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The Transplantation Society of Australia and New Zealand

Forty Third Annual Scientific Meeting

PROGRAM AT A GLANCE

Friday, 20 June 2025–Associated Pre-Meeting Programs		
09:00–17:00	2025 Transplant Infectious Diseases Day	Fitzroy and Murray Rooms
Saturday, 21 June 2025–Associated Pre-Meeting Programs		
08:30–17:15	FACT (Frontiers and Challenges in Organ Transplantation) Update Course	Fitzroy and Murray Rooms
11:00–17:00	Solid Organ Transplant Symposium (SOTS) Liver Day 1	Swan Room
13:00–17:00	TSANZ Board Meeting	Derwent Room
Sunday, 22 June 2025–Associated Pre-Meeting Programs		
09:00–12:45	Solid Organ Transplant Symposium (SOTS) Liver Day 2	Swan Room
09:30–12:15	Solid Organ Transplantation Symposium (SOTS) Kidney and Pancreas	Murray Room
09:30–12:30	Solid Organ Transplantation Symposium (SOTS) Cardiothoracic	Fitzroy Room
13:00–15:00	Concurrent Afternoon Session: Heart	Fitzroy Room
13:00–15:00	Concurrent Afternoon Session: Kidney and Pancreas	Murray Room
13:00–15:00	Concurrent Afternoon Session: Lung	Swan Room

Sunday, 22 June 2025		
07:45–08:45	**Fun Run/Walk (5km)**	Lake Burley Griffin (Start/Finish Meeting Point–Rond Terrace Park)
12:30–14:30	**Patient Forum–Transplant Australia**	Torrens Room
13:30–15:00	**Registration**	Ballroom and Gallery Foyers
15:10–15:20	**Welcome Ceremony**	Ballroom (Main Plenary)
15:20–15:30	**Official Opening:** ***TSANZ President***	Ballroom (Main Plenary)
15:30–16:00	**PLENARY 1: Astellas Sponsored Session** Achieving Operational Tolerance: Bench to Bedside	Ballroom (Main Plenary)
16:00–16:20	**Josette Eris Lecture** Imposter or Outlier With Style? The Science to Showing up Anyway	Ballroom (Main Plenary)
16:20–16:50	**Afternoon tea**	Ballroom and Gallery Foyers
16:50–17:50	***CONCURRENT FREE COMMUNICATIONS SESSIONS***	
	Free Communications 1: Immunosuppression and Genetics	Ballroom (Main Plenary)
	Free Communications 2: Access to Transplantation	Fitzroy Room
	Free Communications 3: T Cell Biology	Murray Room
	Mini-oral Session 1	Swan Room
17:50–18:30	**TTS - Women in Transplantation Session**	Ballroom (Main Plenary)
18:30–19:00	**"Town Hall Session"** Update on The Australian Law Reform Commission (ALRC) Review of Human Tissue Laws	Ballroom (Main Plenary)
19:00–20:00	**Welcome Reception**	Ballroom and Gallery Foyers

Monday, 23 June 2025		
07:30–08:00	**Coffee with sponsors**	Ballroom and Gallery Foyers
08:00–09:30	**PLENARY 2: Joint TSANZ/OTA Session** Challenges in Organ Donation and Transplantation	Ballroom (Main Plenary)
09:30–10:30	***CONCURRENT FREE COMMUNICATIONS SESSIONS***	
	Free Communications 4: Donor Organ Utilisation and Allocation	Ballroom (Main Plenary)
	Free Communications 5: Optimising Kidney Transplant Outcomes	Fitzroy Room
	Free Communications 6: Experimental Models for Transplantation	Murray Room
	Mini-oral Session 2	Swan Room
10:30–11:00	**Morning tea and Poster Viewing**	Ballroom and Gallery Foyers
11:00–12:40	**PLENARY 3: ThermoFisher Sponsored Session** Dealing With the HLA Barrier	Ballroom (Main Plenary)
12:40–13:30	**Lunch and Poster Viewing**	Ballroom and Gallery Foyers
	ECC "Meet the Researcher" Forum	Torrens Room
13:30–15:30	**President's Prize Symposium**	Ballroom (Main Plenary)
15:30–16:00	**Afternoon tea and Poster Viewing**	Ballroom and Gallery Foyers
16:00–17:00	***CONCURRENT FREE COMMUNICATIONS SESSIONS***	
	Free Communications 7: Managing Complications	Ballroom (Main Plenary)
	Free Communications 8: Surgery	Fitzroy Room
	Free Communications 9: Immunobiology	Swan Room
17:00–17:45	**TSANZ Annual General Meeting**	Ballroom (Main Plenary)
18:30–22:30	**TSANZ Annual Awards Dinner**	Old Parliament House

Tuesday, 24 June 2025		
07:30–08:00	**Coffee with sponsors**	Ballroom and Gallery Foyers
08:00–09:00	***CONCURRENT STATE OF THE ART SESSIONS***	
	STATE OF THE ART 1: **Joint TSANZ/Xvivo Sponsored Session** Machine Perfusion–The Evolving Landscape	Ballroom (Main Plenary)
	STATE OF THE ART 2: Joint TSANZ/Takeda Sponsored Session Infections	Murray Room
09:00–10:30	**PLENARY 4: ThermoFisher Sponsored Session** Rejection	Ballroom (Main Plenary)
10:30–11:00	**Morning tea**	Ballroom and Gallery Foyers
11:00–12:00	**CONCURRENT STATE OF THE ART SESSIONS**	
	STATE OF THE ART 3: Astellas Sponsored Session Stretching the Boundary in Transplantation	Ballroom (Main Plenary)
	STATE OF THE ART 4: Joint TSANZ/Pharmacor Sponsored Session Bench to Bedside	Murray Room
13:30–15:00	**Plenary 5: Astellas Sponsored Session** Advances in Transplantation	Ballroom (Main Plenary)
13:00–14:00	**Light Lunch**	Ballroom and Gallery Foyers
14:00	**ASM Concludes**	

OFFICE BEARERS OF THE TRANSPLANTATION SOCIETY OF AUSTRALIA & NEW ZEALAND LIMITED

Chair
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Deputy Chair & Chair, Advisory Committees/Working Groups
A/Professor Nikky Isbel
Honorary Secretary
A/Professor Kavitha Muthiah
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Dr Joshua Kausman
Board Members
Dr Tanya McWilliams - New Zealand Representative
Dr Handoo Rhee - Surgical Representative
A/Prof Avik Majumdar
Dr Animesh Singla
Dr Lucy Sullivan
Professor Angela Webster - RACP
Paul Robertson - ATCA Representative
A/Professor Bronwyn Levvey – TNA Representative

Scientific Program & Education Committee (SPEC)

A/Professor Wai Lim (Co-Chair)
Dr Jeanette Villanueva (ASM)
Dr Siah Kim
A/Prof Darren Lee (ASM)
Dr Tina Marinelli (TID)
Dr Griffith Perkins (FACT)
Professor Ulrich Stock
(Cardiothoracic SOTS convenor)
Dr Caroline Tallis
(Liver SOTS convenor)
Mr Paul Robertson
(Kidney/Pancreas-Islet SOTS convenor)
Professor Henry Pleass
(Kidney/Pancreas-Islet SOTS convenor)
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Dr Olivia Smibert (TID)
Dr Matthew Roberts (TID)
Dr Sakhee Kotecha (FACT)
Dr Rebecca Pearson
(Cardiothoracic SOTS convenor)
Dr Katherine Stuart
(Liver SOTS convenor)
Dr Reshma Shettigar
(Kidney/Pancreas-Islet SOTS convenor)

Early Career Researchers' Committee

Georgina Irish – SA (Co-Chair)
Laura De Souza - QLD
Katharine Hegerty - QLD
Atharva Kale - NSW
Saskia Leibowitz - QLD
Aspasia Pefanis - VIC
Amir Shamshirian - QLD
Eric Son - NSW
Griffith Perkins – SA (Co-Chair)
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Donna Hickling - QLD
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Olivia Smibert - VIC
Karen Waller - NSW

TSANZ Administrative Staff

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Partners

The Transplantation Society of Australia & New Zealand Limited gratefully acknowledges the support of the following companies in providing sponsorship for the Annual Scientific Meeting

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AWARDS

The Transplantation Society of Australia & New Zealand Limited gratefully acknowledges the support of the following companies for sponsoring awards presented at the Annual Scientific Meeting.

AWARDS

The President's Prize – Basic and Clinical Science
(supported by TSANZ)

Early Career Researcher Awards – Basic and Clinical Science
(supported by TSANZ)

Aviva Rosenfeld Award for Excellence in Patient Care in Transplantation
(supported by TSANZ)

Ian McKenzie Award for Outstanding Contribution in Transplantation
(supported by TSANZ)

Josette Eris Memorial Award in Support of Emerging Female Leaders in Transplantation
(supported by TSANZ)

TSANZ Award for the highest scoring abstract relating to Transplantation – Heart

TSANZ Award for the highest scoring abstract relating to Transplantation - First Nations People

TSANZ Award for the highest scoring abstract relating to Transplantation – Gender Equity

Kidney Health Australia Awards for Clinical & Laboratory Presentations relating to Kidney Diseases or Kidney Transplantation

Lungitude Foundation Award for Research/ Clinical Presentations relating to Lung Transplantation Research/ Clinical Outcomes

Patient Forum
(supported by Transplant Australia)

FINANCIAL STATEMENTS

Annual Financial Statements and Reports of the Directors and Auditor for the Company in respect of the period ended 31 December 2024 are available on the easily accessible member password protected section of the TSANZ website www.tsanz.com.au.

INVITED INTERNATIONAL SPEAKERS

Professor Roslyn B. Mannon, MD

Dr. Mannon is a professor of medicine, pathology, microbiology, and immunology at the University of Nebraska Medical Center, vice-chair for academic development and research mentoring, and associate chief of nephrology for research. Dr. Mannon is a fellow of the American Society of Nephrology and the American Society of Transplantation. She received her medical degree from Duke University, completing an internal medicine internship, residency and nephrology fellowship and chief residency at Duke.

Her career includes serving as Medical Director for the Kidney/Pancreas NIDDK intramural transplant program and at the Birmingham VA Medical Center and Section Chief of Transplant Nephrology at the University of Alabama at Birmingham. Dr. Mannon is a past president of the AST and is a deputy editor of the American Journal of Transplantation. She is the chair of Women in Transplantation, an initiative of the Transplantation Society, chair of the Policy and Advocacy Committee of the American Society of Nephrology, and co-chair of the Scientific Registry of Transplant Recipients Review Committee. She is a trustee of the Banff Allograft Pathology Foundation.

She was recently named a UNMC distinguished scientist for 2022. She is board certified in internal medicine and nephrology.

Women in Transplantation
an Initiative of The Transplantation Society

INVITED INTERNATIONAL SPEAKERS

Dr Peter Nickerson, MD, FRCPC, FCAHS

Dr. Nickerson, a distinguished professor of internal medicine and immunology at the University of Manitoba, is a clinical nephrologist at the Health Sciences Centre in Winnipeg and a medical consultant for the Transplant Immunology Laboratory at Shared Health.
His research program is focused on the mechanisms underlying transplant rejection, non-invasive techniques for diagnosing kidney transplant rejection, and health system design to improve access to transplants and outcomes for patients

INVITED INTERNATIONAL SPEAKERS

Dr Megan Sykes, MD

Dr. Sykes is the Michael J. Friedlander Professor of Medicine and Professor of Microbiology & Immunology and Surgical Sciences (in Surgery), Columbia University. Dr. Sykes is the founding Director of the Columbia Center for Translational Immunology and serves as Director of Research for the Transplant Initiative and as Director of Bone Marrow Transplantation Research at Columbia. Dr. Sykes joined Columbia University in April, 2010 from Massachusetts General Hospital/Harvard Medical School, where she was the Harold and Ellen Danser Professor of Surgery and Professor of Medicine (Immunology) and Associate Director of the Transplantation Biology Research Center. Dr. Sykes has over 39 years' experience in transplantation biology and Type 1 diabetes research, including translational research from animals to clinical trials and mechanistic studies of human transplant recipients. She is currently Past President of the Federation of Clinical Immunology Societies (FOCIS). Dr. Sykes received numerous honors and awards, including the Medawar Prize in 2018 and is a member of the National Academy of Medicine and of the Association of American Physicians

INVITED INTERNATIONAL SPEAKERS

Dr Cameron R. Wolfe, MBBS(Hons), MPH, FIDSA, FAST

Cameron Wolfe is a Professor of Medicine, in the Division of Infectious Disease at Duke University Medical Center, USA. Cameron's initial training was based in Melbourne, but his work now revolves around clinical care for transplant and immunosuppressed patients as well as the safe transplantation of donors who carry known and unrecognized infections. In addition, his research interests are in HIV transplantation, vaccine responsiveness in immunosuppressed hosts, and management of respiratory viral infections. He was a past Chair of the Disease Transmission Advisory Committee, and a Board Member of the UNOS/OPTN , administering transplant services in the US. He is the current Secretary of the Transplant Infectious Disease section at The Transplantation Society, and a co-faculty of the Duke Human Vaccine Institute.

Sponsored by -

ASID AUSTRALASIAN SOCIETY FOR INFECTIOUS DISEASES

INVITED SPEAKERS

A/Prof Louise Barbier
HPB and Liver Transplant unit, Auckland City Hospital, NZ
Associate Professor at University of Auckland

Ms Lucinda Barry
Chief Executive Officer,
Organ and Tissue Authority, Donate Life Australia

Dr Peter Boan
Infectious Diseases Physician
Fiona Stanley Hospital, WA

Prof Toby Coates
Central and Northern Renal and Transplantation Service (CNARTS)
SA Health

Prof Jeremy Chapman
Director, Division of Medicine and Cancer
Westmead Hospital, Sydney NSW

Dr David Darley
Department of Thoracic Medicine
St Vincent's Hospital, Sydney NSW

Prof Jaquelyne Hughes
College of Medicine and Public Health
Flinders University SA

Prof Chris Hayward
Department of Cardiology
St Vincent's Hospital Sydney NSW

Dr Yashutosh Joshi
Victor Chang Cardiac Research Institute, NSW

Prof Emily Lancsar
Head, Department of Health Economics Wellbeing and Society
Australian National University, ACT

Dr Jeremy McComish
Clinical Immunologist
Cabrini Health, Vic

INVITED SPEAKERS

Prof Stephen McDonald
Director of Dialysis and Nephrologist
The Central Northern Renal and Transplantation Service, Royal Adelaide Hospital SA

Dr Stella McGinn
Nephrologist, Royal North Shore Private Hospital
NSW

A/Prof Kavitha Muthiah
Victor Chang Cardiac Research Institute
NSW

Prof Henry Pleass
Westmead Clinical School,
Sydney University, NSW

Prof Natasha Rogers
Deputy Director, Centre for Transplant and Renal Research
The Westmead Institute for Medical Research, NSW

Dr Olivia Simbert
Infectious Disease Physician
Peter McCallum Cancer Centre and Austin Health, Vic

Prof Simone Strasser
Head of Department, Gastroenterology and Liver
Royal Prince Alfred Hospital NSW

Dr Lucy Sullivan
Scientific Director, Transplantation and Immunogenetics Services
Australian Red Cross Lifeblood

Dr Matthew Tunbridge
Adelaide Medical School, University of Adelaide, SA

A/Prof Antiopi Varelias
The Transplantation and Immunology Laboratory
QIMR Berghofer, Qld

Dr Melanie Wyld
Nephrologist, Westmead Hospital
Senior Lecturer, School of Public Health, University of Sydney, NSW

ABSTRACT REVIEW PROCESS AND PRESENTATION FORMATS

A total of 138 abstracts were submitted this year. Abstracts were blinded for authors and institutions and were reviewed by four reviewers (see below) assigned by the Scientific Program and Education Committee (SPEC). Reviewers did not review abstracts if a conflict of interest was identified. Reviewers scored between 6 to 12 abstracts and in general there was a close agreement between scores.

Three presentation formats will be used at the 2025 ASM. Free Communications session will have 4 oral presentations (12 min presentation, 3 min questions). 24 abstracts will be presented as mini-orals (3 min presentation, 1 min question) on Sunday evening and Monday morning. Abstracts will also be displayed as posters and the poster viewing sessions will be held during morning tea, lunch and afternoon tea on Monday June 23. Presenters should be at their posters during the poster sessions to answer any questions from delegates.

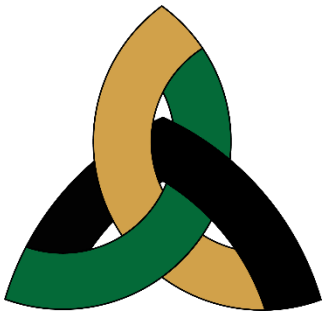
The President's Prize (PP) will be awarded in two categories: Basic Science and Clinical. The highest-ranked abstracts from eligible applicants in both categories will be presented in a single PP session. The award in each category will be based on the quality of the abstract and the presentation on the day.

The reviewers of the abstracts for the TSANZ 2025 meeting were:

Leyla Aouad
Eric Au
Dylan Barnett
Anjan Bongoni
Michael Burke
Scott Campbell
Steve Chadban
Jeremy Chapman
Suet-Wan Choy
Philip Clayton
Toby Coates
Shlomo Cohney
Michael Collins
Peter Cowan
Nicole De La Mata
Ian Dittmer
Chandima Divithotawela
Sine Donnellan
Jonathan Downing
Heather Dunckley
Karen Dwyer
Helen Evans
Doreen Fang
Sanduni Fernando
Randall Faull
Michael Fink
Ross Francis
Ling Gao
David Goodman
Basu Gopal
David Gracey
Bruce Hall
Wayne Hancock
Wayne Hawthorne
Bulang He
James Hedley
Munish Heer
Adrian Hibberd
Rhonda Holdsworth
Min Hu
Peter Hughes
Frank Ierino
Ashley Irish
Georgina Irish
Nikky Isbel
Shilpanjali Jesudason
Matthew Jose
John Kanellis
Joshua Kausman
Peter Kerr
Karen Keung
Siah Kim
Stephanie Kuo
Jair Kwan
Maleeka Ladhani
Nicholas Larkins
Paul Lawton
Darren Lee
Bronwyn Levvey
Jennifer Li
Wai Lim
Tom Loudovaris
Grant Luxton
Peter Macdonald
John Mackintosh
Sandawana Majoni
Paul Manley
Rosemary Masterson
Geoff McCaughan
Stephen McDonald
Solomon Menahem
William Mulley
Brian Nankivell
Eu Ling Neo
Philip O'Connell
Kathy Paizis
Miranda Paraskeva
Sia Pefanis
Helen Pilmore
Henry Pleass
Chanel Prestidge
William Rawlinson
Handoo Rhee
Amanda Robertson
Paul Robertson
Natasha Rogers
Brenda Rosales
Christine Russell
Jessica Ryan
Evelyn Salvaris
Julian Singer
Animesh Singla
Michael Stormon
Nancy Suh
Lucy Sullivan
Ramyasuda Swaminathan
Matthew Sypek
Matthew Tunbridge
Antiopi Varelias
Jeanette Villanueva
Debbie Watson
Angela Webster
John Whitlam
Germaine Wong
Kate Wyburn
Melanie Wyld
Tracey Ying
Kenneth Yong
Nathan Zammit

The committee members thank these reviewers for their reviews and effort in supporting the meeting.

Wai Lim and Lucy Sullivan
Chairs of TSANZ Scientific Program



The Transplantation Society of Australia and New Zealand
Forty Third Annual Scientific Meeting

PROGRAM

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09:00–17:00	2025 Transplant Infectious Diseases Day	Fitzroy and Murray Rooms

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13:00–15:00	Concurrent Afternoon Session: Lung	Swan Room

Sunday, June 22, 2025

07:45–08:45	**Fun Run/Walk (5km)**	Lake Burley Griffin (Start/Finish Meeting Point–Rond Terrace Park)
12:30–14:30	**Patient Forum** Sponsored by Transplant Australia	Torrens Room
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15:10–15:20	**Welcome Ceremony**	Ballroom (Main Plenary)
15:20–15:30	**Official Opening: *TSANZ President*** Prof Kate Wyburn	Ballroom (Main Plenary)
15:30–16:00	**PLENARY 1: Astellas Sponsored Session** *Chair: Prof Stephen Alexander* **Achieving Operational Tolerance: Bench to Bedside** Prof Megan Sykes	Ballroom (Main Plenary)
16:00–16:20	**Josette Eris Lecture** *Chair: Prof Kate Wyburn* **Imposter or Outlier With Style? The Science to Showing up Anyway** Prof Natasha Rogers	Ballroom (Main Plenary)
16:20–16:50	**Afternoon tea**	Ballroom and Gallery Foyers
16:50–17:50	***CONCURRENT FREE COMMUNICATIONS SESSIONS*** **Free Communications 1: Immunosuppression and Genetics** *Chairs: Dr Dylan Barnett and Dr Alison Graver*	Ballroom (Main Plenary)
Abstract	***— Oral presentations —***	

Sunday, June 22, 2025

1	16:50	**FIRST IN HUMAN STUDY OF INTRA-CUTANEOUS ISLET TRANSPLANT INTO PRE-VASCULARISED NOVOSORB® NEODERMIS: 12 MONTH RESULTS OF THE INCEPTR TRIAL** TOBY COATES	
2	17:05	**OUTCOMES OF CHECKPOINT INHIBITORS IN KIDNEY TRANSPLANT RECIPIENTS WITH ADVANCED CUTANEOUS MALIGNANCIES** HYAN JAE NAM	
3	17:20	**PHARMACOGENETIC PROFILING TO OPTIMISE TACROLIMUS DOSING: A SINGLE TRANSPLANT CENTER EXPERIENCE** SHARON HO	
4	17:35	**HLA COMPATIBILITY IMPACTS ANTIBODY FORMATION IN RENAL TRANSPLANT RECIPIENTS FROM INDIGENOUS AND NON-INDIGENOUS BACKGROUNDS** WATHSALA MUNASINGHE	
16:50–17:50	**Free Communications 2: Access to Transplantation** *Chairs: Dr Kathy Paizis and*		Fitzroy Room
Abstract	***— Oral presentations —***		
5	**16:50**	**VARIATIONS IN LIVING DONOR KIDNEY TRANSPLANTATION – INSIGHTS FROM THE PARENT TRANSPLANT CENTRE MODEL IN AUSTRALIA & NEW ZEALAND** LACHLAN McMICHAEL	
6	**17:05**	**ACCESS TO WAITLISTING AND KIDNEY TRANSPLANTATION FOR PATIENTS WITH INCIDENT KIDNEY FAILURE IN AUSTRALIA AND THE UNITED KINGDOM** LACHLAN McMICHAEL	
7	**17:20**	**A CONTEMPORARY ANALYSIS OF BODY MASS INDEX AND ITS IMPACT ON MORTALITY AND GRAFT SURVIVAL IN KIDNEY TRANSPLANT RECIPIENTS** KENNETH XIE	
8	**17:35**	**A NEW METHOD FOR PRIORITISING HLA MATCHING IN KIDNEY ALLOCATION THAT ACCOUNTS FOR DIFFICULT-TO-MATCH INDIVIDUALS** PHILIP CLAYTON	
16:45–17:45	**Free Communications 3: T Cell Biology** *Chairs: Prof Michaela Lucas and Dr Griffith Perkins*		Murray Room
Abstract	***— Oral presentations —***		

Sunday, June 22, 2025

10	16:50	**DIFFERENTIATION OF STEM-LIKE MEMORY T CELLS IN HEMATOPOIETIC STEM CELL TRANSPLANT RECIPIENTS FOLLOWING SARS-COV-2 VACCINATION** CHENG SHENG CHAI	
11	17:05	**MULTI-OMIC ANALYSIS OF ALLOREACTIVE CD8+ T CELLS ACROSS DIFFERENT TARGET ORGANS AND GENETIC BACKGROUNDS** TAEYOUNG SON	
12	17:20	**THE ROLE OF NATURAL KILLER T CELLS IN MURINE LIVER TRANSPLANTATION** AMY PROSSER	
16:50–17:50	**Mini-Oral Session 1** *Chairs: Dr Sia Pefanis and Dr Matthew Sypek*		Swan Room
Abstract	***— Mini-oral presentations —***		
13	16:50	**RECOVERY OF RAT HEARTS AFTER COLD STORAGE WITH ACID SENSING ION CHANNEL INHIBITOR HI1A VARIES BY SEX** SANJAY DUTTA	
14	16:55	**NEPHROLOGIST PERSPECTIVES ON OFFER AND CONSENT PRACTICES FOR INCREASED VIRAL RISK KIDNEY TRANSPLANT OFFERS** ALISON WEIGHTMAN	
15	17:00	**CELLULAR REJECTION SURVEILLANCE WITH ENDOMYOCARDIAL BIOPSIES IN THE FIRST YEAR POST HEART TRANSPLANT: A SINGLE CENTRE EXPERIENCE** JERRY PANG	
16	17:05	**IDENTIFYING THE BARRIERS TO KIDNEY TRANSPLANTATION FACED BY PACIFIC PEOPLE WITH END STAGE RENAL DISEASE: A MIXED METHODS STUDY** AMELIA TEKITEKI	
17	17:10	**COMMON BILE DUCT INJURY IN DONATION AFTER CIRCULATORY DEATH LIVERS – AN INDICATOR FOR INTRAHEPATIC BILIARY DAMAGE?** JACKSON SCULLION	
18	17:15	**THE IMPACT OF FEMALE SEX & INTERSECTIONAL DISADVANTAGE ON ACCESS TO DECEASED KIDNEY TRANSPLANTATION IN AUSTRALIA (2006-2023)** TENNILLE VITAGLIANO	
19	17:20	**SEX DIFFERENCES IN DISCONTINUATION OF CARDIOPROTECTIVE MEDICATION FOLLOWING KIDNEY TRANSPLANTATION** NICOLE DE LA MATA	

Sunday, June 22, 2025

20	17:25	**PERSPECTIVES OF TRANSPLANT PROFESSIONALS ON GENDER DIFFERENCES IN LIVING KIDNEY DONATION: A SEMI-STRUCTURED INTERVIEW STUDY** SUNDARESWARI ADINARAYANAN	
22	17:35	**IMMUNE RESPONSE AND SAFETY OF 1 VS 2 DOSES OF AS01E-ADJUVANTED RSVPREF3 IN TRANSPLANT RECIPIENTS VS NON-IMMUNOCOMPROMISED ADULTS** STEVE CHADBAN	
23	17:40	**KIDNEY SUPPORTIVE CARE FOR ADULT KIDNEY TRANSPLANT RECIPIENTS** PHOEBE TIN	
24	17:45	**DENOVO ANTI-HLA DONOR SPECIFIC ANTIBODY FORMATION IN AUSTRALIA'S FIRST UTERUS TRANSPLANT** KAREN KEUNG	
17:50–18:30	**TTS - Women in Transplantation Session - Making a Difference** *Chair: Prof Germaine Wong* 17:50 **Professional Development and Leadership: Identifying Opportunities Within and Beyond Your Medical Center** Prof Roslyn Mannon 18:10 **TBA** Prof Emily Lancsar		Ballroom (Main Plenary)
18:30–19:00	**"Town Hall Session"** *Chair: Prof Kate Wyburn* **Update on The Australian Law Reform Commission (ALRC) Review of Human Tissue Laws** Dr Maeghan Toews; Commissioner ALRC		Ballroom (Main Plenary)
19:00–20:00	**Welcome Reception**		**Ballroom and Gallery Foyers**

Monday, June 23, 2025

07:30–08:00	**Coffee with sponsors**	Ballroom and Gallery Foyers
08:00–09:30	**PLENARY 2: Joint TSANZ/OTA Session** **Challenges in Organ Donation and Transplantation** *Chairs: Prof Helen Opdam and Dr Samantha Ng* 08:00 **Australian Organ Donation and Transplantation** Ms Lucinda Barry 08:15 **Disease Transmission Reporting: The DTAC and UNOS Experience** Prof Cameron Wolfe 08:45 **Vigilance and Surveillance Expert Advisory Committee: The Australian Experience** Prof Jeremy Chapman 09:00 **Overcoming Barriers to Living Kidney Donor Transplantation** Dr Melanie Wyld 09:15 **NIKTT Implementation** Prof Stephen McDonald and Prof Jaquelyne Hughes	Ballroom (Main Plenary)
09:30–10:30	***CONCURRENT FREE COMMUNICATIONS SESSIONS*** **Free Communications 4: Donor Organ Utilisation and Allocation** *Chairs: Prof Steve Chadban and Dr Alison Weightman*	Ballroom (Main Plenary)
Abstract	***— Oral presentations —***	
25	09:30 **PROGNOSIS MATCHING IN THE AUSTRALIAN DECEASED DONOR KIDNEY ALLOCATION ALGORITHM** JAMES HEDLEY	
26	09:45 **METRICS FOR ASSESSING DONOR COORDINATION COMPLEXITY OF THE KIDNEY ALLOCATION SYSTEM** JAMES HEDLEY	
27	10:00 **CLINICAL RISK AVERSION AND POTENTIAL GAINS FROM DONORS FORGONE FOR DECEASED KIDNEY DONATION: A DATA-LINKAGE STUDY** BRENDA ROSALES	

Monday, June 23, 2025

28	10:15	**NON-RETRIEVAL AND NON-UTILISATION OF DECEASED DONOR KIDNEYS FOR TRANSPLANTATION: AN AUSTRALIAN COHORT STUDY** RACHEL CUTTING	
09:30–10:30		**Free Communications 5: Optimising Kidney Transplant Outcomes** *Chairs: Dr Georgina Irish and Prof Wai Lim*	Fitzroy Room
Abstract		***— Oral presentations —***	
29	09:30	**DISTINCT DIFFERENCES IN THE PATTERN OF MAJOR ADVERSE CARDIAC EVENTS PRE- AND POST-KIDNEY TRANSPLANTATION: THE CARSK STUDY** TRACEY YING	
30	09:45	**THE PREDICTIVE VALUE OF KIDNEY RESISTIVE INDEX FOR DELAYED GRAFT FUNCTION IN TRANSPLANTATION: THE BEST-FLUIDS IMAGING SUBSTUDY** ALEXANDER GILBERT	
31	10:00	**IMPLEMENTATION OF A STATEWIDE ALLOCATION SYSTEM FOR DECEASED DONOR KIDNEYS AT RISK OF PROLONGED COLD ISCHAEMIA IN VICTORIA** KEVIN CHOW	
09:30–10:30		**Free Communications 6: Experimental Models for Transplantation** *Chairs: A/Prof Antiopi Varelias and Dr Jeanette Villanueva*	Murray Room
Abstract		***— Oral presentations —***	
33	09:30	**TEMPERATURE OPTIMISATION OF HEART STORAGE USING CO2/OXYGEN PERSUFFLATION IN A RAT HEART MODEL** WARREN PAVEY	
34	09:45	**THE IMPACT OF ADDITIVES TO THE UNIVERISTY OF WISCONSIN (UW) SOLUTION DURING KIDNEY PROCUREMENT AND STORAGE** SEBASTIAN PRIMROSE	
35	10:00	**DEVELOPMENT OF AN ORGANOID MODEL FROM HEREDITARY PANCREATITIS PATIENTS COMPLIMENTS SPATIAL-TRANSCRIPTOMIC CHARACTERIZATION** JAMES ZUIANI	

Monday, June 23, 2025

36	10:15	**RBM20 CARDIOMYOPATHY: PHENOTYPIC CHARACTERISATION OF A NOVEL PATIENT DERIVED AVATAR MOUSE MODEL THAT REQUIRES CARDIAC TRANSPLANT** JENNIFER RIGTERINK	
09:30–10:30	**Mini-Oral Session 2** *Chairs: Dr Chandima Divithotawela and Dr Stephanie Kuo*		Swan Room
Abstract	***— Mini-oral presentations —***		
38	09:30	**ACUTE LUNG ALLOGRAFT DYSFUNCTION (ALAD) IN THE FIRST-YEAR POST-TRANSPLANT: INCIDENCE, ETIOLOGY, SEVERITY AND OUTCOME** REECE JEFFERIES	
39	09:35	**KIDNEY TRANSPLANT OUTCOMES FROM DONORS WITH PRIOR ECMO BUT NO NRP: A SYSTEMATIC REVIEW AND META-ANALYSIS** ANGUS WALDON	
40	09:40	**PRE-TRANSPLANT ANGIOTENSIN II TYPE 1 RECEPTOR AUTOANTIBODIES PREDICTS REDUCED SURVIVAL IN LUNG TRANSPLANT RECIPIENTS** ANDREI DARIE	
41	09:45	**IMPACT Of OBESITY ON KIDNEY TRANSPLANT WAITLISTING OUTCOMES IN AUSTRALIA** KENNETH XIE	
42	09:50	**DESIGN AND REPORTING QUALITY OF NON-INFERIORITY TRIALS IN KIDNEY TRANSPLANTATION: A SYSTEMATIC REVIEW** BREE SHI	
43	09:55	**THE EFFECT OF MENTAL ILLNESS ON MORTALITY, GRAFT FAILURE, AND ACUTE REJECTION POST-KIDNEY TRANSPLANT** TRISHALA SHARMA	
44	10:00	**SIMULTANEOUS LUNG AND HEART RETRIEVAL DOESN'T RESULT IN WORSE OUTCOMES FOR DCD LUNG TRANSPLANTATION – PROPENSITY MATCHED ANALYSIS** SANJAY DUTTA	
45	10:05	**PATIENT-REPORTED CHANGES IN SYMPTOMS AFTER ADULT KIDNEY TRANSPLANTATION** CATHERINE KING	
46	10:10	**REVIEW OF AUSTRALIAN DECEASED DONOR RENAL OFFER DECLINES DUE TO DONOR SPECIFIC ANTIBODIES IN 2023 AND 2024** REBECCA SCAMMELL	

Monday, June 23, 2025

47	10:15	**COMPARABLE LONG-TERM OUTCOMES BETWEEN DONATION AFTER CIRCULATORY VERSUS NEUROLOGICAL DEATH DONORS IN AUSTRALIA AND NEW ZEALAND** ALAN XU	
48	10:20	**LANDSCAPE OF MENTAL ILLNESS IN KIDNEY FAILURE: A THREE NATION COMPARISON BETWEEN AUSTRALIA, NEW ZEALAND, AND SCOTLAND** JAMES HEDLEY	
10:30–11:00	**Morning tea and Poster Viewing**		Ballroom and Gallery Foyers
11:00–12:40	**PLENARY 3: ThermoFisher Sponsored Session** **Dealing With the HLA Barrier** *Chairs: Ms Rhonda Holdsworth and A/Prof Ross Francis* 11:00 **Signatures of Organ Transplant Tolerance** Prof Megan Sykes 11:30 **HLA Molecular Mismatch as a Risk Stratification Tool to Guide Precision Medicine in Transplantation** Prof Peter Nickerson 12:00 **HLA Compatible Red Cell Transfusion** Dr Jeremy McComish 12:20 **HLA Mismatches in Lung Transplantation-Friend or Foe?** Dr Lucy Sullivan		Ballroom (Main Plenary)
12:40–13:30	**Lunch and Poster Viewing**		Ballroom and Gallery Foyers
	ECC "Meet the Researcher" Forum		Torrens Room
13:30–15:30	**President's Prize Symposium** *Chair: TSANZ President, Prof Kate Wyburn* ***— Oral presentations —***		Ballroom (Main Plenary)
49	13:30	**A NOVEL HYPOTHERMIC OXYGENATED MACHINE PERFUSION SYSTEM ALLOWS FOR LOW-COST, WIDESPREAD IMPLEMENTATION FOR LIVER TRANSPLANTATION** CHARLES RISBEY	

Monday, June 23, 2025

50	13:45	**APOPTOTIC DONOR B CELL INFUSIONS FOR TOLERANCE IN A NON-HUMAN PRIMATE MODEL OF ALLOGENEIC KIDNEY TRANSPLANTATION** MATTHEW TUNBRIDGE	
51	14:00	**A DECADE OF DONATION AFTER CIRCULATORY DEATH HEART TRANSPLANTATION IN AUSTRALIA** YASHUTOSH JOSHI	
52	14:15	**DRIVING FAST CARS TO THE KIDNEY: CAR-T REGS TARGETED AT IMMUNE AND RENAL ANTIGENS** KARLI SHAW	
53	14:30	**PATHAGENT: THE FIRST ARTIFICIALLY INTELLIGENT AUTONOMOUS AGENT FOR RENAL PATHOLOGY** HARRY ROBERTSON	
54	14:45	**NORMOTHERMIC PRESERVATION OF HUMAN LIVERS FOR MORE THAN 3 WEEKS: FROM EXPERIMENTAL MODEL TO CLINICAL APPLICATION** DANIEL BABEKUHL	
55	15:00	**OUTCOMES OF SOLID ORGAN TRANSPLANT RECIPIENTS WITH ADVANCED CANCERS RECEIVING IMMUNE CHECKPOINT INHIBITORS: A SYSTEMATIC REVIEW** NIDA SALEEM	
56	15:15	**SPIDER-VENOM DERIVED HI1A EXTENDS VIABILITY OF DONATION AFTER CIRCULATORY DEATH DONOR HEARTS** YASHUTOSH JOSHI	
15:30–16:00		**Afternoon tea and Poster Viewing**	Ballroom and Gallery Foyers
16:00–17:00		***CONCURRENT FREE COMMUNICATIONS SESSIONS***	
		Free Communications 7: Managing Complications *Chairs: Dr Basu Gopal and Dr Ramyasuda Swaminathan*	Ballroom (Main Plenary)
Abstract		***— Oral presentations —***	
57	16:00	**DIETARY INULIN IMPROVES DYSGLYCAEMIA AND ALTERS THE GUT MICROBIOME FOLLOWING KIDNEY TRANSPLANTATION: RESULTS FROM THE DIGEST RCT** ALEX GILBERT	
58	16:15	**IMPACT OF BORDERLINE T-CELL MEDIATED REJECTION IN THE FIRST YEAR AFTER KIDNEY TRANSPLANT: AN ANZDATA REGISTRY ANALYSIS** CRAIG COOREY	

Monday, June 23, 2025

59	16:30	**IDENTIFYING STRATEGIES FOR LIFE PARTICIPATION IN CHILDREN WITH CHRONIC KIDNEY DISEASE: A SONG WORKSHOP REPORT** ANASTASIA HUGHES	
60	16:45	**ASYSTOLIC WARM ISCHAEMIC TIME DOES NOT IMPACT OUTCOMES FOLLOWING DONATION AFTER CIRCULATORY DEATH LUNG TRANSPLANTATION** SANJAY DUTTA	
16:00–17:00	**Free Communications 8: Surgery** *Chairs:* Dr *Handoo Rhee and Dr Adam Philipoff*		Fitzroy Room
Abstract	***— Oral presentations —***		
61	16:00	**TAKING THE PAIN OUT OF LIVING KIDNEY DONATION SURGERY: IMPACT OF ENHANCED RECOVERY AFTER SURGERY PROTOCOL ON PAIN** ANGELINA KOH	
62	16:15	**EARLY POST-OPERATIVE DOPPLER ULTRASOUND PREDICTS HEPATIC ARTERY STENOSIS AND POOR GRAFT SURVIVAL POST-LIVER TRANSPLANTATION** KURTIS HANSON	
63	16:30	**TEMPORAL TRENDS IN ORGAN DONATION CONSENT RATES IN NEW SOUTH WALES, AUSTRALIA** RACHEL CUTTING	
64	16:45	**EVALUATING THE ROLE OF SURGICAL TECHNIQUE IN THE DEVELOPMENT OF BILIARY ANASTOMOTIC STRICTURES FOLLOWING LIVER TRANSPLANTATION** SAMITH MINU ALWIS	
16:00–17:00	**Free Communications 9: Immunobiology** *Chairs: Prof Toby Coates and Dr Amy Prosser*		Murray Room
Abstract	***— Oral presentations —***		
65	16:00	**ELIMINATING MHC II EXPRESSION WITH BASE EDITING AS A STRATEGY TO PREVENT CHRONIC ANTIBODY-MEDIATED KIDNEY TRANSPLANT REJECTION** AILISH BARRY	
66	16:15	**CELL-FREE MITOCHONDRIAL DNA AND NUCLEAR CELL-FREE DNA AS A BIOMARKER IN LUNG TRANSPLANT RECIPIENTS** HERBERT LUDEWICK	

Monday, June 23, 2025

67	16:30	**A SINGLE-CELL IMAGING ATLAS OF THE PERIPHERAL IMMUNE SYSTEM IN KIDNEY TRANSPLANT RECIPIENTS** GRIFFITH PERKINS	
68	16:45	**DIETARY FIBRE-DERIVED SHORT-CHAIN FATTY ACID (SCFA) TREATMENT PROTECTS AGAINST KIDNEY ISCHAEMIA-REPERFUSION INJURY (IRI)** ALEX GILBERT	
17:00–17:45		**TSANZ Annual General Meeting**	Ballroom (Main Plenary)
18:30–22:30		**TSANZ Annual Awards Dinner**	Old Parliament House

Tuesday, June 24, 2025

07:30–08:00	**Coffee with sponsors**	Ballroom and Gallery Foyers
08:00–09:00	***CONCURRENT STATE OF THE ART SESSIONS***	
	STATE OF THE ART 1: Joint TSANZ/Xvivo Sponsored Session	Ballroom (Main Plenary)
	Machine Perfusion-The Evolving Landscape *Chairs: Prof Peter Macdonald and Prof Henry Pleass*	
	08:00 **Normothermic Regional Perfusion-Implementation in New Zealand** Dr Louise Barbier	
	08:20 **Let's Talk About the Logistics to Implement Machine Perfusion and the Unintended Consequences on Other Organs – Panel Discussion** Prof Henry Pleass	
08:00–09:00	**STATE OF THE ART 2: Joint TSANZ/Takeda Sponsored Session**	Fitzroy Room
	Infections *Chairs: A/Prof Matthew Roberts and Dr Brenda Rosales*	
	08:00 **The 2 am Call to Your ID Friend-is This Bug OK? Ask the Panel** Dr Peter Boan	
	08:40 **Not All Bugs Are Bad-Gut Microbiota in Transplant Recipients** Dr Oliva Simbert	

Tuesday, June 24, 2025

09:00–10:30	**PLENARY 4: ThermoFisher Sponsored Session** **Rejection** *Chairs: A/Prof William Mulley and Dr Lucy Sullivan* 09:00 **Impact of Rejection (TCMR and ABMR) on Graft Outcomes in the Modern Era of Immunosuppression** Prof Peter Nickerson 09:30 **Donor Derived Cell-Free DNA in Heart Transplantation** A/Prof Kavitha Muthiah **09:45 Chronic Lung Allograft Dysfunction Phenotypes** Dr David Darley **10:00 Chronic Antibody Mediated Rejection and Microvascular Injury-Update on Diagnosis and Evolving Treatment** Prof Roslyn Mannon	Ballroom (Main Plenary)
10:30–11:00	**Morning tea**	Ballroom and Gallery Foyers
11:00–12:00	***CONCURRENT STATE OF THE ART SESSIONS*** **STATE OF THE ART 3: Astellas Sponsored Session** **Stretching the Boundary in Transplantation** *Chairs: A/Prof John Whitlam and A/Prof Bronwyn Levvey* 11:00 **DCD Heart Transplant Program** Dr Yashutosh Joshi 11:20 **Experience With Imlifidase Use For Highly Sensitised Patients in ANZKX** Dr Stella McGinn 11:40 **Liver Transplant Oncology** Prof Simone Strasser	Ballroom (Main Plenary)

Tuesday, June 24, 2025

11:00–12:30	**STATE OF THE ART 4: Joint TSANZ/ Pharmacor Sponsored Session** **Bench to Bedside** *Chairs: Dr Min Hu and Dr Sarah Short* 11:00 **Spatial Transcriptomic Analysis in Hereditary Pancreatitis** Prof Toby Coates 11:20 **Murine Models for Infective Risk in Graft Versus Host Disease** A/Prof Antiopi Valerias 11:40 **Transdermal Glomerular Filtration Rate in Murine Kidney Transplant Model** Dr Matthew Tunbridge	Fitzroy Room
12:00–13:00	**PLENARY 5: Astellas Sponsored Session** **Advances in Transplantation** *Chairs: Dr Kavitha Muthiah and Mr Harry Robertson* 12:00 **Total Artificial Heart (BiVACOR)-Will it be a Bridge Beyond Transplantation?** Prof Chris Hayward 12:30 **Biomarkers in Transplantation** Prof Roslyn Mannon	Ballroom (Main Plenary)
13:00–14:00	**Light lunch**	Ballroom and Gallery Foyers
14:00	**ASM Concludes**	

Abstract	*— Poster —*
69	**DEVELOPMENT OF A LOCAL, SIMPLIFIED, SHEEP WORKING HEART MODEL** WARREN PAVEY
70	**OPTIMISING GAS FLOW RATES FOR CO2/OXYGEN HEART PERSUFFLATION** WARREN PAVEY
71	**HUMAN CD4+CD25+CD127LO TREG HAVE ENHANCED EXPRESSION OF IL-12RB1 UPON ACTIVATION WITH ALLOANTIGEN AND RIL-2** RANJE AL-ATIYAH
72	**TREG EFFECTOR MOLECULES (CD39/HLA-DR/PD-1) EXPRESSION IN RENAL TRANSPLANT PATIENTS WITH LONG SURVIVING GRAFT AND HEALTHY VOLUNTEERS** NIRUPAMA VERMA
73	**TREG PHENOTYPES IN RENAL TRANSPLANT PATIENTS WITH LONG SURVIVING GRAFT: INCREASED TH2-LIKE AND REDUCED TH1- AND TH17-LIKE TREG** NIRUPAMA VERMA
76	**EFFECTIVE USE OF A MARKETING PLATFORM TO ENHANCE LUNG TRANSPLANT PATIENT COMMUNICATION AND HEALTH EDUCATION** BRONWYN LEVVEY
77	**INDIVIDUAL AND CUMULATIVE IMPACT OF DONOR RISK FACTORS ON GRAFT SURVIVAL IN LUNG TRANSPLANT RECIPIENTS** ANDREI DARIE
78	**A PHYSICAL FLOW CYTOMETRY CROSSMATCH IS NECESSARY TO EVALUATE UNEXPLAINED B*08:01 REACTIVITY ON SINGLE ANTIGEN BEAD ASSAYS** LAUREN GREGORY
79	**A SYSTEMATIC REVIEW OF THE EFFECTIVENESS OF CONTRAST-ENHANCED ULTRASONOGRAPHY FOR EVALUATING RENAL ALLOGRAFT FUNCTION** RAJITH AMARATUNGA
80	**ENHANCING DONOR ORGAN AVAILABILITY THROUGH THE INTEGRATION OF MACHINE PERFUSION, MICROBUBBLES AND ULTRASONOGRAPHY** RAJITH AMARATUNGA
81	**DISSOLUTION OF URETERIC CLOT CAUSING OBSTRUCTION WITH INTRA-URETERIC UROKINASE IMMEDIATELY POST RENAL TRANSPLANT: A CASE REPORT** CHINTHANI MADIGASEKARA

Abstract	— *Poster* —
82	**ESTABLISHING A LAPAROSCOPIC DONOR NEPHRECTOMY ENHANCED RECOVERY AFTER SURGERY (ERAS) PATHWAY – A SINGLE CENTRE EXPERIENCE** ASHIVINI SHEKHAR
83	**INFECTION PREVENTION AND SURVEILLANCE IN THE CARE OF AUSTRALASIAN SOLID-ORGAN TRANSPLANT RECIPIENTS - AN INTERNATIONAL SURVEY** PRIYA GARG
84	**UTILISATION OF SURROGATE FLOW CYTOMETRIC CROSSMATCHING IN TRANSPLANT PATIENT MANAGEMENT** JUDEE PEREZ
85	**HHV8 INFECTION AND KAPOSI SARCOMA POST RENAL TRANSPLANT: A CASE REPORT** SNEHA AMIN
86	**CASE STUDY: AN INVESTIGATION INTO DQB1*03 ANTIBODIES DETECTED BY LABSCREEN IN AN UNSENSITISED MALE KIDNEY PATIENT** DEANNA NANKERVIS
87	**AN UNUSUAL CASE OF SEVERE PERSISTENT HYPOPHOSPHATEMIA POST KIDNEY TRANSPLANTATION** KEN CHAU
88	**VARICELLA ZOSTER VIRUS LUMBOSACRAL POLYRADICULITIS: A CASE REPORT** PAULIN KANABAR
89	**NOT THE USUAL SUSPECTS: A CASE OF METAMYCOPLASMA HOMINIS AND UREAPLASMA ENDOCARDITIS IN A RENAL TRANSPLANT PATIENT** LEE SKEAT
90	**THE ONGOING CHALLENGE OF ANTIBODY MEDIATED REJECTION (AMR): A SINGLE-CENTRE REVIEW OF INCIDENCE AND PATIENT CHARACTERISTICS** HENRY GUO
91	**URINARY TRACT INFECTION POST TRANSPLANT: UNUSUAL CAUSE OF GRAFT DYSFUNCTION** ISRA IFTIKHAR
92	**THIOPURINE SHUNTING IN RENAL TRANSPLANT RECIPIENT: PRE-PREGNANCY CONSIDERATIONS WITH AZATHIOPRINE & ALLOPURINOL** VANITHA NAGARAJAH
93	**SUBOPTIMAL TIMING OF BLOOD GLUCOSE MONITORING AFTER KIDNEY TRANSPLANTATION** STEVE CHADBAN

Abstract	*— Poster —*
94	**DISSEMINATED INVASIVE ASPERGILLOSIS REQUIRING RENAL ALLOGRAFT NEPHRECTOMY: A CASE REPORT** PAULIN KANABAR
95	**A CHALLENGING TRANSITION: CASE SERIES OF DEDICATED YOUNG ADULT TRANSPLANT CLINIC** JESSIE MADDEN
96	**THE SAFETY AND EFFICACY OF ENDOBRONCHIAL BALLOON DILATATION FOLLOWING LUNG TRANSPLANTATION: A SINGLE CENTRE RETROSPECTIVE AUDIT** ALEXANDER MULLIN
97	**CYTOMEGALOVIRUS IMMUNE MONITORING HAS LIMITED UTILITY TO GUIDE PRIMARY PROPHYLAXIS IN D+/R- LUNG TRANSPLANT RECIPIENTS** BRADLEY GARDINER
98	**REDEFINING CLINICALLY SIGNIFICANT ANASTOMOTIC STRICTURES TO UNTANGLE BILIARY RECONSTRUCTION IN LIVER TRANSPLANTS FOR PSC** SAMITH MINU ALWIS
99	**SODIUM GLUCOSE CO-TRANSPORTER 2 INHIBITORS ARE ASSOCIATED WITH RENAL STABILISATION IN HEART TRANSPLANTATION** LISA RAVEN
100	**MINIMISATION OF INTRAOPERATIVE HYPOTHERMIA IMPROVES RENAL TRANSPLANT RECOVERY** FRANK HUANG
101	**IMPACT OF PREOPERATIVE ANAEMIA ON RECOVERY OUTCOMES POST RENAL TRANSPLANT** FRANK HUANG
102	**ACUTE UPPER EXTREMITY DEEP VENOUS THROMBOSIS POST HEART TRANSPLANT** FAHID TALUKDER
103	**INCREASING INCIDENCE AND PREVALENCE OF DIABETES AFTER HEART TRANSPLANTATION: A CASE FOR INTEGRATED DIABETES CARE** LISA RAVEN
104	**VALIDITY OF KIDNEY TRANSPLANT OUTCOMES IN THE ANZDATA REGISTRY: A COMPARISON WITH CLINICAL TRIAL DATA** BREE SHI
105	**RISK-STRATIFIED ECHOCARDIOGRAPHIC EVALUATION FOR PATIENTS WITH KIDNEY FAILURE PRIOR TO KIDNEY TRANSPLANTATION** GEORGE TSIHLIS

Abstract	*— Poster —*
106	**COMPARING AND COMBINING GLOBAL IMMUNE BIOMARKERS TO PREDICT INFECTIONS IN LUNG TRANSPLANT RECIPIENTS** BRADLEY GARDINER
107	**PAXLOVID-INDUCED TACROLIMUS TOXICITY AND REVERSAL WITH PHENYTOIN** PATRICK MANLEY
109	**CURRENT KIDNEY ASSESSMENT PRACTICES FOR POTENTIAL LIVING DONORS: FINDINGS FROM A NATIONAL SURVEY OF AUSTRALIAN NEPHROLOGISTS** LAURA SMITH
110	**INFECTION TRANSMISSION RISK OF KIDNEY DONORS WITH POSITIVE HEP C ANTIBODY AND NEGATIVE NAT: SYSTEMATIC REVIEW AND META-ANALYSIS** FRED LEE
111	**LIVING DONOR DEMOGRAPHICS IN AUSTRALIA & NEW ZEALAND: HAVE DISPARITIES INCREASED OVER TIME?** ROSE-MARIE SCARLATO
112	**IDENTIFYING STRATEGIES FOR DISSEMINATING RESEARCH TO PATIENTS WITH CHRONIC KIDNEY DISEASE AND CAREGIVERS: A WORKSHOP REPORT** ANASTASIA HUGHES
113	**LIVING KIDNEY DONOR EVALUATION IN AUSTRALIA: A NATIONAL SURVEY OF GUIDELINE AVAILABILITY AND USE** MELANIE WYLD
114	**INTERSECTIONAL DISADVANTAGE AND ITS EFFECT ON LIVING DONOR KIDNEY TRANSPLANT ACCESS IN AUSTRALIA: A NATIONAL COHORT STUDY** TENNILLE VITAGLIANO
115	**BONE MINERAL DENSITY IN YOUNG ADULT KIDNEY TRANSPLANT RECIPIENTS** PHOEBE TIN
117	**ROLE OF HUMAN LEUKOCYTE ANTIGEN EPLET MATCHING IN CARDIAC ALLOGRAFT VASCULOPATHY AND ACUTE CELLULAR REJECTION** MARILYN PAUL
118	**NEPHROLOGIST PERSPECTIVES ON OBTAINING INFORMED CONSENT FOR KIDNEY TRANSPLANT OFFERS WHILE UPHOLDING DONOR CONFIDENTIALITY** ALISON WEIGHTMAN

Abstract	*— Poster —*
119	**ESTABLISHING A CORE OUTCOME MEASURE FOR LIFE PARTICIPATION IN CHILDREN WITH CHRONIC KIDNEY DISEASE: A SONG WORKSHOP** ANASTASIA HUGHES
120	**KIDNEY TRANSPLANT ACROSS ETHNICITIES IN A SINGLE CENTRE IN AOTEAROA NZ: ARE WE MISSING THE OPPORTUNITY TO TRANSPLANT PEOPLE?** CAROLYN CLARK
121	**QUANTITATIVE URINE PROTEOMICS ANALYSIS REVEALS DIFFERENCES BETWEEN KIDNEY TRANSPLANT REJECTION AND NORMAL PATHOLOGY** STEPHANIE KUO
122	**GLP-1 RECEPTOR AGONIST (GLP-1RA) USE IN HEART TRANSPLANT RECIPIENTS: A RETROSPECTIVE SINGLE-CENTRE REVIEW IN WESTERN AUSTRALIA** ANN ELIZABETH DEVLIN
123	**SIR-ZOSTER: IMMUNOGENICITY OF SHINGRIX VACCINATION IN SOLID ORGAN TRANSPLANT RECIPIENTS AND NON-IMMUNOSUPPRESSED COHABITANTS** GRIFFITH PERKINS
124	**QUALITY OF LIFE, MENTAL HEALTH, AND HEALTH SELF-PERCEPTION IMPACT ON YOUNG ADULT KIDNEY TRANSPLANT PATIENT MEDICATION ADHERENCE** LIAM QI
125	**IMPLEMENTATION OF VORICONAZOLE PROPHYLAXIS TO PREVENT ASPERGILLUS INFECTION POST KIDNEY TRANSPLANTATION: EFFICACY AND CHALLENGES** CHEE LOONG CHONG
126	**PAN-REACTIVE HLA-A REACTIVITY PATTERN IN SINGLE ANTIGEN BEAD RESULTS OF A KIDNEY TRANSPLANT WAITING LIST PATIENT** JONATHAN DOWNING
127	**PHARMACOTHERAPY AND WEIGHT OF HEART TRANSPLANT PATIENTS: A SINGLE-CENTRE CROSS-SECTIONAL STUDY** ANN ELIZABETH DEVLIN
128	**DOES INTRAOPERATIVE HYPOTHERMIA CONFER BENEFIT IN KIDNEY TRANSPLANTATION** ROHAN BHATTACHARJYA
129	**MINI-INCISION RENAL TRANSPLANT; A SINGLE-CENTRE NON-RANDOMISED FEASIBILITY STUDY** LACHLAN ALLAN

Abstract	*— Poster —*
130	**URINE LEAK POST KIDNEY TRANSPLANT IN THE SETTING OF AN INFARCTED LOWER POLE** MADDISON TAYLOR
131	**IMPACT OF VASCULAR ANASTOMOSIS TIME ON KIDNEY TRANSPLANT OUTCOMES – A SYSTEMATIC REVIEW** KHALED SAYAH
132	**HOW PATIENT NAVIGATORS CAN IMPROVE PATIENT JOURNEYS FOR FIRST NATIONS PEOPLE WITH KIDNEY FAILURE: THE COMPASS PROJECT** KELLI OWEN
133	**BURDEN OF PHYSICAL AND PSYCHOLOGICAL SYMPTOMS IN HEART AND LUNG TRANSPLANT CANDIDATES** PERRYN NG
134	**HOW PATIENT NAVIGATORS CAN IMPROVE PATIENT JOURNEYS FOR FIRST NATIONS PEOPLE WITH KIDNEY FAILURE: THE COMPASS PROJECT** PERRYN NG
135	**SUCCESSFUL ESWL FOR RADIOLUCENT GRAFT UROLITHIASIS–AP AXIS IDENTIFICATION, IV PYELOGRAM AND FREE HAND ULTRASOUND MAY BE USEFUL** TRENT PATTENDEN

Abstract No. 1

FIRST IN HUMAN STUDY OF INTRA-CUTANEOUS ISLET TRANSPLANT INTO PRE-VASCULARISED NOVOSORB® NEODERMIS: 12 MONTH RESULTS OF THE INCEPTR TRIAL

COATES PT[1], GREENWOOD J[2], ETHERTON C[1], RICKARD A[1], KAY T[3], LOUDOVARIS T[4], TORPY D[5], CONCANNON E[6], PENKO D[1], NITSCHKE J[1], KIRETA S[1], COUGHLAN P[1], GREY S[7], DROGEMULLER C[1]

[1]Central Northern Adelaide Renal and Transplantation Service, Royal Adelaide Hospital, [2]Burns Unit, Royal Adelaide Hospital, [3]Immunology and Diabetes, St Vincents Institute, [4]Immunology and Diabetes, St Vincent's Institute, [5]Department of Endocrine and Metabolism, Royal Adelaide Hospital, [6]Plastic Surgery, Royal Adelaide Hospital, [7]Department of Molecular and Biomedical Science, University of NSW

Aims: To develop an alternative to intra-hepatic islet cell transplant (ICT) we pre-implanted a Biodegradable Temporizing Matrix (BTM)(Novosorb®) into the inner-bicep of three trial participants prior to ICT as part of our INtra-Cutaneous Ectopic Pancreas TRial – INCEPTR. Pre-implantation of Novosorb® created a fully functional dense vascular bed capable of supporting transplanted islets within the intra-cutaneous-transplant site.

Methods: INCEPTR is a prospective first-in-human study of allogeneic ICT into a pre-vascularised intracutaneous transplant site: Australian and New Zealand Clinical Trials Registry (ACTRN12621001573842). INCEPTR trial primary outcome was detectable c-peptide at 3 months post-transplant. Secondary outcomes included average daily exogenous insulin usage and HbA1c measured at baseline, 3-, 6- and 12-months post-transplant.

Results: Three kidney transplant recipients with long-standing T1D who were receiving immunosuppressive therapy (tacrolimus, mycophenylate +/- low dose corticosteroid were chosen to receive Novosorb® BTM implantation. Novosorb® BTM was implanted (100x40mm graft) under local anaesthesia before cadaveric human islet transplantation. A mean total IEQ of 322,081 (range 204,633-485,584) was transplanted under anti-thymocyte globulin induction subject to cell availability. No significant adverse events were observed. One of the patients with positive c-peptide at 3 months has ongoing long-term detectable graft function out to 2.5 years post engraftment. Primary and secondary outcomes are shown in Table 1.

Conclusion: Prevascularised Novosorb® neo-dermis is safe and supported human islet cell survival in an extra-hepatic intra-cutaneous transplant site.

Table 1

Pt	Pre-Islet transplant Novosorb® integration period	Total IEQ transplant	3/12 c-pep	3/12 HbA1c reduction	3/12 insulin Reduction	6/12 HbA1c reduction	6/12 insulin reduction	12/12 HbA1c reduction	12/12 Insulin reduction
1	25 days	485,584	pos	1.1%	21%	1.8%	22%	1.8%	28%
2	33 days	204,633	neg	1.1%	10%	0.6%	7%	0.8%	21%
3	76 days	276,026	pos	0.3%	44%	0.3%	44%	1.3%	62%

Abstract No. 2

OUTCOMES OF CHECKPOINT INHIBITORS IN KIDNEY TRANSPLANT RECIPIENTS WITH ADVANCED CUTANEOUS MALIGNANCIES

NAM HJ[1], SHAO E[2], CAO M[1], WONG K[3], KHOSROTEHRANI K[1], ISBEL N[4], CAMPBELL S[4], LADWA R[5]

[1]Department of Dermatology, Princess Alexandra Hospital, Brisbane, [2]Department of Dermatology, Royal Brisbane Women's Hospital, [3], Royal Brisbane Women's Hospital, [4]Department of Renal Medicine, Princess Alexandra Hospital, Brisbane, [5]Department of Medical Oncology, Princess Alexandra Hospital, Brisbane,

Aim: Despite the established efficacy of checkpoint inhibitors (CPI) in advanced malignancies, transplant recipients are often excluded from clinical trials due to concerns regarding graft rejection, with literature reporting rejection rates of 40-50%. This study evaluates the efficacy and safety-profile of CPIs in kidney transplant recipients (KTR) with advanced cutaneous malignancies, examining tumour response rates, graft outcomes, and treatment-related adverse events.

Method: A retrospective analysis was conducted at Princess Alexandra Hospital, examining patients who received kidney transplants between 1991-2024 and subsequently received CPIs. Data collection included patient demographics, transplant history, cancer characteristics, immunosuppression regimens, tumour responses, and graft outcomes. Treatment-related adverse events were assessed using CTCAE criteria.

Results: Sixteen KTRs were included, with median age 66 years (50-86). The majority (81%) were male, and the predominant malignancy was cutaneous squamous cell carcinoma (81%). Cemiplimab was the most used CPI (75%). The median time from transplant to metastatic/recurrent malignancy diagnosis was 8.9 years (0.15-36.14), with median time to CPI initiation of 55 days (8-943). Complete response in malignancy was observed in 19% of patients, with partial response in 13%, progressive disease in 56%, and graft rejection in 19%. All-cause mortality was 50%, with 75% of deaths attributed to malignancy progression at median 9 months (2-37) after CPI initiation.

Conclusion: Our study demonstrates that CPIs can achieve meaningful responses in KTRs while showing lower rejection rates compared to previous literature. These findings suggest that with appropriate patient selection and monitoring, CPIs may be viable for transplant recipients with advanced malignancies.

Table 1. Summarised patient characteristics and outcomes of checkpoint inhibitors in kidney transplant recipients.

Variable	n=16
Age, years, median (range)	66 (50–86)
Sex (%)	
Male	13 (81%)
Female	3 (19%)
Age at transplant, average	57 (30–73)
Malignancy type	
Cutaneous squamous cell carcinoma	13 (81%)
Metastatic	9 (56%)
Dermal metastatic	2 (13%)
Recurrent	2 (13%)
Metastatic melanoma	2 (13%)
Metastatic Merkel cell carcinoma	1 (6%)
Kidney transplant to malignancy diagnosis, years, average (range)	8.9 (0.15–36.14)
Checkpoint inhibitor type	
Cemiplimab	12 (75%)
Nivolumab	1 (6%)
Nivolumab then Ipilimumab	1 (6%)
Avelumab	1 (6%)
Pembrolizumab	1 (6%)
Malignancy diagnosis to checkpoint inhibitor, days, median (range)	55 (8–943)
Time treated with checkpoint inhibitor, days, median (range)	131 (20–730)
Checkpoint to follow up, months, median (range)	10.5 (3–44)
Malignancy response (%)	
Complete response	3 (19%)
Partial response	2 (13%)
Stable disease	1 (6%)
Oligoprogression	1 (6%)
Progressive disease	9 (56%)
Rejection (%)	3 (19%)
All-cause mortality (%)	8 (50%)
From malignancy (%)	6 (38%)
From renal failure (%)	0 (0%)
Other (%)	2 (13%)

Abstract No. 3

PHARMACOGENETIC PROFILING TO OPTIMISE TACROLIMUS DOSING: A SINGLE TRANSPLANT CENTRE EXPERIENCE

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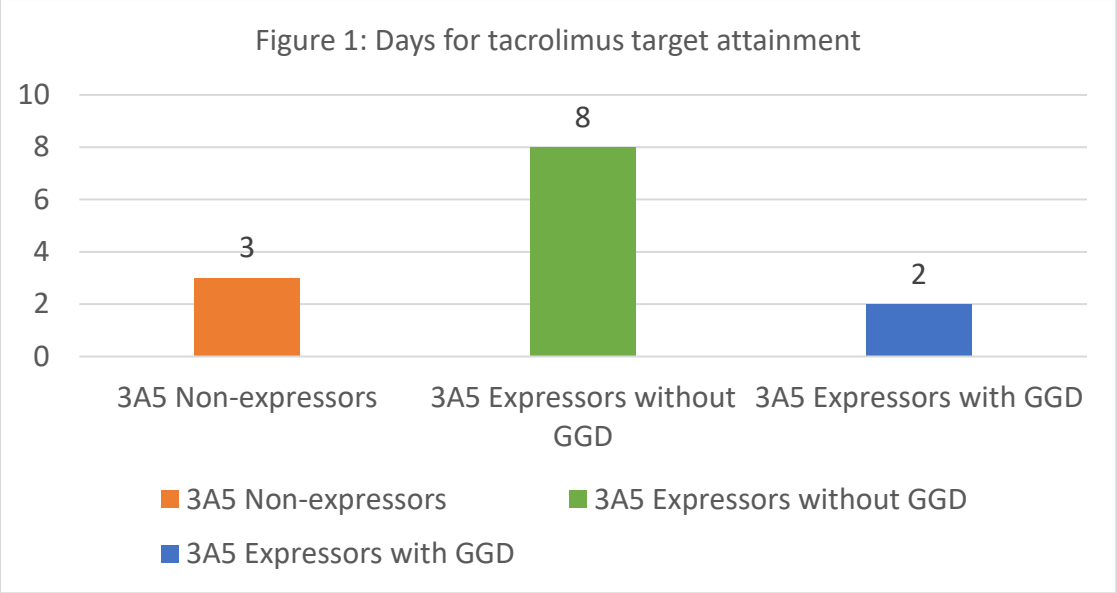
Background and Aims: Pharmacogenetics (PGx) is the study of genetic factors contributing to the variability of drug response. Up to 45% of tacrolimus interpatient variability may be attributed to genetic differences in cytochrome (CYP) 3A5. CYP3A5 expressors display enhanced tacrolimus clearance, lower drug levels and increased risk of rejection. We explore the utility of pre-emptive PGx profiling on tacrolimus targets in our single transplanting center.

Methods: PGx testing for CYP3A5 genotypes was conducted for wait-listed patients during a 10-month period. CYP3A5 expressors identified received genotype guided dosing (GGD) with 1.5 times the standard weight-based dose according to Clinical Pharmacogenetic Implementation Consortium guidelines.

Results: PGx testing was done in 81 patients with 17 (21%) identified as CYP3A5 expressors. A total of 25 proceeded to transplantation, of which 7 were CYP3A5 expressors. The tacrolimus dose needed for target attainment for CYP3A5 expressors was 3 times that of non-expressors (0.184mg/kg vs 0.06mg/kg; p value=0.0017). It took 2.5 times longer for CYP3A5 expressors without GGD to reach therapeutic levels (8 days vs 3 days). This is contrasted to CYP3A5 expressors who received GGD (n=5). This cohort achieved target levels at 2 days, comparable to non-expressors and required less dose changes 1-month post-transplant (6.45 vs 4 per patient).

Conclusions: Pre-emptive PGx profiling had utility in the identification of at-risk metabolic phenotypes, allowing for personalised tacrolimus dosing for transplant recipients. Despite small numbers, there was an observed benefit in optimising tacrolimus dosage requirements, shortening length of time to target attainment and reducing the number of dose changes required post-transplant.



Abstract No. 4

HLA COMPATIBILITY IMPACTS ANTIBODY FORMATION IN RENAL TRANSPLANT RECIPIENTS FROM INDIGENOUS AND NON-INDIGENOUS BACKGROUNDS

MUNASIGNHE W[1], SULLIVAN L[1], EMERY T[1], LAKE M[1], LEAHY R[1], TSIOPELAS E[2], MCDONALD K[1], SULLIVAN H[1], DEAYTON S[1], GALEA J[1], BILOGREVIC F[1], FLEET A[1], CARROLL R[1]

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Aims: Transplant recipients that are poorly matched for donor human leucocyte antigens (HLA) have inferior outcomes, particularly when mismatched for HLA-DQ. HLA-DQ molecules can be divided into Group 1 (G1) heterodimers (DQA1*02/03/04/05/06 alleles paired with DQB1*02/03/04) or Group 2 (G2, DQA1*01 paired with DQB1*05/06), with individuals classified as G1G1, G1G2 and G2G2 genotypes. Here, we aimed to assess the impact of HLA compatibility using HLAMatchmaker (eplet mismatches, epMM), PIRCHE II and HLA-DQ genotype matching on de novo donor-specific HLA antibody (DSA) formation in Indigenous and non-Indigenous renal transplant recipients.

Methods: 144 renal transplant recipients from Northern Territory transplanted between 2012- 2022 were included in the study, with 100 recipients (~70%) identified as Indigenous background. EpMM, PIRCHE II scores and HLA-DQ genotype were determined, and the formation of de novo DSA was assessed using single antigen bead testing.

Results: The difference between Indigenous and non-Indigenous median PIRCHE II was 390 vs 295 respectively ($p<0.01$) and 72 vs 52 for epMM ($p<0.01$). Highest quartile epMM and PIRCHE recipients had a higher incidence of de novo DSA formation within 1 year (43%) compared to lowest quartile recipients (10%). No G1G1 recipients developed HLA Ab, compared to 25% of G2G2 and 29% G1G2 recipients. Regardless of their HLAMatchmaker or PIRCHE scores, de novo DSA were not detected in recipients that received HLA-DQ genotype matched transplants.

Conclusion: Due to their unique HLA types, Indigenous recipients received highly mismatched kidneys, however matching for HLA-DQ genotypes may decrease DSA formation.

Abstract No. 5

VARIATIONS IN LIVING DONOR KIDNEY TRANSPLANTATION – INSIGHTS FROM THE PARENT TRANSPLANT CENTRE MODEL IN AUSTRALIA & NEW ZEALAND

MCMICHAEL L[1], CROSS N[2], WYBURN K[3], CLAYTON P[4], WYLD M[5]

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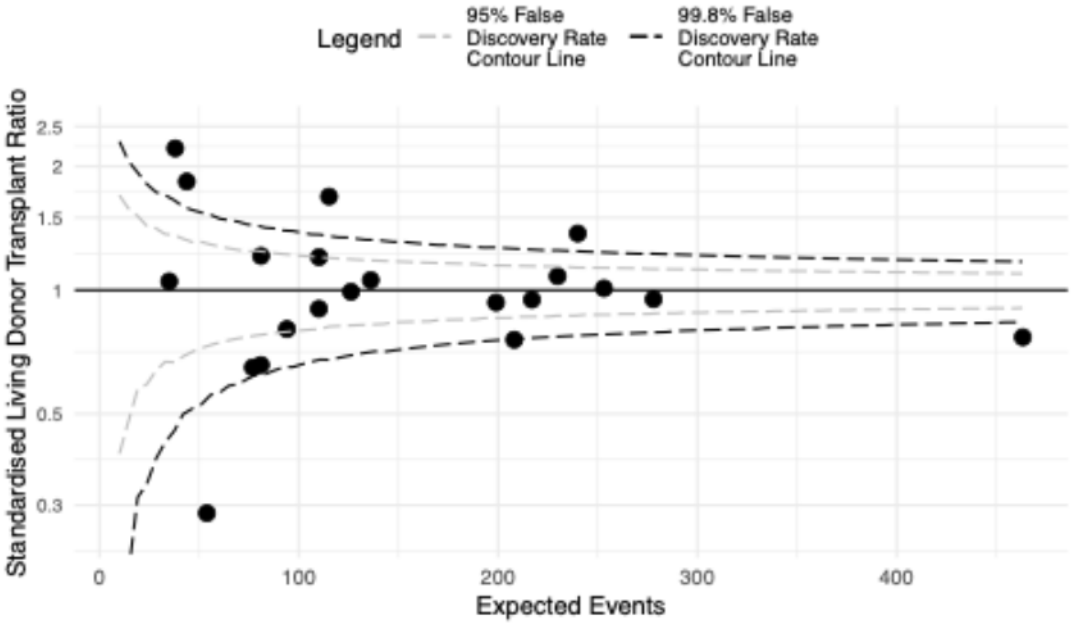
Aim Living donor kidney transplantation (LDKT) is the gold standard treatment for kidney failure. Rates of LDKT have been declining over time. We sought to identify the degree of variation in access to LDKT for patients commencing kidney replacement therapy (KRT) by their parent transplant centre.

Methods Incident adult patients (18-75) commencing KRT registered in ANZDATA between 2002-2022 were included. All patients were mapped to their parent transplant unit. A standardised living donor transplant ratio (SLDTR) was calculated to compare the observed number of LDKT within 12 months of KRT start to the expected number of LDKT predicted at an average centre. The expected number of LDKT for each centre were obtained using multivariate Poisson regression including a random effect for each transplant centre. The SLDTR is presented with 95 & 99.8% false discovery rate confidence intervals that account for multiple comparisons.

Results There were 54,371 patients included. The ratio of observed versus expected LDKT ranged from 0.29 to 2.21. Of 21 transplant centres, most were performing at or above expectations. 14 sites (66.7%) had a SLDTR within the expected range and 4 sites (19%) performed above expectation. 3 sites (24%) performed below the expected range, figure 1. Male gender, younger age and lower BMI were associated with receiving a LDKT.

Conclusion Access to living donor kidney transplantation varies across transplant centres in Australia & New Zealand. Identifying factors driving this variation at a transplant centre level will be critical in developing targeted centre-based strategies to enhance LDKT rates.

Figure 1 – Ratio of observed versus expected living donor kidney transplants at 12 months post–commencing kidney replacement therapy by parent transplant centre



Abstract No. 6

ACCESS TO WAITLISTING AND KIDNEY TRANSPLANTATION FOR PATIENTS WITH INCIDENT KIDNEY FAILURE IN AUSTRALIA AND THE UNITED KINGDOM

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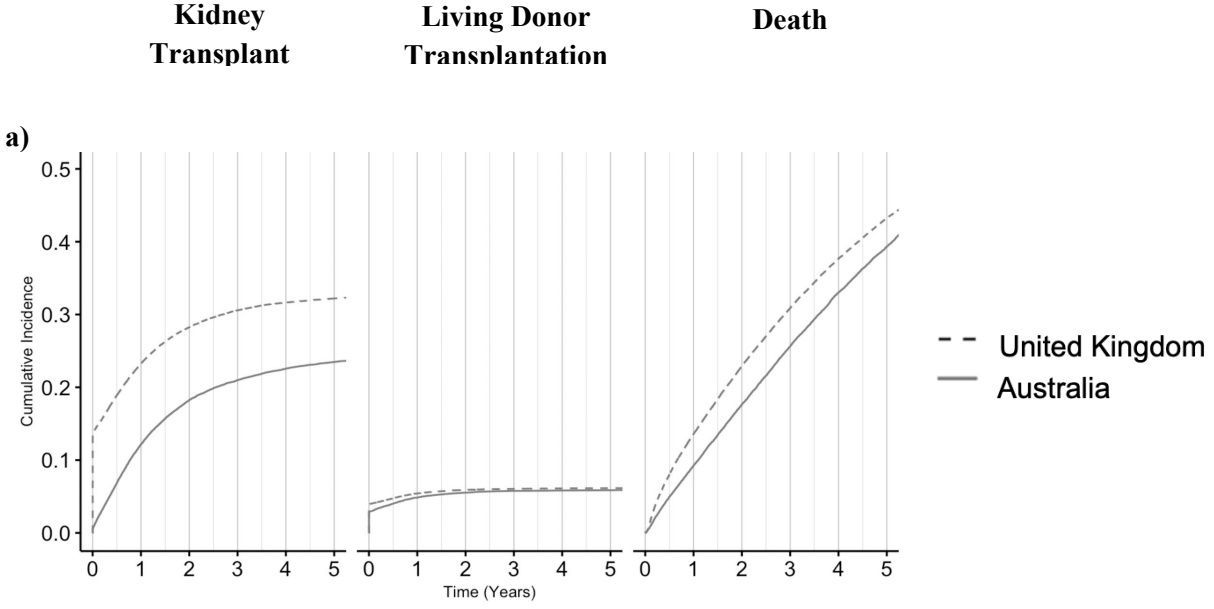
Aim The purpose of this study was to compare access to and predictors of waitlisting and kidney transplantation in the United Kingdom (UK) and Australia.

Methods Incident adult patients commencing kidney replacement therapy (KRT) between 2010-2020 recorded in the UK Renal Registry and ANZDATA Registry were included. The primary outcome was time-to-waitlisting with competing risks of death and living donor kidney transplantation (LDKT). Secondary analysis included time-to-deceased donor transplantation. The cumulative incidence of the first observed outcome was recorded. Multivariable competing risk time-to-event models were used to compare predictors of waitlisting/LDKT.

Results There were 29,901 and 70,583 patients from Australia and the UK. In Australia, 7,044(23.6%) patients were waitlisted and 1,743(5.8%) received LDKT. In the UK, 22,745(32.2%) patients were waitlisted and 4,336(6.1%) received LDKT. Women were less likely than men to achieve waitlisting/LDKT. The difference was larger in Australia (Australian sub-distribution hazard ratio (SHR) 0.78(95%CI0.74-0.81), UK SHR0.91(95%CI0.89-0.93)). Diabetic kidney disease patients were less likely to achieve waitlisting/LDKT (Australian SHR0.35(95%CI0.33-0.37), UK SHR0.55(95%CI0.53-0.57). Age, socio-economic and smoking status were similar between countries. A secondary analysis examined transplantation as the primary event. In Australia, 5,254(17.6%) and 2,053(6.9%) patients had deceased/LDKT compared to 14,872(21.1%) and 6,511(9.2%) in the UK. Mortality was higher in the UK compared to Australia in both analyses.

Conclusion KRT patients in Australia had lower rates of waitlisting/LDKT compared to UK patients. Higher mortality rates were observed in the UK. Policy initiatives in the UK that prioritise pre-emptive waitlisting and deceased donor transplantation may support higher waitlisting/LDKT in Australia. Death Kidney Transplant Waitlisting Living Donor Transplantation

Figure 1 – Cumulative incidence of each competing outcome for all adult patients commencing kidney replacement therapy in Australia and United Kingdom between 2010-2020



Abstract No. 7

A CONTEMPORARY ANALYSIS OF BODY MASS INDEX AND ITS IMPACT ON MORTALITY AND GRAFT SURVIVAL IN KIDNEY TRANSPLANT RECIPIENTS IN AUSTRALIA

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Aim: The obesity paradox describes an observed survival advantage with increasing weight in individuals with end stage kidney disease. However, it's impact on mortality after kidney transplantation remains unclear. We aimed to provide an updated analysis of the influence of obesity on patient survival and allograft outcomes in a contemporary cohort of kidney transplant recipients from Australia.

Methods: This study analysed data from the ANZDATA registry, focusing on adult patients who received their initial kidney transplant in Australia between July 2006 and December 2023. Body Mass Index (BMI) at time of transplant was categorised according to WHO classification, with normal BMI serving as the reference group. The impact of BMI on patient and graft survival was examined with Cox proportional hazards, adjusting for important covariates: age, gender, ethnicity, smoking, primary kidney disease, comorbidities, dialysis vintage and era of transplant (5-year intervals).

Results: A total of 13307 patients were included in the analysis. Compared to recipients with normal BMI, obesity was associated with higher risk of patient death in univariate analysis (see Table). In multivariate analysis, overweight (BMI 25-30) recipients had improved survival (HR: 0.88 [0.79, 0.99]), while no significant differences were observed in other BMI groups. Class III obesity (BMI > 40) was significantly associated with worse graft survival in both univariate (HR: 2.84 [1.73, 4.7]) and multivariate analysis (HR: 2.11 [1.12, 3.99]).

Conclusion: Obesity alone does not independently affect patient survival post transplantation. However, class III obesity is associated with reduced kidney allograft survival.

Table 1: Summary of Post Transplant Survival and Allograft Outcomes by BMI Category

BMI		Patient Survival	Graft Survival
Underweight (< 18.5)	Patient Number (%)	316/13307 (2.37%)	
	Hazards Ratio (95% CI)	0.72 (0.53, 0.97)**	1.00 (0.74, 1.36)
	Adjusted Hazards Ratio*	1.26 (0.87, 1.82)	1.06 (0.71, 1.58)
Normal Weight (18.5 – 24.9)	Patient Number (%)	4457/13307 (33.5%)	
	Hazards Ratio (95% CI)		
	Adjusted Hazards Ratio		
Overweight (25 – 29.9)	Patient Number (%)	4906/13307 (36.9%)	
	Hazards Ratio (95% CI)	1.24 (1.13, 1.36)**	0.91 (0.81, 1.02)
	Adjusted Hazards Ratio	0.88 (0.79, 0.99)**	0.95 (0.82, 1.11)
Obese I (30 – 34.9)	Patient Number (%)	2873/13307 (21.6%)	
	Hazards Ratio (95% CI)	1.51 (1.37, 1.67)**	1.05 (0.92, 1.20)
	Adjusted Hazards Ratio	0.95 (0.70, 1.08)	1.09 (0.92, 1.30)
Obese II (35 – 39.9)	Patient Number (%)	685/13307(5.2%)	
	Hazards Ratio (95% CI)	1.46 (1.21, 1.76)**	1.20 (0.95, 1.51)
	Adjusted Hazards Ratio	0.87 (0.70, 1.09)	1.01 (0.76, 1.35)
Obese III (≥40)	Patient Number (%)	70/13307 (0.5%)	
	Hazards Ratio (95% CI)	1.98 (1.18, 3.29)**	2.84 (1.73, 4.7)**
	Adjusted Hazards Ratio	1.22 (0.63, 2.37)	2.11 (1.12, 3.99)**

Adjusted for age, gender, ethnicity, smoking, primary kidney disease and comorbidities (diabetes, cardiovascular, pulmonary, peripheral vascular, cerebrovascular diseases), dialysis vintage and era of care.

** Statistically significant

Abstract No. 8

A NEW METHOD FOR PRIORITISING HLA MATCHING IN KIDNEY ALLOCATION THAT ACCOUNTS FOR DIFFICULT-TO-MATCH INDIVIDUALS

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Aims: The Australian kidney allocation algorithm defines good HLA-matching as 0-DR and 0-2 A/B mismatches. However, this definition favours patients with common HLA types; those with uncommon HLA-profiles are disadvantaged. We developed a method for prioritising HLA-matches based on whether a specific match is a good opportunity for a given recipient, relative to what they might expect on average from the donor pool. This method considers matching at the A, B, DR, and DQ loci.

Methods: HLA data from 1000 donors and 3508 waitlisted patients from 2022-2023 were obtained from ANZOD, ANZDATA and OrganMatch. For each donor-patient pair, a "mismatch score" was defined as the weighted sum of mismatches at the A/B/DR/DQ loci, with weights of 1:1.5:3:3 (score range 0-17, where 17 indicates a complete mismatch). A patient's "matchability" was determined by their mean mismatch score across the 1,000 reference donors. For each donor-patient pair, a z-score was calculated as:

$$\frac{mean(mismatch\ score)\ -mismatch\ score(for\ this\ donor)}{SD(mismatch\ score)}$$

Results: For a given patient**,** positive z-scores indicate better-than-average HLA-matching while negative scores reflect worse-than-average matching, compared to what they would expect from the donor pool. The distribution of mismatch scores differs by ethnicity ($p<0.001$, Figure 1); Caucasians have the highest "matchability" (mean mismatch score: 11.9); Aboriginal and Torres Strait Islander patients have the lowest "matchability" (mean mismatch score: 12.7). The overlapping z-score distributions demonstrate that this method mitigates these disparities.

Conclusions: This method may be used in kidney allocation to improve HLA-matching and transplant rates for ethnic minorities and difficult-to-match patients.

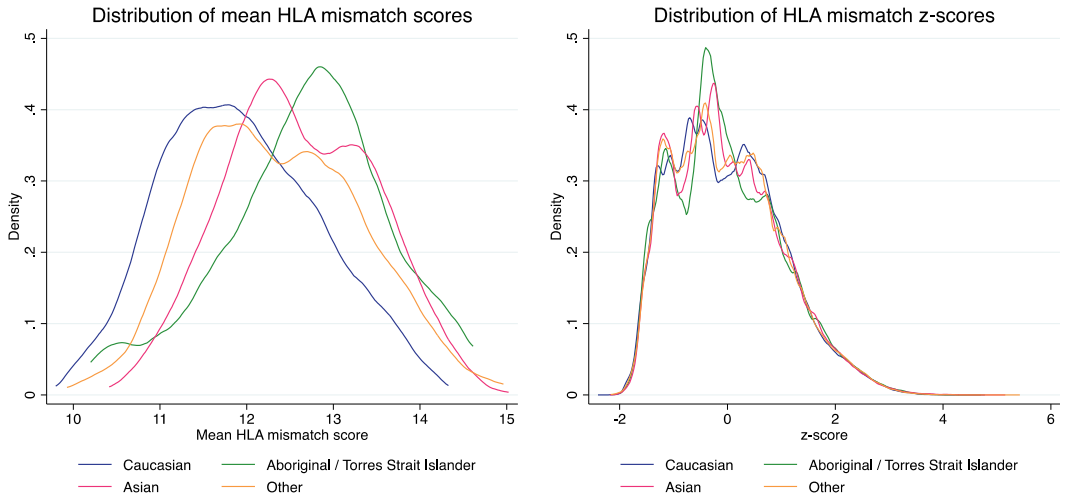

Figure 1: Distribution of raw mean HLA mismatch scores (left) and normalised HLA mismatch z-scores (right), by ethnicity, for patients on the kidney transplant waiting list in Australia between 2022-2023.

Abstract No. 10

DIFFERENTIATION OF STEM-LIKE MEMORY T CELLS IN HEMATOPOIETIC STEM CELL TRANSPLANT RECIPIENTS FOLLOWING SARS-COV-2 VACCINATION

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[1]School of Medicine, Faculty of Health Sciences, University of Adelaide, [2]Basil Hetzel Institute, The Queen Elizabeth Hospital, [3]Infectious disease unit, Royal Adelaide Hospital, [4]Central Northern Adelaide Renal and Transplantation Service, Royal Adelaide Hospital

Aims: Vaccine efficacy wanes more quickly in immunosuppressed populations, including hematopoietic stem cell transplant (HSCT) recipients who remain at increased risk of breakthrough infections. We aimed to assess longitudinal vaccine responses in HSCT recipients, and cellular determinants of durable immunity.

Methods: HSCT recipients (n=25) were prospectively recruited and antibody responses to SARS-CoV-2 vaccination longitudinally profiled over 12 months by anti-SARS-CoV-2-Spike IgG ELISA. Formation of SARS-CoV-2-specific effector and stem-like memory T (Tscm) cells was assessed in a sub-cohort of patients (n=21) versus age- and sex-matched healthy controls (n=21) by high-parameter spectral cytometry as a key determinant of long-lived immunity from vaccination.

Results: Following two vaccine doses, the median anti-spike IgG titre in HSCT recipients was nine-fold lower than healthy controls (AUC: 255 vs. 2316; $p<0.05$). HSCT recipients mounted a comparable SARS-CoV-2-specific $CD4^+$ T-cell response to healthy controls (median: 0.18% vs. 0.34% of CD4+, $p = 0.2796$), but significantly reduced median $CD8^+$ T cell (0.04% vs. 0.24% of CD8+, $p<0.05$) and CD8+CCR7+CD45RA+CD95+ Tscm (0.0051 vs.0.028% of CD8+, $p<0.05$) responses. Expression of markers associated with stemness and longevity, including granzyme K, CD127 and TCF-1, were reduced in vaccine responsive T cells from HSCT recipients, while markers of terminal differentiation (KLRG1, CX3CR1) were elevated.

Conclusion: HSCT recipients have impaired humoral and cellular immune responses to vaccination. Impaired emergence of stem-like properties in CD4 and CD8 T cells may underlie waning immunity and breakthrough infections in HSCT recipients.

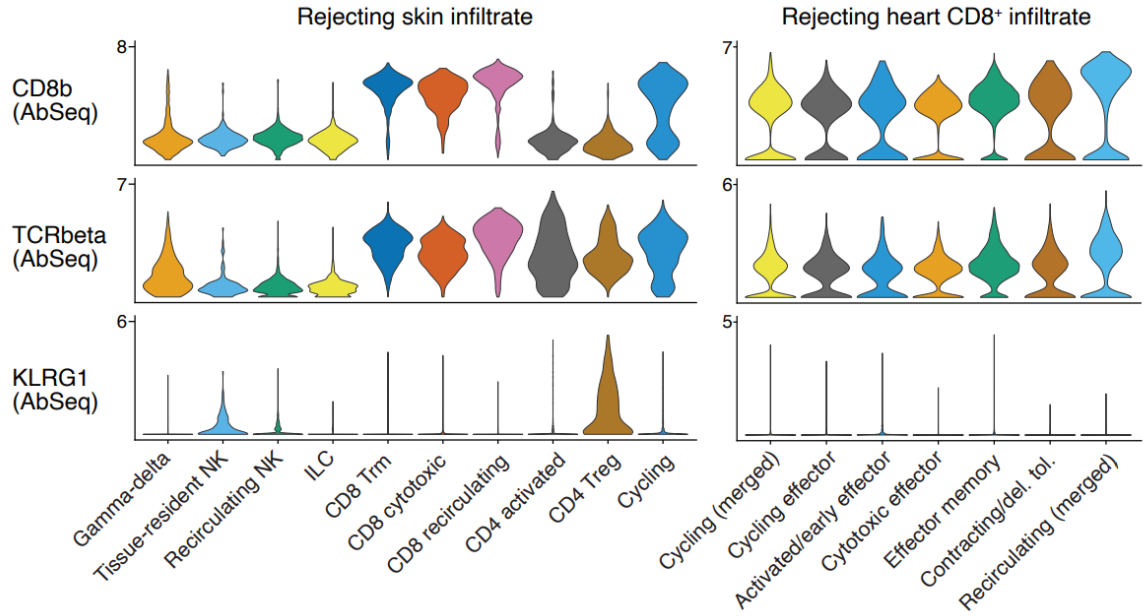
Abstract No. 11

MULTI-OMIC ANALYSIS OF ALLOREACTIVE CD8+ T CELLS ACROSS DIFFERENT TARGET ORGANS AND GENETIC BACKGROUNDS

SON T[1], PAUL-HENG M[1], RATNASEELAN S[1], HILL A[1], WANG C[1], MURADUZZAMAN AKM[2], DENKOVA M[1], FARIDI P[2], RAMARATHINAM S[2], BRAUN A[2], LA GRUTA N[2], PURCELL A[2], MIFSUD N[2], SHARLAND A[1]

[1]Central Clinical School, University of Sydney, [2]Department of Biochemistry and Molecular Biology, Monash University

Aims: We recently discovered andgt;40 immunogenic H-2Kb-peptide complexes recognised by directly alloreactive CD8+ T cells. Here we used a barcoded dextramer panel incorporating 12 of these epitopes as part of a multiomic approach to characterise alloreactive T cells across different target organs and genetic backgrounds.
Methods: Dextramer-positive alloreactive T cells were isolated from the infiltrate of C57BL/6 heart grafts to either BALB/c or B10.BR recipients, rejecting Kb-bearing skin grafts or Kb-tolerant liver leukocytes (B10.BR). Single cell TCR sequences, transcriptome, cell surface markers and pMHC specificity were determined.
Results: The peptide dominance hierarchy of alloreactive CD8+ T cells from the heart infiltrate differed modestly between BALB/c and B10.BR recipients. Differences were more pronounced between alloreactive B10.BR T cells isolated from skin, heart or liver, reflecting the varying abundance of particular immunogenic peptides between target organs. TCR gene segment usage within each epitope-specific repertoire was broadly conserved. Graft infiltrating cells followed a trajectory from cycling through early and mature cytotoxic effectors to generation of effector memory cells. KLRG1, a canonical marker of short-lived effector cells in antiviral responses was absent at both the gene and protein level from CD8+ T cells infiltrating rejecting skin and heart.
Conclusions: Our 12-plex multimer panel performs well across two different strains and the use of ubiquitous peptides allows detection of T cells responding to the immunopeptidome of multiple transplantable organs. Single cell multiomic analysis of alloreactive T cells permits insights into the biology of graft rejection and how it may differ from other immune responses.



Abstract No. 12

THE ROLE OF NATURAL KILLER T CELLS IN MURINE LIVER TRANSPLANTATION

PROSSER A[1], TROLIO E[1], LIU L[1], KAUR J[1], DELRIVIERE L[2], JEFFREY G[2], LUCAS M[3]

[1]Medical School, University of Western Australia, [2]Western Australian Liver and Kidney Transplant Service, Medical School, Sir Charles Gairdner Hospital, University of Western Australia, [3]Department of Immunology, Medical School, Sir Charles Gairdner Hospital, University of Western Australia

Background: Liver transplantation is the final treatment option for end-stage liver diseases, but it is not a lifelong cure. The anti-graft or allo-immune response that occurs after transplantation can result in graft rejection. One of the most abundant cell types in the murine liver and potential contributor to the alloresponse is the prototypic unconventional T cell subset, natural killer T (NKT) cells, which have both pro- and anti-inflammatory effects in a context-dependent manner.

Methods: We used our established murine liver transplantation model and flow cytometry to track graft infiltration of MHC mismatched transplants by NKT cells and other lymphocyte subsets. The contribution of donor- and recipient-derived NKT cells to the alloresponse was also assessed using NKT-deficient CD1d-/- mice as transplant donors and recipients.

Results: In immunocompetent liver transplants, donor NKT cells were rapidly replaced by infiltrating recipient NKT cells. These infiltrating NKT cells highly expressed markers of activation and tissue-residency and abundantly produced granzyme B, indicating a role for these cells in perpetuating graft damage. NKT deficiency in donors did not influence the numbers of graft-infiltrating recipient lymphocytes. However, more cells infiltrated grafts when recipient NKT cells were absent, suggesting their ability to regulate cell migration.

Conclusions: Recipient NKT cells may directly contribute to liver graft damage by cytotoxic activity and establishment of tissue-residency, but they may also play a role in controlling recipient lymphocyte graft infiltration. Further investigation into their and other unconventional T cell mechanisms of action and effects on graft survival are warranted.

Abstract No. 13

RECOVERY OF RAT HEARTS AFTER COLD STORAGE WITH ACID SENSING ION CHANNEL INHIBITOR HI1A VARIES BY SEX

DUTTA S[1], VILLANUEVA J[1], GAO L[1], DOYLE A[1], PALPANT N[2], KING G[2], MACDONALD P[1]

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Aims: Most heart transplants use cardioplegia and cold static storage (CSS) for preservation. Supplementation of cardioplegia improves post-transplant function and Hi1a, an acid sensing ion channel (ASIC) 1a inhibitor, reduces ischaemia-reperfusion injury. Women are underrepresented in cardiovascular research, and oestrogen decreases ASIC1a expression in other tissues. We investigated if recovery following CSS with cardioplegia supplemented with Hi1a differed based on sex.

Methods: Hearts were isolated from male (M) and female (F) Wistar rats (300-570g, n = 6-10) perfused ex-vivo with Krebs-Henseleit buffer, and baseline haemodynamic measurements of aortic flow (AF) were obtained. Hearts were arrested with Celsior (Cel) either alone, or supplemented with 10nm Hi1a. Following 6-hour CSS (4°C), hearts were re-perfused. Haemodynamic measurements were obtained, and recovery expressed as percentage of pre-storage baseline (mean SEM).

Results: Compared to unsupplemented Celsior (AF 145.0%), male hearts supplemented with 10nM Hi1a had improved recovery (AF 5510%, P = 0.026). Female hearts stored in unsupplemented Celsior (AF 24±5.8%) did not show improved recovery with supplementation (AF 31±9.8%, P = 0.89). Two-way ANOVA revealed interaction between supplementation with Hi1a and sex (P = 0.047), with supplementation resulting in improved recovery overall (P = 0.007) with no impact of sex (P = 0.412).

Conclusions: Supplementation of Celsior with Hi1a improves cardiac recovery in male but not female rats, with its benefit as a preconditioning agent influenced by sex. Further work is needed to explain the differing efficacy. ASIC1a inhibitors may improve acceptable ischaemic times for transplantation however donor sex may need to be considered.

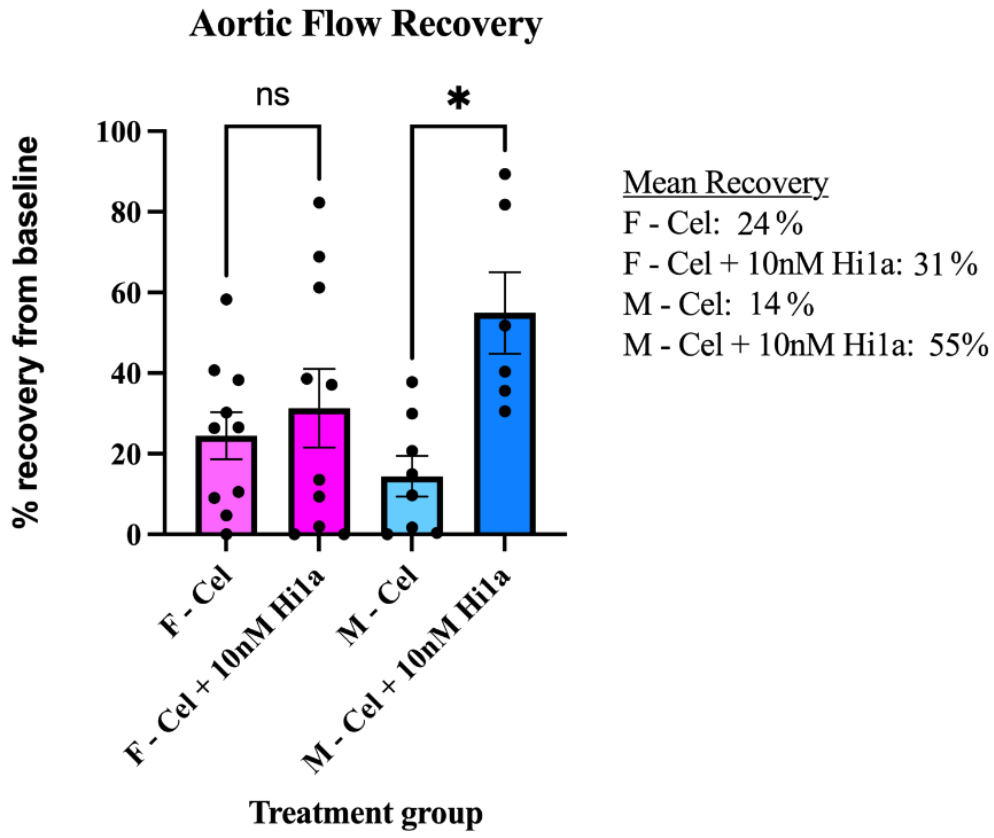

Figure 1: Mean myocardial functional recovery following 6hrs CSS, expressed as a percentage of baseline aortic flow. Error bar represents standard error of the mean.

Abstract No. 14

NEPHROLOGIST PERSPECTIVES ON OFFER AND CONSENT PRACTICES FOR INCREASED VIRAL RISK KIDNEY TRANSPLANT OFFERS

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Introduction In Australia and New Zealand, deceased donor kidney transplants can occur from donors at increased risk of Hepatitis B, Hepatitis C and HIV. However there is a lack of consensus about best practice for informing and consenting potential recipients for these offers. Aims To explore nephrologists' opinions of offer and consent processes for increased viral risk kidney transplants.

Methods 50 nephrologists from Australia and New Zealand participated in semi-structured interviews. Transcripts were thematically analysed.

Results Nephrologists viewed increased viral risk offers as complicated. They placed greater emphasis on engaging recipients in the offer decision-making and aligning with the recipient's risk preferences about these offers. Some doctors voiced discomfort about knowingly exposing recipients to higher risks of these infections, especially younger patients and those with greater immunosuppression exposure. There was broad agreement about the need for dedicated viral risk education of patients prior to the offer being received. However, there was disagreement about the use of dedicated consent forms and waitlists to preselect potential recipients for these offers. Many non-transplant nephrologists discussed reliance on the transplant team to provide education and guidance to patients about level of risk.

Conclusion Nephrologists continue to perceive significant risks to patients associated with donors at increased risk of blood borne viruses, leading to an increased focus on shared decision making and informed consent for such offers. This suggests a need for an increased viral risk patient decision aid to assist both recipients and their doctors in making informed decisions about these offers.

Abstract No. 15

CELLULAR REJECTION SURVEILLANCE WITH ENDOMYOCARDIAL BIOPSIES IN THE FIRST YEAR POST HEART TRANSPLANT: A SINGLE CENTRE EXPERIENCE

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Background: Endomyocardial biopsy (EMB) remains the gold standard for detecting cellular rejection in heart transplant (HTx) recipients. Despite being reasonably safe, with infrequent complications, there are incentives to reduce such invasive procedures.

Methods: Consecutive HTx recipients who underwent ≥1 EMB at Fiona Stanley Hospital from 2015 to 2023 were included in this retrospective study. Ethics approval was obtained and data collected from hospital records. The primary outcome was the percentage of biopsies with ISHLT grade ≥2R cellular rejection within 12 months post-HTx. These were further categorized into biopsies performed routinely versus those performed for suspected rejection. Secondary outcome measures included acute complication rates and when rejection occurred.

Results: Of 1143 biopsies performed in 99 patients, (median of 12 biopsies per patient, IQR 11-12) over 12 months, 55 (4.8%) biopsies from 33 patients had ≥2R rejection. One patient had 3R rejection. Of these 55 biopsies, 20 were performed for clinical indications, and 35 for routine surveillance. One patient required pericardiocentesis 5 hours post-EMB. The timing post-HTx of biopsies with ≥2R rejection is reflected in Table 1. Almost all rejection episodes were seen in the first 6 months. There were 4 deaths within the 12 months post-HTx, none were due to rejection.

Conclusion: In asymptomatic patients on stable immunosuppression, the incidence of cellular rejection in routine surveillance biopsies is low. It may be reasonable to reduce the number of surveillance biopsies. Larger studies will be useful to guide reduced EMB schedules. Non-invasive methods for detection of rejection are in development.

	Cardiac transplant recipients (n = 99)		Patients with ≥2R results (n = 33)
Total number of biopsies	1143		413
Total ≥2R results	55/1143 (4.81%)		
Number of clinically indicated biopsies with ≥2R results	20		
Number of surveillance biopsies with ≥2R results	35/1123 (3.12%)		
Mean and median number of biopsies	11.55 and 12		
Median length of initial hospital-stay	15 days		17.5 days
Deaths within first year of transplant	4/99 (causes of death – infection, multi-organ failure, spontaneous intracranial haemorrhage and PTLD; two of these patients has 2R rejection in the first year of transplant but this was not the cause of death)		
Timing of biopsy:	0-12 weeks	13-26 weeks	52 weeks
Total ≥2R results	41/55 (74.54%)	11/55 (20%)	3/55 (5.45%)
Number of patients with clinically significant rejection	4/7 (57.14%)	1/7 (14.29%)	2/7 (28.57%)
Number of surveillance biopsies with ≥2R results	28/35 (80%)	6/35 (17.14%)	1/35 (2.86%)
Proportion of >2R results	41/773 (5.3%)	11/297 (3.70%)	3/73 (4.11%)

Abstract No. 16

IDENTIFYING THE BARRIERS TO KIDNEY TRANSPLANTATION FACED BY PACIFIC PEOPLE WITH END STAGE RENAL DISEASE: A MIXED METHODS STUDY

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Background In New Zealand, rates of end stage renal disease for Pacific people are significantly higher than non-Pacific, however transplant rates for Pacific people are low. Aims To investigate barriers in the evaluation process for transplant listing faced by Pacific people with ESRD.

Methods Patients on the deceased donor waitlist and recent transplant recipients were studied using a convergent parallel mixed methods design with quantitative and qualitative data collected separately. In the quantitative component, we analysed medical records from 202 participants. Data collection included; demographics, comorbidities, dialysis history, and time to wait-listing. In the qualitative component, 19 Pacific participants underwent semi-structured interviews and thematic analysis was used to identify themes.

Results Study participants were aged 26 – 76 years. Pacific people comprised 29.2% of the cohort. The median time between referral for transplant evaluation to waitlisting was 14.7 months, with no significant difference between ethnic groups (P=0.0561). Pacific people were less likely to be listing pre-emptively (P=0.0064) and after listing more likely to be suspended (P<0.0001). Semi-structured interviews identified 5 major themes as potential barriers to kidney transplant waitlisting: Pacific cultural ideals and values; poor communication and ineffective provision of information; uncertainties and fear around transplantation; financial and resource limitations; and mental health challenges.

Conclusions Pacific are completing the transplant evaluation process but have lower rates of pre-emptive listing and higher rates of suspensions. They face important barriers in a number of key areas. This work will assist transplant units to improve processes and increase transplant rates for Pacific people.

Abstract No. 17

COMMON BILE DUCT INJURY IN DONATION AFTER CIRCULATORY DEATH LIVERS – AN INDICATOR FOR INTRAHEPATIC BILIARY DAMAGE?

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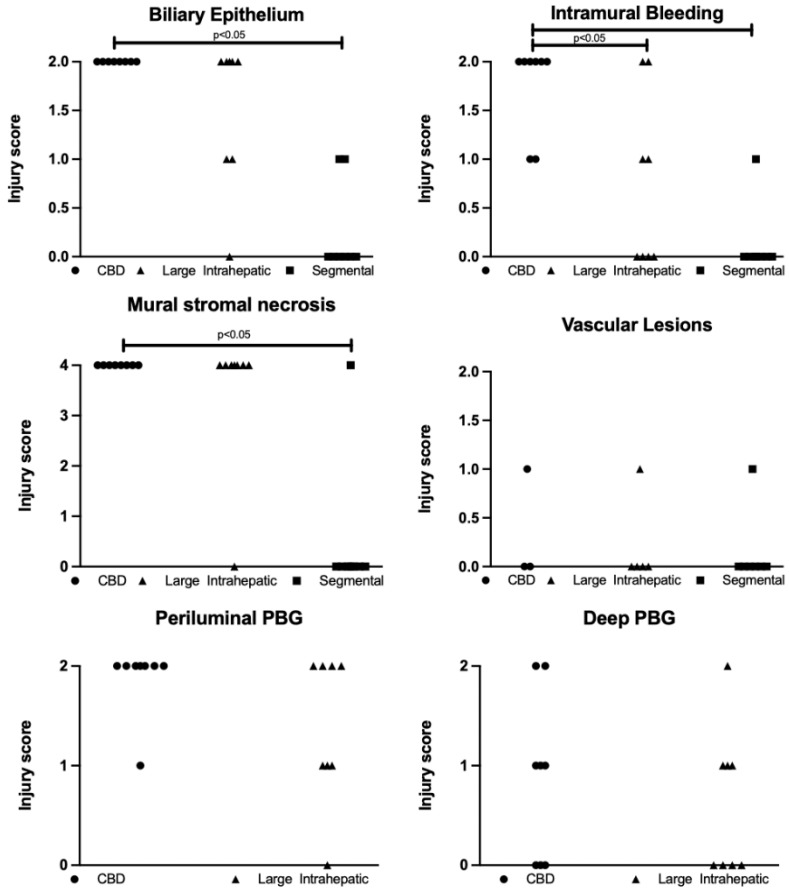
Aims: Ischemic cholangiopathy remains a challenge in the transplantation of donation after circulatory death (DCD) livers, predominantly affecting the intrahepatic ducts. Normothermic machine perfusion (NMP) provides an opportunity to sample the common bile duct (CBD). This study investigates the correlation between injury severity at different levels of the biliary tree and assesses whether CBD samples reliably indicate overall biliary injury.

Methods: Eight Human DCD livers unsuitable for transplantation underwent NMP. Bile duct tissue was collected before and after perfusion. Histological scoring was performed by a pathologist to assess the biliary epithelium, mural stroma, peribiliary vascular plexus and glands. A score of 0 represented no sign of injury, and 2 indicating >50% of the sample affected. Mural necrosis was scored to 4 if >75% of the ductal wall was affected.

Results: CBD injury was present in all livers post-perfusion, with significantly worsening mural necrosis, bleeding, and vascular lesions ($p<0.05$). Post-perfusion biopsy showed no correlation between epithelial injury in the CBD and segmental ducts. Mural necrosis and bleeding in the CBD was significantly worse than in the intrahepatic ducts. Injury to the deep and periluminal peribiliary glands of the CBD did not change after perfusion and was comparable to the intrahepatic ducts.

Conclusion: Contrary to what has previously been described, injury in the CBD did not correlate with that of the intrahepatic ducts and is not a reliable surrogate for overall biliary injury. Further research is needed towards a method to evaluate the early viability of the biliary system that considers these potential differences.



Histological scoring of bile duct injury at the level of the common bile duct and the large intrahepatic ducts at the end of NMP.

Abstract No. 18

THE IMPACT OF FEMALE SEX ANDAMP; INTERSECTIONAL DISADVANTAGE ON ACCESS TO DECEASED KIDNEY TRANSPLANTATION IN AUSTRALIA (2006-2023)

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Aims: To determine if there are sex-based disparities in access to the deceased donor waitlist and/or transplantation, and how intersectional disadvantages such as older age, minority ethnicity, low socio-economic position, cause of kidney failure, high co-morbidity burden and BMI may interact with such disparities, in Australia.

Methods: A cohort study using the ANZDATA registry (2006-2023) to explore the associations between sex, intersectional disadvantage and outcomes including waitlisting, deceased donor transplantation, and death. Cox proportional hazards models, two-way interaction models and competing risk analysis adjusted for baseline characteristics were used.

Results: 47,884 patients (38% female) commenced dialysis during the study period and were followed for 147,510 person-years. In our fully adjusted model, females were 19% less likely to be waitlisted (adjusted Hazard Ratio[aHR]0.81; 95%CI:0.77-0.84), than their male peers. The sex-based disparity in waitlisting was larger for females with intersectional disadvantage including ethnic minorities (eg. female Aboriginal andamp; Torres Strait Islander (aHR 0.57;95%CI:0.49-0.66), female Māori andamp; Pacific Peoples (aHR 0.80; 95%CI:0.66-0.96)), diabetic kidney disease (aHR 0.61; 95%CI:0.56-0.67), GN (aHR 0.80; 95%CI:0.74-0.85), having ≥3 co-morbidities (aHR 0.66; 95%CI:0.56-0.79), and obesity (aHR 0.69; 95%CI:0.65-0.75), compared to male peers. Once waitlisted, there are no sex-based disparities in rates of deceased donor transplantation or death.

Conclusions: Females have significantly less access to both kidney transplant waitlisting than their male peers. For female dialysis patients with intersectional disadvantage, access to the kidney waitlist is further reduced due to amplification of sex-based disparities. There are no sex-based disparities in rates of deceased donor transplantation or death after waitlisting.

Abstract No. 19

SEX DIFFERENCES IN DISCONTINUATION OF CARDIOPROTECTIVE MEDICATION FOLLOWING KIDNEY TRANSPLANTATION

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Aims. Women with kidney failure have excess cardiovascular mortality moreso than men. Discontinuation of cardioprotective medication may be a contributing factor. We sought to evaluate sex differences in the discontinuation of cardioprotective medications following kidney transplantation.

Method. All incident kidney transplant recipients in Australia, 2003-2014, from ANZDATA, linked to their dispensed prescriptions from the Pharmaceutical Benefits Scheme until 2022. Cardioprotective medications included: (1) first-line antihypertensives (2) lipid lowering agents and (3) antiplatelet agents. We considered medications dispensed within 60 days prior to kidney transplantation and analysed time to first discontinuation within three years post-transplantation. Cox models evaluated sex differences in discontinuation, adjusting for sociodemographics.

Results Of 9,147 recipients, cardioprotective medications were dispensed pre-transplant for 4,321 males and 2,477 females, post-transplant for 616 males and 428 females, and never dispensed for 791 males and 514 females. Most were antihypertensives (53%), following by lipid lowering(42%) and antiplatelets(5%). 4,840 patients were receiving cardioprotective medication at transplantation, where 56% discontinued. After adjustment, females were 50% (95%CI:35-66%) more likely to discontinue antihypertensives compared to males. Sex and transplant era were modifiers ($p<0.001$): females in 2006-08 were 1.31 (95%CI:1.05-1.64) times more likely to discontinue, increasing to nearly twice (1.93, 95%CI:1.61-2.31) as likely in 2012-14 compared to their male counterparts. No sex difference for lipid lowering ($p=0.09$) or antiplatelet agents ($p=0.46$).

Conclusion Discontinuation of cardioprotective medications was common following kidney transplantation, with sex differences evident in antihypertensives. Strategies to support continued medication use, particularly among females, may aid in preventing cardiovascular mortality among this high-risk population.

Abstract No. 20

PERSPECTIVES OF TRANSPLANT PROFESSIONALS ON GENDER DIFFERENCES IN LIVING KIDNEY DONATION: A SEMI-STRUCTURED INTERVIEW STUDY

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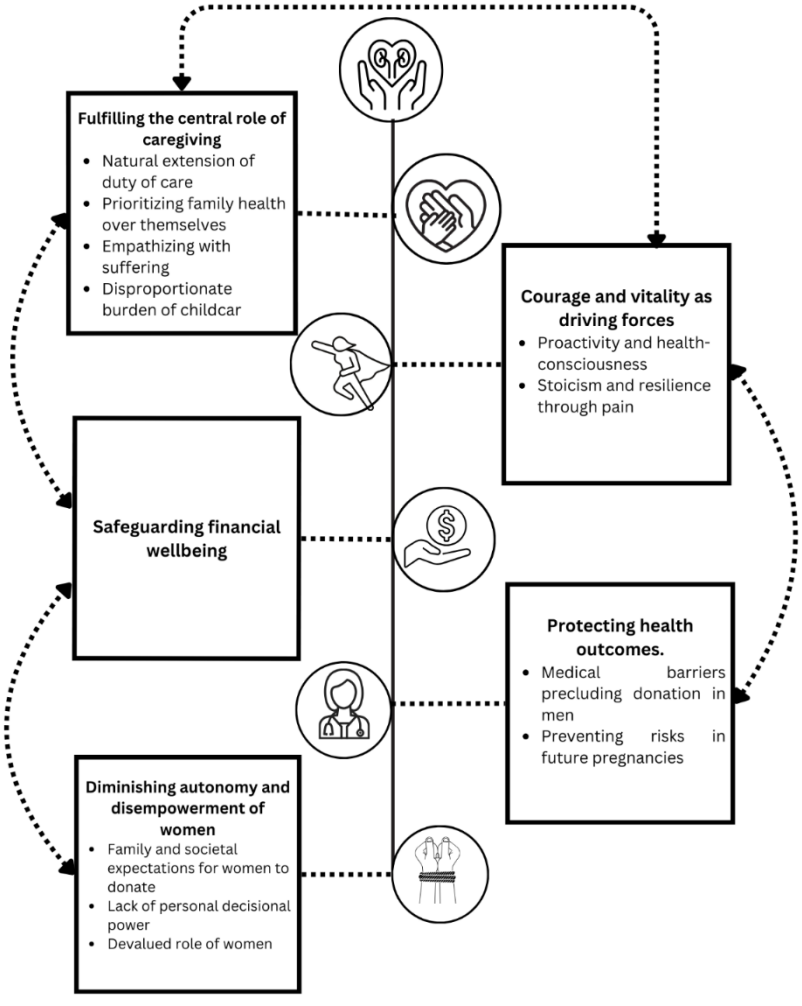
Background: Gender disparities in living kidney donation are well-documented, with women comprising 55-65% of kidney donors globally. The underlying reasons for these disparities are multifaceted and complex. We aimed to describe the perspectives of transplant professionals on gender disparities in living kidney donation.

Methods: We conducted semi-structured interviews with transplant professionals involved in living kidney donation from November 2023 to July 2024. The transcripts were analyzed thematically.

Results: 39 transplant professionals (24 (62%) nephrologists, 11 (28%) coordinators, 4 (10%) transplant surgeons) from 15 countries participated. We identified five themes: fulfilling the central role of caregiving (natural extension of the duty of care, prioritizing family health over themselves, empathizing with suffering, disproportionate burden of childcare); diminishing autonomy and disempowerment of women (family and societal expectations of women to donate, lack of personal decisional power, devalued role of women); driven by courage and vitality (proactivity and health-consciousness, stoicism and resilience through pain); and safeguarding financial wellbeing and protecting health outcomes (medical barriers precluding donation in men, preventing risks in future pregnancies).

Conclusions: Transplant professionals believe that culturally driven societal roles and status of women, the financial burden associated with donation, and concerns about donor health outcomes contribute to gender disparities in living kidney donation.

Figure: Schema



Abstract No. 22

IMMUNE RESPONSE AND SAFETY OF 1 VS 2 DOSES OF AS01E-ADJUVANTED RSVPREF3 IN TRANSPLANT RECIPIENTS VS NON-IMMUNOCOMPROMISED ADULTS

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Aims: Immunosuppressed transplant recipients are at increased risk of RSV disease and usually show lower immune responses post-vaccination. We assessed immune responses and safety of 1 vs 2 doses of adjuvanted RSVPreF3 in immunocompromised (IC) adults and compared to 1 dose in non-IC adults.

Methods: In this ongoing phase 2b, randomised, open-label study, lung or kidney transplant recipients aged ≥18 years received either 1 dose of adjuvanted RSVPreF3 (IC1) or 2 doses 30–60 days apart (IC2). A control group of non-IC adults aged ≥50 years received 1 dose vaccine. Humoral immune (HI, RSV-A/-B neutralising titers [NTs]; all groups) and cell-mediated immune (CMI, RSVPreF3-specific CD4+ T-cell frequencies; subset of participants) responses and safety were assessed.

Results: IC2 showed robust HI responses, with higher NTs at 1-month post-dose 2 vs. post-dose 1, achieving levels similar to non-IC adults. Post-dose 1, IC adults not on mycophenolate reached NTs similar to non-IC adults, while those on mycophenolate required dose 2. CMI responses were high and similar across groups. Most solicited adverse events (AEs) were mild-to-moderate (grade 3, <3%). Unsolicited AEs were similar post-dose 1 in both IC (20.7%) and non-IC adults (20.8%), and between dose 1 (25.4%) and dose 2 (30.6%) in IC2. Serious AEs were more common in IC adults, likely due to underlying conditions.

Conclusions: In transplant recipients, 1 dose of adjuvanted RSVPreF3 elicited robust immune responses. A second dose increased NTs to levels similar to non-IC adults. Both doses were well tolerated with an acceptable safety profile.

Abstract No. 23

KIDNEY SUPPORTIVE CARE FOR ADULT KIDNEY TRANSPLANT RECIPIENTS

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Background: Kidney Support Care (KSC) is a growing area of nephrology with an increasing role in kidney transplantation given chronic disease burden, symptoms and complex medical care associated with transplantation complications such as malignancy, infection, and graft failure.
Aim: Describe the profile of adults with a kidney transplant known to a KSC service.
Methods: Retrospective analysis of patients referred to KSC between February 2016 and January 2025. Demographic characteristics, disease data including kidney function, Charlson Comorbidity Index (CCI), reason for referral, advance care planning (ACP) and death data were extracted from hospital records. Results were analysed descriptively.
Results: A total of 19 patients with transplants were referred, representing 1.25% of the total number of KSC referrals during the 9-year time-period. 79% were referred after transplantation, 58% were female, median age at referral was 70 (IQR 14.5) years, median eGFR was 28ml/min/1.73m2 (IQR 30.5) and median CCI was 7 (IQR 3). The most common reason for referral was ACP (80%), followed by symptom management (67%). Of those referred for ACP, 58% subsequently completed an ACP document. 11 patients died and the median time from KSC referral to death for post-transplant referrals was 4 months (IQR 3). The most common place of death was an acute hospital (45%).
Conclusion: Adults following a kidney transplant are under-represented in KSC and most are referred andlt; 6 months prior to death. While anecdotally these patients would benefit greatly from KSC, larger studies to ascertain the extent of benefit of KSC in this population is needed.

Abstract No. 24

DENOVO ANTI-HLA DONOR SPECIFIC ANTIBODY FORMATION IN AUSTRALIA'S FIRST UTERUS TRANSPLANT

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Australia's first uterus transplant was performed in 2023. The recipient was a 30-year-old G2P1 who suffered a post-Caesarean haemorrhage in 2021 necessitating massive transfusion and subtotal hysterectomy. Despite her history, she had no detectable HLA antibodies on Luminex screening, and she received a haploidentical uterus transplant from her mother. She had standard induction with basixilimab; and prednisolone, tacrolimus and mycophenolate for maintenance immunosuppressive therapy. No DSAs were detectable at 1 and 4 weeks post-transplant, and mycophenolate was switched to azathioprine at 9 weeks in preparation for future pregnancy. The first embryo transfer (ET) was successful and she had an uneventful pregnancy, with an elective Caesarean delivery at 37 weeks. Around 6 months post-partum, she developed recurrent per vaginal (PV) bleeding, with concerns for rejection on ectocervical biopsy for which she received pulsed methylprednisolone IV. DSA evaluation demonstrated denovo DSA formation across all mismatched HLA class II loci. The uterus was explanted as the patient had completed her family, with histopathologic findings suggestive of chronic TCMR, and ischaemic changes of the cervix. In contrast our second uterus transplant recipient, with uterine factor infertility from MRKH syndrome who received a transplant from a living unrelated donor, has not developed DSAs at last evaluation 6 months post-partum, and remains on triple immunosuppression with plans for a further pregnancy. This is the first reported case of denovo DSA formation in pregnancy in a uterus transplant recipient, with PV bleeding as a manifestation of chronic rejection.

Abstract No. 25

CLINICAL RISK AVERSION AND POTENTIAL GAINS FROM DONORS FORGONE FOR DECEASED KIDNEY DONATION: A DATA-LINKAGE STUDY

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Aims: Biovigilance risk from potential deceased organ donors varies and can challenge decision-making. We sought to estimate donation and transplant gains achievable from increasing clinical consistency in potential donor medical suitability decisions.

Methods: Using current Australian and New Zealand clinical guidelines, we interrogated a data-linked biovigilance register to identify and describe potential kidney donors deemed not suitable for transplantation due to a higher but guideline-acceptable risk of cancer and/or infection (clinical risk aversion) in NSW, Australia, 2015-2022. We estimated gain in donors per million population (pmp) should these donors have been accepted.

Results: Of 5,211 potential donors deemed not medically suitable, 674 (13%) were forgone for risk aversion, an average of 84 (1.6%) donors annually. Of these donors forgone for risk aversion, 317 (49%) had increased risk behaviours for blood-borne viruses, 539 (20%) had a historic cancer diagnosis, and 328 (49%) had a current other infection. Donors forgone for risk aversion were majority male (62%), over 55 years (75%) with one or more comorbidities (85%) and slightly lower KDPI (median 48; IQR 29,67 compared to actual donors KDPI median 53; IQR 26,78). Accepting these donors could increment annual NSW donation rates by 9.9 donors pmp.

Conclusion: Many potential kidney donors forgone for clinical risk aversion could have safely donated. Assuming consent (only 7% had been approached) and transplant, accepting these donors could increase donation rates from the current 17.5pmp in NSW to 27.4pmp, with a significant impact on Australian rates overall. Challenging risk-averse decisions could provide viable transplant opportunities nationwide.

Abstract No. 26

NON-RETRIEVAL AND NON-UTILISATION OF DECEASED DONOR KIDNEYS FOR TRANSPLANTATION: AN AUSTRALIAN COHORT STUDY

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Aims: An efficient organ procurement program must maximise utility of retrieval team activity. We aimed to quantify non-retrieval and non-utilisation rates of deceased donor kidneys.

Methods: Cohort study of deceased kidney donors in Australia 2014-2021 using ANZOD data. Outcomes were non-retrieval (kidneys not retrieved after surgical incision) and non-utilisation (kidneys retrieved but not transplanted). We compared non-retrieval and non-utilisation rates using logistic regression by donor factors (age, sex, blood-group, ethnicity, BMI, smoking, socio-economic disadvantage, remoteness, year, cause of death, resuscitation, pathway, KDPI, side, dual-allocation/en-bloc), and system factors (state/territory of donor hospital, retrieval team, and intended recipient's hospital).

Results: Among 7,211 kidneys (3,683 donors) accepted for retrieval, 675 (9%) were non-retrieved and 430 (7%) were non-utilised. Crude non-retrieval rates doubled from 5% to 10% between 2014-2021 (p=0.01) while non-utilisation remained around 7% (p=0.1). After adjustment, non-retrieval was greater among donors with KDPI≥75 (OR 4.28, 95%CI: 2.08–8.81, p<0.001), diabetes (OR 1.74, 95%CI: 1.25–2.43, p=0.001), and in recent years (annual OR 1.08, 95%CI: 1.03–1.55, p=0.002), and lower for ECD DCDD (OR 0.46, 95%CI: 0.26-0.81, p=0.01). Non-utilisation was greater for SCD DCDD (OR 1.90, 95%CI: 1.28-2.82, p<0.001), blood group AB (OR 2.05, 95%CI: 1.16-3.64, p=0.03) and in recent years (annual OR 1.08, 95%CI: 1.02-1.15, p=0.01), and lower in Tasmania (OR 0.28, 95%CI: 0.08-0.97) and Queensland (OR 0.57, 95%CI: 0.36-0.92, p=0.03). Documented reasons for non-utilisation lacked transparency but included poor perfusion (17%).

Conclusions: Efforts to maximise transplantation of donor kidneys could focus on improving utilisation of higher KDPI kidneys and perfusion techniques.

Abstract No. 27

PROGNOSIS MATCHING IN THE AUSTRALIAN DECEASED DONOR KIDNEY ALLOCATION ALGORITHM

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Aims: Prognosis matching in deceased donor kidney transplantation, whereby organs with longer expected graft function are preferentially allocated to patients with longer expected survival, and vice-versa, can help maximise utility derived from available organs. As part of redesigning the Australian kidney allocation algorithm, we developed a continuous score for prioritising prognosis matching.

Methods: Using established prognostic metrics, the kidney donor profile index (KDPI) and expected post-transplant survival (EPTS), we calculated prognosis-match score as the absolute difference between EPTS and KDPI, scaled from 0 (largest possible difference) to 1 (EPTS=KDPI). Patients with central EPTS (e.g. 50) would match equally well with lower/higher KDPIs (e.g. 40/60), whereas extreme EPTS (e.g. 100) would match well with KDPIs in only one direction (e.g. 90, since KDPI cannot exceed 100). To ensure central EPTS isn't unintentionally prioritised, we adjusted scores so the average across all KDPIs was equivalent for each EPTS and rescaled between 0 and 1 for easy reweighting.

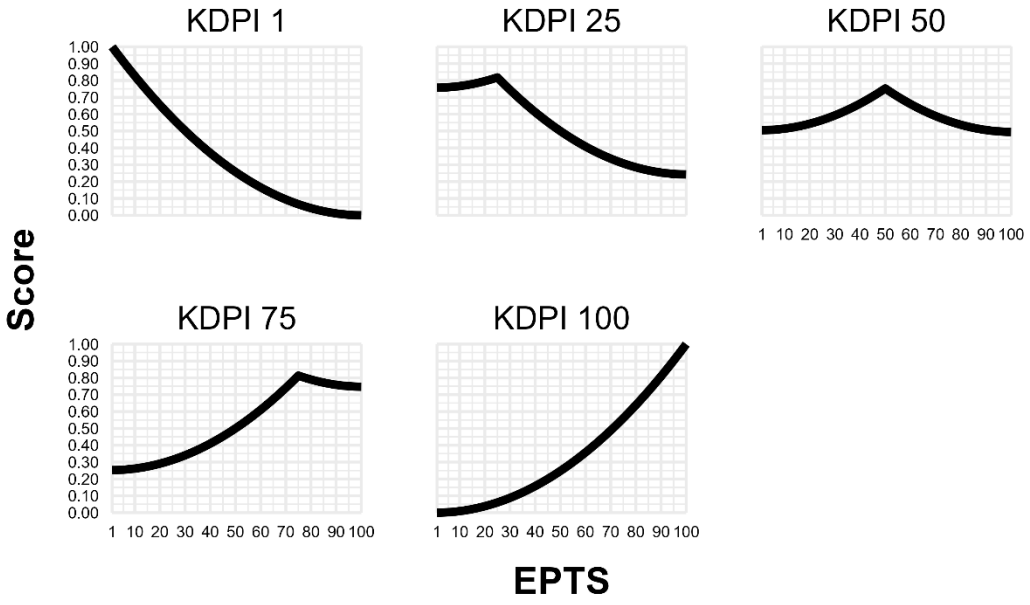
Results: The final score was:

$$\frac{EPTS^2 - 101EPTS - 100|EPTS - KDPI| + 10000}{9900}$$

For any KDPI, score is highest when EPTS=KDPI, and lowest for largest difference between EPTS and KDPI (e.g. for KDPI=50: max=0.75 for EPTS=50, min=0.49 for EPTS=100). The maximum possible score is lowest when KDPI is 50 and highest at extremes of KDPI (e.g. for KDPI=1, scores range from 1 for EPTS=1 to 0 for EPTS=100). An interactive plot is available here: https://james-hedley.shinyapps.io/prognosis_matching/

Conclusions: This score may be used in deceased donor kidney allocation to prioritise prognosis matching. It emphasises like-for-like matches where the kidney has an especially good/poor prognosis.

Figure 1: Prognosis-match scores for different combinations of donor KDPI and patient EPTS.



Abstract No. 28

METRICS FOR ASSESSING DONOR COORDINATION COMPLEXITY OF THE KIDNEY ALLOCATION SYSTEM

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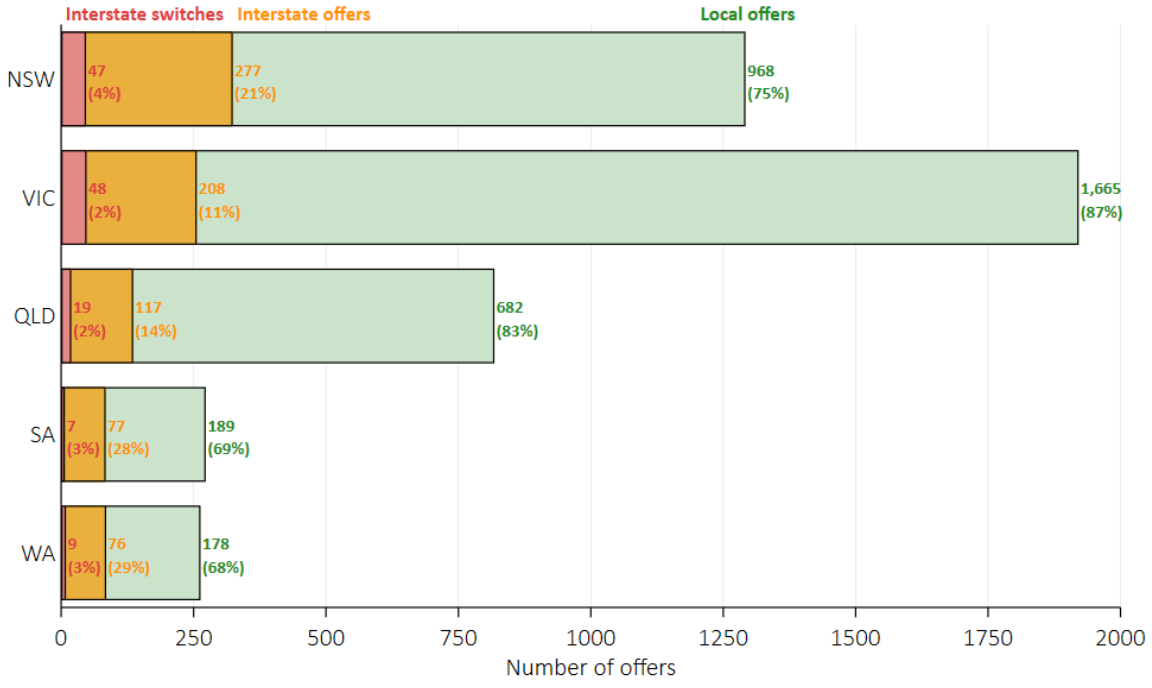
Aims: Deceased donor kidneys are offered to waitlisted patients nationally using the kidney allocation algorithm (KAv2), with offers managed by donor coordinators in the donor's state. The offer list may contain a mix of high priority interstate or local patients. Switching between local and interstate offers can be complex and time consuming for coordinators. With a new allocation system currently under development, there is need for appropriate metrics to measure and compare system complexity from the donor coordination perspective. We aimed to develop metrics and visualisations for assessing and comparing donor coordination complexity of kidney allocation systems.

Methods: Simulations of the Australian deceased donor kidney allocation algorithm in Stata using waitlist data 2022-2023. Offer list complexity was determined by number of switches from local to interstate offers, interstate offers, and total offers; from simple (e.g. one local patient only) to complex (e.g. many switches from local to interstate patients).

Results: We simulated 824 donors (1,461 kidneys, 4,567 offers). Under KAv2, 443 donors (54%) were offered interstate (highest NSW 62%, lowest QLD 47%, p=0.03), of which 115 (36%) required switching from local to interstate (similar across states, p=0.5, and 93% switched only once). Proportion of local, interstate, and offers switched from local to interstate, by donor state, are shown in Figure 1.

Conclusions: Well-defined metrics for evaluating the complexity of donor coordination will ensure administrative challenges are taken into consideration when designing/modifying kidney allocation systems. **Figure 1:** Number of total offers, interstate offers, and times switched from local to interstate offers, for all simulated kidney donors 2022-2023 by donor state



Abstract No. 29

DISTANT DIFFERENCES IN THE PATTERN OF MAJOR ADVERSE CARDIAC EVENTS PRE- AND POSTTRANSPLANTATION: THE CARSK STUDY

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Purpose: Cardiovascular disease (CVD) is the most common cause of death among people with ESKD. Dialysis and transplantation differentially impact CV risks. We hypothesised that the pattern of major adverse cardiac events (MACE) differs pre-and post-transplant.

Methods: CARSK is an ongoing multinational RCT of dialysis-dependent participants waitlisted for deceased-donor kidney transplantation randomised to regular screening for coronary disease versus no regular screening. Between 2016-2024, 2659 participants were followed to a maximum of 5-years on the waitlist, or to 12 months post-transplant. MACE were determined by a blinded event adjudication committee. We compared incidence and type of MACE pre-versus post-transplant.

Results: Participants were age 55(SD12), female (36%), obese (31%), of Caucasian (49%), Asian (24%), or First-Nations (9%) ethnicity. Dialysis vintage exceeded 3yrs in 40%. Comorbidities included T2DM (36%) and CVD (10%). During 3504 pre-transplant and 1214 post-transplant years, 213(6.1/100 patient-years) MACE events including 51 CV deaths (1.5/100) occurred pre-transplant versus 56 (4.6/100) MACE and 3 CV deaths (0.2/100) post-transplant. Non-fatal MI was the most common event pre- 95 (2.7/100) and post- 39 (3.2/100) transplant. Type 1 MI was most common pre-transplant 54 (1.5/100) and Type 2 MI post-transplant 18 (1.5/100). Non-CV deaths were similar pre-vs post-transplant (55 (1.6/100) vs 16 (1.3/100), however major bleeding was more common after transplantation, [108 (3.1/100) versus post-transplant 66 (5.4/100)].

Conclusions: Among a large cohort of waitlisted and newly transplanted participants, the incidence and type of MACE differed between pre- and post-transplant periods. Post-transplant CV deaths were rare, however particular focus on peri-operative bleeding risk and Type 2 MI is warranted.

Abstract No. 30

THE PREDICTIVE VALUE OF KIDNEY RESISTIVE INDEX FOR DELAYED GRAFT FUNCTION IN TRANSPLANTATION: THE BEST-FLUIDS IMAGING SUB-STUDY

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Background: Delayed graft function (DGF) occurs in 30-50% of deceased donor kidney transplants and is associated with prolonged hospital stay, increased risk of acute rejection, and graft failure. In the BEST-Fluids trial (n=808 participants), use of intravenous balanced crystalloid fluid during and after transplantation reduced the incidence of DGF compared with the previous standard of care, normal saline. We hypothesised that the association between saline and increased DGF risk might be mediated via hyperchloraemia-induced kidney vasoconstriction and thus analysed graft ultrasound characteristics in trial participants who gave consent in an imaging sub-study.

Methods: Ultrasound parameters including kidney resistive index (RI) were measured in trial participants within 3 days post-transplant. RI was categorized as either >0.7 or ≤ 0.7. Univariable and multivariable linear and logistic regression analyses were conducted to assess the relationships between RIs, randomised intravenous fluid, serum chloride, and DGF, with adjustment for confounders.

Results: Overall, 689 kidney transplant recipients were included in this analysis. RIs were not significantly associated with intravenous fluid type or serum chloride. RI >0.7 was significantly associated with increased risk of DGF (OR 2.31, p = 0.04). Despite this association, the predictive value of RI for DGF was modest, with a sensitivity of 61%, specificity of 53% and AUC of 0.60.

Conclusions: Elevated kidney RI within the first 3 days post-transplant is associated with increased risk of DGF, but its predictive value in isolation is limited. Neither the type of intravenous fluid used nor serum chloride levels were associated with RI values.

Abstract No. 31

IMPLEMENTATION OF A STATEWIDE ALLOCATION SYSTEM FOR DECEASED DONOR KIDNEYS AT RISK OF PROLONGED COLD ISCHAEMIA IN VICTORIA

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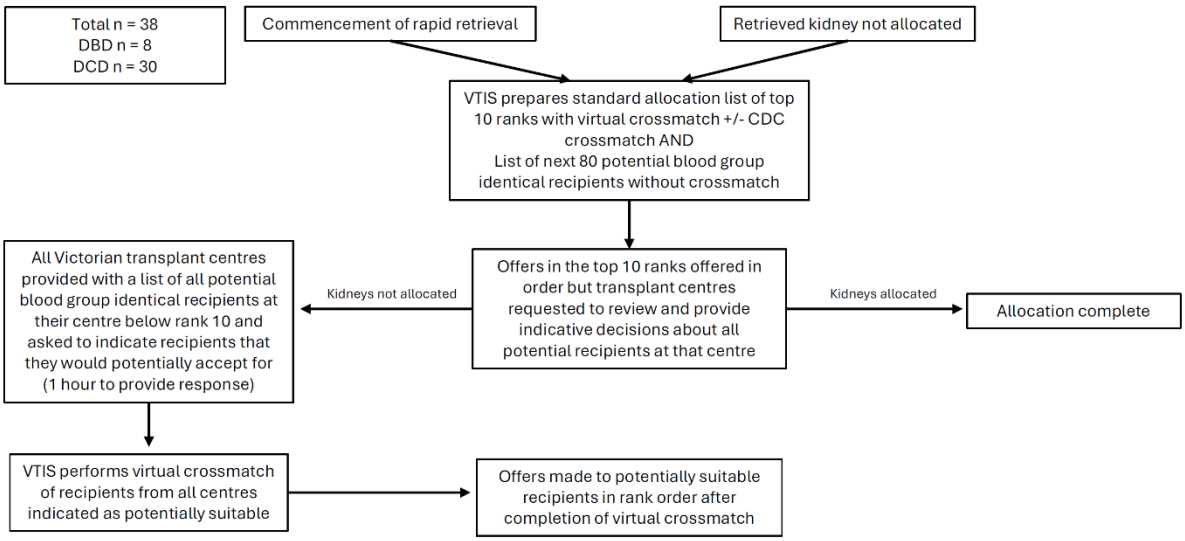
Aims: In July 2022, a novel expedited allocation system was implemented in Victoria for deceased donor kidneys at risk of non-utilisation due to prolonged cold ischaemia. This is activated whenever: a rapid retrieval commences, or a retrieved kidney has not been allocated, triggering simultaneous indicative offers made to all Victorian kidney transplant units, before availability of virtual crossmatch results (Figure 1). We aim to investigate the performance since its implementation.

Methods: We examined the characteristics, allocation efficiency and utilisation rates of donor kidneys offered through this expedited system from July 2022 to December 2024.

Results: The system was activated involving 38 donors (rapid retrieval n=24, retrieved kidney(s) not allocated n=11, donor marginality (beyond originally intended scope) n=3). Median donor age was 58 years (IQR 38-63) while KDPI was 82 (IQR 52-92). Of 58 kidneys suitable to offer, 49 were initially accepted with 11 later deemed unsuitable by the receiving transplant centre (donor factors n=10, recipient factors n=1) and unable to be reallocated, resulting in 38 kidneys (66%) being ultimately transplanted. Of the accepted kidneys, recipient ranks ranged from 1 to 159 (median 9; IQR 2, 46). Time from commencement of offers until final allocation ranged from 0.8 to 14.5 hours (median 3.3; IQR 1.4 ,7.1).

Conclusion: Implementation of an expedited allocation system for deceased donor kidneys historically at risk of non-utilisation in Victoria demonstrated successful allocation and transplantation of 66% of offered kidneys in a time efficient manner. Possible expansion of its use for other difficult-to-allocate kidneys is being evaluated.

Figure 1: Statewide expedited allocation system for deceased donor kidneys in Victoria



Abstract No. 32

CLINICAL PRACTICES IN LIVING DONOR EVALUATION IN AUSTRALIA: A SURVEY OF CARDIAC, METABOLIC, SUBSTANCE USE, AND FAMILY PLANNING ASSESSMENT CRITERIA

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Background: Living kidney donor evaluation practices vary widely, yet the extent of this variability is poorly understood. We conducted a national survey of Australian nephrologists to understand the cardiovascular and metabolic criteria applied in donor assessments.

Methods: Between February and April 2024, Australian nephrologists involved in living kidney donor assessment were invited to complete a 24-question online survey. Questions covered participant demographics, assessment practices and exclusion criteria. Data were analysed descriptively.

Results: Thirty-six nephrologists (56% transplant nephrologists; 44% general nephrologists) participated. Reported practices included: stress testing in donors with cardiovascular risk factors (72%); echocardiogram for those with cardiovascular risk factors (58%); 24-hour ambulatory blood pressure monitoring for elevated blood pressure (56%); and routine 2-hour oral glucose tolerance testing (OGTT) (67%). Frequent exclusion criteria included hypertension treated with ≥2 antihypertensives (47%), mild diastolic dysfunction in well-controlled hypertension (50%), mild diastolic dysfunction without hypertension or obesity(39%), second degree heart block (47%), right bundle branch block (50%), atrial fibrillation (64%); mild left ventricular hypertrophy(53%), pre-diabetics with a 2-hour OGTT ≥7.8mg/mmol(64%); obesity (body mass index andgt;30 kg/m2, 69%), strong family history of diabetes combined with pre-diabetes or obesity (53%), tobacco (64%) or marijuana (44%) smoking, history of substance use disorder (39%) or if insufficient abstinence period (35%); alcohol use disorder if insufficient abstinence period (35%); and female donors who had not completed their families (56%).

Conclusion: These findings highlight substantial variation in Australian living donor evaluation, potentially reflecting a lack of consensus-driven, evidence-based guidelines. Establishing national guidelines may harmonise practices, enhance donor safety, and strengthen the integrity of living kidney transplantation programs.

Abstract No. 33

TEMPERATURE OPTIMISATION OF HEART STORAGE USING CO2/OXYGEN PERSUFFLATION IN A RAT HEART MODEL

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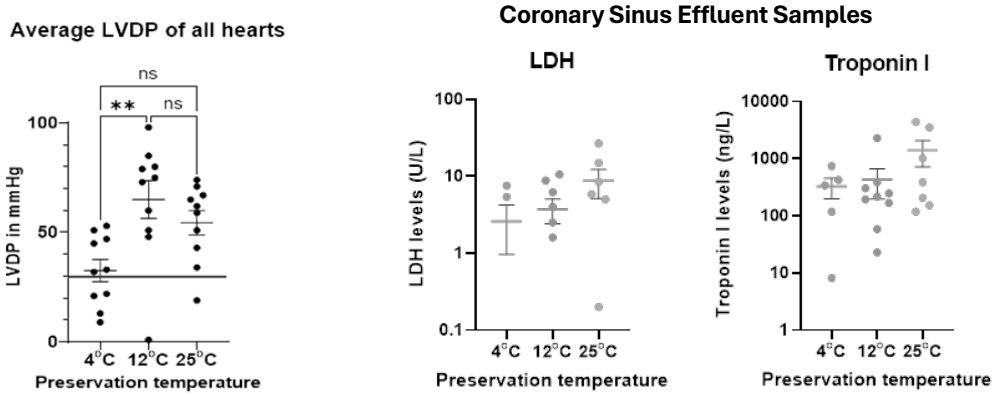
Gas persufflation is a novel preservation technique that may allow longer storage than static cold storage or machine perfusion. Successfully applying gas preservation to clinical heart storage requires further optimisation of storage system settings.

Aims: This study sought to determine the effect of 3 storage temperatures, 4°C, 12°C and room temperature, during gas persufflation, on functional and biochemical outcomes in rodent hearts.

Methods: 30 heparinised male Sprague Dawley rats had hearts explanted following anaesthesia and circulatory arrest effected by rocuronium. Hearts were divided into 3 storage temperature groups (4°C n=10, 12°C n=10 and room temperature n=10) while persufflated with a 50:50 mix of oxygen and CO_2 at a flow rate of 4.5ml/min for 3 hours. Following storage, hearts were reanimated on a modified Krebs filled Langendorff device for 1 hour. LV pressure measurements were recorded and effluent and tissue samples were taken.

Results: Successful reanimation rates were 60% (4°C), 90% (12°C) and 90% (25°C). Hearts stored at 12°C displayed significantly better reanimation function than those stored at 4°C. There was a trend toward better function in the room temperature group compared to the 4°C group. No differences were found in post reanimation Troponin, LDH or Capsase 3 activity.



Conclusions: We have demonstrated that gas persufflation of rodent hearts at 12°C yields better performing hearts than those stored at a conventional 4°C. We will seek to apply these results in longer term storage models.

Abstract No. 34

THE IMPACT OF ADDITIVES TO THE UNIVERISTY OF WISCONSIN (UW) SOLUTION DURING KIDNEY PROCUREMENT AND STORAGE.

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Aim. University of Wisconsin (UW) solution is the most commonly used organ preservation solution in Australia. Whilst antibiotics, insulin and dexamethasone were historically added to the UW-solution as the original formulae, its use have evolved since its introduction in the 1980's. Even in Australia, various practices exist, providing an opportunity to assess if the additives have an impact on renal specific outcomes.

Methods. Data from adult organ donors and their renal transplant recipients between 2014 and 2023 were obtained from the Australian and New Zealand Dialysis and Transplant (ANZDATA) registry. Outcome parameters such as delayed graft function (DGF), graft failure within 90 days and development of rejection were assessed based on whether additives were used in the UW solution during organ procurement and storage. **Results.** Over a ten-year study period, 6732 adults received a kidney from deceased donors. The outcomes of kidney transplants were assessed from 1534 recipients without additives to UW solution compared to 5198 recipients with the additives to UW solution. A multivariate regression analysis showed that, after correction for other variables in the model, the use of perfusion additives did not impact on DGF rate (OR 1.09 0.94 – 1.27, P = 0.3), all cause graft loss (death-censored) (OR 1.08, 0.86-0.35, P=0.5) or time to first rejection (HR0.98, 0.84-1.15, P=0.9).

Conclusion. The results of this large contemporary retrospective national registry-based analysis indicates that the use insulin and dexamethasone in UW solution during kidney procurement and storage does not significantly impact kidney transplant outcomes including DGF, graft failure or time to first rejection.

Abstract No. 35

DEVELOPMENT OF AN ORGANOID MODEL FROM HEREDITARY PANCREATITIS PATIENTS COMPLIMENTS SPATIAL-TRANSCRIPTOMIC CHARACTERIZATION

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Background: Hereditary pancreatitis (HP) is an inflammatory genetic condition typically caused by uncontrolled activation of trypsin within the pancreas. Animal models struggle to replicate this disease due to discrepancies in HP genes such as PRSS1. We have grown organoids from healthy pancreas and PRSS1 mutant HP samples to generate a model which can emulate patient specific mutations. Alongside this work we have characterized HP through spatial transcriptomics analysis of patient samples.

Methods: Pancreatic organoids were derived from islet isolation samples, with HP samples originating from patients undergoing total pancreatectomy with islet auto transplantation (TPIAT). Organoids were characterized via qPCR, immunohistochemistry and a trypsin activity assay. Spatial transcriptomic analysis was performed using the Visium HD platform from 10X genomics, **and this data was processed via bin2cell and Seurat**

Results: Organoids were successfully grown from HP samples, displaying expression of acinar genes including PRSS1 and amylase, alongside the presence of ductal genes such as KRT19, indicating the beginnings of acinar to ductal metaplasia (ADM). Spatial analysis allowed for annotation of cells during HP, alongside the identification of factors driving the inflammatory environment (CCL20, CXCR4). Furthermore, a unique combination of fibrosis related genes was identified within the fibrotic regions of the HP pancreas including MMP2, CCN2 and MGP.

Conclusion: We have demonstrated one of the first instances of growing organoids from HP patient samples. The utilization of the organoid model in combination with findings derived from spatial analysis will open the door for the discovery and validation of potential therapeutic options.

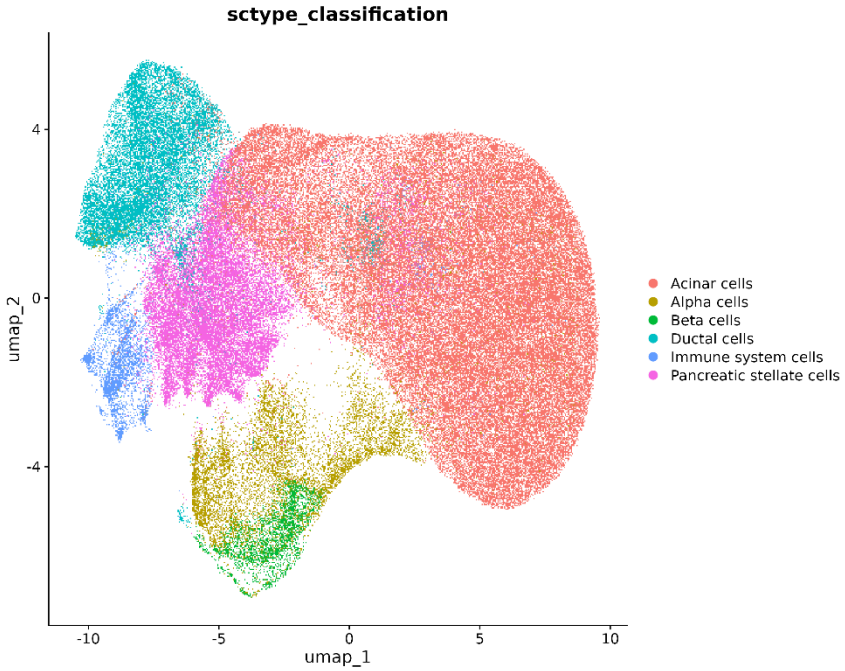

Figure: Cell clustering UMAP generated through Visium HD spatial transcriptomic analysis of hereditary pancreatitis (HP) sample.

Abstract No. 36

RBM20 CARDIOMYOPATHY: PHENOTYPIC CHARACTERISATION OF A NOVEL PATIENT DERIVED AVATAR MOUSE MODEL THAT REQUIRES CARDIAC TRANSPLANTATION

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Background: RNA Binding Motif protein 20 (RBM20) cardiomyopathy is a severe genetic disorder caused by mutations in the splicing factor RBM20, a key regulator of RNA splicing. This arrhythmogenic form of dilated cardiomyopathy (DCM) is characterised by its clinically aggressive progression. Patients present with rapid progression to heart failure, an increased risk of arrhythmias, and a high risk of sudden cardiac death, with heart transplantation remaining the major definitive intervention. The R636H mutation is a pathogenic variant located within the highly conserved RS domain of RBM20, which has been linked to the most severe clinical presentations. An avatar mouse was developed using CRISPR at ANU.

Aim: To characterise and assess the R636H avatar mouse model.

Results: Phenotypic assessment of the model included electrocardiograms (ECG) and histology, revealing typical DCM features in both RBM20WT/R636H and RBM20R636H/R636H mice. ECGs showed severe arrhythmic events in both mutant mice groups, worsened after administering a challenge protocol (caffeine and epinephrine), highlighting the arrhythmogenic nature of the disease. Electron microscopy images of the left ventricle in the RBM20WT/R636H and RBM20R636H/R636H groups showed the altered sarcomere structure as compared to the wildtype group. The RBM20R636H/R636H group had reduced survival and high rates of sudden death ($P<0.0001$).

Conclusion: The avatar mouse with an R636H mutation demonstrates the same clinical pathology as patients with left ventricular dilation, cardiac dysfunction, structural integrity issues, and sudden death providing a model for potential therapeutics.

Abstract No. 37

IMPROVING LIVING KIDNEY DONOR SOLICITATION: A SYSTEMATIC REVIEW AND META-ANALYSIS OF INTERVENTIONS

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Background: Living donor kidney transplantation provides superior patient and graft outcomes compared to deceased donor transplantation yet remains underutilised globally. A key barrier is recipient discomfort with current care models that rely heavily on recipient-led solicitation. Optimal solicitation models are unknown.
Methods: This systematic review and meta-analysis followed standard Cochrane methodology. We searched 4 databases and grey literature from inception to 22 May 2024 for randomised controlled trials (RCTs) and non-randomised intervention studies evaluating living donor solicitation strategies. We performed meta-analyses, separating RCTs and non-randomised evidence, and used the Grading of Recommendation, Assessment, Development, and Evaluation approach to assess our certainty in the evidence.
Results: We included 22 RCTs (27082 participants) and 7 non-randomised interventions (2193 participants) aimed at promoting living donor solicitation. Education programs increased enquires (Relative Risk (RR)1.65, 95%CI 1.10, 2.46), solicitation (RR1.86, 95%CI 1.02, 3.40), and transplants (RR4.01, 95%CI 1.49, 10.76) compared to usual care (very low certainty evidence). One-on-one versus group education had uncertain effects on enquiries (RR1.51, 95%CI 0.91, 2.51), and transplants (RR1.69, 95%CI 1.17, 2.45) (very low certainty evidence).
Conclusion: Education programs increased donor solicitation, encouraged prospective donors to start or complete evaluations, and led to more living donor transplantations. However, the overall certainty of the evidence was very low, and included studies ranged from unclear to high risk of bias, while non-randomised interventions were of moderate risk of bias. Larger, high-quality RCTs using agreed-upon outcome measures are urgently needed to strengthen the evidence base, refine donor solicitation practices, and improve access to living kidney transplantation.

Abstract No. 38

ACUTE LUNG ALLOGRAFT DYSFUNCTION (ALAD) IN THE FIRST-YEAR POST-TRANSPLANT: INCIDENCE, ETIOLOGY, SEVERITY AND OUTCOME

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Background: ALAD is a novel concept denoting an acute decline in lung function >3 days post-lung transplant (LTx). Etiologies include allo/non-alloimmune or idiopathic. The purpose was to apply the ISHLT working group definition to explore incidence, etiology, severity and outcomes. Correctly defining ALAD will enhance LTx diagnostics, prognostication and therapies.

Methods: A retrospective 365-day review of 59 LTx (7/22-6/23) followed at our centre was performed. ALAD was defined as a fall in FEV1 ≥10%, SpO2 ≤92% or worsening hypoxia (FiO2 ≥10% increase). Episodes were assessed for etiology, severity and reversibility by 90 days.

Results: Of 59 LTx; 7 single, 52 bilateral, there were 31 ALAD episodes. Twenty-four (77%) were defined by hypoxia, all with CXR abnormalities. Eight (26%) were defined by fall in FEV1 and 23 (74%) did not have contemporary spirometry. Etiology and severity are summarized in table 1. Infection was the most common specific diagnosis (17, 55%), followed by idiopathic (3, 10%). Two of three idiopathic cases died from ALAD (66%). ALAD ≤30 days was more severe than ALAD >30 days.

Conclusion: In the first-year post-LTx, ALAD is most commonly definable by hypoxia, with recipients often too unwell for spirometry. Conversely, SpO2 ≤92% captures less relevant insults if not defined by duration >24 hours. Most causes were non-alloimmune and reversible. Idiopathic ALAD carries a poor prognosis. Characterizing ALAD ≤30 and >30 days appears useful. This definition of ALAD will aid in benchmarking early LTx outcomes. These definitions appear useful in advancing diagnosis and therapies for idiopathic ALAD.

Table 1. Characteristics of ALAD events.

	≤30 days (n=9)	31-365 days (n=22)
Age (mean ± SD)	55.1 ± 11.7	58.8 ± 12.1
Days post-LTx (mean ± SD)	12 ± 9.3	173 ± 97.8
Etiology		
Alloimmune	0	2 (9%) 1 CLAD-BOS* 1 ARAD†
Non-alloimmune	7 (78%)	19 (86%)
Infection	4	13
Pulmonary oedema	0	2
Pleural	0	2
Other	3	2
Idiopathic	2 (22%) 1 DAD‡ 1 OP§	1 (5%) 1 AFOP¶
Severity		
Outpatient	0	3 (13.5%)
Ward	0	9 (41%)
ICU	4 (45%)	6 (27%)
Intubated/ECMO	3 (33%)	3 (13.5%)
Died	2 (22%)	1 (5%)
Reversibility by 90 days		
Complete	6 (67%)	15 (68%)
Partial	1 (11%)	3 (14%)
Stabilized	0	0
Progressive	2 (22%)	4 (18%)

*CLAD-BOS= Chronic Lung Allograft Dysfunction, Bronchiolitis Obliterans Syndrome phenotype.
†ARAD= Azithromycin-Responsive Allograft Dysfunction.
‡DAD=Diffuse alveolar damage. Described on autopsy.
§AFOP=Acute Fibrinous Organizing Pneumonia. Described on open lung biopsy.
¶OP=Organizing pneumonia. Described on transbronchial biopsy.

Abstract No. 39

KIDNEY TRANSPLANT OUTCOMES FROM DONORS WITH PRIOR ECMO BUT NO NRP: A SYSTEMATIC REVIEW AND META-ANALYSIS

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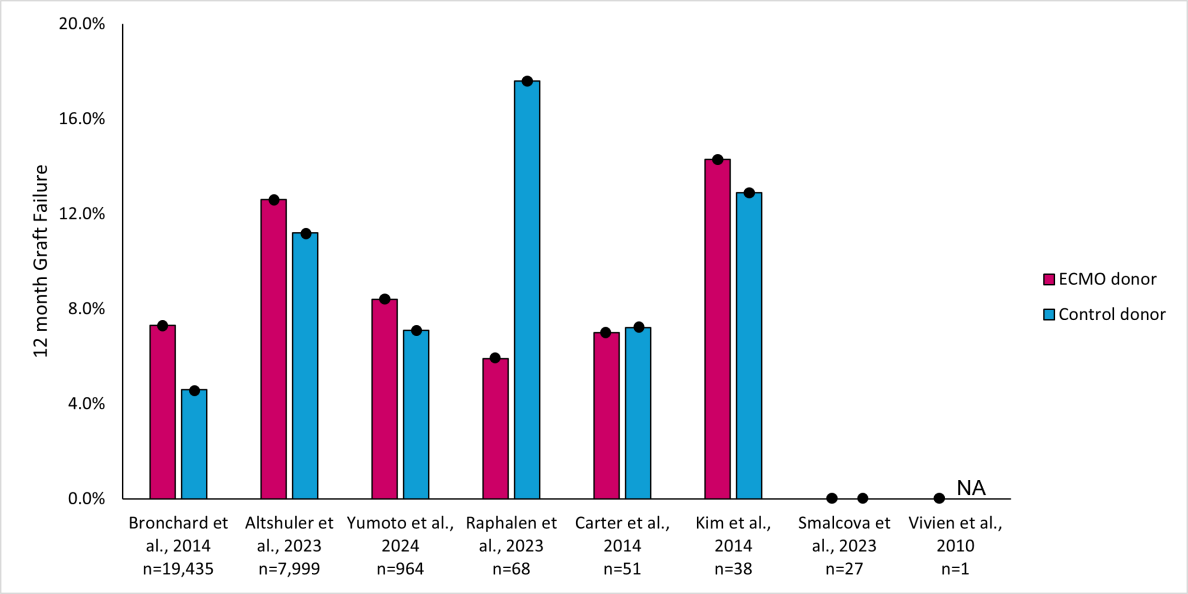
Introduction. Patients treated with extracorporeal membrane oxygenation are rarely used for kidney donation due to concerns that potential grafts are damaged by hypoperfusion, thromboemboli and inflammation secondary to shock, respiratory failure and during ECMO. This systematic review assesses the potential negative effect of prior ECMO on kidney graft outcomes without the added benefit of normothermic regional perfusion (NRP), which is not available in all jurisdictions.

Results. It identifies 7 cohort studies and 4 case reports that reported at least one of the following graft outcomes from prior ECMO donors: Delayed graft function (DGF), primary non-function (PNF), graft failure at 12-months, and recipient death after 12-months. Graft failure at 12-months was 1.1-1.6 times more common for prior ECMO donors, though this was statistically non-significant within each relevant study and when they were pooled by meta-analysis (RR = 1.23, 95% CI [0.889-1.72], p = 0.54). DGF was 1.3-6.2 times more common for prior ECMO donors, though the studies did not differentiate if donation was after brain or circulatory death (DBD or DCD), limiting the conclusions drawn.

Conclusions. Despite the increased risk of DGF and graft failure, patient outcomes appear favourable to remaining on dialysis, even without the benefit of NRP. Further studies are required to support the ongoing use of prior ECMO donors, especially after venovenous ECMO or DCD where the data is very limited.



Abstract No. 40

PRE-TRANSPLANT ANGIOTENSIN II TYPE 1 RECEPTOR AUTOANTIBODIES PREDICTS REDUCED SURVIVAL IN LUNG TRANSPLANT RECIPIENTS

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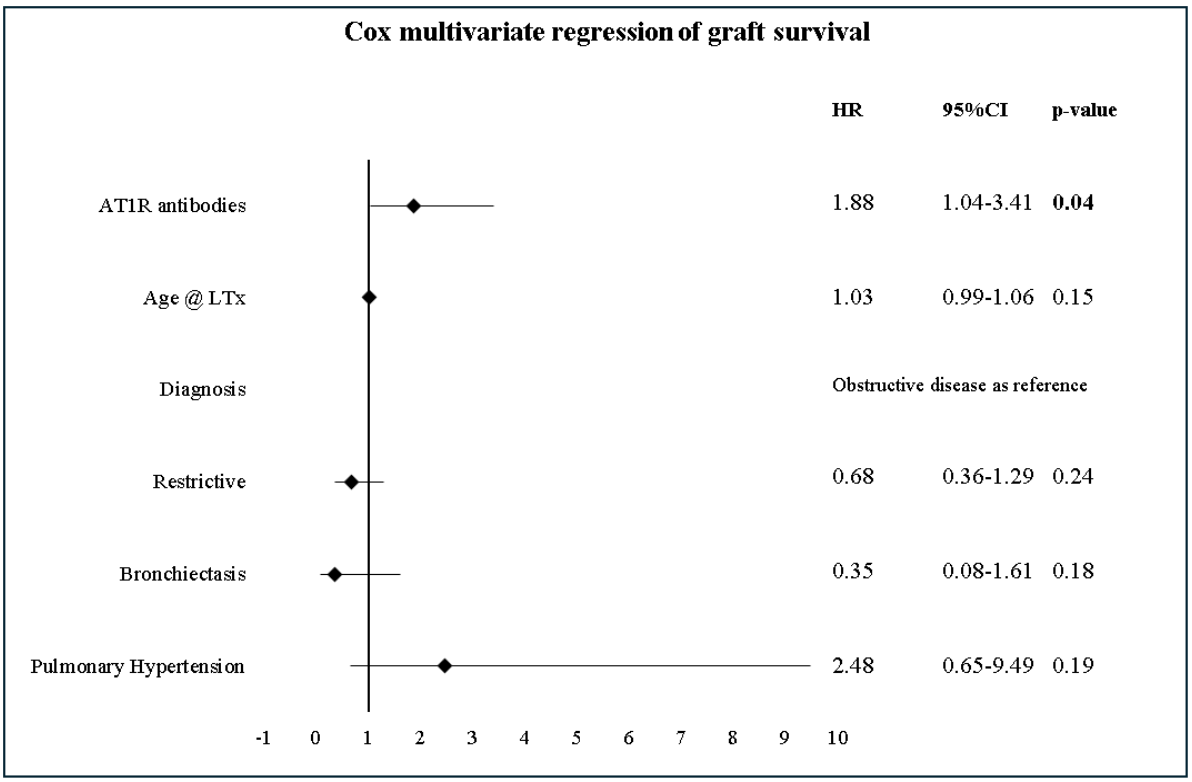
Introduction: Angiotensin II type 1 receptor autoantibodies (AT1Rabs) have been previously linked to chronic lung allograft dysfunction and decreased graft survival in a small study of lung transplantation (LTx) recipients bridged on extracorporeal membrane oxygenation. In this study we aim to explore the impact of pre-LTx AT1Rabs on baseline lung function and graft survival in a large cohort of LTx recipients.

Methods: Single centre case-control study. AT1Rabs > 10U/ml were considered positive. Follow-up data until at least seven years was available for all patients – censored at death or re-LTx. Baseline FEV1 and FVC were defined as the mean of the best two postoperative values attained more than 3 weeks apart. Cox proportional hazards model was used to compare graft survival and Student's t-test was used to compare lung function between groups.

Results: The analysis included 119 LTx between July 2014 and June 2017 with a mean follow-up of 7 years. The mean age at LTx was 53 ± 10 years and 55.5% of recipients were male. The AT1Rabs positive group had lower baseline lung function [% predicted FEV1 (94% vs 102%, p=0.05) and FVC (92% vs 100%, p=0.02)] compared to the negative group. After adjusting for age and indication for LTx, Cox regression demonstrated an adverse association of AT1Rabs with graft survival (HR 1.9, p=0.04) (Figure 1).

Conclusion: Pre-LTx AT1Rabs are associated with lower baseline lung function and decreased survival in LTx recipients.



Abstract No. 41

LANDSCAPE OF MENTAL ILLNESS IN KIDNEY FAILURE: A THREE NATION COMPARISON BETWEEN AUSTRALIA, NEW ZEALAND, AND SCOTLAND

HEDLEY J[1], LINVINGSTONE S[2], SHARMA T[1], RAVI S[3], DE LA MATA N[1], SARA G[1], BEAGLEHOLE B[4], DHAUN N[5], BELL S[2], WEBSTER A[1]

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Aims: People with mental illness (MI) and kidney failure experience poorer kidney-related outcomes. However, there is limited data to assess prevalence of MI in kidney failure. We aimed to compare MI prevalence in kidney failure across jurisdictions: Australia (New South Wales, NSW), New Zealand (NZ), and Scotland.

Methods: Three cohorts starting dialysis/kidney transplant (KRT) in NSW, NZ, and Scotland April 2011 - December 2020, linked to their respective administrative health data including hospitalisations, mental health (MH) contacts (NSW, NZ), and pharmaceutical dispensing (NZ, Scotland). We classified pre-existing MI as severe or persistent (SPMI), other, or none, based on health service utilisation from April 2009 until KRT (minimum 2-years history). MI severity was determined using ICD-10, activity type (NZ MH-contacts), or drug class (pharmaceuticals). Persistent MI was multiple services over 2+ years.

Results: We included 8,334 (NSW), 4,985 (NZ), and 5,020 (Scotland). Using hospitalisations, prevalence varied across jurisdictions for any MI (NSW 3.5%, NZ 2.3%, Scotland 3.9%, p<0.001). SPMI was similar in NSW and Scotland (1.5%) but lower in NZ (0.9%, p=0.01, Table 1 overleaf). Including MH-contacts, NZ had higher prevalence than NSW for any MI (15.2% vs. 6.3%, p<0.001) and SPMI (5.8% vs. 2.5%, p<0.001). Including pharmaceuticals, Scotland had higher prevalence than NZ for any MI (19.2% vs. 7.1%, p<0.001) and SPMI (14.9% vs. 4.3%, p<0.001). Trends were similar in waitlisted and transplanted patients.

Conclusions: MI prevalence in kidney failure varies internationally depending on data sources; comparisons may illuminate local healthcare improvements to support people with kidney failure and MI.

Table 1: Prevalence of pre-existing mental illness in people with kidney failure, kidney waitlist patients, and kidney transplant recipients, by location (NSW, NZ, Scotland) and by mental health data source

	Kidney failure						Kidney waitlist				Transplant recipients					
	NSW		NZ		Scotland		NSW		NZ		NSW		NZ		Scotland	
Mental illness, n (%)	*N = 8,334*		*N = 4,985*		*N = 5,020*		*N = 1,737*		*N = 867*		*N = 1,645*		*N = 843*		*N = 843*	
Hospital admissions																
None	8,046	(96.5)	4,872	(97.7)	4,824	(96.1)	1,702	(98.0)	851	(98.2)	1,614	(98.1)	830	(98.5)	1,134	(97.4)
Any	288	(3.5)	113	(2.3)	196	(3.9)	35	(2.0)	16	(1.8)	31	(1.9)	13	(1.5)	30	(2.6)
Other	*163*	*(2.0)*	*67*	*(1.3)*	*121*	*(2.4)*	*23*	*(1.3)*	*10*	*(1.2)*	*18*	*(1.1)*	*9*	*(1.1)*	*21*	*(1.8)*
SPMI	*125*	*(1.5)*	*46*	*(0.9)*	*75*	*(1.5)*	*12*	*(0.7)*	*6*	*(0.7)*	*13*	*(0.8)*	*4*	*(0.5)*	*9*	*(0.8)*
Hospital admissions + mental health contacts																
None	7,804	(93.6)	4,256	(85.4)	-		1,666	(95.9)	734	(84.7)	1,572	(95.6)	677	(80.3)	-	
Any	530	(6.4)	729	(14.6)	-		71	(4.1)	133	(15.3)	73	(4.4)	166	(19.7)	-	
Other	*322*	*(3.9)*	*438*	*(8.8)*	-		*49*	*(2.8)*	*73*	*(8.4)*	*53*	*(3.2)*	*126*	*(14.9)*	-	
SPMI	*208*	*(2.5)*	*291*	*(5.8)*	-		*22*	*(1.3)*	*60*	*(6.9)*	*20*	*(1.2)*	*40*	*(4.7)*	-	
Hospital admissions + pharmaceutical dispensing																
None	-		4,629	(92.9)	4,057	(80.8)	-		734	(84.7)	-		723	(85.8)	948	(81.4)
Any	-		356	(7.1)	963	(19.2)	-		56	(6.5)	-		120	(14.2)	216	(18.6)
Other	-		*144*	*(2.9)*	*214*	*(4.3)*	-		*133*	*(15.3)*	-		*43*	*(5.1)*	*44*	*(3.8)*
SPMI	-		*212*	*(4.3)*	*749*	*(14.9)*	-		*77*	*(8.9)*	-		*77*	*(9.1)*	*172*	*(14.8)*

Abstract No. 42

IMPACT Of OBESITY ON KIDNEY TRANSPLANT WAITLISTING OUTCOMES IN AUSTRALIA

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Aim: Obesity is a challenge to kidney transplantation due to heightened perioperative and metabolic risks. We sought to characterise its influence on waitlist activation and subsequent transplantation in an Australian population.

Methods: Data was analysed from the ANZDATA registry, focusing on adult patients who commenced dialysis between 2006 and 2023 in Australia. Weight trends from dialysis commencement to 5 years post-transplantation were assessed. Using normal BMI (WHO classification) as reference, cox proportional hazards modelling was employed to examine the impact of baseline BMI on initial waitlist activation and kidney transplantation.

Results: Among 54,755 patients, increasing obesity was associated with prolonged median times to waitlisting (see table): 12.3 months for Class I obesity, 18.9 months for Class II, and 31.1 months for Class III. Median times to transplantation were similarly increased at 30.1, 37.2 and 48.8 months respectively. Patients with Class III obesity experienced significant weight loss of 20kg (-16%) by waitlisting, and 25kg (-20%) by transplantation. They were markedly less likely to be waitlisted (HR: 0.27 [95% CI:0.24, 0.30]) or transplanted (HR: 0.26 [0.23, 0.29]) compared to individuals with normal BMI.

Conclusion: Increasing baseline obesity at dialysis initiation delays waitlist activation and transplantation and reduces the likelihood of these desired outcomes. This highlights the need to establish a systematic approach to efficacious weight management interventions to improve access to kidney transplantation.

Table 1: Summary of Waitlist and Transplant Outcomes by BMI Category

BMI \ Timepoints		Dialysis Commencement	Waitlist Activation	Kidney Transplantation
Underweight (< 18.5)	Patient Number (%)	1348	267/1348 (19.8)	213/1348 (15.8)
	Median Weight kgs (% Change)	46.0	48.0 (+4.3)	50.0 (+8.7)
	Median Time (Months)		10.9	33.2
	Hazards Ratio (95% CI)		**0.85 (0.75, 0.97)****	0.91 (0.79, 1.04)
	Adjusted Hazards Ratio*		**0.61 (0.54, 0.70)****	**0.68 (0.59, 0.79)****
Normal Weight (18.5 – 24.9)	Patient Number (%)	15323	3631/15323 (23.7)	2859/15323 (18.7)
	Median Weight kgs (% Change)	63.0	64.8 (+2.9)	66.4 (+5.4)
	Median Time (Months)		9.6	28.1
	Hazards Ratio (95% CI)			
	Adjusted Hazards Ratio			
Overweight (25 – 29.9)	Patient Number (%)	17073	3689/17073 (21.6)	2860/17073 (16.8)
	Median Weight kgs (% Change)	78.0	79.5 (+1.9)	80.8 (+3.6%)
	Median Time (Months)		10.2	27.9
	Hazards Ratio (95% CI)		**0.87 (0.83, 0.91)****	**0.85 (0.81, 0.90)****
	Adjusted Hazards Ratio		1.13 (1.08, 1.18)	1.11 (1.05, 1.17)
Obese I (30 – 34.9)	Patient Number (%)	11108	2175/11108 (19.6)	1665/11108 (15.0)
	Median Weight kgs (% Change)	91.7	91.0 (-0.8)	92 (+0.3)
	Median Time (Months)		12.3	30.1
	Hazards Ratio (95% CI)		**0.76 (0.72, 0.80)****	**0.73 (0.69, 0.78)****
	Adjusted Hazards Ratio		1.06 (1.01, 1.13)	1.03 (0.97, 1.10)
Obese II (35 – 39.9)	Patient Number (%)	5630	792/5630 (14.1)	648/5630 (11.5)
	Median Weight kgs (% Change)	104.8	100.0 (-4.6)	97.0 (-7.4)
	Median Time (Months)		18.9	37.2
	Hazards Ratio (95% CI)		**0.51 (0.47, 0.55)****	**0.52 (0.48, 0.57)****
	Adjusted Hazards Ratio		**0.65 (0.61, 0.71)****	**0.71 (0.65, 0.78)****
Obese III (≥40)	Patient Number (%)	4273	334/4273 (7.8)	258/4015 (6.0)
	Median Weight kgs (% Change)	125.0	105.0 (-16)	100.1 (-20)
	Median Time (Months)		31.1	48.8
	Hazards Ratio (95% CI)		**0.27 (0.24, 0.30)****	**0.26 (0.23, 0.29)****
	Adjusted Hazards Ratio		**0.29 (0.25, 0.32)****	**0.30 (0.26, 0.34)****

* Adjusted for age, gender, ethnicity, smoking, primary kidney disease and comorbidities (diabetes, cardiovascular, pulmonary, peripheral vascular, cerebrovascular diseases)

** Statistically significant

Abstract No. 43

DESIGN AND REPORTING QUALITY OF NON-INFERIORITY TRIALS IN KIDNEY TRANSPLANTATION: A SYSTEMATIC REVIEW

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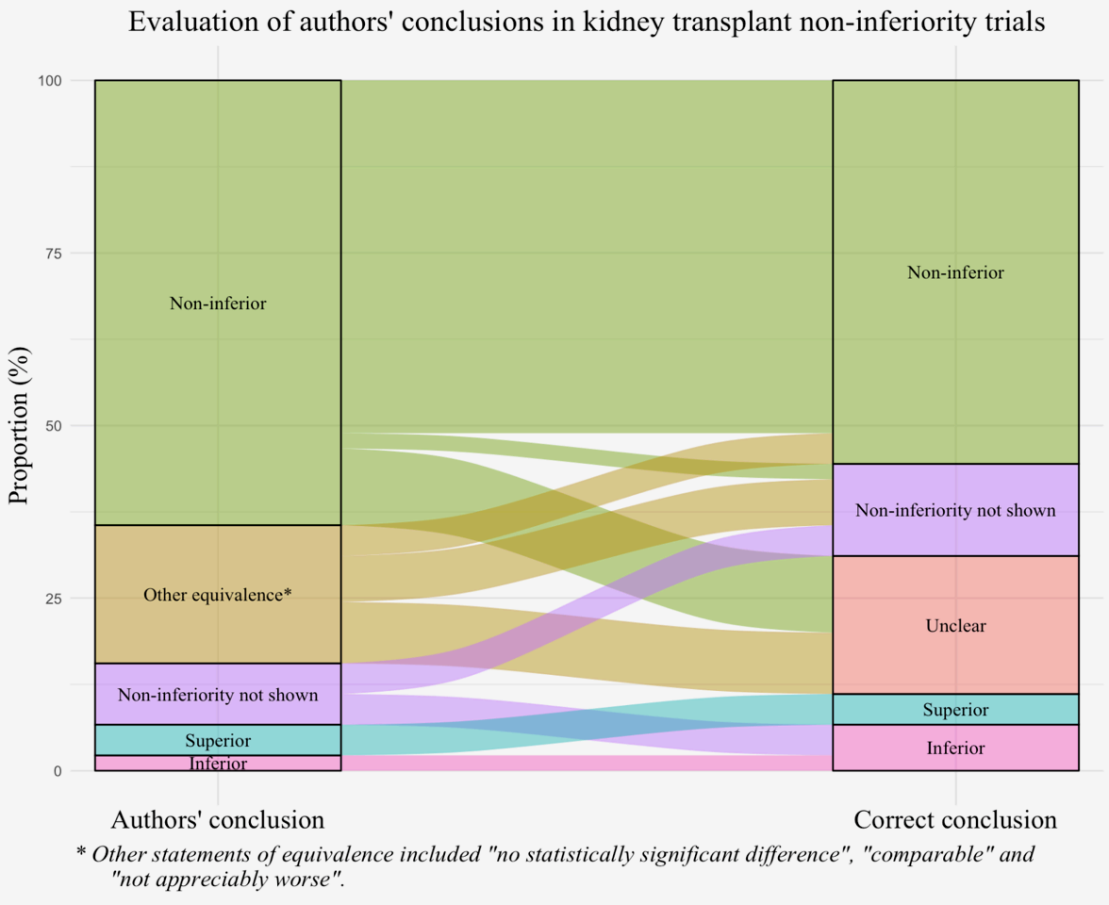
Background. Non-inferiority trials facilitate innovation in kidney transplantation and their use is increasing. We aimed to assess the design and reporting quality of non-inferiority trials in kidney transplantation, specifically assessing adherence to existing guidelines.

Methods. We searched MEDLINE, Embase, and CENTRAL for randomised-controlled non-inferiority trials in kidney transplantation published up to February 2025. Two investigators reviewed and extracted data. Adherence to CONSORT, FDA and EMEA guidelines was evaluated.

Results. We identified 45 unique trials: 37(82%) compared a novel immunosuppressive regimen to standard of care and 26(58%) were industry sponsored. The non-inferiority margin (the worst-case loss in efficacy considered clinically acceptable) was not justified in 32(71%) studies and poorly justified in 6(13%). Of 32 studies with a categorical primary outcome, 31(97%) inappropriately assessed absolute risk reduction, rather than relative risk, leading to inflated tolerance for loss of efficacy in 19 trials. Most studies had high withdrawal and dropout rates, and 38(84%) did not specify methods for handling missing data. Intention to treat analysis was used to determine primary efficacy in 34(76%) studies, thereby creating bias toward a non-inferiority finding when dropout rates were high. Fourteen studies (31%) provided an incorrect conclusion, most claiming equivalence when non-inferiority had not been adequately demonstrated (Figure). Trial quality did not improve over time, and no association was evident between trial quality and journal impact factor.

Conclusion. We found major deficiencies in the design, conduct and reporting of non-inferiority trials in kidney transplantation which is compromising the evidence base for novel therapies in this field.



Abstract No. 44

THE EFFECT OF MENTAL ILLNESS ON MORTALITY, GRAFT FAILURE, AND ACUTE REJECTION POST-KIDNEY TRANSPLANT

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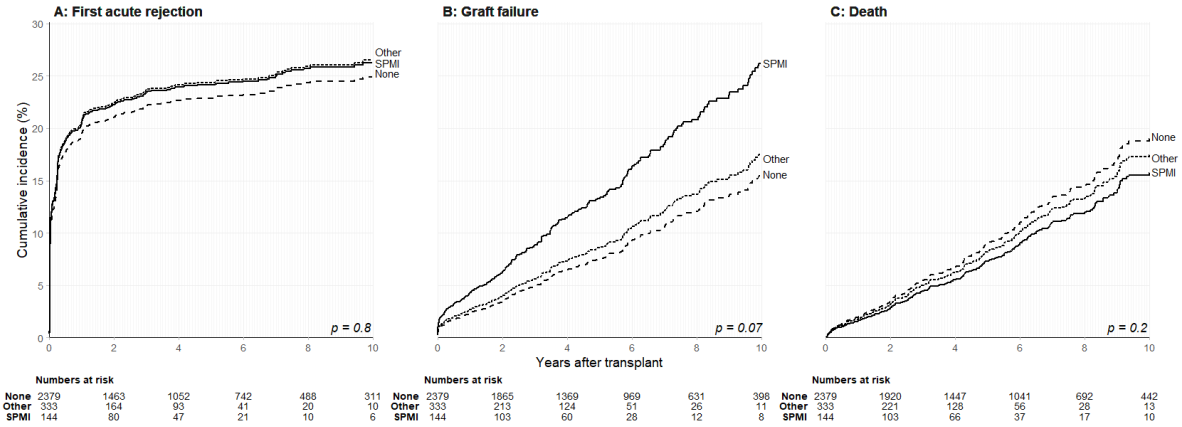
Aims: Severe or persistent mental illness (SPMI) may impact patient and kidney outcomes post-transplant, yet evidence is limited. We investigated the association between pre-existing SPMI and acute rejection, graft failure, and mortality.

Methods: Population-based cohort study using ANZDATA linked with NSW Health data, including NSW residents who received their first transplant between 2005-2020. Mental health service users were defined by mental health hospitalisations or non-admitted mental health contacts prior to transplant, and grouped into SPMI (any diagnosis of psychosis or more than 2 years of service contact) or other mental illness. We analysed time to acute rejection, graft failure and death using Cox regression, adjusting for age, sex, ethnicity, remoteness, socioeconomic status, donor characteristics (pathway, criteria and KDPI), and transplant hospital.

Results: Among 2,941 recipients over 15.9 years follow-up, 149 (5%) had pre-existing SPMI and 347 (12%) had other mental illness. Compared with no mental illness, those with SPMI had higher rates of graft failure (adjusted HR 1.61, 95%CI 1.05-2.47), with some evidence these were due to drug complications/non-compliance (23% vs. 7%, p=0.2). SPMI had similar rates of acute rejection (adjusted HR 0.99, 95%CI 0.68-1.45) and mortality (adjusted HR 0.78, 95%CI 0.58-1.06). Those with other mental illness had similar outcomes to those with no mental illness (Figure 1).

Conclusions: Pre-existing SPMI is associated with an increased risk of graft failure but not with acute rejection or mortality after transplantation. Further work to understand care gaps and causes of graft failure could inform targeted support for patients with mental illness post-transplant.

Figure 1: Modelled cumulative incidence plots for first acute rejection (A), graft failure (B), and death (C)



Abstract No. 45

SIMULTANEOUS LUNG ANDAMP; HEART RETRIEVAL DOESN'T RESULT IN WORSE OUTCOMES FOR DCD LUNG TRANSPLANTATION – PROPENSITY MATCHED ANALYSIS

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Aims: Lung transplantation (LTx) following donation after circulatory death (DCD) has excellent outcomes, however concern has been raised over outcomes with simultaneous heart retrieval. We hypothesised that simultaneous retrieval provides satisfactory outcomes following LTx.

Methods: A retrospective cohort analysis was performed of all DCD LTx between July-14 and June-24, and retrievals with simultaneous heart retrieval identified. Baseline recipient, donor and operative characteristics were analysed. Death was defined as all-cause mortality. Multivariable Cox regression measured association between simultaneous retrieval and death. Propensity matching was performed 1:1.

Results: 116 DCD LTx were performed, with 33 (28%) performed from a donor with simultaneous retrieval, median follow-up time 4.2 years. Median age for simultaneous donors was lower (32 vs. 53 years, p <0.001), and were more likely to be male (75.8% vs 47%, P =.0.005). There was significantly lower 1-year mortality in the simultaneous group (0% vs 19.3%, P = 0.005). On multivariable Cox regression simultaneous retrieval was associated with reduced risk of late death (aHR = 0.37, 95% CI 0.16–0.95, P = 0.038). 28 matched pairs were created, with the 1-year mortality difference persisting (0% vs 28.6%, P = 0.013). There was a difference in 5-year survival curves in the unmatched but not matched cohort (78% vs 63.2%, P = 0.32).

Conclusions: DCD LTx with simultaneous direct heart procurement has excellent short and long-term outcomes, however results may not apply to lungs retrieved after thoracoabdominal normothermic regional perfusion (TA-NRP). DCD LTx with simultaneous heart procurement should be encouraged as DCD HTx expands.

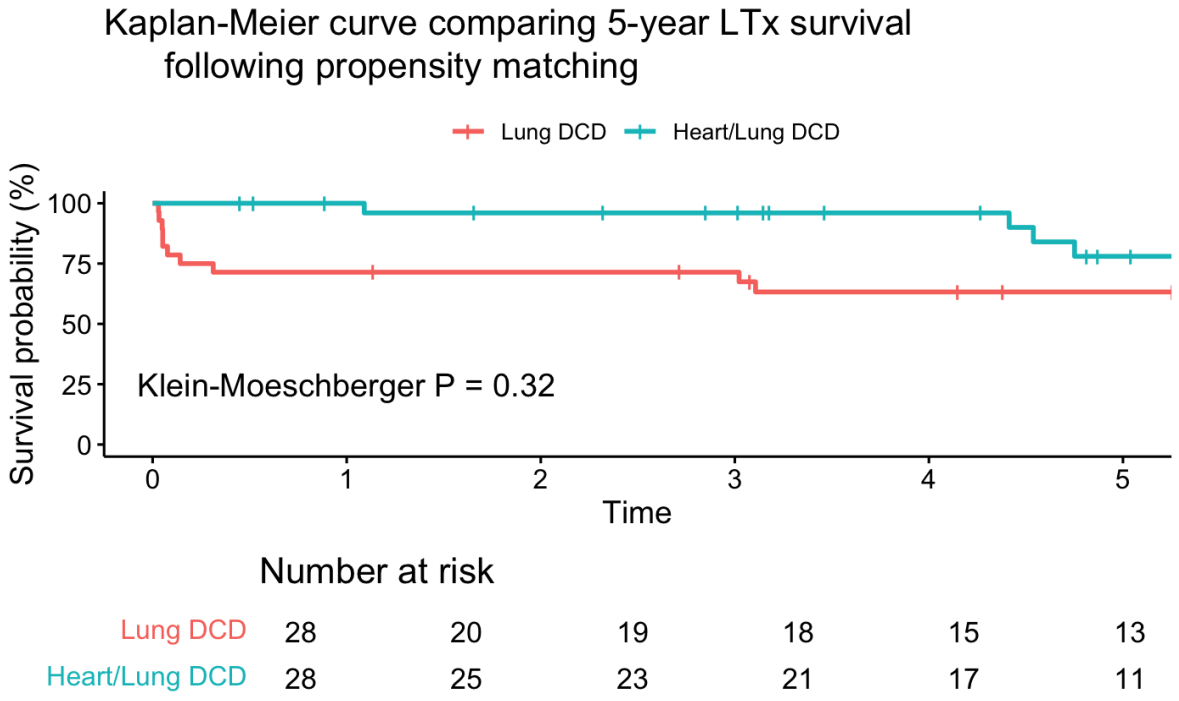

Figure 1: Kaplan-Meier Survival Curve for 28 propensity-matched patient pairs

Abstract No. 46

PATIENT-REPORTED CHANGES IN SYMPTOMS AFTER ADULT KIDNEY TRANSPLANTATION

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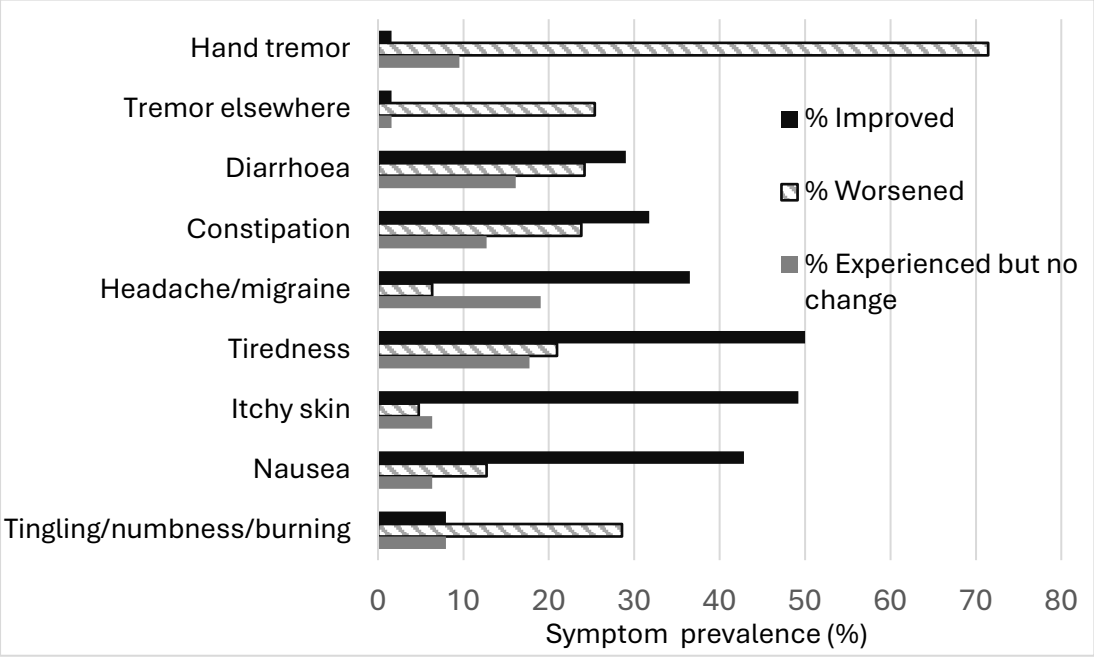
Aims. This study aimed to explore changes in patient-reported medical symptoms in the period immediately before and after kidney transplantation.

Methods. A single-centre, prospective, semi-qualitative pilot study was conducted involving sequential recruitment of adult kidney transplant recipients in the early post-transplant period. Study participants completed a questionnaire around the prevalence and frequency of medical symptoms they experienced from the few months before transplantation, to several weeks afterwards. Symptoms were categorised as having improved (less frequent or resolved), worsened (more frequent or new-onset) or not changed since transplantation.

Results. 63 participants completed this non-interventional study. 63% were male, the median (range) age at transplant was 53 years (19 - 75 years) and the median (range) time since transplant was 31 days (22 - 74 days)). An average of 5 symptoms were reported per participant both before and after transplant. 40% of participants reported >5 symptoms before transplant, compared to 44% post-transplant. Tiredness, itchy skin, nausea and headache/migraine were reported to have improved following transplantation by 50%, 49%, 43% and 37% of patients, respectively. By contrast, hand tremor, tingling/numbness/burning and tremor elsewhere were reported to have worsened by 71%, 29% and 25% of patients, respectively.

Conclusions. In the early post-transplantation period, patients reported improvement in many symptoms since receiving their graft. However, most participants reported that hand tremor had become more frequent or had newly arisen since transplant. This may relate to immunosuppressant toxicity and warrants further investigation.

Figure 1. Patient-reported changes in frequency of symptoms after adult kidney transplantation (n=63)



Abstract No. 47

REVIEW OF AUSTRALIAN DECEASED DONOR RENAL OFFER DECLINES DUE TO DONOR SPECIFIC ANTIBODIES IN 2023 AND 2024

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Aims Review the instances of decline for renal offers for deceased donors where Donor Specific Antibodies (DSA) against the donor were the only listed reason in 2023 and 2024. Can any trends be identified?

Methods A review of Australian deceased donors from January 2023 to December 2024 focused on renal offers declined solely due to DSA. During this period, 3311 renal offer declines were documented; 273 were attributed exclusively to DSA, involving 154 recipients. The profiles of both recipients and donors were analysed for commonalities.

Results The distribution of declines per state mirrored the distribution of donors, except Victoria, which had a higher decline rate (49%) compared to its donor rate (41%). ABO blood group distribution was comparable to the Kidney Transplant Waiting List in Australia, though blood group A recipients had a higher decline rate compared to the numbers listed.Among the 154 recipients, 30% were highly sensitised (cPRA ≥95%) and 31% of the overall declines involved highly sensitised recipients. 35% of those who experienced declines due to DSA later received a transplant, 50% with no DSA. 102 recipients had one decline due to DSA, while 52 had multiple declines, with two recipients having 8 and 9 declines.

State	Number of Declines (%)	Number of Donors (%)
NSW	23%	26%
QLD	17%	19%
SA	7%	9%
VIC	49%	41%
WA	3%	5%

Conclusion A decline of an offer due to DSA does not inhibit the ability to receive a transplant and in some situations the clinician may be looking for an offer absent of DSA. There also may be instances where other clinical factors for the recipient or donor were involved but not recorded.

Abstract No. 48

COMPARABLE LONG-TERM OUTCOMES BETWEEN DONATION AFTER CIRCULATORY VERSUS NEUROLOGICAL DEATH DONORS IN AUSTRALIA AND NEW ZEALAND

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Aims: Despite increasing uptake of Donation after Circulatory Determination of Death (DCDD) kidney donors to meet waitlist demand, concerns remain regarding DCDD donors portending poorer long-term outcomes. This belief may lead to decrease in uptake of DCDD organs, further exacerbating the gap between demand and supply for the transplant waiting list, with more patients remaining on dialysis. We sought to analyse and demonstrate comparable long-term outcomes of kidney transplant recipients between DCDD donors and Donation after Neurological Determination of Death (DNDD) donors in Australia and New Zealand.

Methods: We analysed the Australia and New Zealand Dialysis and Transplant (ANZDATA) registry data collected between 2010 and 2023. We used Cox proportional hazard, logistic regression, and linear mixed models to determine outcomes of death censored graft survival (DCGS), patient survival, rejection at 12 months, and estimated glomerular filtration rate (eGFR) over time.

Results: A total of 10896 kidney transplant recipients were included in the study (DNDD, n=8122, DCDD n=2774). There was no difference in DCGS (adjusted hazard ratio (aHR) 1.24, 95% Confidence Intervals (CI) 0.78 – 1.94, p=0.35) between both groups (Figure 1). DCDD recipients had increased long-term patient survival (aHR 0.87, CI 0.78 – 0.97, p=0.01). There was a higher likelihood of rejection within 12 months in the DCDD group (Odds Ratio 1.32, p<0.01, CI 1.18 – 1.48).

Conclusions: Despite increased short-term rejection, long-term outcomes proved similar between both groups studied. These favourable long-term outcomes support and reinforce the benefits of ongoing use of DCDD kidneys as a solution for ongoing donor shortage.

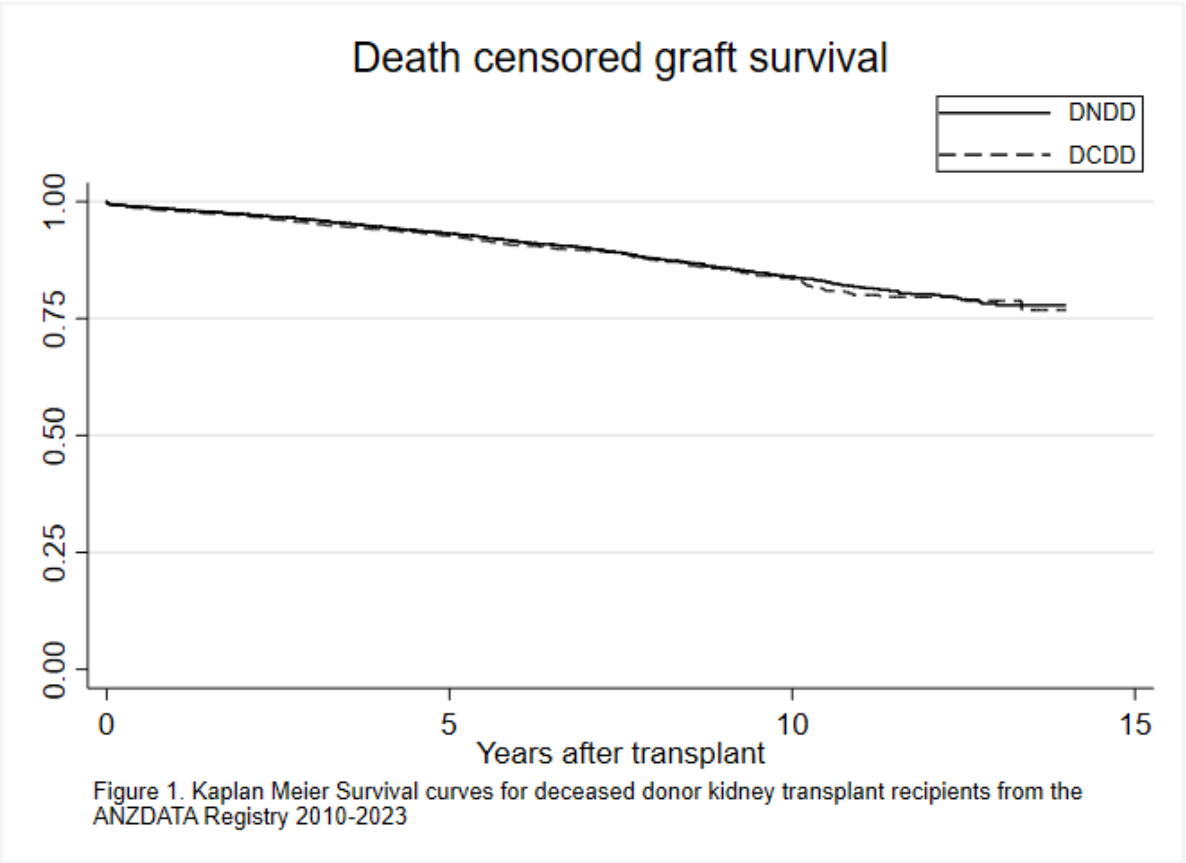

Figure 1. Kaplan Meier Survival curves for deceased donor kidney transplant recipients from the ANZDATA Registry 2010-2023

Abstract No. 49

A NOVEL HYPOTHERMIC OXYGENATED MACHINE PERFUSION SYSTEM ALLOWS FOR LOW-COST, WIDESPREAD IMPLEMENTATION FOR LIVER TRANSPLANTATION

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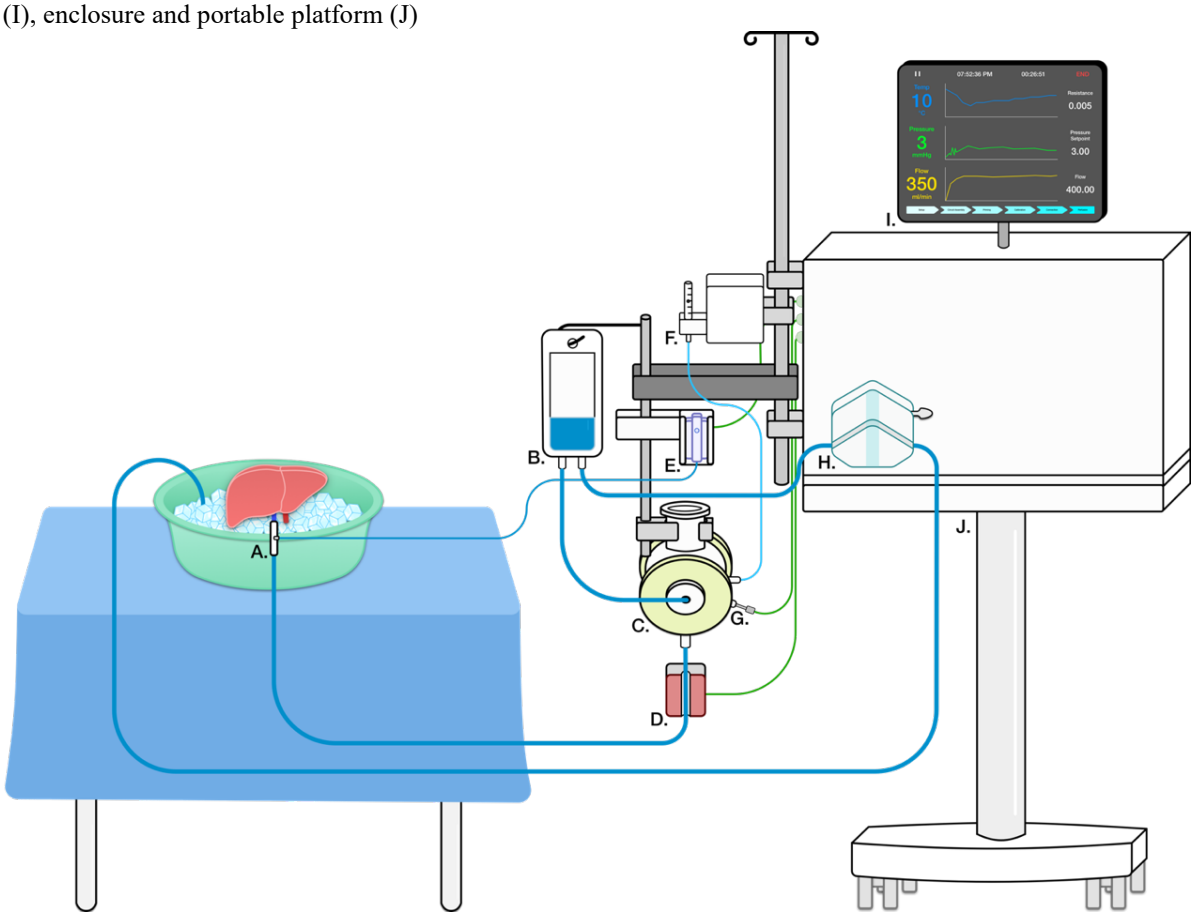
Background: Despite significant clinical benefit, the substantial economic cost has prevented widespread adoption of Hypothermic Oxygenated machine PErfusion (HOPE). Currently, HOPE is primarily utilised by liver transplantation (LT) units within high-income, developed countries, creating disparities in access for units within lower-resource settings. As such, the aim of this project was to assess the feasibility of developing and implementing a novel, low-cost HOPE system into routine clinical practice for LT.

Methods: The HOPE system developed by the Centre for Organ Assessment, Repair and Optimisation (COARO) comprises readily available components and is built upon institutionally developed electrical and software architecture. Pre-clinical testing comprised sequentially perfusing human livers declined for transplantation using HOPE followed by long-term normothermic machine perfusion. Following clinical introduction, all LT recipients at Royal Prince Alfred Hospital were eligible to receive a graft perfused using the COARO system.

Results: To date, 34 LT procedures have utilised the COARO system. No instances of device failure or unsafe perfusion dynamics have occurred. Six patients developed early allograft dysfunction (17.6%) and median Model for Early Allograft Function (MEAF), and Liver Graft Assessment Following Transplantation (L-GrAFT7) scores were 4.79 (3.23 – 6.79) and -3.65 (-4.05 – -3.23), respectively. One patient developed primary non-function second to surgical issues. The annual cost of the COARO system is A$240,438 for 100 LT procedures, 80% cheaper than A$1,416,082 to operate a commercial system for 100 LT procedures. **Conclusion:** The COARO HOPE system is safe, reliable and presents significant economic advantage over commercial systems, allowing universal implementation of HOPE for LT.

Figure 1: Schematic of the COARO HOPE system. PV cannula (A), IV transfer bag (B), oxygenator (C), flow sensor (D), pressure sensor (E), gas mixer (F), temperature probe (G), peristaltic pump (H), touchscreen display (I), enclosure and portable platform (J)



Abstract No. 50

APOPTOTIC DONOR B CELL INFUSIONS FOR TOLERANCE IN A NON-HUMAN PRIMATE MODEL OF ALLOGENEIC KIDNEY TRANSPLANTATION

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[1]School of Medicine, University of Adelaide, [2]Division of Nephrology, Duke University, [3]Division of Surgery, Duke University

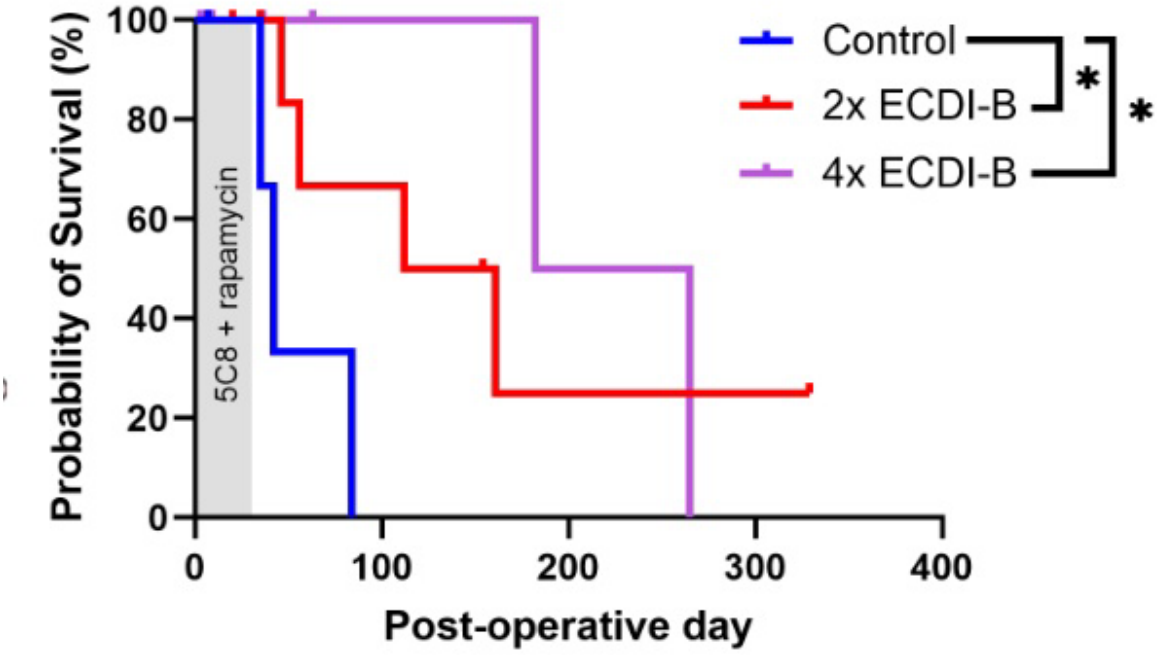
Aims: Donor antigen delivered in a tolerogenic fashion may lead to immunological tolerance in allogeneic transplantation. This study uses donor B cells expanded ex vivo and treated with the apoptosis-inducing chemical cross-linker 1-ethyl-3-(3-dimethylaminopropyl) carbodiimide (ECDI) for infusion in a Rhesus macaque model of allogeneic kidney transplantation.

Methods: Rhesus macaques underwent MHC-mismatched kidney transplantation with simultaneous native nephrectomy in a domino fashion. ECDI-B infusions were prepared by culture and expansion of B cells isolated from donor peripheral blood prior to ECDI treatment. Control animals received temporary immunosuppression with anti-CD40L and rapamycin between days -8 and 28 with respect to transplant (n = 4). Investigational groups received control immunosuppression plus either 2 (n = 10), 4 (n = 8), or 6 (n = 3) doses of ECDI-B infusions post-transplantation. Endpoint was transplant rejection with censoring for death due to other causes (n = 4 ongoing, n = 10 censored).

Results: Control median survival time (MST) was 43 days vs. 133 days in the 2-dose group (p = 0.032), and 223.5 days in the 4-dose group (p = 0.028) [Figure 1]. A 6-dose group is currently under investigation. Increased survival in the ECDI-B-treated groups was associated with an increase in CD4+CD25+FoxP3+ T cells from baseline compared to control. Single cell RNA sequencing analysis at 35 days post-transplantation showed a reduction in inflammatory pathways including NF-κB and TNF-α signalling in PBMCs.

Conclusions: Infusions of apoptotic donor leukocytes significantly extend graft survival in a non-human primate model of kidney transplantation with temporary immunosuppression.

Figure 1



Abstract No. 51

A DECADE OF DONATION AFTER CIRCULATORY DEATH HEART TRANSPLANTATION IN AUSTRALIA

JOSHI Y[1], MACLEAN C[2], WANG K[2], SCHEUER S[1], VILLANUEVA J[3], GAO L[3], DOYLE A[3], WU J[3], SOTO C[4], DINALE A[4], CROPPER J[4], CHEW H[1], MUTTIAH K[5], CONNELLAN M[1], GRANGER E[1], WATSON A[1], IYER A[1], JANSZ P[1], MACDONALD P[1]

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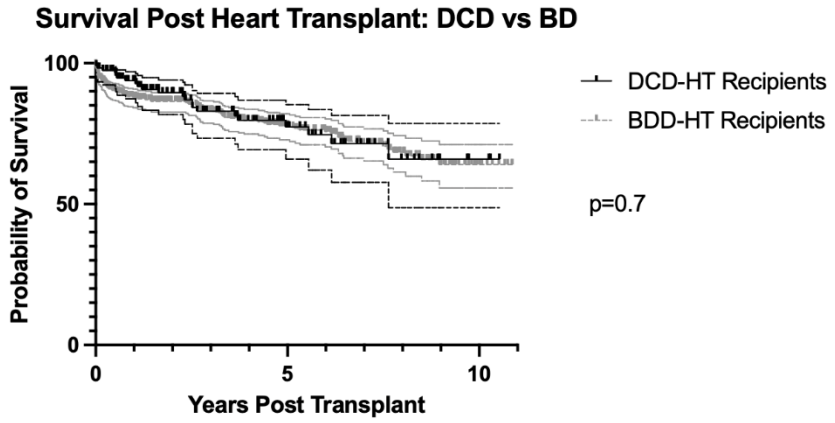
Aims: Donation after circulatory death (DCD) heart transplantation has expanded the donor pool with excellent short-term outcomes internationally. Having commenced the world's first DCD heart transplant (HT) program, with a decade of experience, we now look to evaluate the long-term outcomes of DCD-HT recipients.

Methods: All DCD and brain-dead donor (BDD) heart transplants between 2014-2024 at our institute were included. DCD hearts were directly procured with normothermic machine perfusion. BD hearts were retrieved with static cold storage or hypothermic machine perfusion.

Results: Over 10yrs, DCD-HT accounted for 23% (118/503) of all HT activity. There was no significant difference in short- or long-term survival between DCD-HT or BDD-HT recipients (5yr-survival: 77% vs 78%; 10yr-survival: 66% vs 64% respectively, p=0.7), nor was there any difference in incidence of severe primary graft dysfunction (sPGD) (14% in both groups, p>0.9). Incidence of sPGD independently predicted mortality regardless of donation pathway (HR 2.1, CI 1.3-3.3, p=0.002). On multivariate analysis, asystolic warm ischaemic time (aWIT) was the only DCD retrieval specific time-parameter to be a significant, independent predictor of sPGD (OR 1.3, CI 1.02-1.8, p=0.0485). At 10yrs, incidence of coronary allograft vasculopathy (CAV) was not significantly different between DCD-HT or BDD-HT recipients (61% vs 41% freedom from CAV, p=0.5).

Conclusion: Long-term Australian DCD-HT outcomes support the ongoing use of DCD hearts to expand the donor pool, with no significant differences in: sPGD, long-term survival, or incidence of CAV when compared to BDD-HT recipients. In DCD-HT, minimising aWIT can reduce the risk of sPGD, a predictor of mortality.



Number at risk:

Years Post-Transplant	0	1	2	3	4	5	6	7	8	9	10
DCD Heart Recipients	118	94	76	58	45	34	25	18	12	6	4
BDD Heart Recipients	385	323	269	231	196	155	125	86	60	32	14

Abstract No. 52

DRIVING FAST CARS TO THE KIDNEY: CAR-T REGS TARGETED AT IMMUNE AND RENAL ANTIGENS

SHAW K[1], WANG YM[1], LU D[1], HU M[2], CHUNG E[1], RIGTERINK J[1], RONNING E[1], MCCARTHY H[1], ALEXANDER S[1]

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AIM: To develop a protocol to create Chimeric Antigen Receptor T-regulatory (CAR-T-Regs) cells that target to either a native or a transplanted kidney.

METHODS: Second-generation lentiviral (LV) constructs were designed containing a SCFV targeting Human Leukocyte Antigen (HLA)-A2 or Phospholipase A2 (PLA2R), with costimulatory elements CD28 and CD3ζ, and MYC. Donor naïve T-cells were obtained from mouse spleens (Foxp3EGFP), positively selected with CD4+ microbeads, and FACS purification (CD4+CD25+FOXP3+). Cells were serum starved for 3 hours to enhance LDL receptor expression for LV entry. LV was transduced to T-regs at MOI of 5 via spinoculation, and cells were kept to a low surface area to volume ratio. Cells were rested overnight with high dose IL-2 and rapamycin. The following day, cells were washed and injected intravenously via tail vein into recipient mice. Cells were assessed in a murine kidney transplant model using an A2+ donor (A2KB) and C57/BL6 recipient to assess localisation of A2-CAR-T-Regs to the A2+ expressing graft, but not A2- native kidney. Additionally, C57BL/6 mice were used to assess localisation of PLA2R-CAR-T-regs in both native kidneys (PLA2R+).

RESULTS: CAR-T-Regs localise to the kidney. Kidney sections show positive cells (GFP+MYC+) up to day 100 in mice with A2+ kidney transplant, but not in A2- native kidney. Mice injected with PLA2R-CAR-T-Regs show localisation of CD4+MYC+FOXP3+ cells in both native kidneys.

CONCLUSION: We have developed a protocol to direct rapidly produced murine CAR-T-Reg cells to a transplant kidney, but not native kidney using A2-CAR-T-Regs, or to both native kidneys using PLA2R-CAR-T-Regs.

Abstract No. 53

PATHAGENT: THE FIRST ARTIFICIALLY INTELLIGENT AUTONOMOUS AGENT FOR RENAL PATHOLOGY

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Background and Aims: Renal pathology is the cornerstone for accurate diagnosis of allograft dysfunction, yet implementing systematic approaches like the Banff Criteria remains challenging. Although computational models have emerged to assist in pathology, their utility is often limited by technical barriers, including coding expertise and specialized hardware.

Methods: We have developed PathAgent, the first autonomous, artificially intelligent agent for renal pathology. The system integrates multiple vision-language, language, pan-optic segmentation, and classification models, all orchestrated by a central "conductor" language model. Notably, PathAgent operates within its own computing environment, enabling automated internet searches, coding, image interpretation, and autonomous report generation.

Results: We evaluated PathAgent on two independent cohorts. In a dataset of n=15,000 kidney biopsies from Mass General Brigham, PathAgent replicated the Banff scoring system with high concordance to expert pathologists (average quadratic kappa across all 16 Banff scores = 0.73), showcasing its ability to handle complex grading tasks. More concretely, PathAgent achieved near perfect classification of rejection subtypes as defined by the Banff22 criteria (balanced accuracy = 0.97). In the AUSCAD cohort of n=1,200 biopsies, PathAgent integrated standard clinical data to augment treatment decisions, demonstrating the agent's adaptability in real-world clinical scenarios.

Conclusions: These findings illustrate PathAgent's potential to enhance diagnostic accuracy and workflow efficiency, marking a paradigm shift toward agentic decision support in transplantation medicine. By seamlessly bridging advanced computational capabilities with clinical insights, PathAgent lays the groundwork for broader adoption of autonomous diagnostic systems across medical specialties.

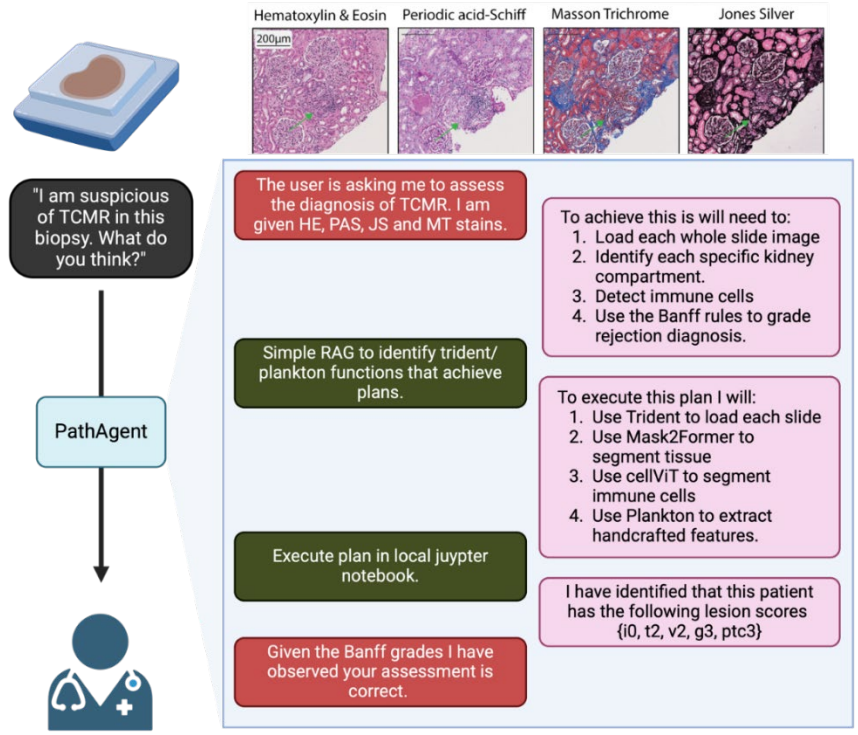

Figure 1: PathAgent's autonomous assessment of T-cell mediated rejection (TCMR) in renal biopsy.
PathAgent receives a clinical query regarding TCMR and systematically evaluates multiple histopathology stains (H&E, PAS, MT, and JS). It follows a structured workflow: (1) loading whole-slide images, (2) segmenting kidney compartments using Mask2Former, (3) identifying immune cells via cellViT, and (4) extracting handcrafted features with Plankton. PathAgent then applies the Banff scoring system, providing lesion scores ({i0, t2, v2, g3, ptc3}) and confirming the suspicion of TCMR.

Abstract No. 54

NORMOTHERMIC PRESERVATION OF HUMAN LIVERS FOR MORE THAN 3 WEEKS: FROM EXPERIMENTAL MODEL TO CLINICAL APPLICATION

BABEKUHL D[1], RISBEY C[1], NIU A[1], YOUSIF P[1], ZHANG W[2], FONSEKA N[2], CURRY S[2], SEOW C[2], DERWENT E[2], NG I[2], STRASSER S[1], MCCAUGHAN G[1], CRAWFORD M[1], PULITANO C[1]

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Aims: Long-term normothermic machine perfusion (LT-NMP) of human livers can facilitate advanced assessment, repair and regeneration of sub-optimal grafts, improve utilization rates and donor-recipient matching, and provide translational research opportunities. Here, we present the results of a fully automated system and protocol for LT-NMP of human livers for more than three weeks, and its translation into clinical practice.

Methods: The LT-NMP model was developed utilizing human livers deemed unsuitable for transplantation (n=28). The system continuously measures and automatically regulates perfusion pressures, pH, pO2, potassium, base excess, hematocrit, atmospheric conditions and continuously quantifies ICG clearance. Nutrition is provided via a feeding-fasting regimen and hemodialysis is incorporated for waste removal. Viability was assessed using VITTAL criteria, glucagon response, ICG clearance and histology.

Results: Median graft viability was 18 days with two livers surviving greater than 3 weeks. Median bile production on day 14 was 1.75ml/hr/kg. All livers responded to glucagon boluses with a rise in perfusate glucose throughout perfusion. Oxygen consumption was responsive to variation in nutritional supply. Viability was restored in livers initially deemed non-viable by current clinical criteria.

Conclusion: Perfusing human organs for more than 3 weeks in a viable condition has been achieved with a fully automated LT-NMP system, requiring minimal human intervention. LT-NMP has the potential to increase the number of organs available and improve transplantation logistics. The feasibility of LT-NMP is being evaluated in a clinical trial where marginal human livers are perfused for up to 4 days prior to transplantation.

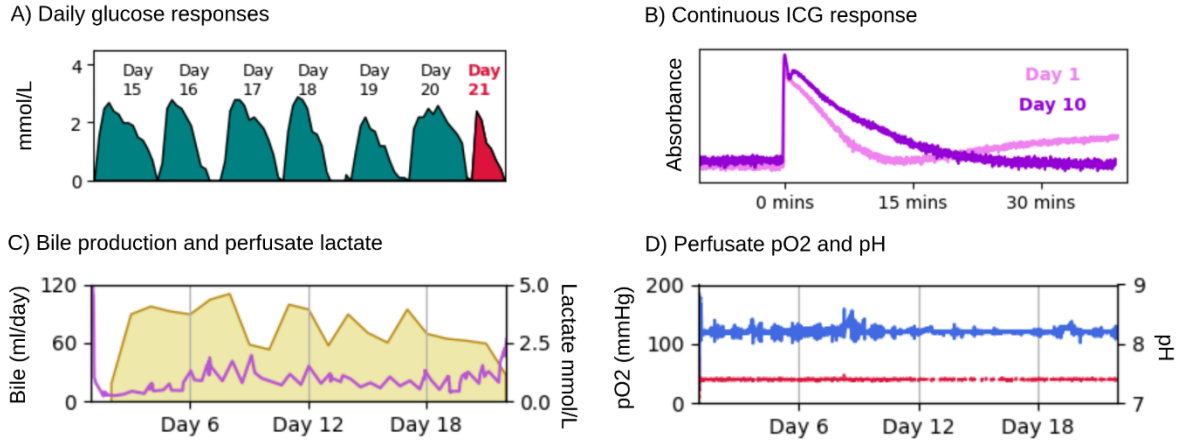

Figure 1: key parameters for viability assessment during long-term normothermic machine perfusion of human livers. A: Glucose response to daily glucagon boluses throughout week 3 of perfusion. B: Continuous quantification of ICG clearance on days 1 and 10. C: Daily bile production (filled area, yellow) and perfusate lactate (solid line, purple). D: Perfusate pO2 (solid line, blue) and pH (dotted line, red).

Abstract No. 55

OUTCOMES OF SOLID ORGAN TRANSPLANT RECIPIENTS WITH ADVANCED CANCERS RECEIVING IMMUNE CHECKPOINT INHIBITORS: A SYSTEMATIC REVIEW

SALEEM N[1,2,3], WANG J[3,4], REJUSO A[3,4], TEIXEIRA-PINTO A[3,4], STEPHENS J[1,3], WILSON A[1,3], KIEU A[3], P GATELY R[5], BOROUMAND F[3,4], CHUNG E[3] BONEVSKI B[4,6], S. CARLINO M[4,7,8,9,10], CARROLL R[11,12], H LIM W[13,14,15], C CRAIG J[11,12], MURAKAMI N[16], WONG G[2,3,4]

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Aims: Immune checkpoint inhibitors (ICIs) have improved survival in patients with advanced-stage malignancies. However, data on their efficacy and safety in solid organ transplant recipients (SOTRs) are limited. We aim to determine the effects of ICIs on cancer-specific and overall survival in SOTRs with advanced-stage cancer.

Methods: We included studies till June 2024 on advanced-stage cancer treated with ICIs in SOTRs. Individual participant data (IPD) were extracted, pooled, and analyzed using a single-stage random effect model. Outcomes include time to cancer-related death, rejection, and cancer response. Adjusted Cox regression models were conducted for time-to-event analyses.

Results: Of 140 studies included, 128 studies involving 343 unique SOTRs were evaluated. Most participants were males (76.9%), kidney transplant recipients (70.9%), and treated with programmed cell death-1 inhibitors (76%). Within three years of ICI initiation, 52.7% died from cancers. However, 31.6% had cancer response. Acute rejection occurred in 36.2% of participants, with 59.5% losing their grafts within six months. Participants with cutaneous squamous cell carcinoma (cSCC) had higher cancer response rates (67.4%) than melanoma (48.5%) and solid organ cancers (26.9%). Having melanoma was associated with a higher risk of acute rejection (2.82, 1.43- 5.54) than cSCC. Maintenance with steroids and mammalian target of rapamycin inhibitors (mTORIs) was associated with a lower risk of rejection (0.37, 0.15- 0.93).

Conclusion: SOTRs with advanced-stage cancer experienced adverse graft and patient outcomes despite ICI therapy. However, recipients with cSCC had better overall survival than those with other cancers. Additionally, administering steroids and mTORIs may help prevent ICI-induced rejection.

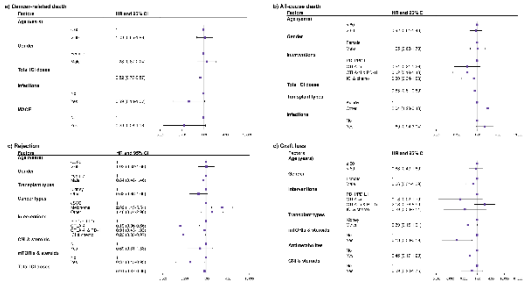

Figure 1: Factors impacting rejection, graft loss, all-cause, and cancer-related deaths following ICI initiationHR: Hazard ratio, CI: Confidence interval, ICI: Immune checkpoint inhibitor, MACE: Major cardiovascular adverse event, mTORIs: Mammalian Target of Rapamycin inhibitors, CNI: Calcineurin inhibitor, CTLA-4i: Cytotoxic T lymphocyte-associated protein-4 inhibitor, PD-1/PD-L1i: Programmed cell death protein-1/Programmed cell death ligand-1 inhibitor, PD-1i: Programmed cell death protein-1 inhibitor.

Abstract No. 56

SPIDER-VENOM DERIVED HI1A EXTENDS VIABILITY OF DONATION AFTER CIRCULATORY DEATH DONOR HEARTS

JOSHI Y[1], VILLANUEVA J[2], MACLEAN C[3], WANG K[3], GAO L[2], DOYLE A[2], WU J[2], SOTO C[4], DINALE A[4], QIU M[5], IYER A[6], WATSON A[1], JANSZ P[1], MACDONALD P[6]

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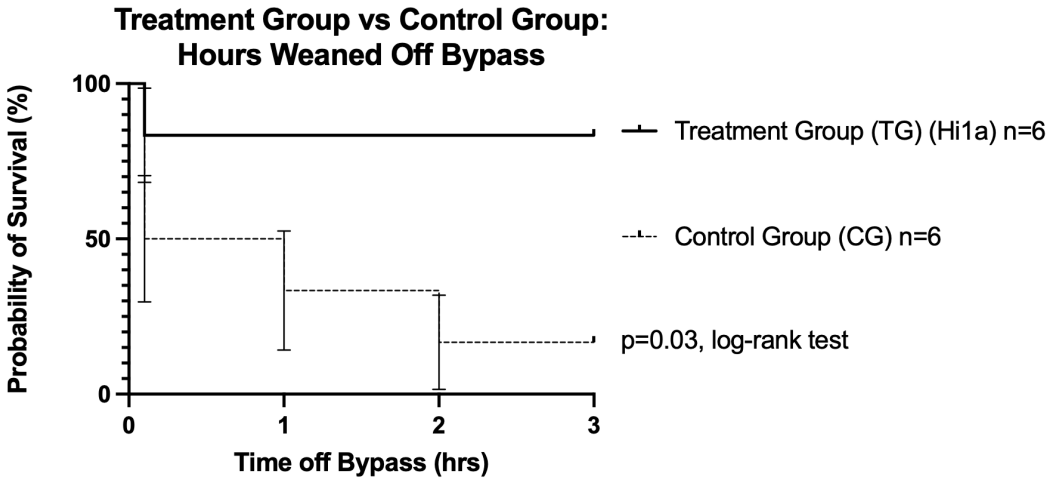
Aims: In clinical donation after circulatory death (DCD) heart transplantation, an asystolic warm ischaemic time (aWIT) of >15mins has emerged as a significant predictor of severe primary graft dysfunction (sPGD). Pre-clinical studies utilising an isolated DCD porcine heart model demonstrated supplementation of cardiac procurement protocols with Hi1a (an ASIC1a inhibitor and spider-venom derived peptide) resulted in full recovery following 20mins of aWIT. We aim to provide a platform for clinical translation by determining the potential cardioprotective role of Hi1a in a full porcine DCD cardiac transplant model.

Methods: Landrace pigs (55-65kg) were used as donors and recipients forming two groups: the control group (CG) (n=6) and treatment group (TG) (n=6). In both groups, donor hearts were procured following a DCD pathway with 30mins of aWIT. Donor hearts in the TG received a total of 40nM Hi1a in: donor cardioplegia, and, normothermic machine perfusion (NMP) device (Transmedics) perfusate. Both groups received 3hrs of NMP followed by transplantation via a bi-atrial technique. Both groups were then reperfused for 1hr. The primary end-point was met if the donor heart could then be weaned off cardiopulmonary-bypass (CPB) for 3hrs.

Results: TG recipients were significantly more likely to meet the primary end-point of being weaned off CPB (Figure 1). Post-transplant systolic blood-pressure was significantly higher in the TG (p=0.005). Histopathological analysis found no contraction bands in TG cardiac biopsies.

Conclusion: In a DCD transplant model Hi1a supplementation improves aWIT tolerance beyond 15mins. This warrants clinical exploration to potentially reduce sPGD and increase DCD heart transplantation.



Abstract No. 57

DIETARY INULIN IMPROVES DYSGLYCAEMIA AND ALTERS THE GUT MICROBIOME FOLLOWING KIDNEY TRANSPLANTATION: RESULTS FROM THE DIGEST RCT

GILBERT A[1], SINGER J[1], YING T[1], GRACEY D[2], WYBURN K[1], AOUAD L[2], MACIA L[3], SHI B[4], WU H[4], CHADBAN SJ[1]

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Aims: Kidney transplantation provides optimal treatment for people with kidney failure, however gut dysbiosis and post-transplant diabetes are common complications. We conducted a randomised, controlled pilot trial of dietary inulin supplementation aiming to correct gut dysbiosis, promote short chain fatty acid (SCFA) production and mitigate post-transplant dysglycaemia

Methods: Kidney transplant recipients were randomised 28 days post-transplant to inulin supplementation (10-20g/day for 4 weeks) or standard care. Continuous glucose monitoring(CGM) captured glycaemic data over two 2-week periods. Stool samples were collected before and after the intervention, and gut microbiota were analysed via 16S rRNA sequencing. The primary outcomes of the study were: feasibility, adherence, and tolerability of inulin supplementation. Secondary outcomes were glycaemic control and variability, and abundance of SCFA-producing microbiota.

Results: Forty participants were randomised (21 inulin, 19 standard care). Inulin supplementation was feasible, well-tolerated and safe. CGM demonstrated a lower mean glucose (5.7 vs 6.4mmol/L, p=0.02), less time above range (>7.8mmol/L, 9.7 vs 23.0%, p=0.04) and reduced glucose variability (mean amplitude of glucose excursions, 2.2 vs 3.4mmol/L, p=0.04) at week 8 post-transplant in non-diabetic participants receiving inulin. Inulin resulted in reduced alpha diversity but expansion in SCFA-producing bacterial genera *Bifidobacterium* and *Odoribacter.* SCFA-producers *Bifidobacterium* and *Blautia* were positively correlated with improved glycaemic markers (Figure). Kidney function, incidence of rejection and DSA formation were not different between groups.

Conclusion: Dietary inulin supplementation is feasible, safe and well-tolerated following kidney transplantation. Improved glycaemic control and expansion of potentially beneficial gut bacterial populations suggest this strategy is worth pursuing in a larger trial.

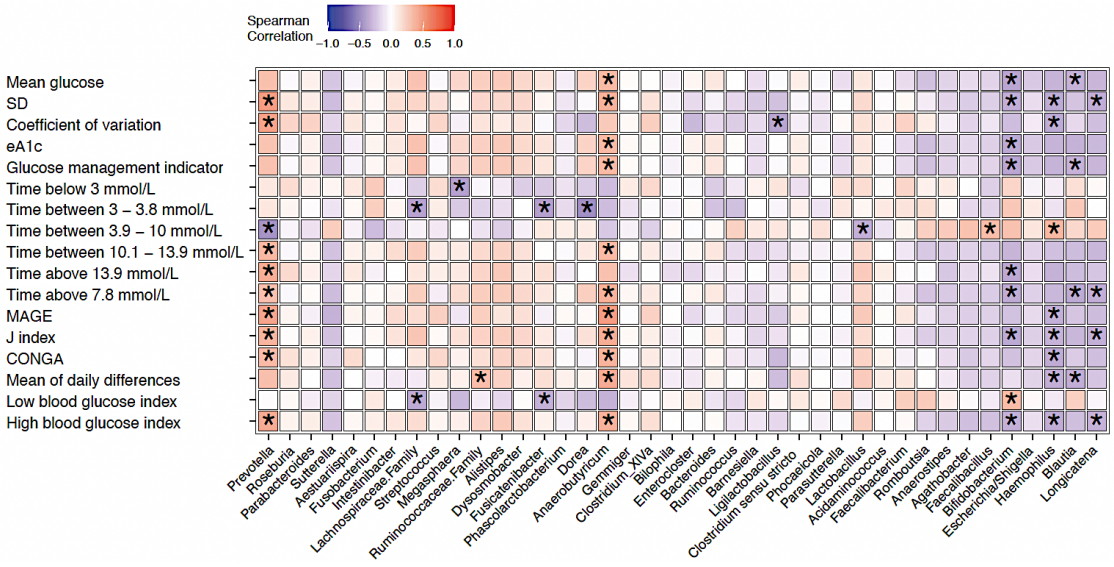

Figure 1. Heatmap displaying Spearman correlations between the relative abundance of gut bacterial genera and glycaemic metrics during final week of the intervention period. Asterisks (*) indicate significant correlations ($p < 0.05$).

Abstract No. 58

IMPACT OF BORDERLINE T-CELL MEDIATED REJECTION IN THE FIRST YEAR AFTER KIDNEY TRANSPLANT: AN ANZDATA REGISTRY ANALYSIS

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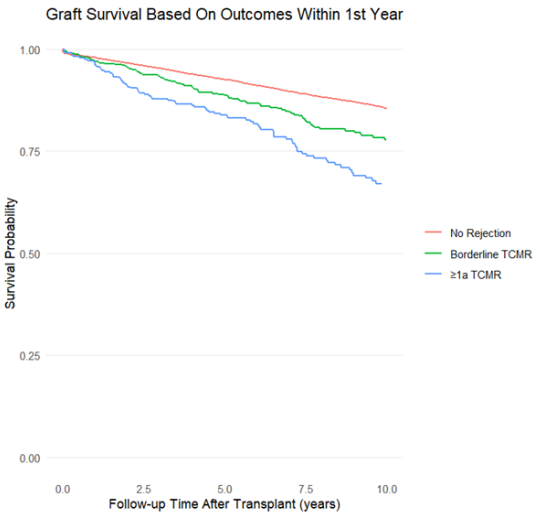
[1]Department of Renal Medicine, Royal Prince Alfred Hospital, [2]Faculty of Medicine and Health, University of Sydney, [3]School of Medicine, Western Sydney University, [4]ANZDATA, [5]Melbourne School of Population and Global Health, University of Melbourne, [6]Department of Renal Medicine, The Alfred Hospital, [7]Central Northern Adelaide Renal and Transplantation Service, Royal Adelaide Hospital [8]Faculty of Health and Medical Sciences, University of Adelaide, [9]Department of Renal and Transplant Medicine, Westmead Hospital, [10]Department of Renal Medicine, Auckland City Hospital, [11]Department of Nephrology, Royal Melbourne Hospital, [12]Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, [13]Department of Nephrology, School of Medicine, Sir Charles Gardiner Hospital, University of Western Australia, [14]Department of Nephrology, Centre for Inflammatory Diseases, Monash Medical Centre, Monash University, [15]Faculty of Medicine and Health, University of Sydney, [16]Department of Renal and Transplant Medicine, Westmead Hospital

Aims: The clinical significance of borderline T-cell–mediated rejection (bTCMR) in kidney transplantation remains uncertain.

Methods: We conducted a cohort study of kidney transplant recipients from Australia and New Zealand (2004-2022) using ANZDATA Registry data. Recipients with bTCMR, ≥1A TCMR, and no rejection within their first post-transplant year were included. Rejection episodes with adequate Banff criteria reporting were included and those with antibody-mediated rejection as first rejection episode or vascular rejection were excluded. Graft survival (primary outcome), patient survival and subsequent rejection episodes (secondary outcomes) were compared across groups by Cox proportional hazards models using rejection status as a time-varying covariate and adjusted for age, body-mass index, diabetes, transplant era, donor type, early or delayed graft function, and HLA mismatch.

Results: Among 13210 included recipients, 668(5.1%) had bTCMR, 345(2.6%) had ≥1a TCMR and 12197(92.3%) had no rejection in the first year. Compared to no rejection, bTCMR in the first year was associated with higher risks of graft failure (hazard ratio(HR):1.52 (95%CI 1.25 to 1.85, p-value<0.001, Figure) and subsequent rejection (HR:3.90 (95%CI: 3.03 to 5.01, p-value<0.001) but no difference in patient survival. Whereas those with ≥1A TCMR in the first year had higher risks of graft failure (HR:2.21 (95%CI 1.76 to 2.78, p-value<0.001), subsequent rejection (HR:7.34 (95%CI: 5.69 to 9.46, p-value<0.001) and death (HR:1.36 (95%CI: 1.08 to 1.71, p-value=0.01) compared to those with no rejection.

Conclusions: bTCMR in the first year was associated with increased risks of graft failure and subsequent rejection relative to those without rejection.



Abstract No. 59

IDENTIFYING STRATEGIES FOR LIFE PARTICIPATION IN CHILDREN WITH CHRONIC KIDNEY DISEASE: A STANDARDISED OUTCOMES IN NEPHROLOGY – CHILDREN AND ADOLESCENTS WITH CHRONIC KIDNEY DISEASE (SONG-KIDS) CONSENSUS WORKSHOP REPORT

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School of Public Health, University of Sydney

Aim: To establish strategies for children and their families to achieve life participation in children and young people with CKD. Children with chronic kidney disease and their families face ongoing challenges in achieving life participation. Through the SONG-Kids Initiative, life participation has been identified as an outcome of critical importance to children with CKD, their caregivers and health professionals. However, strategies to achieve this remain limited.

Methods: Consensus workshops (one in-person [English language], three online [two English and one Spanish language]) were held to discuss strategies and interventions to improve life participation in children with CKD. Transcripts were thematically analyzed.

Results: Over 80 participants, including patients and caregivers, and health professionals from more than 10 countries attended. Five themes and ten subthemes were identified, these include: emphasizing life priorities in clinical care; minimizing treatment burden; empowering children to engage in life activities; strengthening social connections; and ensuring caregiver wellbeing.

Conclusion: Patients, caregivers and health professionals working together through shared decision making to enact strategies to improve life participation can help to support patient-centred care and outcomes for children with CKD.

Abstract No. 60

ASYSTOLIC WARM ISCHAEMIC TIME DOES NOT IMPACT OUTCOMES FOLLOWING DONATION AFTER CIRCULATORY DEATH LUNG TRANSPLANTATION

DUTTA S[1], JOSHI Y[1], IYER A[1], WATSON A[1], GRANGER E[1], JANSZ P[1], DARLEY D[2], CONNELLAN M[1]

[1]Department of Heart and Lung Transplantation, St Vincent's Hospital, Sydney, [2]Lung Transplant Service, St Vincent's Hospital, Sydney

Aims: Donation after Circulatory Death (DCD) lung allografts can tolerate significant donor agonal and functional warm ischaemic times. Outcomes following prolonged asystolic warm ischaemic time (aWIT) is unknown. Given that aWIT ≥15min is associated with worse outcomes for cardiac recipients, investigation in the lung transplant (LTx) population is warranted.

Methods: A retrospective cohort analysis was performed of all DCD LTx between July-14 and June-24. aWIT was time between asystole and pneumoplegia, prolonged aWIT ≥15min. Baseline recipient, donor, and operative characteristics were analysed. Multivariable Cox regression measured association between prolonged aWIT and all-cause mortality. Logistic and linear regression was used to analyse aWIT as a continuous variable.

Results: 116 DCD LTx were performed, 51 (44%) from a donor with prolonged aWIT, median follow-up 4.2 years. The longest aWIT was 26min. Median age of recipients of prolonged aWIT organs was higher (59 vs. 55 years, P = 0.036). Prolonged aWIT donors were more likely to have a smoking history (52.9% vs 32.3%, P = 0.03), or simultaneous heart retrieval (41.2% vs 18.5%, P = 0.007). There was no difference in 30-day mortality or PGD. As a continuous variable, aWIT wasn't associated with long-term mortality (HR 1.02, 95% CI 0.94 – 1.11, P = 0.66).

Conclusions: Clinically, aWIT does not impact short or long-term patient outcomes following DCD LTx. While there is undoubtably a point where aWIT will impact outcomes, this doesn't appear to exist in real-world practice, and teams should focus on quality retrievals with less emphasis on timings compared to heart retrievals.

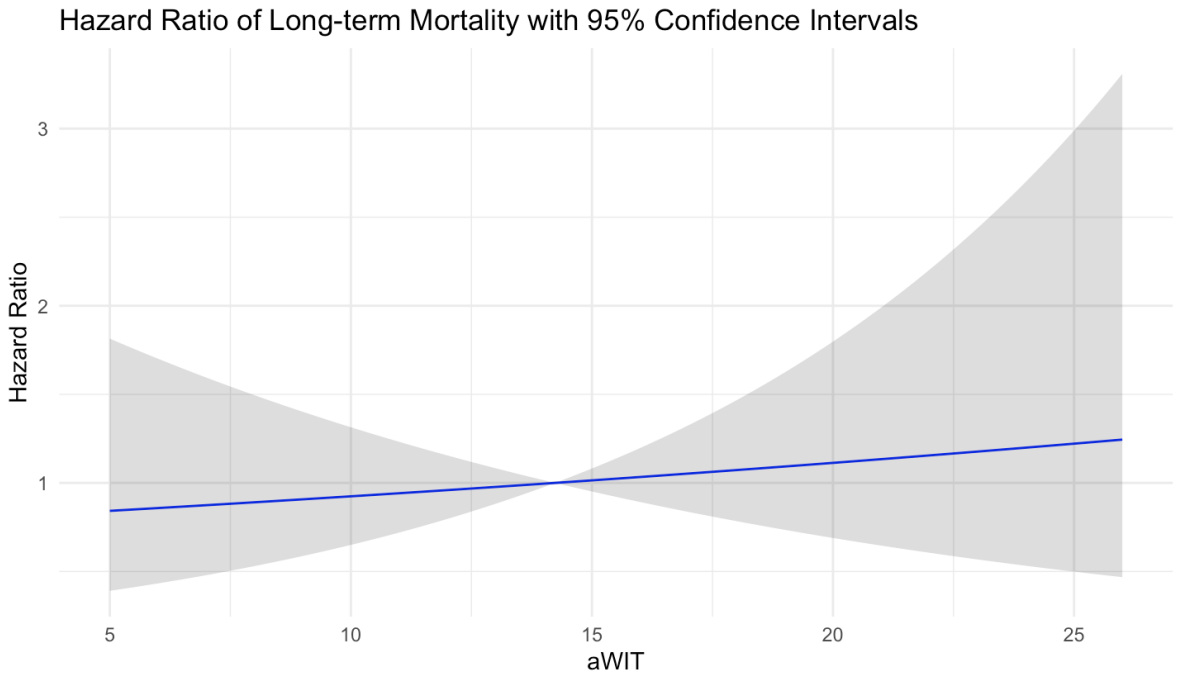

Image 1: Cox-regression analysis of long-term mortality with aWIT as a continuous variable

Abstract No. 61

TAKING THE PAIN OUT OF LIVING KIDNEY DONATION SURGERY: IMPACT OF ENHANCED RECOVERY AFTER SURGERY PROTOCOL ON PAIN

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Aims Living kidney donation is an altruistic, lifesaving surgery. It is a treatment for end stage kidney disease and results in significant health care savings, estimated at one third the annual cost of dialysis. Optimisation of donors' perioperative care and post-surgical outcomes should be a priority. However, the role of enhanced recovery after surgery (ERAS) protocols in donor nephrectomies are not well established and pain outcomes remain underexplored.

Methods Retrospective review of all donor nephrectomy admissions from November 2020 to November 2024, comparing pre to post ERAS patient outcomes. All adult kidney donors who have undergone a donor nephrectomy were included. Primary outcomes included pain scores and oral morphine equivalent daily doses (oMEDD). The secondary outcome measured was functional activity scores. These were assessed pre-ERAS and post-ERAS implementation, up to three days after surgery.

Results 109 patients were included in this study (47 pre-ERAS, 62 post-ERAS). Post-ERAS pain scores were significantly lower on day 0 (pre-ERAS pain score 3; post-ERAS pain score 2, $p = 0.010$). oMEDD was significantly lower day 0 (pre-ERAS 212mg/day; post-ERAS 116mg/day, $p < 0.001$), day 1 (pre-ERAS 204mg/day; post-ERAS 32mg/day, $p < 0.001$) and day 2 (pre-ERAS 160mg/day; post-ERAS 30mg/day, $p < 0.001$). There was no significant difference in functional activity pre-ERAS and post-ERAS.

Conclusion There was significant improvement in pain scores and reduction in oMEDD post-ERAS implementation, indicating that pain management was more optimised in the ERAS protocol incorporating multimodal analgesia.

Abstract No. 62

EARLY POST-OPERATIVE DOPPLER ULTRASOUND PREDICTS HEPATIC ARTERY STENOSIS AND POOR GRAFT SURVIVAL POST-LIVER TRANSPLANTATION

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Background Post-liver transplantation (LT) vascular complications such as hepatic artery stenosis (HAS) are a significant cause of patient morbidity and mortality. Postoperatively, doppler ultrasound (DUS) serves as a convenient screening method to identify vascular complications, however, correlation between early DUS and long-term morbidity and mortality is poorly described. This study aims to evaluate if early postoperative DUS after LT can predict the development of HAS and long-term morbidity.

Methods All adult LT at Royal Prince Alfred (RPA) Hospital between 2009 and 2019 were included. Peak systolic velocity (PS), RI, and systolic acceleration time (AT) were collected from the first post-liver transplant DUS, and CT angiography was used to confirm HAS diagnosis. Multivariate logistic regression and Kaplan-Meier survival analysis were conducted based on RI, and the presence of HAS.

Results A total of 734 liver transplantations were included, with 118 (16%) developing HAS. Early DUS RI was significantly less for HAS patients (0.69 vs 0.74, $p \leq 0.001$), 30-day mortality (RI 0.64 vs 0.74, $p \leq 0.001$) and 30-day graft failure (RI 0.62 vs 0.74, $p < 0.001$). Multivariate analysis found early DUS RI ($p = 0.002$) and indication for LT ($p = 0.012$) as predictors of HAS. HAS patients experienced poorer graft (HA 72.32% NON-HAS = 77.39%, $p = 0.018$) and overall survival (HAS = 77.19%, NON-HAS = 80.91%, $p = 0.037$).

Conclusion Our findings demonstrate that routine DUS in the early postoperative period is a convenient and clinically useful tool for identifying patients at increased risk of HAS.

Table 5. First DUS parameters for HAS, 30-day Mortality and 30-day Graft failure patients.

	HAS		
	NO	YES	P
RI	0.74 (0.65-0.81)	0.69 (0.54-0.78)	<0.001
>0.55 n (%)	497 (89.0)	78 (73.5)	<0.001
≤0.55 n (%)	61 (10.9)	28 (26.4)	
PS (cm/s)	56.1 (39.9-81.8)	59.8 (38.2-81.4)	0.520
AT (seconds)	0.04 (0.03-0.05)	0.05 (0.03-0.07)	0.011
	30-day Mortality		
RI	0.74 (0.65-0.81)	0.64 (0.44-0.69)	<0.001
>0.55 n (%)	571 (98.6)	8 (1.4)	0.006
≤0.55 n (%)	84 (93.3)	6 (6.7)	
PS (cm/s)	56.3 (39.7-81.8)	69.1 (51.0-107.6)	0.078
AT (seconds)	0.04 (0.03-0.06)	0.03 (0.02-0.04)	0.119
	30-day Graft Failure		
RI	0.74 (0.65-0.81)	0.62 (0.44-0.72)	<0.001
>0.55 n (%)	566 (97.8)	13 (2.2)	<0.001
≤0.55 n (%)	80 (88.9)	10 (11.1)	
PS (cm/s)	56.3 (39.6-81.42)	70.0 (47.5-118.9)	0.048
AT (seconds)	0.04 (0.03-0.06)	0.04 (0.02-0.04)	0.048

Abstract No. 63

TEMPORAL TRENDS IN ORGAN DONATION CONSENT RATES IN NEW SOUTH WALES, AUSTRALIA

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Aims Efforts to improve next-of-kin consent are important in increasing the number of deceased organ donors for transplantation. We examined temporal trends in next-of-kin consent rates in NSW, Australia.

Method Cohort study of all people considered for deceased organ donation in NSW 2010-2023, using the Organ Referral Characterisation Database (ORCHARD). We used logistic regression to examine trends in consent rates over time, adjusted for donor factors and the COVID-19 pandemic (2020-2023) and hospital site. Donor factors included age, sex, ethnicity, religion, socioeconomic deprivation, remoteness, and comorbidities.

Results Of 13,213 potential deceased donors, next-of-kin consent was requested for 4,484 (34%), of whom 2,464 (55%) received consent and 2,020 (45%) were declined. Potential donors increased over time likely due to the Australian Government's 2009 national program, but consent rates did not (Figure 1a). Overall, the adjusted consent rate decreased over time pre-pandemic (annual OR 0.90, 95%CI: 0.86-0.94, p<0.001) but remained steady during the pandemic (annual OR 0.95, 95%CI: 0.85-1.07, p=0.4). There were differences in consent rate by age, ethnicity, religion and socioeconomic status (all p<0.001). On average, hospital specific consent rates remained steady over time (annual IRR 0.99, 95%CI: 0.98-1.00 p>0.05, Figure 1b) but differed by site (p<0.001).

Conclusion Despite increases in potential donors considered, the number of cases approached for next-of-kin consent has remained stable overall and by hospital. Consent rates are similarly unchanged overtime and no evidence the pandemic impacted agreements. Further investigation is needed to more granularly explore case mix of potential donors considered and approached over time.

Figure 2a

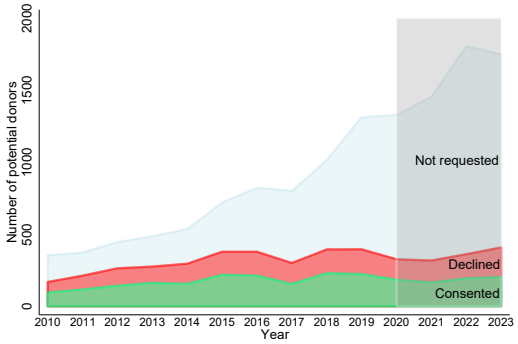

Figure 2b

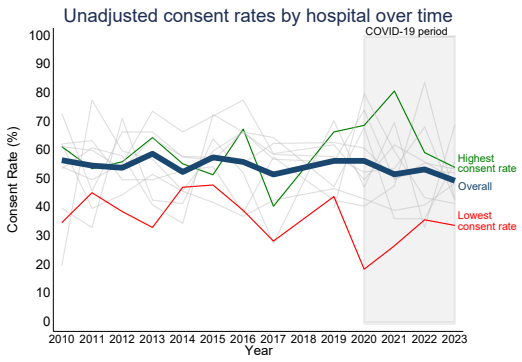

Figure 1a Number of potential donors where consent from next-of-kin was requested, consent was given, and consent declined, in New South Wales from 2010 to 2023. The COVID-19 period is highlighted in grey, beginning officially on 18 March 2020 and ending on 20 October 2023.

Figure 1b Unadjusted consent rates by hospital in New South Wales from 2010 to 2023. Hospitals with the smallest number of consent requests were combined and top ten hospitals with highest consent requests displayed individually. The navy line shows the average consent rate overtime across all hospitals. The green line shows the hospital with the highest consent rate, and red the lowest. The COVID-19 period is highlighted in grey.

Abstract No. 64

EVALUATING THE ROLE OF SURGICAL TECHNIQUE IN THE DEVELOPMENT OF BILIARY ANASTOMOTIC STRICTURES FOLLOWING LIVER TRANSPLANTATION

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Aims: We aimed to evaluate the incidence of clinically significant BAS (csBAS) after liver transplantation (LT) with varying surgical technique.
Methods: A retrospective medical record review of patients undergoing LT at Austin Health between January 1st 2000-December 31st, 2023, was performed. Primary endpoint was csBAS incidence with non-absorbable suture material, type of anastomosis (duct-to-duct and Roux-en-Y hepaticojejunostomy) and suturing technique (continuous and/or interrupted). Secondary endpoint was the association of surgical technique with graft failure. Univariable analyses and binomial logistic regression were performed to identify associations with csBAS. The time to initial BAS intervention in patients with csBAS was assessed using Kaplan-Meier curves.
Results: From 976 transplants performed for 939 patients, the median recipient age and follow up was 55 (IQR=16) and 6.3 (IQR=7.6) years, respectively. csBAS occurred after 129 (13%) transplants. There was no association with the type of suture material. Type of anastomosis (duct-to-duct 14% vs hepaticojejunostomy 3%, adjusted OR 0.25, 95%CI 0.08-0.83, p=0.02) and suture technique (continuous and interrupted 7% vs continuous alone 17% vs interrupted 14%, adjusted OR 2.39, 95%CI 1.35-4.24, p=0.03 vs continuous alone, adjusted OR 2.21 95%CI 1.17-4.16, p=0.01 vs interrupted alone) were associated with csBAS development. No difference was seen in the time to development of BAS, nor the incidence or time to graft failure between the three aspects of surgical technique (p>0.05).
Conclusion: Type of anastomosis and suturing technique were found to be associated with the development of csBAS post-LT. There was no association between csBAS and the use of non-absorbable suture material.

Abstract No. 65

ELIMINATING MHC II EXPRESSION WITH BASE EDITING AS A STRATEGY TO PREVENT CHRONIC ANTIBODY-MEDIATED KIDNEY TRANSPLANT REJECTION

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Background: Chronic antibody-mediated rejection (cAMR) is the main impediment to long term survival of kidney allografts. The main target of donor specific alloantibodies (DSA) which are fundamental to this rejection process is MHC II on the kidney microvasculature. Prolonged DSA and MHC II interaction promotes complement activation, inflammation, and tissue injury ultimately resulting in graft failure. Despite its significance, no curative treatment options exist for cAMR. To fill this gap, this study presents the foundations for a gene therapy to combat cAMR.

Aims: To generate MHC II deficient THP-1 cells by introducing SNPs associated with Bare Lymphocyte Syndrome Type II in CIITA and RFX5 genes using a cytosine base editor (CBE).

Methods: Custom sgRNA sequences were cloned into sgRNA scaffold plasmids and transformed into competent cells. sgRNA plasmids were extracted from recombinant transformants and THP-1 cells were transfected with sgRNA and CBE plasmids. Mutant THP-1 cells were stimulated with IFN-γ and MHC II expression was assessed with flow cytometry.

Results: Custom sgRNA sequences were designed for CIITA and RFX5 genes with CRISPR REGEN BE-Designer. Three sgRNA and CBE plasmid combinations were selected for further investigation. Initial flow cytometry on wild type THP-1 cells confirmed that IFN-γ treatment induces MHC II expression.

Conclusion: This investigation presents the foundations for a gene editing therapy that combats cAMR by knocking out MHC II; improving the longevity and quality of life of kidney transplant patients.

Abstract No. 66

DIETARY FIBRE-DERIVED SHORT-CHAIN FATTY ACID (SCFA) TREATMENT PROTECTS AGAINST KIDNEY ISCHAEMIA-REPERFUSION INJURY (IRI)

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Aims: This study examined the impact of dietary fibre or direct SCFA administration after acute injury in a murine model of kidney IRI.

Methods: B6 mice received normal chow (NC) or high-fibre diet (HFD). NC mice were treated with acetate or placebo from day 2 post-reperfusion. Kidney ischaemia was induced for 22min followed by reperfusion. Samples were collected at days 1 and 28.

Results: HFD-mice were protected against acute and chronic kidney IRI, with reduced serum creatinine, tubular damage and tubulo-interstitial infiltrates compared to controls ($p<0.05$). HFD-mice had less proteinuria and interstitial fibrosis at 28 days. HFD reduced inflammatory cytokines, chemokines and fibrosis-related gene expression within IRI-kidney versus controls ($p<0.05$). IRI-induced dysbiosis and significant expansion of pathobionts was evident in NC-IRI mice compared to NC sham-operated controls ($p<0.05$-0.001), however this was attenuated in HFD-IRI mice ($p<0.05$-0.001). Expansion of SCFA-producing bacteria was evident in HFD-mice versus controls and was associated with better kidney histology and function. Consistent with gut microbiota changes, HFD-mice had significantly higher serum acetate and faecal SCFA concentrations. HFD provided significantly less protection in GPR43-/- mice compared to wild-type HFD-IRI-mice (Figure 1a). Acetate treatment after acute IRI protected against chronic IRI, lowering serum creatinine (Figure 1b, $p<0.01$), interstitial fibrosis ($p<0.01$) and tubulo-interstitial infiltrates versus controls ($p<0.05$-0.01).

Conclusions: Dietary fibre protects against acute and chronic kidney IRI through gut microbiota modulation, enrichment of SCFA-producing bacteria, ameliorating IRI-associated dysbiosis. This protection is partially mediated through GPR43. SCFA treatment after acute IRI also protects against chronic kidney IRI, indicating therapeutic potential.

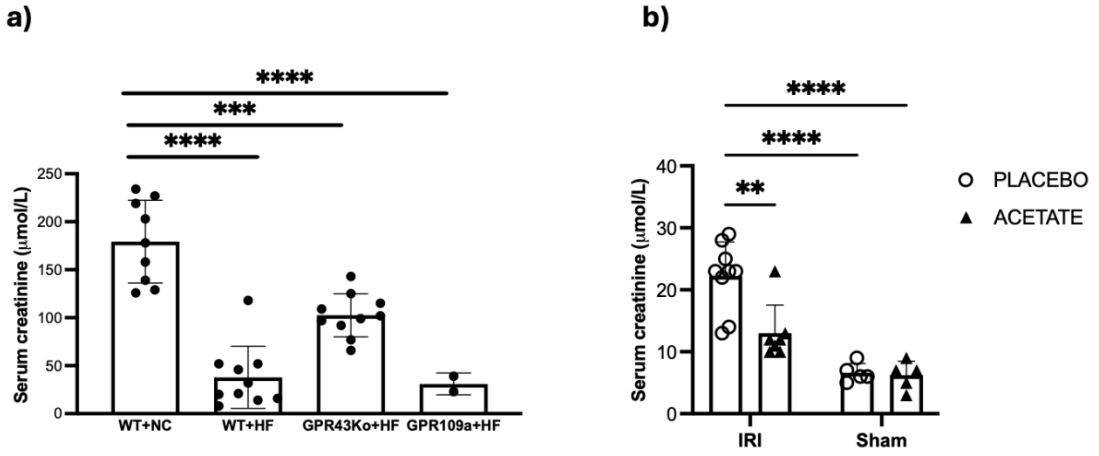

Figure 1: a) Serum creatinine on day 1 post-IRI in wild type (WT) and GPR43-/- and GPR109a-/- mice on NC and HF diets. b) Serum creatinine on day 28 post-IRI in IRI and sham-operated mice fed placebo control or sodium acetate. **p<0.01; ***p<0.001, ****p<0.0001.

Abstract No. 67

CELL-FREE MITOCHONDRIAL DNA AND NUCLEAR CELL-FREE DNA AS A BIOMARKER IN LUNG TRANSPLANT RECIPIENTS

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Nuclear cfDNA, particularly donor-derived cfDNA (dd-cfDNA) is establishing as a biomarker for monitoring transplant rejection as levels increase with cellular damage reflecting direct graft injury and cell turnover. Circulating mitochondrial DNA released during mitochondrial stress is emerging as biomarker that may be important in transplant medicine for monitoring rejection as levels may increase earlier before structural damage occurs. Here we quantified levels of cf-mtDNA and cf-nuDNA in lung transplant patients

Method: Twenty patients were enrolled post lung transplant. Total plasma cfDNA was determined using fluorometric assay. The levels of cf-mtDNA and cf-nuDNA were quantified by droplet digital PCR (ddPCR).

Results: Lung transplant patients had elevated levels of plasma cfDNA (median 3100ng/ml [IQR 1247-5180 ng/ml]) compared to healthy controls (median 324ng/ml [IQR 259-542 ng/ml]); (p<0.001). The copy numbers of nuclear DNA in transplant patients were also significantly elevated (p<0.0001) in transplant patients (median 1382 copies/ul [IQR 528.53-3168.8 copies/ul]) compared to healthy controls (median 36.4 copies/ul [IQR 7.44-50.13 copies/ul]). A significant increase in the circulating levels of mtDNA was observed in lung transplant patients (median 13400 copies/ul [IQR 6509.7-36200 copies/ul]) compared to healthy controls (median 637.4 copies/ul [IQR 558.7-998 copies/ul]); (p<0.0001)

Conclusion: We observe significantly higher levels of cfDNA (nuclear and mitochondrial) in lung transplant patients. The elevated circulating levels of mtDNA could provide a simple quantifiable parameter for monitoring allograft health as it may increase earlier, before structural damage occurs responding to immune activation and mitochondrial dysfunction.

Abstract No. 68

A SINGLE-CELL IMAGING ATLAS OF THE PERIPHERAL IMMUNE SYSTEM IN KIDNEY TRANSPLANT RECIPIENTS

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Aim: To use a novel *single-cell imaging* methodology to map the peripheral immune system of kidney transplant recipients (KTRs) and identify perturbations associated with immunosuppression, comorbidities and vaccine response.

Methods: KTRs receiving immunosuppression with mTOR-inhibitor/mycophenolate/prednisolone (n=12) or tacrolimus/mycophenolate/prednisolone (n=12), and healthy controls (n=12), were vaccinated against COVID-19, and peripheral blood samples collected 21 days later. Groups were matched for age and vaccine type. Peripheral blood mononuclear cells (PBMCs) were fixed and attached to slides coated with poly-D-lysine. Intracellular RNA was amplified *in situ*, and the spatial localisation of 5,000 mRNA species imaged with fluorescent probes at sub-cellular resolution using the Xenium Analyser (10X Genomics). Genes measured included immune surface and checkpoint markers, cytokines, and metabolic and cell signalling molecules relevant to adaptive and innate immune responses.

Results: Gender balance, HLA-mismatches, induction therapy and comorbidity burden were numerically similar between immunosuppression groups, and a range of autoimmune and non-immune underlying diseases were represented. Vaccine responses were significantly different between groups with respect to anti-SARS-CoV-2-Spike IgG (p<0.0001), anti-receptor-binding-domain Ig (p<0.0001), live virus neutralization (p<0.0001) and IFNγ-ELISpot (p=0.0002). Single-cell gene-expression matrices were generated for 200,000 to 250,000 PBMCs/sample at a cost of ~$0.0057/cell. Analysis is ongoing; a single-cell atlas of >8 million PBMCs will be generated and associations with immunosuppression, comorbidities and vaccine response described.

Conclusion: Single-cell imaging provides a low-cost, ultra-high-throughput approach for atlasing projects, which are currently lacking in transplant populations. This project will generate the first single-cell immune atlas in KTRs, which will be made publicly available to the community.

Abstract No.69

DEVELOPMENT OF A LOCAL, SIMPLIFIED, SHEEP WORKING HEART MODEL

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Schechter et al have described a novel pig working heart model characterised by a centrifugal pump providing coronary pressure in Langendorff mode and afterload in working mode.[1] We sought to simplify this model and apply it to sheep heart in our local, Australian context.

Aim: To develop a local working sheep heart model and describe representative left ventricular performance.

Methods: We made the following modifications to the Schechter model.

Modification	
>2yo Merino Ewes	Cheaper than pigs and greater availability in Australia
St Thomas' Cardioplegia A	Cheaper than UW or Celsior, used clinically in Australia
No Red cell washing	Reduced cost and complexity
Premortem blood collection from aortotomy	Increased blood collection volume
Defoamers in reservoirs	Reduced gas embolism risk
Adjustable tilt table for heart placement	Reduced tension on aorta-rig connection

Explanted hearts were run for 1 hour after reanimation. A transapical conductance catheter measured left ventricular performance. Dobutamine was added at 5mcg/min to replace the absence of endogenous catecholamines.

Results: LV performance data was broadly comparable with the published porcine data.[1]

Table 1: Representative Left Ventricular performance data from Schechter et al (Pig) against data from HLRI (Sheep)

Parameter	Pig	Sheep
Load Independent		
PRSW	31.72	38.35
dP/dt max vs EDV	3.53	8.89
PVA vs EDV	55.79	135.89
PVA vs ESP	79	25.28
ESPVR	1.31	0.33
Tau	63.32	65.75
Load Dependent		
SW	1010.83	682.8
CO (mL/min)	3685.33	947.9
SV (mL)	40.78	18.74
EDV	306.83	87.3
HR (bpm)	90.37	50.6
Ea (mmHg/mL)	1.23	3.03
dP/dt max (mmHg/s)	411.8	815.8
dP/dt min (mmHg/s)	-377.43	-831.4

Conclusions: We believe that our modified working sheep heart model, reduces cost and complexity when compared with the model published by Schechter et al. Representative sheep heart data is presented.

Reference:

1. Schechter, M.A., Southerland, K.W., Feger, B.J., Linder, D., Ali, A.A., Njoroge, L., Milano, C.A., Bowles, D.E. An Isolated Working Heart System for Large Animal Models. *J. Vis. Exp.* (88), e51671, doi:10.3791/51671 (2014)

Abstract No. 70

OPTIMISING GAS FLOW RATES FOR CO2/OXYGEN HEART PERSUFFLATION

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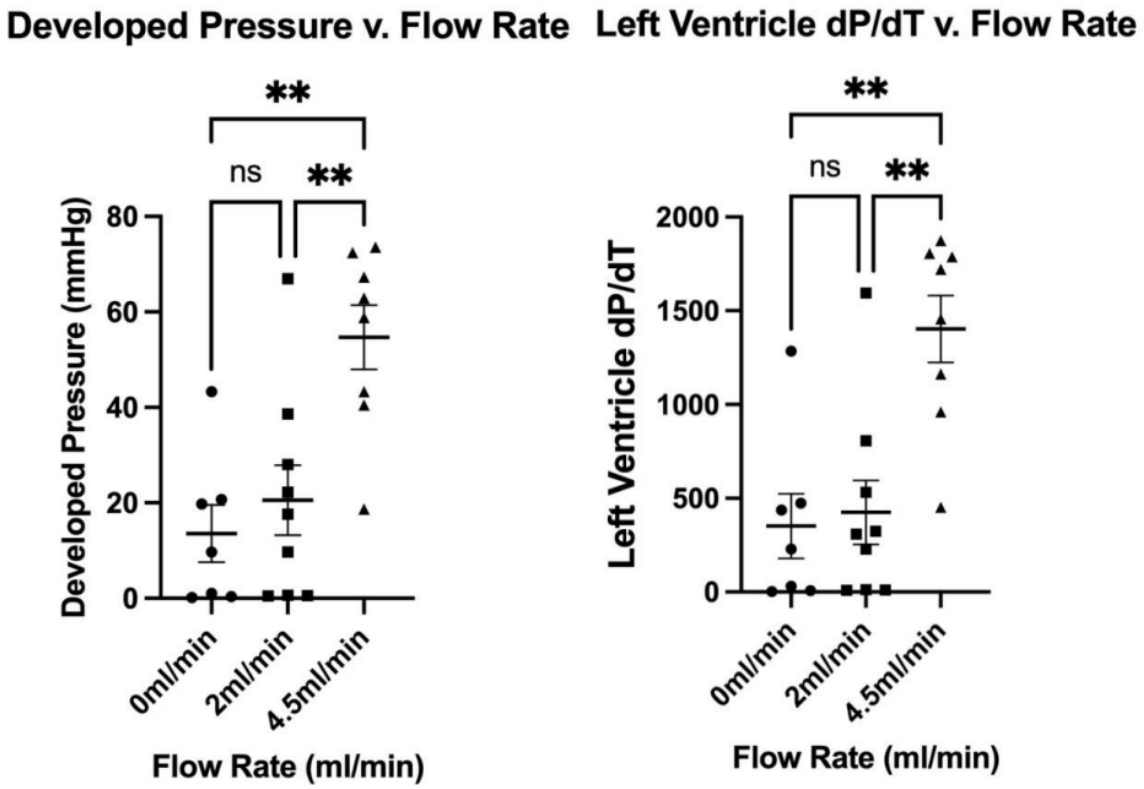
Gas persufflation (PSF) is a novel preservation technique that may allow longer storage than static cold storage or machine perfusion. Successfully applying gas preservation to clinical heart storage requires further optimisation of storage system settings.

Aims: This study sought to determine the effect of 3 gas flow rates: 0ml/hr, 2 ml/hr and 4.5ml/hr, during PSF on functional and biochemical outcomes in rat hearts.

Methods: Male Sprague Dawley rat hearts were preserved using a PSF system with three experimental flow rates: 0 mL/min, 2 mL/min (low flow), and 4.5 mL/min (high flow). After 3 hours of preservation, hearts were transferred to a Langendorff system for reanimation, functional, biochemical and tissue assessment.

Results: Hearts preserved with CO_2/O_2 PSF at 4.5 mL/min exhibited significantly improved functional recovery compared to the 0 mL/min and 2 mL/min groups. (Fig 1) Biochemical analysis of markers, including LDH2, troponin I, and caspase-3 activity, revealed no significant differences across the groups.

Figure 1: Post reanimation functional performance of hearts persufflated at different gas flow rates



Conclusion: We have demonstrated that gas persufflation of rodent hearts at 4.5ml/min yields better performing hearts than those persufflated at 0ml/min or 2ml/min. We are yet to determine an upper optimal flow rate. Adequate gas flow is an important determinant of persufflation success. We will seek to apply these results in longer term storage models.

Abstract No. 71

HUMAN CD4+CD25+CD127LO TREG HAVE ENHANCED EXPRESSION OF IL-12Rβ1 UPON ACTIVATION WITH ALLOANTIGEN AND rIL-2

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AIMS: We have shown that short-term culture of rat $CD4^+CD25^+Foxp3^+$T cells with rIL-2 and alloantigen induces IFNGR and IL-12Rβ2 and enhanced suppressive ability. Here, we examined activation of human Treg and expression of cytokine receptors.

METHODS: $CD4^+$ $CD25^+CD127^{lo}$ Treg isolated by FACS from blood of healthy volunteers were cultured for 4 days with rIL-2 and irradiated allostimulators (alloAg). We monitored three Populations of Treg: Pop I ($Foxp3^+CD25^+CD45RA^+$), Pop II ($Foxp3^{++}CD25^{++}CD45RA^-$) and Pop III ($Foxp3^+CD25^+CD45RA^-$). Cultured Treg were examined for shifts in Pop I, II, III and cytokine receptor expression.

RESULTS: Culture with alloAg alone or with rIL-2 resulted in two additional populations identified as $CD25^{++}/Foxp3^{++}CD45RA^+$ Pop I (Pop Ia) and $CD25^{+++}/Foxp3^{+++}CD45RA^-$ Pop II (Pop IIa). $CD4^+$ $CD25^+CD127^{lo}$ Treg cultured alone had reduced Pop II compared to the fresh starting population (2.7% vs 23.5%). Culture with alloAg or rIL-2 alone preserved Pop II and identified Pop Ia and Pop IIa. IFNGR expression in Pop I and II was higher in cultures with rIL-2 alone compared to preculture or with alloAg alone. Culture with both alloAg and rIL-2 wasn't different to with alloAg alone. Proportion of IL-12β1 expressing cells were higher in Pop II compared to Pop I. However, Pop Ia and IIa had much higher proportions of IL-12Rβ1 expressing cells to Pop I and II respectively. Culture with both rIL-2 and alloAg preserved IL-12Rβ1 expression in Pop III.

CONCLUSIONS: $CD4^+CD25^+CD127^{lo}$Treg stimulated with alloAg and rIL-2 induced IL-12Rβ1 CD25 and Foxp3. These finding may have implications for activation of alloantigen specific $CD4^+CD25^+CD127^{lo}Foxp3^+$Treg that induce tolerance.

Abstract No. 72

TREG EFFECTOR MOLECULES (CD39/HLA-DR/PD-1) EXPRESSION IN RENAL TRANSPLANT PATIENTS WITH LONG SURVIVING GRAFT AND HEALTHY VOLUNTEERS

RAKESH P[1,2], ZOHOROWSKA B[3], DIEP J[3], CHEUNG J[3], WU P[3], AL-ATIYAH R[1,2], SURANYI M[3], SPICER T[3], WONG J[3], TRAN GT[1,2], HODGKINSON SJ[1,2,4], HALL BM[1,2,3], VERMA ND[1,2]

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Aim: Activated Treg express molecules associated with suppressor function. These include CD39, HLA-DR and PD-1, all have been assayed as a potential monitor of tolerance. We examined the expression frequency of these molecules in three populations of $CD4^+CD25^+Foxp3+CD127^{lo}$T cells.

Methods: Blood from healthy volunteers (HV)(n=15) and stable renal transplant patients (RT) with grafts surviving >10yrs (RT)(n=25) was stained for CD4/CD25/CD127/FOXP3/CD45RA to identify three populations of Treg. Expression of activation molecules (CD39/HLA-DR/PD-1) in each population was examined using monoclonal antibodies. Data was acquired on BD FACSCanto II using FACS DIVA 8.0 and analysed using FlowJo (BD).

Results: The activated Treg Population II, identified as $CD45RA^-Foxp3^{hi}$ had the highest proportion of $HLA\text{-}DR^+$ cells, with >75% expressing HLA-DR but no difference between HV and RT. CD39 expression was within 2/3rds of cells having >75% expression and 1/3rd had <40%. Again, there was no difference between HV and RT. Population III, which is CD45RA-$Foxp3^+$ had around 40% $HLA\text{-}DR^+$ and 40% $CD39^+$ cells. Population I of resting Treg, stained as $CD45RA^+Foxp3^+$ had low CD39 expression (<20%) and no HLA-DR and PD-1 expression. PD-1 in RT and HV was <10% in all populations. A large proportion of cells in Population II and III were both $CD39^+$ and $HLA\text{-}DR^+$.

Conclusions: Expression of HLA-DR and CD39 within Treg populations was not different in RT and HV and was mainly within memory/activated Treg. PD-1 expression was low as it is only expressed on T cell activation. Alone these markers are unlikely to detect tolerance.

Abstract No. 73

TREG PHENOTYPES IN RENAL TRANSPLANT PATIENTS WITH LONG SURVIVING GRAFT: INCREASED TH2-LIKE AND REDUCED TH1- AND TH17-LIKE TREG

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Aims: Activated Treg express chemokine receptors(CCR) of activated effector T cells, including CXCR3, a Th1 receptor and CCR6, a Th17 receptor. Th2 like Treg express CCR4 but not CCR6 and CXCR3. Here, we examined Th-like Treg in renal transplant patients and compared these to healthy volunteers.

Methods: Blood from healthy volunteers (HV) (n=44) and stable renal transplant patients (RT) with grafts surviving >10yrs (RT) (n=25) was stained for CD4/CD25/CD127/FOXP3/CD45RA to identify three populations of Treg. Expression of CCR4/CXCR3/CCR6 in each Population was analysed. Data was acquired on BD FACSCanto II using FACS DIVA 8.0 and analysed using FlowJo (BD).

Results: Total Treg proportion within CD4 cells was lower ($p<0.01$) in RT than HV. RT had lower naïve Treg (Pop I, $p<0.01$) but Pop II and III were not different. Expression of CXCR3 or CCR6 was low in $CD45RA^-$ cells compared to $CD45RA^+$ cells. In HV, $CD45RA^-$ cells were ~50% $CXCR3^+$ or $CCR6^+$. RT had significantly lower $CXCR3^+$ ($p<0.0001$) or $CCR6^+$ ($p<0.01$) cells in Pop II compared to HV. Both Pop II and III had significantly higher ($p<0.01$) $CXCR3^-CCR6^-$ cells and lower $CXCR3^+CCR6^+$ cells ($p<0.001$) in RT than HV. Th2-like Treg ($CCR4^+CXCR3^-CCR6^-$) were higher in RT in Pop II ($p<0.01$) and Pop III ($p<0.05$). Th1/Th17-like Treg ($CCR4^+CXCR3^+CCR6^+$) in Pop II ($p<0.001$) and Pop III ($p<0.01$) were lower in RT than HV.

Conclusions: RT patients had reduced naïve Treg. Unanticipated, RT had a lower Th1- and Th17-like Treg cells and higher Th2-like Treg. Whether this is an effect of immunosuppression, or a measure of tolerance is unknown.

Abstract No. 76

EFFECTIVE USE OF A MARKETING PLATFORM TO ENHANCE LUNG TRANSPLANT PATIENT COMMUNICATION AND HEALTH EDUCATION

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Aims: Effective communication with transplant patients is critical to enhance healthcare outcomes. Traditional methods (phone, individual emails) are time-consuming and limits the amount of information provided. This paper describes how Mailchimp, an email marketing platform, has been utilised by our Lung Transplant (LTx) Service as a successful method of mass communication with LTx recipients (LTR).

Methods: In March 2020, at the start of the COVID-19 pandemic, the LTx Patient Newsletter was created in Mailchimp, recognising the need for urgent, frequent communications to ~700 LTR. All the MDT contribute content; initially with a focus on COVID-19 (eg. changes to virtual health care model; recommendations on COVID-19 vaccinations/treatments) Subsequently, content has evolved to include MDT recommendations on post-LTx health-care strategies, changes to pharmacy prescribing/links to e-pharmacy, advice on new vaccinations and links to on-line patient education seminars.

Results: Over 50 newsletters have been sent to >600 LTR (average 80% open rate, 64% within 24hrs). A COVID-19 Vaccination Survey link (65% response rate) indicated a high uptake of vaccinations (98% with at least 2 doses) which translated into only 4% LTR mortality from COVID-19 (up to Dec 2022). 90% reported the LTx Newsletter positively impacts their health-care management and improves communication with LTx team. Feedback, via linked surveys, and Mailchimp metrics are used to evaluate and improve content.

Conclusions: Mailchimp has proven to be an efficient, effective solution for communication of key health care messages from the MDT team to a large LTx cohort. Ongoing newsletter enhancements are planned, based on LTR recommendations

Abstract No. 77

INDIVIDUAL AND CUMULATIVE IMPACT OF DONOR RISK FACTORS ON GRAFT SURVIVAL IN LUNG TRANSPLANT RECIPIENTS

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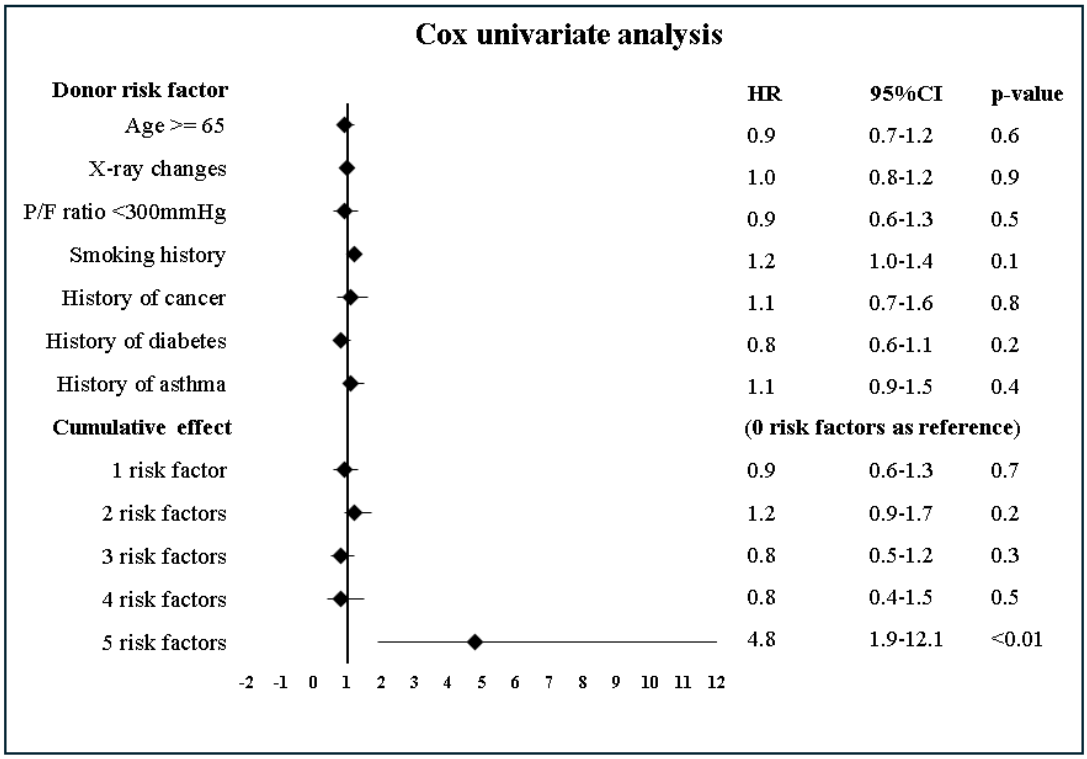
Introduction: Organ suitability assessment implies scrutinizing individual donor risk factors that might preclude optimal long-term outcomes. However, data on the cumulative impact of donor risk factors is scarce. We aimed to assess the individual and cumulative effect of donor risk factors on survival after lung transplantation (LTx).

Methods: Single centre study of LTx performed at the Alfred between January 2010 and December 2024. The following donor risk factors, reported in the electronic donor record, were included in the analysis: age≥65 years, X-ray changes, ratio of arterial oxygen partial pressure to fractional inspired oxygen (P/F ratio) <300mmHg, smoking history, history of cancer, diabetes, or asthma. Cox proportional hazards model was used to assess effect of risk factors on graft survival.

Results: A total of 1014 patients with a mean age of 53 years were included in the analysis. Fifty-five percent of the LTx were male. Although multiple risk factors (≥2) were frequently present (55%), none of the donors had >5 risk factors. The most prevalent risk factor was X-ray changes (61%) followed by smoking history (53%). None of the risk factors impacted the graft survival in the univariate analysis irrespective of LTx type (p>0.05). Moreover, only the concomitant presence of 5 risk factors had a negative effect on graft survival (HR 4.8, 95%CI 1.9-12.1, p<0.01) (Figure 1).

Conclusion: Extended criteria donors with less than 5 risk factors should be judiciously considered for LTx in order to expand the donor pool.

Figure 1. Individual and cumulative effect of donor risk factors on graft survival



Abstract No. 78

A PHYSICAL FLOW CYTOMETRY CROSSMATCH IS NECESSARY TO EVALUATE UNEXPLAINED B*08:01 REACTIVITY ON SINGLE ANTIGEN BEAD ASSAYS

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Background: Single antigen bead (SAB) assays are highly sensitive for detecting anti-HLA antibodies, allowing histocompatibility assessments without physical crossmatch. However, SAB assays can show false-positive reactivity, complicating interpretation and, potentially preventing patients from matching with compatible donors. At NSW Transplantation and Immunogenetics laboratory we observed a pattern of B*08:01 bead reactivity, often in unsensitised patients, leading to unacceptable antigen (UA) assignment in some cases. Our aim was to evaluate alternative assays to determine whether this is true- or false-positive B*08:01 reactivity.

Methods: Sixteen pre-transplant samples with B*08:01 SAB reactivity with MFIs >4000 with OneLambda LABScreen™ (OLI) underwent additional testing with LIFECODES® and flow cytometry crossmatch (FCXM). Results were compared across all platforms to determine if B*08:01 reactivity was true or false-positive.

Results: While approximately 79% of samples tested with LIFECODES® were also positive for B*08:01, 50% were FCXM negative. There appeared to be no correlation between B*08:01 MFI strength in either OLI or LIFECODES® assays and the FCXM results.

Conclusions: Resolving suspected false-positive antibody results is crucial for accurate assignment of UA. We sought to identify the most time and cost-effective method for resolving false reactivity. While there are differences in vendor products, some false positives such as the B*08:01 are seen in both and may relate to the bead manufacturing process. A physical FCXM is necessary for determining the nature of unexpected B*08:01 bead reactivity. Given B*08:01 is present in 20.7% of local donor population, this has significant clinical implications.

Abstract No. 79

A SYSTEMATIC REVIEW OF THE EFFECTIVENESS OF CONTRAST-ENHANCED ULTRASONOGRAPHY FOR EVALUATING RENAL ALLOGRAFT FUNCTION

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Introduction: Kidney transplantation outcomes are influenced by multiple factors, including donor procurement, preservation and recipient characteristics. Early and longer-term graft outcomes are difficult to predict. The aim of this study was to review the current evidence on the utility of Contrast-Enhanced Ultrasonography (CEUS) in assessing post-transplant renal allograft function.

Methods: A search of Embase, Medline and Cochrane database of all systematic reviews was conducted to identify studies utilising CEUS for the assessment of renal allograft function. Studies were excluded where CEUS parameters derived from time-intensity curves (TIC) were not reported or where CEUS was used to assess vascular complications.

Results: Of 272 screened articles, 19 studies were deemed suitable for further analysis. Included studies reported on delayed graft function (DGF), acute tubular necrosis (ATN), rejection and non-rejection injuries, glomerulosclerosis (GS) and non-specified graft function. Reported CEUS parameters included a combination of time and intensity indexes. A total of 95% of studies (18/19) reported a significant association between CEUS parameters and the outcome measure. Despite these findings, significant variability in time and intensity index trends between studies prevented the identification of reliable CEUS parameters for graft function assessment. **Conclusion:** Though CEUS holds significant potential, the current evidence prevents it from being used as a reliable tool for allograft assessment. This is likely due to methodological differences between studies, particularly in selection of regions of interest (ROIs) for ultrasound assessment. Further research is required to determine individual CEUS parameters that can prognosticate renal transplantation outcomes.

Abstract No. 80

ENHANCING DONOR ORGAN AVAILABILITY THROUGH THE INTEGRATION OF MACHINE PERFUSION, MICROBUBBLES AND ULTRASONOGRAPHY

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Introduction: To counter the worsening donor organ shortage the transplant community has been utilising poorer quality organs for transplantation. These organs are associated with worse outcomes. Normothermic machine perfusion (NMP) has emerged as a tool to assess and rejuvenate damaged allografts prior to transplantation. However, NMP parameters that consistently assess perfusion and predict graft performance have not yet been established. This study aimed to enhance the diagnostic capability of NMP by integrating microbubbles (MB) and contrast enhanced ultrasonography (CEUS) during NMP, to assess kidney perfusion and diagnose damage. **Method:** A pilot study was established to assess feasibility where MB were injected directly into a previously established NMP circuit perfusing a porcine kidney and real time CEUS perfusion images were assessed. A further 14 porcine kidneys subsequently underwent 2 hours of NMP with CEUS performed at 0, 60 and 120 mins of NMP. Time intensity curves (TIC) and CEUS parameters were then compared to standard methods of assessing graft perfusion and function.

Results: All 15 porcine kidney grafts were successfully assessed using CEUS during NMP. Objective assessment of perfusion utilising TIC parameters was variable preventing true correlation with pre-existing assessment methods.

Discussion: We have demonstrated that performing CEUS during NMP is feasible. The variability in CEUS results reflects methodological development and the pilot nature of the study. Further refinement is required to establish CEUS as a diagnostic tool to determine graft quality and provide a potential platform for treatment.

Abstract No. 81

DISSOLUTION OF URETERIC CLOT CAUSING OBSTRUCTION WITH INTRA-URETERIC UROKINASE IMMEDIATELY POST RENAL TRANSPLANT: A CASE REPORT

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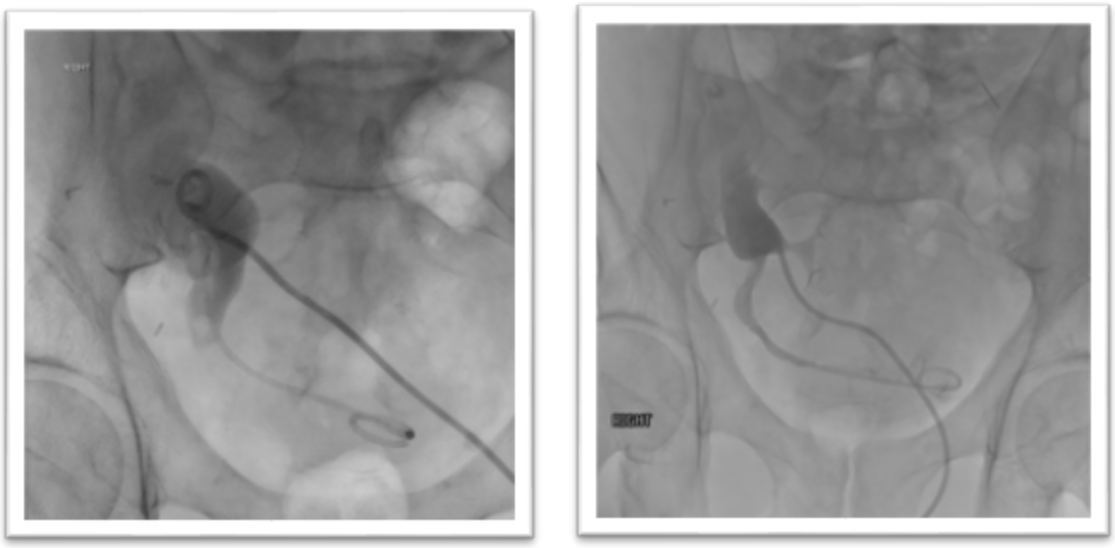
AIMS: Ureteric obstruction in the immediate post renal transplant period is a rare but potential major cause of morbidity. Routine use of ureteric stents has largely addressed this issue. However, obstruction due to intra-ureteric clot hasn't been documented. Management via percutaneous nephrostomy (PCN) can be problematic in the transplant population with associated risk of infections.

METHODS: We describe the use of urokinase, administrated via PCN tube, for the treatment of ureteric obstruction and hydronephrosis due to intra-ureteric clot. Urokinase, a serine protease, activates plasminogen directly by converting it to active plasmin, acting as a thrombolytic agent. This technique has been described for ureteral thrombus however not in acutely post-transplant.

RESULTS: A 54-year-old male underwent a cadaveric renal transplant due to Von Hippel Lindau syndrome associated Renal cell carcinoma. Prophylactic ureteric stents were placed due to bilateral nephrectomies. Initial recovery was complicated with delayed graft function requiring dialysis. Day 8 ultrasound demonstrated hydronephrosis. Nephrostogram demonstrated ureteric obstruction with filling defects in the ureter compatible with clot and PCN was inserted. 7 days of titrated urokinase flushes were administered through PCN followed by capping for 15 minutes. Subsequent nephrostogram showed flow in ureter and on day 24 resolution of clot. Kidney function recovered, PCN removed after 16 days, and at time of stent removal at 6 weeks retrograde pyelogram demonstrated no filling defects.

CONCLUSION: This case demonstrates the feasibility of urokinase administration for managing ureteral clot post-transplant. This novel technique allows for a decreased period of percutaneous nephrostomy tube insertion.



Nephrostogram Pre And Post Urokinase Dissolution Therapy

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Abstract No. 82

ESTABLISHING A LAPAROSCOPIC DONOR NEPHRECTOMY ENHANCED RECOVERY AFTER SURGERY (ERAS) PATHWAY – A SINGLE CENTRE EXPERIENCE

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Donor nephrectomy is an altruistic procedure. Establishing an Enhanced Recovery After Surgery pathway allows for coordinated multidisciplinary care for this unique cohort of patients and improves the overall experience and recovery for the donor.

AIMS: Our ERAS pathway was initiated in November 2022 aiming to ascertain if a change in practice had a positive impact.

METHODS: Retrospective review of all donor nephrectomy admissions from November 2020 to September 2024, comparing pre to post ERAS patient outcomes. Primary outcomes were use of intravenous patient-controlled analgesia (PCA), return to bowel function, length of stay, serum creatinine and complications.

RESULTS: We compared 47 pre-ERAS to 52 post-ERAS donors. PCA use declined from all patients in pre-ERAS group to 17% in the first-year post-ERAS group and none in 2024. The analgesia regime in ERAS was regional erector spinae block +/- wound catheter in place of IV-PCA. Return to bowel function improved by a 1 day in the post-ERAS group from a median of 4 days to 3. Length of stay shortened in the post-ERAS group from a median of 4.2 days from 5.4 days. There was no significant difference between serum creatinine at Day 1 and day of discharge in both groups. There was no difference in complication rates between the two groups.

CONCLUSIONS: Since establishing an ERAS pathway in our institution, there has been a reduction in the use of patient-controlled opiate analgesia, a shorter length of stay, an earlier return to bowel function, without compromising impact on serum creatinine or complications.

Abstract No. 83

INFECTION PREVENTION AND SURVEILLANCE IN THE CARE OF AUSTRALASIAN SOLID-ORGAN TRANSPLANT RECIPIENTS- AN INTERNATIONAL SURVEY

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Background: Opportunistic and healthcare associated infections (OHAIs) are a significant cause of morbidity and mortality amongst solid-organ transplant (SOT) recipients. Australasia has no standardised system for OHAI monitoring, nor SOT-specific infection prevention and control (IPC) guidelines. The INTERACT study aimed to understand IPC/surveillance practice for this cohort.

Methods: A cross-sectional survey was conducted among infectious disease, microbiology, and IPC specialists caring for the high-risk immunocompromised host (ICH) within Australasian healthcare facilities (HCFs).

Results: 140 healthcare-workers from all Australian jurisdictions and New Zealand responded of whom 97/140 (69.3%) provided care for SOT patients. At HCFs caring for SOTs, although the majority (97.0%) had IPC services, only 45.5% had a dedicated ICH-ID service, and fewer ICH-specific IPC guidelines (37.1%). Over half (50.5%) reported a staff mask-wearing mandate on the transplant ward, primarily surgical masks (87.8%) yet there was no consensus on appropriate clinical setting for routine use or timing post-SOT. Fewer employed visitor-masking (33%). HCF infrastructure was also limited, despite 76.3% indicating single-room availability, only 40.2% reported positive-pressure and 37.1% HEPA-filtration capacity. HAI surveillance was performed by the majority (75.3%), but a smaller proportion (23.7%) monitored for infectious opportunists. Most did not have a routine screening policy for major multi-drug-resistant organisms. Just over half (58.7%) regularly counselled on strategies for safe living on discharge or vaccine reconciliation (54.6%).

Conclusion: This is the first survey of IPC and surveillance practice in the care of the Australasian SOT population, highlighting multiple areas of practice variability and emphasising the need for standardisation to optimise clinical outcomes and reduce infection.

Abstract No. 84

UTILISATION OF SURROGATE FLOW CYTOMETRIC CROSSMATCHING IN TRANSPLANT PATIENT MANAGEMENT

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Background Anti-Human Leucocyte Antigen (HLA) antibodies play a significant role in transplant immunology. The most commonly used method for detecting anti-HLA antibodies is the Luminex Single Antigen Bead (SAB) assay. Whilst the Luminex SAB is highly sensitive, its specificity is imperfect as the antigen source and conformation on the beads may not truly represent the true physiological antibody-HLA interaction. The binding of patient sera on native HLA antigens displayed by cells offers greater specificity. The antigen of interest can be interrogated through surrogate Flow Cytometric Crossmatching (sFCXM) to provide clinically relevant results and support patient management.

Methods NSW Transplantation and Immunogenetics Laboratory (NTIS) performed sFCXM on the following two patients' sera. Patient 1 is a 60-year-old male with a mPRA of 38% requiring a lung transplant. The patient's SAB profile indicated a moderately positive B*44:02 antibody. Patient 2 is a 55-year-old male with a mPRA of 99% and two prior kidney transplants, now requiring a third. The patient had an unacceptable DQB1*05:01 antibody based on historical results, although more recent samples showed reduced antibody strength.

Results sFCXM using surrogate B*44:02 and DQB1*05:01 cells, respectively, were negative. Both patients were subsequently successfully transplanted across these antigens with no signs of rejection.

Discussion Specificity limitations with the SAB assay has the potential to incorrectly assign unacceptable antigens and access to transplant in certain patients. At NTIS we have a surrogate donor bank of more than 280 cells and use sFCXM to clarify the clinical relevance of SAB antibody profiles and facilitate transplantation.

Abstract No. 85

HHV8 INFECTION AND KAPOSI SARCOMA POST RENAL TRANSPLANT: A CASE REPORT

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Background: Kaposi's sarcoma (KS) is associated with human herpesvirus 8 (HHV8) in immunocompromised patients. Post-transplant KS occurs either via reactivation of latent HHV8 or donor-derived infection. Donor-derived typically occurs within six months post-transplant. We describe a case of probable donor-derived HHV8 infection and KS in a patient with low underlying risk of HHV8 infection.

Case Report: A 65-year-old female presented eight months post-transplant with right leg swelling, lower back pain, and violaceous purpura over her torso. Her original renal failure was secondary to AA amyloid without an underlying inflammatory disorder identified. She had received basiliximab induction, and maintenance immunosuppression with tacrolimus, mycophenolate, and prednisolone. The deceased donor had a history of male-to-male sexual contact and was retrospectively confirmed to be HHV8-positive by PCR.

HHV8 was detected in the patient's serum at presentation. A PET scan showed diffuse lymphadenopathy, abnormal soft tissue adjacent to the renal transplant, and abnormal focal uptake in the liver, spleen and paratracheal lymph nodes [Figure 1]. Para-aortic lymph node biopsy confirmed diagnosis of KS. Skin biopsy and retrospective staining of the three-month protocol transplant biopsy were negative for HHV8.

Following the KS diagnosis, tacrolimus and mycophenolate were ceased and everolimus was commenced. Serial PET scans revealed complete radiological resolution of lesions [Figure 1]. Despite radiological KS remission, the patient experienced multiple infective complications and died from sepsis three months after diagnosis.

Conclusion: Further research is required to develop reliable screening and management strategies for donor-derived HHV8 infections and KS in transplant recipients.

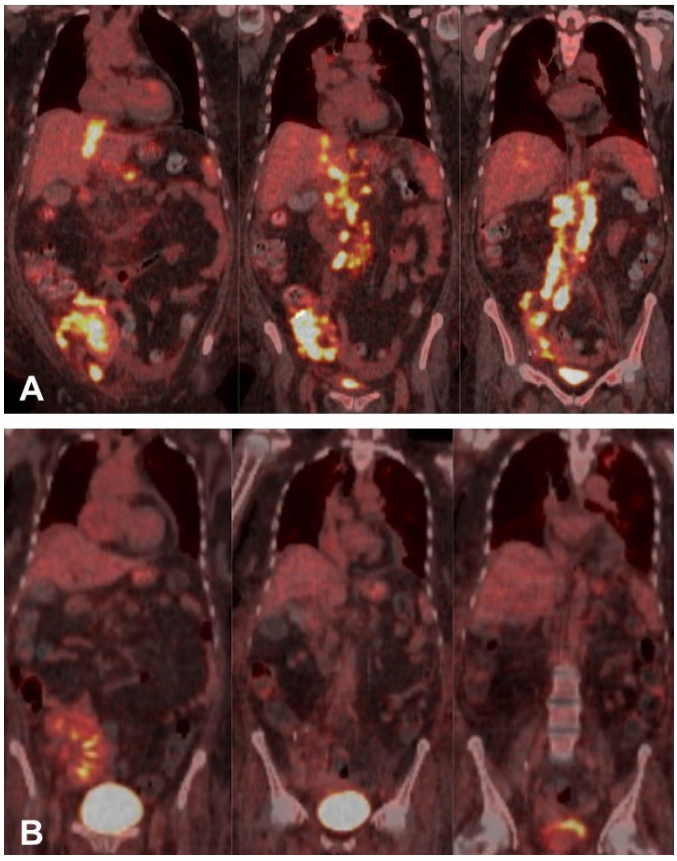

Figure 1: Serial PET scans (A) PET at diagnosis showing FDG-avid soft tissue near the right renal transplant, with uptake in subdiaphragmatic lymph nodes, liver, spleen, and right lower paratracheal lymph nodes (B) PET three months after reduction of immunosuppression showing resolution of retroperitoneal and right common iliac lymphadenopathy, with no FDG uptake suggesting active Kaposi's sarcoma

Abstract No. 86

CASE STUDY: AN INVESTIGATION INTO DQB1*03 ANTIBODIES DETECTED BY LABSCREEN IN AN UNSENSITISED MALE KIDNEY PATIENT

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Introduction: Non-specific binding in antibody screening assays can make it difficult to determine the clinical significance of positive bead reactivity. Antibodies can bind to denatured antigens on the beads – cryptic epitopes that become exposed by the manufacturing process. VTIS uses the OneLambda LABScreen kit for HLA antibody screening of patient serum for the kidney transplant waitlist. In some cases, further investigation is required to distinguish between non-specific DQB1*03 and true positive results.

Case Study: Serum was tested for a 52-year-old unsensitised male patient for kidney transplant workup. HLA antibody screening was performed using single antigen beads and all DQB1*03 beads were positive, between 500 and 5500 MFI. There is an eplet (55PP) for the positive DQB1*03 specificities, which would usually indicate a true result. However, due to the absence of prior sensitisation, it was suspected that the positive bead profile was non-specific. Further screening with the mixed bead kit was negative for Class II antibodies. We performed surrogate flow cytometry crossmatches (FCXM) between the patient serum and cells that had target DQB1*03 antigens. The FCXM results were negative for T and B cells (4 cells had the DQB1*03:01 antigen; 2 were DQB1*03:02; and 1 was DQB1*03:03). Reviewed in combination with the negative mixed bead antibody screen and negative FCXM, the Class II Luminex single antigen result was assigned negative with non-specific reactivity.

Conclusion: For an unsensitised patient, further testing can assist in identifying non-specific reactivity and help to avoid assigning spurious antibodies that would otherwise reduce patient access to transplant.

Abstract No. 87

AN UNUSUAL CASE OF SEVERE PERSISTENT HYPOPHOSPHATEMIA POST KIDNEY TRANSPLANTATION

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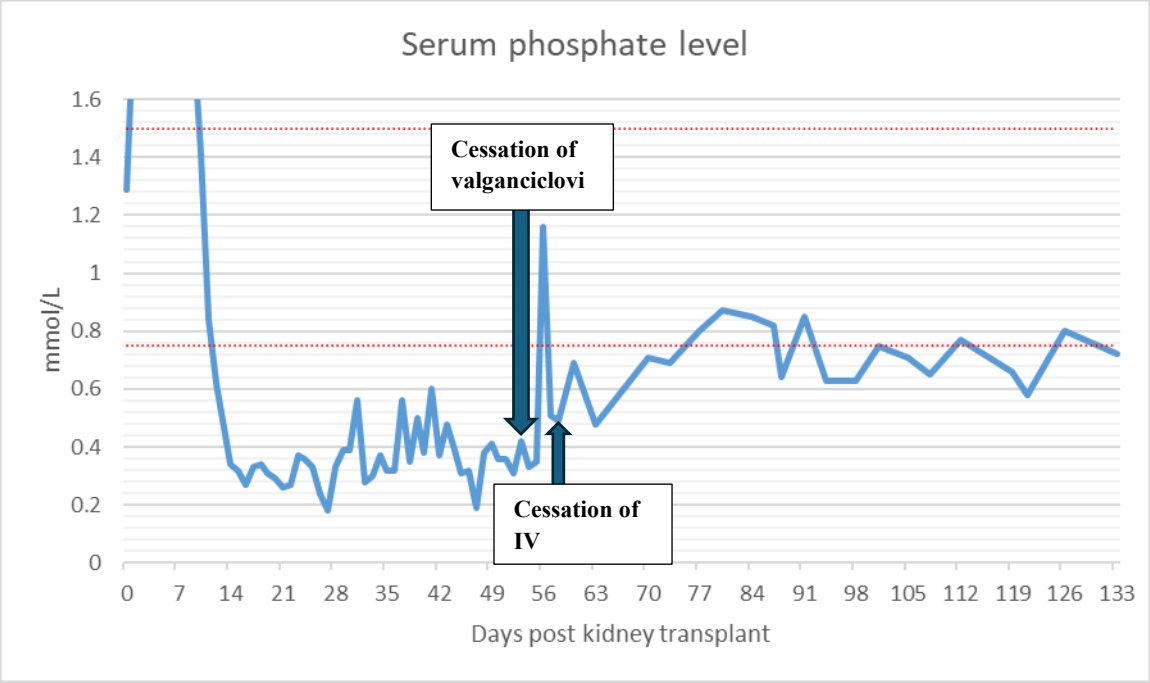
Background: Hypophosphatemia is a common early post-transplant complication, often caused by persistent hyperparathyroidism and elevation of Fibroblast growth factor-23 (FGF23), tubular injury related to calcineurin inhibitors and ischemia during surgery. This condition is usually transient and manageable with supportive treatment.
Case Report: A 50-year-old female developed severe hypophosphatemia (nadir 0.18 mmol/L) 10 days after deceased donor kidney transplantation for polycystic kidney disease. Medications included mycophenolate, tacrolimus, prednisolone, trimethoprim/sulfamethoxazole, valganciclovir (450 mg twice daily), and pantoprazole. Calcitriol (1mcg twice daily), oral phosphate supplements, and phosphate-rich diet were initiated with limited effect. Intravenous phosphate replacement (50-80 mmol/day) was required, achieving a serum phosphate level of 0.3–0.4 mmol/L.
Urinary phosphate wasting was confirmed (fractional excretion of phosphate [FeP] = 76.2%). FGF23 level was 280.1 ng/L (reference range: 23–95 ng/L). Parathyroid hormone (PTH) level was 38 pmol/L (reference range: 2.0-9.3 pmol/L). Tacrolimus dosing was reduced and cinacalcet was restarted to address PTH-related urinary phosphate wasting. Despite these interventions, the patient's hypophosphatemia persisted. Following discontinuation of valganciclovir, serum phosphate levels recovered within 48 hours and intravenous supplements were stopped. FeP improved significantly to 19.9% within 4 days and phosphate level remained stable.
Discussion and Conclusion: This case is unusual due to the severity of hypophosphatemia and the temporal, rapid improvement following cessation of valganciclovir. Valganciclovir has been associated with hypophosphatemia in 12% of patients in solid organ transplant clinical trials and there is significant interpatient variability in drug exposure. Further study on the potential contribution of valganciclovir to post-transplant hypophosphatemia is required.



Abstract No. 88

VARICELLA ZOSTER VIRUS LUMBOSACRAL POLYRADICULITIS: A CASE REPORT

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Background: Reports of Varicella Zoster Virus (VZV) as a cause of lumbosacral polyradiculitis in renal transplant patients are exceedingly rare.

Case Report: We present the case of a 73-year-old man who had received a renal transplant three years prior for renal failure secondary to hypertension. He initially presented to hospital with symptoms of right-sided neuralgic lower back pain, scrotal pain, and urinary retention. A urinary catheter was inserted, and he was discharged home without any attributable cause for his symptoms. He returned to hospital one week later following the development of bilateral lower limb weakness and faecal incontinence in the absence of saddle anaesthesia. Neurological examination of lower limbs demonstrated normal tone, bilateral proximal leg weakness, absent reflexes, and normal sensation. Rectal examination revealed mildly reduced tone but normal voluntary anal contraction. MRI spine demonstrated enhancement of the thecal sac and cauda equina. With the development of a vesicular sacral rash, a viral skin swab and cerebrospinal fluid analysis both confirmed VZV as the underlying cause of his lumbosacral polyradiculitis. It was noted that this patient had not received the shingles vaccination. He was treated with two weeks of acyclovir and required a further two weeks of inpatient rehabilitation, with resolution of his rash and improvement of neurological symptoms.

Conclusion: This case underscores the need for heightened clinical awareness of VZV reactivation in immunocompromised individuals, especially when a rash is not initially evident. It also highlights the importance of incorporating the shingles vaccination in managing immunocompromised patients.

Abstract No. 89

NOT THE USUAL SUSPECTS: A CASE OF METAMYCOPLASMA HOMINIS AND UREAPLASMA ENDOCARDITIS IN A RENAL TRANSPLANT PATIENT

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A 44-year-old man with end stage renal failure from ADPCKD and a previous mechanical mitral valve replacement underwent a DCD renal transplant with 2Ag MM and no DSAs in April 2024. He received standard induction and maintenance immunosuppression. Post-operatively he had an infected peri-nephric haematoma which cultured Metamycoplasma *hominis* and Ureaplasma species. The patient returned consistently positive urine MCS with growth of Metamycoplasma *hominis and* Ureaplasma species. He received serial courses of doxycycline. The patient had unexplained episodes of sepsis and AKI which were persistently blood culture negative. He then presented with sepsis and a hemianopia and was found to have multi-territory embolic strokes. TOE showed a vegetation on the mechanical valve. On high suspicion further blind subcultures were taken which returned positive for both Metamycoplasma *Hominis* and Ureaplasma species. The patient underwent a repeat mitral valve replacement and was treated with moxifloxacin and doxycycline therapy. He remains on these indefinitely with good clinical response.

Metamycoplasma *Hominis* and Ureaplasma are considered normal urogenital flora and rarely reported as concerning in extragenital tract infection. Bacteraemia may go undetected for prolonged periods due to the slow-growing nature of the organisms as well as lack of growth in standard automated blood culture methods. While donor derived and opportunistic infection are not-uncommon, there are only a handful of cases of infective endocarditis in the literature. There is no consensus from international guidelines on optimal regimen or duration of treatment. This case highlights the need for vigilance for atypical pathogens in the transplant population.

Abstract No.90

THE ONGOING CHALLENGE OF ANTIBODY MEDIATED REJECTION (AMR): A SINGLE-CENTRE REVIEW OF INCIDENCE AND PATIENT CHARACTERISTICS

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Background and Aims: Antibody-mediated rejection (AMR) is a major cause of premature kidney allograft loss. We aimed to describe clinical, immunological, and treatment outcomes of AMR patients in a single centre.

Methods: Kidney-only and simultaneous pancreas-kidney (SPK) transplant recipients with biopsy-proven AMR between January 2022 to December 2024 were included. Demographic, biochemical, histological, immunological data, including donor-specific antibodies (DSA), were collected.

Early AMR was defined as occurring within 6 months post-transplantation, and late AMR beyond 6 months. Clinically significant DSA had a mean fluorescence index (MFI) greater than 500.

Results: There were 1011 active transplants at commencement, with 267 new transplants during the study. 72 patients had biopsy-proven AMR with a mean age of 47.7 (±15.2) years. 17 (23.6%) had previous transplants. 70 (97.2%) were on tacrolimus and mycophenolate, with 29 (40.3%) having tacrolimus levels <5 microg/L. 8 (11.1%) admitted to non-adherence.32/72 (44.4%) had early AMR (median 0 months, IQR 0-4) and 40/72 (55.6%) had late AMR (median 48.5 months, IQR 16.5-123.5).9 (12.5%) had preformed DSA, 20 (27.8%) developed de novo DSA, and 40 (55.6%) had no DSA. 43 (59.7%) had glomerulitis/peritubular capillaritis, 19 (26.4%) had vascular rejection, and 45 (62.5%) were C4d positive. 24 (33.3%) were reported as AMR despite negative DSA and C4d.

AMR treatment included glucocorticoids (n=58), intravenous immunoglobulin (n=57), plasma exchange (n=41), and anti-thymocyte globulin (n=10). Outcomes are summarised in Figure 1.

Conclusion: AMR presented heterogeneously in timing, histology, and DSA characteristics. Most had no identifiable DSAs, and DSA-positive patients had poorer outcomes.

Figure 1: Treatment outcomes of AMR patients, stratified based on timing and presence of DSA

Abstract No. 91

URINARY TRACT INFECTION POST TRANSPLANT: UNUSUAL CAUSE OF GRAFT DYSFUNCTION

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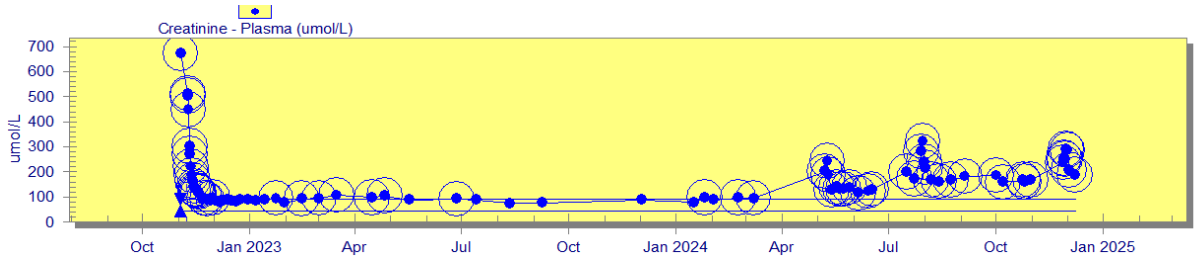
We report two Renal transplant cases with graft dysfunction, sterile pyuria and renal biopsy demonstrating acute pyelonephritis due to Ureaplasma Urealyticum.

Case 1: A 25-year-old female had deceased donor second renal transplant for focal segmental glomerulosclerosis. Her baseline creatinine was 95umol/l at 1 year. At 14 months, she presented with graft dysfunction. She lacked features of urinary tract infection except persistent leukocyturia. Renal biopsy showed acute pyelonephritis with severe neutrophil infiltration, white cell casts and patchy abscesses. Multiple urine samples were negative for Mycobacteria, fastidious and sexually transmitted organisms. Finally, urine returned positive for Ureaplasma Urealyticum DNA on PCR testing. Direct Bacterial Sequencing on renal biopsy was negative for Ureaplasma. Prolonged course of azithromycin and moxifloxacin was undertaken for 6 weeks. The urine repeat PCR was negative. Her graft function settled at 150umol/l. Repeat renal transplant biopsy two months later showed resolution of pyelonephritis.



Case 2: 51-year-old female had deceased donor renal transplant for hypertension four years prior to presentation. She had progressive graft dysfunction. Her immunosuppression levels were therapeutic. Her urine microscopy had 10-100 leucocytes without nitrites and low urine pH of 6.5. Patient's renal biopsy showed chronic pyelonephritis. Extended testing of urine showed positive Mycoplasma hominis and Ureaplasma pavum. Direct bacterial sequencing was not performed on renal biopsy. She was treated with six weeks of oral moxifloxacin and doxycycline with improvement of her graft function and biopsy after four months.

Conclusion

Clinicians should consider unusual organisms for analysis of graft dysfunction in an immunocompromised host.

Abstract No. 92

THIOPURINE SHUNTING IN RENAL TRANSPLANT RECIPIENT: PRE-PREGNANCY CONSIDERATIONS WITH AZATHIOPRINE ANDAMP; ALLOPPURINOL

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Aim To describe the case of a female renal transplant recipient with thiopurine shunting, resulting in hepatotoxicity from azathioprine use, and to evaluate the efficacy of azathioprine-allopurinol co-therapy in mitigating this effect while preparing for pregnancy.

Methods A renal transplant recipient in her 40s with systemic lupus erythematosus (SLE) was transitioned from mycophenolate to azathioprine due to its safer profile in pregnancy. Despite normal thiopurine S-methyltransferase (TPMT) activity, she exhibited excessive thiopurine shunting, leading to hepatotoxicity. The patient's liver function tests (LFTs) and thiopurine metabolites were monitored before and after initiation of low-dose azathioprine with allopurinol.

Results Initial azathioprine monotherapy resulted in elevated 6-methylmercaptopurine (6-MMP) levels and hepatotoxicity. Discontinuation of azathioprine led to LFT improvement. Upon reintroduction with allopurinol co-therapy, metabolite levels normalised, LFTs improved, and immunosuppressive efficacy was maintained.

Conclusion This case highlights a crucial yet underrecognised metabolic complication of azathioprine in transplant recipients. Thiopurine shunting can lead to severe hepatotoxicity even in patients with normal TPMT activity. Progressive thiopurine shunting during pregnancy further emphasises the importance of vigilant monitoring to ensure optimal maternal and foetal outcomes. Azathioprine-allopurinol co-therapy offers a targeted metabolic intervention, effectively redirecting thiopurine metabolism to enhance treatment safety while preserving immunosuppression. These findings emphasise the importance of personalised therapeutic strategies and metabolic monitoring in optimising pregnancy outcomes for renal transplant recipients.

Abstract No. 93

SUBOPTIMAL TIMING OF BLOOD GLUCOSE MONITORING AFTER KIDNEY TRANSPLANTATION

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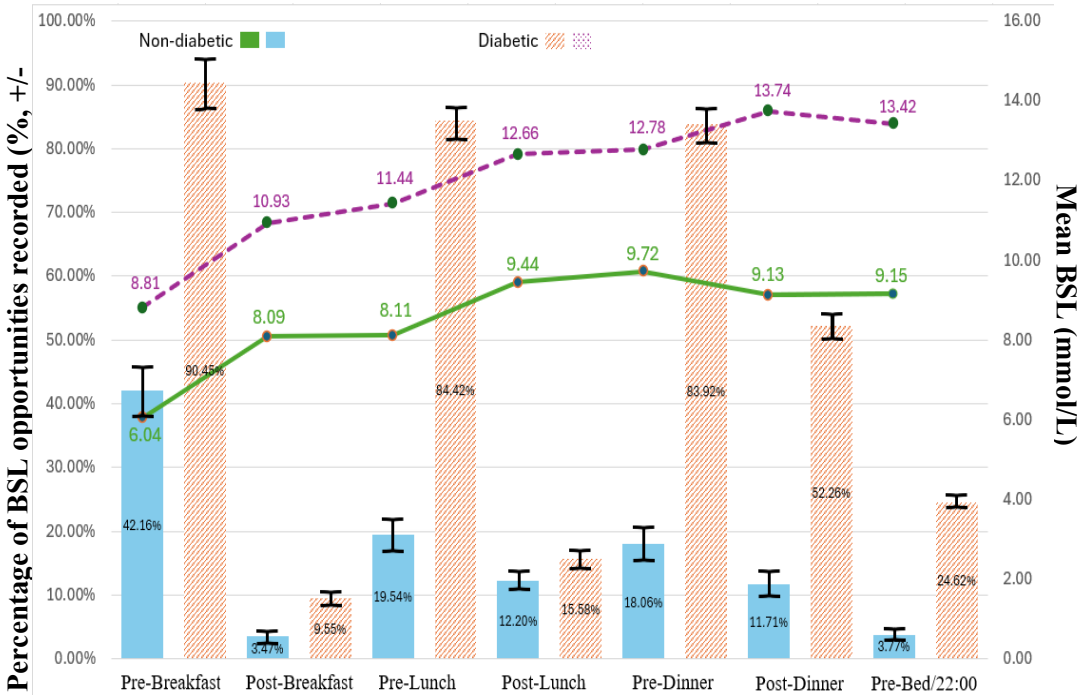
Introduction: Post-transplant diabetes mellitus (PTDM) is associated with increased risks of cardiovascular events and mortality. Steroid induced hyperglycaemia is an antecedent of PTDM and is a post-prandial phenomenon, best reflected in blood glucose level (BGL) measured 2hours after lunch. **Aims:** To evaluate how often the BGLwas measured 2 hours post-lunch in kidney recipients during their index transplant admission at Royal Prince Alfred Hospital (RPA).

Methods: We conducted a retrospective cohort study of all patients who received a kidney transplant at RPA during 01/07/2023-01/07/2024. Electronic medical records were accessed to extract BGL timing, frequency and results. Patients were stratified by presence or absence of diabetes pre-transplant.

Results: Of 100 patients transplanted, 4 were excluded (early graft nephrectomy n=2, ICU admission >1 week n=2), thus 96 were included, 15 with pre-transplant diabetes. Of all recording opportunities, post-lunch BGL was measured 12.2% (non-diabetics) and 15.6% (known diabetes) of the time (Figure). Of all BGLs recorded, 11.0% (non-diabetics) and 4.3% (known diabetes) were post-lunch measurements. During each admission, at least one BGL was recorded post-lunch in 68.8% (non-diabetics) and 73.3% (known diabetes). Fasting BGL was the most frequently measured timepoint.

Conclusions: These findings demonstrate a lack of optimal BGL monitoring post-renal transplant at a single centre. Strategies designed to improve practice at our centre, and audits to determine the generalisability of these findings are warranted.



Abstract No. 94

DISSEMINATED INVASIVE ASPERGILLOSIS REQUIRING RENAL ALLOGRAFT NEPHRECTOMY: A CASE REPORT

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Background: Invasive aspergillosis is rare but can be a devastating complication of renal allograft transplantation.
Case Report: We present the case of a 53-year-old man with a history of diabetic kidney disease who underwent renal allograft transplantation from his wife. There were unexpected surgical complications, and he received a five-day course of intravenous thymoglobulin in the context of delayed graft function and to avoid allograft biopsy. He achieved good graft function by two weeks post-transplant but presented seven weeks post-transplant with pleuritic chest pain. CT imaging revealed a new large soft-tissue mass in the anterior upper lobe of the left lung (figure 1), leading to the diagnosis of biopsy-proven pulmonary aspergillosis. Biopsies of an axillary lymph node and subcutaneous nodule confirmed disseminated disease. Antifungal therapy was initiated along with minimisation of immunosuppression, but with ongoing radiological progression one week later, allograft nephrectomy was performed to facilitate cessation of immunosuppression. Following graft nephrectomy, the patient was established on haemodialysis. Histology of explanted allograft also demonstrated aspergillosis with abscess formation.
Conclusion: This case highlights the challenging balance between immunosuppression and infection in transplantation, where difficult decisions such as sacrificing an allograft to preserve life may be necessary. The impact of graft nephrectomy in this case was profound including the surgical risks of the operation, physiological impact of return to dialysis and the emotional distress of losing a transplanted kidney donated by a loved one. Another consideration is immunological sensitisation potentially complicating future transplantation. Multidisciplinary care was essential in delivering patient care.

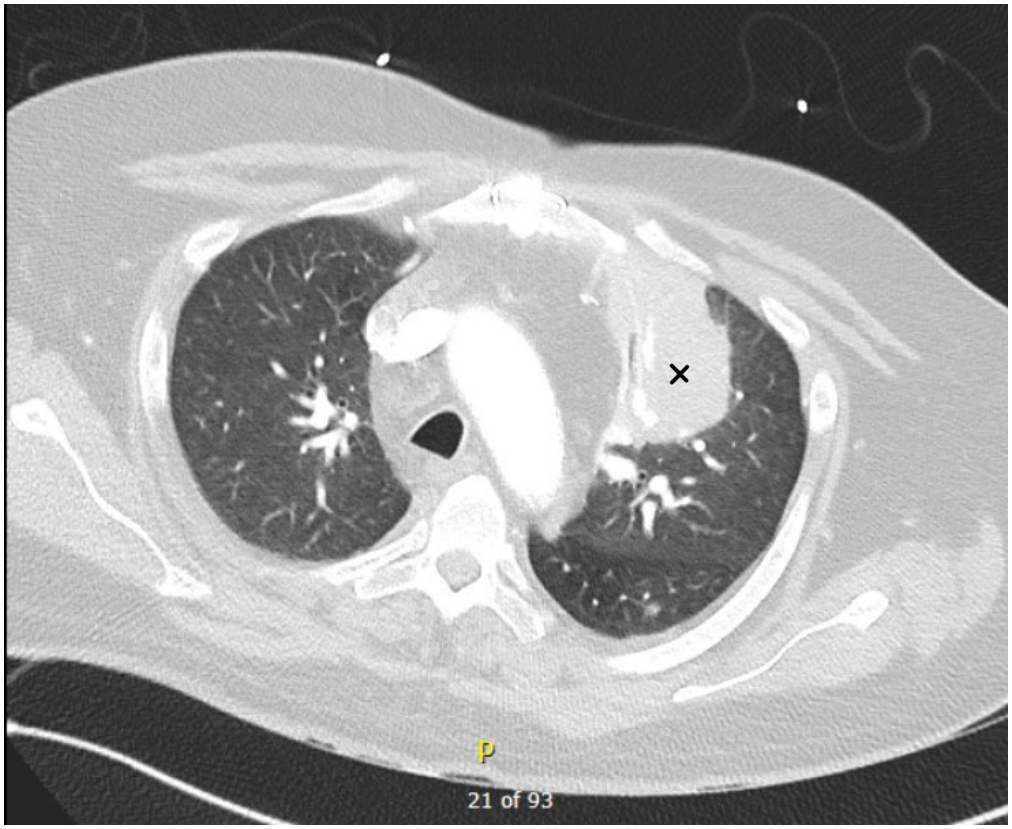

Figure 1: CT Pulmonary Angiogram of patient on presentation demonstrating a large (47mm x 55mm x 39mm) left soft-tissue apical mediastinal mass (marked x).

Abstract No. 95

A CHALLENGING TRANSITION: CASE SERIES OF DEDICATED YOUNG ADULT TRANSPLANT CLINIC

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Aim: Review the outcomes of young adults transitioning from paediatric to adult health care through Mater Hospital South Brisbane Young Adult Kidney Transplant Clinic (YAKTC).

Background: Young adulthood (defined between 17-25 years) is a high-risk period for solid organ allograft loss. While this risk is multifactorial, difficulty transitioning from paediatric to adult health care services with increasing independence is thought to be a major contributor.

Methods: We retrospectively reviewed all kidney transplant recipients enrolled in the YAKTC Clinic from 2016-2024. Graft outcomes included rejection, graft loss, pyelonephritis. Patient outcomes included primary kidney pathology, age at clinic referral/discharge and at transplant, attendance, cancer, death.

Results: There were 38 patients, 49% male, median age 18 at first visit, followed up for 2.5 years (IQR 1-5). Mean attendance 85% of all scheduled appointments. 8 patients (21%) had a rejection episode. 7/8 (88%) T-cell mediated and 5/8 (63%) within the first year of referral. The median age at rejection was 18.5 years (IQR 18-20.75). 3/8 patients lost their graft (8% overall). Mean attendance 85% in rejection cohort and 69% in graft loss subgroup. 1 patient lost their graft to recurrent pyelonephritis. 1 patient died, secondary to post-transplant lymphoproliferative disease.

Conclusion: In this retrospective analysis of 38 young adult kidney transplant recipients, rates of graft loss due to rejection were low. The first year following transition into clinic was the highest risk period for rejection episode. Clinic attendance was similar in those with a rejection episode, but lower in those who lost their graft.

Abstract No.96

THE SAFETY AND EFFICACY OF ENDOBRONCHIAL BALLOON DILATATION FOLLOWING LUNG TRANSPLANTATION: A SINGLE CENTRE RETROSPECTIVE AUDIT

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Background: Stricture formation is a common airway complication following lung transplantation (LTx). In patients with allograft dysfunction or symptoms, bronchoscopic evaluation and endobronchial balloon dilation (EBD) is a common therapeutic approach. Limited available evidence suggests EBD is a safe therapy but requires multiple sessions to achieve sustained efficacy.

Aims: To evaluate the safety and efficacy of EBD for the management of endobronchial strictures following LTx.

Methods: We retrospectively reviewed theater records in a single metropolitan LTx center between the 1st of January 2020 and 31st of December 2024 to identify all EBDs performed in LTx patients. EBD performed on patients outside the timeframe were included for analysis of procedure recurrence. Simple statistics were performed in Microsoft Excel.

Results: We identified 26 patients who had endobronchial dilatation performed with a total of 98 EBD performed in these individuals. Across all cases there were 9 (9.3%) minor complications of which 7 (7.3%) were minor bleeding and 2 (2.0%) were cartilage rupture. There were no major complications associated with EBD. Of the procedures performed 9 (9.3%) failed to achieve adequate bronchial dilatation, 17 (65%) of patients required repeat EBD and 6 (23%) patients required endobronchial stent insertion.

Conclusions: EBD is a safe and effective treatment for stricture formation following LTx with few failing to achieve adequate dilatation. However, the majority of patients required repeat EBD with some requiring endobronchial stent insertion.

Table 1: Characteristics of patients undergoing EBD for post LTx airway strictures.

Characteristic	Value
Number of patients	26
Number of dilatations	
n	98
Mean ± SD	3.8 ± 3.9
Repeat Dilatation (%)	17 (65)
Age, years (MEAN ± SD)	53.8 ± 13.8
Sex	
Male (%)	19 (73)
Female (%)	7 (27)
Transplant Type (%)	
Bilateral	18 (69)
Single	8 (31)
Left	5 (63)
Right	3 (37)
Transplant Conditions	
Emphysema/ COPD	6 (23)
ILD	15 (58)
Bronchiectasis	2 (8)
CLAD	2 (8)
Obliterative bronchiolitis	1 (4)
Donor Ischemic Time (MEAN ± SD)	297 ± 100
Primary graft dysfunction (%)	
Present	3 (12)
Absent	23 (88)
Time to first dilatation from LTx, days	
Mean (Range)	335 (66 – 2071)
Stenotic Location (%)	
Anastomotic	14 (54)
Lobar/segmental only	7 (27)
Anastomotic plus lobar/segmental	5 (19)
Balloon Dilatation size maximum (%)	
8mm	1 (4)
10mm	4 (15)
12mm	19 (73)

Abstract No. 97

CYTOMEGALOVIRUS IMMUNE MONITORING HAS LIMITED UTILITY TO GUIDE PRIMARY PROPHYLAXIS IN D+/R- LUNG TRANSPLANT RECIPIENTS

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Aims: Cytomegalovirus (CMV) contributes to significant morbidity in lung transplant recipients, particularly those with donor-positive/recipient-negative (D+/R-) serostatus. The Quantiferon-CMV (QF-CMV) assay measures cellular immunity against CMV and has potential to inform personalized risk stratification and tailor antiviral prophylaxis. This study aims to explore acquisition of CMV-specific immunity and burden of CMV infection in D+/R- lung transplant recipients.

Methods: We performed a retrospective cohort study of adult D+/R- lung transplant recipients at Alfred Health who underwent QuantiFERON-CMV testing from 2010-2024. Clinical data were collected from medical records. The primary outcome was CMV infection in blood and/or BAL.

Results: 91 patients were included (60% male, median age 58, 92% bilateral transplants). All received valganciclovir prophylaxis (median 11 months). Most (70/91, 77%) developed CMV infection, at a median of 12.4 months post-transplant or 48 days after prophylaxis cessation. This was mostly symptomatic disease, with 51/70 (73%) requiring readmission, 31/70 (44%) experiencing end-organ disease, and 39 (56%) needing intravenous ganciclovir for treatment. In total, 293 QF-CMV assays were performed. Overall, 156 (53%) were negative, 90 (31%) indeterminate and 47 (16%) positive. Of the 153 assays performed in the first 200 days post-transplant, only 5 (3%) were positive, the remainder were negative (84/153, 55%) or indeterminate (63/153, 41%).

Conclusions: D+/R- LTRs are very high risk for CMV infection including significant CMV disease resulting in hospitalization. Patients were very unlikely to develop CMV-specific immunity early post-transplant. Further research is required to define optimal preventative strategies in this high-risk group.

Abstract No. 98

REDEFINING CLINICALLY SIGNIFICANT ANASTOMOTIC STRICTURES TO UNTANGLE BILIARY RECONSTRUCTION IN LIVER TRANSPLANTS FOR PSC

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Aims: We evaluated the incidence of biliary complications (especially clinically significant anastomotic strictures, csBAS) in patients with primary sclerosing cholangitis (PSC) having a duct-to-duct (DD) anastomosis or Roux-en-Y hepaticojejunostomy (HJ).

Methods: A retrospective record review of patients with PSC undergoing liver transplant (LT) at Austin Health between June 1st 2000-December 31st, 2022 was performed. Primary and secondary endpoints were the incidence of biliary strictures (BAS and non-anastomotic strictures [NAS]) and non-stricture complications. A novel definition, extended biliary dilatation program (EBDP), was introduced to evaluate csBAS. Univariable and multivariable regression analyses were performed to identify associations with BAS formation. Patient survival was assessed using a Kaplan-Meier curve.

Results: From 105 transplants performed for 101 patients, 54 (51.4%) and 51 (48.5%) received DD and HJ anastomoses. Mean recipient age and follow up was 47±13 years and 98±69 months, respectively. BAS was more common (48.1% vs 27.5%, OR 2.45, 95%CI 1.09-5.54, p=0.03) and occurred earlier (p=0.001) in the DD group. On multivariable analysis, only anastomotic technique was associated with BAS (DD adjusted OR 3.00, 95%CI 1.19-7.56, p=0.02). No difference was seen in csBAS rates (p=0.53). NAS had a comparable incidence (p=0.53) in HJ and DD groups. Anastomotic revision was exclusively seen in the HJ cohort (p=0.02). No difference was seen in time to NAS, bile leaks, cholangiocarcinoma, graft failure, and cumulative survival.

Conclusion: EBDP as a marker for csBAS mitigates the effects of opportunistic intervention when compared to conventional definitions. DD anastomosis yielded similar outcomes to HJ anastomosis after LT.

Table 1. Incidence of strictures and postoperative biliary tract intervention rates following DD and HJ anastomosis in transplants performed for primary sclerosing cholangitis.

		Total (n=105)	DD (n = 54)	HJ (n = 51)	p value	OR [95% CI]
Strictures (%)		55 (52)	31 (57)	24 (47)	0.29	1.52 [0.70, 3.28]
BAS (%)	Overall	40 (38)	26 (48)	14 (27)	0.03	2.45 [1.09, 5.54]
	Early BAS (% overall)	24 (60)	19 (73)	5 (36)	0.03	4.28 [1.09, 16.83]
NAS (%)	Overall	38 (36)	18 (33)	20 (39)	0.53	0.78 [0.35, 1.72]
	Early NAS (% overall)	12 (32)	7 (39)	5 (25)	0.36	1.91 [0.48, 7.64]
BAS and NAS (%)		21 (20)	12 (22)	9 (18)	0.56	1.33 [0.51, 3.50]
Time to earliest stricture (IQR) months		11.9 (3.8-43.5)	4.9 (2.7-28.2)	38.2 (9.0-73.5)	0.001	
Time to BAS (IQR) months		6.8 (3.0-40.3)	4.8 (2.3-13.1)	41.8 (7.2-88.7)	0.007	
Time to NAS (IQR) months		36.0 (7.7-60.3)	14.5 (4.4-40.7)	49.8 (15.4-77.9)	0.05	
Postoperative intervention	Overall	217	125	92	0.44	
	ERCP	112	112	0	<0.001	
	PTC	105	13	92	0.002	
Extended biliary dilatation program (%)		19 (18)	11 (20)	8 (16)	0.53	1.38 [0.50, 3.75]

DD, duct-to-duct; HJ, Roux-en-Y hepaticojejunostomy; BAS, biliary anastomotic stricture; NAS, non-anastomotic biliary stricture; ERCP, endoscopic retrograde cholangiopancreatography; PTC, percutaneous transhepatic cholangiography.

Abstract No. 99

SODIUM GLUCOSE CO-TRANSPORTER 2 INHIBITORS ARE ASSOCIATED WITH RENAL STABILISATION IN HEART TRANSPLANTATION

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[1]Department of Endocrine and Metabolism, St Vincent's Hospital, Sydney, [2]Department of Heart and Lung Transplantation, St Vincent's Hospital, Sydney

Heart transplant (HTx) recipients are at increased risk of diabetes and CKD, and both are independently associated with increased mortality. Sodium glucose co-transporter 2 inhibitors (SGLT2i) are standard of care for type 2 diabetes mellitus (T2DM), heart failure and chronic kidney disease in the non-transplant population.

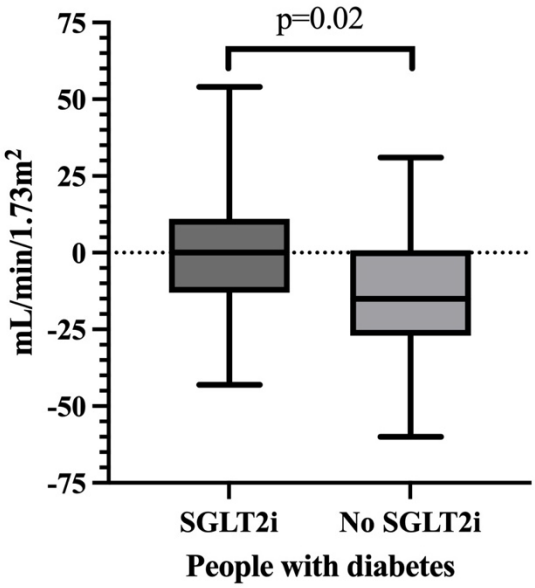
Aims: To assessed renal outcomes in HTx recipients with diabetes exposed to SGLT2i (commenced within 12 months of HTx) compared to HTx recipients with diabetes not exposed to SGLT2i treatment.

Methods: Retrospective observational study of HTx recipients between January 2015 and December 2020 at a single centre. Data was extracted from hospital electronic medical records, with follow up until December 2023.

Results: Of 104 HTx recipients with diabetes, 23 (22%) were exposed to SGLT2i and 81 (78%) were not exposed to SGLT2i. Cohorts were similar in age, sex and underlying cause of heart failure. At baseline, the SGLT2i exposed cohort had higher median creatinine 115 umol/L (IQR 93-138) versus 95 umol/L (IQR 77-119) in those not exposed to SGLT2i (p=0.03). Over three years of follow-up post-HTx, SGLT2i treatment was associated with a median eGFR change of 0 mL/min/1.73m2 (IQR -13 – +11) from baseline, compared to -15 mL/min/1.73m2 (IQR -27 – +1) in patients not exposed to SGLT2i (p=0.02) (Figure 1).

Conclusions: SGLT2i was associated with stable renal function in HTx recipients with diabetes, compared to a decline in patients not exposed to SGLT2i. Further investigation of SGLT2i in HTx recipients, particularly focussing on renal outcomes, is required.

Figure 1: The between groups difference in eGFR change from baseline assessed at three years post heart transplantation



Abstract No. 100

IMPACT OF PREOPERATIVE ANAEMIA ON RECOVERY OUTCOMES POST RENAL TRANSPLANT

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Introduction Anaemia is common in end-stage renal disease and frequently observed in kidney transplant candidates. Low preoperative haemoglobin (Hb) may theoretically impair oxygen delivery, potentially affecting postoperative recovery. While the risks of high Hb are well documented, the impact of low Hb on early post-transplant outcomes remains unclear. This study examines whether preoperative Hb status influences early recovery and complications in adult recipients of cadaveric renal allografts.

Method A retrospective audit of 102 adult patients undergoing cadaveric renal transplantation between November 2022 and July 2023 at a tertiary center was conducted. Preoperative Hb was analysed as both a continuous variable and dichotomized (low vs. normal). Primary outcomes included admission length, mobilisation time, return of bowel function, and postoperative complications.

Results Among 102 patients (mean age 50.2±13.3 years), 74 had low preoperative Hb (mean 109±11.5 g/L) and 28 had normal Hb (mean 137±11.3 g/L). There were no significant differences in hospital stay (8.79 vs. 8.04 days, p=0.47), time to mobilisation (1.2 vs. 1.4 days, p=0.28), physiotherapy clearance (2.7 vs. 2.6 days, p=0.71), or bowel function return (3.4 vs. 3.6 days, p=0.46). Wound complications and delirium incidence were similarly low and comparable. Multivariable analysis confirmed preoperative Hb was not a significant independent predictor of early postoperative outcomes.

Conclusions Preoperative Hb status was not associated with prolonged hospitalization, delayed recovery, or increased complications in cadaveric kidney transplant recipients. These findings suggest mild-to-moderate anaemia alone may not critically impact short-term postoperative recovery.

Abstract No. 101

MINIMISATION OF INTRAOPERATIVE HYPOTHERMIA IMPROVES RENAL TRANSPLANT RECOVERY

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Introduction Despite advances in surgical and immunosuppressive management, perioperative factors remain important determinants of renal transplant success. Temperature control is one such factor, with multiple sources in the literature advocating maintenance of intraoperative core temperatures above 35.5°C to reduce postoperative complications. Hypothermia (<35°C) has been linked to adverse outcomes such as delayed graft function, though data on its impact in renal transplants and recovery remain sparse. This audit aimed to evaluate current temperature management practices in adult cadaveric renal transplant recipients at the Princess Alexandra Hospital and assess whether hypothermia influenced postoperative recovery.

Method A retrospective analysis of 102 renal transplants (November 2022–July 2023) evaluated intraoperative temperatures, classifying patients experiencing low temperatures into hypothermic (<35°C) or low-temperature (<35.5°C) groups. Outcomes included hospitalisation duration, mobilisation time and complications. Statistical analyses used t-tests, Wilcoxon, and Fisher's tests.

Results Among 102 recipients (50.2±13.3 years; 55 male, 47 female), 65% had intraoperative temperature monitoring. 9% experienced hypothermia, while 34% had temperatures <35.5°C. Mean minimum temperature was 35.7°C (SD=0.55°C). Patients with <35.5°C had longer median hospitalisation (8 vs. 7 days, p=0.0084). Hypothermic patients required more days to mobilise (median 2 vs. 1 days, p=0.0003). No differences in wound complications or delirium were observed. Demographics did not differ significantly between groups.

Conclusions Suboptimal intraoperative temperatures were common, with <35.5°C linked to prolonged hospitalization and hypothermia delaying mobilization. These findings reinforce ANZCA guidelines advocating rigorous temperature monitoring to improve recovery. Targeted interventions, including standardized warming protocols, warrant prospective evaluation.

Abstract No. 102

ACUTE UPPER EXTREMITY DEEP VENOUS THROMBOSIS POST HEART TRANSPLANT

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Background: Perioperative placement of central venous catheters (CVCs) in the upper extremity veins is ubiquitous in heart transplantation (HTx). The incidence and management of upper extremity deep venous thrombosis (UEDVT) post-HTx however remains undefined.

Methods: After Ethics approval, retrospective analysis of consecutive HTx recipients at Fiona Stanley Hospital was performed using medical records. The primary outcome was incidence of UEDVT and management strategy.

Results: Between 2015-2024, 107 patients underwent HTx (Table 1). 28 patients had UEDVT (n=9 with upper limb or facial swelling), with 26 developing internal jugular vein (IJV) thrombosis, and 2 with subclavian venous thrombosis. 5 UEDVT patients underwent CVC insertion pre-HTx versus 23 patients during HTx. For 11 patients with right IJV thrombosis alternative access was required for endomyocardial biopsy. 21 patients commenced therapeutic anticoagulation (n=14 DOAC, n=4 Warfarin, n=2 intravenous Heparin, n=1 subcutaneous Enoxaparin), and 2 underwent thrombectomy. Anticoagulation duration was variable, with n=5 indefinite anticoagulation, n=2 had unclear duration of UEDVT therapy due to anticoagulation for persistent thrombosis elsewhere or multiple interruptions for return to theatre; of the remainder (n=14), median duration was 150 days [IQR 36.75-202]. 10 patients had complete thrombus resolution. Minor bleeding was reported in 4 patients. Compared to patients without UEDVT, the UEDVT cohort had significantly higher dialysis rates (42.9% vs. 22.8%, p=0.04), longer donor ischaemic times (256.9 vs. 210.9 minutes, p=0.03)), and longer median CVC duration (19.5 vs. 10 days, p=0.0006).

Conclusion: UEDVT incidence post-HTx was high (26.2%), with a significant impact on post-HTx care and highly variable management.

Table 1. Baseline characteristics of heart transplant recipients (HTx) with upper extremity deep venous thrombosis versus those without.

Total population (n = 107)	UEDVT cohort (n = 28)	No UEDVT cohort (n = 79)	P-value
Age (years)	50 (± 12.7)	52 (± 14.0)	0.31
Sex	Male: 16 (57.1%) Female: 12 (42.9%)	52 (65.8%) 27 (34.2%)	0.41
Donor Ischaemia time (minutes)	256.9 (± 113.5)	210.9 (± 107.9)	0.03
Median CVC duration (days)	19.5 [IQR 13.5-33.5]	10 [IQR 6-15]	0.0006
Transplant length of stay (days)	44.2 (± 49.9)	24.7 (± 26.4)	0.003
Preoperative platelet count	213 (± 51.2)	204.4 (± 66.5)	0.129
Preoperative albumin	41.0 (± 5.3)	41.9 (± 5.3)	0.977
Elective transplant admission	23 (82.1%)	66 (83.5%)	0.86
>240 minute donor ischaemia time	12 (42.9%)	23 (29.1%)	0.19
Prophylactic anticoagulation	24 (85.7%)	77 (97.4%)	0.02
Prior venous thromboembolism	6 (21.4%)	5 (6.3%)	0.02
Transvenous devices	18 (64.3%)	53 (67.1%)	0.79
Lead retention after transplant	3/18 (16.7%)	4/53 (7.5%)	0.27
Thrombophilia	4 (14.3%)	7 (8.9%)	0.42
Cancer history	1 (3.6%)	11 (13.9%)	0.14
Chronic kidney disease	22 (78.6%)	50 (63.3%)	0.14
Acute renal replacement therapy postoperatively	12 (42.9%)	18 (22.8%)	0.04
Chronic liver disease	7 (25%)	10 (12.7%)	0.13
Liver cirrhosis	3 (10.7%)	4 (5.1%)	0.11

Abstract No. 103

INCREASING INCIDENCE AND PREVALENCE OF DIABETES AFTER HEART TRANSPLANTATION: A CASE FOR INTEGRATED DIABETES CARE

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Heart transplantation (HTx) survival rates have improved over the last 20 years, and there has been a greater focus on post-transplant care. Diabetes is common after transplantation and may be pre-existing (type 2 diabetes mellitus, T2DM) or develop after transplant (post-transplant diabetes mellitus, PTDM). Our institution introduced a dedicated endocrine registrar and clinic integrated into the heart and lung transplant unit in 2015.

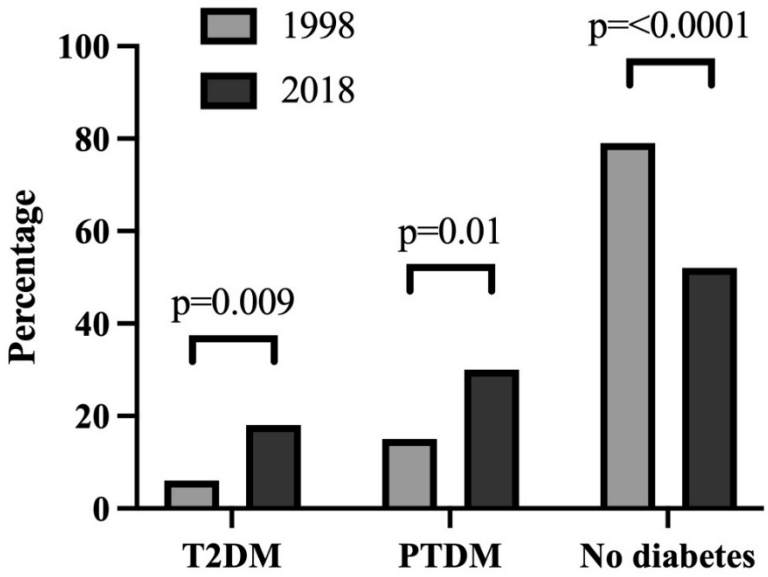
Aims: To compare the incidence and prevalence of diabetes in HTx recipients in two cohorts separated by 20 years.

Methods: Retrospective audit comparing the prevalence of T2DM and cumulative 2-year incidence of PTDM in consecutive HTx recipients in 1998 and 2018 at the same tertiary referral teaching hospital.

Results: There were 88 patients in the 1998 cohort and 141 in the 2018 cohort. The prevalence of T2DM at the time of HTx increased from 6% (n=5) in 1998 to 18% (n=25) in 2018 (p=0.009); and the incidence of PTDM increased from 15% (n=13) in 1998 to 30% (n=42) in 2018 (p=0.01) (Figure 1). Routine HTx immunosuppression differed between the two cohorts. In the 1998 cohort, maintenance immunosuppression consisted of cyclosporin, azathioprine and corticosteroids. Whereas the 2018 cohort were routinely treated with tacrolimus, mycophenolate and weaning corticosteroids.

Conclusions: The incidence and prevalence of diabetes after HTx at our institution has increased over 20 years. With increasing HTx survival and rates of diabetes, endocrinologists should be incorporated into the care teams of transplant recipients. Further studies of diabetes therapies in this increasing diabetes cohort is warranted.

Figure 1: Prevalence of diabetes in heart transplant recipients



Abstract No. 104

VALIDITY OF KIDNEY TRANSPLANT OUTCOMES IN THE ANZDATA REGISTRY: A COMPARISON WITH CLINICAL TRIAL DATA

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Background. Clinical registries capture data that is used to assess quality of clinical care, inform health service planning, and enable health outcomes research. Confidence in data validity is critically important. **Methods.** We evaluated the validity of data within the ANZDATA registry by comparison with data for the same patients from the database of a rigorously monitored, prospective, industry sponsored clinical trial. We performed deterministic linkage between the ANZDATA Registry and A2309 trial database. Agreement between the datasets was assessed using kappa statistics for variables including age, sex, donor sex, donor type, ethnicity, primary kidney disease, acute rejection, graft function, graft failure, and death.

Results. All 95 A2309 participants from Australia and New Zealand were matched. Agreement for age, sex, donor sex, and donor type was perfect (κ=1.00). Ethnicity, primary kidney disease, and graft function over time showed moderate-good agreement. Occurrence of acute rejection demonstrated good overall agreement (κ=0.62) (Table 1). Graft failure and death exhibited almost perfect concordance (κ=0.85 and 1.00, respectively).

Conclusions. ANZDATA registry provides reliable data for key transplant outcomes. Subtle differences in nomenclature, definitions and timing may hamper comparisons between registries and other datasets and this could be improved by standardisation.

Table 1. Agreement of acute rejection, graft failure and death between ANZDATA and A2309 study

Outcome			A2309			Agreement %	Kappa
			No	Yes	Total		
Acute rejection	ANZDATA	No	69	4*(4**)	77	87	0.62
		Yes	4	14	18		Good
		Total	73	22	95		
Graft failure	ANZDATA	No	91	1	92	99	0.85
		Yes	0	3	3		Very good
		Total	91	4	95		
Death	ANZDATA	No	92	0	92	100	1.00
		Yes	0	3	3		Very good
		Total	92	3	95		

*one case was classified as Banff IIB in 2309 but Renal Vein Occlusion in ANZDATA
**four cases were classified as "rejection" in 2309 were not classified as rejection using Banff criteria
ANZDATA, Australia and New Zealand Dialysis and Transplant Registry.

Abstract No. 105

RISK-STRATIFIED ECHOCARDIOGRAPHIC EVALUATION FOR PATIENTS WITH KIDNEY FAILURE PRIOR TO KIDNEY TRANSPLANTATION

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Aims: Individuals with advanced chronic kidney disease (CKD) experience a high risk of cardiovascular disease and typically undergo echocardiographic evaluation during kidney transplant assessment. The optimal frequency of echocardiographic surveillance in patients awaiting transplantation remains unclear.

Methods: Adult patients with stage IV or V CKD, who were scheduled for a living donor kidney transplant, active on the transplant waiting list, or undertaking pre-transplant assessments, were recruited into a prospective, single-centre cross sectional study. All participants underwent resting transthoracic echocardiogram (TTE), in addition to standard pre-transplant screening. Demographic data was collected using electronic medical records. Analysis was conducted using ANOVA and Chi-square testing.

Results: To date, thirty-one participants (mean age 55 years, 74% male) have been recruited. Nineteen patients were receiving haemodialysis, 9 patients were on peritoneal dialysis and 3 patients had non-dialysis CKD. New echocardiographic findings suggestive of heart failure (HF) were identified in 5 patients (16.1%), when compared to their transplant assessment TTE (range 7-16 months prior to study TTE). Abnormal findings included left ventricular systolic and diastolic dysfunction, moderate valvular disease and moderate pulmonary hypertension. Transplantation was deferred for one patient who required coronary artery stenting. A history of ischaemic heart disease was associated with an increased risk for new HF (80% vs. 11.5%, p=0.01). Diabetes (80% vs. 42.3%, p=0.1), or absence of renin-angiotensin-aldosterone-system blockade (80% vs. 53.8%, p=0.3), were associated with a non-significant increased risk for new HF.

Conclusion: The frequency of pre-transplant echocardiographic surveillance may need to be stratified according to individualised risk for cardiovascular disease.

Abstract No. 106

COMPARING AND COMBINING GLOBAL IMMUNE BIOMARKERS TO PREDICT INFECTIONS IN LUNG TRANSPLANT RECIPIENTS

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Aims: Immune biomarkers could measure immunosuppression & predict infection in transplant recipients. The aim of this study was to evaluate the absolute lymphocyte & neutrophil counts (ALC, ANC), Quantiferon®-Monitor (QFM) & the mitogen assay alone & combined for prediction of serious opportunistic infections (SOI) in lung transplant recipients.

Methods: Patients were recruited from 2015-17, with blood collected at 3, 6 and 12 months post-transplant. The primary outcome (SOI) was evaluated between 3-6, 6-12 and 12-18 months. Univariate/multivariate logistic regression were used to calculate odds ratios (OR).

Results: Our cohort included 79 patients (median age 61, 60% male, 86% bilateral). SOI occurred in 12 (15%), 18 (24%) & 4 (5%) patients between 3-6, 6-12 & 12-18 months respectively. Low ALCs were associated with SOI between 3-6 (median 1.4 vs. 1.0x1000 cells/μL, OR 0.19 per unit increase, 95% CI 0.05-0.73, p=0.02) & 6-12 (1.3 vs.0.8x1000 cells/μL, OR 0.29, 0.10-0.84, p=0.02) months. Area under the ROC curve for all biomarkers combined were slightly higher compared to ALC alone (Table). Beyond 12 months predictions were less accurate.

Conclusions: Immune biomarkers could measure net state of immunosuppression & identify transplant recipients at risk for serious infections. Here, ALC was the most useful single test although incorporating 3 other biomarkers modestly improved predictions. Negative predictive values were high indicating that patients with high ALC values were unlikely to experience SOI. These findings could inform clinical decision-making regarding immunosuppression dosing, intensity of clinical/virologic monitoring and antimicrobial prophylaxis.

Table: Performance characteristics for the four immune biomarkers alone and in combination for each time period.

Time period	Model	Optimal cutoff	Specificity (%)	Sensitivity (%)	PPV (%)	NPV (%)	AIC	AUC (%)
3-6 months	ALC	1.1	65%	73%	25%	94%	59.7	75%
	ANC	2.9	79%	46%	26%	90%	67.7	53%
	Mitogen	0.46	82%	64%	37%	93%	60.6	74%
	QFM	10	62%	82%	26%	96%	63.5	64%
	ALC + ANC	-	74%	64%	28%	93%	61.6	75%
	ALC + mitogen	-	74%	82%	33%	96%	57.7	80%
	ALC + QFM	-	68%	82%	29%	96%	60.7	76%
	All	-	71%	91%	33%	98%	61.6	80%
6-12 months	ALC	1.0	76%	65%	46%	87%	75.4	70%
	ANC*	5.3	64%	53%	32%	81%	81.3	55%
	Mitogen	8.4	57%	59%	30%	81%	80.8	57%
	QFM	60	60%	65%	34%	84%	81.0	59%
	ALC + ANC	-	68%	77%	43%	90%	76.8	69%
	ALC + mitogen	-	66%	71%	40%	88%	76.8	71%
	ALC + QFM	-	74%	65%	44%	87%	77.3	69%
	All	-	76%	65%	46%	87%	80.1	70%
12-18 months	ALC	1.0	70%	75%	13%	98%	34.1	62%
	ANC	1.5	92%	75%	38%	98%	30.8	78%
	Mitogen*	9.38	55%	75%	9%	97%	34.3	61%
	QFM	56	71%	50%	10%	96%	33.8	58%
	ALC + ANC	-	85%	75%	23%	98%	32.4	77%
	ALC + mitogen	-	92%	75%	38%	98%	35.4	73%
	ALC + QFM	-	56%	100%	12%	100%	35.5	66%
	All	-	77%	75%	17%	98%	34.2	84%

*Values refer to patients testing below the calculated optimal cutoffs relative to those testing above, except for the asterisked models where the interpretation is reversed (likely due to poor discrimination).

ALC, absolute lymphocyte count (x1000 cells/μL). ANC, absolute neutrophil count (x1000 cells/μL). QFM, Quantiferon®-Monitor (IU/mL). Mitogen, mitogen component of the QF-CMV assay (IU/mL). PPV, positive predictive value. NPV, negative predictive value. AIC, Akaike information criterion. AUC, area under the receiver operating characteristic curve

Abstract No. 107

PAXLOVID-INDUCED TACROLIMUS TOXICITY AND REVERSAL WITH PHENYTOIN

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Case Report: A 68 year old female kidney transplant recipient presented to her local rural hospital in June 2024 with fevers, myalgias and general lethargy. Her baseline creatinine was 150 micromoles/litre (umol/L) and her usual immunosuppression regime consisted of tacrolimus, mycophenolate and prednisolone. COVID-19 was confirmed and was discharged home on standard dose Paxlovid (nirmatrelvir/ritonavir).

Four days after discharge, she represented with reduced urine output and acute kidney injury (creatinine 232 umol/L) and was urgently transferred to the regional hospital. Her admission tacrolimus level was supra-therapeutic at 134 umol/L. Her tacrolimus was suspended and phenytoin, a potent CYP3A4 inducer, 200mg twice daily was administered for 3 days - which rapidly reduced her tacrolimus level to the therapeutic range. Her acute kidney injury recovered.

On day 4 of her admission, she developed an increasing oxygen requirement requiring intubation, ventilation and broad-spectrum antibiotics with a CT scan demonstrating extensive pulmonary infiltrates. An emergency bronchoscopy did not identify an alternate pathogen. The diagnosis was consistent with COVID pneumonitis. She failed to respond to therapy and passed away 4 weeks after presentation.

Discussion and Conclusion: Tacrolimus is metabolised by the cytochrome P450 (CYP) 3A4 subfamily whilst the ritonavir component of paxlovid is a strong inhibitor of CYP3A4 and can lead to rapidly toxic levels of tacrolimus when co-administered. This case highlights the importance of checking drug-drug interactions when prescribing new medications. It also offers a therapeutic option for reducing supra-therapeutic tacrolimus levels using a potent CYP3A4 inducer, like phenytoin.

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Abstract No. 109

CURRENT KIDNEY ASSESSMENT PRACTICES FOR POTENTIAL LIVING DONORS: FINDINGS FROM A NATIONAL SURVEY OF AUSTRALIAN NEPHROLOGISTS

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Background: A comprehensive assessment of kidney function in potential kidney donors is essential to ensure appropriate and safe donor selection. However, the current parameters used by Australian nephrologists to evaluate kidney function—and any variability in these practices—are not well understood. We aimed to explore the kidney assessment parameters used by Australian nephrologists when assessing potential living donors.

Methods: Between February and April 2024, Australian nephrologists were invited to complete a 20-question web-based survey. The survey collected demographic information and detailed donor assessment practices. Data were analysed using descriptive statistics.

Results: Sixty-nine nephrologists participated in the survey. Methods for routine kidney function assessment included eGFR from serum creatinine (91%), serum creatinine (59%), and eGFR from cystatin C(7%). Half (50%) of respondents performed creatinine clearance via a 24-hour urine collection, while the other half did not. Most (86%) undertake nuclear medicine GFR studies, while 14% do not. For proteinuria 96% used spot urine albumin:creatine ratios (ACR), 64% used spot urine protein:creatinine ratios, and 47% used 24-hour urine protein excretion. Frequently reported exclusion criteria were eGFR <80ml/min/1.73m2 (74%), marked discrepancy in kidney size (7%), spot urine ACR >3.5mg/mmol (50%), history of symptomatic nephrolithiasis (39%), isolated haematuria (6%), and thin basement membrane disease (25%). Commonly applied age-based exclusions for male donors were age < 22-years or >67-years, while female donors were frequently excluded if they were <26-years or >69-years.

Conclusions: Substantial variability exists in kidney function assessment and exclusion criteria among Australian nephrologists, underscoring the need for standardized guidelines to ensure consistent, safe living donor evaluations.

Abstract No. 110

INFECTION TRANSMISSION RISK OF KIDNEY DONORS WITH POSITIVE HEP C ANTIBODY AND NEGATIVE NAT: SYSTEMATIC REVIEW AND META-ANALYSIS

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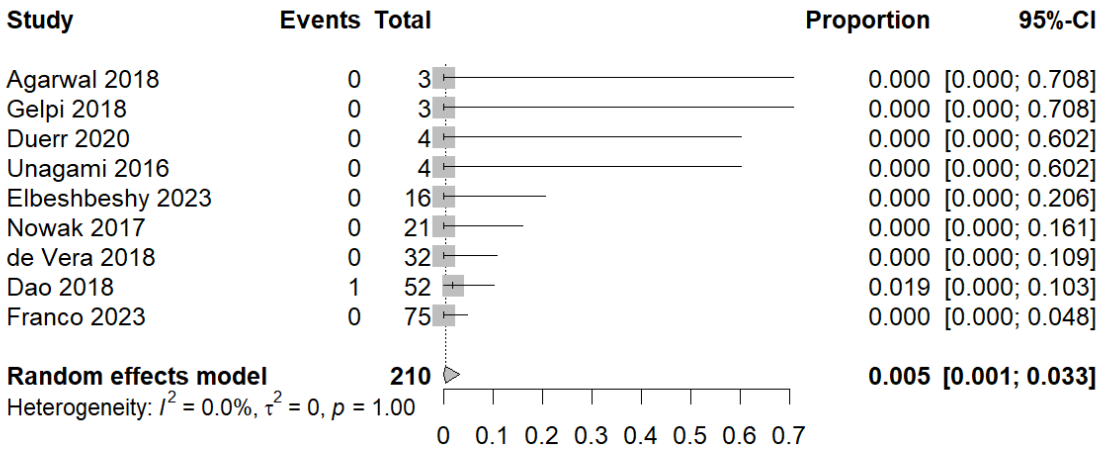
Aims: We sought to determine the hepatitis C virus (HCV) infection transmission risk of kidney donations from donors with past HCV.

Methods: Systematic review and meta-analysis. We queried MEDLINE in November 2024 for kidney transplant cohorts from donors with past HCV (HCV antibody positive, NAT negative) in HCV-susceptible recipients. Bias was appraised using a modified JBI Critical Appraisal Instrument. NAT positivity in recipients after transplant was categorized as HCV transmission. Transmission proportions were pooled through meta-analysis generalized linear mixed model (GLMM) with random effects. Sensitivity analysis used classic meta-analysis with arcsine transformation.

Results: We included 9 cohorts of 210 recipients from 155 donors with past HCV, 1 of which was a living donor. All recipients were followed for at least 3 months, however, overall follow-up varied widely (3 to 12 months). There was 1 case of HCV transmission which was traced by authors to a false negative NAT result at graft retrieval. The pooled transmission rate was 0.5% (95% CI: 0.1, 3.3%). Sensitivity analysis was 0.1% (95% CI: 0.0, 1.0%). Heterogeneity was minimal (I^2 = 0.0%). 31/158 (19.6%) recipients with reported serology results post-transplant seroconverted without NAT positivity, but there was limited information on time of post-transplant testing or whether results were sustained over time.

Conclusions: The exceedingly low transmission rate, and advancements in hepatitis C testing and treatment, support the use of kidneys from donors with past HCV in transplants as a safe, effective approach.



Abstract No. 111

LIVING DONOR DEMOGRAPHICS IN AUSTRALIA AND NEW ZEALAND: HAVE DISPARITIES INCREASED OVER TIME?

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Aims: The incidence of living kidney donation in Australia has declined, while New Zealand (NZ) has seen continued growth. We aimed to assess reasons for these divergent trends by investigating changes over time in; (1) donor demographics and (2) proportion of living donors (LD) with comorbidity *at higher risk* for decline in renal function.

Methods: We included LDs (2004-2023) from ANZDATA Living Kidney Donor Registry. *Higher Risk* (HR) donors were defined as having one of; hypertension, diabetes mellitus, proteinuria, glomerular filtration rate (GFR)<80mL/min/1.73 m² or BMI>35kg/m². Changes were analysed using Poisson, logistic and linear regression.

Results: Australian (5040, 79%) and NZ (1358, 21%) LDs had a mean age of 49±11yrs, were predominantly female (57% vs 59%) and Caucasian (87% vs 77%). In NZ the incidence of donation remained stable in women (IRR 1.08, CI 0.98-1.18) and increased in men (IRR 1.19, CI 1.03-1.28) with a 28% increase for males <35 years (IRR 1.28, CI 1.01-1.64) compared with a decline for both sexes in Australia. Over time Australian LDs became older (p<0.001), more socio-economically advantaged (p<0.001), and less likely to be Indigenous (p<0.001) whilst there was an increase in Māori(p=0.005) and non-white(p<0.001) LDs in NZ. HR donors (1261, 20%) reduced over time (p<0.001), were greater in Australia (p<0.001) and increased with age (p<0.001) and female gender (p=0.039).

Conclusion: The donor landscape has changed over time in Australia and NZ with regards to socio-demographic factors. Further evaluation into living donation accessibility for ethnically and socio-demographically diverse populations is warranted.

Abstract No. 112

IDENTIFYING STRATEGIES FOR DISSEMINATING RESEARCH TO PATIENTS WITH CHRONIC KIDNEY DISEASE AND CAREGIVERS: A WORKSHOP REPORT

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Background: Health research results are primarily disseminated through scientific peer-reviewed journals and are not readily accessible to patients and caregivers, which can impede informed decision-making and limit the impact of research on patient outcomes. The aim of the workshop was to identify strategies to disseminate research in chronic kidney disease (CKD) to patients and caregivers.

Methods: We held a national workshop with patients, caregivers (n=27), and health professionals (n=54) from Australia. Across ten breakout groups, strategies to disseminate research to patients and caregivers were considered. The transcripts were thematically analysed.

Results: Three themes (strategies) were identified. *Generating interest* encompassed emphasising the benefits and impacts of research, using engaging modes of delivery, increasing visibility in clinical settings, and harnessing popular culture. *Eliminating barriers to access* included ensuring free access to journal articles, translating into different languages, providing plain-language summaries, considering convenience in the context of CKD-related burdens, and maximising exposure. *Demonstrating trustworthiness and repute* entailed filtering for high-quality information and propagating through familiar networks and community-based channels.

Conclusion: Ensuring ease of access to research; drawing attention; and prompting motivation; to engage in research, and instilling confidence in patients/caregivers about the quality of research may support effective dissemination of research to patients with CKD and their caregivers. Adopting patient prioritized models to increase translation of research may support shared decision-making in practice and improve care and patient outcomes.

Abstract No. 113

LIVING KIDNEY DONOR EVALUATION IN AUSTRALIA: A NATIONAL SURVEY OF GUIDELINE AVAILABILITY AND USE

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Background: Australia lacks a current national guideline for living donor evaluation, resulting in considerable variability in assessment practices across centres. Clear and consistent guidelines are vital for optimising donor safety, standardising practices, and maintaining equitable access to transplantation. This study aimed to assess the availability and use of living donor guidelines among Australian nephrologists.

Methods: Between February and April 2024, Australian nephrologists involved in living kidney donor assessment were invited to complete a 26-question online survey. Questions included participant demographics, and guideline availability and use. Data were analysed descriptively.

Results: Thirty-three nephrologists (52% transplant nephrologists; 48% general nephrologists) participated. Forty-eight percent reported they have unit-specific guidelines in oral/shared knowledge form, 27% did not have unit-specific guidelines, and 21% had written guidelines. Ninety-one percent referred to some form of guideline when deciding on donor suitability: 88% consulted the KDIGO Living Donor Guidelines, 55% the archived CARI Guidelines, and 39% ANZKX Guidelines.

Conclusion: Although most Australian nephrologists rely on established international guidelines such as KDIGO, there is inconsistency in how local guidelines are defined and maintained. The reliance on archived or external sources highlights the clear need for comprehensive, up-to-date national guidelines. Standardised, written protocols would reduce variability in donor assessments, enhance donor safety, and enable greater consistency across living kidney transplantation programs in Australia.

Abstract No. 114

INTERSECTIONAL DISADVANTAGE AND ITS EFFECT ON LIVING DONOR KIDNEY TRANSPLANT ACCESS IN AUSTRALIA: A NATIONAL COHORT STUDY

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Aims: To examine how intersectional disadvantage influences access to living donor transplantation in Australia, with a focus on how sociodemographic factors intersect and potentially compound barriers to transplantation.

Methods: We conducted a cohort study using the ANZDATA registry (2006-2023) to explore the associations between patient sociodemographics and outcomes of overall, pre-emptive, non-pre-emptive living donor transplantation (LDT). Cox proportional hazards models for each endpoint, including two-way interactions models for female sex, age, ethnicity, socio-economic position, cause of kidney failure, comorbidity burden and BMI.

Results: A total of 46,684 patients commenced kidney replacement therapy (KRT) during the study period, contributing 165,147 person-years of follow up (female 37%). Two-way interactions revealed a strong association between age and cause of kidney failure ($p<0.001$). Specifically, patients aged 46-65 experienced significantly less access to LDT when kidney failure was due to GN **(aHR 0.80; 95%CI:0.71-0.89),** hypertension/renal artery disease **(aHR 0.55; 95%CI:0.40-0.77),** tubulointerstitial disease **(aHR 0.53; 95%CI:0.44-0.65)** and Other **(aHR 0.56; 95%CI:0.44-0.71).** Pre-emptive LDT also recognised this strong association, however only tubulointerstitial diseases remained significant among those aged 46-65 **(aHR 0.56; 95%CI:0.42-0.74).** No significant two-way interactions were found for non-premptive LDT.

Conclusions: Access to living donor transplantation is challenged by a myriad of sociodemographic factors. Our findings highlight that KRT patients aged 46-65, especially those with GN, hypertension/renal artery disease tubulointerstitial disease and other minor causes, face compounded barriers in access to overall LDT.

Abstract No. 115

BONE MINERAL DENSITY IN YOUNG ADULT KIDNEY TRANSPLANT RECIPIENTS

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Aims: This retrospective study aimed to evaluate factors associated with bone mineral density (BMD) in kidney transplant recipients attending a dedicated Young Adult Clinic at the Mater Hospital in Brisbane.
Methods: There were 22 patients (15 males, 68%), with an average age of 21 ± 3 years. Data including demographics, blood investigations, immunosuppression, previous renal history and BMD results were reviewed cross-sectionally in January 2024 and Spearman's correlation, Wilcoxon test and Kruskall-Wallis test were performed on R.
Results: All had a BMD Z-score of less than 0 (100%) and 8 patients had a Z-score of -2.0 or less (36%). Analysis showed a significant correlation between increased levels of serum phosphate with lower mean Z-score of the whole body (ρ-coefficient -0.45, p-value 0.03). Recipients who received peritoneal dialysis pre-transplant had significantly lower mean whole body BMD measurements compared to recipients on haemodialysis pre-transplant (p-value 0.02).
Conclusion: Young adults with kidney transplant have reduced BMD. Patients with a higher serum phosphate or those who received peritoneal dialysis prior to transplant were associated with lower BMD. BMD in young adult patients with kidney transplants is an area of limited research with rising importance given the increased risk of osteoporosis and uncertainty regarding optimal long-term management in young patients, especially due to fertility implications. Further evaluations should include use of other markers of bone health and longitudinal follow up.

Table 1. Evaluation for associations between bone mineral density (BMD) of the whole body (in absolute values and z score) and different factors in young kidney transplant recipients (n=22, average age 21 ± 3 years). Spearman's correlation and Wilcoxon test were used.

			Mean BMD		Mean Z-score	
			ρ-coefficient	P value	ρ-coefficient	P-value
Years since transplant			-0.42	0.06	-0.16	0.48
Body Mass Index			0.03	0.89	0.26	0.22
Height			0.14	0.54	0.15	0.50
Weight			0.18	0.45	0.41	0.06
Serum Creatinine			0.15	0.50	0.18	0.42
Estimated glomerular filtration rate			-0.05	0.83	-0.21	0.35
Serum bicarbonate			0.07	0.75	-0.14	0.52
Serum phosphate			-0.11	0.63	-0.45	**0.03**
Serum albumin			0.01	0.96	-0.00	0.99
Serum magnesium			0.20	0.42	0.43	0.06
Serum calcium corrected			-0.37	0.09	-0.25	0.25
Parathyroid hormone level (pre-transplant)			0.36	0.16	0.09	0.71
Parathyroid hormone level (post-transplant)			-0.03	0.9	0.16	0.54
Serum 25-hydroxyvitamin D level			-0.02	0.90	0.24	0.30
Total cholesterol			-0.24	0.32	-0.32	0.15
Total cumulative prednisone dose			-0.25	0.27	0.00	0.98
			Mean BMD		Mean Z-score	
		Count	Median (IQR) (g/cm^2)	P-value	Median (IQR)	P-value
Gender	Male	15	0.837 (0.16)	0.58	-1.7 (1.243)	0.21
	Female	7	0.756 (0.14)		-1.0 (1.26)	
Aboriginal/Torres Strait Islander	Yes	1	0.999 (0)	0.16	-0.1 (0)	0.11
	No	21	0.831 (0.14)		-1.7 (1.5)	
Transplant type	Living donor	11	0.851 (0.17)	0.55	-1 (1.71)	0.43
	Deceased donor	11	0.829 (0.14)		-1.7 (1.2)	
Dialysis type pre-transplant	Peritoneal dialysis	6	0.747 (0.07)	**0.02**	-1.9 (1.47)	0.14
	Haemodialysis	5	0.885 (0.12)		-1.3(1.0)	
Immunosuppression agent	Mycophenolate	18	0.834 (0.15)	0.59	-1.7 (1.38)	0.50
	Azathioprine	3	0.874 (0.13)		-0.65 (1.8)	
IV methylprednisolone	Yes	2	0.920 (0.04)	0.21	-0.49 (0.19)	0.07
	No	19	0.829 (0.15)		-1.7 (1.45)	

Abstract No. 117

ROLE OF HUMAN LEUKOCYTE ANTIGEN EPLET MATCHING IN CARDIAC ALLOGRAFT VASCULOPATHY AND ACUTE CELLULAR REJECTION

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Aim: Successful heart transplantation (HTx) hinges on precise Human Leukocyte Antigen (HLA) matching between donor and recipient. HLA proteins act as cellular identification tags, helping the immune system recognise foreign cells, with specific regions, called eplets, determining their immunogenicity. However, eplet-based matching and its impact on long-term transplant outcomes remain underexplored. This study investigates how HLA eplet mismatches influence clinical outcomes, including cardiac allograft vasculopathy (CAV) and rejection in HTx recipients.

Method: HTx recipients from a single institution were retrospectively studied. HLA eplet load was calculated using HLA Fusion MatchMaker software for Class I (*HLA-A, B, C*), Class II (*HLA-DP, DQ*) and combined Class I and II. Rejection and CAV data from routine endomyocardial biopsies, cardiac magnetic resonance imaging (MRI) and coronary angiograms over five years were analysed with generalised linear mixed models and univariate binary or ordinal logistic regression.

Results: Ninety-seven HTx recipients were included. Class II *HLA-DQ* eplet mismatches were linked to an 11% increased risk of moderate-to-severe acute cellular rejection (ACR) (OR=1.11, 95% CI: 1.03-1.19, p=0.0049). When the number of mismatches exceeded 35, the risk of moderate-to-severe ACR surpassed 50%. Due to limited cases, the association between antibody-mediated rejection and eplet mismatches could not be evaluated. No eplet mismatches significantly increased the risk of CAV. Table 1 summarises eplet mismatches and outcomes.

Conclusion: Class II *HLA-DQ* eplet mismatches are an independent risk factor for ACR. Therefore, it is essential to establish clinically relevant thresholds for risk stratification to enhance monitoring and tailored immunosuppressive strategies for high-risk patients.

Relevant Table:

Table 1: Correlation of human leukocyte antigen eplet mismatches and cardiac allograft vasculopathy and acute cellular rejection

	Cardiac allograft vasculopathy+		Acute cellular rejection[a]		Acute cellular rejection[b]	
Type of eplet load	**OR (95% CI)**	**p-value**	**OR (95% CI)**	**p-value**	**OR (95% CI)**	**p-value**
Class I						
Unique & antibody-verified	1.08 (0.96 - 1.21)	0.23	1.05 (0.99 -1.12)	0.075	1.01 (0.94 - 1.08)	0.75
Unique	1.01 (0.66 - 1.56)	0.54	1.02 (1.00 -1.04)	0.10	1.00 (0.98 - 1.03)	0.93
Antibody-verified	1.06 (0.94 - 1.19)	0.33	1.05 (1.00 -1.12)	0.071	1.01 (0.94 - 1.08)	0.78
Total	1.01 (0.97 - 1.06)	0.49	1.02 (1.00 -1.04)	0.056	1.00 (0.98 -1.03)	0.88
Class II						
DP antibody-verified	0.92 (0.78 - 1.10)	0.37	1.04 (0.96 -1.14)	0.31	1.05 (0.95 -1.15)	0.32
DP total	0.91 (0.84 -0.98)	**0.012**	1.00 (0.96 -1.04)	0.97	1.01 (0.96 -1.05)	0.79
DQ antibody-verified	1.01 (0.87 -1.16)	0.94	1.10 (1.02 -1.17)	**0.0077**	1.11 (1.03 -1.19)	**0.0049**
DQ total	0.99 (0.93 -1.07)	0.86	1.05 (1.01 -1.08)	**0.012**	1.06 (1.02 -1.10)	**0.0047**
Unique & antibody-verified	0.97 (0.90 -1.05)	0.49	1.05 (1.01 -1.09)	**0.011**	1.06 (1.01 -1.10)	**0.0097**
Unique	0.99 (0.96 -1.01)	0.31	1.01 (1.00 -1.03)	0.09	1.02 (1.00 -1.03)	**0.042**
Antibody-verified	0.98 (0.92 -1.05)	0.64	1.03 (1.00 -1.07)	0.078	1.03 (0.99 -1.07)	0.15
Total	0.99 (0.96 -1.01)	0.28	1.01 (1.00 -1.02)	0.13	1.01 (1.00 -1.03)	0.074
Class I & Class II						
Unique & antibody-verified	1.00 (0.94 -1.07)	0.92	1.04 (1.01 -1.07)	**0.0043**	1.04 (1.00 -1.07)	**0.033**
Unique	0.99 (0.97 -1.02)	0.62	1.01 (1.00 -1.02)	**0.027**	1.01 (1.00 -1.02)	0.10
Antibody-verified	1.00 (0.95 -1.06)	0.91	1.03 (1.00 -1.06)	**0.025**	1.02 (0.99 -1.05)	0.21
Total	0.99 (0.98 -1.01)	0.57	1.01 (1.00 -1.02)	**0.031**	1.01 (1.00 -1.02)	0.13

+ Cardiac allograft vasculopathy (CAV) was treated as a binary outcome: absence vs presence of CAV, missing data for 36 participants

[a] Acute cellular rejection (ACR) was treated as an ordinal outcome: no, mild, moderate, and severe rejection, missing data for 3 participants

[b] Acute cellular rejection (ACR) was treated as a binary outcome: none & mild vs moderate & severe rejection, missing data for 3 participants

Abstract No. 118

NEPHROLOGIST PERSPECTIVES ON OBTAINING INFORMED CONSENT FOR KIDNEY TRANSPLANT OFFERS WHILE UPHOLDING DONOR CONFIDENTIALITY

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Introduction Kidney transplant offers expose a key tension between maintaining donor confidentiality while providing potential recipients with sufficient information to obtain their informed consent. However there has been limited exploration of the ways in which nephrologists navigate this dilemma.
Aims To explore offer processes and nephrologist priorities for deceased donor kidney transplants, including perspectives on donor confidentiality and recipient informed consent.
Methods 50 nephrologists from Australia and New Zealand participated in semi-structured interviews. Transcripts were thematically analysed.
Results There was wide variation in the amount of information shared with patients at the time of kidney transplant offers, reflecting differing prioritisation of recipient autonomy and donor privacy. Doctors highlighted complex offers, especially those involving marginal donors or increased viral risk organs, as necessitating more information sharing and greater rigor in establishing informed consent. Nephrologists working in transplant centres also described other competing ethical priorities such as guardianship of scarce resources to justify limiting information sharing at the time of transplant.
Conclusion Nephrologists are often conflicted about the amount of information they can provide to potential recipients as part of kidney transplant offers. While nephrologists recognise their legal and ethical obligations to limit information sharing to prevent donor identification, they also feel compelled to give sufficient information for the recipient to appropriately assess the associated risks of a particular transplant offer. Given the growing complexity of kidney offers resulting from expansion of donor acceptance criteria, this is likely to become more problematic in the future.

Abstract No. 119

ESTABLISHING A CORE OUTCOME MEASURE FOR LIFE PARTICIPATION IN CHILDREN WITH CHRONIC KIDNEY DISEASE: A STANDARDISED OUTCOMES IN NEPHROLOGY – CHILDREN AND ADOLESCENTS WITH CHRONIC KIDNEY DISEASE (SONG-CKD) CONSENSUS WORKSHOP REPORT

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Aim: To establish a core outcome measure for life participation in children and young people with CKD. Life participation is of critical importance to children and young people with chronic kidney disease (CKD), their caregivers and health professionals. However, life participation is rarely and inconsistently assessed in trials in CKD.
Methods: Consensus workshops (one in-person [English language], three online [two English and one Spanish language]) were held to discuss and establish a meaningful, relevant and feasible core patient-reported outcome measure for life participation for trials in children with CKD. Transcripts were analyzed thematically.
Results: Over 80 participants, including patients and caregivers, and health professionals from more than 10 countries attended. Four themes were identified including allowing individual interpretation and valuation of life participation; respecting developmental needs; capturing broad perspectives; and enabling widespread implementation.
Conclusion: A core outcome measures for life participation in children with CKD should enable a patient to interpret life participation in their own context, have applicability across the CKD population, and be psychometrically robust and feasible to implement. Measuring life participation in a consistent and meaningful way across trials can better support patient-centered decision making and outcomes.

Abstract No.120

KIDNEY TRANSPLANTATION ACROSS ETHNICITIES IN A SINGLE CENTRE IN AOTEAROA NEW ZEALAND: ARE WE MISSING THE OPPORTUNITY TO TRANSPLANT PEOPLE?

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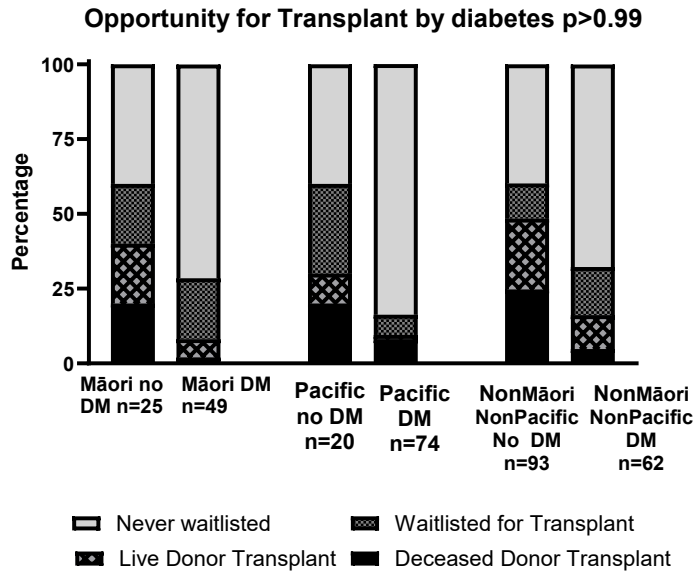
Aims: Huria et al. has demonstrated persistent inequities in dialysis treatment practices between Māori and non-Māori in Aotearoa New Zealand[1]. The purpose of this study is to investigate if there are differences in opportunity for transplantation between ethnicities in our department.

Methods: We conducted a retrospective observational study of all incident renal replacement therapy (RRT) patients in Wellington between Jan 2017 and Dec 2021 using electronic records until November 2024. Graphpad Prism was used for statistical analysis.

Results: 323 incident RRT patients were followed for 4-7 years. Patients were grouped by their primary ethnicity on hospital records into Māori (23%), Pacific (29%) and non Māori non Pacific (NMNP, 48%). There was significant disparity in presence of diabetes (40% for NMNP vs 66% and 78.7% for Māori and Pacific respectively). No statistically significant difference was seen in opportunity for transplantation between ethnicities. Cardiac disease was the most frequent reason for lack of transplantation opportunity across all ethnicities. Opportunity for transplantation is greater in nondiabetics compared to diabetic patients across all ethnicities, although this was not statistically significant (figure 1). There was no significant difference in patient survival from RRT onset or post-transplant mortality in different ethnicities.

Conclusions: Among all ethnicities, there is greater opportunity for transplantation in nondiabetic patients compared to diabetic patients. Diabetes is overrepresented in Māori and Pacific people compared to NMNP people. Early diagnosis and effective management of diabetes are critical strategies for reducing diabetic complications, thereby addressing disparities in access to transplantation opportunities.

Figure 1:



References 1. Huria, T., Palmer, S., Beckert, L., Williman, J., & Pitama, S. (2018). Inequity in dialysis related practices and outcomes in Aotearoa/New Zealand: a Kaupapa Māori analysis. International Journal for Equity in Health, 17(1):27.

Abstract No. 121

QUANTITATIVE URINE PROTEOMICS ANALYSIS REVEALS DIFFERENCES BETWEEN KIDNEY TRANSPLANT REJECTION AND NORMAL PATHOLOGY

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Aim: Kidney rejection remains a leading cause of morbidity in transplant recipients. Although biopsies are the primary diagnostic method, they are invasive and costly. This prospective study aimed to determine whether urine proteomics differ between transplant pathology.

Method: From August 2021 to August 2024, 392 adult kidney transplant recipients undergoing biopsy at the Royal Melbourne Hospital were prospectively enrolled. Midstream urine samples were collected on the day of biopsy and analysed by liquid chromatography–mass spectrometry on a timsTOF Pro using data-independent acquisition. Protein detection (presence/absence) and intensity (label-free quantification) were correlated with biopsy histology. Pairwise comparisons used Chi-square or Fisher's exact tests for detection bases comparisons and intensity based comparisons were conducted using limma's topTable function (adjusted p-value < 0.05).

Results and Conclusion: Biopsies were categorized as normal (n=122), antibody-mediated rejection (AbMR) (n=62), T cell–mediated rejection (TCMR) (n=25), borderline TCMR (n=37), mixed rejection (n=5), acute tubular injury (n=59), and other (n=82). Baseline demographics were similar across groups. Patients with AbMR exhibited higher urinary albumin-to-creatinine ratios compared to normal and TCMR, while serum creatinine was generally elevated in rejection groups compared to normal. Proteomic analysis revealed differences in protein detection patterns between rejection and normal, though borderline TCMR more closely resembles normal than TCMR. Pairwise comparisons between categories indicated difference in label-free quantification intensity patterns across histological diagnoses. Ongoing work will refine proteomic signatures and determine if specific signatures can distinguish normal histology from rejection.

Abstract No. 122

GLP-1 RECEPTOR AGONIST (GLP-1RA) USE IN HEART TRANSPLANT RECIPIENTS: A RETROSPECTIVE SINGLE-CENTRE REVIEW IN WESTERN AUSTRALIA

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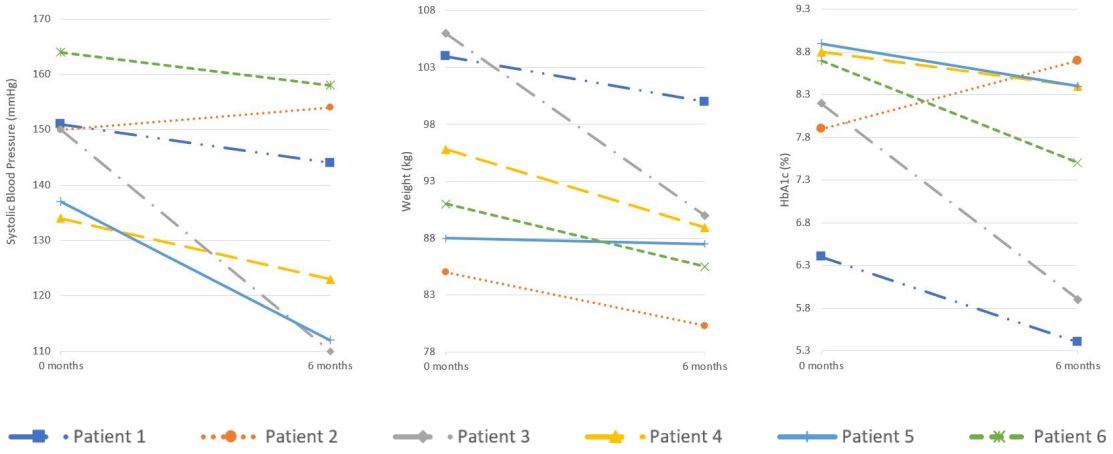
Aims To evaluate the cardiometabolic (CM) profile and effects of GLP-1 receptor agonist (GLP-1RA) therapy on weight, glycated haemoglobin (HbA1c), and systolic blood pressure (BP) in heart transplant (HT) recipients during the first six months of therapy.

Methods A retrospective review was conducted at a single transplant centre, evaluating CM profile and therapies with a detailed review of six HT patients with diabetes mellitus (DM) and/or obesity treated with GLP-1RA for at least six months (four with semaglutide, two with dulaglutide). Weight, HbA1c, and BP were recorded before initiation and at six months. Immunosuppressive stability and rejection were assessed at latest follow-up.

Results Among 138 HT patients, the mean age was 58±14 years, 68% were male, and the median time post-transplant was 7.6 years (range 0.6–30). Mean BMI was 27±5 kg/m²; 75% had BMI <30, and 32% had BMI <25. DM was present in 30%, with 56% being post-transplant DM. GLP-1RA was prescribed in five males and one female (mean age 62±7 years, HbA1c 8.2±0.9%, eGFR 52±14 ml/min/1.73m²) a median of 6.5 years post-transplant (range 13 months–21.8 years). At six months, weight decreased by 6.3±4.8 kg (-7%), HbA1c by 0.8±0.9% (with five patients showing reductions ≥0.4%), and BP by 14±14 mmHg. During a median follow-up of 1.9 years, all patients maintained stable immunosuppression without rejection.

Conclusion GLP-1RAs generally led to reductions in weight, HbA1c, and BP in HT patients without changes to immunosuppression or rejection, suggesting cardiometabolic benefits. Larger studies are needed to confirm long-term efficacy and safety.



Abstract No. 123

SIR-ZOSTER: IMMUNOGENICITY OF SHINGRIX VACCINATION IN SOLID ORGAN TRANSPLANT RECIPIENTS AND NON-IMMUNOSUPPRESSED COHABITANTS

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Aims: To assess the effect of immunosuppression regimen on immunogenicity of the SHINGRIX vaccine in solid organ transplant recipients (SOTRs).

Methods: This is a prospective, observational trial underway across the Royal Adelaide Hospital and the Royal Prince Alfred Hospital. Participants are enrolled in four groups: [1] SOTRs receiving tacrolimus/mycophenolate/prednisolone (N=25); [2] SOTRs receiving mTOR-inhibitor/tacrolimus/prednisolone (N=25); [3] SOTRs receiving mTOR-inhibitor/mycophenolate/prednisolone (N=25); [4] non-immunosuppressed cohabitants (N=25). Participants receive two doses of recombinant zoster vaccine, eight weeks apart. Varicella zoster virus-specific T cell and antibody responses are assessed at five time points (baseline, Week 1, Week 8, Week 16, Week 52) by activation-induced marker assay and ELISA, respectively.

Results: The SIR-ZOSTER study is prospectively registered (NCT06262776) and approved by the relevant human research ethics committee. A flow cytometry panel to evaluate absolute frequencies of leukocyte lineages in whole blood has been established and shows concordance with Complete Blood Counts by Coulter counter. Forty participants have completed the trial to date.

Conclusion: This trial is the first to evaluate immunogenicity of the recombinant zoster vaccine in SOTRs relative to non-immunosuppressed individuals. The influence of three common immunosuppression regimens on the formation and longevity of varicella zoster virus-specific antibody and T cell immunity will be assessed, with data out to 52 weeks. The outcomes will inform subsequent studies of immunosuppression modification to improve vaccine responses in SOTRs.

Abstract No. 124

QUALITY OF LIFE, MENTAL HEALTH, AND HEALTH SELF-PERCEPTION IMPACT ON YOUNG ADULT KIDNEY TRANSPLANT PATIENT MEDICATION ADHERENCE

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Aims: To evaluate the effect of young adult kidney transplant (YAKT) patients' quality of life (QOL), mental health, and health self-perception on medication adherence.

Methods: YAKT patients aged 18 to 25 years, able to give informed consent, conducted the PROMIS Scale V1.2 – Global Health, Depression Anxiety Stress Scales-21, and Brief-Illness Perception Questionnaire to assess QOL, mental health, and health self-perception respectively. Demographic and transplant characteristics were recorded. Tacrolimus levels were collected 6 months before and after questionnaire completion. Non-adherence was defined as tacrolimus level coefficient of variation >30%. The effect of QOL, mental health, and health self-perception on medication adherence was analysed using chi-squared testing for discrete variables and t-test for continuous variables.

Results: Twenty-one patients participated in the study (67% male; age 21.8±2.4years). 52% of patients had a deceased donor kidney transplant and 48% had a living donor kidney transplant. The average kidney transplant age was 9.7±4.7years. Most patients reported poor QOL (76%), poor mental health (86%), depression (62%) and anxiety (67%). 24% of participants were non-adherent. A higher threat to health self-perception was associated with higher rates of non-adherence (Figure 1; p-value of 0.009). More severe anxiety was also associated with higher rates of non-adherence (p=0.02).

Conclusions: YAKT patients are a vulnerable cohort with a higher incidence of poor QOL, mental health, and health self-perception. Medication non-adherence was significantly associated with higher levels of self-perceived threat to health and severe anxiety. Strategies that improve YAKT patients' perception of their health may improve medication adherence and transplant outcomes.

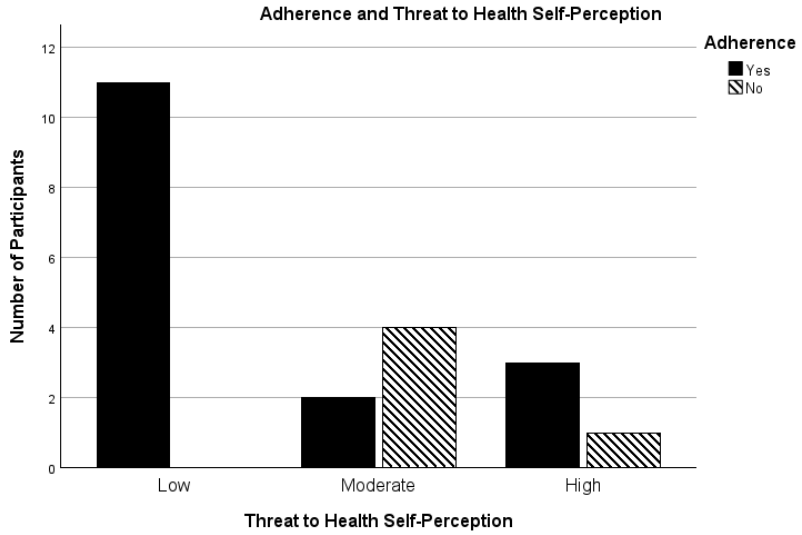

Figure 1. Number of participants according to medication adherence and threats to health self-perception.

Abstract No. 125

IMPLEMENTATION OF VORICONAZOLE PROPHYLAXIS TO PREVENT ASPERGILLUS INFECTION POST KIDNEY TRANSPLANTATION: EFFICACY AND CHALLENGES

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Background and Aims: Following an outbreak of Aspergillosis in our unit, we implemented universal prophylaxis with voriconazole (3-month course) for acute kidney transplant recipients. The aims of this study are to assess efficacy and safety of voriconazole and evaluate the challenges of tacrolimus dosing.

Methods. A retrospective, single centre study evaluating the: 1) Safety, tolerability and therapeutic drug monitoring of voriconazole, 2) Efficacy of voriconazole prophylaxis, and 3) Voriconazole-tacrolimus drug interaction.

Results. Between December 2017 and May 2020, 10 cases of Aspergillosis with 7 deaths were reported. Voriconazole (dose of 200mg bd) prophylaxis was commenced in April 2021 with no further cases experienced. Following the discontinuation of this strategy in January 2023, three new cases of Aspergillosis emerged. Voriconazole prophylaxis was reinitiated in October 2023, and of 84 patients who received kidney transplants between October 2023 and January 2025, no further cases of Aspergillosis were reported. Of 44 patients with available voriconazole trough level (day +7), 22 (50%) achieved target level (1-6mg/L), with 1 (2%) patient switched to posaconazole due to persistent subtherapeutic level. No patients discontinued voriconazole. Tacrolimus dose was reduced by 60% in 36 (82%) patients upon voriconazole initiation, with 31 (70%) patients with above-target trough level of >10 µg/L at day +7 post-voriconazole dosing, compared to 22 (50%) pre-voriconazole.

Conclusion. Voriconazole is well tolerated and effective in preventing Aspergillosis. Careful adjustment of tacrolimus dosing and frequent monitoring is essential given the potent drug-drug interaction with voriconazole.

Abstract No. 126

PAN-REACTIVE HLA-A REACTIVITY PATTERN IN SINGLE ANTIGEN BEAD RESULTS OF A KIDNEY TRANSPLANT WAITING LIST PATIENT

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Precise assignment of HLA antibodies, facilitated accurate and sensitive single antigen bead assays, is essential for solid organ transplant allocation. However, these bead assays are known to generate false positive results. We present a case study of a pan-reactive HLA-A antibody profile which had the potential to confound accurate donor allocation.

A 61yr man was relisted for kidney transplant after having received his first transplant from a fully mismatched deceased donor. At relisting the patient had moderate class I and strong class II HLA antibodies directed at first graft mismatches (HLA-A24, -DQ5 and -DQ6). Routine testing with One Lambda SAB in 12/2023 showed a changed class I result profile where all HLA-A beads were positive with MFI ranging from 1879 to 13921, including self HLA-A antigens A26 (4468) and A30 (3324). The class II profile was unchanged. Communication with the clinical unit revealed the patient had been weaned from prednisolone.

Thorough investigation using an alternative SAB assay, surrogate flow crossmatch and adsorption/elution of antibodies was conducted. All results showed that only reactivity against previously mismatched antigens were true positive.

Patient match profile was limited to previous donor HLA mismatches and specificities identified by the Lifecodes SAB assay. A subsequent deceased donor kidney offer appeared with no repeat mismatches and only weak HLA-C donor specific reactivity identified. Day of transplant testing showed suspected false positive reactivity against donor mismatch A*11 with MFI of 5221. A flow crossmatch was performed which was negative.

This case highlights the need to understand SAB reactivity and fully investigate where false positive reactivity is suspected. Had all HLA-A antigens been considered with equal risk, this patient would have been very difficult to transplant.

Abstract No. 127

PHARMACOTHERAPY AND WEIGHT OF HEART TRANSPLANT PATIENTS: A SINGLE-CENTRE CROSS-SECTIONAL STUDY

DEVLIN AE[1], LAN N[1], FOO D[2], LEE F[1], SHAH A[1], MAIORANA A[3], NAYLOR L[1], LAM K[3]

[1]Department of Cardiology, Fiona Stanley Hospital, Perth, [2]Faculty of Health Sciences, Curtin University, [3]School of Human Sciences, University of Western Australia

Aims Recent advancements in obesity pharmacotherapy have demonstrated significant benefits for overweight patients. Heart transplant (HT) recipients often have clinical features that place them at higher risk for being overweight. This study aimed to characterize overweight HT patients at our centre.

Methods We conducted a retrospective cross-sectional study of all HT patients at a single centre (October 2023 to February 2024), evaluating cardiometabolic profiles and pharmacotherapy from digital clinic records. Overweight [body mass index (BMI) >25 kg/m²] HT patients were analysed in detail. Adjusted logistic regression was used to assess associations between overweight status and pharmacotherapy.

Results Among 138 HT patients [mean age 58±14 years, 68% male, median time post-transplant 7.6 years, (range 0.6–30)], the mean BMI was 27±5 kg/m². Of these, 94 (68%) were overweight. Overweight and normal-weight patients did not differ in age, systolic blood pressure, LDL, creatinine, left ventricular ejection fraction, or time since transplant. Differences were observed in HDL, triglycerides, and glycated haemoglobin. Overweight patients were more likely to receive ACE inhibitors, ARBs, calcium channel blockers, and alpha-blockers, while normal-weight patients were more likely to be on Tacrolimus (Table 1).

Conclusion Overweight HT patients were more likely to receive antihypertensive therapies and less likely to receive Tacrolimus than their normal-weight counterparts. Further longitudinal studies with larger cohorts are needed to explore the relationship between weight and pharmacotherapy in HT patients.

Table 1. The association between BMI>25 kg/m2 and pharmacotherapy use.

Pharmacotherapy	Overweight (N = 94 patients)	Normal weight (N = 44 patients)
***Angiotensin-converting enzyme inhibitors or* angiotensin II receptor blockers**		
Number of patients using therapy (%)	47 (50.0)	11 (25.0)
aOR (95% CI)	**2.77 (1.19-6.45)**	
Alpha-blocker		
Number of patients with event	29 (30.9)	3 (6.8)
aOR (95% CI)	**6.24 (1.40-27.90)**	
Calcium channel blockers		
Number of patients with event	32 (34.0)	6 (13.6)
aOR (95% CI)	**3.81 (1.29-11.23)**	
Ezetimibe		
Number of patients with event	32 (34.0)	6 (13.6)
aOR (95% CI)	**3.00 (1.19-7.59)**	
Metformin		
Number of patients with event	21 (22.3)	4 (9.1)
aOR (95% CI)	1.62 (0.49-5.38)	
Tacrolimus		
Number of patients with event	58 (62.7)	38 (86.4)
aOR (95% CI)	**0.26 (0.09-0.73)**	

Abbreviations: aOR, adjusted odds ratio; CI, confidence interval.
Statistically significant results are bolded.
Estimates were adjusted for creatinine, systolic and diastolic blood pressure, and pre-existing diabetes mellitus.

Abstract No. 128

DOES INTRAOPERATIVE HYPOTHERMIA CONFER BENEFIT IN KIDNEY TRANSPLANTATION

BHATTACHARJYA R[1], BARNETT D[2], SETHI R[2], OLAKKENGIL S[2], BHATTACHARJYA S[2]

[1]School of Medicine, University of Adelaide, [2]Renal and Transplantation Unit, Royal Adelaide Hospital

Aims: To assess whether maintenance of hypothermia during vascular anastomosis in kidney transplants reduces the incidence of delayed graft function.

Methods: A retrospective audit of kidney transplant outcomes in adults receiving static cold preserved single kidneys between 01/01/2018 and 27/11/2024 at a single transplant centre was conducted. One of the three senior consultant surgeons in the unit, from 01/11/2023, adopted the icebag technique to maintain intraoperative hypothermia during implantation. The only exceptions were when vessel lengths did not permit the use of the technique. This subset of patients was compared to patients over this period who were not transplanted with this technique to assess the incidence of DGF. Warm ischaemic time (WIT), cold ischaemic time (CIT), anastomotic time (AT), donor pre-terminal creatinine, donor age, recipient BMI and use of depleting induction therapy were analysed factors.

Results: 623 kidney transplants were performed, of which 507 met inclusion criteria (160 live donors, 227 donations via neurological death (DNDD), 120 donations via circulatory death (DCDD)). Of these, 48 were performed using the icebag technique. Significant factors impacting the rate of DGF revealed on subset logistic regression were AT, donor pre-terminal creatinine and recipient BMI in DNDD recipients (Table 1). AT >25 minutes in DNDD transplants was associated with a significantly higher rate of DGF (p=0.0004). Outcomes of the icebag technique in DNDD were superior to anastomotic times >35 minutes (p=0.03).

Conclusions: Anastomotic time, recipient BMI and donor pre-terminal creatinine are potential modifiable factors that impact the incidence of DGF in DNDD transplants.

Table 1:

Factor	**Odds Ratio**
Anastomotic Time	OR = 1.04, 95% CI = 1.02 – 1.06
Donor Pre-Terminal Creatinine	OR = 1.01, 95% CI = 1.00 – 1.02
Recipient BMI	OR = 1.11, 95% CI = 1.04 – 1.18

Abstract No. 129

MINI-INCISION RENAL TRANSPLANT; A SINGLE-CENTRE NON-RANDOMISED FEASIBILITY STUDY

ALLAN L, PLEASS H, LEE T, NAHM C, HAMEED A, YUEN L

Department of Surgery, Westmead Hospital, Sydney

Background: Wound complications following kidney transplantation (KT) leads to increased morbidity, prolonged length of stay (LOS), hospital readmission and hospital costs. Sequelae of end-stage renal failure (ESRF), immunosuppression and medical comorbidities make KT recipients high risk for wound complications. Technical factors, including wound size, tension and closure technique are known to play a key role in successful wound healing.
Aim: We aim to assess the feasibility and short-term efficacy of performing KT through a mini-incision.
Method: Retrospective non-randomised single-centre, single-surgeon data of all patients who underwent mini-incision KT was included. All patients received a kidney-alone transplant through an incision less than or equal to 9cm. The primary outcome was the ability to safely perform renal transplants through reduced skin incisions and assess feasibility of this approach. Secondary outcomes included wound complications, major surgical complications, vascular complications and short-term graft function.
Results: 21 patients underwent mini-incision KT between June 2023 and November 2024. All patients were successfully transplanted through a mini-incision, there were no wound complications following surgery. There were no vascular complications necessitating surgical or radiological intervention. All transplants had primary graft function. One case required a relook laparotomy, but no significant intraoperative findings were observed. The median second warm ischaemic time (SWIT) time was 27 minutes (26-31), total operative time 139min (126-161) and length of stay (LOS) was 5 days (5-7).
Conclusion: Mini-incision KT is a safe, feasible technique for select patients and can be considered to reduce morbidity associated with wound complications.

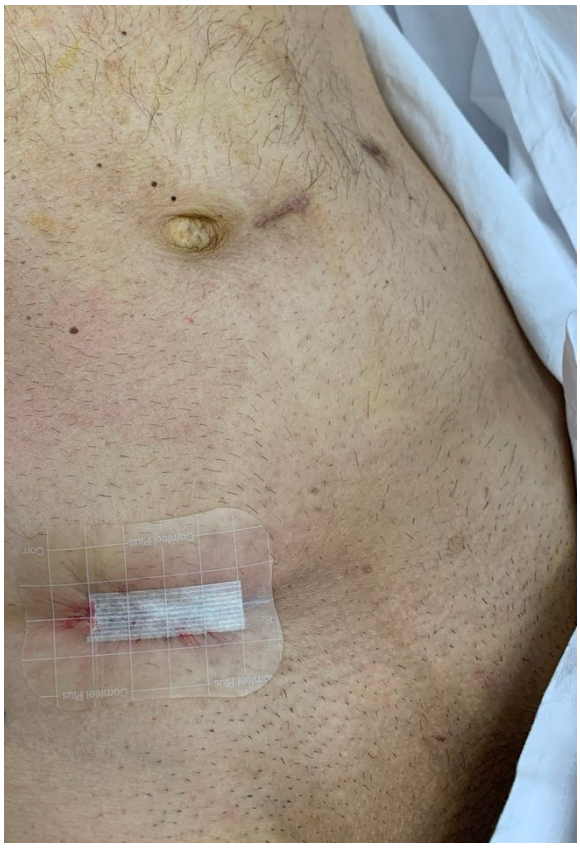

Figure 1. Immediate post operation for renal transplant through a mini incision with the graft placed in the right iliac fossa.

Abstract No. 130

URINE LEAK POST KIDNEY TRANSPLANT IN THE SETTING OF AN INFARCTED LOWER POLE

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[1]Department of Kidney and Transplant Services, Princess Alexandra Hospital, Brisbane, [2]Faculty of Medicine, The University of Queensland, Brisbane

Urological complications including leaks from the vesicoutreteric anastomosis have been significantly reduced with the routine use of urinary stents[1]. However other causes of urine leak occur. Devascularisation of the distal ureter (including loss of the lower pole arterial branch) during organ retrieval or implantation is a risk factor.

Usual presentation is severe pelvic pain on urination after IDC removal. Diagnostic evaluation involves ultrasound and cystogram to confirm contrast extravasation from the vesico-ureteral system[2]. In case reports 99mTC-MAG3 scans have been used to delineate urine leaks outside the anatomical space[3]. Treatment options include decompression with bladder catheterisation, percutaneous drain and surgical intervention[3].

Our case is of a 56 year old male who underwent kidney transplantation and due to complications with the inferior pole artery had a 25% infarction of the lower pole at time of implantation. A double J urinary stent was placed. He remained well post operatively with good graft function. The IDC was removed on day 3. At 1-week post-transplant he experienced sudden onset graft pain with voiding. Ultrasonography, CT and cystogram were all unremarkable. Pain abated with catheter placement but recurred after trial of void. A 99mTC-Mag3 scan showed a collection of tracer over the lower pole which increased following voiding with intact distal ureter. It was postulated that the inferior pole infarction had led to degeneration of capsular integrity and resulted in a parenchymal urine leak. This case highlights an unusual cause of a urinoma as well as the value of 99mTC-Mag3 imaging in diagnosing urine leaks.

References

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Abstract No. 131

IMPACT OF VASCULAR ANASTOMOSIS TIME ON KIDNEY TRANSPLANT OUTCOMES – A SYSTEMATIC REVIEW

SAYAH K[1], BURT H[1], HAMEED A[2], LEE T[2,3], YUEN L[2,3], NAHM C[2,3], LIM W[6], WONG G[7], PLEASS H[2,6]

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Background: Anastomosis time is a potentially important determinant of kidney transplant outcome, however cumulative and long-term data for this is lacking.
Aims: We undertook a systematic review aiming to compare outcomes for prolonged anastomosis time (>35 minutes) to a shorter anastomosis time interval.
Methods: The Cochrane, Embase, and Medline databases were searched, and data extraction was undertaken by two independent reviewers. Primary outcomes of interest included delayed graft function (DGF), and 5-year graft and patient survival.
Results: The weighted mean incidence of DGF across all donor types was 37.7% (± 8.9%) for prolonged anastomosis times (>35 minutes) compared to 33.8% (± 6.5%) for shorter anastomosis times (30-35 minutes). For 5-year graft survival, the weighted mean was 79.4% (± 2.1%) for shorter anastomosis times compared to 74.8% (± 2.4%) for longer anastomosis times.
Conclusions: Improved graft outcomes in the short anastomosis time groups were evident across all donor types. Living donor grafts demonstrated optimal graft outcomes, followed by donation after brain death, with grafts from donation after cardiac death exhibiting the greatest susceptibility to prolonged anastomosis times. Further prospective studies are necessary to establish a definitive threshold beyond which poor graft outcomes are more likely to occur.

Abstract No. 132

HOW PATIENT NAVIGATORS CAN IMPROVE PATIENT JOURNEYS FOR FIRST NATIONS PEOPLE WITH KIDNEY FAILURE: THE COMPASS PROJECT

OWEN KK[1,2], O'DONNELL K[3], D'ANTOINE M[1], BATEMAN S[4], MCDONALD S[4], KELLY J[3], CUNDALE K[2], HAKLAR I[2]

[1]ANZDATA, [2]SAHMRI, [3]The University of Adelaide, [4]Central Adelaide Local Health Network (CALHN)

Aims: The COMPASS (Connecting Our Mob: Patient Navigators as Sustainable Supports) project seeks to address inequities in transplantation pathways by embedding Patient Navigators— Aboriginal and Torres Strait Islander peoples with lived experience of kidney disease— into healthcare settings across urban, regional, and remote regions of South Australia and the Northern Territory.
Methods: Using decolonising methodologies including Kidney Journey Mapping, Yarning, Dadirri, and Ganma, COMPASS explores the impact of Patient Navigators on patient journeys and identifies barriers and facilitators to integrating these roles into mainstream health services.
Results: Involvement of Patient Navigators in kidney care services reduced patient anxiety and missed appointments, and increased engagement with healthcare services and transplant workup referral rates. The program's positive impact is further demonstrated by letters of support from patients' families and carers and healthcare staff, which are being used as supporting evidence for business cases to sustain these positions long-term.
Conclusions: Key learnings from COMPASS are being used to advocate for widespread integration of Patient Navigators in health services across Australia. This will grow the Aboriginal and Torres Strait Islander workforce while enhancing kidney care and health outcomes for Aboriginal and Torres Strait Islander people. COMPASS implementation insights provide a valuable resource for other healthcare services looking to establish or expand navigator programs, providing a framework for an integrated, culturally safe, community-driven model of care.

Abstract No. 133

BURDEN OF PHYSICAL AND PSYCHOLOGICAL SYMPTOMS IN HEART AND LUNG TRANSPLANT CANDIDATES

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Aims: Patients with advanced heart or lung disease face multiple physical and psychological symptoms. As patients undergo evaluation for transplant, it is important to identify and address these sources of distress. This study aims to evaluate the prevalence of physical and psychological symptoms and highlights the importance of palliative care review as part of the work up process.

Methods: We retrospectively analysed outpatient medical records of heart and lung transplant candidates who attended the Heart Lung Supportive Care Clinic at our institution between January 2023 to December 2024. Prevalence of physical and psychological symptoms, Depression in the Medically Ill (DMI) score and palliative care interventions were recorded and analysed.

Results: 57 patients with advanced heart disease (77% male, mean age 54.5 +/- 10.5 years) and 123 patients with advanced lung disease (54% male, mean age 56.4 +/- 11.6 years) were included. *Heart Transplant Candidates:* The most common symptoms encountered were fatigue (98%), breathlessness (86%) and dizziness (26%). 33% of the patients had probable/definite depression. *Lung Transplant Candidates:* The most common symptoms encountered were breathlessness (100%), fatigue (99%) and anxiety (31%). 34% of the patients had probable/definite depression. During advanced care planning discussions, >95% of the patients identified their person responsible. All the patients were also educated on non-pharmacological interventions (e.g. activity pacing, fan to face therapy and anxiety management skills).

Conclusion: There is a significant burden of symptoms in heart/lung transplant candidates. Palliative care review is an important step in providing holistic care for these patients and should be incorporated as part of the transplant workup process.

Table: Prevalence of Symptoms in Heart/Lung Transplant Candidates

	Symptom	**Prevalence (%)**
Heart Transplant Candidates (n=57)	Fatigue	98
	Breathlessness	86
	Dizziness	26
	Anxiety	23
	Pain	19
	Poor Sleep	16
	ICD Shocks	14
	Palpitations	12
Lung Transplant Candidates (n=123)	Breathlessness	100
	Fatigue	99
	Anxiety	31
	Cough	21
	Pain	9

Abstract No. 134

HEART TRANSPLANT RECIPEINTS WITH RESTRICTIVE CARDIOMYOPATHY, HYPERTROPHIC CARDIOMYOPATHY AND CONGENITAL HEART DISEASE

NG P, HAYWARD C

Department of Heart and Lung Transplantation, St Vincent's Hospital, Sydney

Aims: Heart transplant remains the definitive treatment for advanced heart failure. Whilst the majority of patients who undergo heart transplants have ischemic or dilated cardiomyopathy, there is limited data on patients with other causes of advanced heart failure. This study aims to describe the characteristics of heart transplant recipients with restrictive cardiomyopathy (RCM), hypertrophic cardiomyopathy (HCM) and congenital heart disease (CHD).

Methods: We retrospectively analysed medical records of heart transplant recipients at our institution from 2010 to 2024. Baseline demographic data, comorbidities, frailty scores, types of pre-transplant hemodynamic support and number of days on the waiting list were recorded and analysed.

Results: A total of 652 heart transplants were performed from 2010 to 2024. The number of patients who had RCM, HCM and CHD were 38 (5.8%), 32 (4.9%) and 24 (3.7%) respectively. Majority of the patients were male and were either pre-frail or frail. The median days on the waiting list was the least for patients with RCM as compared to patients with HCM or CHD. However, patients with RCM were generally older and had a higher prevalence of renal impairment. The number of patients requiring hemodynamic support at transplant was generally low for this group of patients.

Conclusion: Although patients with RCM, HCM or CHD form a small proportion of patients who undergo heart transplant, they are still an important group of patients that needs to be assessed for the need for advanced heart failure therapies. This is especially so seeing that a large majority of these patients are pre-frail or frail.

Table: Characteristics of Heart Transplant Recipients with Restrictive Cardiomyopathy (RCM), Hypertrophic Cardiomyopathy (HCM) and Congenital Heart Disease (CHD)

	RCM (n=38)	**HCM** (n=32)	**CHD** (n=24)
Age (years), mean ± SD	55.1 ± 10.3	47.4 ± 11.6	43.3 ± 14.5
Male gender, n (%)	27 (71.1%)	17 (53.1%)	14 (58.3%)
BMI (kg/m2), mean ± SD	25.8 ± 4.4	25.7 ± 5.3	24.1 ± 3.7
Diabetes, n (%)	4 (10.5%)	5 (15.6%)	2 (8.3%)
Renal Impairment, n (%)	25 (65.8%)	6 (18.8%)	9 (37.5%)
ICD, n (%)	26 (66.7%)	29 (90.6%)	12 (50.0%)
Prior cardiac surgery, n (%)	4 (10.5%)	11 (34.4%)	24 (100%)
Ejection fraction (%), mean ± SD	41 ± 14	42 ± 18	35 ± 17
Mean PAP (mmHg), mean ± SD	27 ± 8	29 ± 7	27 ± 9
PCWP (mmHg), mean ± SD	20 ± 7	21 ± 7	20 ± 9
Cardiac Index (L/min/m2), mean ± SD	2.0 ± 0.5	2.0 ± 0.5	2.2 ± 0.9
Pre-frail or Frail, n (%)	33 (87%)	29 (90.6%)	21 (87.5%)
Inotropes at Transplant, n (%)	5 (13.1%)	1 (3.1%)	3 (12.5%)
LVAD at Transplant, n (%)	2 (5.2%)	7 (21.9%)	4 (16.7%)
ECMO at Transplant, n (%)	1 (2.6%)	0 (0%)	1 (4.2%)
Days on waiting list, median (IQR)	60 (18-118)	103 (23-321)	119 (54-422)

Abstract No. 135

SUCCESSFUL ESWL FOR RADIOLUCENT GRAFT UROLITHIASIS – AP AXIS IDENTIFICATION, IV PYELOGRAM AND FREE HAND ULTRASOUND MAY BE USEFUL

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Background: Allograft urolithiasis are infrequent amongst renal transplant recipients. External shock wave lithotripsy (ESWL) allows treatment while avoiding the technical challenges with retrograde access via neocystoureterostomy and the potential morbidity associated with percutaneous nephrolithotomy. Due to the posterior and lateral position of the bony pelvis lithotripters are unable to utilise isocentric ultrasound to target calculi in pelvic allograft kidneys, limiting treatment of radiolucent calculi. There is limited peer reviewed literature on successful ESWL of radiolucent calculi in renal transplant recipients. This report documents the authors' experience treating one patient successfully.

Methods: A 41 year old woman with asymptomatic serum creatinine rise from 78 to 110 μmol/L had an 8mm pelvoureteric junction calculi identified in her graft kidney 2 months after renal transplant. It was radiolucent on x-ray, and 320HU on CT, consistent with uric acid. The patient elected to attempt treatment using ESWL. Prior to lithotripsy, the anterior-posterior axis was identified with ultrasound at the abdominal wall. Intravenous pyelography was used to identify a fluoroscopic filling defect secondary to the calculi. Finally, free-hand ultrasound was used throughout the procedure to monitor calculi fracture.

Results: The patient was discharged the same day as the procedure. A non-contrast CT one week later showed complete passage of calculi fragments without complication. She had not developed further calculi after 18 months follow-up.

Conclusions: ESWL can successfully treat radiolucent urolithiasis in graft kidneys. Preoperative marking of the AP axis, intravenous pyelography, and free hand ultrasound may be useful for surgeons in these cases.

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The **Annual General Meeting** of the Transplantation Society of Australia and New Zealand Inc. held on Monday, 17 June 2024 at the Melbourne Convention Centre, Melbourne in Rooms 106/105 commencing at 5.00 pm (AEST).

Present: 65 members of the Society establishing a quorum were present at the meeting, which was chaired by the President, Professor Kate Wyburn

MINUTES

ORDINARY BUSINESS

1. **Apologies/Proxies -** 2 apologies and 2 proxy forms received

2. **Confirmation of the minutes** of the previous Annual General Meeting
   The minutes of the Annual General Meeting held on 19 June 2023 were confirmed as a true and accurate record of that meeting.

3. **Business arising from the minutes**
   There was no business arising from them minutes

4. **President's Report** – Professor Kate Wyburn
   Summarized that TSANZ became a company limited by guarantee (CLG) on 31 August 2023 hence now operating as a legally functioning entity and hence the Council has been renamed "the Board". It is confirmed that TSANZ are also a Health Promotion Charity with the Australian Charities Not-for-Profit Commission (ACNC).

   Outlined the different structure for the ASM in 2024 with the inclusion of the Frontier and Challenges in Transplantation (FACT) Day and Solid Organ Transplant Symposium (SOTS). She asked for feedback via the survey forms available at the registration desk or via the APP.

   Advised of the two Board appointed Board members being the Immediate Past President Professor Helen Pilmore and Mr Stuart McLeod who is on the Finance Committee.

5. **Treasurer's Report** – Dr Joshua Kausman
   Because TSANZ became a CLG, we have two sets of audited reports, one ending on 31 August 2023 and the other on 31 December 2023. Reiterated that overall finances are stable, and we made a small profit ($16K) in 2023.

   Excellent conference registrations pointing to a strong 2024 ASM financial outcome.

   We continue to have good ongoing support from sponsorship from pharma and OTA.

   He advised members that since Aug 2023 TSANZ have an investment portfolio comprising of $1 million with an active balance and that TSANZ have recently also established a separate $500K Term deposit to earn better interest.

Stated that a Finance Committee was established with the addition of Mr Stuart McLeod as a Board- elected Committee member who is helping to set out a budget which help with moving any surplus funds towards the Society's operations and projects.

Confirmed that the current insurance policies will be revised and updated, which would result in a slight increase in expenses.

We are also underway in completing our application to become a deductible gift recipient (DGR) with the Australian Taxation Office (ATO) and that will allow us to strengthen our financial position.

A question was raised as to whether our investment portfolio is with ethical stocks. The Treasurer replied that the Findex portfolio is a socially responsible investment portfolio, and the rest of our funds are in term deposits. The Findex portfolio is returning 6% compared to a 4% return on our TDs.

Adoption of Financial Reports
The members adopted the Auditor's Report for the period ended 31 August 2023 (during which the organisation was structured as an incorporated association)

Proposer: Helen Pilmore

Seconder: David Goodman

Report adopted by the members

The members adopted the Auditor's Report for the period from 1 September 2023 to 31 December 2023 (from which time the Company was restructured as a company limited by guarantee registered under the *Corporations Act 2001* (Cth)).

Proposer: Ross Francis

Seconder: Angela Webster

Report adopted by the members

Appointment of Auditor
The members approved the reappointment of Tinworth and Co. as auditors of the Company for the period from 1 January 2024 to 31 December 2024.

Proposer: Phil O'Connell

Seconder: Angela Webster

Motion passed by the members

6. **Secretary's Report** – A/Professor Kavitha Muthiah
Reported an increase of membership - 659 in 2024. The gender distribution is female dominant.

She also discussed the proposed 30% membership fee increase in 2025 for Full (Australian and New Zealand members) as well as Student with joint TTS. The Treasurer invited approval for the membership increase from the members.

Proposer: Bronwyn Levvey

Seconder: Peter MacDonald

Motion to increase membership fees passed by the members

Also highlighted the updated member categories in 2025 predominantly to add Allied Health to the Full member- Scientist category.

SPECIAL BUSINESS

Discussed that now that TSANZ are a CLG and also a charity, the need to have DGR status which involves an amendment to the constitution

Approval of Amendments to Constitution
The members passed the following resolution as a special resolution primarily to comply with the ACNC regulations for Deductible Gift Recipient (DGR) status:

> "That for the purposes of clause 6.9(a) of the Constitution of Transplantation Society of Australia & New Zealand Limited (Constitution), section 136(2) of the Corporations Act 2001 (Cth) and for all other purposes, the amendments to the Constitution tabled at the Annual General Meeting and initialed by the chairperson of the meeting for the purpose of identification (a copy of which has been made available to members), be approved, with effect from the date of this resolution."
>
> Proposer: Angela Webster
>
> Seconder: Helen Pilmore
>
> **Motion to approve the Constitution amendments passed by the members**

The Secretary reminded members to sign (and have witnessed) the Member Consent forms available at the registration desk, which confirms their agreement to become a member of the newly structured company and their guarantee to pay a maximum amount of $20 should the Company become insolvent.

ORDINARY BUSINESS

7. **Report on Advisory Committees/Working Groups** – A/Professor Nikky Isbel
   Nikky Isbel firstly thanked the Chairs of the Advisory Committees for their substantial contribution especially in working with a newly structured ASM in 2024 within a tight timeframe.

   The work on particular projects, committees and working groups was reported

   She concluded with a final thank you to all chairs of the Advisory Committees and Working Groups, members, Kim Rawson and the convenors of the wonderful SOTS Day.

8. **Scientific Program & Education Committee Report (SPEC)** - Dr Lucy Sullivan and Dr Wai Lim

   Wai Lim thanked:
   - SPEC members
   - ASM Convenors - Matthew Sypek and Miranda Paraskeva
   - FACT Convenors - Melanie Wyld and Harry Robertson

- SOTS Convenors - Robert Jones, Avik Majumdar; Natasha Rogers, Ross Francis, George Javorsky and David Darley
- Organisers of the Patient Forum – Karen Keung and Siah Kim

He compared registration numbers from previous years and was pleased to report that this year's FACT Day and SOTS Symposia had shown increased numbers compared to previous years.

He thanked the ECC Chairs (Georgina Irish and Griffith Perkins) and members who had a role in helping with the ASM (coordinating social and "fun" programs), Grand Rounds and promoting research/forum for discussion such as the *Meet the Researcher* event which was well attended.

Future activities include exploring partnering with ID (Infectious Disease members) and HLA as a pre-ASM course/standalone meetings, etc. He invited members to send in any ideas they might have for future activities by the Society.

Wai Lim and Lucy will be retiring as SPEC chairs in 12 months' time. They thanked Nieves and her team for all their support.

9. **Business without Notice**

The President informed that ASM 2025 will be held in Canberra at the National Convention Centre Canberra, with the 2024 format. The dates and convenors to be confirmed but invited members to put their hands up if they were "interested".

Confirmed TTS will be returning to Australia (Sydney) in 2026 and therefore the possibility of only having a small meeting in 2026.

There being no more business, the meeting concluded at 17:28.

Professor Kate Wyburn
TSANZ President

A/Professor Kavitha Muthiah
TSANZ Honorary Secretary

President's Report 2025

It is my pleasure to update you on the many recent developments and achievements of TSANZ and the groups with which we collaborate with and serve.

Our Board, admin team, advisory committees, SPEC, working groups and the many, many people who give so much of their time and expertise continue to build and strengthen the Society. We are also very grateful for the support and collaborations we enjoy with the Organ and Tissue Authority (OTA), the Australian and New Zealand Society of Nephrology (ANZSN), Kidney Health Australia (KHA), Transplant Australia (TA), the National Indigenous Kidney Transplantation Taskforce (NIKTT), Lifeblood, TTS and many more, on a variety of initiatives.

43rd Annual Scientific Meeting: After a decade away, we are excited to be back in Canberra for the 43rd ASM from the 20th-24th June. Superbly led by the Chairs of SPEC Dr Lucy Sullivan and A/Prof Wai Lim, for the sixth and final time and expertly convened this year by Dr Jeanette Villanueva and A/Prof Darren Lee. We have brilliant local and international invited speakers, including Professors Mannon, Nickerson, Sykes and Wolfe.
In partnership with TTS, we are very proud to be holding the **Women in Transplantation** (WIT) Session again with presentations from Prof Mannon immediate past-chair of WIT TTS, and Professor Emily Lancsar, the Chief Health Economist, Department of Health and Aged Care.

Following the WIT session, we are pleased to announce a **Town Hall** session with Commissioner Dr Maeghan Toews to discuss the **Australian Law Reform Commission** review of the Human Tissue Laws.

As part of our pre-conference meetings, on Friday 20th of June, we will hold the inaugural **Transplant Infectious Diseases Day**, in partnership with the Australian Society for Infectious Diseases and with invited speaker Professor Cameron Wolfe from Duke University. The program will cover a range topics including, donor-derived infections, vaccination, multi-resistant infections and more.

The transplantation update **Frontiers and Challenges in Organ Transplantation** (FACT) Course, expertly convened by Dr Griffith Perkins and Dr Sakhee Kotecha, will be held on Saturday 21st featuring sessions for all transplant clinicians, scientists, and researchers, covering cutting edge updates in aspects of immunology through to clinical conundrums, including contemporary approaches to transplant management, immunosuppression, and infectious sequalae.

On Sunday the 22nd, we are holding the dedicated **Solid Organ Transplant Symposia** (SOTS) for cardiothoracic, kidney/pancreas and liver groups (21st and 22nd). The SOTS provide a forum for in-depth discussions, updates and debate on broad ranging topics of specific interest to each subspecialty.

Don't forget the other fun and highly engaging events including the Fun Run/Walk on Sunday morning and the "*Reignite: from surgery to strength*" Patient Forum on Sunday at 12:30 in partnership with Transplant Australia. On Monday morning we have Coffee with Sponsors, then the Early Career Researcher lunch followed by the Awards Dinner in Old Parliament House on Monday evening.

We are as always extremely grateful for our sponsors, who provide essential support to TSANZ and the ASM. Including our major sponsors: Astellas and ThermoFisher Scientific as well as other supporters; Novartis, Pharmacor, Takeda, Xvivo, Bio-Strategy, CareDx, CSL, GSK, Hansa, the Organ and Tissue Authority (OTA), Stark Med, Aurora BioScience, Kidney Health Australia, Lungitude, Transplant Australia, and The Transplantation Society (TTS-Women in Transplant).

I also wanted to highlight some of the **TSANZ Projects** being undertaken currently, with significant support from OTA, TSANZ is able to progress many projects and working groups and advance our common goals. Some of these include:
Enhancing Clinical Best Practice Guidelines and Procedures under the leadership of Clinical Project Manager Emily Larkins, the TSANZ Clinical Guidelines for Organ Transplantation from Deceased

Donors, with version 1.14 due to be released in June. 13 was updated March 2025. The TSANZ Clinical Guidelines provide an up to date, exceptional framework for clinical practice.

The Deceased Donor Kidney Allocation Algorithm Review was undertaken by the Kidney Allocation Working Group and the Biostatistician Focus Group, that is driven expertly by Dr Sarah White as Project Manager. The submission of the final algorithm design and report is scheduled for June 2025 with Sarah presenting aspects of the new algorithm at various local conferences, including the TSANZ ASM.

Living Kidney Donation Clinical Working Group: A collaborative project chaired by Dr Melanie Wyld, and supported by Dr Sarah White, builds on earlier forums to increase community awareness and support, and improve processes and outcomes for all living kidney donors, including the development of a Living Donation Information Website and Living Donation Clinical Guidelines.

National Indigenous Kidney Transplantation Taskforce (NIKTT): This incredibly important initiative chaired by Prof Stephen McDonald and A/Prof Jaqui Hughes, with Katie Cundale, Program Manager and Kelli Owen, National Community Engagement Coordinator, held another successful Gathering in February to hear stories from patients and providers on successes and challenges in kidney transplant care to help guide future care and practice, aligning community priorities with policy and clinical excellence. The NIKTT continues to build strategic efforts to advance First Nation's peoples' rights to equitable access to kidney transplantation.

Thank you to the many individuals who contributed greatly to the Society, many have done so over many years, almost all voluntarily and always above and beyond expectation.
I extend my sincere thanks to all members of the TSANZ Advisory Committees, Working Groups, Special Interest Groups, and Subcommittees for their invaluable contributions across every facet of the Society's work.
A special acknowledgement goes to Kim Rawson, whose gracious and seamless support plays a vital role in enabling the diverse and important work of these groups.
Finally, it is our amazing administrative staff, consisting of Nieves Piaggio as Executive Officer, Anne Wiseman our Administrative Officer; Kim Rawson as Project Manager and Emily Larkins our Clinical Project Manager for the TSANZ Guidelines, through their expert navigation of the large groups of stakeholders, dedication and professionalism, who keep us all on track to deliver the comprehensive work and support that TSANZ prides itself on doing.

Thank you to all TSANZ members,
Professor Kate Wyburn