Abstract Lay Summaries of the 2025 CST Annual Scientific Meeting

The CST's annual scientific meeting provides a forum for the transplantation community to share ideas, leading practices, innovative science, and educational content in transplant care. The 2025 CST Annual Scientific Meeting was held at the Westin Bayshore, Vancouver, BC, October 6-10, 2025. With over 450 Canadian and International delegates attending, the 2025 CST ASM received outstanding educational programming, but also rare opportunities to connect with Transplantation professionals from all over the world.

ID#1

Caitlin Chew, BC Children's Hospital

Treatment of cytomegalovirus in pediatric solid organ transplant recipients: a retrospective cohort study

Cytomegalovirus, or CMV, is a common infection that can occur in the solid organ transplant population. Pediatric solid organ transplant recipients are at increased risk of developing CMV infection (no symptoms) and/or disease (symptoms present). In general, there is a lack of evidence to guide how we treat CMV in this population. The purpose of this study was to evaluate and describe the efficacy and safety of antivirals, valganciclovir and ganciclovir, for the treatment of CMV in the pediatric solid organ transplant population. Overall, we included 63 transplants. Of this, 29% developed at least one episode of CMV in their first-year post-transplantation and a total of 20 episodes of CMV were captured. We found that valganciclovir and ganciclovir were effective at treating CMV. There were no differences in viral loads at start of treatment for patients with CMV infection and/or disease. Most patients were treated until their viral load was 0 cp/mL. Over half the patients experienced neutropenia (a decrease in white blood cells) a common side effect from valganciclovir. This study helps inform and guide future research to determine the efficacy and safety of alternative methods for CMV management, including exploring other antiviral agents or monitoring procedures.

ID#3

Seychelle Yohanna, McMaster University

Consensus Conference to Define a High-Quality Living Kidney Donor Evaluation

Living donor kidney transplantation is the best treatment option for patients with kidney failure; however, the evaluation process to decide if someone is healthy enough to donate has been described by donors as the worst part of donating. In collaboration with Canadian Blood Services, a conference was held in September 2024 to come to an agreement on how to define what a high-quality living kidney donor (LKD) evaluation is based on the views of living kidney donors, clinicians, and administrators, and to decide how to measure the quality of the LKD evaluation, helping Living Donor Programs understand how they were doing and what might need to be improved. The conference brought together over 100 patients, nurses, nephrologists, surgeons, researchers, and representatives from provincial transplant bodies through a series of virtual working groups and a 1-day virtual consensus conference. The conference produced 35 recommendations, including recommendations to improve the LKD evaluation process (including the option for a condensed donor evaluation) and recommended measures of quality (e.g., duration of the LKD evaluation). Last year at the CST Annual Meeting, we presented the aim of this research and the how we carried the research out. This year, we summarize the consensus conference results, and propose a future work plan to put in place the recommendations.

ID#4

Mimi Deng, University of Toronto

Evaluating the impact of extended warm ischemic time using ex vivo heart perfusion in juvenile porcine models of circulatory death

The critical shortage of donors in pediatric heart transplant (HT) results in many children dying on the waitlist. Previously, it was thought that donors whose hearts stopped (cardiac death) could not offer viable organs for HT. However, in recent years, hearts donated after circulatory death (DCD) are now utilized with the assistance of ex vivo heart perfusion (EVHP), which reconditions the heart by circulating warm blood. Commercial EVHP machines exist for adult donors but not for children because of the size restriction. As a result, no pediatric DCD HT are currently performed in Canada. We have been pioneers with the development of the first pediatric EVHP model that allows for rehabilitation and assessment of the donor heart. Our recent work in large animal models has shown that DCD hearts with 45min 'downtime' benefit from EVHP. Unfortunately, these hearts experience significant swelling and reduction in function. This critical finding informs the theme of our future work: how to treat this heart muscle edema. By enhancing the understanding of EVHP in pediatric DCD, we hope to launch of a DCD HT program in Canada for the young patients who stand to gain immensely from a larger donor pool.

ID#6

Darren Yuen, St. Michael's Hospital

Kidney H-scan - a new way to non-invasively assess donor kidney fibrosis burden

Kidney scarring (fibrosis) is a major reason why some kidney transplants fail, but current ways to measure it — like biopsies — are invasive, can miss damaged areas, and often don't predict how well a kidney will work after transplant.

To address this issue, we developed renal H-scan, a new, non-invasive ultrasound tool that estimates kidney scarring quickly using standard imaging equipment. In a first human study of 61 donor kidneys, surgeons with minimal extra training scanned each kidney in about five minutes.

H-scan measurements from a small area of the kidney matched biopsy results. However, when the entire kidney was scanned, we found that scarring was often unevenly spread. This explained why biopsy results did not predict future kidney function well, while full-kidney H-scan estimates strongly correlated with how well the kidneys worked 9–12 months after transplant.

Renal H-scan offers a fast, non-invasive, and reliable way to assess kidney health before transplant and could improve the selection and matching of donor kidneys, potentially leading to better transplant outcomes.

ID#7

Mariam Bakshi, Canadian Institute of Health Information

User-Centered Design of a New Pan-Canadian Organ Donation and Transplantation Secure Reporting Tool

The Canadian Institute for Health Information (CIHI) is creating an online tool that lets users who have an account view Canadian organ donation and transplantation (ODT) data. To help create this tool, we interviewed 16 people who are involved in ODT from British Columbia (BC), Alberta, (AB) Manitoba (MB), Ontario (ON) and Nova Scotia (NS). There were seven topics that came up: 1) improve how quickly we make data available (timeliness), 2) let the user compare data and see who is doing best (benchmarking), 3) see data by categories (categorization), 4) see more details about the data (granularity), 5) make it easier to get/send data (efficiency), 6) see data from other provinces (out-of-province data), and 7) see how the data changes over time (trending). To get more information on these topics, we spoke with Canada's Organ Donation Organizations (ODOs). ODOs from larger provinces (BC, AB, ON and Quebec) rated benchmarking, trending, and more granular data as the most important. ODOs from smaller provinces rated categorization (Newfoundland, New Brunswick, and Prince Edward Island) and trending (NS, Saskatchewan, MB) as the most important. With this information, we can make sure that the tool helps users and improves ODT in Canada.

ID#8

Rahnuma Sara, University of British Columbia

Identifying Barriers to Accessing Liver Transplantation in British Columbia - a Retrospective Review

We are aiming to identify whether socioeconomic factors (such as ethnicity, education and income) and geographical location lead to barriers in accessing liver transplants in BC, Canada. This is crucial information as BC is ethnically diverse and geographically dispersed with many rural communities. We have the overarching goal of developing strategies and protocols to overcome inequalities in our healthcare system based on the findings from this study. We believe that socioeconomic factors and greater distance from the transplant site (VGH) result in greater time between referral for liver transplant and transplant evaluation/listing.

We did a retrospective chart review of all adults who received liver transplants in BC from 2010-2023. Multivariable regression analysis was done to determine the effect of gender, ethnicity, primary diagnosis, distance from transplant centre and socioeconomic factors on time from referral to first clinic visit, time from referral to transplant listing, and post-operative complications.

We learned that a lower average socioeconomic ranking is associated with longer time from referral to first clinic visit but does not seem to have a significant implant on transplant listing. Surprisingly, Asian Indian patients had a significantly shorter wait time from referral to transplant listing date compared to the Caucasian population.

ID#9

Caroline Carruthers, University Health Network

The relationship between physical function and social participation among liver transplant recipients (LTRs)

After liver transplant, patients often feel physically stronger and enjoy a better quality of life. However, some still don't reach the same level of physical ability as people without liver disease. They also might be less likely to participate in social activities—spending time with friends, joining groups, or attending community events. This study looked at whether physical abilities and social participation are connected in people who have had liver transplant.

We analyzed data from 208 adult liver transplant recipients, who had an average age of 57 years and were mostly men (73%). We used surveys to measure both their physical abilities and social involvement. The results showed that those who were physically stronger also tended to be more socially engaged. Even when considering other factors like age and medical history, this connection still existed.

These findings suggest that helping liver transplant patients improve their physical abilities could allow them to be more connected and engaged with others. Offering rehabilitation after a liver transplant might not only help patients feel better physically but also improve their social lives. As a result, this should be investigated more in future studies.

ID#10

Qinfeng Zhou, Zhangjiagang TCM Hospital Affiliated to Nanjing University of Chinese Medicine

Immune Modulation by Maimendong Decoction via DC-T Cell Crosstalk: Mechanistic Insights with Potential Transplant Applications

We studied Maimendong Decoction (MMDD), a traditional Chinese herbal formula used in lung cancer treatment, to understand how it regulates the immune system. Using lung cancer mouse models and advanced computational analysis such as network pharmacology and molecular docking analyses, we discovered that MMDD strengthens the body's defenses in two key ways: First, it helps "guardian" immune cells (dendritic cells) mature more effectively, enabling them to activate more cancer-fighting T cells. Second, it acts like a precision dial—boosting anti-tumor immunity while preventing harmful overactivation.

Although based on tumor models, our research reveals a novel immune-modulating mechanism: MMDD regulates interactions between dendritic cells and T cells. This discovery offers fresh insights for organ transplantation by proposing a strategy to balance immune surveillance and transplant tolerance. Such a balance could help transplant patients maintain cancer defenses while accepting donor organs. However, direct validation in transplant-specific models is essential to advance real-world therapies. This work highlights the potential of integrating traditional Chinese medicine wisdom with modern medical science, providing a scientific foundation for developing safer immune therapies.

ID#11

Francisco Reyna-Sepulveda, MOTP Atlantic Canada

A Continuous Flow Cooling Sleeve (Cool Sleeve) for Kidney Transplantation to Minimize Warm Ischemia Time and Its Consequences – A Pilot Study in a Porcine Model

When a kidney is too warm for too long during a transplant, it is more likely to fail. Cooling the kidney can help protect it, but keeping it cold during surgery is challenging.

In this study, we validated a new device that cools the kidney while allowing doctors to watch the temperature in real-time to adjust the flow rate and coolant time during anastomosis. We used this cooling sleeve in a pilot study with pigs, simulating a donation after circulatory death, comparing surgeries done with and without the device. We measured how warm the kidney got during the surgery, how long the vascular anastomosis took, and what the kidney looked like under the microscope afterward.

The kidneys without the sleeve got much warmer and showed more signs of injury. This new device may help protect kidneys during transplant surgery, especially when operations take longer. It could help improve the chances of a successful transplant, leading to better outcomes for patients and making the most of every donated organ.

ID#12

Victor Ferreira, CHU Montréal

Planning Intermittent CalciNeurin Inhibitor Controls - The piCNIc Retrospective Cohort Study

Our institution is one of the major transplant center of the region, so we manage most patients with a kidney, liver or lung transplant. Current pratice is for attending physicians to manage CNI dosing and prescribe dose adjustments. Clinical pharmacists work full time with each transplant team by organ specialty (3 pharmacists at a time).

Local practice has always been to measure CNI levels daily, regardless of the patients status or presence of risk factors of altered CNI blood levels. We acknowledge many of our transplant patients are admitted in poor condition, frequently involving fluctuating CNI blood levels. Currently published litterature doesn't address standardizing CNI dosing in acute care setting.

Our pharmacy team sought to develop a standardized order, targeting patients eligible for reduced CNI measurements. Implementation was undertaken by pharmacists, encouraging physicians to adopt this new tool.

This paper evaluates the effectiveness of the intervention in reducing overall CNI dosing. It also looks at patient safety outcomes and protocol adoption rate.

ID#13

Hyunwoong Harry Chae, UBC Medical Student

Chlorhexidine-induced anaphylaxis in the setting of renal transplantation and urologic surgeries: a case series

Chlorhexidine is a disinfect used during surgeries to prevent infections. However, in some people, it can cause a severe allergic reaction, which can be life-threatening. This reaction is especially concerning for patients undergoing kidney transplants or urological surgeries because they are frequently exposed to chlorhexidine.

Our study looked at cases of chlorhexidine anaphylaxis that occurred at our hospital from 2017 to 2023. We found 12 cases of severe allergic reactions, mostly in patients who had been on dialysis or were having kidney transplant or urological surgeries. Some reactions were so severe that they caused dangerously low blood pressure or required emergency treatment. In some cases, surgeries had to be stopped or canceled because of the reaction.

We discovered that the rate of chlorhexidine anaphylaxis at our center was much higher than what has been reported in the general population. Since many of these reactions occurred during kidney transplant or urological surgeries, it may be safer to use other disinfects instead of chlorhexidine for these procedures. Our study highlights that we need to be more aware of this risk and consider changes to standard practices and protocols to protect vulnerable patients.

ID#14
Yasmeen Mansoor, University of Toronto

Prevalence of household food insecurity and financial challenges amongst caregivers of paediatric chronic kidney disease, dialysis, and kidney transplant patients

Caring for a child with chronic kidney disease (CKD), kidney failure requiring dialysis, or a kidney transplant, can create a heavy financial burden for families. However, little is known about how common these financial challenges are or how much they impact families of children with these conditions in Canada.

We surveyed 84 caregivers of children with CKD, dialysis, or kidney transplant in the Greater Toronto Area. The survey asked about food insecurity, trouble covering monthly expenses, and caregiver financial stress due to the child's healthcare needs.

The findings were as follows:

- 40% of families experienced food insecurity, which is almost double the national average of 23%.
- 30% reported struggling to make ends meet each month.
- Many caregivers also reported feeling high financial stress related to caring for their child's health needs

These results highlight that families of children with CKD, dialysis and kidney transplant face significant financial hardships, and more support may be needed to help them manage both medical and everyday living costs.

ID#15

Marie-Chantal Fortin, Centre hospitalier de l'Université de Montré

Canadian HLA experts' perspectives on precision medicine and molecular matching in kidney transplantation

Molecular matching is a novel technique for evaluating the genetic compatibility between donor and recipient to reduce the risk of transplant rejection. The currently used technique is HLA testing, which consists of checking special cell markers to help find compatible donors. We interviewed 7 Canadian experts working in HLA laboratories about their views on the future use of molecular matching. They generally felt that the current organ allocation system works well but could be improved. They had different opinions on whether kidney allocation should be determined more by medical outcome or fairness, agreeing that decisions should involve a team including healthcare professionals and patient representatives. Despite the potential benefits of molecular matching, they highlighted challenges such as funding, , lack of research on the Canadian population, and limited access for certain marginalized groups. As for living donor transplantation, they saw value in incorporating molecular matching into the existing algorithm to help optimize donor-recipient compatibility, but only if does not disadvantage anyone. For the implementation of molecular matching to be successful, experts recommend national collaboration, clear selection criteria, additional research, changes to the HLA laboratories and better education of both doctors and patients

ID#16

Andrew Purssell, University of Ottawa

Chagas meningoencephalitis and myocarditis from reactivation of occult chronic Trypanosoma cruzi infection after cardiac transplantation

Chagas disease or American trypanosomiasis is a parasitic infection caused by Trypanosoma cruzi. This pathogen is endemic to Central and South America and is transmitted by triatomine insect vectors known as “kissing bugs”. Although risk of acquiring Chagas disease from short-term travel to endemic areas is low, it is increasingly being identified as an emerging concern in non-endemic countries due to shifting immigration trends. In solid organ transplant (SOT), Chagas disease can arise from donor-derived infections via blood or organ transplantation, reactivation of chronic latent infection, or newly acquired infection.

Here, we present a case of reactivated Chagas disease involving neurological system and transplanted heart. Serological and molecular testing were used to establish the diagnosis. The patient responded to treatment with high-dose benznidazole, an antiparasitic therapy.

The optimal management of Chagas disease in SOT remains unclear. While current practices include post-transplant serologic or molecular monitoring paired with pre-emptive therapy, prophylaxis may be considered in high-risk SOT recipients. In cases of suspected Chagas disease with neurologic involvement, molecular testing may be used from blood and cerebrospinal fluid to confirm diagnosis. High-dose benznidazole may benefit those with severe disease or neurologic involvement.

ID#17

Louis Vanpeperstraete, Université de Montréal

The role of complement in the microvascular rarefaction associated with kidney ischemia-reperfusion and the impact of age

Kidneys contain millions of tiny blood vessels called capillaries. Capillaries provide oxygen and nutrients to kidney cells allowing them to accomplish their role in cleaning the blood. Blood supply is always interrupted when kidneys are transplanted. This can damage capillaries and in turn the long-term kidney allograft function. Kidneys from older donors have lower numbers of capillaries and often suffer greater damage during transplantation.

In our study, we investigated how a key protein called C3 in the complement system, contributes to the loss of renal capillaries due to increasing age, interruption of blood supply or both. Using mice that are genetically deficient for the protein C3, we found that the loss of renal capillaries with older age and also the loss of capillaries caused by interruption of the blood supply are both controlled by C3. C3 also controls the development of scars within the kidney, a process called fibrosis.

Our findings highlight the importance of protecting blood vessels in transplanted kidneys, particularly in kidneys from older donors. Our findings also identify the possibility of inhibiting the protein C3 at the time of transplantation to prevent scarring of transplanted kidneys and improve their function.

ID#18

Patricia Gongal, Canadian Donation and Transplantation Research Program, University of Alberta

Implementation of a National Integrated Knowledge Translation Strategy for Transplant Recipients

The COVID-19 pandemic has posed major risks for transplant recipients, but their voices are underrepresented in research. To bridge this gap, the Canadian Donation and Transplantation Research Program (CDTRP) used an integrated knowledge translation (iKT) approach to involve transplant patients and families in creating a meaningful research agenda. In 2022, the CDTRP leadership team consulted with healthcare professionals, researchers, and policy advisors to begin defining research priorities for COVID-19 in transplant communities, focusing on infection prevention and recovery. Then, we organized a series of national forums to gather insights from the community, allowing for a flexible response to the changing COVID-related needs of the transplant community. Each forum addressed different but connected goals, and has shaped the study design and execution. Through national forums, our approach to research design and execution prioritizes inclusive participation and patient/family perspectives.

ID#19

Gabriel Siebiger, University of Toronto

Mitochondrial transplantation for the recovery of donor lungs subjected to prolonged warm ischemia: a novel strategy to expand the donor pool for transplantation

Each year, many people die waiting for a lung transplant. A big reason is that lungs taken after an unexpected cardiac arrest often sit without blood flow and oxygen for several hours. That "warm-time" injury frequently makes the organs too damaged for a safe transplant.

We tested a new repair method called Mitochondrial Transplantation. Mitochondria are known as the tiny "power plants" inside cells. When cells are hurt, their mitochondria fail first. We wondered: if we add new, healthy mitochondria into such injured lungs, can we recover them?

For our study, we used donated pig lungs that had been exposed to several hours of "warm-time injury" — similar to the worst human cases. We connected these lungs to a machine-based breathing and blood-like circulation system that allows lungs to breathe and receive nutrients outside the body. We kept the lungs in this machine for an extended period either with added healthy mitochondria or without them.

Remarkably, lungs that received mitochondria transported oxygen more effectively, stayed easier to inflate, and showed far lower levels of inflammation, similarly to lungs routinely used for transplant. To examine whether healthy mitochondria are required, we gave "switched-off" (non-working) mitochondria. The benefits, however, disappeared.

These findings suggest that mitochondrial transplantation could revive donor lungs that are currently discarded, offering new hope to patients waiting for life-saving transplants.

ID#20

Francis Migneault, CRCHUM, Université de Montréal, CDTRP

MiR-423-5p predicts microvascular rarefaction and regulates microvascular homeostatis after renal ischemia-reperfusion injury

During preservation and at the time of transplantation, small blood vessels within the kidney can be damaged. This can lead to the loss of small blood vessels—called microvascular rarefaction—and contribute to long-term kidney problems. Unfortunately, we currently lack reliable ways to predict, monitor or prevent this damage.

In this study, we investigated a small molecule called miR-423-5p, found in particles released by blood vessel cells. We discovered that higher levels of miR-423-5p in the blood of kidney transplant patients were associated with better blood vessel health and lower scarring, both of which predicted better kidney function over time.

In mice, delivering miR-423-5p after kidney injury helped protect blood vessels and reduce kidney damage. Laboratory experiments also showed that this molecule helps blood vessel cells survive, move, and form new connections, which are essential in the healing process.

These results suggest that miR-423-5p could help monitor kidney transplant health and a represents a potential therapy to prevent damage. This could help improve outcomes for transplant patients by allowing earlier intervention and better protection of kidney function.

ID#21
Ellina Lytvyak, University of Alberta

Concomitant Sarcopenia and Myosteatosis in Cirrhosis patients is associated with longer recovery and mortality after liver transplant

This study looked at whether muscle health before liver transplant affects how well patients recover afterward. Some patients with liver disease lose muscle or develop fat inside their muscles. These changes can make the body weaker, but it's not clear how this impacts recovery after a liver transplant.

There were 302 patients evaluated in this study, who had liver transplants and a CT scan before their transplant. These scans were used to measure muscle size and quality. These patients were followed to see how long they stayed in the hospital and how they did in the years after their transplant.

People who had both low muscle mass and fat in their muscles before transplant spent more time in the hospital and were less likely to survive five years after their transplant. These risks were even higher for people over the age of 60.

This research shows that checking muscle health before transplant could help physicians and researchers better understand which patients may have a harder time recovering from their transplant. In the future, this may help guide treatment plans, support patients more effectively after transplant, and improve long-term outcomes.

ID#22

Ellina Lytvyak, University of Alberta

Liver stiffness measurement by vibration-controlled transient elastography predicts adverse clinical outcomes in autoimmune hepatitis: results from a large multicenter longitudinal study

The study aimed to explore how certain non-invasive techniques could potentially help in predicting health outcomes and measuring the effectiveness of treatments for individuals with autoimmune hepatitis (AIH). This can aid in identifying when patients need urgent care, such as liver transplant. We examined a large group of 853 individuals with AIH from a CaNAL registry. We specifically looked at participants who had a certain score indicating their condition and had undergone a non-invasive test that measures liver stiffness. This test helps to assess liver health without needing invasive procedures. Our findings revealed that measuring liver stiffness is a strong indicator of adverse health outcomes for patients with AIH. Even after considering other known risk factors and treatment responses, liver stiffness was still a reliable predictor of complications, such as liver failure, cancer, or the need for a transplant. This study improves our understanding of how to better monitor and manage autoimmune hepatitis. By identifying patients at higher risk for serious health issues, healthcare providers can implement closer surveillance and timely interventions. Ultimately, this means better care and outcomes for patients, which is crucial for those living with this challenging condition, as well as for their families and support networks.

ID#23
Ellina Lytvyak, University of Alberta

PSC-specific prognostic scores associated with graft loss and overall mortality in recurrent PSC after liver transplantation

Primary sclerosing cholangitis (PSC) is a progressive liver disease with no treatment other than liver transplantation (LT). After LT, patients can develop PSC (rPSC) again in their liver graft. The United-Kingdom (UK-PSC) and Amsterdam-Oxford (AOPSC) scores are two scores that are used to predict clinical outcomes such as the likelihood of death and LT in patients with PSC before transplant. We aimed to see if these scores could be used to predict the likelihood of patients with rPSC losing their graft or dying after liver transplant.

This study looked at 67 people who had rPSC. We found that the UK-PSC score at rPSC can predict both graft loss and death, while the AOPSC score calculated using either age at rPSC or at diagnosis predicts only graft loss in people with rPSC. We found that severe cholestasis (slowing down of bile) was also predictive of graft loss. Based on these results, we believe that these easy-to-administer tools can be used in clinical practice to find patients with rPSC who are at a high risk of losing their graft and/or dying and guide decisions about their treatment and monitoring.

ID#24

Ellina Lytvyak, University of Alberta

Sex, ethnicity and clinical outcomes in autoimmune hepatitis: results from a large multicenter longitudinal cohort

Studies have shown that sex and ethnicity affect survival in other liver diseases, but we do not know if this is the case for people living with autoimmune hepatitis (AIH). This study aimed to see if there were any associations between sex and ethnicity and response to treatment and clinical outcomes using a large group of patients with AIH from many centres across Canada.

In this study, we defined an adverse event as the development of liver decompensation (a stage of liver disease in which there is worsening liver function due to significant scarring in the liver), hepatocellular carcinoma (HCC; a type of liver cancer), liver transplantation (LT), or death. We defined response to treatment as a measurement of alanine transaminase (ALT), a liver enzyme, within the normal range at 6 months after starting treatment.

We collected data of 1198 people with AIH with a follow-up period of 13443 person-years. We found that a higher proportion of males living with AIH had HCC and LT and a lower response rate to treatment compared to females. From the ethnicity perspective, Indigenous Canadians living with AIH have a higher risk of developing adverse liver outcomes compared to other ethnic groups.

ID#25

Nicholas Avdimiretz, University of British Columbia

Disparities in lung transplantation in children: Community-level socioeconomic factors impact illness severity and post-transplant outcome

Equity in health outcomes for pediatric lung transplant recipients is understudied. UNOS database was queried for lung recipients < 1 8 years of age listed from 1993 to 2023. The Distressed Communities Index (DCI) measures community socioeconomic distress, and was linked to LTX data by zip code. 1,319 recipients were identified, with 17% from distressed areas. 48% of Black children were from distressed or at-risk communities, with the distribution of ethnicities being different based on DCI ($p = 0.014$). Those from distressed communities were far more likely to have public insurance versus private ($p < 0.001$). More distressed DCI was associated with ventilator support at time of listing ($p = 0.038$) and with shorter graft survival ($p = 0.045$). Multivariate modeling revealed higher BMI was associated with ventilator ($p = 0.009$) and ECMO use ($p = 0.044$) at listing. Black children were more likely to have longer length of stay ($p = 0.002$). Overall, either recipients from distressed areas had more severe lung disease, or there was a bias towards ventilator use in this population. Poorer long-term outcomes were noted for those from distressed communities. This should be shared with stakeholders to improve access to care for children from disadvantaged communities.

ID#26
Kendra-Lee Dupuis, Brock University

An integrative review exploring organ donation after death by circiulatory criteria in Canada

In Canada, many people are waiting for life-saving organ transplants, but there are not enough organs donated to meet the needs. Organ donation after an individual's heart stops is a type of donation that has been occurring more frequently in Canada to meet these needs. To better understand how this practice has changed and how it could improve or expand, an online search was performed and 50 published articles were located that related to these donation practices in Canada. We found that while donation after the heart stops has expanded significantly over the past 20 years, there are still major differences in the way this practice is performed across the country. Additionally, differences were reported by Canadians regarding how comfortable they are with the practice and how much education they have regarding the process. Many of the existing guidelines for this donation practice were developed through meetings with key healthcare leaders and patient-family partners. These results suggest that development of clear and consistent program guidelines are required. Engaging with various partners to consider these changes and discuss potential expansion could help accomplish this and help save more lives.

ID#28

Michael Manno, Canadian Institute for Health Information

Thoracic transplantation in Canada: volumes and patient outcomes, 1988-2023

Thoracic (lung/heart) transplantation in Canada has seen tremendous advances in the last 40 years. Improvements in medical technology have led to improved patient outcomes. We examined volumes and outcomes of adult patients undergoing heart and lung (thoracic) transplantation in Canada (excluding Quebec) from 1988 to 2023 using data from the Canadian Organ Replacement Register (CORR). Overall, we found that thoracic transplants increased 3.5-fold over this time period with double-lung transplants being the main driver of the increase. Specifically, double-lung procedures increased by almost 10 per year, starting at < 1 0 in 1988, climbing steadily to over 340 in 2023. In terms of patient outcomes for recipients of thoracic transplants, 10-year survival was highest for heart transplant recipients (46.5%) and lowest for single-lung recipients (30.9%). Patient survival at 10 years was also higher for younger recipients and for patients who received transplants more recently (post-2010). Among lung transplant patients, double-lung recipients had better survival than single-lung recipients.

ID#29

Hyunwoong Harry Chae, UBC Medical Student

***Native nephrectomy through a massive flank hernia in a renal transplant patient: a case report*.**

Kidney transplant patients may be at greater risk of developing hernias near the surgical site. This is because they are on medications that prevent the body from rejecting the transplanted kidney, but these medications weaken their immune system and delay wound healing. A hernia happens when an internal part of the body pushes through a weak spot in the surrounding muscle or tissue. They can be large and difficult to repair and may complicate future surgeries.

In our case, a 73-year-old man developed a massive hernia after his kidney transplant surgery. During follow-up, we found a mass on his native (original) kidney that was getting larger. Surgery to remove the affected kidney was recommended, but the hernia distorted anatomical structures and weakened tissues surrounding the kidney, making it difficult to use standard surgical techniques. The surgeons instead opted for an open surgery through the hernia area and carefully made the incision directly over the hernia. The procedure went well, and the patient recovered without complications. Further tests showed the removed kidney growths were not cancerous.

Transplant and urological surgeons must be aware of and potentially utilize creative surgical approaches when hernias complicate future kidney surgeries.

ID#30

Hemant Sharma, Royal Liverpool University Hospital

Donor Recipient ABO Compatibility Status has minimal influence on Renal Transplant Outcomes : A Retrospective NHSBT Data Analysis

This study looked at whether kidney transplants work equally well when the blood types of donors and recipients are different but compatible, compared to when they are exactly the same.

Why this matters: Blood type matching is important for transplants, but being too strict about exact matches might limit how many people can receive kidneys. If compatible but different blood types work just as well, more people could get the transplants they need.

What we did: We examined records of over 51,000 kidney transplant patients. We compared how long the transplanted kidneys lasted in people who received kidneys from donors with exactly the same blood type versus those who received kidneys from donors with different but compatible blood types.

What we found: Kidney transplants worked equally well regardless of whether the blood types were identical or just compatible.

Why this helps patients: This evidence suggests confident use of kidneys from donors with compatible (but not identical) blood types.

ID#31
Dheyaa Al-Najafi, University of British Columbia

Efficacy of Corticosteroid Pretreatment in the Management of Deceased Organ Donors: A Systematic Review and Meta-Analysis

Organ transplantation is a life-saving treatment for numerous patients, but the demand has consistently exceeded the supply. Researchers are aiming to increase the viability of organs donated after death to increase the supply of potential organs donated. One option is to administer corticosteroids—anti-inflammatory medications—to deceased donors before organ recovery with the goal of decreasing inflammation and stabilizing the donor. However, it remains unclear whether this approach effectively improves the transplant outcomes in recipients.

To address this question, we conducted a study by compiling 10 clinical trials (involving 687 donors and over 1,680 transplant recipients) evaluating corticosteroid administration in deceased organ donors. We focused on assessing key transplant-related outcomes such as recipient survival, organ rejection, hospital stay, and how well the transplanted organs functioned.

We found that administering corticosteroids to deceased organ donors does not significantly improve these key transplant outcomes. However, differences in how the studies were conducted—such as the type of steroids used and the organs transplanted—make it difficult to draw firm conclusions. Therefore, the current evidence for using corticosteroids in deceased donors remains inconclusive, and more rigorous research is needed to determine whether certain types of transplants may benefit from this treatment approach.

ID#32

Terri Ser, University of British Columbia

Parapelvic cysts presenting as allograft dysfunction 10 years post-renal transplant: a case report

Parapelvic cysts (PPCs) are rare fluid-filled sacs that are found in the kidney and are usually. However, because of their rare nature and ambiguous appearance on imaging, they are often underreported or misdiagnosed as a blockage in the kidney. Here, we present a case of a 61-year-old female who received a kidney transplant in 2014 but began to experience decreasing kidney function 10 years later. The initial ultrasound suggested that there was a blockage in the transplanted kidney, so a tube was placed to help drain any excess fluid. However, the kidney still appeared to be blocked despite adequate draining from the tube. A more detailed scan was then conducted, revealing multiple PPCs which may have appeared as a blockage on the initial images. Furthermore, the PPCs did not seem to be causing any actual blockage in the kidney, as the patient's kidney function began to stabilize without any other intervention, and she was able to urinate normally after the removal of the tube. This case report highlights the importance of transplant doctors considering PPCs as a possible cause in unusual presentations of kidneys appearing blocked in transplant recipients.

ID#34
Cagdas Duru, University Health Newtwork

Successful 24-Hour Ex-Vivo Perfusion in the Swine Total Hindlimb Model

Transplantation of limbs has been possible since 1998. When a limb is retrieved, it loses blood supply and its energy stores gradually deplete. To slow this process, limbs are flushed with preservation solutions and stored at 4°C. This method preserves limbs with large muscles for up to 6 hours, as muscle requires high amounts of nutrients and oxygen.

To extend preservation time, we developed a machine perfusion system that circulates a solution through pig limbs outside the body, maintaining oxygen and nutrient delivery. The solution mimics blood, containing electrolytes and red blood cells to improve oxygen transport. We compared perfused limbs to cold-stored limbs by measuring energy stores (ATP) and muscle cell structure.

We observed that energy stores remained stable in perfused limbs, while cold-stored limbs showed gradual ATP loss. Additionally, the perfusion system preserved normal muscle cell structure, while cold storage caused changes. Our results suggest that machine perfusion can significantly extend preservation time. In the future, such systems could increase the availability of donor limbs and improve outcomes for patients in need.

ID#35

Kate Rokoss, University Health Network

Effectively engaging high school students about organ donation and transplantation: An update on the High School Outreach Initiative experience

Youths have the power to embrace and change societal perceptions of organ donation and transplantation. The High School Outreach Initiative was established to raise awareness about organ donation and transplantation through high school presentations in the Greater Toronto Area and Ottawa. This study collected and analyzed pre- and post-presentation surveys of students' knowledge of organ donation and transplantation and awareness of donor registration. Between 2012-2023, 805 presentations were delivered to 46,415 students at 160 high schools in the Greater Toronto Area and Ottawa. After the presentation, roughly half of students stated they were willing to register to donate their organs and tissues after death, and roughly three-quarters of students stated they were willing to speak to their families about organ donation and transplantation. Pre- and post-presentation matched surveys between 2017-2019 showed a significant decrease in those who stated they were not knowledgeable about organ donation and transplantation and those who were not willing to register decreased by half. This study demonstrates that the High School Outreach Initiative is an effective educational program that evidently improves youth's attitudes and perceptions about organ donation and transplantation. Future directions include further program expansion and investigating the relationship between survey data and demographics.

ID#36
June Wang, University Health Network

Shared Care between a Cystic Fibrosis Program and a Lung Transplant Program: A Quality Improvement Endeavour

Shared Care between a Cystic Fibrosis Program and a Lung Transplant Program: A Quality Improvement Endeavour

Cystic fibrosis (CF) is a devastating chronic illness. Historically, median survival was twenty-six years of age (2008), and many patients required a lung transplant. Over the past 10 years, treatment options have improved outcomes and now the median survival is sixty-two years, and most patients do not require a lung transplant. The landscape of care has changed dramatically; medical care has shifted from post-transplant care to long term health outcomes. Our shared care quality improvement initiative includes quarterly joint team meetings between centres at two separate institutions with the goal of optimizing care for our patients.

Twelve post-transplant CF patients have been reviewed since May 2024. Time since transplant ranged from eighteen months to eleven years. Various categories of issues were identified and assigned to either our CF program or our transplant program for follow-up.

Our shared care initiative exemplifies the collaboration between a transplant program and a CF program to identify medical issues that require co-management. Next steps include continuing to review further patients, share findings our with our patients, identify gaps in care, and improve the processes related to shared care.

ID#37

Tony Kiang, Faculty of Pharmacy and Pharmaceutical Sciences

Differential effects of music on the kinetics of mycophenolic acid 7-O-glucuronide and acyl glucuronide formations in rodents

When someone receives an organ transplant, the newly transplanted organ may be attacked by the immune system in the patient's body. Mycophenolic acid (MPA) is a medicine that is prescribed to lower the immune response and prevent the body from rejecting the transplanted organ. When patients take MPA, their body breaks MPA down into two forms: i) MPAG (MPA 7-O-glucuronide, not harmful) and ii) AcMPAG (MPA acyl glucuronide, harmful and causes side effects). However, there are large differences between individuals in how their bodies break down MPA, which can affect drug action. We think that music exposure is a potential influencing factor, and we tested our hypothesis in adult rats exposed to a variety of composed music elements. The tested music element combinations did not affect MPAG formation, but certain music (fast tempo, irregular rhythm, and atonal harmony; please listen to the sample provided) substantially reduced AcMPAG formation. These results suggest that MPA's drug actions may be affected by the type of music that transplant patients listen to. We are planning further studies to confirm these findings in the clinic.

ID#38

Mitchell Webb, University of British Columbia

Comparison of Yttrium-90 Transarterial Radio Embolization vs Stereotactic Body Radiotherapy for Locoregional Treatment of Hepatocellular Carcinoma Prior to Liver Transplantation: a comparison of pathologic and clinical outcomes

Liver transplant offers the best chance of a cure of Hepatocellular Carcinoma. Yet, due to the limited number of donors, we must employ treatments that can be used to either keep the cancer under control while waiting ("bridging") or shrink it enough to make a transplant possible ("downstaging").

This study compares two treatments—radiation through tiny beads placed directly into the liver's blood vessels (Y90 radioembolization), and another that uses external radiation (called SBRT, or stereotactic body radiation therapy). We looked at patients who eventually had a liver transplant to see which treatment worked better at completely killing the cancer, shrinking tumors, and helping patients reach transplant.

Our data did not demonstrate a significant difference in outcome between the two treatments. However, it appears that TARE was used more often for heavier disease burden, while SBRT was an effective option when other modalities had failed. Both were useful as a bridge to liver transplantation and down-staging.

This research will help to choose the best way to treat liver cancer in patients who are being considered for a transplant. We can improve the chances of successful transplant and better outcomes for patients.

ID#40

Max Levine, University of Alberta

Robotic-assisted kidney transplantation in a Canadian centre: a review of the first in Canada implementation

Kidney transplantation from a living donor is a preferred therapy option for patients with kidney failure, but certain patients are at higher risk of complications related to their wounds due to the size of incision that is required to complete the transplant surgery. There is a minimially invasive transplant technique done in several transplant programs across the world that uses a tool called a surgical robot. The surgical robot allows for keyhole incisions in the abdomen for small instruments to be controlled by a surgeon to perform the transplant surgery, avoiding large incisions and reducing wound problems. Our program performed the first robot assisted kidney transplant in Canada. We tracked our results and checked our outcomes for quality assurance of our first nine cases. Our patients ranged from normal weight to very obese (who are at highest risk of wound issues), and a balance of males and females were included. Our patients experienced good kidney function with no wound complications. The transplant procedure components were performed at a similar performance as highly experienced robot transplant surgeons, indicating our initial introduction of robotic transplants were completed to a high standard. We are seeking opportunities to further optimize the outcomes for patients.

ID#41

Tom Blydt-Hansen, BC Children's Hospital

Challenges in Non-invasive Biomarker Profiling of Subclinical Borderline Rejection in Pediatric Kidney Transplantation

This study evaluated whether 3 different blood tests could identify rejection. We looked at samples from children with a kidney transplant, taken when they had a kidney biopsy and there was no other suspicion for rejection. This is also called "subclinical rejection". The tests evaluated are called dd-cfDNA, GEP and TTV. Thirteen of 73 (18%) had borderline grade of rejection on the biopsy. None of the three tests was able to reliably say whether rejection was present or absent, when used to evaluate the samples at the time of the biopsy.

Although these tests have been proposed as good indicators for rejection in adults with a kidney transplant, we were not able to show any relationship between them and rejection in children. They cannot therefore be recommended in children for routine monitoring of subclinical rejection.

ID#42

Jenny Wichart

Optimization of Ambulatory Immunosuppressant Ordering in a Provincial Electronic Medical Record

In 2019, our province introduced a new computer chart system in all hospitals and clinics. We noticed that prescribing anti-rejection medications, often used for transplant patients, had become much more complicated with this system. Multiple prescriptions were often made for each order, causing confusion for the transplant team and pharmacy.

To find a solution, we asked other Canadian hospitals if they noticed similar difficulties. We also surveyed doctors, nurses and pharmacists that work in our facilities as well as reviewed error reports. With this information, a team was formed to design a safer and easier process. We started by reviewing all areas of the current system and used information from our survey and error reports to guide our design. With the help of patients and many health care providers, we created an “immunosuppressant alternative record” which removed the requirement for multiple prescriptions and provided a single order. This work also ensured no medication issues would be noticed for patients during hospital stays by using a ‘pop-up’ reminder during admission and discharge. The result is a safer process for prescribing anti-rejection medications, which may also be used for other medications that come in multiple strengths.

ID#43

Marie-Chantal Fortin, Centre hospitalier de l'Université de Montré

Expanding the use of less-than-ideal kidneys: Exploring the educational needs of Black Canadian kidney transplant candidates and recipients

The shortage of deceased donor kidneys can lead to long waiting times and decreased quality of life for transplant candidates. A possible solution is to increase the use of kidneys from donors whose age or health status are likely to result in shorter graft survival. Candidates must be prepared to make decisions about whether to accept such "less-than-ideal" (LTI) kidneys. To prevent disparities, educational tools must be clear, accessible and respectful to members of all communities. We aimed to explore the educational needs about LTI kidneys among self-identified Black kidney transplant candidates and recipients. We conducted 9 interviews. Participants were generally positive about expanding LTI kidney use, which they thought would give transplant candidates more options. Concerns that educational tools should address include expected graft longevity, priority on regular transplant waiting lists, and implications for post-transplant care. Members of marginalized communities may perceive an LTI kidney offer as discriminatory. Participants also identified medical mistrust, being religious and lower donor rates as factors to consider in developing educational tools. We conclude that it is possible to expand the use of LTI kidneys in an inclusive and equitable manner but that specific concerns will need to be taken into consideration.

ID#44

Holly Mansell, University of Saskatchewan

Patient Perceptions and Educational Needs on Suboptimal donor organs: A Scoping Review

There are not enough deceased donor organs available for everyone who needs them. One solution could be to use organs from donors whose age or health status may result in shorter graft survival. Organs can also be used from people who may have a higher chance of transmitting infectious diseases. However, patients need information to understand the risks and benefits of 'suboptimal organs' so they can decide whether to accept them. We reviewed medical literature to find out if studies have been completed about how people feel about suboptimal organs. We also wanted to learn whether studies described education on this topic. Of nearly 7000 papers found using the search terms suggested by a medical librarian, we found 28 articles. Twenty studies described patient' thoughts and feelings towards suboptimal organs. Eight articles described different ways people have been educated. Some studies used education from healthcare providers (n=2), animations (n=2) mobile apps (n=2), and tools to help people make decisions (n=2). Four studies described educational needs identified by patients. Patients desired information about the donor's situation, potential outcome and clear terminology for decision-making. This information will help us develop education to help decide whether to accept a suboptimal organ.

ID#45

Sacha De Serres, Université Laval Québec

Multicenter Validation of a Cell-based Risk Score to Predict Over-immunosuppression Events in Kidney Transplant Recipients – TCAD-01 Study

Immunosuppression is essential in the treatment of patients with immune-mediated chronic kidney disease and kidney transplant recipients. Unfortunately, immunosuppressants increase the risk of serious infections, cancer, and premature death. Currently, immunosuppressants are generally prescribed in a “one size fits all” fashion. Although the dose is adjusted based on blood levels, we have no tool to measure each individual's actual functional immune response at these levels.

We recently developed a test based on live peripheral blood cells called monocytes. To measure the immune system's ability to respond to a foreign insult, we cultured these cells with Epstein-Barr virus peptides and assessed the response by measuring the secretion of the cytokine TNF-alpha. This cell subset and cytokine were selected based on extensive preliminary studies, conducted in a single-center cohort of kidney transplant recipients. We have now validated, in a multicenter cohort, that the combination of this cellular test and age can predict patients at low (11%), intermediate (18%), and high (30%) risk of serious infection and cancer. Positive results from a future clinical trial will support the use of this score in immunosuppressant decision-making.

ID#46

Tony Kiang, Faculty of Pharmacy and Pharmaceutical Sciences

Pharmacokinetic interactions between protein-bound uremic toxins and mycophenolic acid in adult kidney transplant recipients

Mycophenolic acid (MPA) is commonly administered to kidney transplant recipients to prevent the body from rejecting the organ. Large variations in MPA blood levels are observed in patients, and our previous studies suggested that these variabilities might be caused by "uremic compounds" that accumulate in the patient's body after transplantation. We aimed to study the relationships between MPA blood levels and four of these uremic compounds (p-cresol sulfate (pCS), p-cresol glucuronide (pCG), indoxyl sulfate (IxS), and indoxyl glucuronide (IxG)) in patients with new kidney transplants. We discovered that higher pCS blood levels were consistently related to higher MPA blood levels, which might be explained by pCS preventing the body from removing MPA effectively. We also found a relationship between IxS and the breakdown product of MPA, which can also affect how the body handles and removes MPA. These knowledge can help us improve how MPA is prescribed to kidney transplant patients.

ID#47

Serena Chan, University of British Columbia

Clinical utility of routine MAG-3 scan for surveillance of kidney allograft injury at 48h post-kidney transplant

The mercaptoacetyltriglycine (MAG-3) scan is a kidney scan performed within 48 hours after kidney transplant. Recovery from transplant is currently predicted using clinical data alone. This study evaluates whether the MAG-3 scan is useful to perform, or if MAG-3 scan results used with clinical data predicts transplant recovery better than using clinical data alone.

67 pediatric patients were included. Using MAG-3 scan data alongside clinical data improved prediction of how much time it takes to fully recover from transplant by 8%, but did not improve the prediction of how much kidney function was recovered after transplant. This is the first study to show that the MAG-3 scan is useful to perform in pediatric patients. Guidance on its use can be updated.

ID#48

Trana Hussaini, University of British Columbia and Vancouver General Hospital

Early Corticosteroid Protocols in Liver Transplantation: A Survey of Canadian and American Centres

Liver transplant recipients are often given corticosteroids (a type of anti-rejection medication) shortly after surgery to help prevent rejection of the new liver. However, there is no clear agreement on how long patients should take these medications or at what dose. Different transplant centres across Canada and the United States use different approaches, and there is little scientific evidence to show which method is best.

To better understand current practices, we surveyed pharmacists and doctors from liver transplant programs across North America. We received responses from 34 centres, including 30 in the U.S. and 7 in Canada. We found that a small number of centres do not use steroids at all, while others stop them within two weeks. Most, however, continue steroid treatment for anywhere from 3 to 24 weeks. Most centres also adjust the treatment based on the patient's health history, such as whether they have diabetes or weak bones.

This wide variation in care shows that there is a need for more research and clearer guidelines. By studying these differences, we hope to support safer, more consistent care for liver transplant recipients.

ID#49

Sabrina Leo, McGill University Health Center Research Institute

Retinoid acid receptor-related orphan receptor gamma (RORγ): a potential target in transplantation oncology to expand therapeutic options for patients with hepatocellular carcinoma (HCC)

Liver cancer is a disease that often develops in people who already have liver damage from long-term inflammation, such as cirrhosis. Currently, liver transplants are one of the most effective treatments. However, many people are not eligible for a transplant because their cancer is too advanced or likely to recur.

In our study, we looked at a protein, RORγ that plays a role in inflammation and helps liver cancer grow. We wanted to see what would happen if we blocked this protein; that is, test to see if we could slow down the cancer and help suppress it more effectively.

To answer this, we tested a new drug developed in our lab, as well as a genetic method, to block this protein in liver cancer cells. We studied the effects in the lab and in mice with liver cancer. We measured how rapid the cancer cells grew, how they survived, and how they interacted with immune cells.

We found that blocking the RORγ protein slowed cancer growth, reduced harmful immune cell activity, and overall showed a reduced tumour burden in mice.

This research could lead to new treatment options and help more liver cancer patients become eligible for life-saving transplants.

ID#50

Christie Rampersad, University of Toronto

Time-Varying Risk of Post-Transplant Lymphoproliferative Disorder in Kidney Transplant Recipients by Donor/Recipient Epstein-Barr Virus Serostatus

This study looked at the risk of a cancer called post-transplant lymphoproliferative disorder (PTLD) in kidney transplant patients. PTLD is linked to a common virus called Epstein-Barr virus (EBV). Most people are exposed to EBV at some point, and their bodies make antibodies to fight it off. If a person has these antibodies, they are "EBV-positive." If they don't, they are "EBV-negative."

Our study is the largest to date, including over 300,000 kidney transplant patients in the United States from 2003 to 2023, with a focus on how a patient's and donor's EBV status combination affected PTLD risk over time. We discovered that patients who received a kidney from someone with EBV (EBV-positive), while they themselves had never been exposed (EBV-negative), faced the highest (eighteen-fold) PTLD risk. We also found a unique pattern – patients who were EBV-negative but received a kidney from another EBV-negative person also had an unexpectedly high (eight-fold) PTLD risk.

Most PTLD cases occurred in the first year after transplant. Patients who developed PTLD were more likely to die or lose their kidney, with children facing the highest death risk. Our findings highlight the need for targeted EBV monitoring in patients with high PTLD risk.

ID#51

Christie Rampersad, University of Toronto

Time-Varying Risk of Post-Transplant Lymphoproliferative Disorder in Pancreas Transplant Recipients by Donor-Recipient Epstein-Barr Virus Serostatus

This study looked at the risk of a type of cancer called post-transplant lymphoproliferative disorder (PTLD) in people who received pancreas transplants. PTLD is linked to a common virus called Epstein-Barr virus (EBV). Most people have been exposed to EBV, and their bodies make antibodies to fight it off. If someone has these antibodies, they are "EBV-positive." If they don't, they are "EBV-negative."

Our study is the largest of its kind, including over 21,000 pancreas transplant patients in the United States from 2003 to 2023. We focused on how a patient's and donor's EBV status together affected PTLD-risk over time. We found that patients who received a pancreas from someone with EBV (EBV-positive) while they themselves had never been exposed (EBV-negative) had the highest PTLD-risk – an eight-fold increase. Even patients who were EBV-negative but received a pancreas from another EBV-negative person had high PTLD-risk.

We also found that PTLD was most common in the first two years after transplant, and was especially high in those who received a pancreas without a kidney. Patients who developed PTLD were five times more likely to die. Our findings show the need for careful monitoring and prevention in high-risk pancreas transplant patients.

ID#52
Christie Rampersad, University of Toronto

Bias in Kidney Transplant Risk Prediction: Fairness of the Kidney Donor Risk Index and Estimated Post-Transplant Survival Score

This study looked at two tools used to guide kidney transplant decisions: the Kidney Donor Risk Index (KDRI), which predicts how good a kidney is, and the Estimated Post-Transplant Survival (EPTS) score, which predicts how long a recipient will live after transplant. We wanted to see if these tools were fair and accurate for people of different biologic sexes and races.

We studied over 135,000 kidney transplants in the United States from 2013 to 2023. Our findings showed that the KDRI tool systematically labeled kidneys from female donors as higher risk than they actually were. This meant that many good kidneys from female donors were more likely to be discarded or given to recipients with lower chances of long-term survival. This mislabeling reduced the chance of matching good kidneys with healthier recipients, missing opportunities to maximize transplant success.

In contrast, the EPTS score was fair at current thresholds, accurately predicting survival for recipients.

Our findings suggest that the KDRI may need to be improved to prevent good kidneys from being wasted and to ensure that kidney transplant decisions are accurate and fair for everyone.

ID#53
Christie Rampersad, University of Toronto

Development of a Donor-Based Predictive Model for Pancreas Discard in Deceased Donor Transplantation in the U.S.

This study looked at why many donated pancreases in the United States are not used for transplant – about 25–30% are discarded. To help prevent this waste, we developed a tool to predict which donated pancreases are most likely to be discarded.

We created our tool using data from pancreases that reached the critical stage of being procured (removed for possible transplant). This is when many pancreases are discarded after the surgeon's visual inspection, but no existing tools are designed for this stage. We built a simple model using donor factors like age, sex, weight, smoking history, and cause of death to accurately predict discard risk.

We then tested our tool in the group of all pancreas offers (including those not removed). In both groups – procured and all-comer pancreas offers – our tool outperformed the existing European model, P-PASS, which is only meant for use before procurement. This means our tool can help transplant teams make better decisions at different stages, from initial offer to final use.

Our findings suggest this tool could reduce unnecessary pancreas discards, make better use of resources in organ procurement, and increase the number of pancreases used for transplant.

ID#54

Christie Rampersad, University of Toronto

The Comparative Effectiveness of Rabbit Anti-Thymocyte Globulin vs. Basiliximab in Simultaneous Kidney-Pancreas Transplantation: A Target Trial Emulation

This study compared two drugs used to prevent organ rejection in people receiving both a kidney and a pancreas transplant at the same time (simultaneous kidney-pancreas, or SPK transplantation). The two drugs were rabbit anti-thymocyte globulin (rATG) and basiliximab. These drugs are called “induction therapies” because they are given at the start of transplant to prevent the immune system from attacking the new organs. Although induction is standard in pancreas transplant, the choice of drug is often based on studies in kidney transplant patients.

We studied over 5,700 SPK recipients in the United States (2013–2022) using a method called “target trial emulation,” which mimics a clinical trial using real-world data. Our results showed that rATG was linked to lower pancreas graft failure beyond three years after transplant. This is important because rATG is already known to reduce rejection in pancreas transplants, but has not consistently been shown to improve long-term graft survival.

There were no major differences in kidney transplant outcomes or serious complications between the two drugs, except for a slightly longer hospital stay (less than one day) with rATG. Our findings suggest that rATG may be the better choice for long-term pancreas protection in SPK transplant patients.

ID#55
Christie Rampersad, University of Toronto

Transplanting Change: The Slow Progress of Gender Equity in Editorial Leadership

This study looked at how many women hold leadership positions at the top 20 transplantation journals. We wanted to see how well women are represented among editors, including editors-in-chief, and whether this has changed over the past decade.

We reviewed 1,479 editors in these journals in 2024. Women made up 31% of all editors and 13% of editors-in-chief – figures that have not changed since 2014. Female representation was highest among allied health editors (77%) and lowest among surgeons (16%). Most editors (94%) were from high-income countries, with none from low-income countries.

Women were more likely to be editors in allied health fields but less likely in surgical specialties. Our analysis showed that while women were underrepresented on editorial boards, this pattern generally matched the gender distribution in the transplantation workforce, where women are less common in surgical and senior roles. However, there was a "leaky pipeline" for women in senior editorial roles, with few advancing to editors-in-chief.

These findings suggest that gender differences in editorial leadership may partly reflect lower numbers of women in senior and surgical roles within transplantation. Addressing this may require mentorship programs, transparent reporting of gender data, and initiatives to support women in academic leadership.

ID#56
Christie Rampersad, University of Toronto

Pancreas Graft Failure in Simultaneous Kidney-Pancreas Transplantation: Epidemiology, Mortality, and Kidney Graft Outcomes

This study looked at how often pancreas transplants fail in patients who receive both a pancreas and a kidney at the same time (simultaneous pancreas-kidney, or SPK transplantation). We also studied how pancreas transplant failure affects patient survival and kidney transplant outcomes.

We reviewed data from over 7,600 SPK recipients in the United States between 2013 and 2022. We found that about 14% of pancreas transplants failed within five years, with most failures happening in the first year. These early failures were often due to surgical problems.

When a pancreas transplant failed, patients were more likely to die and more likely to lose their kidney transplant. This risk was high both early (within the first year) and later (after one year) following pancreas failure. Even when the pancreas failed due to technical issues (like surgical problems), it increased the risk of death.

If the kidney transplant also failed, the risk of death became even higher. These findings highlight the serious impact of pancreas and kidney failure in SPK patients, showing that preventing pancreas failure is important for improving long-term outcomes.

ID#57

Holly Mansell, University of Saskatchewan

Characterizing the Role Transplant Pharmacists Internationally

Transplant recipients need to take many medications. In the USA, transplant teams are required to have a pharmacist to help with medications. In other countries, however, it is unclear whether there are transplant pharmacists and what their role is. We conducted an internet search to find out which countries have transplant centers. We emailed all transplant centers in countries other than the USA a survey in their own language to ask them. If they had a transplant pharmacist, we asked the centers to share another survey with their pharmacists. The second survey asked transplant pharmacists about their role in transplant care.

Of 194 countries, 128 (65.8%) performed solid organ transplants. Survey 1 (which was sent to 1726 centers) received responses from 131 centers/42 countries. Survey 2 received responses from 157 pharmacists in 17 countries other than the USA and 54 in the USA. Of 43 countries responding in total, 42% had transplant pharmacists, 21% supplied mixed responses, and 37% did not; the most common reason was that pharmacists did not routinely provide clinical care. Transplant pharmacists who responded to the survey described their role in transplant care and shared their challenges.

ID#58

Trana Hussaini, University of British Columbia and Vancouver General Hospital

Hematocrit-Adjusted Tacrolimus Levels Early Post-Liver Transplantation: Impact on Rejection and Acute Kidney Injury

Tacrolimus is a key medication used to prevent organ rejection after liver transplantation. Most of it binds to red blood cells, leaving only a small portion free to actually do the work (free tacrolimus level). In people with anemia (low red blood cell levels), lab tests may show low overall tacrolimus levels, even though the active free part could be high. This can make it hard for doctors to interpret results and adjust dosing safely.

This study looked at whether adjusting tacrolimus levels based on a patient's red blood cell count (called hematocrit) could better reflect the active drug level in the body. We reviewed data from over 400 liver transplant recipients and tracked outcomes such as organ rejection and kidney injury in the first 90 days after transplant.

We found that adjusting tacrolimus levels for hematocrit did not increase the risk of rejection and may provide a more accurate picture of how much active drug is present. On the other hand, higher total tacrolimus levels were linked to kidney problems.

In summary, adjusting tacrolimus for red blood cell levels could help personalize treatment, especially in patients with anemia, and may reduce side effects without increasing the risk of rejection.

ID#59
Muhammad Tassaduq khan, DOW UNIVERSITY HOSPITAL

Profile of avascular necrosis cases among kidney transplant recipients on a low-dose steroid regimen, A Retrospective Study

This study looked at kidney transplant patients who developed a bone condition called avascular necrosis (AVN). AVN happens when blood supply to a bone is reduced, causing the bone to weaken and break down. It often affects the hip and can be linked to steroid medications used to prevent organ rejection after transplant.

We studied 30 kidney transplant recipients diagnosed with AVN between 2017 and 2022. All were on a low-dose steroid regimen. Most were men, with an average age of 37. Some of the women were postmenopausal. Patients received a high steroid dose during surgery, followed by a lower daily dose.

In all cases, the hip joint was affected. MRI scans confirmed the diagnosis in most patients. Eight people (27%) needed surgery. Although more than half had experienced transplant rejection in the previous six months, this did not increase their risk of needing surgery.

However, women were more likely than men to require surgery, even though fewer women had AVN. This suggests female patients may need more frequent bone health checks.

In summary, AVN can develop even with low steroid use after kidney transplant, and women may be at higher risk for severe cases requiring surgery.

ID#61
Christie Rampersad, University of Toronto

A Decade of Kidney Transplantation in Canada (2014 to 2023): Regional Trends, Disparities, and Progress

This study looked at kidney donation and transplant trends across Canada from 2014 to 2023. We used national data to see how many people got kidney transplants, how long they waited, and where the donated kidneys came from. Over this time, more patients received transplants each year, while the number of people waiting for a kidney declined. Median wait times for deceased donor kidneys became shorter, while wait times for living donor transplants stayed the same.

Transplant rates were highest in British Columbia and Saskatchewan, while Manitoba had the lowest. When we looked at transplant rates as a percentage of people on dialysis, differences between provinces were smaller, ranging from 3.5% in Newfoundland and Labrador to 7.5% in British Columbia. Deceased donor transplants increased, especially for donations after circulatory death, while living donor transplants remained steady.

Our study shows that while Canada has made progress in kidney transplantation, there are still notable differences in access between provinces. These findings can help health leaders make changes to improve fairness and access to kidney transplants across the country.

ID#62
Somaya Zahran, McGill University

Graft Survival Following Microvascular Inflammation: Impact of Donor-Specific Antibodies and Crossmatch Status in Kidney Transplant Recipients

After a kidney transplant, physicians monitor for signs of immune system attacks on the new kidney. One early warning sign is a type of inflammation seen on biopsy called microvascular inflammation (MVI). Sometimes this happens when the recipient has antibodies against the donor (called donor-specific antibodies or DSA), but in other cases, these antibodies are not present, and it is unclear how that affects long-term outcomes.

In this study, we looked at over 400 kidney transplant patients who had MVI on biopsy. We found that patients without DSA had the best long-term kidney survival, while those with DSA, especially if they had a positive crossmatch before transplant (a test showing how the recipient immune system react to the donor's cells before transplant), were more likely to experience kidney failure over time. Interestingly, patients with DSA but a negative crossmatch did better than those with a positive one.

These results show that not all inflammation means the same risk, and that antibody and crossmatch testing can help physicians better understand which patients are more vulnerable. This information may guide how closely we monitor patients or how aggressively we treat them after signs of inflammation appear.

ID#64

Jaswanth Gorla, University of Toronto

Perioperative care of kidney transplant recipients: a pan-Canadian survey

Kidney transplantation is the ideal form of treatment for kidney failure. A key predictor of long-term outcomes is how well the kidney works in the week after transplantation. Several factors are known to influence kidney function after transplant. These factors include decisions before, during, and after surgery for intravenous fluids, medications, and blood pressure. Several research studies have reported wide variation in anesthesia care of patients undergoing kidney transplants. To date, the routine multidisciplinary practice for kidney transplant patients in Canada is undefined.

We surveyed transplant specialists in every Canadian transplant center (nephrologists, anesthesiologists, and surgeons) and asked how they routinely manage kidney transplant patients with a focus on evidence-based factors affecting post-transplant kidney function.

From 71 responses, we determined that routine practice varies widely between specialists and centers. We identified agreement between respondents on medications to prevent organ rejection, blood pressure management during surgery, transfusing blood, and managing postoperative pain. On the other hand, routine optimization before transplant, intravenous fluid therapy, and postoperative course appeared to have no established patterns. These findings highlight the need for widely disseminated national multidisciplinary standards to improve the care of kidney transplant recipients at the time of their transplant.

ID#65

Sameer Rathnayaka Koralage, Saskatchewan Transplant Program

KTOPPS-AMR: The Kidney Transplant Outcomes and Practice Patterns Study Following Antibody Mediated Rejection

Kidney transplants improve the quality of life for patient with severe kidney disease, extending their lifespan and well-being. However, rejection, a process when the immune system mistakenly targets the transplanted kidney, remains a major challenge after a kidney transplant. Among different types of rejection, antibody mediated rejection (AMR) is especially difficult to treat. Because there is no standard treatment, doctors across Canada use many different approaches to manage AMR.

This study analyzed 135 adult patients with AMR from five Canadian transplant centers between 2020 and 2022. Researchers reviewed medical records to understand treatment regimens and outcomes. Treatment options varied widely and included steroids, plasma exchange, IVIG (a type of antibody therapy), and other combinations of medications. Despite treatment, half of the patients experienced serious kidney problems within two years, including kidney failure or a significant decline in kidney function

Despite 50% of patients experiencing graft failure or significant decline in kidney function, few reliable predictors exist. Specificaly, only kidney function markers, serum creatinine and urine protein levels, were able to predict poor outcomes. These findings underscore the urgent need for more effective, evidence-based treatments for AMR and highlight the necessity of clinical trials to develop better therapies.

ID#66
Brianna Andrews, University of Saskatchewan

A pathway of excellence in organ donation and transplantation: A novel curricular design

Organ transplantation can save lives for people with organ failure, but there are not enough donor organs for everyone who needs one. Medical students also receive little education on this important topic. To help solve this, we created a curriculum on organ donation and transplantation for medical students. Through interviews, specialist doctors and other transplant healthcare professionals, transplant recipients, living donors, and families of deceased donors shared what they think future doctors need to learn. Primary care doctors were surveyed on which teaching topics they believe are most important. These conversations showed that medical students need to learn more about how organ donation works and how to communicate better with patients and families. Five key areas of learning include the science and skills of organ donation and transplantation, the human stories of donation and transplantation, communication and empathy. These learning areas will be added to medical students' existing courses, and students who complete the curriculum will receive a 'Certificate' in organ donation and transplantation. This curriculum combines the voices of healthcare workers, patients, and families to better prepare medical students and improve how doctors approach organ donation and transplantation, which will increase comfort and could help save more lives.

ID#67

Jacob Michaud, Dalhousie University

Kidney transplant referral, waitlist activation, and transplantation rates in older adults with end-stage kidney disease

Kidney transplantation can greatly improve both the lifespan and quality of life for people with kidney failure. This remains true for carefully selected older adults. However, older patients are often less likely to be put forward for a transplant. This study looked at patients in our province who started dialysis between 2010 and 2020 to see how age affected their chances of being put forward for transplant, being put on the waitlist for a kidney, and eventually receiving a kidney transplant.

Out of 1153 patients, 785 were eligible for a transplant. This study found that older adults, especially those aged 71–80, were much less likely to be put forward for a kidney or added to the waitlist compared to younger patients. Even after accounting for other health issues and frailty, older adults were 93% less likely to be put forward and 90% less likely to be put on the waitlist.

Although older adults can benefit from transplantation, they face clear barriers in accessing it. The findings suggest a need for better policies and practices to ensure that age alone doesn't prevent someone from being considered for a kidney transplant.

ID#68

Robert Wright, BC Children's Hospital Research Institute

Epstein-Barr Virus Donor Seronegative Status Increases the Risk of Post-Transplant Lymphoproliferative Disorder in Seropositive Lung & Heart-Lung Transplant Recipients: Data from the Organ Procurement and Transplantation Network

Epstein-Barr virus (EBV) is a common virus that most Canadians become infected with during their lives. EBV stays in the body forever, usually without causing symptoms. Most people don't even know they have it, because a healthy immune system can keep the virus "asleep" or inactive. However, people who receive organ transplants must take strong medications to weaken their immune system, so their body doesn't reject the new organ. This makes it easier for EBV to "wake up" and cause problems, including certain cancers.

Because of this, transplant doctors try to match patients and donors based on their EBV status. In our study, we looked at 17 years of data from people in the U.S. who received heart, lung, or heart-lung transplants and who were already infected with EBV. We wanted to know if receiving an organ from someone not infected with EBV could change the risk of EBV-related problems.

We found that in lung and heart-lung transplant patients, this type of mismatch might increase the risk of EBV-related cancers without affecting overall survival.

ID#69

Varalika Tyagi, University Of Alberta

Norovirus and Sapovirus Associated Chronic Diarrhea in SOT: Does Viral Load Correlate with Severity of Symptoms?

Solid organ transplant (SOT) recipients must take medications that suppress their immune systems to prevent organ rejection. Unfortunately, this makes them more vulnerable to infections like norovirus and sapovirus —common viruses that causes diarrhea. While healthy people usually recover from these viruses quickly, transplant patients can suffer from long-term diarrhea, leading to weight loss, kidney damage, hospitalizations, and a reduced quality of life. This study will follow transplant patients at the University of Alberta who have had or develop norovirus and sapovirus infection. Researchers will measure the amount of virus in stool samples and compare it with how severe the patients' symptoms are. They will also test how well different treatments—such as oral immunoglobulins, nitazoxanide, and changes to medications—work to reduce symptoms and virus levels. Additionally, patients will complete questionnaires to help understand how NoV affects their mental health, sleep, and overall well-being. The goal is to better understand the relationship between viral load and disease severity and to identify the most effective treatments. This research may help doctors improve care for transplant patients, reduce suffering, and enhance the quality of life for those dealing with chronic diarrhea from norovirus and sapovirus infections.

ID#70

Matthew Kadatz, University of British Columbia

Prevalence of Tobacco and other Substance Use Disorders Among Solid Organ Transplant Recipients in British Columbia: A Population-Based Analysis

Substance use disorders (SUDs)—including tobacco, alcohol, and opioid use—can affect the health and outcomes of people who receive organ transplants. However, little is known about how common these conditions are in transplant recipients. In this study, we looked at all adults who received a kidney, liver, heart, or lung transplant in British Columbia between 2020 and 2024. Using health records, we identified SUDs based on prescriptions, doctor visits, and hospital records.

Out of 2,167 transplant recipients, 296 (13.7%) had a tobacco or other substance use disorder. The most common were tobacco use disorder (6.5%) and alcohol use disorder (6.0%), with some also having opioid use disorder (2.4%). SUDs were most often detected through prescription records. Rates of SUDs were highest among liver transplant recipients, with one in three affected.

These findings show that many transplant recipients live with addiction-related conditions. This highlights the importance of including addictions care as part of transplant planning and follow-up, and supports the provincial goal of improving access to mental health and addictions services in British Columbia.

ID#71

Varalika Tyagi, University Of Alberta

SARS-COV-2 and other Respiratory Viruses - Prevention and Infection rates in SOT and Caregivers enrolled in TREAT-COVID

People who receive organ transplants are more likely to become seriously ill from viruses like COVID-19, the flu, or other common infections. While these individuals were quick to get vaccinated when COVID-19 first started, we don't know if they are still keeping up with vaccines or how sick they are getting from these viruses now.

This ongoing study, called TREAT-COVID, looks at how these viruses affect transplant patients and their caregivers across Canada. Our study invites transplant patients and their family caregivers to take part by filling out online questionnaires every few months and allowing us to review their medical records. This helps us track who is getting sick and how vaccines are being used.

By collecting this information over time, we hope to better understand which viruses are still a serious risk for transplant patients and how well vaccines and treatments are working. This research may guide future vaccine programs and policies to better protect this high-risk group.

ID#72

Vikas Sridhar, University of British Columbia

Impact of diabetes on the efficacy, mechanisms and safety of SGLT2 inhibitors in kidney transplant recipients

Sodium-glucose cotransporter-2 (SGLT2) inhibitors are medications that have proven heart and kidney protective effects in patients with kidney disease, with and without diabetes. To date, this has not been demonstrated in kidney transplant recipients (KTR). We conducted a clinical trial where 52 KTR were randomized to the SGLT2 inhibitor dapagliflozin or placebo for 12 weeks with the aim of studying whether mechanisms of SGLT2 inhibition associated with heart and kidney protection are also activated in KTR. We were specifically interested in whether the effects of SGLT2 inhibition were similar between KTR with and without type 2 diabetes. Several mechanisms were evaluated including blood pressure lowering, detailed measures of kidney function including removal of sodium and glucose, body composition, blood vessel stiffness, cardiac function assessments, and safety. We found that dapagliflozin was safe and well tolerated in KTR. Compared to placebo, dapagliflozin activated mechanisms associated with cardiovascular and kidney protection in KTR, with similar effects in those with and without type 2 diabetes.

ID#73

Kevin Meesters, BC Children's Hospital

Trichodysplasia Spinulosa in Pediatric Solid Organ Recipients: a Case Series and Review of Clinical Management

Children who receive kidney transplants must take medications that suppress their immune systems to prevent rejection of the transplanted organ. Unfortunately, this can make them more vulnerable to certain rare infections. One of these is Trichodysplasia Spinulosa (TS)—a skin condition caused by a virus that usually doesn't cause illness in healthy people. TS leads to rough, spiny bumps on the face and body and can cause hair loss in the eyebrows and back of the head. Although not dangerous, it can be very distressing and affect a child's confidence and social life.

We describe four children at our hospital who developed TS after kidney transplantation. All were taking common immune-suppressing medications. Diagnosis was usually made based on the appearance of the skin, although one child also had a skin biopsy. Treatment involved small adjustments to their medications and use of antiviral therapies. One cream (topical cidofovir) worked well on the areas where it was applied. Another medicine (systemic cidofovir) helped one patient significantly. In the end, all four children improved.

This case series helps raise awareness among doctors and families, so that children with TS can be diagnosed and treated more quickly—improving their physical and emotional well-being.

ID#74
Hana Mitchell, BC Children's Hospital

Optimizing vaccine uptake in pediatric solid organ transplant recipients – a single center retrospective study by the Canadian Immunization Research Network (CIRN)

Children and teens who receive organ transplants are at higher risk of getting serious infections, so staying up to date with vaccines is especially important. However, many of these patients may not be fully vaccinated. Since 2021, our transplant center has taken steps to improve vaccination rates. These included reviewing each patient's vaccine status every year, giving written vaccine recommendations, and providing educational materials to families.

We reviewed the records of transplant patients followed at our center in 2020 and again in 2024 to see if vaccination rates improved. We looked at whether they received all the recommended post-transplant vaccines . In 2020, none of the patients were fully vaccinated, but by 2024, this number increased slightly to 8%. The number of patients missing three or more vaccines dropped from 75% to 44%.The biggest improvements were seen in vaccines for meningitis, hepatitis B, pneumonia, and HPV.

While more patients are getting the vaccines they need, there is still room for improvement. Talking to patients and families about their experiences and information needs may help further increase vaccination rates.

ID#75
Irene Chen, UBC and BCCHR

Information seeking and engagement on social media among pediatric solid organ transplant recipients and their families

Social media is becoming an increasingly important resource for children and adolescents with chronic health challenges. Despite this, there is very little known about how individuals that received their transplant as a child and their families use social media. This study looked at posts and comments from the Reddit group r/transplant to understand what topics matter most to this community.

We analyzed 357 posts written by young transplant recipients (ages 0-24) and their family members. Results showed that online users often talked about medical issues, medications, and emotional experiences. Family members tended to focus on managing medical problems, while transplant recipients discussed mental health and personal milestones more frequently. The topics users talked about also changed over time: those closer to their transplant date were more likely to discuss emotional and medical challenges, while those further along often celebrated transplant milestones. Overall, the community viewed the online group as a helpful, supportive space to connect with others.

These findings highlight how social media can be used to offer meaningful social support to the transplant community and create more tailored online resources.

ID#76

Maya Allen, University Health Network

Unbiased and Spatial Proteomics of Kidney Allograft Biopsies: Terminal Complement Proteins Dominate Chronic Active Antibody Mediated Rejection

Kidney transplantation provides the best outcomes for patients with kidney disease. Unfortunately, many patients experience early loss of their transplanted kidney due to a disease called antibody mediated rejection (AMR). AMR is thought to be caused by antibodies made by the patient that target their new kidney. Interestingly, these antibodies are not found in all patients that have AMR. My goal is to compare AMR kidney biopsies from patients that have these antibodies to those that don't, in order to uncover the differences between them on a molecular level.

ID#78
Irene Chen, UBC and BCCHR

Mental health in children living with a solid organ transplant and their families: exploring narratives shared on social media

Solid organ transplantation (SOT) is a critical procedure for children facing organ failure. However, it comes with numerous challenges, including lifelong medication adherence and the persistent risk of organ rejection. Recent studies have highlighted the mental health challenges that children with a SOT face, such as higher rates of anxiety, depression, and post-traumatic stress symptoms.

This study looked at 357 posts shared by young transplant recipients (ages 0-24) and their families. We specifically analyzed posts about mental health, and three major themes emerged: (1) Fear of organ rejection: many users shared ongoing anxiety about their transplant failing or needing another; (2) Emotional burden of receiving an organ: users expressed feelings of guilt towards their donor and uncertainty about life after transplant; (3) Growing up with a transplant: users discussed challenges with friendships, romantic relationships, body image, and forming a sense of identity.

These findings show that young transplant recipients and their families turn to social to share about their mental health. These insights can help to improve mental health support for this population.

ID#79

Christopher Yu, BC Chilren's Hospital Research Institute

Long Term Life Experiences and Outcomes of Pediatric Transplant Patients

This project studies how transplant recipients under 25 years old and their family members use social media. In Reddit's r/transplant subreddit, there were 301 posts from 203 users who had a kidney, heart, liver, or lung transplant. From these posts, we grouped the topics discussed into general themes. For example, when patients shared their experiences after a transplant, they mainly talked about relationships, medical care, attitudes on life, or education.

In the next steps, we will identify how the post's author feels by matching each word to an emotion or value. The more negative a score, the worse the experience. We can find out how patients of different ages, years after transplant, and the type of organ they received talk about their journey.

Recipients and their relatives often share their journey, ask questions, or seek support on social media. Yet, the subreddit r/transplant is rarely researched. This study can show the issues patients have and discuss most. As such, doctors can provide better care and more resources online or during visits. We hope to improve the quality of life by better focusing on the challenges children with transplant and their families face.

ID#80
Kendra-Lee Dupuis, Brock University

Prospect of an Organ Donation After Uncontrolled Death by Circulatory Criteria Program in Canada: Leaders and Key Stakeholders Perspectives

Although more Canadians are donating organs after death, there still aren't enough donors to meet the growing need. An approach that has worked well in other countries, but has been widely underexplored in Canada, is called "uncontrolled donation after death by circulatory criteria" (UDCC). In this pathway organs are donated after the heart has stopped unexpectedly.

To better understand the potential for using this pathway in Canada, virtual interviews with leaders and experts from organ donation organizations across the country are being performed. So far, 19 key individuals have shared their thoughts. Early findings show that there are many challenges to consider for this pathway, such as ethics, costs, location, and the need for specific resources. Some experts worry that this approach could make the system less fair, especially for people in rural areas. Despite these concerns, many participants agree that saving lives and keeping public trust in the donation system should be the top priorities. Some also suggested exploring other options, like using advanced life support machines or focusing on advancing tissue donation opportunities.

This ongoing study will help to guide national conversations about how to support the system and expand organ donation in Canada.

ID#81
Irene Chen, UBC and BCCHR

Social media as a tool for information and support: survey insights from pediatric solid organ transplant recipients and their families

Young people living with an organ transplant face lifelong health and emotional challenges. Social media can be a source of support for recipients and their families, but little is known about how and why this community engages online.

To explore this, we conducted an online survey with 33 transplant recipients and their families. Respondents used an average of 5 social media platforms, with Facebook and Reddit being used most commonly for transplant-related content. They reported using social media for three primary reasons: to learn about medical topics, find or offer mental health support, and understand long-term outcomes of transplant. However, they also reported concerns about the accuracy, safety, and relevance of information for transplant recipients.

While social media is an important resource for this population, online resources should address common concerns and offer both medical and emotional support.

ID#82

Brianna Andrews, University of Saskatchewan

Exploring the journey of patients, families, and donors in organ donation and transplantation: A qualitative study

Organ transplantation is the best treatment for people with organ failure but the process of donating or receiving an organ, and the experience for families, can be complicated. We wanted to better understand these journeys and the interactions within the healthcare system to help improve the donation and transplant process. To do so, we interviewed transplant recipients, living donors, and the families of deceased donors. Key talking points included decision-making, information received, interaction with healthcare providers, and what could be improved. Many shared that finances, support systems, and concern for dependents influenced their decisions. While people received information about surgery, recovery, and testing plans, information about timelines was missing. Experiences with healthcare providers varied with some people feeling supported and others facing insensitive communication. Participants emphasized the need to be emotionally supported, and to have more culturally sensitive and compassionate care. Knowing which organs were viable for deceased donation was also important. To raise public awareness on organ donation, participants suggested public awareness campaigns and education in schools and at doctors' visits. Listening to patient, donor, and family experiences and using clear, empathetic communication by healthcare providers can make a meaningful difference in improving the donation and transplant journey.

ID#83

Daniel Fantus, CHUM

Diagnostic Potential of Combined Urine CXCL10 and Donor-Derived cfDNA in Kidney Transplant Rejection

In kidney transplantation today, a biopsy is required to diagnose rejection, the primary cause of transplant failure. However, biopsies are invasive, resource-intensive and difficult to use as a monitoring tool over time. Over the last 10-15 years, a variety of tests in both the blood and urine have been investigated to help diagnose rejection. A useful test might help diagnose rejection early, allow one to quiickly rule out rejection or help determine the type of rejection. We sought ot compare the performance of two of these tests using patient samples from our biobank. Interestingly, the tests were complementary. While the blood test we studied helped diagnose antibody-miedtaed rejection, the urine test performed better as a tool to diagnose cellular rejecttion. Further studies are needed to compare how these tests perform in a larger kidney transplant population with a variety of rejection and non-rrejection diagnoses.

ID#84

Jacob Michaud, Dalhousie University

Impact of COVID-19 on hospital outcomes for solid organ transplant recipients: a retrospective analysis of the Canadian Organ Replacement Register

People who receive organ transplants such as kidneys, lungs, hearts, or livers must take medications that lower their immune systems which increases their risk of serious illness from infections like COVID-19. This study looked at how often types of transplant recipients in Canada (excluding Quebec and Manitoba) were admitted to hospitals, needed intensive care, or died while in hospital during 2021-2022, both with and without a COVID-19 diagnosis. We analyzed data from over 23,000 transplant recipients as of December 2020. About 10% were hospitalized with COVID-19, while one-third were hospitalized for other reasons. Lung transplant recipients had the highest rates of hospital visits, intensive care unit transfers, and deaths while in hospital, regardless of whether they had COVID-19. In contrast, heart and liver transplant recipients generally had better outcomes, with liver recipients showing the lowest rates of severe complications. These findings suggest that the type of organ transplanted significantly influences hospital risks and highlight the need for further research into underlying causes, such as differences in immune suppression.

ID#85

Julie Turgeon, Université de Montréal

Circulating Apoptotic Exosome-Like Vesicles (ApoExos) are Associated with Alloimmune Vascular Injury in Kidney Transplant Recipients

Alloimmune vascular injury (AVI) occurs when rejection involves the kidney transplant's blood vessels. AVI damages the vascular wall and is associated with complications such as chronic rejection and even kidney loss. As there are no currently no biomarkers for AVI, its diagnosis involves a kidney transplant biopsy which can itself lead to complications such as bleeding.

Our team has identified small vesicles that are released when cells lining blood vessels die. These small vesicles, called Apoptotic Exosome-Like Vesicles (ApoExos), were measured in patients' blood at the time of kidney transplant biopsies. We found that there were more ApoExos in patients' blood at the time of rejection when associated with AVI.

ApoExo could represent a new biomarker for predicting the occurrence of AVI or follow treatment response without needing to perform multiple biopsies. In the future, we plan to evaluate if measuring ApoExo is useful in the clinical care of kidney transplant patients.

ID#86

Nicole Chrysler, University Health Network

Anti-donor t cell dynamics and CLAD risk in the assessment of lung allograft rejection – measurement of T cell immune synapses (ALARM-T) study

After a lung transplant, the immune system can sometimes recognize the new lung as foreign and begin to attack it—a process called rejection. Over time, this can lead to a condition known as chronic lung allograft dysfunction (CLAD), the main cause of long-term lung transplant failure. In this study, we used a specialized imaging technique to track immune cells called T cells, which play a major role in rejection. By analyzing blood samples from 61 lung transplant recipients and their donors over the first year after transplant, we found that patients who later developed CLAD showed an early increase in anti-donor T cells—especially memory CD4+ T cells—within the first six months. In contrast, patients who remained healthy had a decrease in these cells. Our results suggest that measuring T cell activity shortly after transplant may help identify patients at higher risk for CLAD. This could allow doctors to adjust treatment early, potentially improving long-term outcomes. Further analysis will help confirm how these immune changes relate to different patient outcomes.

ID#87

Bohan Zhu, University Health Network

Determining the Presence and Mechanism of Ferroptosis in Steen-related Cell Injury in a Cell Culture Model

Ex vivo lung perfusion (EVLP) has revolutionized donor lung assessment and preservation. Despite this, the activation/exacerbation of programmed cell death pathways remains a challenge in ex vivo lung perfusion as it contributes to graft injury. Ferroptosis is one form of cell death that has been implicated in ex vivo lung perfusion and is characterized by a cellular overload of iron levels to lethal levels. However, the involvement of Steen solution, the most commonly used acellular perfusate, in ferroptosis during EVLP remains poorly understood. Mechanisms of ferroptosis were measured in human lung epithelial and endothelial cells that were cultured in either Steen solution or controls for 24 or 48 hours using cell culture models. Our results show that cells exposed to Steen solution had reduced antioxidative capacity, evidenced by a depletion in antioxidant levels in epithelial cells after 24 hours. At 48 hours, a resultant decrease in cytoprotective enzyme activity and a compensatory increase in glutathione biosynthesis regulator were observed. Moreover, we also observed mechanisms of anti-ferroptosis to address potential iron overload at 48 hours. In conclusion, these results warrant further investigation into ferroptosis to identify targeted therapeutics to further improve ex vivo lung perfusion.

ID#88

Daniel Vosoughi, University Health Network

Post-lung transplant (LT) longitudinal bronchoalveolar lavage (BAL) profiling reveals prognostic autoantibodies (AABs) with pathogenic potential in Chronic Lung Allograft Dysfunction (CLAD)

For patient with end-stage lung disease, lung transplantation (LT) offers a second chance at life. However, it carries the highest risk of long-term failure among all organ transplants due to chronic rejection, where the immune system mistakenly attacks the new lung. We believe autoantibodies – proteins that act like precision weapons to protect the body but that can turn harmful if self-directed – play a key role in this process. This study aims to identify whether autoantibodies are present after LT, what they target, whether they predict rejection, and if they actually damage the lung. To do this, we will cast a wide net by screening blood samples for a broad range of autoantibodies and examine whether they are linked to future rejection. We will then test their ability to injure lung cells in the lab. If they cause damage, we can explore drugs that block their effects as possible treatments. If successful, this research could lead to a simple blood test to identify patients at high risk of rejection and guide both early intervention and targeted therapy. Our goal is to better protect LT recipients, extend lives, and help people preserve the ability to breathe.

ID#89

Sarita Negi, McGill University Health Centre

Modulation of the PD-1/PD-L1 Axis by Novel RORγ Inverse Agonists: Implications for Immune Regulation in Transplantation

The immune system has built-in mechanisms that prevent it from attacking the body or overreacting after a transplant. One important mechanism is the PD-1/PD-L1 pathway, which helps regulate immune responses and maintain tolerance. In this study, we looked at a molecule called RORγ, which plays a key role in the function of Th17 cells. These cells are involved in inflammation and transplant rejection. Recent research suggests that RORγ may also interfere with the PD-1/PD-L1 pathway.

We tested whether blocking RORγ could influence the PD-1/PD-L1 pathway and promote immune tolerance. We treated two cancer cell lines and blood cells from healthy volunteers with compounds that block RORγ. In both cell lines, blocking RORγ increased PD-L1 levels. In blood cells, blocking RORγ increased PD-1 in CD4+ T cells, which may reflect a more tolerant state. PD-L1 levels was also increased in monocytes and natural killer cells, suggesting enhanced immune suppression.

These findings suggest that RORγ may act to suppress the PD-1/PD-L1 pathway. Blocking it could enhance immune regulation, reduce harmful immune responses, and lower inflammation. This approach may offer a promising strategy for improving transplant outcomes and developing new therapies for immune-related conditions.

ID#92

Cora England, Western University

The addition of molecular hydrogen during the hypothermic pulsatile perfusion of renal grafts in porcine models confers a protective effect against IRI in ex vivo simulated transplantation

The current clinical standard of kidney preservation for transplantation has been shown to lead to organ damage and negatively interfere with renal function in recipients; especially when the organ is collected from a sub-optimal donor. In this study, the impact of hydrogen-saturated organ preservation solution, in comparison to standard organ preservation solution, was investigated using an ex vivo porcine model of kidney transplantation. To model sub-optimal donor conditions, renal arteries were clamped for 60 minutes prior to kidney removal, after which grafts were flushed with either UW-only or UW+H2 preservation solutions before undergoing 4 hours of cold (4°C) storage followed by 4 hours of warm (37°C) reperfusion using blood collected from the porcine subject. Intracellularly, the hydrogen-treated grafts showed significantly improved cellular structure and significantly reduced production of proinflammatory genes compared to the UW only group. As well, the hydrogen-treated grafts displayed enhanced functionality, as shown through significantly increased renal blood flow and urine output, compared to the UW only group. Overall, it can be concluded that the implementation of molecular hydrogen within organ preservation solution led to improved graft quality and function, suggesting its potential to increase the viability of organs collected under sub-optimal conditions.

ID#93

Tamara Sidar Ortas, UWO

Evaluation of Sodium Thiosulfate Supplementation in a Porcine Model of DCD Kidney Preservation

Kidneys from donors whose hearts have stopped (called donors-after-circulatory-death, or DCD) are being used more often for transplants, but these organs are at high risk of damage due to a lack of oxygen before and during transplantation. In this study, we tested whether adding a protective compound called sodium thiosulfate (STS)—a safe, FDA-approved drug that releases hydrogen sulfide—could help preserve these kidneys better.

Using a pig model that mimics DCD kidney transplantation, we treated some kidneys with STS during cold storage and compared their recovery to untreated kidneys during a simulated transplant. We found that male kidneys treated with STS had better urine output, improved blood flow, and cleared waste more efficiently after transplantation. Kidneys from both sexes also had less tissue damage, and treated male kidneys showed lower levels of inflammation. Gene analysis supported these findings, showing increased activity in protective and repair-related pathways in treated kidneys.

Overall, adding STS to the preservation solution appears to protect kidneys from injury, especially in males, and may improve outcomes in DCD kidney transplants. These findings offer a promising step toward safer and more effective kidney preservation.

ID#94

Francisco Reyna-Sepulveda, MOTP Atlantic Canada

Hypothermic Machine Perfusion for Renal Preservation in Low-Income Regions

We developed a new device to protect kidneys during transport. Unlike traditional methods that simply keep the kidney cold, our machine gently pumps a special solution through the kidney while keeping it at the right temperature. This helps reduce damage and keeps the kidneys in better condition.

The device is small, portable, and affordable, designed to be used in hospitals with fewer resources. It also shows important information, like temperature, pressure, and flow, in real time so doctors can monitor the kidney's condition. We tested the system in the lab using pig kidneys, and all parts worked together as planned. The liquid flowed properly, sensors reported data, and the system ran safely.

Although more testing is needed before it can be used in real patients, this device has the potential to improve kidney transplant outcomes, expand access to better technology in lower-resource settings, and ultimately save more lives.

ID#95

Shabitha Arumugarajah, Western University

KIM-1 upregulation in the allograft predisposes to premature graft failure

Kidney transplantation is the optimal treatment for kidney failure as it improves quality of life and survival. However, transplanted kidneys are injured during organ recovery and immune rejection leading to premature failure, requiring repeat transplantation. Understanding the genes that are involved in transplant failure may lead to strategies to extend the lifespan of transplants.

Kidney Injury Molecule-1 (KIM-1) appears on injured kidney cells. In previous studies using genetically identical mice, we showed KIM-1 protected kidneys from early injury caused by organ recovery. Here, we examined the role of KIM-1 in a genetically mismatched mouse kidney transplant model that better represents human transplantation, where kidneys face both types of injury. All mice received a life-saving transplant from donors with or without KIM-1 (knockouts) and were monitored for 30 days. Transplanted kidneys and blood were collected at the endpoint for assessment of types of tissue damage and rejection responses, respectively.

Unexpectedly, mice that received kidneys without KIM-1 experienced less kidney failure and better survival owing to improved healing and less scarring. Our new findings suggest that KIM-1 found normally in our bodies may interfere with tissue recovery after injury and targeting KIM-1 may be a promising way to improve kidney transplant survival.

ID#97

Shok Hoon Ooi

Differential impact of tacrolimus concentration-to-dose ratio (C0/D Ratio) with different tacrolimus formulations on kidney function in kidney transplant recipients (KTRs)

This study looked at how the body's ability to process an anti-rejection medication called tacrolimus affects kidney transplant outcomes. Tacrolimus helps prevent the body from rejecting a new kidney, but people process the drug at different rates. We examined 202 of our planned 555 kidney transplant patients who received different types of tacrolimus—either standard forms (taken once or twice daily) or a newer version, LCP-tacrolimus (taken once daily).

The goal was to see if the speed at which people metabolize tacrolimus (measured by a "concentration-to-dose" ratio at 3 months after transplant) had any impact on kidney function a year after transplant. Patients were grouped based on how quickly they metabolized the drug and what type of tacrolimus they were taking. We also looked at the risk of viral infections, such as CMV and BK virus.

To date, the results showed no major differences in kidney function between the groups, regardless of how fast they processed the drug or which type of tacrolimus they took. Infection rates were also similar.

In summary, while the form of tacrolimus may play a role in patient outcomes, more research and assessment of our targeted number of patients is needed to understand these effects clearly.

ID#98

Ngan Lam, University of Calgary

Duration of PJP Prophylaxis in Adult Kidney Transplant Recipients and Outcomes: A Population-Based Study

To prevent rejection of their transplant, recipients need to be on anti-rejection drugs that suppress their immune system. This puts them at risk of serious infections that can lead to hospitalizations or death. For example, Pneumocystis jirovecii pneumonia (PJP) is a lung infection caused by a fungus that affects those with weakened immune systems. To prevent this infection, transplant recipients take antibiotics. It is unclear how long kidney transplant recipients need to be on these prophylactic antibiotics. The highest risk of PJP is within the first year of transplant, but most cases occur many years after transplant. In Alberta, the two transplant centers differ in their duration of PJP prophylaxis. The Northern Alberta program recommends antibiotics for 6 months and the Southern Alberta program recommends antibiotics lifelong.

Our study looked at 1,265 kidney transplant recipients in Alberta who received either short-term (65%) or long-term (35%) antibiotics to prevent PJP. We found that the risk of PJP infection was low affecting only 3 (0.2%) recipients, with no difference between the 2 groups. There was also no difference in the risk of death between the two groups. Thus, short-term antibiotics to prevent PJP infections may be appropriate for kidney transplant recipients.

ID#99

Shok Hoon Ooi,

Long term outcomes of HLA-incompatible and ABO-incompatible kidney transplantation – a single centre Canadian experience

Ideally kidney transplant patients will receive a HLA and ABO compatible donor. Unfortunately, highly-sensitized patients may have to wait a long time. HLA and ABO incompatible (HLAi and ABOi) donor kidney transplants may be a way to decrease wait times. We matched 53 living donor HLA and ABO incompatible kidney transplant recipients with 53 controls (HLA and ABO compatible). Primary outcome was death-censored kidney allograft survival, and secondary outcomes were time to first acute allograft rejection, prevalence of primary non-function (PNF), overall patient survival and estimated glomerular filtration rates (eGFR) at follow-up. The incompatible group had 12 subjects who were ABOi and 41 who were HLAi kidney transplant recipients. Death-censored kidney-allograft survival was comparable between groups. There was a trend towards more allograft rejection among the HLAi and ABOi groups at 5 years follow-up (odds ratio 2.99, p value = 0.064). HLAi and ABOi kidney transplant recipients showed a trend towards higher odds of allograft rejection. Overall mortality and death-censored graft survival are comparable between groups. Carefully selected HLAi and ABOi kidney transplants remain a good option for highly sensitized patients needing kidney transplants.

ID#100
Jiwon Hwang, UBC Department of Medicine

Cardiac Testing Delays and Geographic Variability in Pre-Transplant Assessments Across a Large Catchment Area

This study explores how easy or difficult it is for people across British Columbia to complete the medical tests needed before receiving a kidney transplant. While all transplant surgeries take place in Vancouver, most of the testing—such as heart scans and lab work—happens in the patient's local area.

We wanted to understand whether those living far from cities or in rural communities have to wait longer for these tests. We also wanted to know if longer wait times for tests slow down the process of getting approved for a transplant.

To investigate this, we collected information on how long patients wait for different tests in each health region across BC. We then looked at transplant recipient data to see if delays in heart testing were linked to slower approval times. While some heart tests had long wait times that varied by region, they did not appear to cause delays in transplant approval.

Our findings suggest that other factors, like how the health system is organized or how complex a patient's case is, may play a bigger role. We hope to use this data to create a tool that helps patients find faster testing options in their region.

ID#101

Talal Shamma, Western University

Renal cell preservation at 10°C protects from ischemia reperfusion injuries in vitro

Kidney transplantation is a life-saving treatment for patients with end-stage kidney disease. However, there are not enough donor kidneys available, and many transplant centers now rely on sub-optimal kidneys donated after the heart has stopped (called donation after cardiac death, or DCD). These kidneys are more vulnerable to damage caused by the lack of oxygen and blood during donation and transport, known as ischemia/reperfusion injury (IRI). Traditionally, kidneys are stored at 4°C on ice to slow down damage, but recent research in other organ transplants suggests that storing organs at a slightly warmer temperature—10°C—can offer better protection.

In our study, we tested this idea using human and pig kidney cells in a lab model that mimics the conditions of DCD donation. We compared cells stored for 24 hours at 4°C versus 10°C. We found that cells preserved at 10°C had higher survival, less cell death, and lower levels of injury markers. They also showed stronger antioxidant defense system responses.

These findings suggest that storing kidneys at 10°C may protect them better than current methods, potentially leading to better transplant outcomes. This approach could help make more donor kidneys available for transplant and improve patient care.

ID#102
Judith Rho, University of Alberta

Vaccination rates in solid organ transplant recipients and their caregivers

Patients who receive solid organ transplants are at increased risk of infection due to their underlying disease and the medications they require after transplant. Vaccines are an important way to help protect them from certain infections. Additionally, individuals who care for these patients are encouraged to stay up-to-date with their vaccinations to prevent spreading infections. The goal of our study was to determine how many adult solid organ transplant recipients and their caregivers receive their recommended vaccinations. We reviewed vaccine records from 85 transplant recipients and 45 of their caregivers to see which vaccines they had received. We found that most transplant recipients had received most of their recommended vaccines. However, their caregivers were less likely to be fully vaccinated. Vaccination rates were particularly low for newer vaccines or those not covered by public health programs, such as the shingles and RSV vaccines. These results show that there are still gaps in protection for transplant patients and their close contacts. Consequently, more research is needed to better identify reasons why individuals may not complete their vaccinations to allow for more targeted strategies to increase vaccine uptake.

ID#103

Tammy Lau, Canadian Institute for Health Information

A national study on hospital length of stay outcomes for sequential and simultaneous liver-kidney transplants

Patients who need a liver and kidney transplant may have both organs transplanted at the same time (simultaneous liver-kidney transplant [sim-LKT]) or one after another (sequential liver-kidney transplant [seq-LKT]). The objective of this study was to examine how length of stay (LOS) – the number of days that a patient stayed in the hospital after transplant – differs by demographics for these two transplant types.

CIHI's Hospital Morbidity Database and Canadian Organ Replacement Register was used to find the 161 adult (18 years or older) Canadians who received a seq-LKT or sim-LKT between 2013-2024. Of this, 30% had a seq-LKT and 70% had a sim-LKT. Almost half of the seq-LKT patients had their second transplant about 3 years after their first transplant. Most transplant patients were male, lived in lower income areas, were between the ages of 45 to 59, and lived in urban areas. Overall, seq-LKT patients' LOS was 68% longer than sim-LKT patients. LOS was longer as patients got older and if they lived in rural/remote areas instead of urban areas. Further research is needed to better understand why these differences exist.

ID#104

Tom Blydt-Hansen, BC Children's Hospital

Early experience with interprovincial sharing of class II matched donor kidneys for pediatric transplant recipients

In December 2025, a new feature was added to the Canadian Transplant Registry (CTR), which permits sharing across Canada for donor kidneys that are highly matched to children in the registry. This matching includes markers of human leukocyte antigen (HLA) called class II, which are linked to a higher risk of kidney failure. Allocating donor kidneys with absence of a mismatch to a child recipient is expected to substantially improve their chance for kidney transplant survival.

We evaluated this program over the 6 months since it was launched. In that time, there were 4 successful transplants with zero mismatch into Canadian children. The other donor characteristics selected for in the decision to accept included younger donor age and absence of major medical issues. There was not an appreciable impact on the number of donor kidneys offered to otherwise highly sensitized adult transplant candidates in the CTR, who were less then 99% sensitized.

This program is ongoing and we plan to reevaluate the outcomes of children who have benefitted from this program again after 12 months.

ID#105
Wanda Rojas, University of British Columbia

***Anti-nephrin antibodies in recurrence of focal segmental glomerulosclerosis: A case series of four patients*.**

Recurrent focal segmental glomerulosclerosis (FSGS) following kidney transplantation continues to be a challenge as it can lead to poor long-term outcomes including graft loss.

The pathophysiology of FSGS is not fully understood, and the presence of circulating permeability factors, such as anti-nephrin antibodies, has been implicated in its recurrence.

This case series aims to show the clinical differences between patients with and without anti-nephrin antibodies and assess their outcomes post-transplantation.

This is a retrospective case series of four patients who developed FSGS after kidney transplantation. We included 3 adult patient and one pediatric, with aim tto highlight how devastating this disease is in all age groups.

We reviewed their clinical data, specifically focusing on the presence or absence of anti-nephrin antibodies pre and post transplant.

Recurrent FSGS following kidney transplantation remains a major concern, which is apparently earlier and more aggressive in patients with pre-transplant anti-nephrin antibodies. Understanding the clinical differences between anti-nephrin positive and negative patients could not only help improve management but also guide decision-making for repeat transplants.

ID#106

Wanda Rojas, University of British Columbia

HLA identical kidney transplant after graft loss due to Post-transplant lymphoproliferative disorder

Renal transplantation remains the treatment of choice for patients with end-stage renal disease (ESRD). One of the most feared complications is Post-transplant lymphoproliferative disorder (PTLD), which can result in graft loss. Retransplantation in the context of PTLD remains a topic of debate.

We present a 71 yo female that underwent a second kidney transplant after graft loss due to primary central nervous system lymphoma. In March 2025 she received a HLA identical kidney transplant which permitted the use use of Basiliximab and no antimetabolites. Her kidney function was satisfactory from the beggining.

ID#107

Matthew Kadatz, University of British Columbia

Impact of Preemptive Versus Non-Preemptive Transplantation on Outcomes in Living Donor Kidney and Simultaneous Pancreas-Kidney Recipients with Type I Diabetes

People with type I diabetes and kidney failure may receive either a kidney transplant from a living donor or a combined pancreas and kidney transplant. Each option has potential benefits, but it's unclear which leads to better long-term health, especially depending on whether the transplant happens before or after starting dialysis.

In this study, we looked at over 16,000 patients in the United States who received either a simultaneous pancreas-kidney transplant or a living donor kidney transplant between 2000 and 2022. We compared their outcomes based on whether the transplant occurred before (preemptive) or after (non-preemptive) six months on dialysis.

We found that receiving a transplant before starting dialysis was associated with better kidney survival and lower risk of death. People who had a living donor kidney transplant after starting dialysis were less likely to later receive a pancreas transplant and had the highest risk of death, even after accounting for other health factors.

These findings suggest that for people with type I diabetes, early referral for transplant and avoiding time on dialysis are crucial—especially if receiving a kidney from a living donor.

ID#108

Benjamin Kopman, University Health Network

E*fficient screening for anxiety symptoms among kidney and kidney-pancreas transplant recipients*

Kidney and kidney-pancreas transplant recipients often experience anxiety, which can affect their quality of life. We wanted to test simple and efficient ways to identify anxiety in this group. We asked participants to answer two anxiety questionnaires: the Generalized Anxiety Disorder-7 questionnaire and the Patient-Reported Outcome Measurement Information System - Anxiety (PROMIS-A). We then created two-step screening scenarios that began with a brief 1-2 item questionnaire. Only participants who scored above a set point would have been assessed further by looking at their scores on the PROMIS-A questionnaire. This allowed us to see if the combination of a short and longer questionnaire could accurately identify those with anxiety. The two-step methods were accurate. Additionally, the two-step approach would have reduced the number of questions that participants had to answer compared to either the GAD7 or PROMIS-A alone. While a clinical diagnosis is a more accurate way to confirm anxiety, our results suggest that the two-step method could still be useful in future clinical trials as a quicker way to identify patients who may benefit from further psychological evaluation and treatment.

ID#109

George Dugbartey, University of Western Ontario

Sodium thiosulfate administration ameliorates acute kidney injury induced by renal ischemia-reperfusion injury

Acute kidney injury (AKI) is a condition characterized by the sudden loss of kidney function, with significantly high morbidity and mortality. While there are many causes of AKI, obstruction of blood flow to the kidney followed by restoration is the leading cause of AKI. As there is currently no effective drug therapy for AKI, we investigated whether treatment with sodium thiosulfate (STS), a drug already in clinical use, can effectively improve AKI in a rat model. To do this, we administered STS at 30 minutes before a 1-hour period of obstructing blood flow to both kidneys, and 30 minutes after restoring blood flow. Blood and urine samples were collected on post-operative days 3, 5 and 7, and the rats were sacrificed and kidneys collected on the same post-operative days. Compared to untreated AKI rats, STS-treated rats showed significantly improved AKI by preserving kidney structure through reduced expression of injury markers, as well as kidney function by increasing the clearance of waste products and preserving urine concentrating ability of the kidney. Overall, STS attenuated AKI in rats, and therefore, can be considered as a potential drug therapy for AKI in humans.

ID#110

Aditi Singh, of the McGill University Health Centre (RI-MUHC)

Acceptability and Usability of GETonTRAK: A Web-Based Self-Management Guide for Kidney Transplant Recipients

While a kidney transplant can add years to life, it doesn't always restore quality of life. Even after the transplant, many recipients struggle with low energy, staying active, and mental health challenges, among other issues that deeply affect their daily lives. Yet most education provided by transplant centers still focuses only on medications and infection prevention. While essential, these resources often miss the broader needs of patients navigating recovery across all aspects of life. Patients want to take an active role in managing their health, but practical and comprehensive tools to support that are still lacking.

To address this, we created GETonTRAK (Getting on with your life after a transplanted kidney), a website designed to support the post-transplant journey. It offers practical guidance on every area of life. We wanted to make sure the website was truly useful for the people it was designed for: the recipients themselves. Therefore, we invited 20 adult recipients from across Canada to use the website for two weeks. Afterward, they completed two short surveys to rate its ease of use and effectiveness.

Participants found GETonTRAK incredibly easy to use and helpful, offering the kind of everyday support kidney transplant recipients across Canada and beyond need.

ID#111

Amy Thachil, BC Children's Hospital Research Institute

Investigating the association between HLAMatchmaker and PIRCHE-II mismatch scores with graft survival in pediatric kidney transplantation

Mismatched HLA molecules between donors and recipients may play an important role in modulating kidney transplant outcomes. In this work, we evaluated different techniques to profile HLA mismatches between transplant recipients and donors to assess their association with transplant survival in children who received kidney transplants. Children transplanted at BC Children's Hospital (Vancouver) between 2005-2024 were included in this study. HLA mismatches were calculated using the HLAMatchmaker and PRICHE II algorithms. Statistical models were created including clinical variables (recipient/donor age, sex, previous transplant) and HLA mismatch scores (eplet, single molecule, PIRCHE II scores). 162 recipient/donor pairs were included in the analysis. The study group was predominantly male, received only 1 transplant and aged 11.4±.3 years. Statistical testing showed that HLA mismatching of both HLA DR and DQ molecules was important for modelling kidney transplant survival. The best model of kidney transplant survival consisted of single molecule HLA DR and DQ mismatch scores and clinical variables. This data suggests that single molecule HLA mismatch scoring is superior for modelling kidney transplant survival in children, and that it is important to include molecular mismatch information from both DR and DQ HLA molecules. Further investigation is needed to determine how this information may be used for patient risk stratification and to optimize HLA matching in deceased donor organ allocation.

ID#112

Amy Thachil, BC Children's Hospital Research Institute

Investigating serum metabolite profiles associated with graft functional decline in pediatric kidney transplant recipients

Following transplantation, some individuals develop forms of rejection that reduce the lifespan of their transplant and negatively impact their quality of life. The purpose of the work described here is to identify whether there exists measurable differences in blood molecules known as metabolites, that can predict kidney transplant function and inflammation in the first year after transplant.

We measured small molecules (metabolites) in pre-transplant blood samples collected from 123 children undergoing kidney transplantation. We identified patterns of metabolites associated with reduced kidney transplant function at the one-year post-transplant timepoint. In future work, we aim to identify metabolite patterns related to inflammation levels in the first-year post-transplant.

The overall goal of the research reported here is to improve our understanding of factors that contribute to the risk of rejection and reduced transplant function, and to develop a method for identifying those at high risk. This will allow us to intervene before transplant to personalize treatment and improve long-term transplant survival.

ID#113
Marie-Michele Gaudreault-Tremblay, Montreal Children's Hospital

Renal Transplant After Desensitization in a Pediatric Recipient

When children need a second kidney transplant, their immune system often becomes very sensitive, making it harder to find a matching donor. A special approach, called desensitization, can help lower this sensitivity and improve their chances of receiving a transplant.

This is the case of a 14-year-old boy whose first kidney transplant had failed. His immune system had become extremely sensitive. He had been on dialysis for 12 years. Finally, he was offered a kidney from a deceased donor who was a partial match. However, the boy's immune system still showed strong signs it would reject the kidney. It was decided to do a short desensitization protocol to quickly reduce this rejection's risk. Over one week, he received, 3 treatments to remove harmful antibodies, a high dose of special antibodies (IVIG), and a drug that targets immune cells (rituximab). After this, the risk of rejection dropped to a safer level, and we moved forward with the transplant.

Forty days after the transplant, the new kidney was working well. A transplant biopsy two months later showed no signs of rejection. The harmful antibodies had greatly decreased or disappeared. It's one of the few known successful cases of this kind in Canada.

ID#114

Jana Abi Rafeh, Institute of the McGill University Health Center

Heterogeneity in humoral and adaptive cellular immunity following SARS-CoV-2 XBB.1.5 mRNA vaccination: A single-cell analysis of BCR and TCR repertoires and associated Memory-Cell transcriptomics in kidney transplant recipients

Kidney transplant recipients are at higher risk of serious illness from COVID-19 and often show reduced immune responses despite multiple vaccine doses. This study aimed to better understand the type and strength of antibody and cellular immune responses triggered by the XBB.1.5 vaccine.

We studied 20 kidney transplant recipients, including males and females of various ages. When looking at antibody responses, we found that while most participants produced antibodies against COVID-19, suggesting increased protective responses following multiple vaccine doses, 20% of participants were unable to mount a protective antibody response. Moreover, participants with protective antibody responses had highly varied cellular responses, often shaped by past infection rather than vaccination.

Our research suggests opportunities to personalize the management of individual kidney transplant recipients. While kidney transplant recipients who demonstrate a capacity to mount a protective antibody response may benefit from repeated COVID-19 booster doses as new variants emerge. On the other hand, those who are unable to mount protective antibody or cellular responses may benefit from supplemental therapy to decrease the severity of the disease once infection occurs.

ID#116

Marie-Michele Gaudreault-Tremblay, Montreal Children's Hospital

A single-center experience regarding the role of Tocilizumab in managing antibody-mediated rejection following the failure of standard care

Chronic rejection is a major reason why kidney transplants can fail in children. The type of rejection, called antibody-mediated rejection (ABMR), is often challenging to treat, and many patients do not improve with the usual medications.

In our study, we looked at five pediatric and young adult kidney transplant recipients who had ABMR that did not respond to standard treatment. We gave them a medication called Tocilizumab once a month, along with their usual anti-rejection drugs. We followed them for several years to monitor their kidney function, signs of ongoing rejection and medication side effects.

All five patients still had working kidney transplants by the end of the study. Their kidney function was declining slower than what is reported in the literature with standard management. Two patients no longer had donor-specific antibodies but one patient developed new antibodies while on treatment. Some patients had mild viral infections, but these stayed under control. One developed low white blood cell count. No cancer was reported.

Overall, Tocilizumab appeared to be safe and helped in slowing the decline in kidney function in children with difficult-to-treat rejection but it is less effective in removing donor-specific antibodies. Further research is needed to understand its long-term effectiveness

ID#117

Ahmed Menaouar, CHUM (Centre Hospitalier de l'Université de Montréal)

Should porcine DCD lungs procured after heart resuscitation with thoraco-abdominal normothermic regional perfusion be transplanted?

Background. This study investigates the potential of using lungs for transplantation taken from animals whose hearts were restarted following varying periods without blood circulation. The lungs were assessed using ex-vivo lung perfusion (EVLP).

Methods. Pigs were divided into four groups based on how long their hearts were arrested (15, 30, or 45 minutes). The hearts were restarted using a technique called Thoraco-abdominal normothermic regional perfusion, followed by a short evaluation of their function. A control group had lungs removed after 30 minutes without oxygen and blood circulation. All lungs were stored for one hour before being tested with EVLP for their potential use in transplants.

Results. Heart resuscitation was faster and successful after 15 or 30 minutes of blood and oxygen deprivation. However, after 45 minutes of deprivation, the heart does not restart, which negatively impacted lung function. Inflammatory markers and tissue damage were slightly impacted. Although pulmonary vascular resistance and lung weight increased, the ability of lungs to exchange oxygen remained intact.

Conclusion. Successful heart resuscitation after a short period of blood and oxygen deprivation does not compromise lung graft transplantability based on EVLP assessment criteria. However, prolonged blood and oxygen deprivation in combination with unsuccessful heart resuscitation may negatively affect lung function.

ID#118

Jed Gross, University Health Network

Ex Situ Organ Perfusion Technology: Ethical, Legal, and Policy Challenges

Ex situ organ perfusion (ESOP), also known as ex vivo organ perfusion, entails perfusing donated organs outside the human body to evaluate them and optimize them for clinical transplantation. This presentation surveys the landscape of ethical, legal, and policy challenges arising around the use of ESOP. Major unresolved questions represented in the published literature include balancing the cost and utility of ESOP, ESOP's potential impact on access to the benefits of transplantation, and the respective roles of ESOP and regional perfusion. In light of our experience in similar domains, other issues warranting attention include donor authorization, translational benchmarking and recipient consent, animal welfare, and public accountability and trust. We offer a preliminary, thematic analysis, identifying contextual factors contributing to these challenges and possible strategies for managing them as ESOP architecture is built out in North America. If they can be navigated in an ethically and legally defensible way, the expansion of ESOP will potentially lead to improved transplant outcomes, increased organ utilization, and wider access to the benefits of transplant medicine.

ID#119
Emma Bartlett, University of British Columbia

Improving team processes to address transition milestones and increase youth transition readiness in the multi-organ transplant transition clinic

Youth with organ transplants have complex medical and social issues. They need a team of healthcare providers to support them as they transition to adult care. Without support, this transition may take longer, cause more stress, and lead to poor health outcomes.

This quality improvement project was completed in a clinic for youth with a kidney transplant who are transitioning to adult care. The goal was to increase readiness scores on youth and caregiver surveys called “Am I ON TRAC? For Adult Care”. We collected baseline information on the clinic, including interviews with patients, caregivers, and health care providers. Youth also tracked which transition topics were discussed at their appointment on a survey.

The team felt unable to discuss transition topics due to other responsibilities in clinic and unclear team roles. We assigned team roles for the transition topics and created templates for each role. Youth had a wide range of readiness scores, with small increases in our early data. The number of transition topics discussed during appointments increased after our intervention.

Transitioning to adult care is complex and variable. By assigning team roles, we increased the number of transition topics discussed to prepare youth for transitioning to adult care.

ID#120
Jad Fadlallah, University Health Network

Using PROMIS Physical Function scores to identify delayed physical function recovery after solid organ transplantation

After a transplant surgery, some patients struggle to regain their physical function (PF) which may be helped by offering timely rehabilitation. Identifying those patients could help improve PF recovery. We followed 104 recently transplanted adults over two months to understand patterns of PF recovery using a questionnaire called Patient-Reported Outcome Measures Information System (PROMIS) PF, which measures self-reported PF.

Participants completed the questionnaire within a week after transplant and every two weeks thereafter. Based on their initial scores and how much their scores changed within two weeks afterwards, we grouped them into four clusters: (1) those with poor initial function and no improvement, (2) poor initial function but improved, (3) better initial function with no improvement, and (4) better initial function and improved.

We found that patients in the “improved” groups showed higher PF by two months compared to those who didn’t improve early on. In particular, those in the poorest-functioning group who didn’t improve showed the lowest recovery.

These results suggest that tracking patient-reported PF in the first weeks after transplant may help identify those who could benefit from early rehabilitation.

ID#121

Chengliang Yang, University of British Columbia

Identification of early risk factors associated with the development of cardiac allograft vasculopathy

Heart transplants save lives, but over time, many patients can develop a complication called cardiac allograft vasculopathy (CAV). This condition affects the blood vessels of the new heart and is one of the most common reasons a transplanted heart may eventually fail. Right now, CAV can only be confirmed using a test called coronary angiography, which is invasive and not ideal for frequent monitoring. Our study aimed to find early warning signs of CAV using simple and routine health information. We followed 41 heart transplant patients at St. Paul's Hospital in Vancouver. Eleven of them later developed CAV. We looked at their medical histories, common blood test results, and medications during the first year after transplant. We found that people were more likely to develop CAV if the heart came from an older donor, if they had certain health conditions (like atrial fibrillation or artery disease), or if their blood had lower hemoglobin or more monocytes early on. We combined these findings into a prediction tool that worked very well.This study shows that we can use everyday health data to help spot people at risk for CAV early, making it possible to tailor care and prevent heart transplant failure.

ID#122
Fatima Saqib, University of Manitoba

A retrospective study: Detection and management of latent tuberculosis infection in kidney transplant candidates and recipients

People who receive kidney transplants must take medications that weaken their immune systems to prevent organ rejection. While essential, this makes them more vulnerable to infections like tuberculosis (TB). Many people carry a “sleeping” form of TB, called latent TB, which can become active when the immune system is weakened.

This study looked at how people being considered for kidney transplants in Manitoba in 2018 were tested and treated for latent TB. We reviewed 147 patient records and found that nearly everyone was screened, mostly using a skin test, and about 1 in 5 tested positive .

Most of those who tested positive received treatment with one of two medications: isoniazid or rifampin. We found that rifampin was easier to complete because it caused fewer side effects. Liver problems, nausea, and skin rashes were more common with isoniazid. Importantly, none of the treated patients who received a transplant developed active TB afterward.

This study highlights the importance of screening and treatment before transplant. It can help guide doctors in choosing safer treatments, and adds to limited current research in the field. The study is still ongoing and aims to support better care and long-term health for future kidney transplant patients.

ID#124

Harrison Joron, University of Toronto

Sleep disturbance and physical function among kidney transplant recipients

Kidney transplant recipients often experience trouble sleeping and may struggle with everyday physical activities. More physical activity is associated with better sleep. We wanted to understand how sleep disturbances might be related to physical function in this population. Participants completed questionnaires from the Patient-Reported Outcomes Measurement Information System to measure sleep disturbance and physical function. Participants also answered questions about their age, sex, racialized status, immigration status, income, education, and employment. Additional questionnaires assessed symptoms including depression, fatigue, and how much pain interfered with daily activities. Medical history and lab results were collected from electronic medical records. We found that sleep disturbance was associated with significant impairment in physical function. Participants with sleep disturbance had over twice times the odds of reporting impaired physical function. This relationship remained significant even after accounting for sociodemographic and clinical differences, as well as for depression. However, this association was no longer significant when pain interference or fatigue were considered, or when all three symptoms were evaluated together. This finding suggests an association between sleep disturbance and physical function, highlighting the potential importance of addressing sleep and related symptoms like pain and fatigue in managing functional limitations in kidney transplant recipients.

ID#125
Janice Borg, University of British Columbia

Is timing key? Complement factor normalization as a strategy to prevent C3GN recurrence post-kidney transplant – a case report

C3 glomerulonephritis (C3GN) is a rare kidney disease caused by abnormal complement system activity, an integral part of the immune system, leading to damage of healthy kidney tissue. Treatment options are limited, and over 50% of patients experience disease recurrence after kidney transplantation, often resulting in transplant failure.

This report describes a 33-year-old woman with C3GN who received a kidney transplant from her mother. Blood tests before transplant showed complement system dysregulation. The disease recurred three months later, and despite treatment, her kidney function declined, leading to transplant failure and dialysis after 32 months. Her complement levels only normalized about four years after transplant failure.

even years later, after approval of the drug Iptacopan as a backup treatment in case of recurrence, she received a second transplant from a deceased donor. At that time, her complement system levels were within the normal range. One year later, she remains well with no signs of disease recurrence.

This case suggests that waiting for complement system normalization before transplant may reduce recurrence risk. Further studies are needed to confirm this.

ID#126

Tanroop Aujla, University Health Network

***Donor lung storage at 10°C reduces ferroptosis and improves metabolic activity - evidence from a cell culture model of lung preservation*.**

There are not enough donor lungs available for everyone who needs a transplant. One reason is that many lungs become too damaged during storage to be safely used. Traditionally, lungs are stored on ice at 4°C, but recent research from our group shows that storing lungs at a slightly warmer temperature—10°C—may help keep them healthier for longer. In this study, we used lung cells in the lab to better understand why 10°C works better than colder storage. We found that cells stored at 10°C stayed more active and produced more energy. These cells were also much less likely to die during storage. One reason appears to be a type of damage called ferroptosis, which is caused by a buildup of iron inside cells. At 10°C, this iron-related damage was much lower. By uncovering how 10°C helps protect lung cells, this study brings us closer to safer and longer storage for donor lungs. This could mean fewer lungs wasted, shorter wait times for patients, and more lives saved through successful transplants.

ID#127

Kieran Manion, University Health Network

Altered glomerular complement deposition and tubulointerstitial protein metabolism are causally implicated in graft loss in the setting of DSA+ antibody-mediated rejection

Rationale: Kidney transplantation is the best treatment for 50,000 Canadians with kidney failure; however, half of transplanted kidneys fail within 10 years. This is mainly because of a process called antibody-mediated rejection, where the patient's immune system damages the donor kidney. We aim to discover how the immune system causes rejection within the transplanted kidney.

Methods: We obtained kidney tissue from 116 kidney transplant recipients with no rejection or antibody-mediated rejection who had a biopsy as part of their clinical care. We measured and compared proteins (molecular actors) as well as their potential actions within the transplanted kidneys and used artificial intelligence (AI) to identify changes to these proteins in patients with rejection who have lost their graft.

Discovery: We found 516 proteins with different levels in the transplanted kidneys of patients with versus without rejection. Proteins at higher levels in patients with rejection were linked to distinct immune system responses, while proteins at lower levels were linked to kidney function. The AI program found that some of these same immune and functional proteins may be causing subsequent graft loss.

Impact: This study will help us identify targets for improved treatments and earlier detection.

ID#128
Inès Issa Richard, Montreal University

Impact of warm ischemia duration on cardiac function and recovery following thoracoabdominal normothermic regional perfusion (TA-NRP) in DCD porcine hearts

Background. Investigate the impact of increasing durations of warm ischemia on cardiac recovery in a porcine model of donation after circulatory death (DCD), using thoracoabdominal normothermic regional perfusion (TA-NRP).

Methods. Four female pigs per group were assigned to 15-, 30-, or 45-minute warm ischemia time (WIT) groups. WIT is defined as the interval from systolic arterial pressure at procurement was scored from 0 to 4.

Results. In WIT15, all parameters reflected full recovery: ejection fraction, diastolic filling, and cardiac output (CO) were restored, with minimal metabolic or histological injury. In WIT30, recovery was incomplete, with reduced function and mild tissue damage. WIT45 showed no functional recovery: spontaneous contraction was absent, CO remained low and structural injury was moderate.

Conclusion. These findings demonstrate that TA-NRP supports cardiac recovery following short ischemia, but myocardial functional and structural recovery declines rapidly beyond 30 minutes.

ID#130
Christie Rampersad, University of Toronto

Evaluating Racial Differences in Mortality Risk Stratification Using the Estimated Post-Transplant Survival Score in Kidney Transplantation

The Estimated Post-Transplant Survival (EPTS) score is a tool used to predict how long someone will live after a kidney transplant. It helps decide which patients receive high-quality kidneys expected to last longer. A recent study showed that Black, Asian, and Hispanic patients were less likely to receive these high-quality kidneys. We wanted to see if the EPTS score itself works equally well for people of different races.

We studied over 135,000 kidney transplant recipients in the United States. We found that the EPTS score was slightly better at ranking risk for White recipients than for Black recipients. This means it was a little better at identifying which White patients were at higher or lower risk of death. However, when we looked at how well the score's predictions matched actual survival (calibration), the EPTS score performed well for all groups. In other words, the score's survival predictions were similarly accurate for everyone, even though it was slightly less effective at ranking Black patients by risk.

These findings show that the EPTS score is reliable for predicting survival in all patients, regardless of race. But it is important to keep monitoring how well it works to ensure fairness.