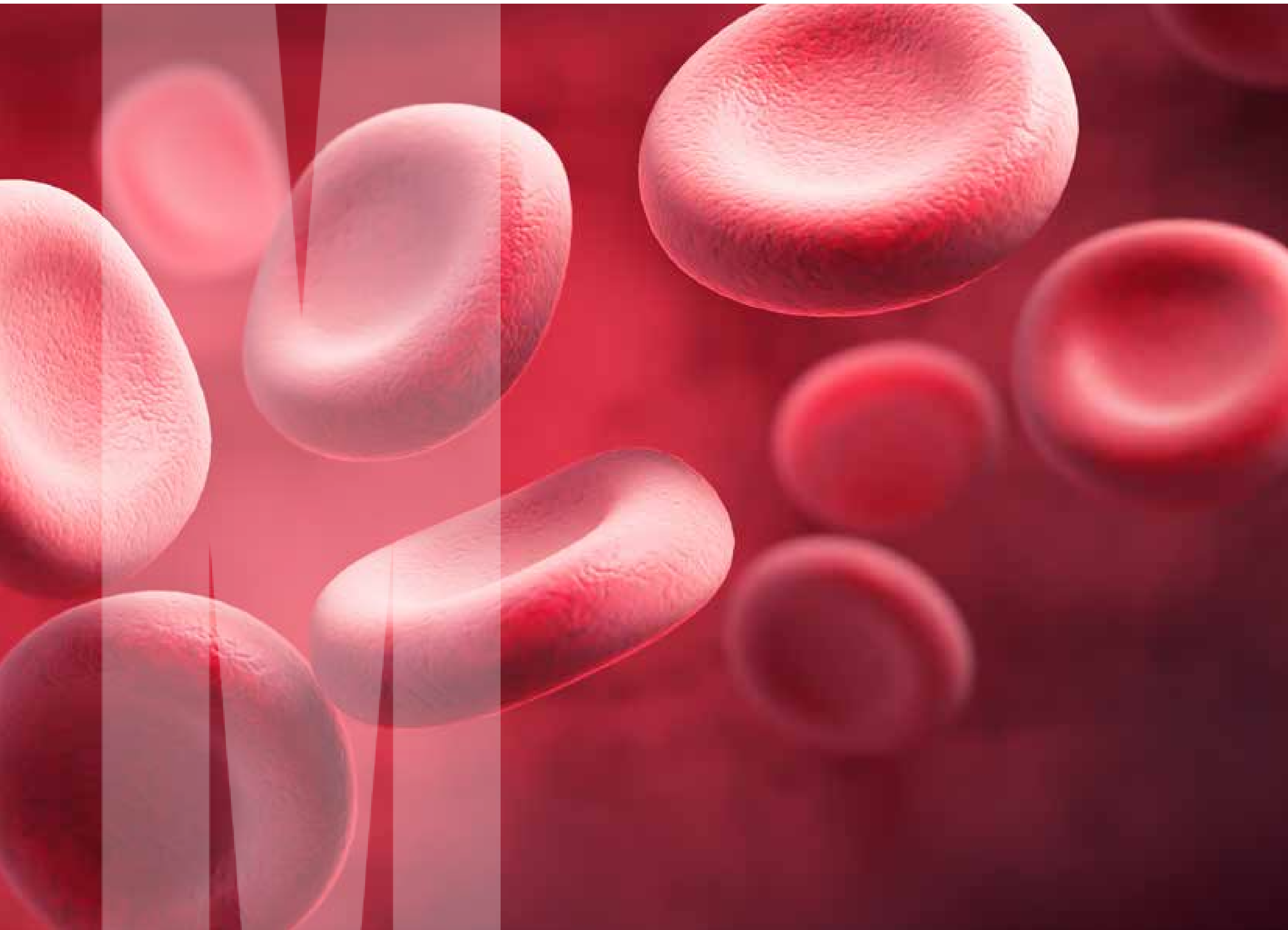
MONASH University

transfusion research unit

TRANSFUSION RESEARCH UNIT



ACKNOWLEDGEMENT OF COUNTRY

We acknowledge the traditional owners of the lands on which we work. We pay our respects to their Elders, past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples.

> “*One in three Australians will need a blood transfusion. Our research drives blood safety, quality, efficiency and accessibility, and improves the quality of life of people living with blood disorders.*”

transfusion
research unit

The Transfusion Research Unit is an internationally recognised, multidisciplinary research team at Monash University’s School of Public Health and Preventive Medicine.

We collaborate with clinical and institutional partners to lead national registries, clinical trials, systematic reviews, educational activities and other projects in blood disorders and conditions requiring major or complex transfusion support.

Our work helps the medical and wider community better understand and improve clinical practice and outcomes. We provide data that inform health care policy and practice and contribute to high-quality patient care, improved patient outcomes and better stewardship of precious resources.

ABOUT THIS REPORT

This report reflects the research undertaken in the Transfusion Research Unit (2023-2024), and highlights the activities of our staff, students, and research partnerships.

CONTENTS

Research Highlights 2023-2024

WELCOME

It is my pleasure to share the Transfusion Research Unit (TRU) research report for 2023-24. The report profiles our team and showcases our activities, from research to improve clinical transfusion practice, to delivering better care and outcomes for patients with blood disorders, along with our teaching and engagement.

Transfusion can save and improve lives. Blood products, donated by community volunteers, are precious – they are in limited supply and expensive, and all carry some hazards. However, many aspects of how we use these products are still not evidence-based, and in other cases clinical practice has changed greatly since the original evidence was generated. We're committed to addressing these evidence gaps.

We are a diverse team of more than 40 people, and part of the Monash School of Public Health and Preventive Medicine – the largest in the Asia-Pacific region. We work with more than 400 collaborators, including individual investigators, hospitals, blood services, governments and public health agencies, research organisations, and community, industry, professional, and philanthropic partners.

We are world leaders in clinical quality registries, clinical trials, qualitative and mixed-methods research, health economics, evidence synthesis, biostatistics and epidemiology. We have access to all the resources of Monash University and our partner networks to support our research and its translation.

We are committed to high-quality research and experienced in managing complex programs. We have been awarded major funding from the NHMRC, including two Synergy grants (and the 2020 Fiona Stanley Award for the top-ranked Synergy application), a Centre of Research Excellence in improving immunoglobulin use, and clinical trials support. We have also received significant funding from the Medical Research Future Fund, Victorian Department of Health, Australian Research Data Commons, Australian and New Zealand Society of Blood Transfusion, and the National Blood Authority.

Our work in blood diseases includes blood cancers, inherited conditions, and rare diseases which require substantial transfusion support. All of these need better evidence to guide policy and practice. Our registries provide vital real world evidence on current practice, and monitor changes, such as uptake of new diagnostics and therapies. We have established new infrastructure and international partnerships, such as the global Lymphoma Registry Alliance (LyRA) and the Asia Pacific Myeloma and Related Diseases Registry. Our clinical trials use novel designs and incorporate innovative biological, qualitative and health economics analyses.

We invest in our people, and are enormously proud of our team. Our group has been awarded multiple investigator grants and postgraduate scholarships from the NHMRC and other highly competitive fellowships. We are committed to teaching, and have won awards for our teaching excellence. TRU is sought out for student projects and attachments, including a highly successful partnership with RMIT University for final-year Pharmaceutical Sciences students.

As experts, we engage broadly and this guides our work, including the 2024 Blood Synergy community consultation to identify national transfusion research priorities. We have been invited to present our research to government, industry, professional and community groups, at national and international scientific meetings, and to the World Health Organization.

Thank you for your support of TRU. I hope you enjoy reading this report, and look forward to your feedback, and your ideas for future collaborations.

Professor Erica Wood AO FAHMS

Head, Transfusion Research Unit
School of Public Health and Preventive Medicine
Faculty of Medicine, Nursing and Health Sciences
Monash University

LEADERSHIP TEAM

Prof Erica Wood AO

Head of Unit

Prof Zoe McQuilten

Deputy Head of Unit (Research)

Mr Neil Waters

Deputy Head of Unit (Operations)

WHO WE ARE

Research Staff

Ms Naomi Aoki, Business Project Manager
Dr Zahra Anwar, Clinical Research Associate
Dr Elham Ashrafi, Senior Research Officer
Dr Giannie Barsha, Program Manager
Dr Karina Brady, Program Manager
Ms Kirsten Caithness, Senior Project Officer
Ms Melissa Chee, Research Officer
Dr Fiona Chen, Senior Data Officer (to mid-2024)
Ms Eliza Chung, Project Manager
Dr Nicole Eise, Clinical Research Associate
Dr Laura Fanning, Senior Research Fellow
Dr Lucy Fox, Research Fellow
Ms Vanessa Fox, Registries Program Manager
Dr Brendan Gillespie, Clinical Research Associate
Ms Jennifer Griffiths, Clinical Trials Program Manager
Ms Jessica Guglielmino, Research Officer
Prof Eliza Hawkes, Senior Research Fellow
Mrs Helen Haysom, Project Coordinator
Dr Adam Irving, Research Fellow
Dr Shiyang Jia, Clinical Research Associate
Dr Thao Le, Senior Research Fellow
Dr Joanna Loh, Research Fellow
Mr Karthik Mandapaka, Data Analyst
Dr Yayehirad Melsew, Senior Data Officer
Dr Elizabeth Moore, Research Fellow
Ms Laura Oliver (to mid-2024)
Dr Catriona Parker, Research Fellow
Ms Susi Rosin, Senior Administrative Officer
Mr Aiden Scholey, Research Officer
Dr Laura Sellick, Research Officer
Ms Prislene Singh, Research Officer
A/Prof Rosemary Sparrow, Adjunct Associate Professor
Dr Gaya St George, Research Officer (to mid-2023)
Ms Robyn Sutherland, Research Officer
Dr Sasha Taylor, Research Fellow
Ms Tina van Tonder, Project Manager (to mid-2024)
Dr Cameron Wellard, Data Manager
Dr Lauren Young, Program Manager
Dr Tracy Zhang, Research Officer

Clinical Fellows

Dr Gemma Crighton
Dr Victor Lin
Dr Marsali Maclean

Postgraduate Students

Ms Sara Carrillo de Albornoz
Dr Khai Li Chai
Ms Eliza Chung
Dr Andrew Flint
Dr Lucy Fox (University of Melbourne)
Mr Philip Kiely
Dr Nathanael Lucas
Dr Aleece McPhail
Dr Allison Mo
Dr Elizabeth Prime
Ms India Read
Dr Brenton Sanderson (Macquarie University)
Dr Briony Shaw
Dr Jasmine Singh

Undergraduate RMIT Students

Mr William Chau (2023)
Ms Jenny Le-Nguyen (2024)
Ms Tasmyn Greentree (2025)

OUR STRATEGIC APPROACH

Vision

To improve the evidence base guiding treatments for people with blood diseases, and the use of blood products for transfusion.

Mission

We are committed to conducting research that underpins policies and practices supporting high-quality patient care and outcomes for people living with a range of blood diseases, and those requiring blood transfusions, as well as better stewardship of precious blood product resources.

WHAT WE DO

Areas of Excellence	Priorities
Major Collaborative Programs • Blood Synergy • OPTIMAL Centre of Research Excellence	• Generating new knowledge • Building transfusion research capacity • Translating research findings into policy and practice • Informing future transfusion research
Health Economic Analyses • EpiMAP Myeloma • TRUST-Ig • TRUST-MDS	• Identifying the full costs of treatment • Modelling and monitoring demand for high-cost therapies
Data Linkages • National Transfusion Dataset (NTD) • Clinical registry, administrative datasets & other linkages	• Establishing reseach infrastructure • Novel methods
Clinical Trials • TREATT • RATIONAL Platform Trial (incl. the RATIONALISE trial) • FEISTY II • REDDS2 • DIAAMOND • FRAIL-M • MY-PROMPT-2 • ITACS • REMAP-CAP & ASCOT	• Closing evidence gaps • Delivering patient-centered care • Building clinical trials infrastructure • Incorporating biological, qualitative and health economics analyses to capture a broad spectrum of key outcomes
Clinical Registries • Aplastic Anaemia & Other Bone Marrow Failure Syndromes Registry (AAR) • Asia-Pacific Myeloma & Related Diseases Registry (APAC MRDR) • Australia & New Zealand Myeloma & Related Diseases Registry (ANZ MRDR) • Haemoglobinopathy Registry (HbR) • Lymphoma & Related Diseases Registry (LaRDR) • Neonatal Alloimmune Thrombocytopenia (NAIT) Registry • Thrombotic Microangiopathies (TMA) Registry	• Clinical benchmarking • Identifying variations in practice and access to care • Monitoring disease trends and outcomes • Monitoring uptake of new diagnostics and novel therapies • Contemporary Australian health economic analyses • Opportunities to capture patient-reported outcomes and patient-reported experiences
Registry Programs • Global Lymphoma Registry Alliance (LyRA)	• Knowledge sharing • Data intraoperability
Observational Studies & Evidence Synthesis • Cochrane reviews • Blood use in ICU (incl. InPUT) • Immunoglobulin replacement	• Identifying knowledge gaps • Informing future research • Emerging diseases and treatments

AWARDS & RECOGNITION 2023-2024

National Health & Medical Research Council (NHMRC), David Cooper Award

Prof Zoe McQuilten received the award as principal investigator of the ASPREE-CHIP-XT study, which was the highest ranked grant application under the annual NHMRC Clinical Trials and Cohort Studies Grant Scheme.

Australian & New Zealand Society for Blood Transfusion (ANZSBT), Peter Schiff Award

Mr Neil Waters was the 2024 recipient of the ANZSBT Peter Schiff Award, recognising his longstanding contributions to transfusion medicine and research.

School of Public Health & Preventive Medicine (SPHPM), Research Excellence Awards 2023

Dr Thao Le received the ECR Best Paper award for her 2022 paper published in *The Lancet Healthy Longevity*, titled *A multistate model of health transitions in older people: a secondary analysis of ASPREE clinical trial data.*

Monash University Faculty of Medicine Nursing and Health Sciences (FMNHS), Early Career Postdoctoral Fellowship

Dr Catriona Parker was a recipient of a 2024 fellowship to support her program of research that integrates lived experience into haematological supportive care research.

Victorian Comprehensive Cancer Centre (VCCC), Tony Burgess Medal

Prof Eliza Hawkes was the recipient of the 2024 Tony Burgess Medal, which honours an early/mid-career researcher across the VCCC alliance membership for their innovative and collaborative program of cancer-focused research.

International Society for Blood Transfusion (ISBT) Award

Mrs Linley Bielby, a long-time partner to the Transfusion Research Unit, and chief investigator on the Blood Synergy program and OPTIMAL Centre of Research Excellence, received the ISBT Award in 2024 for her outstanding contribution to transfusion education, practice and research.

King’s Birthday Honours List, Order of Australia (AO)

Prof Erica Wood received an AO in the 2023 King’s Birthday Honours List for her distinguished service to transfusion medicine, haemovigilance, haematology, and national and international organisations.

Australian Academy of Health and Medical Sciences (AAHMS), 2023 Fellow

Prof Erica Wood was inducted as a new Fellow of the Australian Academy of Health and Medical Sciences in 2023 in recognition of her outstanding achievements and contributions to the sector.

School of Public Health & Preventive Medicine (SPHPM), Research Excellence Award 2023

Head of School Award for Research Excellence.

BLOOD SYNERGY PROGRAM

Blood Synergy

Authored by: Dr Karina Brady

bloodsynergy.org

The Blood Synergy is an NHMRC-funded research program focused on making better use of blood. The program is led by the Transfusion Research Unit at Monash University, and brings together a multidisciplinary team of Australian and international experts in haematology and transfusion medicine, emergency and trauma, critical care, anaesthesia, laboratory science, public health, epidemiology, biostatistics, health economics, and health systems research. and input from people with lived experience of transfusion.

The Blood Synergy was established in 2020 to address Australia's national transfusion research priorities, and over the last five years the team has built a large program that provides new knowledge on how blood is used in Australia and, ultimately, how its use can be improved and made more cost-effective. The program's flagship research activities are the National Transfusion Dataset (NTD), the FEISTY II clinical trial, the InPUT study, and the RATIONAL platform trial. The Blood Synergy also supports many additional projects (some described later in this report), including REDDS2, TRUST-MDS, TRUST-Ig, and observational studies of transfusion in intensive care, and immunoglobulin use in post-allogeneic stem cell transplantation.

The collaborative network has expanded to over 50 investigators, working group members, students and staff, and produced more than 60 publications to date.

Over the last two years a key activity undertaken by the program was our Community Consultation project, which sought to identify the top 10 transfusion related research priorities through consultation with transfusion-recipients, blood donors, policy-makers, medical scientists, and a broad range of healthcare professionals. The outcomes of the project were presented at the International Society of Blood Transfusion (ISBT) Congress 2024 by Mr Neil Waters, and at Blood 2024 by Dr Catriona Parker, and are set to be published in 2025.

In both 2023 and 2024 we once again held our annual Open Meeting, hybrid meetings that showcase research outcomes from the program and our collaborators, as well as facilitating discussion between clinicians, scientists, researchers, policy-makers, and the wider community. The keynote speakers for these meetings were Prof Michael Murphy and Prof Jeannie Callum, who provided an overview of transfusion research in the UK and Canada, respectively.

In 2024 the Blood Synergy team also launched the Transfusion in Trauma workshops, held in partnership with the SWAN conference in February, and the Trauma 2024 meeting of the Australian and New Zealand Trauma Society in October. The meetings brought together experts in transfusion, trauma medicine and prehospital care to hear about current clinical trials, discuss contentious topics in trauma resuscitation, and commence collaborative development of a research roadmap.

In late 2024 the team was successful in its bid to extend the program by securing a further five-year grant, the first program to receive consecutive funding through the NHMRC Synergy scheme.

NATIONAL TRANSFUSION DATASET

Authored by: Ms Kirsten Caithness

transfusiondataset.com

The National Transfusion Dataset (NTD) collects information about where, when, and how blood products are used across all clinical settings, and as the number of contributing hospitals and analysed NTD data increase, is forming the first integrated national database of blood use in Australia.

The dataset includes clinical and laboratory data on all adult recipients (18+ years) transfused any type of blood component during their hospital admission with the aim of closing the vital haemovigilance loop.

The NTD was formed through the incorporation of the established Australian and New Zealand Massive Transfusion Registry (ANZ-MTR) and pilot Transfusion Database (TD) project. While the ANZ-MTR had a unique focus on massive transfusion, the NTD (and trial TD) capture data on transfusions of all blood products. The NTD also links datasets of blood utilisation including prehospital and clinical registry data.

The recent focus of the NTD has been on establishing robust database infrastructure, expanding data collection efforts and refining processes to support long-term project development and sustainability.

Using ANZ-MTR data we launched a pilot interactive blood usage dashboard. The dashboard (available on the NTD website) showcases massive transfusion data from the years 2007 to 2018 and offers a glimpse into the capabilities of building a national dataset. This will eventually be updated to use NTD data as the number of contributing hospitals increase.

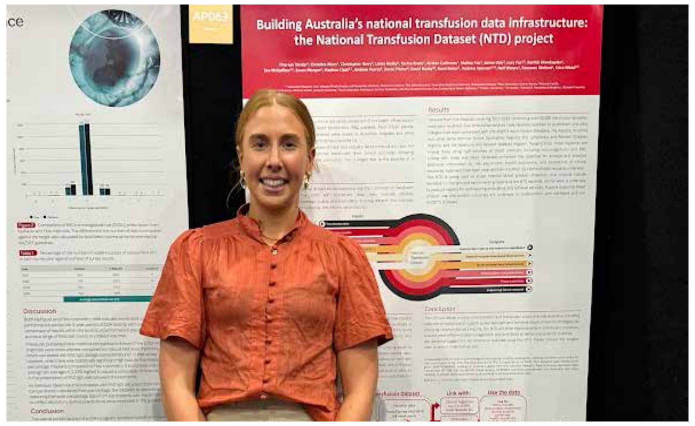
The NTD also partnered with Alfred Health to pilot the application of the CogStack platform; a natural language processing (NLP) and artificial intelligence (AI) technology that extracts information in any format, including structured and unstructured information within a scanned document or image. NLP is a branch of AI that allows computers to understand, interpret and manipulate written or spoken human language.

The NTD-CogStack pilot examines the feasibility of using information from unstructured data such as medications, point-of-care testing results and transfusion-related adverse events from electronic medical records, to supplement transfusion data in the NTD. This partnership will strengthen the data coverage and quality of data in the NTD.

Throughout 2023 and 2024, the NTD team have actively contributed to transfusion research through presentations, publications, and stakeholder engagement. Outcomes of the ANZ-MTR were presented at the 2023 International Society of Blood Transfusion (ISBT) Congress in Gothenburg by Mrs Helen Haysom, and at the European Hematology Association (EHA) 2024 Congress in Madrid by Dr Marsali MacLean. Additionally, Mr Chris Berry shared insights on the Alfred Health CogStack collaboration project at the Blood 2024 meeting.

In addition to these research contributions, the NTD continues to maintain strong connections with the wider transfusion community. We hosted a meeting of NTD stakeholders at the Blood 2023 conference, and presented updates on our research at the 2023 and 2024 Blood Synergy Open Meetings, as well as at the Australian Research Data Commons All Staff Retreat 2023, the Blood Matters 2024 Transfusion Nurse Forum, and Blood Management Summit for Scientists 2024.

The NTD has recorded over 50,000 transfusion episodes to date and continues to grow. With more than 40 sites approved to participate across Australia, efforts are underway to access additional data from sites to support expanded uses, including registry linkages, donor data, and prehospital insights.



Building Australia's national transfusion data infrastructure: the National Transfusion Dataset (NTD) project

National Transfusion Dataset

Using machine learning to predict transfusion need

Presented by:
Chris Berry | Data Scientist | AlfredHealth
On behalf of the National Transfusion Dataset team

theAlfred transfusion MONASH University Blood Synergy

OPTIMAL CENTRE OF RESEARCH EXCELLENCE

OPTIMAL
Improving immunoglobulin use
and clinical outcomes

Authored by: Dr Lauren Young

optimalcre.org

OPTIMAL is an NHMRC-funded Centre of Research Excellence (CRE) which brings together patients, leading researchers, health professionals and health economists to generate new knowledge and research capacity required to design, build and implement better systems for delivering immunoglobulin therapy and improve clinical outcomes for patients.

The intended outcomes of the CRE scheme are to:

- support the conduct and development of innovative, high quality, collaborative research
- promote effective translation of research into knowledge gain, health policy and/or practice
- foster and build capacity and capability in the health and medical research workforce
- provide opportunities to expand and improve collaborations between research teams

OPTIMAL is generating new knowledge across two broad steams:

1. Immunoglobulin replacement to prevent infections in patients with blood cancers
2. High-dose (immunomodulatory) immunoglobulin in two exemplar groups: patients with Kawasaki Disease & myasthenia gravis

Awarded by the National Health and Medical Research Council (NHMRC) in late 2023, more than 50 researchers, health professionals, patients, students and partners have joined our new research network. Critical to our success has been the partnerships we have fostered with community organisations, including Myeloma Australia, Lymphoma Australia, the Kawasaki Disease Foundation and Myasthenia Alliance.

OPTIMAL's projects and initiatives, all aim to address national priorities and inform national and international policy and practice to ensure immunoglobulin is being used where it is the most valuable, and reduce costs to the community.

These include:

- New knowledge:
    - Developing a core dataset on immunoglobulin use and outcomes for patients and families with blood cancers that could be used in future trials as well as in routine clinical care and audits.
    - Working with patients, families, and health professionals to understand how we deliver immunoglobulin therapy to blood cancer patients, both in the hospital and in the community, and use co-design principles to develop a more patient-centred service delivery system.
    - Bringing together data from our systematic reviews, interventional and observational studies to lead the development of evidence-based clinical practice guidelines for immunoglobulin use in blood cancers.
    - Generating new health economics analyses of healthcare resource use and associated costs related to immunoglobulin therapy for patients with Kawasaki Disease and myasthenia gravis, to help measure the true cost of treatment (over and above the price of the product) and help understand the impact of new therapeutics as they become available.

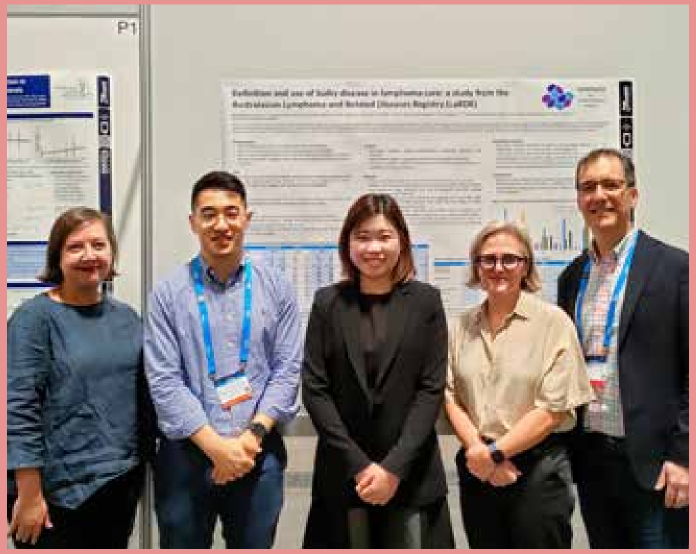
- Capacity building:
    - Supporting PhD student projects across a broad range of methodologies: health system design, health economics and pharmacokinetic/pharmacodynamic modelling.
    - Providing core training and a range of opportunities for career development for PhD candidates, and early to mid-career researchers, via delivery of webinars and field trips and discussions with experts in the field.

Generate
Generate new knowledge that lead to improved Ig use and clinical outcomes

Translate
Promote effective transfer of research outcomes into evidence-based health policy and practice

Build
Develop Australia's Ig research capacity

Collaborate
Bring together patients, researchers, health professionals and health economists



LYMPHOMA & RELATED DISEASES REGISTRY

Lymphoma and Related Diseases Registry

Authored by: Ms Eliza Chung & Ms Jenny Le-Nguyen

lardr.org

LaRDR provides vital contemporary ‘real world’ data for clinical practice, research and health service planning; serves as national research infrastructure; and supports a broad range of research projects including for early- and mid-career investigators and students. LaRDR provides regular data reports to sites to use in benchmarking practice improvement activities.

The coverage of LaRDR participating sites expanded to 38 sites across Australia and New Zealand during 2024, capturing over 1000 newly diagnosed patients every year. Whilst patient data are of utmost importance to the registry, ensuring data quality and completeness is equally critical. The LaRDR Data Quality Reference Group conducts training workshops for data managers and study coordinators at participating sites to support LaRDR data entry and analysis.

The value of registry data has been recognised by governments. The National Blood Authority-funded ICAN Study (Immunoglobulin use and outcomes in CLL And NHL) was completed and the final report submitted to the National Blood Authority in 2023. In 2024, the BrainCAR19 Study, which will utilise LaRDR data as part of its analyses, successfully secured grant funding from the Medical Research Future Fund.

LaRDR published five peer-reviewed manuscripts in 2023-2024 including on the outcomes of HL, relapsed and refractory mantle cell lymphoma and follicular lymphoma patients, and our work has been featured in national professional media such as *the limbic*.

LaRDR has forged robust partnerships with several international consortia. As a consequence of our contributions to large datasets, LaRDR published three manuscripts on advanced stage HL, nodular lymphocyte predominant HL and T-cell lymphoma. In-progress studies and preliminary results were presented in national and international conferences.

LaRDR investigators led the analyses of 15 abstracts, including presentations at scientific meetings of the European Hematology Association and American Society of Hematology.

The Lymphoma and Related Diseases Registry (LaRDR) is a clinical registry collecting health information on patients diagnosed with non-Hodgkin (NHL) and Hodgkin lymphomas (HL), and related diseases, including chronic lymphocytic leukaemia (CLL), and captures over 1000 newly diagnosed patients every year.

The aims of the registry are to:
- Monitor access to care
- Benchmark outcomes nationally and internationally
- Explore variation in practice, process and outcome measures
- Monitor trends in incidence and survival
- Explore the factors that influence outcomes including survival and quality of life, and
- Act as a resource for clinical trials

Since 2022 LaRDR has partnered with the Australasian Lymphoma Alliance and Lymphoma Australia to host collaborative annual open investigator meetings. The Australasian Lymphoma Alliance, founded in 2018, is supported by the Snowdome Foundation as a collaborative working group for lymphoma clinicians and researchers in Asia-Pacific. Lymphoma Australia is the only charitable organisation dedicated to supporting lymphoma patients in Australia, and their team of haematology and oncology nurses provides quality education for health professionals across Australia. We proudly share new data and insights to improve lymphoma patient outcomes. In our open meetings, we bring clinician-researchers, consumer representatives, and patient advocates to the discussions with government, industry, academics and clinical stakeholders.

GLOBAL LYMPHOMA REGISTRY ALLIANCE

Authored by: Ms Eliza Chung & Prof Eliza Hawkes

In 2023 LyRA established a multidisciplinary Steering Committee comprising haematologists, medical oncologists, epidemiologists, and biostatisticians from leading established lymphoma registries in partnership with patient advocates from 11 countries. The committee provides program oversight of the establishment and governance of LyRA, and strategic direction of the future development to implement LyRA's objectives.

In 2023 LyRA conducted the first pilot survey to gather information from all current and potential lymphoma registry and consortia members to understand the diversity and maturity of registries around the globe. Data on the leading country, scale, disease scope, funding type and research capacity of the registries were collected. Survey results were presented in the Annual Investigator Meeting. As LyRA continues to expand, we look forward to welcoming new members.

LyRA held Annual Investigator Meetings alongside the American Society of Hematology Annual Meeting & Exposition in 2023 and 2024. These provided administrative updates on the establishment of the Alliance and discussed future direction of the planned activities with the wider group of over 50 clinician members representing their registries from around the world.

The Global Lymphoma Registry Alliance (LyRA) is a new collaboration of lymphoma registries and major research consortia to synergise knowledge and enhance data interoperability. The membership of LyRA consists of over 30 jurisdictions and continues to grow.

LyRA aims to build a network of:

- People for knowledge sharing
- Registries through formal collaborations
- Datasets with streamlined mechanisms to enable collaborative research

LyRA is proudly supported by the Lymphoma Coalition, a worldwide network of non-profit patient organisations which promote evidence-based practice in lymphoma care.

AUSTRALIAN & NEW ZEALAND MYELOMA & RELATED DISEASES REGISTRY

Authored by: Dr Elizabeth Moore & Dr Tracy Zhang

mrdr.net.au

The Myeloma & Related Diseases Registry (MRDR), established in 2012, is a clinical quality registry dedicated to improving outcomes for patients with multiple myeloma and related conditions, such as plasmacytoma, plasma cell leukaemia, and monoclonal gammopathy of undetermined significance (MGUS).

Through the collection and analysis of real-world data from over 50 participating centres across Australia and New Zealand, the MRDR is building a robust evidence base for optimising diagnosis, treatment, and patient support.

Participating sites receive six-monthly reports comparing their data to the rest of the cohort, enabling clinicians to identify variation in treatment and areas for improvement. Additionally, MRDR data are widely used in research to drive advances in myeloma care and outcomes.

Over 2023-2024, the MRDR achieved significant milestones in research, data reporting, and clinical impact. The registry reached over 8,000 patients recruited across 59 approved sites in all jurisdictions of Australia and New Zealand. MRDR data played a key role in supporting a successful application to the Medical Services Advisory Committee. Additionally, Professor Joy Ho's MRDR paper on renal impairment at diagnosis and its impact on outcomes was cited in the latest International Myeloma Working Group recommendations for managing renal impairment (Lancet Oncology, 2023).

The Myeloma 1000 Project, a biobank sub-project of the MRDR, expanded substantially over 2023-2024, with samples now collected from more than 740 patients. The Spencer laboratory's Myeloma Research Group secured MRFF grant funding to develop a platform for functional high-risk multiple myeloma using biobank data (ZEPFHR MM trial). The biobank will also support another MRFF-funded study working toward a liquid biopsy for multiple myeloma.

The MRDR produced seven key peer-reviewed publications during this period, including a cytogenetic biomarker study on the prognostic impact of t(11;14) and an analysis of real-world outcomes in relapsed refractory patients exposed to multiple treatments. A paper on a major MRDR project detailed the development and validation of a discrete-event simulation model (EpiMAP) using MRDR data. This model demonstrated robust performance and has promising applications in economic evaluations, treatment demand forecasting, and assessment of new therapies.

The registry also contributed to an important study on immunoglobulin use and its impact on myeloma survival (Chai, et al. eJHeam 2024). Findings indicated no survival benefit, underscoring the urgent need for well-designed trials to guide patient selection for immunoglobulin replacement therapy, and explore alternative infection prevention strategies.

Beyond publications, the MRDR actively engages in professional and scientific forums, delivering over 30 presentations during 2023-24 at key national and international haematology and oncology conferences. These presentations reinforce the registry's role in shaping best practices in myeloma treatment. Through ongoing research, data sharing, and professional engagement, the MRDR has strengthened its position as a leading resource for real-world evidence in myeloma, driving improvements in patient outcomes across the region.

ASIA-PACIFIC MYELOMA & RELATED DISEASES REGISTRY

Authored by: Ms Naomi Aoki

apacmrdr.org

The Asia-Pacific Myeloma and Related Diseases Registry (APAC MRDR) was established in 2018 by Monash University, in collaboration with clinical and research representatives from member countries.

The registry collects comprehensive health data on patients diagnosed with multiple myeloma and related conditions, such as plasmacytoma, plasma cell leukemia, and monoclonal gammopathy of undetermined significance (MGUS) across the Asia-Pacific region.

Participating sites are located in China, Korea, Malaysia, Singapore, and Taiwan. The APAC MRDR is a parallel study to the Australian & New Zealand Myeloma & Related Diseases Registry (ANZ MRDR).

The registry has experienced substantial growth over the past two years, with enrolment nearly doubling to over 2,400 patients by the end of 2024. This is partly attributed to the inclusion of China, with over 400 patients now enrolled from Beijing Chaoyang Hospital and Renji Hospital in Shanghai. Currently, 25 hospitals are contributing to the study, with more hospitals and countries expressing interest in participating.

With the registry data maturing, it is increasingly being used for research purposes. In 2023, Dr Khai Li Chai and colleagues published a manuscript titled 'Variation in immunoglobulin use and impact on survival in myeloma' in eJHaem, the open access journal of the British Society for Haematology. In 2024, the APAC MRDR methodology manuscript was published in the BMC Medical Research Methodology, detailing the registry's design and development, initial data, progress and future plans. Furthermore, Dr Ken Lim and colleagues published an editorial in the Clinical Lymphoma Myeloma Leukemia Journal describing the association of 1q21 gain and amplification with poorer outcomes in daratumumab-treated multiple myeloma patients.

To showcase the research utilising registry data and facilitate new and ongoing collaborations, the APAC MRDR hosted two Open Meetings in 2023 and 2024. These meetings brought together investigators, study coordinators, industry partners, and researchers from the ANZ and APAC regions, fostering a collaborative environment for future research endeavours.

APLASTIC ANAEMIA & OTHER BONE MARROW FAILURE SYNDROMES REGISTRY

Authored by: Ms Vanessa Fox

aaregistry.org.au

The Aplastic Anaemia and Other Bone Marrow Failure Syndromes Registry (AAR) is a clinical quality registry which collects data on individuals diagnosed with aplastic anaemia and inherited bone marrow failure syndromes (BMFS).

Its goal is to more accurately determine the prevalence of these diverse conditions in Australia and investigate factors that affect clinical outcomes. Compiling a complete dataset is crucial for understanding the clinical progression and long-term outcomes of patients with both acquired and inherited BMFS. A complete national picture of BMFS will further advance and support scientific studies of these rare diseases.

There are currently 39 sites across Australia contributing data, and we've recently recruited our 600th patient, a remarkable achievement for a rare disease registry. A little more than half of participants (59%) have an acquired bone marrow failure diagnosis, with the remaining participants diagnosed with an inherited BMFS.

In 2023 the AAR established a new collaboration with Biobanking Victoria to launch the Australian Marrow Failure Biobank (AMFB), which aims to provide a centralised resource for marrow failure research. Thanks to support from Maddie Riewoldt's Vision, the AMFB will collect, process and store matched tissue samples from participants with an established or newly presenting diagnosis of BMFS. It combines clinical data from the AAR with linked biological samples, facilitating insights into disease mechanisms and supporting research into novel therapeutic strategies such as gene editing and gene therapy.

The AAR is also collaborating with investigators nationally to participate in the MRFF-funded IBMDx whole genome transcriptome sequencing study. This study aims to provide accurate diagnosis for both paediatric and adult patients experiencing bone marrow failure and related disorders. The AAR serves to capture long term follow up and clinical outcomes of patients enrolled in this study.

The AAR publication in Best Practice & Research Clinical Haematology (Fox, et al. 2023) describes the registry and how it aims to serve as a resource for research and practice improvement. An oral presentation was also delivered at the 2023 National Symposium on Bone Marrow Failure Syndromes with Professor Erica Wood and Professor Melissa Southey providing a registry update.

NEONATAL ALLOIMMUNE THROMBOCYTOPENIA REGISTRY

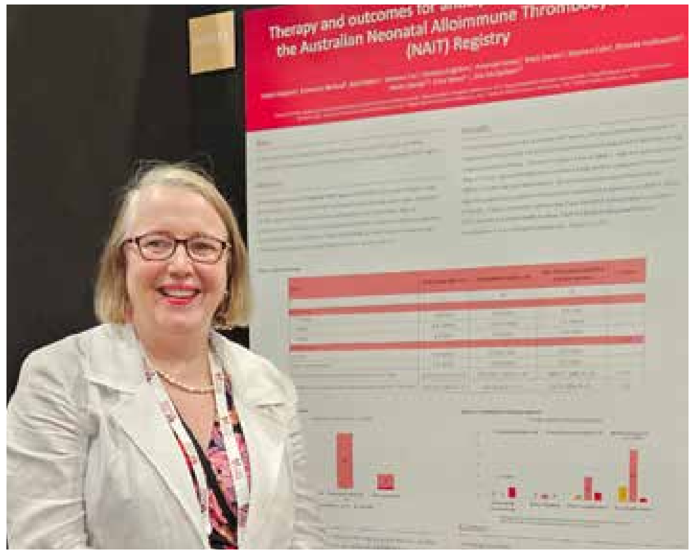
Authored by: Mrs Helen Haysom

Neonatal alloimmune thrombocytopenia (NAIT) is an uncommon but serious condition that can lead to severe haemorrhage in a fetus or newborn.

The Australian NAIT Registry, established in 2009, collects real-world data about clinical management and outcomes of NAIT pregnancies in Australia. It aims to better define the incidence, natural history, and clinical outcomes of NAIT and provide information on the range of therapeutic strategies (such as immunoglobulin and platelet transfusions) used in the treatment of NAIT patients. This includes exploring factors influencing clinical outcomes and better defining optimal management of NAIT patients in order to inform and inspire future hypothesis-driven research in this area.

The NAIT Registry continues to accrue details of cases of this rare condition, with a total of 176 babies (including 8 sets of twins) and 188 pregnancies (from 147 mothers) now available in the registry.

The latest analysis of therapies and outcomes for anticipated NAIT pregnancies was presented at the Blood 2024 conference in Brisbane, in October 2024. The results showed that where NAIT was anticipated in pregnancy, treatment with immunoglobulin was associated with better outcomes for the baby.



THROMBOTIC MICROANGIOPATHIES REGISTRY

Authored by: Dr Brendan Gillespie

monash.edu/medicine/sphpm/tma

Thrombotic Microangiopathies (TMA) are a collection of rare but very serious diseases including thrombotic thrombocytopenic purpura (TTP), haemolytic uremic syndrome (HUS) and atypical haemolytic uremic syndrome (aHUS).

Many fundamental questions regarding the true incidence and natural history of these conditions, and the best treatment approaches, remain unclear. The relative rarity of these diseases makes it difficult to improve our understanding, or to conduct trials of new therapies. The national registry of patients provides an important community resource to gather data about these conditions, and so improve the care of patients with TMA. The TMA registry is a live database, and is active at 41 sites.

The TMA registry was established in 2008 and contains longitudinal data for 427 patients diagnosed with thrombotic microangiopathies, and survey data from clinicians. This long running registry is continuously expanding, with additional patients added in 2023 and 2024.

Susbtantial variation in practice between Australian sites has been documented for diagnosis, management and long-term follow-up of patients. Survey data from the registry was presented at Blood 2024, and data arising from this registry were recently published in The American Journal of Haematology (Jacobs, *et al.* 2024). This important publication investigated whether immune thrombotic thrombocytopenic purpura (iTTP) displayed seasonal variation in its development and relapse. This has been suggested in previous studies, however methodological and sample size limitations have hindered this association from being rigorously assessed. This study found that the observed proportion of iTTP episodes during the winter was significantly greater than expected if equally distributed across seasons, and that the distance from the equator and mean temperature deviation positively correlated with the proportion of iTTP episodes during winter. Similarly, acute iTTP episodes were associated with the winter season and colder temperatures, with a second peak during summer. Occurrence during winter was most pronounced at sites further from the equator and/or with greater annual temperature deviations.

HAEMOGLOBINOPATHY REGISTRY

Authored by: Mrs Helen Haysom & Ms Melissa Chee

The Haemoglobinopathy Registry (HbR) is a collaborative effort between people living with haemoglobinopathies, clinicians, hospitals and Monash University. Its purpose is to address critical questions about the health needs of individuals living with conditions such thalassaemia and sickle cell disease.

Since inception of the HbR in 2013 our team have developed strong connections with the two key consumer advocacy groups, Thalassaemia and Sickle Cell Australia (TASCA) and the Australian Sickle Cell Advocacy (ASCA). In January 2024 we met with the TASCA steering committee to give an update on the registry and outline how the data we collect can be used to improve the provision of health care for people living with haemoglobinopathies.

Prof Erica Wood was invited to present an HbR update at the ASCA forum in September 2024. Held at Parliament House in Canberra, this event was attended by politicians, policymakers, pharmaceutical companies, patient advocates, and healthcare professionals from across Australia, and provided an opportunity to highlight the importance and benefits of capturing real-world registry data on these important conditions and their impact on the lives of patients and their families.

In 2024 the registry published the first analysis of data specific to people living with clinically significant sickle cell disease in Australia. The paper, published in the Internal Medicine Journal, journal of the Royal Australasian College of Physicians (Nelson, et al. 2024), described participant characteristics and diagnoses, elucidating demand for current and novel therapy, including transfusion, and facilitating the planning of service for this vulnerable population.

Haemoglobin disordes, such as thalassaemia and sickle cell disease are worldwide issues affecting millions of people. Many patients require substantial support with red cell transfusion. However, how many people are living with these conditions in Australia, their clinical management and outcomes are unknown.

HEALTH ECONOMICS

Authored by: Dr Adam Irving

The health economics workstream at the Transfusion Research Unit aims to optimise resource allocation and maximise patient outcomes in blood product utilisation and blood disorder management.

Our objectives include
- evaluating cost-effectiveness of transfusion practices
- identifying efficiency opportunities throughout the blood supply chain
- conducting economic analyses of novel treatments for haematological conditions including malignancies, and
- developing value-based frameworks for clinical decision-making

We aim to ensure sustainable access to life-saving blood products whilst improving quality of life for patients with blood disorders through evidence-based economic modelling and policy recommendations.

The health economics team are involved in a wide range of projects across the Transfusion Research Unit, and provide training to higher degree students in cost analysis of blood products and blood disorders. All hold joint appointments with the Centre of Health Economics, Monash Business School.

EpiMAP Myeloma

We completed and published a discrete event simulation model of multiple myeloma disease outcomes and treatment pathways. This model will be used by the government to determine which novel treatment strategies are cost-effective for myeloma patients.

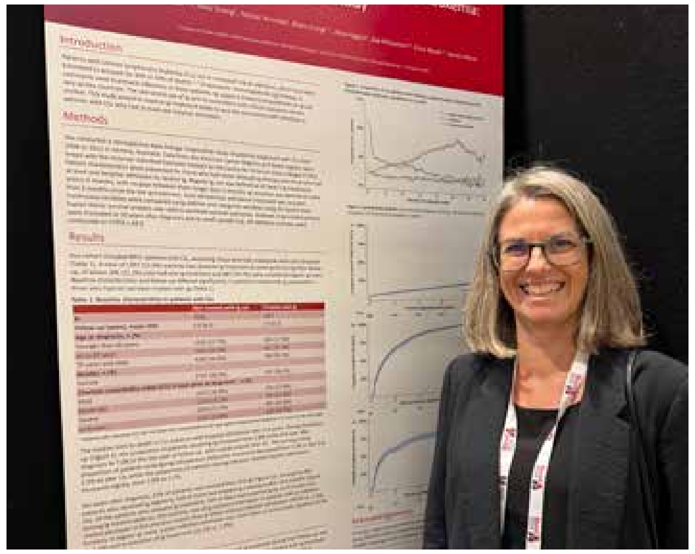
VALUE-Ig

We are analysing administrative Victorian hospital data to develop an infection risk model for patients with multiple myeloma. This model will be used by clinicians and patients to make informed choices around immunoglobulin replacement therapy.

Pathogen reduction technology

We published methods for presenting the results of an economic evaluation when the benefit is contingent on a highly uncertain event. We used the emergence of a novel virus and pathogen reduction technology for platelets as the exemplar, which is being used by the UK's National Health Service Blood and Transplant in negotiations with manufacturers.

Systematic reviews and evidence synthesis projects are detailed on page 37.



TRUE COST OF TRANSFUSION

Authored by: Ms Sara Carrillo de Albornoz, Mrs Helen Haysom, & Dr Allison Mo

The True Cost of Transfusion (TRUST) projects aim to estimate the total healthcare-related costs associated with transfusion, beyond the cost of the blood product alone. To do so, we measure all the hospital resources used (for example, pharmacy and laboratory testing and consumables) and accurately map the time it takes hospital staff to complete the different activities and processes involved in the delivery of blood products to the patient.

In 2023-2024 we undertook two TRUST projects in parallel: TRUST-Ig, which estimates the total cost of an immunoglobulin (Ig) infusion in patients with haematological malignancies, and TRUST-MDS, which calculates the total cost of red blood cell transfusion in people with myelodysplastic syndromes (MDS) receiving outpatient transfusions. We also used the costing data collected as a part of TRUST-Ig to compare the overall cost of intravenous Ig treatment (an in-hospital therapy) with that of subcutaneous Ig treatment (self-administered in the patient's own home).

The collection of data for these projects was undertaken at Monash Health during 2023-2024, and is now complete. Full analysis of the results will be finalised in 2025, with publication of the outcomes to follow soon after. The study protocol and preliminary results for TRUST-MDS were presented by Dr Allison Mo at the Blood 2024 conference and the International Society of Blood Transfusion (ISBT) conference in Spain 2024.

RATIONAL PLATFORM TRIAL & RATIONALISE TRIAL

Authored by: Ms Jennifer Griffiths

rationalisetrial.com

The RATIONAL-PT (platform trial) and RATIONALISE trials are two very closely related studies investigating the safety and effectiveness of different infection prevention strategies in patients with blood cancers and low levels of certain antibodies (immunoglobulins).

Whilst patients with blood cancers are often treated with immunoglobulin replacement therapy, there is limited scientific evidence to support this treatment and therefore vital information remains unknown. This includes the safety and effectiveness of this treatment compared to other options (such as oral antibiotics), when is best to start therapy, when it is safe to be stopped, and the optimal dose of immunoglobulin to achieve the best outcomes for patients. Moreover, treatment of the underlying blood cancers has changed enormously since those studies were published in the 1980s and 1990s. There are also few data available on patient perspectives and preferences for different treatments, the cost-effectiveness of the different treatment options, and the relationship between treatment strategy and patient immune function. The RATIONAL-PT and RATIONALISE trials aim to address these evidence gaps.

In 2023, the RATIONALISE trial team celebrated the recruitment of their first participant to the project. There are now six sites across Australia that have joined the trial and work has commenced on opening RATIONAL-PT.

Funded subsequently to RATIONALISE, the RATIONAL-PT project uses a novel platform trial design to rapidly assess multiple treatment strategies compared to a traditional trial design. This design allows for increased efficiency in trial processes whilst allowing for trial outcomes to be assessed as soon as there is sufficient evidence, and the flexibility for additional treatment strategies to be added to the project in future. RATIONAL-PT expands upon the work of the RATIONALISE trial and poses additional research questions that could not be answered within the RATIONALISE trial alone.

By the end of 2024, four Australian hospital sites were actively preparing submissions for local authorisation to commence the project and discussions were underway with over 15 additional Australian hospital sites regarding possible future participation in the trial.

RATIONAL-PT has also generated international interest and activities commenced in 2024 to expand the trial to New Zealand and Canada. The RATIONAL-PT team are looking forward to activating the first trial sites and opening the trial to recruitment in 2025.

TREATT

Authored by: Ms Robyn Sutherland

treatt.org

TREATT was a phase III double blind, randomised controlled trial evaluating the safety and efficacy of tranexamic acid in patients with haematological malignancies and severe thrombocytopenia. This study tested whether tranexamic acid, an inexpensive and widely used anti-fibrinolytic agent that prevents clot breakdown, is an effective treatment for bleeding in patients with haematological conditions undergoing intensive chemotherapy or haematopoietic stem cell transplantation.

The trial reached its participant recruitment target in 2022 and the first results were presented at the American Society of Hematology in 2023. The trial found no difference in the proportion of participants who died or had WHO grade 2 or higher bleeding, and no difference in thrombotic events. The investigators' conclusion that there is insufficient evidence to support routine use of tranexamic acid to reduce bleeding in patients with haematological malignancies undergoing intensive chemotherapy was published in Lancet Haematology in 2024.

This project was an international collaboration between NHS Blood and Transplant (NHSBT) in the UK and the Transfusion Research Unit and involved researchers and clinical teams from a number of hospitals in both the UK and Australia. The Australian arm of the trial was funded by the NHMRC and the Australian and New Zealand Society of Blood Transfusion (ANZSBT).

MY-PROMPT-2

Authored by: Dr Brendan Gillespie

Routine monitoring of patient-reported symptoms for people with solid tumours can improve outcomes, such as health-related quality of life, symptom control, and the tolerability of chemotherapy. However similar data for haematological malignancies, and particularly multiple myeloma, remain limited. Data from the Myeloma & Related Diseases Registry (MRDR) indicate that premature therapy cessation can reduce survival benefits that would otherwise be achieved with optimal duration on therapy.

MY-PROMPT-2 aims to assess if increasing the awareness of emerging patient symptoms by feeding back the results of a patient-reported questionnaire to clinicians leads to more timely intervention and optimised duration of therapy.

The use of patient-reported outcome measures may improve outcomes for multiple myeloma patients by notifying clinicians of emerging symptoms and side effects in a timely way. This may in turn facilitate a more proactive response and ultimately lead to extended durations on therapy and maximise depth of the treatment response. In doing so, these high-cost therapies could be used more cost-effectively and yield better outcomes for patients.

The MY-PROMPT-2 study is funded by the Medical Research Future Fund and currently recruiting across eight trial sites in Australia. The MY-PROMPT-2 study protocol was presented at Blood 2023.

DIAAMOND

Authored by: Ms Robyn Sutherland

The DIAAMOND-Ava trial is a single-arm, open-label registry-based Bayesian Optimal phase II trial examining the use of the thrombopoietin-receptor agonist avatrombopag with immunosuppressive therapy (IST) in patients with severe aplastic anaemia. The trial is being conducted to determine whether oral thrombopoietin-receptor agonist avatrombopag can increase blood counts and reduce the need for blood transfusions and supportive care, including hospital admissions. It also evaluates the safety of adding avatrombopag to IST in the treatment of severe aplastic anaemia.

The DIAAMOND trial closed in January 2024, following the recruitment 80 participants across the 12 registry sites. A protocol paper was published in BMJ Open in 2024, and primary analysis of data for newly diagnosed patients (DIAAMOND-FIRST) was presented at the American Society for Hematology meeting in 2024 by Prof Zoe McQuilten. A poster reporting the molecular findings was also presented at this same meeting by Dr Lucy Fox.

The first results from the DIAAMOND-FIRST analysis are expected to be published in 2025.

ASPREE-CHIP-XT STUDY

Authored by: Dr Jasmine Singh

ASPREE-CHIP-XT is a sub-study of the ASPREE (Asprin in Reducing Events in the Elderly) trial. Clonal haematopoiesis of indeterminate potential (CHIP) is a condition where blood cells acquire mutations in genes associated with blood cancers, even though individuals have no symptoms of a blood disorder. Over time, people with CHIP have an increased risk of developing blood cancers and other non-blood disorders including heart disease. However, little is known about how CHIP evolves over time. In particular, there are no known interventions to prevent or treat CHIP, and it is not known whether CHIP clones should be monitored in practice.

ASPREE was a large, five-year randomised controlled trial in initially healthy, community-dwelling older adults without underlying cardiovascular disease. It investigated whether low-dose aspirin affected health outcomes including cardiovascular disease and overall survival. After the completion of the intervention phase in mid-2017, the cohort continues to be followed up as part of an ongoing observational study, ASPREE-XT. ASPREE-CHIP was a sub-study where we performed targeted sequencing for CHIP to investigate if CHIP is associated with clinical outcomes in initially healthy older individuals, and whether, and if so how, and how often, in clinical practice the effect of aspirin varies in individuals with or without CHIP.

The ASPREE-CHIP-XT study commenced in 2024, and will investigate what happens to CHIP clones over time by sequencing individuals at three time points. The aims of ASPREE-CHIP-XT are to understand the factors that contribute to growth of CHIP clones, and the implications of growing clones on clinical outcomes. Additionally, the study aims to explore links between CHIP, inflammation and outcomes.

The CHIP study is funded by an NHMRC Clinical Trials & Cohort Studies grant, and received an NHMRC Excellence Award as the top-ranked application for 2023 (chief investigator Prof Zoe McQuilten pictured below at the NHMRC awards ceremony).

REDDS-2

Authored by: Dr Brendan Gillespie

monash.edu/medicine/redds2

As evidence relating to the optimal frequency of red cell transfusions for transfusion-dependent patients with myelodysplastic syndromes (MDS) is sparse and few patient experiences or preferences have been evaluated to date, this trial aims to provide essential data to support practices that best promote the health and wellbeing of patients with MDS.

REDDS-2 is a collaboration between Monash, NHS Blood and Transplant in the UK, and colleagues in the Netherlands. It builds on the experience from the initial REDDS pilot trial of red cell transfusion support for patients with myelodysplastic syndromes. In Australia it is funded by the National Blood Authority and the Australian and New Zealand Society of Blood Transfusion, and forms a major part of PhD studies for Dr Allison Mo.

A total of 9 study sites are open across Australia, UK and the Netherlands, and patient recruitment is ongoing. The protocol for REDDS 2 was published in Transfusion (Mo, et al), and preliminary data presented at Blood 2023 as well as the International Society of Blood Transfusion (ISBT) 2023 Congress.

REDDS2 is a feasibility study evaluating differences in red blood cell (RBC) transfusion schedules for patients with transfusion-dependent myelodysplastic syndromes (MDS).

The aim of this study is to investigate the feasibility of a weekly, phenotype- and/or genotype-matched RBC transfusion schedule compared to standard of care transfusion practice, which typically involves transfusions every 3-4 weeks. This study also aims to better understand the experiences of patients and staff members with weekly transfusions compared to standard of care.

SYSTEMATIC REVIEWS & EVIDENCE SYNTHESIS

Authored by: Prof Erica Wood

The Transfusion Research Unit conducts systematic reviews to evaluate the evidence base for transfusion support and for practice across a range of blood disorders, and to identify priority gaps to be addressed. Many of these are led by PhD students or early/mid-career researchers. These include reviews undertaken in partnership with the Oxford-based Systematic Reviews Initiative and the Cochrane Haematology group, and provide opportunities for collaboration with international experts.

International clinical practice guidelines on the use of red cells were published by the Association for the Advancement of Blood and Biotherapies (AABB) and international partners. Prof Erica Wood was a member of the guideline development group. See Carson J et al, JAMA Nov 2023. An update of the guideline incorporating results of the MINT trial (in patients with acute myocardial infarction, published in 2024) is in progress, and an AABB international guideline on platelet transfusion has been accepted for publication.

The need for national clinical practice guidelines in use of immunoglobulin replacement therapy for patients with blood cancers has been identified. The OPTIMAL CRE group is planning to develop national clinical practice guidelines.

In 2023-2024, topic areas where systematic reviews were in progress, or published, include:

- Living systematic reviews of convalescent plasma, hyperimmune immunoglobulin, monoclonal antibodies for management of COVID-19 infection:
  - Iannizzi, Chai, et al. *Cochrane Database Systematic Reviews* May 2023
  - Stadler, Chai, et al. *Lancet Microbe* Nov 2023
- Interventions including immunoglobulin therapy to reduce infections in patients with hematological malignancies:
  - Chai, et al. *Blood Advances* Jan 2023
  - Chai, et al. *Cochrane Database of Systematic Reviews* March 2024
  - Carrillo de Albornoz, et al. *Int J Technol Assess Health Care* May 2024
- Impact of treatments for anaemia on quality of life and physical function in patients with myelodysplastic syndromes:
  - Mo, et al. *Blood Reviews* September 2023
- International definitions of massive transfusion:
  - Lin, et al. *Critical Care* July 2023
- Clonal haematopoiesis of indeterminate potential (CHIP):
  - Singh, et al. *Blood Advances* July 2024
- Efficacy and safety of thrombopoietin-receptor agonists for treatment of aplastic anaemia, led by Dr Elham Ashrafi (in progress)
- Enteral versus parenteral nutrition as nutritional support after allogeneic hematopoietic stem cell transplantation, led by Prof Zoe McQuilten, Dr Sarah Andresen, A/Prof Andrea Henden, and Dr Elham Ashrafi (in progress)
- Outcomes used in randomised control trials evaluating the use of haemostatic interventions in patients with major trauma:
  - Wang, et al. presented at the ANZTS Trauma 2023 conference, October 2023

PHD STUDENTS

Dr Khai Li Chai

Developing new evidence for antibody therapy in the prevention of infections

Supervisors: Prof Erica Wood, Prof Zoe McQuilten

Khai Li's PhD project aims to synthesise evidence to optimise immunoglobulin replacement and other prophylactic interventions from clinical trials, describe current approaches to immunoglobulin replacement in real-world clinical practice, and explore the acceptability of immunoglobulin replacement from the perspectives of people with blood cancers. The project also aims to evaluate the role for convalescent plasma and hyperimmune immunoglobulin in the treatment of SARS-CoV-2 infection. The results will assist clinicians and researchers in designing future clinical trials as well as support the future planning and provision of immunoglobulin resources. Khai Li received a Leukaemia Foundation/HSANZ New Investigator PhD Scholarship.

Dr Andrew Flint

Platelet transfusions in critically ill and bleeding patients

Supervisors: Prof Michael Reade, Prof Erica Wood, Prof Zoe McQuilten

Andrew's PhD investigates platelet transfusions in critically ill and bleeding patients, particularly in intensive care units (ICUs). ICUs are the clincical areas which are the second-largest users of platelet transfusion, and platelets are the second most common transfusion in the ICU. Despite their prevalence, evidence to guide platelet transfusion decisions is limited, and much is unknown about their benefits and harms. Andrew's PhD includes multiple studies (including point prevalence studies, systematic reviews, and observational cohort studies) that investigate platelet transfusion use, current evidence, and the potential benefits and harms in this patient cohort. His PhD projects were supported by a project grant from National Blood Authority.

Dr Aleece MacPhail

Predicting and preventing sepsis in patients with haematological malignancies

Supervisors: Prof Zoe McQuilten, Dr Claire Dendle, Prof David Picher, Prof Monica Slavin, Dr Niccolò Buetti

Aleece's PhD aims to produce a broad overview of sepsis epidemiology and risks, current strategies to reduce infections, and targets for intervention. Amongst the strategies she's examining are immunoglobulin replacement, infection prevention and control (IPC) approaches to reduce hospital-acquired bloodstream infections, and vaccination. Her research methods include registry data, data linkage, cohort studies and surveys of practice. Aleece's PhD studies are supported by a NHMRC postgraduate scholarship.

Dr Allison Mo

Anaemia in Myelodysplastic Syndromes: optimising management and transfusion practices

Supervisors: Prof Erica Wood, Prof Zoe McQuilten

Allison's PhD investigates optimal usage of blood products (in particular, red cell and platelet transfusion) in patients with myelodysplastic syndromes (MDS), a blood cancer which is more commonly seen in elderly people, and how to improve transfusion-related clinical outcomes, including patient-oriented quality of life and physical function outcomes. Her PhD includes systematic reviews, observational studies, data-linkage analyses, health economics analyses and the REDDS2 novel pilot randomised clinical trial. Allison is supported by a HSANZ New Investigator Scholarship, NHMRC postgraduate scholarship, and NBA Patient Blood Management Early Career Research Scholarship.

Dr Briony Shaw

Novel approaches to transfusion to improve supportive care for patients with blood cancers

Supervisors: Prof Erica Wood, Prof Zoe McQuilten, Dr Catriona Parker

Briony's PhD focuses on identifying novel approaches for improving the quality of life and supportive care practices for patients with blood cancers (such as lymphoma, leukaemia and myeloma). This includes connecting with patients and caregivers through qualitative interviews and co-design approaches to identify how patients receive information and make decisions regarding their healthcare and explore current supportive care practices. This information will be used for a pilot study of transfusing blood products in patients' homes to improve patient comfort. Briony received a NHMRC postgraduate scholarship.

Dr Jasmine Singh

Determining the risk factors and consequences of clonal haematopoiesis of indeterminate potential (CHIP)

Supervisors: Prof Zoe McQuilten, Prof Erica Wood, Prof David Curtis, Dr Thao Le

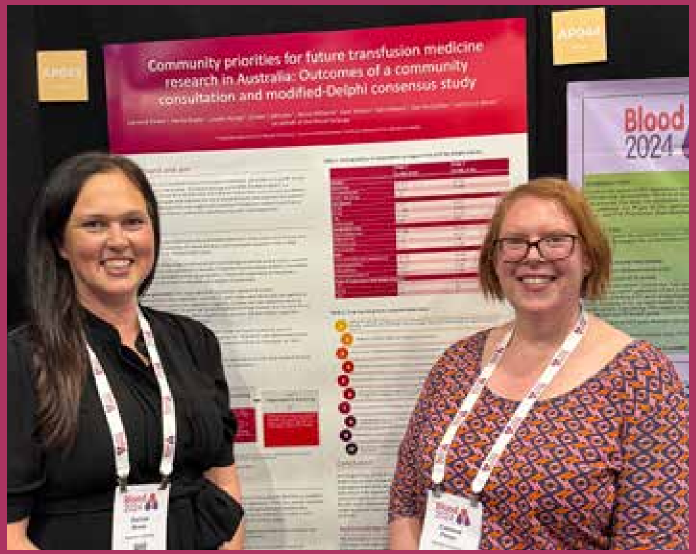
Jasmine's PhD focuses on understanding clonal haematopoiesis of indeterminate potential (CHIP), an age-associated, asymptomatic condition where individuals carry acquired mutations in genes associated with blood cancers, in the absence of an overt blood disorder. In particular, she is investigating associations between CHIP and non-blood cancer outcomes in a large cohort of >9000 community dwelling older adults enrolled in the ASPREE trial. Her aims are to understand the clinical implications of CHIP and the risk factors associated with presence and growth of CHIP clones. Jasmine's studies are supported by a Leukaemia Foundation/HSANZ New Investigator PhD Scholarship.

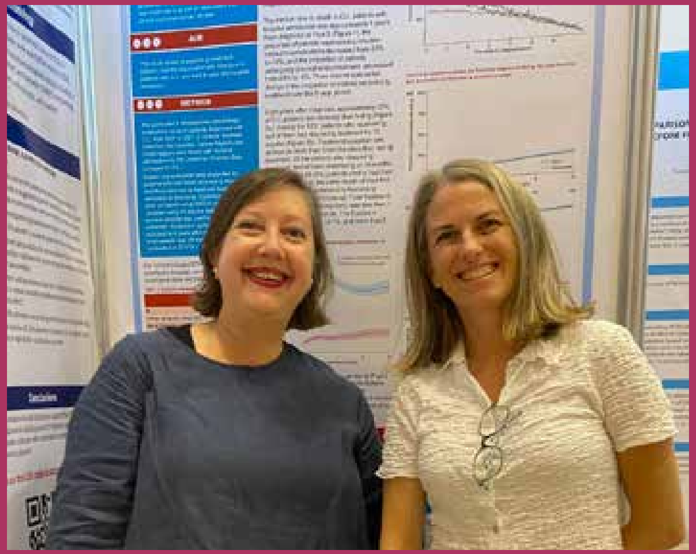
Ms Sara Carrillo de Albornoz

Health economic evaluations in haematological malignancies and immunoglobulin use

Supervisors: Prof Zoe McQuilten, Prof Dennis Petrie, Dr Alisa Higgins

Sara's project assesses the cost and cost effectiveness of immunoglobulin (Ig) in haematological malignancies. Alongside a systematic review on this topic, her PhD includes a trial-based economic evaluation of Ig versus antibiotics, and a time-driven activity based costing study of intravenous and subcutaneous Ig in patients with haematological malignancies. Furthermore, Sara has conducted a real-world analysis of administrative data from Victorian hospitals to understand the infection burden, Ig treatment patterns and hospital costs in chronic lymphocytic leukaemia, as this is one of the subpopulations with the highest use of Ig. Sara is the recipient of a Blood Synergy PhD scholarship.





PHD STUDENTS COMMENCING 2025

Dr Nathanael Lucas

BOne Marrow failure, Epidemiology, Rare mutations in Australia and New Zealand: BOoMERANgZ Project

Supervisors: Prof Erica Wood, Prof Zoe McQuilten, Dr Lucy Fox, Dr Siobhan Cross

Nate's PhD aims to expand the Aplastic Anaemia & Other Bone Marrow Failure Syndromes Registry (AAR) to include New Zealand data, develop a model to distinguish between germline and acquired bone marrow failure, and investigate mutations that may be more common in Indigenous populations. His research will enhance diagnostic precision and provide insights into the broader implications of these conditions for patients and their families. Nate is supported by an HSANZ New Investigator PhD Scholarship.

Ms India Read

Codesigning transfusion futures; a stakeholder-driven approach to human-centered healthcare systems

Supervisors: A/Prof Leah Heiss, Dr Catriona Parker, Prof Erica Wood

India's PhD will explore how stakeholder-driven co-design can enable safer, more equitable, and sustainable immunoglobulin delivery in Australia. It will investigate how co-design projects can support delivery of robust, systemically-oriented solutions to complex health problems, as well as generate value for engaged stakeholders beyond the explicitly-stated goals. Through ethnographic research, participatory design, service design, and futures thinking, the study will seek to generate a replicable co-design model that enhances stakeholder engagement in healthcare innovation and helps shape integrated, human-centered health futures. India received an OPTIMAL CRE PhD Scholarship to undertake her studies.

Ms Eliza Chung

Improving the quality of global lymphoma registry data to measure and benchmark patient outcomes

Supervisors: Prof Eliza Hawkes, Prof Erica Wood, Prof Zoe McQuilten

Eliza's PhD aims to synthesise the existing quality indicators in lymphoma care and synergise the datasets of international lymphoma registries. Standardisation of the core datasets can improve data interoperability to facilitate real-world research and reporting of patient outcomes. By leveraging the infrastructure of the Australian and New Zealand Lymphoma and Related Diseases Registry (LaRDR) and the Global Lymphoma Registry Alliance, she will conduct a scoping review and a data mapping project. Future definition of quality indicators routinely captured and reported by LaRDR is also planned. Eliza is recipient of a Monash University PhD Scholarship.

Dr Elizabeth Prime

Medium to long term outcomes in aplastic anaemia

Supervisors: Prof Zoe McQuilten, Prof Erica Wood, Dr Catriona Parker, Dr Lucy Fox

Lizzie's PhD is focused on outcomes beyond 5 years in patients treated with immunosuppressive therapy. In particular her research will investigate quality of life in aplastic anaemia and the use of disease-specific patient related outcome measures, with an aim to encourage their use in clinical practice and trials.

DOCTORAL COMPLETIONS 2023-2024

Dr Lucy Fox

DMedSci (2023)

Clinical, genomic and molecular determinants of outcomes in patients with bone marrow failure syndromes

Supervisors: Prof David Ritchie, Prof H. Miles Prince, Prof Erica Wood

Dr Lucy Fox's doctorate focused on patient outcomes in bone marrow failure syndromes (BMFS) and hereditary predisposition to haematological malignancy (HPHM). Working with the Australian Aplastic Anaemia and other Bone Marrow Failure Syndromes Registry (AAR) and the Melbourne Genomics Health Alliance Bone Marrow Failure Flagship, Lucy analysed comprehensive germline and somatic data to identify the clinical, genomic and molecular determinants of outcomes for individuals with BMFS. She identified barriers to optimal patient management, and developed a comprehensive model of care which aimed to improve diagnosis, management and outcomes of Australian patients with BMFS/HPHM and their families. This work was supported by a Maddie Riewoldt's Vision Fellowship and a Maddie Riewoldt's Vision Bridging Fellowship.

Dr Brenton Sanderson

PhD (2024)

Computerised decision support to improve efficiency and outcomes of massive blood transfusion

Supervisors: Prof Enrico Coiera, Prof Erica Wood, Prof Lise Estcourt, Prof Jeremy Field

Dr Brenton Sanderson's project, undertaken at the Centre of Health Informatics, Macquarie University explored the role of decision support and health informatics in massive transfusion for critical bleeding. During his PhD Brenton led the design of a computerised clinical decision support tool specific for massive transfusion. Informed by a survey of anaesthetists from across Australia and New Zealand (published in Anaestheisa & Intensive Care, 2021), the prototype tool was tested in a simulated bleeding scenario with focus groups (published in Transfusion, 2023). In the final evaluation phase, the developed electronic tool was shown to support more time-efficient decision-making compared to paper-based massive transfusion management (published in Transfusion, 2023). Brenton's studies were supported by funding from the Australian and New Zealand College of Anaesthetists (ANZCA) and a National Blood Authority (NBA) Patient Blood Management Early Career Research Scholarship.

Dr Philip Kiely

PhD (2024)

Emerging infectious diseases and blood safety in Australia

Supervisors: Prof Erica Wood, Prof Allen Cheng, A/Prof Manoj Gambhir, Dr Adam Irving

Dr Philip Kiely's PhD studies examined the transfusion transmission risk in Australia of emerging infectious diseases such as West Nile virus (WNV) and severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). Phil developed a model to predict the transmission risk associated with blood donors having recently returned from outbreak regions overseas (published in Transfusion Medicine Reviews, 2017), and applied the model to the 2018 outbreak of WNV in the European Union (published in Transfusion, 2020) and the United States (published in Transfusion, 2022). This model was then used to estimate the cost-effectiveness of implementing WNV donor screening in Australia, and later applied in a risk assessment of the transmission of SARS-CoV-2 via blood transfusion. Phil's studies were supported by Australian Red Cross Lifeblood.

EARLY CAREER RESEARCHERS

Dr Thao Le

BPharm, MStat, PhD
(University of Oxford)
Senior Research Fellow

Dr Thao Le is a biostatistician with expertise in prediction modelling, complex survival data analysis and clinical trial design. She holds a joint appointment with the Transfusion Research Unit and the Australian Trials Methodology Research Network (AusTriM), and is a core researcher of the Victorian Centre for Biostatistics (ViCBiostat), and a member of the Statistics in Trials Interest Group, Australian Clinical Trials Alliance (ACTA STInG). Thao is an investigator on the Blood Synergy program and OPTIMAL CRE, as well as the ASPREE-CHIP-XT study.

Dr Adam Irving

BEconSc, MSc, PhD
(Monash University)
Research Fellow

Dr Adam Irving is a health economist working within both the Transfusion Research Unit and the Centre of Health Economics, Monash University. Adam has more than 14 years of experience in performing economic evaluations using both clinical trial and observational data including for health technology assessment. His current research interests include the economics of blood disorders and blood products. He is the lead modeller on the MRFF-funded EpiMAP Myeloma project, and an investigator on the OPTIMAL CRE and Blood Synergy program.

Dr Catriona Parker

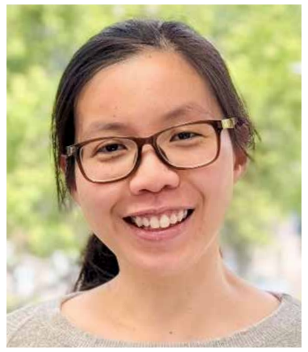
BAppSc(MLS),
MAppSc(MedSc), PhD
(Monash University)
Research Fellow

Dr Cat Parker is a qualitative and mixed-methods researcher with interests in patient experience and outcomes. She joined the Transfusion Research Unit in 2024, bringing with her expertise in cancer survivorship care, together with prior experience in palliative care research, and as a medical scientist with specialising in transfusion medicine and haematology. Cat works across a number of studies in the unit, including the MY-PROMPT2 study, RATIONALISE trial, OPTIMAL CRE and the Blood Synergy program.

Dr Laura Fanning

BPharm(Hons), MPH, PhD
(Monash University)
Senior Research Fellow

Dr Laura Fanning works across both the Transfusion Research Unit and the Centre of Health Economics, where she is the theme leader for the Economic Modelling and Health Policies and Technologies stream. Her research expertise includes causal inference using healthcare administrative data, economic evaluation alongside clinical trials, discrete choice experiments, and conducting health technology assessment evaluations. Laura is an investigator on the RATIONALISE and RATIONAL-Platform clinical trials, OPTIMAL CRE and VALUE-Ig project.



Dr Joanna Loh

MBBS / BMedSci, MPH,
FRACP, FRCPA
Research Fellow

Dr Joanna Loh is a Research Fellow providing medical guidance to the National Transfusion Dataset, with previous experience with the Australian & New Zealand Massive Transfusion Registry. She is also a consultant clinical and laboratory haematologist, currently working at Monash Health and Eastern Health. Joanna's research interests include haemoglobinopathies / red cell disorders, obstetric haematology and public health.

Dr Sasha Taylor

MBBS (Hons) MPH
FAFPHM
Research Fellow

Dr Sasha Taylor is a Public Health Physician and research fellow. With extensive experience in clinical, government and academic settings, Sasha has expertise in research and data analysis, stakeholder engagement and translation of evidence to guide policy and practice. Sasha is involved in the Blood Synergy program and National Transfusion Dataset.

Dr Elizabeth Moore

PGDipNurs(CritCare), MPH,
PhD (Monash University)
Research Fellow

Dr Liz Moore is a Research Fellow with a background in critical care nursing and has extensive experience managing the complex needs of critically ill cancer patients. Her research expertise is in registry science, clinical trials, and patient-reported outcomes. As Project Manager of the ANZ Myeloma and Related Diseases Registry (MRDR), she oversees research outputs and provides research support. She is a steering committee member of the Asia Pacific MRDR. Liz led the MY-PROMPT pilot trial (published in Am J Hematol 2020) and is a chief investigator on the MRFF-funded MY-PROMPT-2 trial.

COLLABORATIONS & PARTNERSHIPS

The Transfusion Research Unit has an international reputation for transfusion and haematology research and this is reflected in our collaborations.

Within Monash Public Health, we are part of the Division of Acute and Critical Care, and we work closely with the following groups at Monash University:

- ASPREE (ASPirin in Reducing Events in the Elderly) Research Unit
- Australian & New Zealand Intensive Care Research Centre (ANZIC-RC)
- BioPRIA
- Biostatistics Unit
- Cancer Research Program
- Centre for Health Economics, Monash Business School
- Clinical Registries Groups
- Epidemiological Modelling Unit
- Infectious Diseases
- Monash Art Design and Architecture (MADA)
- Prehospital, Emergency & Trauma Unit
- Public Health Genomics Program

We have strong community partnerships, including with:

- Australian Sickle Cell Advocacy
- Kawasaki Disease Foundation
- Leukaemia Foundation
- Lymphoma Australia
- Maddie Riewoldt's Vision
- Myeloma Australia
- Rare Voices Australia
- Thalassaemia and Sickle Cell Australia.

We are active members of societies and collaborate with colleges including the:

- Australian & New Zealand Society of Blood Transfusion
- Australian & New Zealand Intensive Care Society
- Australian & New Zealand College of Anaesthetists
- Haematology Society of Australia & New Zealand
- International Society of Blood Transfusion

We conduct clinical studies with the Australasian Leukaemia and Lymphoma Group (ALLG), Australasian Lymphoma Alliance (ALA), and the Australasian Myeloma Research Consortium (AMaRC), as well as the Canadian Cancer Trials Group (CCTG) and Canadian Transfusion Trials Group (CTTG).

We collaborate with the National Blood Authority, the Blood Matters program (Victorian Department of Health), and the national blood services of Australia (Australian Red Cross Lifeblood), New Zealand, UK, the Netherlands, and Canada.

Our partnerships include many Australian universities and research institutes and the leading international academic groups in transfusion research, such as:

- University of Oxford (UK)
- Queen Mary University of London (UK)
- Queen's University (Canada)
- Université de Bretagne Occidentale (France)
- Amsterdam University Medical Centers (Netherlands)
- Leiden University (Netherlands).

TRU is also the only Australian academic institutional member of the international Biomedical Excellence for Safer Transfusion (BEST).

Amongst the international partners to visit the Transfusion Research Unit in 2023-2024 were Prof Cécile Aubron (Université de Bretagne Occidentale, France), and Prof Michael Murphy (University of Oxford, UK).

ENGAGEMENT 2023-2024

World Health Organization (WHO)

- Advisory Group on Blood Regulation, Availability and Safety: Prof Erica Wood (co-Chair)
- Advisory Group on Global Patient Safety Action Plan 2021-2030: Prof Erica Wood
- Expert Advisory Panel in Transfusion Medicine: Prof Erica Wood
- Working Group on Developing Tools for Costing Blood Establishments: Dr Adam Irving, Mr Neil Waters
- Guideline Development Group – Anaemia: Prof Erica Wood
- Guideline Development Group for the creation of WHO Donor Human Milk Banking guidelines: Prof Erica Wood

International Society for Blood Transfusion (ISBT)

- Past President (2022-2024): Prof Erica Wood
- International Scientific Advisory Committee: Prof Erica Wood (Chair)
- Transfusion Evidence Round-Up Project Manager: Dr Allison Mo
- Awards and Prizes Committee: Prof Erica Wood (Chair)
- Nominations Committee: Prof Erica Wood

American Society for Hematology (ASH)

- Scientific Committee on Transfusion Medicine: Prof Erica Wood
- Associate Editor of *Blood*: Prof Erica Wood
- Editorial Board of *Blood*: Prof Eliza Hawkes
- Editorial Board of *Blood Advances*: Prof Eliza Hawkes

Association for the Advancement of Blood and Biotherapies (AABB, USA)

- Associate Editor of *Transfusion*: Prof Zoe McQuilten
- Red Cell Guidelines Working Group: Prof Erica Wood
- Platelet Guidelines Working Group: Prof Erica Wood

British Society of Haematology

- Associate Editor of *eJHaem*: Prof Eliza Hawkes

Biomedical Excellence for Safer Transfusion (BEST)

- Honorary Lifetime Member: A/Prof Rosemary Sparrow
- Member: Prof Erica Wood

US National Heart Lung Blood Institute

- Myelodysplastic Syndrome (MDS) International Guideline Steering Committee: Prof Zoe McQuilten

International Collaboration on Transfusion Medicine Guidelines (ICTMG)

- Executive Committee: Prof Erica Wood

Systematic Reviews Initiative, NHS Blood & Transplant/University of Oxford

- International Steering Group: Prof Erica Wood

Transfusion Medicine

- Editorial Board: Prof Erica Wood

Transfusion Medicine Reviews

- Associate Editor: Prof Zoe McQuilten
- Editorial Board: Prof Erica Wood

Commonwealth Government of Australia

- Medical Services Advisory Committee, Evaluation Subcommittee: Prof Erica Wood
- Therapeutic Goods Administration, Advisory Committee on Biologicals: Prof Erica Wood (Chair)
- National Haemopoietic Progenitor Cell Sector Clinical Advisory Group: Prof Erica Wood

National Blood Authority (NBA)

- Haemovigilance Advisory Committee: Prof Erica Wood (Chair)

Australian Red Cross Lifeblood

- Advisory Committee: Prof Zoe McQuilten

Blood Matters

- Advisory Committee: Prof Zoe McQuilten (Chair)
- Serious Transfusion Incident Reporting (STIR) expert working group: Prof Erica Wood

Australian & New Zealand Society of Blood Transfusion (ANZSBT)

- Research Advisory Committee: Prof Erica Wood
- Engagement and Learning Committee: Dr Allison Mo

Australasian Leukaemia & Lymphoma Group (ALLG)

- Scientific Advisory Committee: Prof Zoe McQuilten
- Supportive Care Working Group: Prof Zoe McQuilten (Chair), Dr Catriona Parker, Dr Khai Li Chai, Dr Briony Shaw, Dr Allison Mo

Australasian Myeloma Research Consortium (AmaRC)

- Steering Committee: Prof Erica Wood

Australian Clinical Trials Alliance (ACTA)

- Registry Special Interest Group: Ms Eliza Chung, Ms Vanessa Fox, Dr Elizabeth Moore
- Registries Annual Scientific Meeting 2023 Organising Committee: Ms Eliza Chung
- Registries Annual Scientific Meeting 2024 Organising Committee: Ms Eliza Chung, Ms Vanessa Fox, Dr Elizabeth Moore
- Adaptive Platform Trial Operations Special Interest Group: Ms Jennifer Griffiths

Maddie Riewoldt's Vision (MRV)

- Scientific Advisory Committee: Prof Zoe McQuilten

Cancer Nurses Society of Australia (CNSA)

- Research Standing Committee: Dr Elizabeth Moore (Chair)

RMIT University

- Pharmaceutical Science Industry Advisory Committee: Mr Neil Waters

Health Studies Australian National Data Asset (HeSANDA)

- Monash Node, Steering Committee: Ms Vanessa Fox

Monash University

- Research Committee: Prof Erica Wood
- Good Clinical Quality Registry Practice Guide, Working Group: Ms Vanessa Fox (Group Lead)

Monash University, Centre of Health Economics (CHE)

- Advisory Committee: Prof Erica Wood

Monash University, School of Public Health & Preventive Medicine (SPHPM)

- Senior Management Committee: Prof Erica Wood, Prof Zoe McQuilten
- Research Strategy and Governance Committee: Prof Erica Wood
- Research Governance Committee: Dr Elizabeth Moore
- Consumer Engagement Commitee: Prof Erica Wood, Dr Catriona Parker, Dr Karina Brady
- Early/Mid-Career Researcher Committee: Prof Erica Wood
- Professional Managers Network Committee: Mr Neil Waters, Ms Susi Rosin
- Research & Project Manager forum: Ms Vanessa Fox, Ms Naomi Aoki, Ms Jennifer Griffiths, Dr Lauren Young, Ms Eliza Chung, Mrs Helen Haysom, Dr Karina Brady

KEY PRESENTATIONS 2023-2024

- International Society for Blood Transfusion (ISBT) Developing Countries Award Symposium (virtual), Manipal (India), March 2023: Prof Erica Wood
- Shwachman Diamond Syndrome meeting, Cambridge (UK), March 2023: Dr Lucy Fox
- International Society for Blood Transfusion (ISBT) 33rd Regional Congress, Gothenburg (Sweden), June 2023: Prof Erica Wood, Mrs Helen Haysom
- Cancer Nurses Society of Australia (CNSA) Congress, Adelaide, June 2023: Dr Elizabeth Moore
- Multinational Association of Supportive Care in Cancer (MASCC) 2023, Nara (Japan), June 2023: Dr Briony Shaw
- Cancer Nurses Society of Australia (CNSA) Grant Writing Webinar (virtual), August 2023: Dr Elizabeth Moore
- Australian Research Data Commons, Melbourne, September 2023: Prof Erica Wood
- Australasian Leukaemia & Lymphoma Group (ALLG) Scientific Meeting, Sydney, October 2023: Prof Zoe McQuilten
- Australian & New Zealand Trauma Society (ANZTS) Trauma 2023 conference, Melbourne, October 2023: Erica Wang
- International Society of Blood Transfusion (ISBT) 34th Regional Congress, Cape Town (South Africa), November 2023: Prof Erica Wood
- 16th International Conference on Thalassaemia & Haemoglobinopathies & 18th TIF International Conference for Patients and Parents, Kuala Lumpur (Malaysia), November 2023: Prof Erica Wood
- Blood 2023, Melbourne, November 2023: Dr Allison Mo, Dr Briony Shaw, Ms Sara Carrillo de Albornoz, Dr Lucy Fox
- Australian Centre for Blood Diseases (ACBD) Research Symposium, Melbourne, November 2023: Dr Jasmine Singh
- American Society of Hematology (ASH) Annual Meeting, San Diego (USA), December 2023: Prof Zoe McQuilten, Dr Lucy Fox
- Highlights of ASH in the Asia-Pacific, Sydney, February 2024: Prof Erica Wood
- Malaysian Blood Transfusion Society (MBTS) and International Society of Blood Transfusion (ISBT): Transfusion Medicine Update Asian Pacific Symposium 2024, Kota Bharu Kelantan (Malaysia), February 2024: Prof Erica Wood
- International T-Cell Project Investigator Meeting (virtual), April 2024: Prof Eliza Hawkes
- Thalassaemia and Sickle Cell Australia (TASCA) committee meeting, Melbourne, February 2024: Prof Erica Wood, Mr Neil Waters, Mrs Helen Haysom
- International Society for Blood Transfusion (ISBT) 38th Regional Congress, Barcelona (Spain), June 2024: Mr Neil Waters
- European Hematology Association (EHA) 2024 Congress, Madrid (Spain), June 2024: Dr Marsali Maclean
- Brigham and Women's Hospital/Harvard University, Hematology Grand Rounds, Boston (USA), June 2024: Prof Erica Wood
- Blood Matters, Melbourne, June 2024: Dr Cameron Wellard & Ms Tina van Tonder
- MEDLAB Asia and Asia Health, Bangkok (Thailand), July 2024: Prof Erica Wood
- Leukaemia Foundation Consumer Engagement Group meeting, Melbourne, August 2024: Dr Catriona Parker
- Melbourne Academic Centre for Health (MACH), Melbourne, August 2024: Prof Eliza Hawkes
- Cancer Nurses Society of Australia (CNSA) Grant Writing Webinar (virtual), August 2024: Dr Elizabeth Moore
- Australian Sickle Cell Advocacy (ASCA) Forum, Canberra, September 2024: Prof Erica Wood
- The Critically Unwell Pregnant Patient, Melbourne (virtual), September 2024: Prof Erica Wood
- Blood Management Summit for Scientists, Melbourne, September 2024: Mr Neil Waters & Mrs Helen Haysom
- Indian Society of Blood Transfusion "Transmedcon" (virtual), September 2024: Prof Erica Wood & Mr Neil Waters
- Philippine College of Hematology and Transfusion Medicine, Manila (Philippines), September 2024: Prof Erica Wood
- Indonesian Red Cross (Palang Merah Indonesia), Rational Use of Blood Seminar (virtual), October 2024: Prof Erica Wood
- Omani Society of Hematology, 6th National Conference, Muscat (Oman), October 2024: Prof Erica Wood
- HSANZ Presidential Symposium, Blood 2024, Brisbane, October 2024: Prof Eliza Hawkes
- Blood 2024, Brisbane, October 2024: Dr Elizabeth Moore, Prof Zoe McQuilten, Dr Catriona Parker, Dr Allison Mo, Dr Andrew Flint, Dr Jasmine Singh
- Transfusion Practioner Workshop, Blood 2024, Brisbane, October 2024: Mrs Helen Haysom
- Monash University School of Public Health & Preventive Medicine, Consumer and Community Involvement Showcase, Melbourne, October 2024: Ms Eliza Chung
- Thalassemia International Federation (TIF), Thalassemia India and ECHO India, Advanced webinar series for Thalassemia (virtual), November 2024: Prof Erica Wood
- ASEAN Congress of Clinical Laboratory Sciences, Brunei Darussalam, November 2024: Prof Erica Wood
- Blood Matters SCIg Forum, Melbourne, November 2024: Prof Erica Wood
- HSANZ Nurses Group, Education Dinner, Melbourne, November 2024: Dr Elizabeth Moore
- American Society of Hematology (ASH) Annual Meeting, San Diego (USA), December 2024: Prof Zoe McQuilten
- Australia Clinical Trials Alliance (ACTA) Registry Symposium 2024, Melbourne, December 2024: Dr Elizabeth Moore, Ms Eliza Chung

PUBLICATIONS 2023-2024

Adhikari, et al. Intravenous Vitamin C for Patients Hospitalized With COVID-19: Two Harmonized Randomized Clinical Trials. *JAMA* 2023 (doi:10.1001/jama.2023.21407)

Aoki, et al. The establishment of a multiple myeloma clinical registry in the Asia-Pacific region: The Asia-Pacific Myeloma and Related Diseases Registry (APAC MRDR). *BMC Med Res Methodol* 2024 (doi:10.1186/s12874-024-02227-0)

Aubron, et al. Anti-factor-Xa and activated partial thromboplastin time concordance and outcomes in adults undergoing extracorporeal membrane oxygenation: a secondary analysis of the pilot low-dose heparin in critically ill patients undergoing extracorporeal membrane oxygenation randomized trial. *Crit Care Explor* 2023 (doi:10.1097/CCE.0000000000000999)

Baggio, et al. International forum on blood donation in individuals with current, past or germline predisposition to malignancy: summary. *Vox Sang* 2023 (doi:10.1111 vox.13549)

Baggio, et al. International forum on blood donation in individuals with current, past or germline predisposition to malignancy: responses. *Vox Sang* 2023 (doi:10.1111 vox.13550)

Barraclough, et al. Outcomes in grade 3B follicular lymphoma: an international study led by the Australasian Lymphoma Alliance. *Haematologica* 2023 (doi:10.3324/haematol.2022.281375)

Barraclough, et al. Diffuse large B-cell lymphoma. *Hematol Oncol* 2023 (doi:10.1002/hon.3202)

Barraclough, & Hawkes. Antibody and immunotherapy in diffuse large B-cell lymphoma. *Semin Hematol* 2023 (doi:10.1053/j.seminhematol.2023.11.001)

Barraclough, et al. Impact and utility of follicular lymphoma GELF criteria in routine care: an Australasian Lymphoma Alliance study. *Haematologica* 2024 (doi: 10.3324/haematol.2023.284538)

Buckstein, et al. Red cell transfusion thresholds in outpatients with myelodysplastic syndromes: Combined results from two randomized controlled feasibility studies. *Am J Hematol* 2024 (doi: 10.1002/ajh.27181)

Caram-Deelder, et al. Efficacy and safety analyses of recombinant factor VIIa in severe post-partum hemorrhage. *J Clin Med* 2024 (doi: 10.3390/jcm13092656)

Carrillo de Albornoz, et al. A systematic review of the cost and cost-effectiveness of immunoglobulin treatment in patients with hematological malignancies. *Int J Technol Assess Health Care* 2024 (doi:10.1017/S026646232400028X)

Carrillo de Albornoz, et al. Economic evaluation: immunoglobulin vs prophylactic antibiotics in hypogammaglobulinemia and hematological malignancies. *Blood Advances* 2024 (doi:10.1182/bloodadvances.2023012047)

Carson, et al. Red blood cell transfusion: 2023 AABB International Guidelines. *JAMA* 2023 (doi:10.1001 jama.2023.12914)

Chai, et al. Interventions to reduce infections in patients with hematological malignancies: a systematic review and meta-analysis. *Blood Advances* 2023 (doi: 10.1182/bloodadvances.2022008073)

Chai, et al. Variation in immunoglobulin use and impact on survival in myeloma. *eJHaem* 2024 (doi: 10.1002/jha2.938)

Chai, et al. Immunoglobulin replacement to prevent infections in people with haematological malignancies and haematopoietic stem cell transplantation (Protocol). *Cochrane Database of Systematic Reviews* 2024 (doi: 10.1002/14651858.CD015719)

de Kretser, et al. Early oral antibiotic switch in staphylococcus aureus bacteraemia: the Staphylococcus aureus Network Adaptive Platform (SNAP) trial early oral switch protocol. *Clin Infect Dis* 2024 (doi: 10.1093/cid/ciad666)

Dzik, et al. Recommended papers of 2023 from the TMR editorial board. *Transfus Med Rev* 2024 (doi:10.1016/j.tmrv.2023.150808)

Dzik, Callum, & McQuilten. Transfusion medicine at the end of the first quarter of the 21st century. *Transfus Med Rev* 2024 (doi: 10.1016/j.tmrv.2024.150873)

Flint, et al. Transfusion practices in intensive care units: An Australian and New Zealand point prevalence study. *Crit Care Resusc* 2023 (doi:10.1016/j.ccrj.2023.10.006)

Fox, et al. The Australian Aplastic Anaemia and other Bone Marrow Failure Syndromes Registry. *Best Practice & Research Clinical Haematology* 2023 (doi:10.1016 j.beha.2023.101516)

Fox. Bone marrow vexations. *Blood* 2024 (doi: 10.1182/blood.2024024971)

Fox. Donor dilemmas in hereditary hematopoietic malignancies. *Haematologica* 2024 (doi: 10.3324/haematol.2024.285545)

Fox, & Blombery. Matching phenotypes through mismatching genomics. *Leuk Lymphoma* 2023 (doi: 10.1080/10428194.2022.2142058)

Godoy, et al. Heparin dose intensity and organ support-free days in patients hospitalized for COVID-19. *JACC Adv* 2024 (doi: 10.1016/j.jacadv.2023.100780)

Goh, et al. Characteristics and outcomes of older patients with classical hodgkin lymphoma: an Australasian Lymphoma Alliance, and Lymphoma and Related Diseases Registry Study. *Clinical Lymphoma Myeloma and Leukemia* 2023 (doi:10.1016 j.clml.2023.01.014)

Hamilton, et al. How I communicate with patients and families about germ line genetic information. *Blood* 2023 (doi: 10.1182/blood.2022017379)

Hapgood, et al. The SALENTO prognostic model for limited-stage peripheral T-cell lymphoma from the International T-Cell Project Network. *Blood Advances* 2023 (doi:10.1182/bloodadvances.2023010037)

Hills, et al. Simvastatin in Critically Ill Patients with Covid-19. *N Engl J Med* 2023 (doi:10.1056NEJMoa2309995)

Ho, et al. The impact of biomarkers of malignancy (IMWG SLiM criteria) in myeloma in a real-world population: Clinical characteristics, therapy and outcomes from the Australian and New Zealand Myeloma and Related Diseases Registry (ANZ MRDR). *Br J Haematol* 2024 (doi: 10.1111/bjh.19624)

Homan, et al. Somatic mutational landscape of hereditary hematopoietic malignancies caused by germline variants in RUNX1, GATA2, and DDX41. *Blood Advances* 2023 (doi: 10.1182/bloodadvances.2023010045)

Iannizzi, et al. Convalescent plasma for people with COVID-19: a living systematic review. *Cochrane Database Systematic Reviews* 2023 (doi: 10.1002/14651858.CD013600.pub5)

Irving, et al. Developing and validating a discrete-event simulation model of multiple myeloma disease outcomes and treatment pathways using a national clinical registry. *PLoS One* 2024 (doi: 10.1371/journal.pone.0308812)

Irving, et al. Can clinical guidelines reduce variation in transfusion practice? A pre-post study of blood transfusions during cardiac surgery. *Vox Sang* 2024 (doi: 10.1111/vox.13751)

Jacobs, et al. The seasonal distribution of immune thrombotic thrombocytopenic purpura is influenced by geography: Epidemiologic findings from a multi-center analysis of 719 disease episodes. *Am J Hematol* 2024 (doi: 10.1002/ajh.27458)

Jacobs, et al. Current state and potential applications of neonatal Fc receptor (FcRn) inhibitors in hematologic conditions. *Am J Hematol* 2024 (doi: 10.1002/ajh.27487)

Kimber, et al. Hyperimmune immunoglobulin for people with COVID-19. *Cochrane Database Systematic Reviews* 2023 (doi: 10.1002/14651858.CD015167.pub2)

Lawler, et al. Effect of Angiotensin-Converting Enzyme Inhibitor and Angiotensin Receptor Blocker Initiation on Organ Support-Free Days in Patients Hospitalized With COVID-19: A Randomized Clinical Trial. *JAMA* 2023 (doi:10.1001 jama.2023.4480)

Lewis, et al. High-Dose Methotrexate as CNS Prophylaxis in High-Risk Aggressive B-Cell Lymphoma. *J Clin Oncol* 2023 (doi:10.1200/JCO.23.00365)

Lim, et al. Real-world outcomes in relapsed refractory multiple myeloma patients exposed to three or more prior treatments: an analysis from the ANZ myeloma and related diseases registry. *Intern Med J* 2023 (doi:10.1111/imj.16277)

Lin, et al. Definitions of massive transfusion in adults with critical bleeding - a systematic review. *Critical Care* 2023 (doi: 10.1186/s13054-023-04537-z)

Loh, et al. Outcomes of massive transfusion recipients administered ABO-incompatible fresh frozen plasma. *Transfusion* 2024 (doi: 10.1111/trf.18070)

Maclean, et al. Ultra-Massive Transfusion: Predictors of Occurrence and In-Hospital mortality From the Australian and New Zealand Massive Transfusion Registry (ANZ-MTR). *Transfus Med Rev* 2024 (doi: 10.1016/j.tmrv.2024.150857)

MacPhail, et al. Hospital-acquired bloodstream infections in patients with cancer: current knowledge and future directions. *J Hosp Infect* 2024 (doi:10.1016/j.jhin.2024.03.002)

MacPhail, et al. Neutropenic Sepsis in the Intensive Care Unit: Differences in Clinical Profile and Outcomes According to the Cause of Neutropenia. *Open Forum Infect Dis* 2024 (doi:10.1093/ofid/ofae289)

MacPhail, et al. Sepsis mortality among patients with haematological malignancy admitted to intensive care 2000-2022: a binational cohort study. *Crit Care* 2024 (doi:10.1186/s13054-024-04932-0)

Mahady, et al. Association Between CKD and Major Hemorrhage in Older Persons: Data From the Aspirin in Reducing Events in the Elderly Randomized Trial. *Kidney Int Rep* 2023 (doi:10.1016/j.ekir.2023.01.012)

Marschner, et al. Transparent reporting of adaptive clinical trials using concurrently randomised cohorts. *BMJ Med* 2023 (doi:10.1136/bmjmed-2023-000497)

Martynchyk, et al. Prognostic Markers within the Tumour Microenvironment in Classical Hodgkin Lymphoma. *Cancers (Basel)* 2023 (doi:10.3390/cancers15215217)

McQuilten, et al. Effect of Low-Dose Aspirin Versus Placebo on Incidence of Anemia in the Elderly: A Secondary Analysis of the Aspirin in Reducing Events in the Elderly Trial. *Ann Intern Med* 2023 (doi:10.7326/M23-0675)

McQuilten, et al. Anticoagulation Strategies in Non-Critically Ill Patients with Covid-19. *NEJM Evid* 2023 (doi:10.1056/EVIDoa2200293)

McQuilten, Wood, & Medcalf. When to use tranexamic acid for the treatment of major bleeding? *J Thromb Haemost* 2024 (doi:10.1016/j.jtha.2023.10.001)

McQuilten, et al. Immunoglobulin replacement vs prophylactic antibiotics for hypogammaglobulinemia secondary to hematological malignancy. *Blood Adv* 2024 (doi:10.1182/bloodadvances.2023011231)

McQuilten, et al. Efficacy and safety of avatrombopag in combination with immunosuppressive therapy in treatment-naive and relapsed/refractory severe aplastic anaemia: protocol for the DIAAMOND-Ava-FIRST and DIAAMOND-Ava-NEXT Bayesian Optimal Phase II trials. *BMJ Open* 2024 (doi:10.1136/bmjopen-2023-076246)

Minson, et al. Death from mantle cell lymphoma limits sequential therapy, particularly after first relapse: Patterns of care and outcomes in a series from Australia and the United Kingdom. *Br J Haematol* 2024 (doi:10.1111/bjh.19179)

Mitra, et al. Pre-hospital freeze-dried plasma for critical bleeding after trauma: A pilot randomized controlled trial. *Academic Emergency Medicine* 2023 (doi: 10.1111/acem.14745)

Mo, et al. Platelet transfusions and predictors of bleeding in patients with myelodysplastic syndromes. *European Journal of Haematology* 2023 (doi: 10.1111/ejh.14049)

Mo, et al. Do anemia treatments improve quality of life and physical function in patients with myelodysplastic syndromes (MDS)? A systematic review. *Blood Reviews* 2023 (doi: 10.1016/j.blre.2023.101114)

Mo, et al. Use of platelet transfusions and tranexamic acid in patients with myelodysplastic syndromes: A clinical practice survey. *Eur J Haematol* 2024 (doi:10.1111/ejh.14156)

Mo, et al. Rethinking the transfusion pathway in myelodysplastic syndromes: Study protocol for a novel randomized feasibility n-of-1 trial of weekly-interval red cell transfusion in myelodysplastic syndromes. *Transfusion* 2024 (doi:10.1111/trf.17706)

Morrow, et al. A novel method to quantify fibrin-fibrin and fibrin-α2-antiplasmin cross-links in thrombi formed from human trauma patient plasma. *J Thromb Haemost* 2024 (doi: 10.1016/j.jtha.2024.03.001)

Nelson, et al. Sickle cell disease in Australia: a snapshot from the Australian Haemoglobinopathy Registry. *Intern Med J* 2024 (doi:10.1111/imj.16297)

Nguyen, et al. Clinical characteristics of Australian treatment-naïve patients with classical Hodgkin lymphoma from the lymphoma and related diseases registry. *Eur J Haematol* 2023 (doi: 10.1111/ejh.13915)

Nicol, et al. Safety, feasibility, and efficacy of exercise interventions for people with multiple myeloma: a systematic review. *Clin Lymphoma Myeloma Leuk* 2023 (doi:10.1016 j.clml.2022.10.003)

Opat, et al. Safety and efficacy of zanubrutinib in relapsed/refractory marginal zone lymphoma: final analysis of the MAGNOLIA study. *Blood Advances* 2023 (doi:10.1182/bloodadvances.2023010668)

Pagano, et al. The 2023 AABB international guidelines for red blood cell transfusions: What is new? *Transfusion* 2024 (doi: 10.1111/trf.17764)

Raasveld, et al. Red blood cell transfusion in the intensive care unit. *JAMA* 2023 (doi: 10.1001/jama.2023.20737)

Reizine, et al. Prophylactic platelet transfusion response in critically ill patients: a prospective multicentre observational study. *Crit Care* 2023 (doi:10.1186/s13054-023-04650-z)

REMAP-CAP Investigators. Long-term (180-Day) outcomes in critically ill patients with COVID-19 in the REMAP-CAP randomized clinical trial. *JAMA* 2023 (doi: 10.1001/jama.2022.23257)

Sanderson, et al. Multicenter, multidisciplinary user-centered design of a clinical decision-support and simulation system for massive transfusion. *Transfusion* 2023 (doi:10.1111 trf.17315)

Sanderson, et al. Clinical decision support versus a paper-based protocol for massive transfusion: Impact on decision outcomes in a simulation study. *Transfusion* 2023 (doi:10.1111/trf.17580)

Shaw, et al. Hematologic malignancy: who cares in the end? A retrospective cohort study of markers of quality end-of-life care. *J Natl Compr Canc Netw* 2023 (doi:10.6004/jnccn.2023.7033)

Shaw, et al. Poor outcomes for trial-ineligible patients receiving polatuzumab for relapsed/refractory diffuse large B-cell lymphoma in routine care: An Australian Lymphoma and Related Diseases Registry project. *Eur J Haematol* 2024 (doi:10.1002/jha2.870)

Singh, et al. Clonal hematopoiesis of indeterminate potential as a prognostic factor: a systematic review and meta-analysis. *Blood Adv* 2024 (doi:10.1182/bloodadvances.2024013228)

So-Osman, et al. The role of convalescent plasma and hyperimmune immunoglobulins in the COVID-19 pandemic, including implications for future preparedness. *Front Immunol* 2024 (doi: 10.3389/fimmu.2024.1448720)

Sparrow, Simpson, & Greening. Protocols for the isolation of platelets for research and contrast to production of platelet concentrates for transfusion. *Methods Mol Biol* 2023 (doi:10.1007/978-1-0716-2978-9_1)

Sparrow, Simpson, & Greening. Preparation of cryoprecipitate and cryo-depleted plasma for proteomic research analysis. *Methods Mol Biol* 2023 (doi:10.1007/978-1-0716-2978-9_4)

Stadler, et al. Monoclonal antibody levels and protection from COVID-19. *Nat Commun* 2023 (doi:10.1038/s41467-023-40204-1)

Stadler, et al. Determinants of passive antibody efficacy in SARS-CoV-2 infection: a systematic review and meta-analysis. *Lancet Microbe* 2023 (doi:10.1016/S2666-5247(23)00194-5)

Tatarczuch, et al. Molecular associations of response to the new-generation BTK inhibitor zanubrutinib in marginal zone lymphoma. *Blood Adv* 2023 (doi:10.1182 bloodadvances.2022009412)

Tedjaseputra, et al. Day-21 bone marrow findings incorrectly designate residual leukaemia in FLT3-mutated acute myeloid leukaemia treated with intensive induction plus midostaurin: a morphology-focused study. *Pathology* 2024 (doi: 10.1016/j.pathol.2024.01.004)

Townsend, et al. Haemovigilance resources available for everyone: A report from the International Haemovigilance Tools Collaborative Project. *Vox Sang* 2024 (doi:10.1111/vox.13570)

van Haeren, et al. Plasma transfusion in the intensive care unit. *Transfusion* 2024 (doi: 10.1111/trf.18071)

Wood, Whitaker, & Townsend. Haemovigilance: Giving it our best SHOT! *Vox Sanguinis* 2023 (doi: 10.1111/vox.13411)

Wood, et al. How we forecast tomorrow's haemovigilance. *Transfus Clin Biol* 2024 (doi:10.1016/j.tracli.2024.03.001)

Yuen, et al. Central venous access device practice across haematology and oncology centres in Australia and New Zealand: a cross-sectional survey. *Intern Med J* 2023 (doi:10.1111/imj.16031)

Zargari, et al. Increased STAT expression in Reed-Sternberg cells as a potential positive prognostication biomarker in Hodgkin lymphoma. *Pathology* 2023 (doi:10.1016/j.pathol.2023.02.007)

Zeibi Shirejini, et al. Current and future strategies to monitor and manage coagulation in ECMO patients. *Thrombosis Journal* 2023 (doi: 10.1186/s12959-023-00452-z)

CONTACT US

Email: sphpm.transfusion@monash.edu

Phone: 1800 811 326

Web: monash.edu/medicine/sphpm/transfusionresearch

Post: Monash University
School of Public Health & Preventive Medicine
553 St Kilda Road, Melbourne
VIC, Australia, 3004