term follow-up clinic.

Abstract:

Aim:
Allogeneic bone marrow transplant (AlloBMT) survivors living 2 years and beyond continue to rise1,2,3. This is accredited to the advancements in practice and supportive care2,3. Due to BMT conditioning, comorbidities and previous treatment, survivors are at considerable risk of developing physical and psycho-social late effects that may impact their daily functioning and quality of life12,3. To promote safe and timely care coordination and late effects monitoring, it is vital to have a dedicated long term follow up clinic (LTFU).

Method:
A nurse-led LTFU service was established at the Royal Melbourne Hospital (RMH) in November 2014 focusing on physical and psycho-social needs of survivors who are at least 2 years post AlloBMT. Most referrals are internal, 15% are from paediatric centres transitioning adolescent and young adult (AYA) survivors. The LTFU service collects physical and quality of life data using PROMS and PREMS. These are used to guide clinical reviews, gain understanding of experience of survivors, and review and adapt guidelines. All data is entered into an ethics approved database.

Results:
First visit to LTFU data from November 2014 – November 2024 identified nearly 700 AlloBMT survivors have been referred to the LTFU service. Attendance is 93% and 88% of patients are alive. Common physical late effects are chronic graft versus host disease (>60%), low bone mineral density (40%), cardiovascular disease (24%), eye disease (27%) and secondary malignancy (16%). The most common patient reported concerns are fatigue, fear/worry, depression & anxiety, financial stress and sexual health. Over 50% are working, nearly 25% are unemployed and 12% are retired.

Conclusion:
Our data identifies a growth in the number of AlloBMT survivors attending LTFU. Clinician and patient reported concerns highlight the breadth of late effects post AlloBMT and supports the need for dedicated clinics and data collection. The comprehensive collection and analysis of our 10-year data set will inform next steps to modify model of care, PROMS and clinical service delivery to optimise patient care and improve health care utilisation.

Abstract Author/s:
Teresa Garcia1, David Ritchie1, Ashish Bajel1, David Routledge1, Katherine Cummins1, Ray Koo1, Yvonne Panek-Hudson1

1 Department of Clinical Haematology and Bone Marrow Transplant Services, The Royal Melbourne Hospital and Peter MacCallum Cancer Centre, Melbourne, Australia

References:

1. Bell, B., & Swainston, K. (2023). The lived experience of long-term follow-up clinical care for haematopoietic stem cell recipients in England: a qualitative exploration. Journal of Cancer survivorship, 1590-1599. doi:10.1007/s11764-023-01399-w

2. Kliman, D., Nivison-Smith, I., Gottlieb, D., Hamad, N., Kerridge, I., Purtill, D., . . . Ma, D. (2020). Hematopoietic stem cell transplant recipients surviving at least 2 years from transplant have survival rate approaching population levels in the modern era of transplantation. Biology of Blood and Marrow Transplantation, 1711-1718. doi:10.1016/j.bbmt.2020.03.005
3. Wingard, J., Majhail, N., Brazauskas, R., Wang, Z., Sobocinski, K., Jacobson, D., . . . Socie, G. (2011). Long-term survival and late deaths after allogeneic hematopoietic cell transplantation. Journal of Clinical Oncology, 29(16), 2230-2239. doi:10.1200/JCO.2010.33.7212

12. Min-Hi Han

Outcomes and treatment determinants in intermediate-adverse risk acute leukaemia: Analysis of barriers to allogeneic stem cell transplant.

Abstract:

Aim:
Aim: To evaluate outcomes among patients with intermediate- or adverse-risk acute myeloid leukaemia (AML) or acute lymphoblastic leukaemia (ALL) treated with intensive chemotherapy in the Northern region of New Zealand. This study also aims to identify and analyse clinical, demographic, and treatment-related factors that determine whether patients proceed to allogeneic stem cell transplantation (alloSCT).

Method:
Method: We conducted a retrospective cohort study of adults diagnosed with intermediate- or adverse-risk AML or ALL from 2018 to 2023 in the Northern Region of New Zealand, including the former Northland, Waitematā, Auckland, and Counties Manukau District Health Boards (DHBs). Eligible cases were identified via referral to the regional Leukaemia Multidisciplinary Meeting (MDM) for intensive chemotherapy and transplant consideration. Demographic data including rurality and ethnicity were analysed to determine if there were factors limiting access to alloSCT. Analyses included univariate analysis (Chi-square and Mann-U) and binary logistic multivariate analysis for determinants of access to alloSCT as well as overall survival (OS) and progression-free survival (PFS).

Results:
Results: A total of 121 patients (AML = 86, ALL = 35) were included in the analysis. Median follow-up estimated using the reverse Kaplan-Meier method was 47.4 months (95% CI: 37.2–57.6) for patients who underwent alloSCT and 68.0 months (95% CI: 54.6–81.3) for those who did not. Median OS was not reached in the alloSCT group, compared to 8.6 months (95% CI: 5.8-11.4) in the non-SCT group. The 1-year OS was significantly higher for alloSCT recipients at 87.5% (95% CI: 79.9–95.1) versus 42.9% (95% CI: 29.1–56.7) for non-SCT ($p < 0.0001$). Similarly, 1-year PFS was 77.8% (95% CI: 68.0–87.6) for the alloSCT group and 28.6% (95% CI: 15.7–41.5) for the non-SCT group ($p < 0.0001$) (Figure 1).

In multivariate analysis, younger age at diagnosis (OR 0.94, 95% CI: 0.89–0.99, p=0.019), a greater number of chemotherapy cycles prior to transplant (OR 2.01, 95% CI: 1.14–3.55, p=0.016) and shorter time from diagnosis to multidisciplinary meeting (OR 0.50, 95% CI: 0.26–0.97, p=0.040) were independently associated with increased odds of receiving an alloSCT. Māori and Pacific Peoples had significantly lower odds of receiving alloSCT (0.21, 95% CI: 0.06–0.77, p=0.018). Rurality or distance from domicile to transplant hospital was not associated with access to alloSCT.

The primary reasons for not receiving alloSCT were disease progression (36.7%), lack of fitness (24.5%), and, equally, lack of donor, infection, and patient choice (12.2% each). One patient had treatment intensified and did not require transplantation.

Following the implementation of a "first-referred, first-transplanted" prioritisation waitlist in July 2021, the proportion of patients receiving alloSCT increased from 51.5% to 69.1% (p=0.05). However, the median time from diagnosis to alloSCT was longer after implementation, at 6.0 months (3.6–14.5) compared to 4.7 months (3.4–13.7), likely reflecting increased demand for transplantation services.

Conclusion:
Conclusion: In the context of Aotearoa New Zealand's growing demand for alloSCT, this study demonstrates that transplantation remains a critical intervention for patients with higher risk acute leukaemia. Despite increasing referral volumes and resource pressures, access to alloSCT has improved with recent changes to prioritisation processes. However, delays in time to transplant reflect the challenge of meeting higher demand. Ultimately, alloSCT significantly improves survival for high-risk patients, highlighting the need for continued investment and system adaptation to ensure equitable, timely access to this life-saving therapy in Aotearoa New Zealand.

Abstract Author/s:
Min-Hi Han (Auckland City Hospital, Christchurch Hospital), Linda Li (Auckland City Hospital, Xiaobin Zhan (Auckland City Hospital), Nigel Bruer (Department of Archaeology, University of Otago), Lauren Child (Auckland City Hospital), Caroline Grist (Auckland City Hospital), Henry Ngu (Auckland City Hospital), Sarah Tan (Auckland City Hospital), Nicole Chien (Auckland City Hospital), Timothy Hawkins (Auckland City Hospital), Peter Browett (Auckland City Hospital), Leanne Berkann (Auckland City Hospital), Richard Doocey (Auckland City Hospital), Clinton Lewis (Auckland City Hospital).