Organised by

Singapore Society of Nephrology

In collaboration with:

KDIGO

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ISN

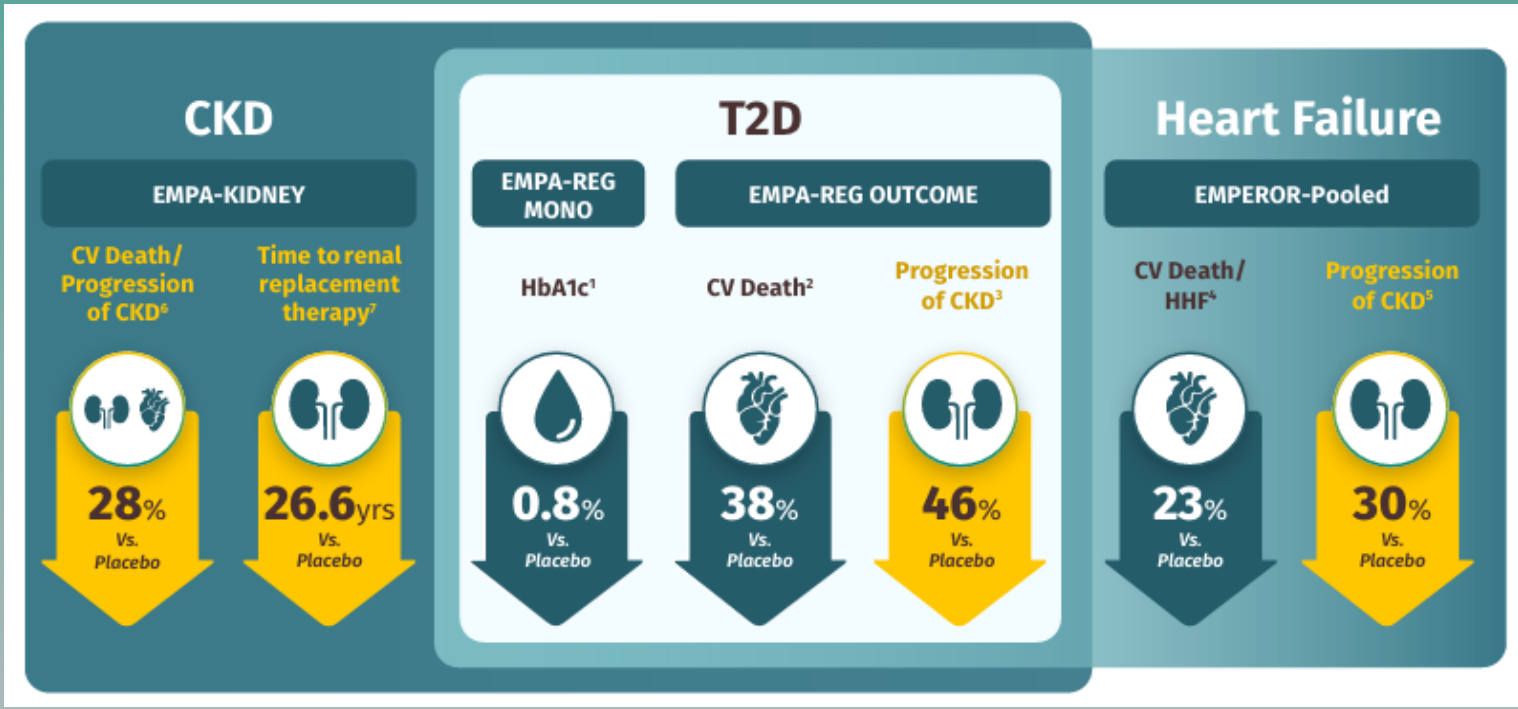
14th SINGAPORE SOCIETY OF NEPHROLOGY ANNUAL SCIENTIFIC MEETING 2024

The Kidney Connection: Across the Care Continuum

12 - 13 October, 2024 | **Conrad Centennial**, Singapore

PROGRAM BOOKLET

JARDIANCE® provides triple protection in Cardio-Renal-Metabolic patients



Make Protection Your Superpower Today!

REFERENCES:

1. Roden M, Merker L, Christiansen AV, et al; EMPA-REG EXTEND™ MONO investigators. Cardiovasc Diabetol. 2015;14:154. 2. Zinman B, Wanner C, Lachin JM, et al; N Engl J Med. 2015;373(22):2117-28. 3. Wanner C, Inzucchi SE, Lachin JM, et al; EMPA-REG OUTCOME Investigators. Empagliflozin and Progression of Kidney Disease in Type 2 Diabetes. N Engl J Med. 2016;375(4):323-34. 4. Ferreira JP, Zannad F, Butler J, et al. Association of Empagliflozin Treatment With Albuminuria Levels in Patients With Heart Failure: A Secondary Analysis of EMPEROR-Pooled. JAMA Cardiol. 2022;7(11):1148-1159. 5. Ferreira JP, Zannad F, Butler J, et al. Recency of Heart Failure Hospitalization, Outcomes, and the Effect of Empagliflozin: An EMPEROR-Pooled Analysis. JACC Heart Fail. 2023;11(6):702-712. 6. Herrington WG, Staplin N, Wanner C, et al; The EMPA-KIDNEY Collaborative Group. N Engl J Med. 2023;388(2):117-127. 7. Fernández-Fernandez B, Sarafidis P, Soler MJ, Ortiz A. Clin Kidney J. 2023;16(8):1187-1198

ABBREVIATIONS:
CKD=chronic kidney disease; CV=cardiovascular; HHF=hospitalization for heart failure; T2D=type 2 diabetes.

Jardiance® (empagliflozin)

CONTENT

LOKELMA™
powder for oral suspension
Sodium zirconium cyclosilicate

WHEN TREATING HYPERKALEMIA

WIN TWICE WITH LOKELMA

LOKELMA™ rapidly reduces potassium (K^+) levels as early as one hour and sustains normokalaemia for up to one year with maintenance therapy.[1,4] The median time to K^+ normalisation was 2.2 hours (interquartile range 1.0 to 22.3).[2]

LOKELMA is indicated for the treatment of hyperkalaemia in adult patients.[1]

*Based on a retrospective analysis of the changes in RAAS inhibitor use during the maintenance phase of a 12-month, open-label study, 63% of patients completed the study, and 74% of patients using RAAS inhibitor therapy at baseline maintained the same dose.[3]

RAPID REDUCTION[1,4]

1

HOUR

after 1 DOSE, LOKELMA significantly reduced serum K^+ levels versus baseline (P<0.001)[1,4]

SUSTAINED CONTROL[1]

88%

OF PATIENTS

receiving LOKELMA maintained an average serum K^+ of <5.1 mmol/L over 11 MONTHS[1]

GENERALLY WELL TOLERATED[1]

1,700+

PATIENTS

participated in clinical trials in which LOKLMA was generally well tolerated[1]

References: 1. LOKELMA Singapore Local Prescribing Information 05/BC/SG/Doc ID-004025194 V8.0 (May 2023) AstraZeneca Singapore Pte Ltd **2.** Thomsen RW, Nicolaisen SK, Hasvold P, et al. Elevated potassium levels in patients with chronic kidney disease: occurrence, risk factors, and clinical outcomes – a Danish population-based cohort study. Nephol Dial Transplant. 2018;33(9):1610-1620 **3.** Spinowitz BS et al. Article and supplementary material. Clin J Am Soc Nephrol. 2019;14:798-809. **4.** Kosiborod M, Rasmussen HS, Lavin P, et al. Effect of sodium zirconium cyclosilicate on potassium lowering for 28 days among outpatients with hyperkalemia: the HARMONIZE randomized clinical trial. JAMA. 2014;312(21):2223-2233

Abbreviated Prescribing Information
LOKELMA® (sodium zirconium cyclosilicate) 5g & 10 g POWDER FOR ORAL SUSPENSION.
INDICATIONS: LOKELMA is indicated for the treatment of hyperkalaemia in adult patients. **DOSAGE & ADMINISTRATION:** For patients with a serum potassium level >5.0 mmol/L, the recommended starting dose of LOKELMA is 10g three times a day orally as a suspension in water, up to 2 days/48 hours. Continued maintenance treatment would require a minimum effective dose to be established, recommended at 5g once daily and titrated up or down by 5g as needed to maintain a normal potassium level. No more than 10 g once daily should be used for maintenance therapy. Serum potassium levels should be monitored regularly during treatment. Monitoring frequency will depend upon a variety of factors including other medications, progression of chronic kidney disease and dietary potassium intake. No changes from the normal doses are required for patients with renal impairment who are not on chronic haemodialysis.For patients on dialysis LOKELMA should only be dosed on non-dialysis days. The recommended starting dose is 5 g once daily. To establish normokalaemia (4.0-5.0 mmol/L), the dose may be titrated up or down weekly based on the pre-dialysis serum potassium value after the long inter-dialytic interval (LIDI). The dose could be adjusted at intervals of one week in increments of 5 g up to 15 g once daily on non-dialysis days. It is recommended to monitor serum potassium weekly while the dose is adjusted; once normokalaemia is established, potassium should be monitored regularly (e.g. monthly, or more frequently based on clinical judgement including changes in dietary potassium or medication affecting serum potassium). **MECHANISM OF ACTION & PHARMACODYNAMIC EFFECTS:** LOKELMA captures potassium throughout the entire GI tract and reduces the concentration of free potassium in the GI lumen, thereby lowering serum potassium levels and increasing faecal potassium excretion, along with its elimination. It reduces serum potassium levels as soon as 1 hour after ingestion and serum potassium concentrations continue to decline over the 48-hour treatment period. **SPECIAL PRECAUTIONS:** Overdose with LOKELMA could lead to hypokalaemia. Serum potassium should be checked and potassium supplemented as needed. In patients with serum potassium levels <3.0 mmol/L, LOKELMA should be discontinued and the patient re-evaluated. In clinical trials of LOKELMA, oedema was generally mild to moderate in severity and was more commonly seen in patients treated with 15 g once daily. Monitor for signs of oedema, particularly in patients who should restrict their sodium intake or are prone to fluid overload. **DRUG INTERACTIONS:** LOKELMA can transiently increase gastric pH, therefore should be administered at least 2 hours before or 2 hours after oral medications with clinically meaningful gastric pH dependent bio availability.

LOKELMA Local Prescribing Information Reference: 05/BC/SG/Doc ID-004025194 V8.0 (May 2023)

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LOKELMA™
powder for oral suspension
Sodium zirconium cyclosilicate

SG-8516 LOK 20241002

WELCOME MESSAGE

Dear Friends and Colleagues,

On behalf of the organising committee, it is our utmost pleasure to extend a warm welcome to all attendees of the Singapore Society of Nephrology 14th Annual Scientific Meeting. This year's theme, " The Kidney Connection: Across the Care Continuum," promises to deliver a captivating and insightful experience. Our SSN 14th ASM 2024 is proudly held in collaboration with Kidney Disease Improving Global Outcomes (KDIGO) and enjoys the support of the International Society of Nephrology (ISN).

The scientific program has been thoughtfully curated to provide an all-encompassing and dynamic experience for every participant. Over the course of two (2) days, you will have the privilege of engaging in a primer course, attending symposia that span a wide spectrum of topics, participating in interactive discussions, and witnessing presentations from esteemed international and local experts.

The success of this conference is the fruit of collaborative efforts from our dedicated organising committee, the remarkable faculty hailing from different corners of the world, and, most importantly, individuals like you, our esteemed delegates. Our primary objective is to offer you an invaluable source of cutting-edge information to enhance your clinical practice or research endeavors. None of this would have been achievable without the generous support of our valued sponsors, whose contributions have been instrumental in making this event a resounding triumph.

Once again, we extend a warm welcome to all participants of Singapore Society of Nephrology 14th Annual Scientific Meeting.

A/Prof Jason Choo
President
Singapore Society of Nephrology

Dr Chan Gek Cher
Co-Chairperson
Organising Committee

Dr Timothy Koh
Co-Chairperson
Organising Committee

ORGANISING COMMITTEE

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Nursing/Allied Health Track In-Charge	Dr Michelle Ng

CONFERENCE INFORMATION

CONFERENCE VENUE

Ballroom, Level 2

Conrad Centennial Singapore

2 Temasek Blvd, Singapore 038982

CONFERENCE REGISTRATION

The Registration Counter is located in the Foyer area outside Ballroom at Conrad Centennial Singapore.

The counter will be open daily from 0830 - 1700 hours.

CONFERENCE SATCHEL AND NAME BADGE

Upon completing your registration, you will receive a Conference satchel containing your personalized name badge.

It is mandatory to wear your name badge to all sessions and events throughout the conference.

In the event of losing your name badge, please contact the Conference Secretariat for a replacement. Please note that a replacement fee applies.

EXHIBITION

A state-of-the-art exhibition featuring medical equipment and allied applications will take place in the Ballroom Foyer, Level 2, Conrad Centennial Singapore.

Exhibition Opening Times:

Saturday, 12 October 2024	0830 – 1710 hours
Sunday, 13 October 2024	0830 – 1600 hours

CME - CPE ADMINISTRATION

(Applicable to Singapore registered Healthcare Professionals ONLY)

CME-CPE points will be accorded for attending the Scientific Symposium. Delegates are required to register their attendance daily at the conference registration counter twice; at the beginning of the day and during lunch time.

LOST AND FOUND

For any lost and found items, please approach the Conference Registration Counter.

CONFERENCE LANGUAGE

English will be the primary medium of instruction for the conference

LIABILITY

The Organisers are not liable for any personal accidents, illnesses, loss, or damage to private properties of delegates during the conference. Delegates are advised to make their own arrangements with respect to personal insurance.

DISCLAIMER

Whilst every attempt will be made to ensure that all aspects of the Conference will take place as scheduled, the Organising Committee reserves the right to make appropriate changes should the need arises with or without prior notice.

POSTER PRESENTATION

Each presenter will be allocated a poster board -one side only) with an area of 1m x 2m. Each poster board will be marked with a poster panel number. Poster should be set up on Saturday, 12 October 2024 between 0830 – 0900 and removed on Sunday, 13 October 2024 after 1530 hours.

CONFERENCE SECRETARIAT

For any assistance, kindly reach out to the Conference Secretariat, conveniently located at the Registration Counter.

CMV management is challenging to navigate[1]

Begin the prophylaxis journey with PREVYMIS™

New Approval by Health Science Authority (HSA)

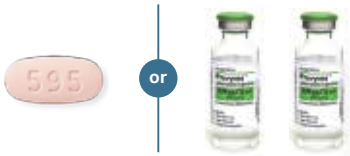
Prevymis™ is now indicated for prophylaxis of cytomegalovirus (CMV) infection and disease

In CMV-seronegative adults who have received a kidney transplant from CMV-seropositive donor [D+/R-]

In adult CMV-seropositive recipients [R+] of an allogeneic hematopoietic stem cell transplant (HSCT) and continued through 200 days post-transplant.

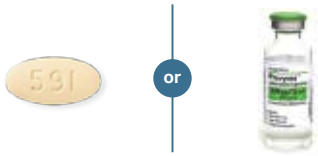
Once-daily regardless of formulation with the flexibility of oral or IV infusion administration[2]

If coadministered with tacrolimus, the recommended dose of PREVYMIS™ is 480 mg administered once daily



One 480mg tablet	Two 240mg IV infusion single-dose vials

If coadministered with cyclosporine, the recommended dose of PREVYMIS™ is 240 mg administered once daily



One 240mg tablet	One 240mg IV infusion single-dose vial

- No dose adjustment of PREVYMIS™ is required based on renal impairment.
- No dose adjustment of PREVYMIS™ is required based on (Child-Pugh Class A) to moderate (Child-Pugh Class B) hepatic impairment. PREVYMIS™ is not recommended for patients with severe (Child-Pugh Class C) hepatic impairment.
- PREVYMIS™ is not recommended in patients with moderate hepatic impairment combined with moderate or severe renal impairment.

Not an actual medicine, for demonstration purposes only.

CMV : Cytomegalovirus ; D+/R- : CMV-seropositive Donor ; KT : Kidney Transplant

References: 1. Jakharia N, Howard D, Riedel DJ. CMV infection in hematopoietic stem cell transplantation: prevention and treatment strategies. Curr Treat Options Infect Dis. 2021;13(3):123-140. doi:10.1007/s40506-021-00253-w **2.** PREVYMIS™ Prescribing Information. Available at: Register of Therapeutic Products, Health Science Authority. https://www.hsa.gov.sg/e-services/infosearch

Selected Safety Information about PREVYMIS™

INDICATIONS PREVYMIS is indicated for the prophylaxis of cytomegalovirus (CMV) infection and disease in adult CMV-seropositive recipients [R+] of an allogeneic hematopoietic stem cell transplant (HSCT). PREVYMIS is also indicated for prophylaxis of CMV disease in CMV-seronegative adults who have received a kidney transplant from a CMV-seropositive donor [D+/R-]. **DOSAGE AND METHOD OF USE** PREVYMIS tablets can be administered with or without food and swallowed as a whole. PREVYMIS concentrate for solution for infusion must be administered intravenously over approximately 60 minutes. PREVYMIS tablet and concentrate for solution for infusion may be used interchangeably at the discretion of the physician, and no dose adjustment is necessary. The recommended dosage of PREVYMIS in adults is 480 mg administered once daily. If PREVYMIS is co-administered with cyclosporine, the dosage of PREVYMIS should be decreased to 240 mg once daily. Safety and efficacy of PREVYMIS have not been established in pediatric patients less than 18 years of age. No dose adjustment of PREVYMIS is required based on age, renal impairment and mild to moderate hepatic impairment. HSCT PREVYMIS should be started after HSCT and may be started on the day of transplant and no later than 28 days post-HSCT or before or after engraftment. Continue PREVYMIS through 100 days post-HSCT. Kidney transplant PREVYMIS should be started on the day of transplant and no later than 7 days post-kidney transplant and continued through 200 days post-transplant. **CONTRAINDICATIONS** PREVYMIS is contraindicated in patients with hypersensitivity to letermovir or any of its inactive ingredients. Concomitant administration with pimozide, ergot alkaloids and cyclosporine with pitavastatin or simvastatin. **WARNINGS AND PRECAUTIONS** Possible clinically significant adverse reactions from greater exposure of concomitant drugs or PREVYMIS. Significant decrease of concomitant drug plasma concentrations which may lead to reduced therapeutic effect of the concomitant drug. Caution should be given when using PREVYMIS with medicinal products that are CYP3A substrates with narrow therapeutic ranges and monitor the dose adjustment. In cases of clinically significant CMV DNAemia or disease, letermovir prophylaxis was stopped and standard-of-care pre-emptive therapy (PET) or treatment was initiated. In patients in whom letermovir prophylaxis was initiated and the baseline CMV DNA test was found to be positive, prophylaxis could be continued if PET criteria has not been met. **ADVERSE EVENTS** Adult CMV-seropositive Recipients [R+] of an Allogeneic HSCT The most commonly reported adverse reactions occurring in at least 1% of subjects in the PREVYMIS group and at a frequency greater than placebo were nausea, diarrhea and vomiting. Adult Kidney Transplant Recipients [D+/R-] The most commonly reported adverse reactions occurring in at least 2% of subjects in the PREVYMIS group or valganciclovir group are leukopenia, neutropenia and white blood cell count decreased.

Before prescribing PREVYMIS™, please consult full prescribing information. Full prescribing information is available upon request or please scan this QR Code:

PREVYMIS™ (letermovir)

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SG-CYT-00150 Aug/2024

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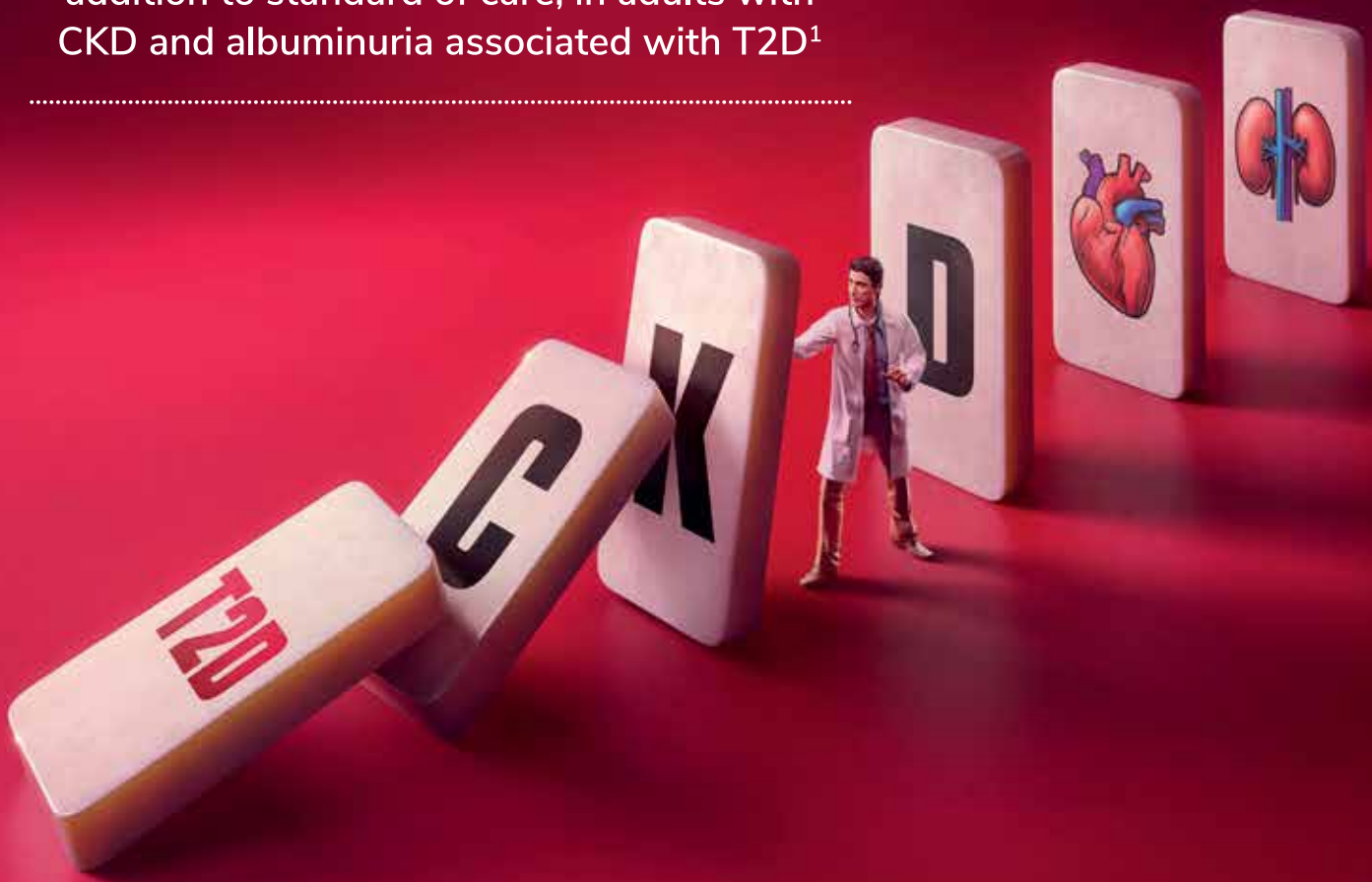
Act now to help give your patients with CKD associated with T2D a different outcome

Slow CKD progression and reduce the risk of associated CV events with Kerendia, in addition to standard of care, in adults with CKD and albuminuria associated with T2D[1]



CKD=chronic kidney disease; CV=cardiovascular; T2D=type 2 diabetes.

Reference: 1. Kerendia Product Insert approved by HSA October 2021

Indication
Kerendia, in addition to standard of care, is indicated to reduce the risk of sustained eGFR decline, end-stage kidney disease, cardiovascular death, non-fatal myocardial infarction and hospitalization for heart failure in adults with chronic kidney disease and albuminuria associated with type 2 diabetes.

BAYER

Kerendia®
finerenone

SCIENTIFIC PROGRAMME

DAY 1 - Morning	Saturday, 12th October 2024	
0830 – 0900	Registration	
	Pre-Congress Primer Course ***Chairperson: Dr Lee Pei Shan***	
0900 – 0930	Management of Anaemia in Chronic Kidney Disease 2024 *Prof Tetsuhiro Tanaka*	
0930 – 1000	Advances in Oncology Therapeutics and Considerations for the Kidney Transplant Recipient *Prof Germaine Wong*	
1000 - 1020	**Morning Tea Break & Poster Viewing**	
1020 – 1050	Lupus Nephritis (KDIGO): New Directions for Lupus Nephritis: Tailoring Effective Immunosuppressive Therapy to Individuals for Personalised Care *Prof Mok Chi Chiu*	
1050 – 1120	Caridiorenal Syndrome: Earlier identification, Assessment and Intervention *Prof Angela Wang*	
1130-1140	**President Welcome Address** *A/Prof Jason Choo*	
1140-1225	**Plenary Lecture: Artificial Intelligence in Medicine** *Prof Joseph Sung*	
1225 - 1255	**Lunch Break**	
1255 - 1340	**Lunch Symposium 1:** **The Key to Curbing CKD** *Chairperson: Dr Claude Renaud* **Tackling CKD: Synergy is Key** *Speaker: Dr Akira Wu* **Unlocking the Cardiorenal Conundrum: Timely Action is Key** *Speaker: Dr Cynthia Lim* *(Educational Grant from Boehringer Ingelheim)*	**Lunch Symposium 2:** **The Fourth Pillar- Emerging Role of GLP-1 RAs in Management of CKD** *Chairperson: A/Prof Chua Horng Ruey* *Speaker: Dr Louis Girard* *(Educational Grant from Novo Nordisk)*

SCIENTIFIC PROGRAMME

DAY 1 - Afternoon		Saturday, 12th October 2024
	Medical Track	**Allied Health / Nursing Track**
	Symposium 1: **The Organs Crosstalk** *Moderator: Dr Mark Boxall*	**Symposium 1:** **Healthier SG for Renal Populations** *Moderator: APN Veronica Loh*
1345 – 1415	Managing Heart Failure and CKD in 2024 *Dr Lim Choon Pin* *(This talk is supported by an unrestricted grant from Boehringer Ingelheim)*	Integrating CKD Prevention into Healthier SG: Opportunities and Challenges *Dr Kwek Jia Liang*
1415 - 1445	Cognitive Impairment and CKD/ESKD: The Bidirectional Relationship and Its Implications on Clinical Practice *Prof Konstadina Griva*	Optimising Care and Empowering Patients: Enhancing Patient Engagement and Self-Management in CKD Care *Ms Chin Shi Chian*
1445 - 1515	AKI and Organ Crosstalk: Challenges and Opportunities for Prevention and Treatment *A/Prof Chua Horng Ruey*	Nutrition and Lifestyle: Interventions for Electrolyte Disorders in CKD: The Role of Dietary Therapy *Ms Yong Xin Nee*
1515 – 1540	**Afternoon Tea Break & Poster Viewing**	
	Symposium 2: **Glomerular Disease and Vasculitis** *Moderator: Dr Tan Hui Zhuan*	**Symposium 2:** **From Basics to Breakthroughs: A Patient-Centric Journey in Dialysis I – Peritoneal Dialysis** *Moderator: APN Kelly Lim*
1540 – 1610	Lupus Nephritis – A Glimpse into the Future: Novel Therapeutic Strategies and Clinical Trials for Refractory and Relapsing Lupus Nephritis *A/Prof Cynthia Lim*	Outsmarting Peritonitis- New and Old Hacks in Management *Dr Mabel Tan*
1610 – 1640	ANCA Glomerulonephritis: New and Emerging Therapies for Renal-Associated ANCA Vasculitis *Dr Goh Su Mein*	Practical Diabetes Management in Peritoneal Dialysis *Dr Chua Yan Ting*
1640 - 1710	Treatment of IgA Nephropathy: Change, Change, Change - Immunosuppressive and Novel Supportive Pharmacologic Therapy *A/Prof Jimmy Teo*	The Dream of Individualisation Unveiling the Biocompatible Blueprint for Personalised PD Solutions *Dr See Yong Pey*
End Of Day 1		

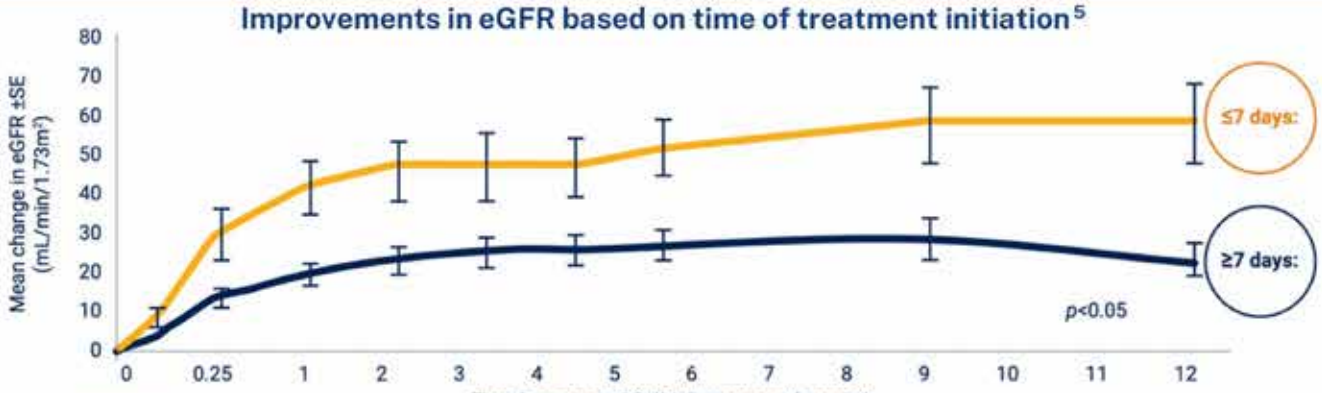
SOLIRIS®
(eculizumab)
The only first-line, proven treatment for aHUS[1,2]

With SOLIRIS®, make a difference to the lives of patients with aHUS

>50% patients develop ESRD after the first aHUS presentation and QoL is significantly impacted[3]

Early diagnosis and use of Soliris® eliminated dialysis in up to **83%** of patients[2,4]

Improvements in eGFR based on time of treatment initiation[5]



Patients (n) Treatment initiated in:											
≤7 days:	21	20	18	20	20	19	19	20	17	14
≥7 days:	76	74	69	74	74	75	72	74	60	54

Soliris® was well tolerated and the majority of reported adverse events (AEs) were not serious[6]

Most frequently reported AEs, occurring at rates >9/100 patient years[6]:

- Decreased haemoglobin
- Fatigue
- Pyrexia
- Headaches

References: 1. Licht C, et al. Kidney Int. 2015;87(5):1061-1073. **2.** Fakhouri F, et al. Am J Kidney Dis. 2016;68(1):84-93. **3.** Noris M et al. Clin J Am Soc Nephrol. 2010. October 1;5(10):1844–59. **4.** Legendre CM, et al. N Engl J Med. 2013;368:2169-2181. **5.** Walle JV et al. J Nephrol. 2017;30(1):127-134. **6.** Socié G et al. Br J Haematol. 2019;185(2):297-310.

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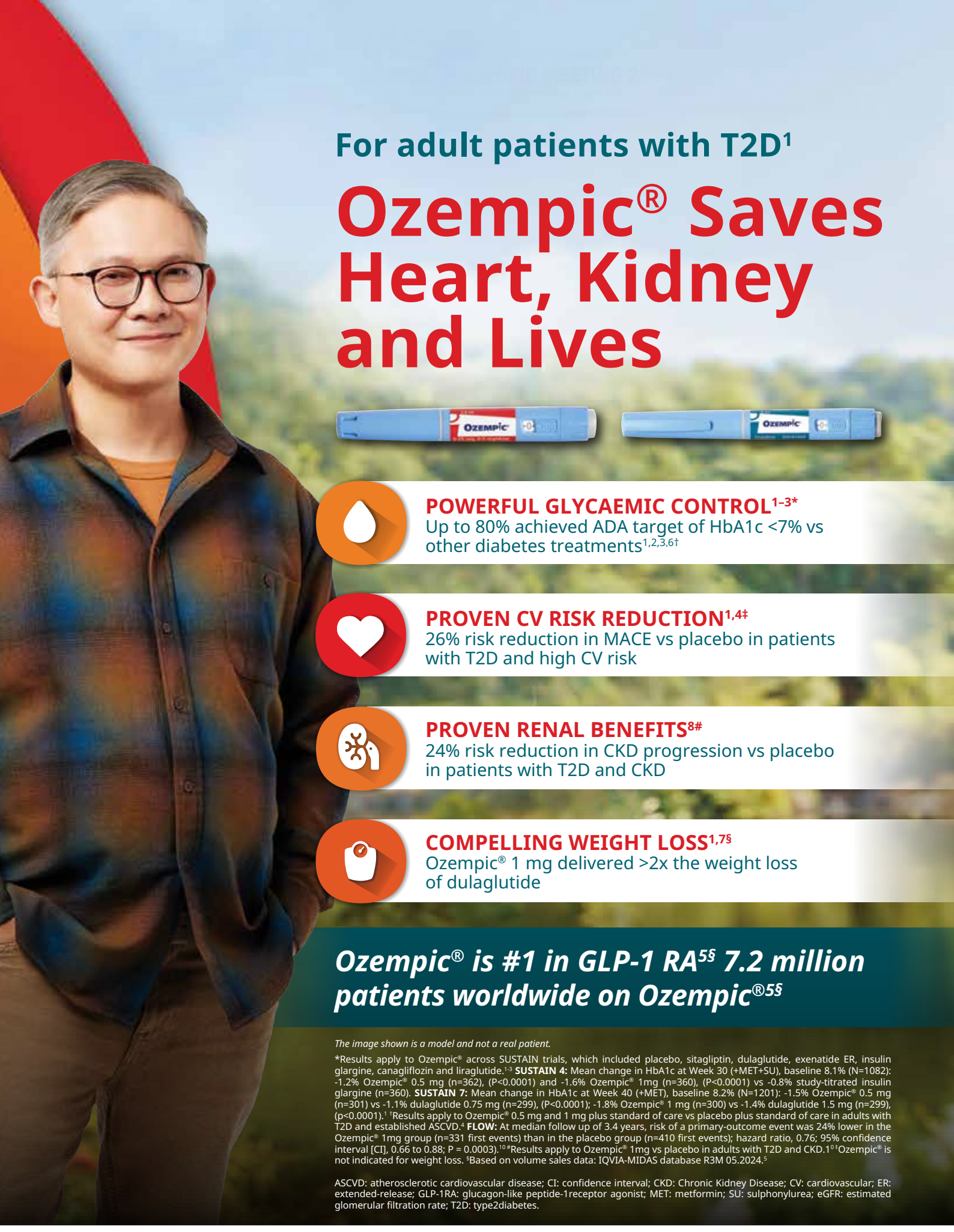
SCIENTIFIC PROGRAMME

DAY 2 - Morning	Sunday, 13th October 2024	
	Medical Track	**Allied Health / Nursing Track**
0830 - 0900	Research Free Paper Presentation *Moderator: Dr Ivan Lee*	**Symposium 3:** **Aging with Dignity: Optimal Renal Management and Conservative Care in Geriatric Renal Health** *Moderator: Ms Amy Lim*
0900 - 0930		Polypharmacy and Kidney Health in Geriatric Patients: Managing Risks and Interactions *Dr Yeo Yan Ting*
0930 - 1000		Easing the Burden: Symptom Management in the Patient for Conservative Care *Dr Gillian Phua*
1000- 1030		Ethical Considerations in the Treatment of Elderly Patients with Kidney Disease *Dr Neo Han Yee*
1030-1100	**Morning Tea Break and Poster Viewing**	
1100 - 1130	**SSN Achievement Award 2024 Presentation** *Dr Michelle Ng*	
1130 - 1200	**17th Lim Cheng Hong Lectureship** My Singapore Dream to the S.I.N:G.A.P.O.R.E Initiative in Critical Care Nephrology *Dr Manish Kaushik*	
1200 - 1230	**Lunch Break and Poster Viewing**	
1230 - 1330	**Lunch Symposium 3** **Finerenone in Practice: Adding a Pillar to Change Outcomes in CKD Management** *Chairperson: Dr Kwek Jia Liang* **Finerenone: Now a recommended & established pillar for the optimal cardiorenal care** *Speaker: Prof Eugenia Pedagogos* **Finerenone RWE: FINE-REAL & Singapore Perspective** *Speaker: A/Prof Jimmy Teo* *(Educational Grant from Bayer)*	**Lunch Symposium 4** **From Common to Rare – Navigating Nephrology's Early Intervention Landscape for CKD, Hyperkalemia and aHUS** *Speaker: Prof. Anjay Rastogi* *(Educational Grant from AstraZeneca)*

SCIENTIFIC PROGRAMME

DAY 2 - Afternoon		Sunday, 13th October 2024
	Symposium 3: **Kidney Transplant** *Moderator: Dr Liew Ian Tatt*	**Symposium 4:** **The Transplant Tapestry: Weaving Together Precision, Innovation, and Equitable Access Precision** *Moderator: APN Veronica Lew*
1335 – 1405	Advances in CMV Management: Diagnostics, Therapeutics and Dilemmas *Prof Tan Ban Hock* *(This talk is supported by an unrestricted grant from MSD Pharma)*	Addressing Polypharmacy Challenges in Transplant Recipients *Dr Lee Puay Hoon*
1405 – 1435	The Nephrologist Matchmaker: Updates in Immunological Assessment *Prof A Vathsala*	Overcoming Barriers to Access and Equity in Renal Transplantation *Ms Sally Kong*
1435 – 1505	Avoiding the Needle: The Role of Liquid Biopsies *Dr Sobhana Thangaraju*	Challenges in the Management of Renal Donors *APN Maslinna Binte Abdul Rahman*
1505 – 1530	**Afternoon Tea Break and Poster Viewing**	
	Symposium 4: **Personalisation of Care in End Stage Kidney Failure** *Moderator: Dr Shanti Tan*	**Symposium 5:** **From Basics to Breakthroughs: A Patient-Centric Journey in Dialysis II – Haemodialysis** *Moderator: APN Huang Zhihua*
1530 – 1600	Nocturnal Haemodialysis: Why Aren't More People Doing It? *Dr Manohar Bairy*	Back to the Basics: The Critical Role of Water Treatment in Haemodialysis *Dr Wong Jiunn*
1600 – 1630	Looking Ahead in Peritoneal Dialysis: Advances and Challenges in Peritoneal Dialysis Technology and Practice *A/Prof Marjorie Foo*	Optimising Dialysis Efficiency: Personalising Treatment Parameters *Dr Charles Ng*
1630 – 1700	Conservative Care for CKD What Every Nephrologist Should Know *Dr Priyanka Khatri*	Taming the Tide: Mastering Common Complication in Haemodialysis *Dr Mayank Chawla*
1700 – 1710	**Award Presentation: Best Free Paper Presentation, Best Renal Senior Resident Award, Best Poster Presentation**	
End Of Meeting		



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ASCVD: atherosclerotic cardiovascular disease; CI: confidence interval; CKD: Chronic Kidney Disease; CV: cardiovascular; ER: extended-release; GLP-1RA: glucagon-like peptide-1receptor agonist; MET: metformin; SU: sulphonylurea; eGFR: estimated glomerular filtration rate; T2D: type2diabetes.

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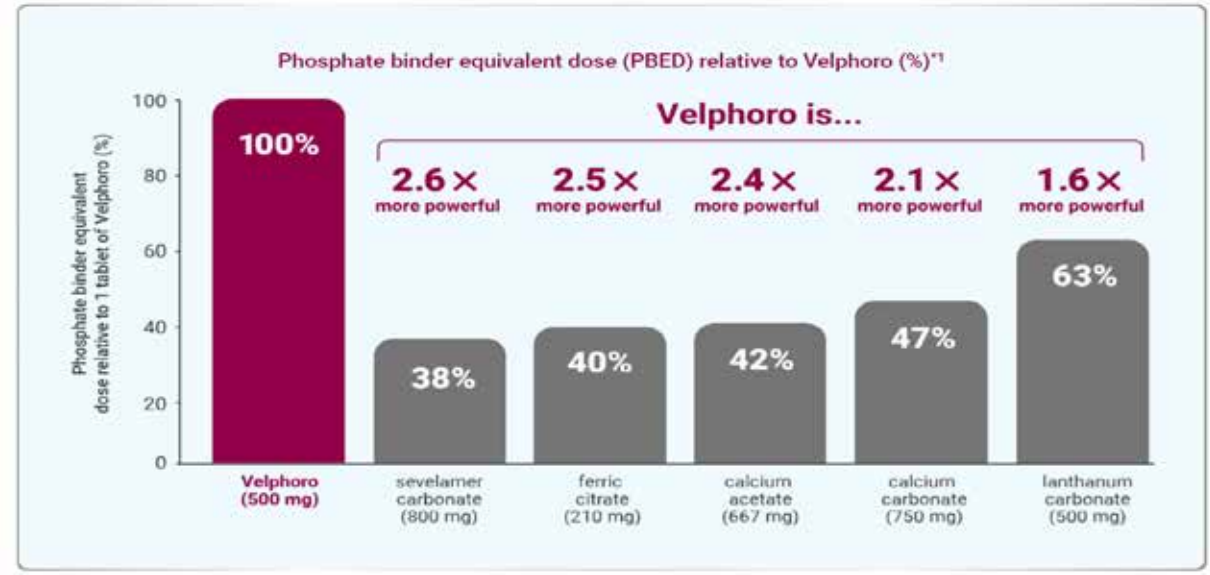

Based on an analysis of comparative clinical studies that roughly established an equivalent dose for phosphate binders relative to the phosphate binding capacity of calcium carbonate.[1]

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1. Effect of Hemodiafiltration or Hemodialysis on Mortality in Kidney Failure, Blankestijn PJ, Vernooij RWM, Hockham C, Strippoli GFM, Canaud B, Hegbrant J, Barth C, Covic A, Cromm K, Cucui A, Davenport A, Rose M, Török M, Woodward M, Bots ML; CONVINCE Scientific Committee Investigators. N Engl J Med 2023;389:700-9. DOI: 10.1056/NEJMoa2304820.

VALIDATION OF DONOR-DERIVED CELL-FREE DNA AS A BIOMARKER FOR ANTIBODY-MEDIATED REJECTION IN KIDNEY TRANSPLANT RECIPIENTS LATE POST-TRANSPLANTATION

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Zi Yun CHANG[2], Benedict YAN[4], Emmett Tsz Yeung WONG[2,3]

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Background and hypothesis:

Antibody-mediated rejection (ABMR) is a leading cause of late allograft failure in kidney transplant recipients (KTRs). Plasma donor-derived cell-free DNA (dd-cfDNA) is a non-invasive diagnostic biomarker for ABMR early post-transplant. As most studies evaluated KTRs at <3 years post-transplant, it is unclear if dd-cfDNA is useful in distinguishing ABMR from other chronic pathologies. We hypothesize that dd-cfDNA is sensitive and specific for diagnosing late ABMR.

Methods:

We conducted a single-center, prospective, observational, pilot study. We recruited 27 KTRs with allograft dysfunction at >3 years post-transplant with a planned biopsy. Plasma dd-cfDNA (AlloSeq®, CareDx, CA) was sent at the time of biopsy. Diagnostic characteristics were performed for dd-cfDNA and donor-specific antibodies (DSA).

Results:

The median age was 53 years (IQR 40, 55); 14 (52%) were living donor KTRs. Eighteen (67%) were Chinese and 7 (26%) were Malays. The median time post-transplant was 7.8 years (4.9, 11.7). Four (15%) KTRs had ABMR. Median dd-cfDNA was higher in KTRs with ABMR (1.95% vs 0.24%, p=0.004). Using a cut-off of 1%, the AUROC for dd-cfDNA was 0.97. The sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) for ABMR were 100%, 96%, 80%, 100%, vs. 100%, 91%, 67%, and 100% for DSA. Combining dd-cfDNA with DSA achieved 100% sensitivity, specificity, PPV and NPV. Dd-cfDNA correlated positively with peritubular capillaritis (β=0.51, R^2=0.31. p=0.002) but not glomerulitis (p=0.070) scores. Other than interstitial fibrosis scores (β=-0.30, R^2=0.13, p=0.038), there was no significant correlation between dd-cfDNA and Banff chronicity scores.

Conclusion:

Dd-cfDNA showed good diagnostic characteristics for late ABMR and correlated positively with ptc scores. A lack of correlation between dd-cfDNA and Banff chronicity scores suggests its utility in predicting late ABMR. This provides preliminary data for larger studies for validating the correlation between dd-cfDNA and Banff scores in a larger cohort.

Presence of rejection	Elevation of dd-cfDNA		DSA at the time of biopsy	
	dd-cfDNA >1%	dd-cfDNA <1%	DSA positive	DSA negative
ABMR	4	0	4	0
No AMBR	1	22	2	21

Figure 1A: Contingency table for dd-cfDNA and DSA at the time of biopsy in the diagnosis of ABMR

Banff lesion score	Regression coefficient, β	95% CI	Adjusted R^2	p value
Acute scores				
Peritubular capillaritis (ptc)	0.51	0.22, 0.81	0.31	**0.002**
Glomerulitis (g)	0.30	-0.03, 0.63	0.09	0.070
Tubulitis (t)	0.06	-0.23, 0.35	-0.03	0.670
Interstitial inflammation (i)	0	NA	NA	NA
Intimal arteritis (v)	0	NA	NA	NA
Chronicity scores				
GBM double contours (cg)	0.20	-0.08, 0.48	0.05	0.146
Vascular fibrosis intimal thickening (cv)	0.40	-0.13, 0.94	0.06	0.134
Interstitial fibrosis (ci)	-0.30	-0.58, -0.02	0.13	**0.038**
Tubular atrophy (ct)	-0.08	-0.26, 0.10	-0.01	0.361

Figure 1B: Correlation between dd-cfDNA and Banff lesion scores

Figure 1: Diagnostic characteristics of dd-cfDNA for ABMR and its correlation with individual Banff lesion scores

THE ASSOCIATION OF CARDIORENAL PROTECTIVE MEDICATIONS AND THE OUTCOME OF DIABETIC KIDNEY DISEASE: REAL-WORLD EVIDENCE FROM THE SINGHEALTH DIABETES REGISTRY

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Introduction:

The prevalence of chronic kidney disease (CKD) and end-stage kidney disease (ESKD) due to diabetic kidney disease (DKD) continues to skyrocket. Antiproteinuric medications like renin-angiotensin-system inhibitors (RASi), sodium-glucose cotransporter-2 inhibitors (SGLT2i) and mineralocorticoid receptor antagonists (MRA), were shown to improve renal outcomes in DKD in clinical trials. However, there is lack of evidence on the association of multiple medications and outcome of DKD. We aimed to evaluate the association of number of medications prescribed and renal outcome in a multiethnic Asian population.

Methodology:

In this retrospective cohort study, we included all adults diagnosed with type 2 diabetes mellitus and compared composite renal outcome (decline in estimated glomerular filtration rate ≥ 50%, ESKD or death due to renal causes) of DKD treated with 0 versus 1, 2 or 3 antiproteinuric medications from 2013 to 2023. By treating exposure as time-varying variable, we examined the association of number of medications and renal outcome via Cox proportional hazard analysis.

Results:

Mean age of 9796 study subjects was 59.8 (±12.7) years old and 55.0% were men. All patients on MRA were prescribed steroidal type. In multivariate model, 3-medication, 2-medication and 1-medication group had hazard ratios (HR) of 0.54 (95%CI: 0.13-2.16, p=0.38), 0.59 (95%CI: 0.43-0.82, p=0.002) and 0.67 (95%CI: 0.54-0.84, p<0.001) respectively for renal outcomes, when compared to 0-medication group. Those prescribed with RASi/SGLT2i had HR of 0.22 (95%CI: 0.12-0.41, p<0.001). MRA when used alone or in combination with RAS or SGLT2i had HR>1.0, though these were not statistically significant, compared with 0-medication group.

In subgroup analysis, RAS/SGLT2i combination showed significant protective effect with HR<1.0 for A2/A3 albuminuria group.

Conclusion:

The use of RAS blocker/SGLT2i is associated with lower risks of death and ESKD in DKD with A2/A3 albuminuria. Spironolactone use in DKD should be restricted to those with cardiovascular indications, eg. heart failure.

PATIENTS' EXPERIENCES AND PERSPECTIVES ON THE EFFECTIVENESS OF DIALYSIS COUNSELLING

Yuan Kai TEH[1], Wan Limm LOOI[1], Huiwen Vanessa TAN[1], Li Qi WONG[1], Fatin Fathiah Mohamad TAHIR[1], Shi Chian CHIN[1], Jee Kam Timothy KOH[1]

[1]Department of Renal Medicine, Tan Tock Seng Hospital, Singapore

Background:

Dialysis counseling is essential to help patients with advanced chronic kidney disease (CKD) understand their kidney disease and treatment options, to ensure early preparation and timely initiation of renal replacement therapy. This study explores patients' perspectives and effectiveness of dialysis counselling.

Methods:

Surveys were conducted with patients before and after their dialysis counselling, to explore their understanding of their kidney disease, treatment options as well as their experiences and perspectives about the dialysis counselling process. Data was collected from the surveys and analyzed.

Results:

Surveys were conducted on 20 patients. 75% felt that the dialysis counselling session had helped them to better understand their kidney disease and treatment options. 80% did not encounter any biases towards a modality when different treatment options were communicated to them. 30% felt that additional educational materials would have been helpful such as videos, diagrams and pamphlets. After the dialysis counselling, 95% better understood the various haemodialysis access options, the importance of early dialysis access creation, complications and cost and financial support available for haemodialysis. 85% better understood how peritoneal dialysis is conducted, the complications associated, and the cost and financial support available for peritoneal dialysis. 70% felt more confident in making decision for their care after the dialysis counselling (Figure 1.). However, 40% still did not feel adequately prepared to start dialysis after the counselling session (Figure 2.). Patients were noted to be very anxious about their condition, with improvement after the session.

Conclusions

Dialysis counseling has helped patients to better understand their kidney disease, treatment options and associated complications. It also increases confidence in the decision-making process and reduces anxiety. However, there is still a significant barrier for patients to feel more prepared to start dialysis. This might account for the unplanned dialysis initiations. Studies are needed to identity these barriers and to reduce burden of unplanned dialysis initiation.

FACTORS PREDICTING RAPID PROGRESSION OF CHRONIC KIDNEY DISEASE: A SINGLE-CENTRE RETROSPECTIVE COHORT STUDY

Christina SURESH[1], Wanting WENG[1]

[1]Department of Renal Medicine, Tan Tock Seng Hospital

Background:

Identifying individuals in routine clinical care at risk of rapid progression of chronic kidney disease (CKD) is crucial for optimising management and treatment strategies. This study aims to investigate the factors predicting rapid CKD progression in patients with CKD stages 3B and 4.

Methods:

This was a single-centre retrospective cohort study, including HALT-CKD patients referred by polyclinics to Tan Tock Seng Hospital between 2017-2022. Patients with estimated glomerular filtration rate (eGFR) 15-44ml/min/1.73m2 and at least 1 year of follow up were included. Patients were divided into 2 groups: rapid CKD progression (defined as annual eGFR decline >5ml/min/1.73m²) and no rapid CKD progression. Baseline demographics and clinical data for each group were analysed. Univariate analyses and multivariate logistic regression analyses were conducted to identify predictors of rapid CKD progression.

Results:

772 individuals were included. The mean age was 68.9±7.6 years and median follow-up 35.3 months. Mean baseline eGFR was 32.4±6.5ml/min/1.73m² and mean annual change in eGFR -1.78ml/min/1.73m². 20.6% (n=159) of patients had rapid CKD progression. Rapid progressors were younger compared to non-rapid progressors (mean age 66.5±8.2 years and 69.5±7.4 years respectively, p<0.001). Mean annual change in eGFR was -3.35ml/min/1.73m² in patients <65 years old compared to -1.29ml/min/1.73m² in patients ≥65 years old. Rapid progressors also had higher systolic (mean 139.5±18.4mmHg and 134.4±17.1mmHg respectively, p=0.001) and diastolic blood pressure (mean 72.3±10.5mmHg and 69.2±9.7mmHg respectively, p<0.001) and proteinuria (mean 2.5±2.2g/day and 1.0±1.2g/day respectively, p<0.001) compared to non-rapid progressors. In the multivariate analysis, the odds ratio of rapid CKD progression in patients ≥65 years was 0.60 (95% CI:0.39-0.94) compared to patients <65 years. Higher proteinuria of 1-3.5g/day and >3.5g/day increased the risk of rapid progression with odds ratio of 4.86 (95% CI:3.09-7.64) and 8.11 (95% CI:4.31-15.27) respectively.

Conclusion:

Our results highlight the importance of managing blood pressure and proteinuria especially in younger patients to slow CKD progression.

PREVALENCE AND CORRELATES OF ADYNAMIC BONE DISEASE IN PATIENTS WITH END STAGE KIDNEY FAILURE IN SINGAPORE

Siew Kit SHUIT[1], Erin Yan Qing WEE[2], Yuan Kai TEH[1], Fang Xia CHEN[1], Regina Shaoying LIM[1], Manohar BAIRY[1]

[1]Department of Renal Medicine, Tan Tock Seng Hospital

[2]Lee Kong Chian School of Medicine, Nanyang Technological University

Background and Hypothesis:

The spectrum of chronic kidney disease-mineral bone disorder (CKD-MBD) is changing and adynamic bone disease (ABD) is now believed to constitute the majority of CKD-MBD in the developed world1,2. However, its prevalence and risk factors are poorly described in our population. Its diagnosis requires bone biopsy but biochemical criteria including parathyroid hormone (PTH) levels show good correlation3,4. We hypothesize that ABD constitutes a large majority of CKD-MBD in our End-Stage Kidney Failure (ESKF) haemodialysis (HD) population, and that certain variables may predict the risk of ABD. This study aims to understand the prevalence and predictors of ABD in our ESKF HD population so as to enable early risk modification.

Methods:

This is a retrospective cross-sectional study. 201 patients on maintenance HD without parathyroidectomy were recruited. Relevant clinical and biochemical parameters, management and outcomes were collected. ABD was diagnosed if any iPTH level during the study period was <15pmol/L.

Results:

Of the 201 patients in the study (Median age 64.5years), 35 (17.4%) patients had ABD. In the multivariable model (Table1), the adjusted odds ratio (OR) of ABD was higher with higher mean adjusted serum calcium level while concurrent use of non-calcium-based phosphate binders was associated with lower odds of ABD. Activated vitamin D non-use was also associated with higher odds of ABD likely reflecting past occurrence of ABD. 17% of patients had fractures without significant association with ABD. The mean PTH level was in the target range (15-60pmol/L) in 41% of the cohort. Cardiovascular complications were not significantly associated with ABD.

Variables	Overall (N=201)	Adynamic Bone Disease (N = 35)	No Adynamic Bone Disease (N = 166)	Multivariable model	
				Adjusted OR (95% CI)	p value*
Age in years, mean (SD)	64.5 (12.5)	68.7 (12.5)	63.6 (12.4)	1.02 (0.98-1.07)	0.26
Gender, N (%)					
Male	123 (61.2)	21 (60.0)	102 (61.5)	1.39 (0.56-3.45)	0.48
Female	78 (38.8)	14 (40.0)	64 (38.6)	Reference	
ESKF cause, N (%)					
Diabetes mellitus (DM)	124 (61.7)	25 (71.4)	99 (59.6)	-	

Hypertension (HTN)	34 (16.9)	5 (14.3)	29 (17.5)	-	
Chronic glomerulonephritis (CGN)	35 (17.4)	3 (8.6)	32 (19.3)	-	
Others	8 (4.0)	2 (5.7)	6 (3.6)	-	

Vintage in months, median (IQR)	54 (30, 80)	41 (18, 78)	56 (31, 90)	1 (0.99-1.01)	0.36
DM, N (%)					
Yes	144 (71.6)	29 (82.9)	115 (69.3)	2.42 (0.82-7.1)	0.12
No	57 (28.4)	6 (17.1)	51 (30.7)	Reference	
Dialysate Calcium (mmol/L)					
Normal (1.5 mmol/L)	111 (55.2)	22 (62.9)	89 (53.6)	Reference	
Low (1.25 mmol/L)	90 (44.8)	13 (37.1)	77 (46.4)	0.58 (0.23-1.42)	0.23
Serum Calcium, mean (SD), mmol/L	2.27 (0.14)	2.30 (0.13)	2.27 (0.14)	163.42 (3.4-7847.73)	**0.01**
Serum Phosphate, mean (SD), mmol/L	1.56 (0.42)	1.47 (0.37)	1.57 (0.43)	0.94 (0.27-3.26)	0.92
Serum Alkaline Phosphatase, mean (SD), U/L	143.73 (159.33)	100.9 (113.91)	152.76 (166.22)	1 (0.99-1)	0.33
Serum Albumin, mean (SD), g/L	39.25 (4.60)	38.91 (5.08)	39.32 (4.50)	-	
Calcium-based phosphate binder, N (%)					
Yes	160 (79.6)	30 (85.7)	130 (78.3)	-	
No	41 (20.4)	5 (14.3)	36 (21.7)	-	
Non-calcium-based phosphate binder, N (%)					
Yes	50 (24.9)	1 (2.9)	49 (29.5)	Reference	
No	151 (75.1)	34 (97.1)	117 (70.5)	20.39 (2.06-202.33)	**0.01**
Calcitriol use, N (%)					
Yes	119 (59.2)	10 (28.6)	109 (65.7)	Reference	
No	82 (40.8)	25 (71.4)	57 (34.3)	5.99 (2.28-15.75)	**<0.001**
Calcimimetic use, N (%)					
Yes	22 (11)	0 (0)	22 (13.3)	-	
No	179 (89.1)	35 (100)	144 (86.8)	-	

CI – Confidence Interval, OR – Odds Ratio * Bolded values indicate statistical significance of $p < 0.05$

Conclusion:

Approximately one in every six HD patients in our care has ABD based on iPTH level. Targeting a lower serum calcium level and using non-calcium-based phosphate binders may reduce the occurrence of ABD and will need to be tested in prospective studies.

URINARY CLUSTERIN AND MONOCYTE CHEMOATTRACTANT PROTEIN (MCP) - 1 PREDICT LONG-TERM MAJOR ADVERSE KIDNEY EVENTS WITH NEPHROTOXICITY

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3Fast and Chronic Programmes, Alexandra Hospital, Singapore

Background:
Reliable methods to identify risks early and predict major adverse kidney events (MAKE) in drug-induced acute kidney injury (AKI) are needed. We hypothesised that elevated urine biomarkers of kidney tubular injury in patients with nephrotoxicity could detect subclinical AKI and predict long-term MAKE.

Methods:
We recruited patients admitted to a tertiary healthcare institution from February 2015 to February 2022 who received antimicrobials of nephrotoxic potential for ≥ 5 days. We measured urinary Clusterin and MCP-1 using ELISA in patients within three days of developing AKI (or final day of nephrotoxic exposure). We analysed the predictive performance of these biomarkers for MAKE, a composite of death, initiation of renal replacement therapy, or doubling of creatinine by one year.

Results:
We studied a cohort of 161 patients (68% male, mean age 56 years, median eGFR 102 ml/min/1.73m²) with 48% hypertension, 35% diabetes, 39% malignancy, and median nephrotoxic exposure of 14 days. Of these, 63% received vancomycin and 22% aminoglycosides. AKI developed in 26% of the patients, and 43% experienced MAKE. Biomarker levels were significantly higher ($p<0.001$) in MAKE cases versus none: Clusterin (median 238.6ng/mL, IQR 400.2ng/mL vs. 63.5ng/mL, IQR 167.4ng/mL) and MCP-1 (median 0.63ng/mL, IQR 0.91ng/mL vs. 0.19ng/mL, IQR 0.36ng/mL). The AUROCs for predicting MAKE for Clusterin, MCP-1, and combined were 0.68, 0.69 and 0.71, respectively; the corresponding AUROC was 0.76 when both biomarkers were analysed with initial AKI, with a net reclassification index of 0.078, showing improved prediction. Patients had a stepwise increased MAKE incidence with and without elevated biomarkers and AKI. We derived an ideal cut-off of Clusterin (>280ng/mL) and MCP-1 (>0.4ng/mL) for predicting MAKE in 50 randomly selected patients and tested its performance on the remaining patients.

Conclusions:
Clusterin and MCP-1 predict MAKE in patients following nephrotoxicity with enhanced accuracy beyond the presence of initial AKI.

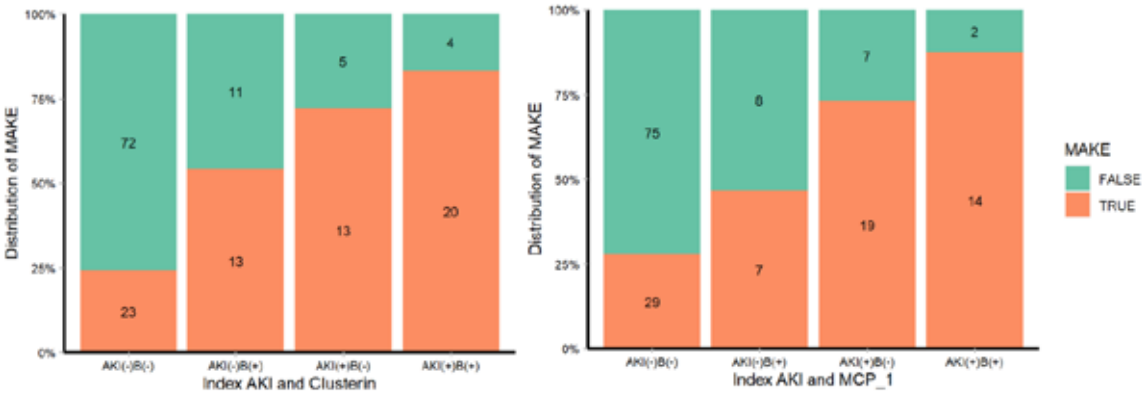

Figure 1. Stepwise increase in the accuracy of MAKE prediction is observed when AKI status is combined with biomarker positivity (with Clusterin set at 250ng/mL and MCP-1 set at 1ng/mL). MAKE - Major Adverse Kidney Events; AKI - Acute Kidney Injury.

Table 1. Performance Metrics of Urinary Biomarkers for MAKE Prediction in the Validation Cohort (n=111)

	Precision	Sensitivity	Specificity	Accuracy
Individual Biomarkers				
Clusterin>280ng/mL	0.62	0.43	0.81	0.65
MCP1>0.4ng/mL	0.59	0.55	0.72	0.65
Biomarkers in combination				
Clusterin>280ng/mL **AND** MCP1>0.4ng/mL	0.65	0.32	0.88	0.64
Clusterin>280ng/mL **OR** MCP1>0.4ng/mL	0.58	0.66	0.66	0.66
Biomarkers with AKI				
Clusterin>280ng/mL or AKI	0.70	0.68	0.78	0.74
MCP1>0.4ng/mL or AKI	0.67	0.77	0.72	0.74

MAKE - Major Adverse Kidney Events; AKI - Acute Kidney Injury.

NON-TUBERCULOUS MYCOBACTERIUM (NTM) INFECTIONS IN PERITONEAL DIALYSIS (PD) PATIENTS: A SINGLE CENTRE REVIEW

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[1]Tan Tock Seng Hospital, Department of Renal Medicine

Background:

Non-tuberculous Mycobacterium (NTM) peritoneal dialysis (PD) catheter-related infections are rare, with literature limited to mostly published case series.

Methods:

All NTM PD catheter infections between 1/1/2004 to 1/1/2024 were reviewed at our centre for epidemiological, clinical characteristics and management.

Results:

There were 11 patients in total with NTM infections over our 20 year review. All patients presented with fast growing NTM. 9 presented with exit site infection (ESI) and 2 with peritonitis alone. Of those with ESI, 3 progressed to tunnel tract infections and 1 progressed to peritonitis.

The median age was 71 years old with a male predominance (8 out of 11). 10 patients had Type II diabetes mellitus. 3 patients had antibiotic exposure within the last month prior to infection. The median time on PD before NTM infection was 272 days (25 to 2187 days).

Patients who presented with or progressed to peritonitis had increased mortality, with 2 out of 3 patients passing on before PD catheter removal. Of the 8 patients who had cutaneous limited infections, only 3 returned successfully to PD after a median duration of 143 days on interim hemodialysis. 5 transferred to long-term hemodialysis.

Of note, all patients received Gentamicin cream ESI prophylaxis from 1/6/2012 and the first occurrence of NTM infection was detected on 29/4/2013. There were 3 episodes of NTM PD infection in 2013 (1 per 29.9 patient years at risk) but this has decreased to 1 per 83.3 patient years at risk in 2023. There were no recorded NTM infections prior to 2012.

Conclusion:

As per current literature, this review suggests that Gentamicin exit site prophylaxis may predispose patients to an increased risk of NTM infections. Given the high mortality rate of NTM Peritonitis, NTM infections should be treated early and aggressively so that patients can return to PD.

A PILOT STUDY EXPLORING THE ROLE OF URINARY SOLUBLE CD163 AS A USEFUL NOVEL BIOMARKER IN IGA NEPHROPATHY

Wei Ling Chelsea CHIA[1], K AKALYA[2], Racell Angeles SOLIS[2], CHUA Horng Ruey[1,2], Boon Wee TEO [1,2], Gek Cher CHAN [1,2]

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Background And Hypothesis:

IgA nephropathy (IgAN) is the most common primary glomerulonephritis and a major cause of kidney failure. CD163 is produced by macrophages, with increased concentrations in acute inflammation. Elevated urinary (u-)CD163 may imply glomerular macrophage infiltration in active glomerulonephritis. We hypothesize that uCD163 can distinguish IgAN as a useful non-invasive biomarker compared to other nephropathies.

Methods:

We conducted a single centre retrolective study and compared uCD163 levels in historical and prospective participants with IgAN, with corresponding levels in patients with quiescent lupus nephritis (LN), diabetic nephropathy (DN), and healthy controls (HC). Prospective IgAN patients were recruited from May 2023 to June 2024 and urine tested within 6 months of biopsy. uCD163 was measured using ELISA. We performed univariate, multivariate, discriminant ROC analysis; and calculated Youden's index to determine the cut-off of uCD163 for optimal classification of IgAN versus other nephropathies.

Results:

We studied 90 patients, including 16 IgAN, 7 LN, 23 DN, and 44 HC. There were no significant demographic differences between patients with IgAN versus those with other nephropathies or HC; both groups had comparable eGFR (p=0.148) and proteinuria (p=0.056) at the point of uCD163 measurement. Median uCD163 was 0.367 (0.351-0.544) in IgAN and 0.345 (0.240-0.378) in LN, DN, or HC (p=0.015); uCD163 remained significantly higher in IgAN versus other nephropathies or HC when adjusted for urine protein creatinine ratio (p=0.010). uCD163 had an AUC of 0.695 (95% confidence interval: 0.555-0.835), with an optimal cut-off of 0.356 ng/mL that had a 75% sensitivity and 62% specificity for distinguishing IgAN versus other nephropathies or HC, including a negative predictive value of 92%.

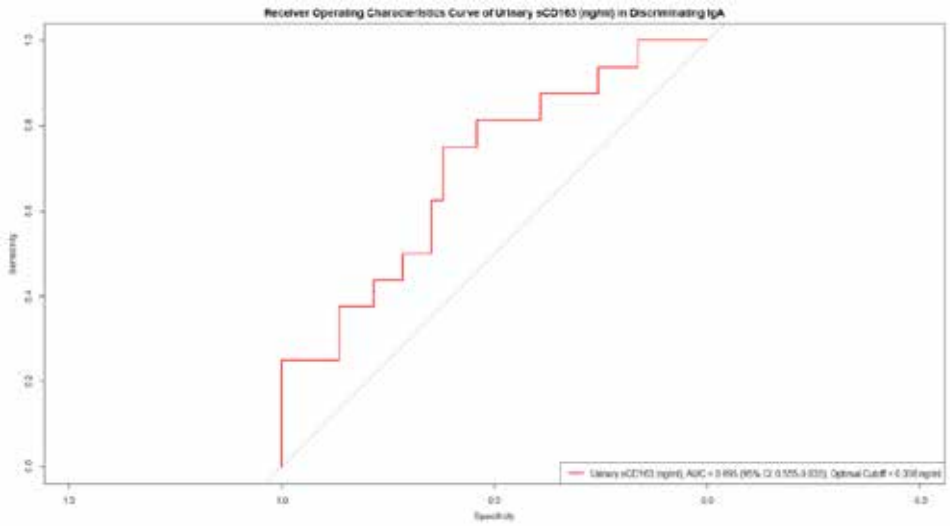
Conclusion:

Elevated uCD163 levels may be useful in distinguishing patients with IgAN from those with quiescent glomerulonephritis or non-immune nephropathies.

Table 1: Univariate analysis of baseline demographic parameters and kidney function between patients with IgAN (Group 1) and other nephropathies and controls (Group 2)			
	Group 1 (n=16)	Group 2 (n=74)	p-value
Age, n (%)			
< 50 years	11 (68.8)	39 (52.7)	0.241
≥ 50 years	5 (31.3)	35 (47.3)	
Gender, n (%)			
Male	7 (43.8)	43 (58.1)	0.295
Female	9 (56.3)	31 (41.9)	
Ethnicity, n (%)			
Chinese	7 (43.8)	37 (50.0)	0.436
Malay	4 (25.0)	15 (20.3)	
Indian	1 (6.3)	15 (20.3)	
Others	4 (25.0)	7 (9.5)	
eGFR, ml/min/1.73m^2 (Median, IQR)	73.8 (37.9-96.0)	96.4 (44.8-111.8)	0.148
Mean BP, mmHg (Median, IQR)	86.3 (79.2-91.0)	85.0 (78.2-93.3)	0.726
Urine Protein: Creatinine Ratio, mg/mmol (Median, IQR)	111.0 (26.7-375.5)	14.6 (8.1-286.8)	0.056
Urinary sCD163 (ng/ml)	0.367 (0.351-0.544)	0.345 (0.240-0.378)	**0.015**
Etiology, n (%)			
IgA	16 (100.0)	0 (0.0)	**<0.001**
Lupus	0 (0.0)	7 (9.5)	
Diabetic	0 (0.0)	23 (31.1)	
Controls	0 (0.0)	44 (59.5)	

Table 2: Multivariate analysis of predictive variables deemed potentially significant (p<0.10) in the univariate analysis between Group 1 and Group 2				
Variable	IgA	Others	OR (95% CI)	p-value
Urine Protein: Creatinine Ratio mg/mmol (Median, IQR)	111.0 (26.7-375.5)	14.6 (8.1-286.8)	1.001 (1.000-1.002)	0.198
CD163, ng/ml, (median, IQR)	0.367 (0.351-0.544)	0.345 (0.240-0.378)	0.002 (0.000-0.218)	**0.010**

Figure 1: Receiver-operating characteristics (ROC) curve of uCD163 in distinguishing between IgAN and Group 2 cohort (AUC 0.695, 95% CI: 0.555-0.835)



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HAVE YOU CONSIDERED **COMBINING AUTOMATED PERITONEAL DIALYSIS WITH REMOTE PATIENT MANAGEMENT?**

Remote Patient Management may be associated with a significantly reduced rate of hospitalization

Remote Patient Management (RPM) technology is designed to be integrated into automated peritoneal dialysis (APD) systems, enabling clinical teams to access dialysis data and make adjustments to treatment. Consequently, combining APD with RPM enables early intervention if therapy complications are encountered, and may improve treatment adherence and clinical outcomes.

A multicenter, retrospective cohort study matched n=63 APD patients without RPM to n=63 APD patients with RPM. Patients using APD with RPM had a 39% lower rate of hospitalization (p=0.029) and spent 54% fewer days in hospital (p=0.028) compared to APD without RPM. RPM may represent a useful tool for improvement of APD treatment.

Read more about the study here **renalcare.baxter.com**

1. Sanabria M, et al. *Remote Patient Monitoring Program in Automated Peritoneal Dialysis: Impact on Hospitalizations.* Perit Dial Int 2019 Sep-Oct;39(5):472-478

SG-RC00-240024

CLINICAL PRACTICE PATTERNS IN HEPATITIS B VACCINATION FOR PATIENTS WITH CHRONIC KIDNEY DISEASE

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Aim:

To investigate the clinical practice patterns among renal professionals regarding hepatitis B vaccination in chronic kidney disease and to identify potential barriers affecting early initiation.

Background:

Optimal hepatitis B vaccination requires a rigorous 6-month schedule for protective seroconversion. However, seroconversion rates are suboptimal in dialysis populations due to declining immune response as the disease progresses. Hence early vaccination is recommended, however, global consensus on the ideal stage of chronic kidney disease for vaccination initiation is still lacking.

Hypothesis:

A Clinical Practice Patterns survey will identify practice variations and highlight barriers impeding unified practice and promote knowledge of early pre-dialysis vaccination.

Method:

A 14-question web-based survey was disseminated to renal professionals across Australia and New Zealand. Participation was anonymous, voluntary with informed consent.

Results:

A total of 133 responses were received. 125 responses (25 medical, 78 nurses, 22 either) were eligible after excluding eight non-consented responses, with highest representation from Western Australia, New South Wales and Victoria (28.42%, 22.11%, 22.11% respectively). The majority were nurses (62.41%) working in the satellite settings (33.68%). The survey showed a significant portion of respondents (21.74 % medical, 45.00% nursing) initiating the vaccine only at the start of dialysis. Lack of designated staff (35.34%) and established guidelines (15.52%) were major barriers for not commencing vaccination pre-dialysis, additionally 6.90% of the respondents indicated limited awareness of the need or the benefits of commencing the hepatitis B vaccination early before reaching dialysis.

Conclusion:

This pilot survey revealed diverse clinical practice patterns across renal centers and outpatient clinics, highlighting barriers influencing vaccination timing. Findings support the need for larger studies to determine the optimal and a standardized stage of chronic kidney disease for vaccination initiation, as well as promoting the staff awareness and understanding of the importance of initiating the Hepatitis B vaccination earlier before reaching dialysis requirement.

REDUCING FLUID OVERLOAD HOSPITALIZATIONS AND READMISSIONS THROUGH POST-DISCHARGE TRANSITIONAL CARE PROGRAMS

HUANG Zhihua[1,3], CHIN De Zhi[2], TAY Wei Yi[4], Lourdes Ducusin GALANG[5], LEONG Ee Won[3,5], LIU Weihua[4], NG Li Choo[1,3], Rachel Marie TOWLE[4], Haslinda Bte BARMAN[4], SIA Wan Jin[2], Serene XIN Xiaosil[6], LOW Lian Leng[4], KANG Mei Ling[5], TAN Chieh Suail[1], Cynthia LIM Ciwei[1]

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Background and Hypothesis:

SingHealth Diabetes Registry data revealed that Fluid Overload (FO) was the top 2 diagnosis for readmission among Singapore General Hospital (SGH) diabetes patient in 2019-2020. Value Driven Care analysis also found that the monthly FO hospitalizations in diabetic kidney disease (DKD) patients increased from 64 (2019) to 100 (2021).

This study evaluates the impact of post-discharge transitional care programs on reducing monthly FO hospitalizations in non-dialysis dependent DKD patients, aiming for 15% reduction (100 to 85 cases) in 12months.

Methods:

The National Diabetes Collaborative highlighted the importance of managing high-risk patients and shifting care to the community as drivers to reduce diabetes-related hospitalizations, including FO in DKD, which has been increasing in SGH from 2016 to 2021. In response, post-discharge transitional care programs were piloted by Renal Medicine and Population Health and Integrated Care Office in July 2022 to empower patients in self-management and intensify follow-up for high-risk patients. After a successful 12-month pilot, the initiatives were expanded to two Internal Medicine wards between August and December 2023. The program's effectiveness was measured by clinical outcomes (hospitalizations and 90-day readmissions for FO) and process outcomes (number of referrals and enrolment into the transitional care programs).

Results:

The interventions showed minimal changes in monthly FO hospitalizations, with an average of 102 cases per month pre-intervention and 99 cases after scaling, The 90-day readmission rate for FO remained relatively stable, decreasing slightly from 10.4% to 10.0% after scaling. However, there was a significant increase in referrals, from an average of 5 cases per month during the pilot phase to 21 cases per month after scaling. Among the 170 enrolled patients, 6.5% experienced 90-day FO readmission.

Conclusion:

Transitional care programs include enhanced follow-up and patient education may help reduce FO readmissions for DKD patients. A longer follow-up is needed to determine the programs' impact on a larger patient cohort.

THE CLINICAL PROFILES AND 2D ECHOCARDIOGRAPHIC FINDINGS OF CHRONIC KIDNEY DISEASE PATIENTS ON HEMODIALYSIS AND HEMODIAFILTRATION IN A PRIVATE TERTIARY HOSPITAL IN MANILA, PHILIPPINES

Hazel Ann Gianelli CU

Introduction:

Cardiovascular disease (CVD) is the leading cause of death in CKD patients worldwide. It can represent up to 40% of the cause of sudden cardiac death and all-cause mortality in CKD. Cardiovascular-kidney-metabolic (CKM) syndrome is a term used nowadays to identify these problems. CKM is defined as a health disorder that connects obesity, diabetes, chronic kidney disease (CKD), and cardiovascular disease (CVD), which includes heart failure, atrial fibrillation, coronary heart disease, stroke, and peripheral artery disease which includes those at risk for CVD and those with existing CVD.

Methods:

This is a prevalence descriptive epidemiology research study to enumerate the clinical profile of CKD patients on MHD and MHDF and their 2D ECHO findings from May 2022- December 2023 at St Luke's Medical Center, Quezon City. 136 Stage 5 CKD patients who were initiated for KRT from May 2022 until December 2023 were identified from the hospital registry with a baseline 2D ECHO for at least 6 months upon commencement of KRT up to 4 weeks of initiating KRT were included in the study.

Results:

The 136 patients who underwent hemodialysis had a mean age of 60.52. They had a mean BMI of 25.02. 64 (47%) of them were females and 72 (52%) were males. Of the 136 CKD Stage 5 patients, 66 (48.5%) were smokers. 90 patients (66.18%) had diabetes. Most of the patients initiated on MHD had an etiology of CKD sec to diabetes and hypertension. 105 (75%) of them used central catheter, and 31 (25%) had AV accesses. Majority of the patients who were initiated had a mean eGFR of 8.35ml/min. Patient had hemoglobin levels within target. but with elevated phosphorus levels at a mean value of 6.05mg/dl. We found that patients had an average level of EF of 54.16% (Simpson's) and 54.62% (Teicholz's).

Discussion and Conclusion:

In this study, we have found out that, majority of CKD patients who were initiated on dialysis were males aged 60 years and older. Most of them were smokers and had diabetes and hypertension. Upon initiation of dialysis, most of them had central venous catheters. Most of their 2D ECHO findings relatively still had normal ejection fraction, LVMI and LVEDD, but a great number among them already showed changes, signaling uremic cardiomyopathy.

REDUCING PATIENT LENGTH-OF-STAY WITH EARLY UNBLOCKING OF BLOCKED TUNNELLED DIALYSIS CATHETERS AT THE EMERGENCY DEPARTMENT

[1]Michelle NG, [1]Genevieve NG, [1]Shashi S/O Chandra SEGARAM

[1]Singapore General Hospital

Background:

End-stage-renal-disease (ESRD) patients on haemodialysis require regular dialysis via a vascular access - either an arteriovenous fistula or graft, or a tunnelled dialysis catheter (TDC). TDCs are prone to complications, including poor flows or blockages of the catheter lumens. Patients who are not able to dialyze at their community dialysis centres due to catheter blockages, often present to the hospital for admission and inpatient unblocking procedures, followed by haemodialysis.

Hypothesis:

Early unblocking of blocked TDCs performed at the Emergency Department (ED) will lead to a reduced length-of-stay for ESRD patients.

Methods:

Seven nursing champions were identified from the ED. They underwent training in unblocking of TDCs with Alteplase. Training consisted of videos, lectures, hands-on demonstration on models, as well as on-site supervision of minimum 10 procedures. Data was then collected on the success rate and monthly patient average length-of-stay (ALOS).

Results:

292 patients presented to the ED between Jan 2022 and Dec 2023 with blocked TDCs. 49 (16.8%) patients underwent unblocking at the ED. Overall ALOS for all patients decreased from 4.3 days (pre-intervention) to 3.2 days (post-intervention) ($p<0.05$). Overall success rate of TDC unblocking increased from 62.1% (pre-intervention) to 72.6% (post-intervention) ($p=0.057$). Using the ALOS difference and the ward cost of B1 inpatient stay per day of $268.92, we estimate a cost savings of S$86,000 between Jan 2022 and Dec 2023.

The ALOS for TDCs unblocked at the ED was 2.6 days, compared to 3.4 days for TDCs unblocked at inpatient level ($p<0.05$). Success rate for TDCs unblocked at the ED was also higher at 90% compared to 68% for the inpatient cases ($p<0.05$).

Conclusion:

Early unblocking of blocked TDCs at the ED helped reduce the patient average length-of-stay. This can translate to reduced burden on inpatient bed requirements, as well as healthcare costs.

END STAGE RENAL DISEASE ON HAEMODIALYSIS PATIENTS WITH CATHETER RELATED BLOOD STREAM INFECTION AND INFECTIVE ENDOCARDITIS

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Faculty of Medicine, University of Indonesia/ Cipto Mangunkusumo Hospital

Background:

The number of patients with end-stage renal disease (ESRD) who require haemodialysis is increasing every year. For haemodialysis to be carried out, vascular access is required including AV (arteriovenous) Fistula, AV Graft or CVC (central venous catheter). Catheter related blood stream infection (CRBSI) is the most frequent complication of CVC. CRBSI increases hospitalisation, antibiotic use and health burden.

Case Report:

A 18 years old female, with fever complaints since 2 weeks before admission especially during haemodialysis, no signs of infection at the exit site CVC. The patient routinely underwent haemodialysis since 2 year before. In physical examination there was cardiac murmur. In laboratory examinations leukocytes 7.650/l, diff count 0.7/0.1/82/11.8/5.4, Procalcitonin 226.4, in echocardiography there was vegetation on the aortic valve with size of 3 x 8 mm. Blood cultures from peripheral veins and catheter tip were negative. The patient was diagnosed with complicated CRBSI, possible infective endocarditis and ESRD on haemodialysis. Patient were given intravenous ampicillin-sulbactam 1.5 gr bid for 2 weeks and continued with 375 mg tid orally for 4 weeks and CVC replacement. In the echocardiography examination 2 weeks after therapy, there was no vegetation.

Conclusion:

Catheter-related blood stream infection should be suspected in patients with an intravenous catheter who have fever, chills or signs of sepsis. Examination for possible metastatic infection should be performed in each patient with CRBSI. The management of CRBSI includes the administration of antibiotics and replacement of CVC depending on the patient's condition such as hemodynamic state, metabolic status and immunity of the patient, presence or absence of metastatic infection, type of causative microorganism and response to antibiotics. Prevention of CRBSI including exit site treatment and antibiotics/antimicrobial locks may be considered in patients at high risk of CRBSI

EVALUATION ON THE EFFECTIVENESS OF THE CHRONIC KIDNEY DISEASE COUNSELLING MODEL: SINGLE CENTRE EXPERIENCE

Ummi Hani ABDUL KADER[1], Lydia Wei Wei LIM[1], Jason Chon Jun CHOO[1]

[1]Department of Renal Medicine, Singapore General Hospital

Background:

Chronic Kidney Disease (CKD) is a growing public health concern. Patient education is a critical component of CKD management to help patients retard the progression of CKD. This study aims to evaluate the effectiveness of the CKD education programme to enable patients to understand and better manage their disease.

Method:

Patients diagnosed with CKD were referred by nephrologists to the Renal Coordinator (RC) clinic for tailored CKD education which lasts an average of 45 minutes.

The topics covered for patients with CKD stage 3 or earlier were causes of CKD, symptoms of CKD and measures to retard progression. For patients with CKD stages 4 or 5, kidney replacement therapy options, complications and cost involved were covered. An educational handout was given to patients.

A 28-question voluntary survey was electronically sent (SMS) to patients after the session.

Results:

Between December 2021 to December 2023, a total of 67 patients participated in the survey of which 59.7% were male with an average age of 66.9 ±12.4 years. 41.8% of the education given was on CKD and end stage kidney failure (ESKF), 32.8% on CKD only and 25.4% on ESKF only. 64.2% of the counselling was done face-to face and 35.8% via telehealth.

Out of the total 67 patients, 13.5% rated their understanding of kidney disease as very good and excellent before education. This increased to 49.3% after education.

Of those who attended ESKF education only, 5.9% rated their understanding of dialysis treatment as good before education. This increased to 52.9% after education.

98.5% felt they learnt more about their kidney disease after education and 97% would recommend the education to other patients.

Conclusion:

This study shows that the CKD education programme is beneficial to improving patient's understanding of the disease. However, more can be done to further improve CKD literacy.

COMPARISON OF A VIDEO TO A PATIENT EDUCATION PAMPHLET IN IMPROVING PATIENTS' KNOWLEDGE, BELIEFS ABOUT, PERCEIVED AND ACTUAL ADHERENCE TO FEMORAL NON-TUNNELLED DIALYSIS CATHETER CARE AMONG HEMODIALYSIS PATIENTS

Felice Fangie LEONG, Fazila ALOWENI, Jason Chon Jun CHOO, Shien Wen Sheryl GAN, Li Choo NG

Siew Hoon LIM

Background:

Effective patient education on post-femoral non-tunnelled dialysis catheter (NTDC) care is crucial due to the risk of complications like dysfunction, infection, and bleeding, impacting safety, efficacy and costs. However, there is no standardised method for educating patients. Pictorial pamphlets and videos are potential tools to improve adherence to femoral NTDC care, though their efficacy is not yet established.

Hypothesis:

Video-based education intervention (VBEI) is better in improving knowledge, beliefs about, perceived and actual adherence to femoral NTDC care among patients on haemodialysis as compared to those who receive patient education pamphlet (PEP).

Methods:

This pre- and post-intervention study was conducted in the renal ward and intermediate care area of an acute care teaching hospital from August 2022 to April 2024. In the pre-implementation phase, patients received Health Belief Model-based patient education pamphlets (PEP), while in the post-implementation phase, they received video-based education interventions (VBEI). Data on knowledge, beliefs, perceived adherence, and actual adherence were collected using a 29-item questionnaire and adherence charts.

Results:

A total of 100 participants were recruited. Significant improvements were noted in perceived knowledge, beliefs, and actual adherence scores within the VBEI group compared to the PEP group ($p<0.05$). The study revealed moderate positive relationships between the number of advocated guidelines and perceived knowledge ($r = 0.593$, $p<0.05$), as well as a positive but low correlation between perceived knowledge and actual adherence ($r = 0.395$, $p<0.05$). Additionally, perceived adherence was moderately positively correlated with actual adherence ($r=0.406$, $p<0.05$). Importantly, perceived adherence and the educational method emerged as significant predictors of patients' actual adherence ($p<0.05$) to femoral NTDC care guide.

Conclusion:

VBEI significantly improved patients' understanding, beliefs, and adherence to femoral NTDC care. This method enhanced nurses' effectiveness in patient education, leading to better patient outcomes and higher treatment adherence, highlighting its value in modern healthcare practice.

SUCCESSFUL LIVING DONOR KIDNEY ALLOGRAFT WITH LITHIASIS IN A YOUNG MALE: EX VIVO LITOTHRIPSY AS A VIABLE OPTION

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Background:

Renal transplantation procedure has been proven its clinical benefits in end-stage kidney disease (ESKD) patients. One of the pitfalls in this procedure is the condition of the renal allograft. Making the right selection in the limited conditions of renal allografts in Indonesia is a challenge. The presence of nephrolithiasis in the donor's kidney is one such thing, and proceeding with the transplantation procedure with known lithiasis is a controversial topic. Here, we presented a case report for a potential solution for this specific problem in the form of ex vivo lithotripsy during the procedure before transplantation.

Case Illustration:

A 23-year-old man was admitted for a kidney transplantation procedure with a history of ESKD. The patient complained of foamy urine from 4 years before admission and was diagnosed with ESKD 1 year before admission. Hemodialysis was started and he was immediately referred for kidney transplantation, for which his biological father consented to become a donor. During donor evaluation 6 months before admission, nephrolithiasis was discovered in the candidate's kidney without any symptoms or functional decline, while other parameters were within normal limits. It was decided that the kidney transplantation would be performed as planned with ex vivo lithotripsy before vascular and ureteric anastomosis. The transplantation procedure was performed as planned, utilizing ureteroscope-guided laser lithotripsy to remove the nephrolithiasis before anastomosis. No major complications were observed during the procedure. Post-procedure, the patient experienced slight pleural effusion which quickly subsided after thoracentesis in addition to maximum medical treatment. Both the recipient and the donor were successfully discharged and follow-up examinations did not reveal any complications two months post-surgery.

Conclusion:

We successfully showed how transplantation of a kidney with nephrolithiasis is a viable option when paired with ex vivo lithotripsy. Larger studies are required to evaluate the overall efficacy of this method.

.FABRY DISEASE SCREENING OF PATIENTS ON MAINTENANCE HAEMODIALYSIS IN SINGAPORE

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Background:

Fabry Disease (FD) is an X-linked lysosomal storage disorder, which results from the defective function of enzyme α-Galactosidase A (AGAL-A). Progressive accumulation of Globotriaosylceramide (Gb3) in a wide range of cells and tissues could result in major organ damage, which includes the kidneys, heart and nervous system. The global prevalence estimates of FD range from 1 in 40,000 to 1 in 170,000 people. Screening of high-risk populations with End Stage Kidney Disease (ESKD) of unexplained aetiology can help detect patients with FD, thereby allowing identification of affected family members at an early stage of the disease, potentially improving outcomes.

Methods:

We screened for FD on haemodialysis patients at NKF centres from October 2022 to April 2023. Patients whose native disease was type 1 Diabetes(DM), type 2 DM with HbA1c ≥7, male ≥55 years of age, Hepatitis B, Hepatitis C or HIV carrier were excluded. Dried blood spot test was performed on eligible patients to detect reduced AGAL-A activity. Parallel testing for plasma lyso-Gb3 biomarker was performed for female patients. Patients with reduced AGAL-A activity were referred for genetic counselling and further genetic tests.

Results:

A total of 883 eligible patients were identified with 536 (60.7%) patients consenting to the screening. Of the 536 patients, 135 (25%) were male and 401 (75%) were female. 288 (54%) were Chinese, 199 (37%) Malay, 32 (6%) Indian, and 17 (3%) were of other ethnicity. Reduced AGAL-A activity was found in 9 (2 male and 7 female) participants. Only 3 participants with reduced AGAL-A subsequently underwent genetic testing with 1 confirming to have FD.

Conclusions:

Screening for FD in a high-risk population with unexplained ESKD could potentially identify patients tailoring therapy but also aid early diagnosis and management of their relatives. This proactive approach could be beneficial in improving outcomes and providing targeted care for this rare disease.

SEVERE ACUTE PANCREATITIS POST INITIAL HEMODIALYSIS TREATMENT

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Background:

The annual incidence of acute pancreatitis (AP) ranges from 4.9 to 73.4 cases per 100,000 individuals worldwide. Patients with ESRD undergoing dialysis exhibit a significantly higher risk of developing AP compared to those without renal disease. While the overall risk of pancreatitis is elevated in this patient population, the occurrence of acute pancreatitis following the initial hemodialysis session is exceptionally rare. Here, we present a rare case of severe acute pancreatitis occurring immediately after the first hemodialysis session.

Case Illustration:

A 65-year-old male patient presented to the hospital with complaints of nausea and weakness. The patient had been diagnosed with ESRD two months prior and was advised to start hemodialysis. He had a history of hypertension for the past 10 years. On admission to our hospital, the patient was diagnosed with CKD stage V, hypertension, and renal anemia. The patient was scheduled for initiation of hemodialysis with settings: duration of 3 hours, blood flow rate of 200 mL/min, dialysate flow rate of 500 mL/min, ultrafiltration goal of 500 mL, and minimal heparin. Post-hemodialysis, the patient experienced worsening nausea and vomiting. Approximately 650 mL of greenish fluid was drained from the nasogastric tube. The patient reported continuous and worsening epigastric pain starting 8 hours post-hemodialysis, with persistent high output from the NGT. Subsequently, the patient experienced decreased consciousness, persistent hypoglicemia, and hypotension requiring vasopressor support. The laboratory results showed hemoglobin 9,8 g/dL, leukocyte 13.440/µL, ureum 462 mg/dL, creatinine 3,4 mg/dL, kalium 7,76 mg/dL, and lipase 360 U/L. Arterial blood gas analysis revealed lethal acidosis with mixed respiratory and metabolic acidosis. The chest X-ray (CXR) showed worsening diffuse infiltrates

Conclusion:

While the incidence of acute pancreatitis is notably higher in patients undergoing long-term hemodialysis, it is important to recognize that acute pancreatitis can also occur during the initiation of hemodialysis.

OPTIMISING RENOPROTECTIVE THERAPIES: AN AUDIT OF ACE-I, ARB, AND SGLT2 INHIBITOR USAGE IN NEPHROLOGY PATIENTS

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Introduction:

Chronic kidney disease (CKD), led by diabetic kidney disease (DKD) and hypertensive kidney disease, is expected to become the sixth-greatest cause of mortality by 2040. The link between CKD and cardiovascular events emphasises the need to delay its onset and progression. ACEis and ARBs have been standard therapies; however, current data reveals varying efficacy in lowering cardiovascular events and mortality. Sodium-glucose cotransporter-2 inhibitors (SGLT2is) have shown promise in nephrology, suggesting new ways to control CKD alongside established medications.

Methodology:

We retrospectively examined ACE-I, ARB, and SGLT2 inhibitor use in CKD patients. We examined patient demographics, medications, test findings, and clinical outcomes in HSAAS Nephrology Clinic electronic health records from March to August 2023. Descriptive and inferential statistics were used to summarise the data and identify renoprotective therapy effectiveness variables.

Results:

The study explored renoprotective interventions in a cohort of 184 CKD patients, primarily male (65.8%) and of Malay descent (87%), with notable incidences of hypertension (93.5%) and diabetes (73.9%). Treatment modalities encompassed SGLT2 inhibitors and ARBs, with 49.5% receiving combination therapy. Adverse events were recorded in 4.9% of cases, while 29.9% demonstrated improvement in UPCI. Regarding renal function, a subset experienced an increase in eGFR, with 3.3% achieving a ≥50% increment and 32.1% observing a <50% increment. Analysis revealed varying risk factors for complications and achieving a 50% increment in eGFR, with no discernible correlations noted for age, sex, or specific medication categories. Nevertheless, the use of SGLT2 inhibitors and combination therapy exhibited significant associations with UPCI improvement ($p < 0.001$).

Conclusion:

In conclusion, the study shows that some treatments might be able to improve kidney function in patients with CKD. Specifically, treatments such as SGLT2 inhibitors and ARBs, when used in combination by almost half of the patients, showed a substantial improvement in UPCI levels.

EVALUATING QUALITY OF LIFE AND PSYCHIATRIC WELL-BEING IN GERIATRIC PATIENTS WITH END-STAGE KIDNEY DISEASE (ESKD) WITH OR WITHOUT DIALYSIS: A CROSS-SECTIONAL STUDY

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Background/Hypothesis:

ESKD especially for the elderly, requiring physical and emotional health treatment. Over-55s have the highest dialysis rates, but worse outcomes and mortality. Psychological illnesses like sadness and anxiety worsen CKD patients' health and function. This study examines how dialysis affects senior ESKD patients' QoL and psychiatric health. We hypothesise that geriatric ESKD patients' psychological burden affects QoL. Age, gender, marital status, education, comorbidities, haemoglobin, urea, and albumin levels all have an impact on psychiatric burden and quality of life.

Methods:

We selected elderly ESKD patients with and without dialysis from Hospital Sultan Abdul Aziz Shah and Hospital Sultan Idris Shah, Serdang, excluding those with significant cognitive impairment or pre-existing psychiatric diseases. We analysed clinical data and KDQOL-36 and DASS-21 questionnaires using SPSS.

Results:

We evaluated 100 elderly ESKD patients in three groups: No RRT, haemodialysis (HD), and peritoneal dialysis (PD). The mean ages were 71.21 (No RRT), 68.57 (HD), and 63.9 (PD). 88% of the patients had hypertension, 74% had diabetes, and 29% had ischaemic heart disease. The average RRT duration for HD was 5.69 years, and for PD, it was 2.04 years. Haemoglobin, urea, and albumin were normal in 6%, 3%, and 49% of patients. With mean KDQOL-36 ratings of 82.77 (symptoms), 67.33 (effects), and 50.57 (burden), PD patients had superior QoL. HD has the highest prevalence of stress (37.30%), anxiety (30.70%), and depression (18.70%), while those on PD have the lowest prevalence of stress (18.20%) and anxiety (9.10%), with a moderate prevalence of depression (9.10%). Marital status (p=0.017), Malay race (p=0.020), Indian race and burden (p=0.038), and ischaemic heart disease (p=0.015) were associated with mental health.

Conclusions:

Our study of elderly ESKD patients found that HD patients have higher stress and anxiety, while PD patients have better QoL. Psychiatric burden, demographics, and clinical variables greatly impact older ESKD patients' QoL.

IMPLEMENTATION OF A CHRONIC KIDNEY DISEASE RISK DETECTION PROGRAMME AMONG A HIGH-RISK POPULATION

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Background:

Chronic kidney disease (CKD) is a major public health concern. In Singapore, the prevalence of CKD is projected to reach 24.3% by year 2035. KDIGO has recommended early CKD screening among high-risk individuals. Since 2022, The National Kidney Foundation Singapore (NKF) provided free screening for individuals at risk through the Chronic Kidney Disease Risk Detection Programme aiming for early detection and intervention.

Methods:

In phase 1, individuals with either diabetes or hypertension, family history of CKD or are ethnic Malays were included. In phase 2, eligibility was extended to those with cardiovascular diseases, BMI≥27.5kg/m^2, or with family history of diabetes or hypertension. Individuals were screened through a dedicated screening clinic and externally through outreach programmes. Office blood pressure, lipid profile, haemoglobin A1c(HbA1c), serum creatinine, estimated glomerular filtration rate (eGFR) and urine-albumin-to-creatine-ratio (UACR) were tested.

Results:

From February 2022 to June 2024, 955 participants were screened. There were: 514(53.8%) females, 606(63.5%) Chinese, 268(28.1%) Malays, 51(5.3%) Indians, 30(3.1%) with other ethnicities, 400(41.9%) with family history of CKD, 43(4.5%) with pre-existing diabetes and 124(13%) with hypertension. Median age was 48 (inter-quartile-range 36-58) years, and mean eGFR was 95.6±15.9 mL/min/1.73m^2. Among those screened, 16(1.7%) had eGFR <60mL/min/1.73m^2 and 60(6.3%) had eGFR ≥60mL/min/1.73m^2 with UACR ≥3mg/mmol. Of those without pre-existing dyslipidaemia(N=777), 88(11.3%) had low-density-lipoprotein(LDL) >4mmol/L and 148(19%) had total-cholesterol-to-high-density-lipoprotein-ratio (TC/HDL) >4.5. Additionally, 15(3.3%) participants without known diabetes (N=912) had HbA1C ≥7.0%, and 160(19.3%) participants without known hypertension (N=831) had blood pressure >140/90mmHg. High-risk participants received lifestyle modification advice from a multidisciplinary team and were advised to seek further assessment with a family physician.

Conclusions:

The programme identified individuals at risk of CKD and may benefit from further scalability through engagement with policymakers and primary care providers.

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Self-reported Pruritus and clinical, dialysis-related, patient-reported outcomes in haemodialysis patients

Sukul N, et al. Kidney Medicine. 2020;3(1):42–53.

Background

Prior studies have demonstrated that CKD-associated Pruritus (CKD-aP) causes patients distress and contributes to restless sleep, agitation and depression. There is an association between CKD-aP and increased mortality.

This large-scale, observational study analysed associations between itch severity and several key outcomes.

METHOD

Patients undergoing haemodialysis enrolled in phases 4–6 of the Dialysis Outcomes and Practice Patterns Study (DOPPS) during the years 2009—2018.

23,264 patients
21 countries

Primary outcome was time to all-cause mortality.

Patient-reported outcomes included, health-related quality of life, depression, sleep quality, faintness/dizziness, feeling washed out/drained.

RESULTS

Decreased quality of life

The differences seen between patients who were 'extremely bothered by itching' and those 'unbothered by itching' were evident across various outcomes.

37% of patients suffered from moderate-to-severe CKD-aP.

2 x as likely to suffer from depression.

2.5 x as likely to suffer from disturbed sleep.

>2 x as likely to feel washed out or drained.

More likely to miss dialysis sessions or withdraw from dialysis completely.

With increasing severity of CKD-aP there is a ↓ in quality of life assessed by physical and mental component scores.

Increased all-cause mortality

Compared to patients who were 'not at all bothered' by itchy skin, those who were 'extremely bothered' by itchy skin were at higher risk of an adverse clinical outcome.

1.2 x higher all-cause mortality rate.

1.3 x higher cardiovascular-related mortality rate.

1.4 x higher infection-related mortality rate.

CONCLUSION

This study confirms the importance of identifying and treating patients who experience CKD-associated Pruritus (particularly severe CKD-associated Pruritus) to reduce symptom burden and improve quality of life and possibly even survival.

Prescribing Information[1]

KORSUVA® (difelikefalin) Abbreviated Prescribing Information. Please refer to full package insert. Active ingredient: One vial of 1 mL contains 50 micrograms difelikefalin (as acetate) **Presentation:** Each vial of 1 mL contains 50 micrograms difelikefalin (as acetate). **Indication:** KORSUVA® is indicated for the treatment of moderate-to-severe pruritus associated with chronic kidney disease in adult patients on haemodialysis. **Dosage and Administration:** Difelikefalin is administered 3 times per week by intravenous bolus injection into the venous line of the dialysis circuit at the end of the haemodialysis treatment during rinse-back or after rinse-back. The recommended dose of difelikefalin is 0.5 micrograms/kg dry body weight (i.e., the target postdialysis weight). **Contraindications:** Hypersensitivity to the active substance or to any of the excipients. **Special warning and precautions:** Hyperkalaemia: In the placebo-controlled clinical studies a numerically higher rate of adverse events of hyperkalaemia was reported for the difelikefalin treated patients compared to placebo. No causal relationship was established. Frequent monitoring of potassium levels is recommended. Cardiac failure and atrial fibrillation: Difelikefalin has not been studied in patients with New York Heart Association class IV heart failure. In the pivotal clinical studies a small numerical imbalance of cardiac failure and atrial fibrillation events was observed in the difelikefalin treated patients compared to placebo, in particular among patients with a medical history of atrial fibrillation who discontinued or missed their atrial fibrillation treatment. No causal relationship was established. Patients with impaired blood-brain barrier: Patients with clinically important disruptions to the BBB (e.g., primary brain malignancies, CNS metastases or other inflammatory conditions, active multiple sclerosis, advanced Alzheimer's disease) may be at risk for difelikefalin entry into the CNS. KORSUVA® should be prescribed with caution in such patients taking into account their individual benefit-risk balance with observation for potential CNS effects. Dizziness and somnolence: Dizziness and somnolence have occurred in patients taking difelikefalin and may subside over time with continued treatment. Concomitant use of sedating antihistamines, opioid analgesics or other CNS depressants may increase the likelihood of these adverse reactions and should be used with caution during treatment with difelikefalin. Compared to placebo, the incidence of somnolence was higher in difelikefalin treated subjects 65 years of age and older than in difelikefalin treated subjects less than 65 years of age. **Undesirable effects:** Common (≥1/100 to <1/10); Somnolence Uncommon (≥ 1/1,000 to < 1/100): Mental status changes, Dizziness, Headache, Nausea, Diarrhoea. Please consult the package insert in relation to other undesirable effects. **Licence Number:** SIN16582P. **Further information:** Adverse events should be reported. For further information please contact our local representative at Vifor Pharma Asia Pacific Pte. Ltd., 20 McCallum Street, #20-01 Tokio Marine Centre, Singapore 069046. Tel: +65 63275937; safety.asia@viforpharma.com
Date of approval: 25 August 2022

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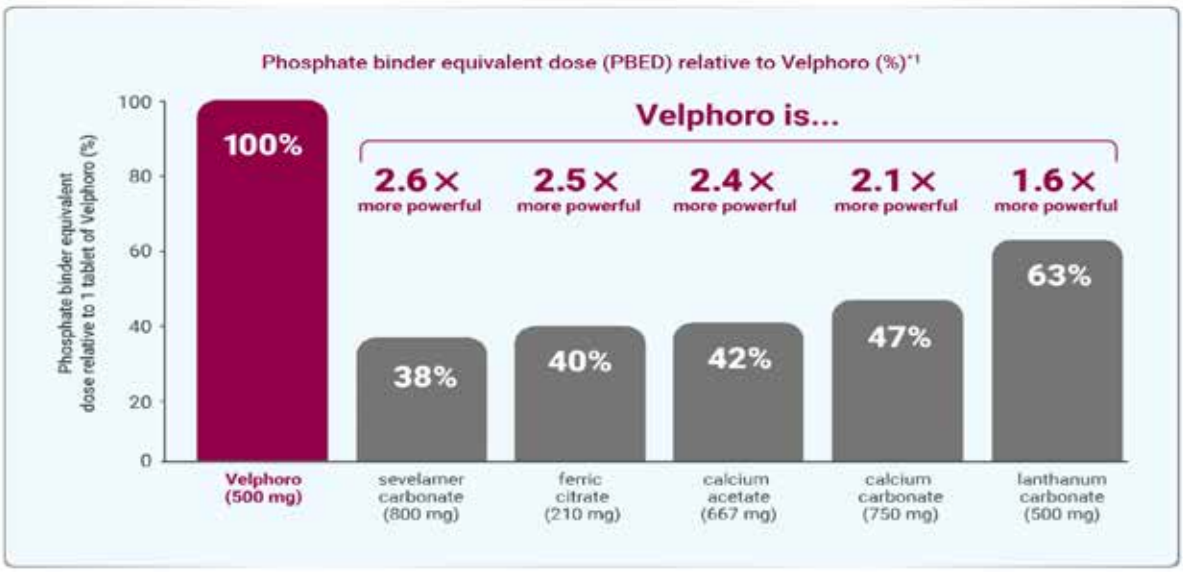

Based on an analysis of comparative clinical studies that roughly established an equivalent dose for phosphate binders relative to the phosphate binding capacity of calcium carbonate.[1]

References: 1. Coyne DW, Larson DS, Delmez JA. Bone disease. In: Daugirdas JT, Blake PG, Ing TS, eds. *Handbook of Dialysis.* 5th ed. Wolters Kluwer Health; 2015:665-692.

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