

Urologic Society for Transplantation & Renal Surgery 2025 Annual Meeting at the AUA, Las Vegas, NV



**Monday, April 28, 2025 - Venetian Expo Center
Bellini Ballroom 2001-2003, Level 2**



2025 Program

www.ustrs.org

2025 USTRS Officers

President: Obi Ekwenna, MD

University of Toledo College of Medicine, Toledo, OH

Immediate Past Presidents:

Alberto Breda, MD, Oncology Urology Unit / Kidney Transplant Surgical Team Urology Dpt, Fundació Puigvert, Barcelona, Spain

Jeffrey L. Veale, MD, Ronald Reagan UCLA Medical Center, Los Angeles, CA

Alp Sener, MD, PhD, Western University, London, Ontario, Canada

President-Elect: (TBD)

Secretary-Treasurer: Nick Cowan, MD

Virginia Mason Med. Ctr., Seattle, WA

Scientific Program Chair: Octav Cristea, MD, Emory

Univ. Hospital, Atlanta, GA

Membership/Fundraising Chair: Neal Rowe, MD,

The Ottawa Hospital, Ottawa, Ontario, Canada

Member at Large: Nathan Osburn, MD

Legacy Good Samaritan Medical Ctr., Portland, OR

Member at Large: Max Levine, MD,

University of Alberta, Canada

Member at Large: Kazunari Tanabe, MD

Tokyo Women's Medical University, Tokyo, Japan

Member at Large: Aneesh Srivastava, MD

Sanjay Gandhi Postgraduate Institute of Medical Science, India

Member at Large: Michelle McDonald, MD

UT Southwestern, Dallas, TX

Emeritus Advisor: John M. Barry, MD

Oregon Health & Science Univ., Portland, OR

Executive Directors:

Chris DeSantis, MBA / Jeannie DeSantis, MBA

USTRS Administrative Office

c/o DeSantis Management Group

1950 Old Tustin Avenue, Santa Ana, CA 92705, USA

Email: info@USTRS.org / Web: www.USTRS.org

Kapoor Keynote Lecturer

Burcin Ekser, MD, PhD



Professor of Surgery, Surgical Director of Liver Transplant, Loyola University Chicago

Dr. Ekser is a multi-organ transplant surgeon specializing in liver and intestinal transplantation, as well as general surgery, clinical organ transplantation (liver, small bowel, multivisceral, kidney and pancreas), basic research in organ transplantation, Xenotransplantation in Pig-to-Nonhuman Primate models (Kidney, Liver, Heart, Islet). He was the recipient of the 2019 American Society of Transplant Surgeons (ASTS) Foundation Faculty Development Grant, awarded to only one researcher each year, for his work to create human liver models using scaffold-free 3D bioprinting technology.

***Kapoor Lecture established 2023 in memory of Dr. Anil Kapoor
(Apr. 30, 1964 - Feb. 28, 2023)***

We thank Seema Rawla, sister-in-law of Dr. Anil Kapoor for her generous donation to the USTRS to continue the legacy of Dr. Anil Kapoor and research in the field of Transplantation since 2023. The 2023, 2024 & 2025 donations of this annual contribution has been given by Seema Rawla, sister-in-law of Dr. Anil Kapoor on behalf of the Kapoor Family.



USTRS 2025 Program Schedule

1:00 PM - 5:00 PM Monday April 28, 2025, Venetian Expo Center - Bellini Room 2001-2003

12:45 PM - 1:15 PM Check-in / Registration / Refreshments

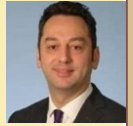
1:15 PM - 1:20 PM President's Welcome, Obi Ekwenna, MD, University of Toledo)

1:20 PM - 1:45 PM

KAPOOR KEYNOTE LECTURE

Advances in Xenotransplantation.

Burcin Esker, MD, Loyola University Medical Center



1:45 PM - 2:10 PM

Fertility and Transplantation.

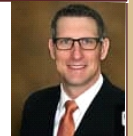
Wen Xie, MD, University of Florida.



2:10 PM - 2:35 PM

The Urologist's Toolkit: 'Ureteroscopy' for Laser Incision of Biliary Strictures in Liver Transplantation.

Thomas Pshak, MD, University of Colorado



2:35 PM - 2:45 PM

SHORT BREAK - VISIT EXHIBITORS - REFRESHMENTS SERVED

2:45 PM - 3:10 PM

POSTER SESSION PRESENTATIONS - Viewing only

1. Prophylactic Surgical Drain In Renal Transplantation Reduces The Incidence Of Wound Complications But Not Postoperative Collections.

Aditha Baskar, McMaster University, Ontario, Canada

2. Ki-67 Index as a Predictor of Metastasis in Adrenocortical Carcinoma: Insights from Retrospective Imaging Data.

Andrew J. Goulian, California Northstate University - College of Medicine, Elk Grove, CA

3. Outcomes of Geriatric Donors For Living Renal Transplant At A Single Institution.

Jennifer Lu, MD, Stony Brook University Hospital

4. Examining the Utility Of Mercaptoacetyl triglycine Imaging Following Ureteric Stent Removal After Renal Transplantation.

Patrick Ciechanski, University of Alberta, Canada.

5. Will Phone-Based Caregiver Confirmation in an Era of Reduced In-Person Interactions Affect Patient Compliance and Outcomes Post Kidney Transplant?

Christina Delvalle, MSSA, LISW, CCTSW, Cleveland Clinic Kidney & Pancreas Transplant

6. Symptom Burden and Quality of Life in 2 Haploidentical Kidney Transplant Recipients: A Comparative Analysis of Immunosuppressed and Tolerance Trial Cohorts.

Lauren (Frankie) Schafrank, Medical Student, David Geffen School of Medicine at UCLA

7. Robot-Assisted Kidney Transplantation (RAKT): The 8-year European Experience.

Angelo Territo, MD, Universitat Autònoma de Barcelona, Spain

8. Robotic-Assisted Kidney Transplantation in a Canadian Centre.

Kun Sirisopana, University of Alberta

USTRS 2025 Program Schedule

3:10 PM - 3:35 PM

The Japanese Experience with HLA/ABO Incompatible Transplants
Kazunari Tanabe, MD, Tokyo Women's Medical University



3:35 PM - 4:00 PM

The Role of Artificial Intelligence in Transplantation
Angelo Territo, MD, Fundacio Puigvert, Barcelona



4:00 PM - 4:55 PM

Novick Resident / Medical Student Presentations on Innovative Research (Papers are 5 minutes each with 2 minute discussion)

1. Delayed Immunological Tolerance in Recipients with Pre-Existing Kidney Transplants.
Lauren (Frankie) Schafrank, Medical Student, David Geffen School of Medicine at UCLA
2. Sensory Reconstitution after Penile Transplantation: You Thought You Lost That Loving Feeling.
Fred Gong, Brown University, Cedars-Sinai, Massachusetts General Hosp.
3. Minimally Invasive Donor Nephrectomy Consensus Statements: A Review of the Literature and Expert Recommendations.
Atieh D. Ashkezari, Medical Student, UCLA Kidney Transplantation
4. Management of Renal Grafts with Multiple Arteries in Robotic-Assisted Kidney Transplantation: Are There Differences Between Bench Surgery and Independent Anastomosis? Results from the ERUS-RAKT Group.
Nuria De Fuentes, MD, Hospital Universitari de Bellvitge, Barcelona, Spain.
5. Kidney Transplant Angiography: Outcomes and Predictors of Renal Artery Stenting.
Jennifer Lu, MD, Stony Brook University Hospital
6. Incidence Of Lymphocele After Renal Transplantation In Open And Robotic Approach And Its Management.
Valentina Ferrando, MD, Hospital Universitari de Bellvitge, Barcelona, Spain

4:55 PM - 5:00 PM

Award Presentation Ceremony



First Place Poster Award



Second Place Poster Award



Novick Grand Prize Award

2024 & 2025 Benefactors

Platinum Level

Seema Rawla, (Sister-in law to
Dr. Anil Kapoor) on behalf of
the Kapoor Family
John M. Barry, MD

Gold Level

Alp Sener, MD
Nick Cowan, MD
Albin Gritsch, MD
Evan Vapnek, MD

Be a Benefactor
Support the USTRS today
at www.ustrs.org!
(donations are tax deductible)



Join the USTRS
Member Applications
at USTRS.org

2024 Annual Meeting Highlights



USTRS Officers and Board



**2024 Novick Award
Winner: Matthew
Wainsten, MD,
Univ. of Toledo,
awarded by
John M. Barry, MD,
Emeritus Advisor.**

**2024 Kapoor
Keynote Lecturer:
Dr. Daniel Shapiro,
Univ. of Wisconsin**



USTRS 2025 Abstracts

Poster Session Abstracts

Poster #1: Prophylactic surgical drain in renal transplantation reduces the incidence of wound complications but not postoperative collections

Emily Zhang, Sukhdeep Bhargal, Adithya Baskar, Aisling Zeng, Grant Sweeny, Michael Uy, Yanbo Guo, Michael G. DeGroot; School of Medicine, McMaster University, Hamilton, ON, Canada; 2Division of Urology, Department of Surgery, McMaster University, Hamilton, ON, Canada

Introduction and Objective: Postoperative fluid collections are common after renal transplantation. Although most are inconsequential, some can cause significant issues with graft perfusion, urine drainage, and pain. There is ongoing debate regarding the prophylactic use of drains in preventing fluid collections and their complications, with usage often influenced by surgeon preference. Existing research on the efficacy of prophylactic drains is inconclusive. Our study aims to evaluate the impact of prophylactic perinephric drains on the incidence of clinically significant postoperative collections and wound infections in adults undergoing renal transplantation.

Methods: This retrospective cohort study included adult patients undergoing renal transplantation at a single academic center from January 2022–2024. Baseline demographics, perioperative details, postoperative imaging, and follow up data up to 12 months were collected. Statistical analyses included Student's t-tests for comparing means and chi-squared tests for proportions. Binary logistic regressions to identify predictors of wound complications requiring non-basic wound care and clinically significant collections (i.e. requiring surgical or radiological intervention) were also done.

Results: Among 293 patients, 76 (25.9%) received an intraoperative prophylactic drain. Patients with drains had fewer wound complications, with 9.2% facing issues compared to 19.5% in the non-drain group ($p = 0.039$). Key perioperative outcomes were not significantly different between drain and non-drain groups. Operative times were similar, averaging 192 minutes in the drain group versus 198 minutes in the non-drain group ($p = 0.51$). Length of hospital stay was similar between groups, with 7.1 days in the drain group versus 6.8 days in the non-drain group ($p = 0.44$). Major complication rates were similar, occurring in 23.1% of the drain group and 24.0% of the non-drain group ($p = 0.45$). The rate of clinically significant collections was also similar, at 11.1% for patients with drains versus 13.2% without ($p = 0.62$). Logistic regression found no predictors for advanced wound complications or significant collections.

Conclusions: The use of drains in adult renal transplantation was associated with fewer wound complications postoperatively. However, there were no differences in the rate of clinically significant perinephric collections or major complications. While drains do not appear to increase perioperative morbidity, the benefit of this approach remains uncertain, warranting further investigation through prospective, randomized studies. Source of Funding: None

Poster #2: Ki-67 Index as a Predictor of Metastasis in Adrenocortical Carcinoma: Insights from Retrospective Imaging Data

Andrew J. Goulian¹, Brielle Goldstein¹, Shawn Cho¹, David S. Yee^{1,2}; California Northstate University - College of Medicine, Elk Grove, CA, Department of Urology and Genitourinary Oncology at Sutter Roseville Medical Center, Roseville, CA

Introduction and Objective: Adrenocortical carcinoma (ACC) is a rare malignancy with high recurrence and metastasis rates. The Ki-67 index predicts local recurrence and metastasis. This study evaluated the relationship between Ki-67 expression and metastasis in ACC patients and its utility in predictive modeling.

Methods: We analyzed 53 ACC patients using clinical and histopathological data from the Adrenal-ACC-Ki67-Seg dataset, sourced

from The Cancer Imaging Archive (TCIA). Patients underwent surgical resection with Ki-67 indices determined from tumor specimens. Statistical analyses, including t-tests, ANOVA, and logistic regression, were performed in R statistical software to evaluate Ki-67 variability by metastasis status, resection margins, and tumor laterality. Logistic regression modeled metastasis risk using Ki-67, tumor size, and age, with performance assessed by McFadden's pseudo R^2 .

Results: Metastatic patients had significantly higher Ki-67 indices (mean: 39.4%) than non-metastatic patients (21.6%, $p < 0.05$). Logistic regression identified Ki-67 as a significant predictor of metastasis ($OR=1.06$, $p < 0.05$), with a 6% increase in odds per 1% Ki-67 increase. Tumor size and age were not significant predictors ($p > 0.05$). The model explained 20.5% of metastasis risk variance (pseudo $R^2=0.205$). No significant differences in Ki-67 were observed by resection margin or tumor laterality.

Conclusions: Ki-67 expression strongly correlates with metastasis in ACC, emphasizing its prognostic significance. Predictive modeling highlights its value in assessing metastasis risk and guiding surgical decisions. Radiomic features may further enhance non-invasive risk assessment.

Poster #3: Outcomes Of Geriatric Donors For Living Renal Transplant At A Single Institution

Jennifer Y. Lu, Fred Gong, Frank Darras, Adam Kressel; Department of Urology, Stony Brook University Hospital, Stony Brook NY, USA

Introduction: Geriatric patients (> 65 years) with a solitary kidney after surgical excision for malignancy are well studied, but geriatric patients with a solitary kidney after donation for transplant have not been well described in the literature. Given the persistent organ shortages and prolonged transplant wait times, geriatric organ donors represent a potentially underutilized population. In this study, we aim to study donor and recipient outcomes of kidney transplants from geriatric donors.

Methods: A retrospective study was completed by querying all patients who underwent living donor renal transplant between January 1, 2000 - September 1, 2024. Donor and recipient pairs were included if the donor was >65 years old at the time of kidney transplant donation. Demographics, surgical factors, donor, and recipient outcomes were collected at 1, 3, 5, and 10 years post-operatively.

Results: 20 renal transplant donors (8 male, 12 female) were included in our analysis with a mean age of 68 years. 50% of patients were biologic and 50% non-biologic donations. Donors had a mean baseline creatinine 0.77 with few risk factors for kidney disease: 30% of patients had hypertension, and 10% had diabetes. There was a mean follow-up of 7.6 years (range 1-21 years). Median serum creatinine at 1 year was 1.29, at 5 years was 1.15, and at 10 years was 1.0. Two donors developed CKD stage IV after their 10 year follow up (at 19 years and 21 years), but no patients developed end stage renal failure needing dialysis. Two donors had expired by the end of the inclusion date (1 from lung cancer, 1 from breast cancer). Twenty recipients had a mean age of 63.5 years (range 36-76) and 40% of recipients were on hemodialysis at the time of transplant. One patient died of operative complications. For the remaining recipients, mean serum creatinine at 6 months was 1.39, at 12 months was 1.41, at 3 years was 1.70, and at 5 years was 1.52. By the conclusion of the study, 5 recipients (25%) had a failed transplant with mean time to failure of 5 years. Two additional recipient mortalities were from metastatic squamous cell carcinoma and COVID-19.

Conclusions: Donor transplant nephrectomy in patients >65 years is safe and feasible. Donors had excellent outcomes with no patients developing ESRD requiring dialysis. Although recipients of these same kidneys had higher rates of graft failure and death compared to reported rates in population studies, deaths were largely unrelated to kidney transplant. Source of Funding: None

Poster #4: Examining The Utility Of Mercaptoacetyltriglycine Imaging Following Ureteric Stent Removal After Renal Transplantation

Authors: Patrick Ciechanski, Max Levine

Introduction and Objectives: Mercaptoacetyltriglycine (MAG3) imaging is routinely used after renal transplant (RTx) to evaluate graft function and surgical complications. Local practice patterns suggest that rates of complications related to ureteric stent removal after RTx are low. This study aims to identify whether there is a role for MAG3 after the removal of ureteric stents following RTx and whether outcomes would be altered by omitting this investigation.

Methods: Retrospective chart review of patients having a RTx performed in Edmonton, Canada between Jan 2021 and Mar 2023. Exclusion criteria includes incomplete data collection, or multi-organ transplant. Outcomes include post-operative MAG3, serum creatinine (sCr), and identification of complications up to 8 weeks following ureteric stent removal.

Results: Analysis of 286 patients was completed, with 32 patients excluded. Age of participants was 54 years [41-65]. The majority of grafts were implanted within the iliac fossa (89.9%) using a Lich ureteric reimplant. Early post-operative MAG3 often demonstrated acute tubular necrosis (ATN; 79.2%) or normal findings (19.2%). Following stent removal MAG3 often showed normal graft function (62.4%) or residual ATN (26.7%), with vesicoureteral reflux, hydronephrosis, worsening ATN, peri-graft fluid collections, vascular stenosis, or urine leak noted in $\leq 3\%$ of cases. Significantly greater changes in sCr were seen when post-stent removal MAG3 demonstrated new or non-resolving abnormalities, compared to MAG3 showing resolving or normal findings [4.6 ± 13.4 vs $-1.9 \pm 10.9\%$; $p=0.006$]. Further work-up was triggered by a rising sCr (44%) or changes in clinical status (28%), rather than MAG3 findings (19%). Intervention for a post-stent removal MAG3 detected abnormality was required in a single case.

Conclusions: The rate of abnormal MAG3 findings requiring intervention following ureteric stent removal after RTx is exceedingly low. Changes in sCr levels are greater in patients with MAG3 abnormalities following stent removal, and changes in sCr and clinical findings typically trigger further investigations of these potential complications. The omission of routine MAG3 has the potential to save cost and reduce the burden of follow-up for patients. Source of Funding: None

Poster #5: Will Phone-Based Caregiver Confirmation in an Era of Reduced In-Person Interactions Affect Patient Compliance and Outcomes Post Kidney Transplant?

Christina L. Delvalle, Hafiz Umair Siddiqui, Dylan Isaacson, Yi-Chia Lin, Joshua J. Augustine, Anne M. Huml, Mohamed Eltemamy: Cleveland Clinic, Cleveland, OH

Introduction and Objective: End-stage renal disease is a common cause of morbidity and mortality globally, with kidney transplant being the most effective treatment option. Approval for transplant listing involves an extensive evaluation. Our center requires two confirmed caregivers (CGs) for psychosocial approval, validated in person or over the phone. We hypothesized transplant recipients with CGs confirmed in-person would have better post-transplant outcomes.

Methods: A retrospective chart review was conducted on recipients transplanted between January 2023 and June 2024. Psychosocial evaluations were completed by the same social worker. CG support plans were categorized into three groups: 1) two CGs confirmed in person, 2) one CG confirmed in person and one by phone, and 3) two CGs confirmed by phone. Post-transplant outcome measurements included no-shows to appointments, 90-day readmissions, and occurrences of tacrolimus levels below 5.0 (units) between 30-90 days post-transplant.

Results: 135 patients were included, 88 (65%) of whom were male and 47 (35%) females. Median age was 60 years. Racial distribution included 86 (64%) white, 42 (31%) black, 7 (5%) other. Average household income was \$65,571, and patients lived an average of one hour from the hospital. 10 (8%) patients had two CGs confirmed in person, 99 (73%) had one CG in person and one by phone, and 26 (19%)

had two CGs confirmed by phone. Patients with at least one in-person CG (groups 1 and 2 combined) had higher average income (\$69,885 vs. \$47,000, $p=0.05$), were more frequently white (73% vs. 54%, $p=0.06$), and had lower SIPAT scores (13 vs. 16, $p=0.014$), indicating less psychosocial risk. There was no significant difference between groups with no-shows (17% vs. 19%, $p=0.74$), 90-day readmissions (42% both groups, $p=0.99$), or tacrolimus levels below 5.0 at 30-90 days post-transplant (29% vs. 27%, $p=0.78$).

Conclusion: Patients with in-person CG confirmation had more psychosocial resources. However, the mode of CG confirmation did not significantly affect post-transplant outcomes. This suggests CG supports confirmed by phone are just as viable for transplant listing approval. Further review on psychosocial requirements for listing and the impact on post-transplant patient outcomes should be done. Source of Funding: None

Poster #6: Symptom Burden and Quality of Life in 2 Haploidentical Kidney Transplant Recipients: A Comparative Analysis of Immunosuppressed and Tolerance Trial Cohorts

Lauren Schafrank, Erika L. Wood, Naveen Gupta, Lorna Herbert, Sarah Connor, Asha Shori, Sheba George, Eric Lum, Neil Kogut, Caspian Oliai, Jolie Shen, Nima Nassiri, and Jeffrey Veale

Introduction and Objective: Lifelong immunosuppression (IS) following renal transplantation is essential for graft survival but carries substantial side effects, including heightened infection risk, cosmetic changes, and lifestyle limitations, which negatively impact patients' health-related quality of life (HRQoL). HRQoL, encompassing physical, social, and psychological domains, is a vital measure of treatment efficacy and patient well-being, especially in chronic conditions like end-stage renal disease (ESRD). This study investigates HRQoL among kidney transplant recipients on IS and those in a tolerance trial that achieved IS-freedom through dual hematopoietic stem cell and kidney transplantation, providing insight into the potential HRQoL benefits of immunosuppression-free living.

Methods: This qualitative study was conducted with 2 haploidentical kidney transplant recipients from UCLA, comprising UCLA patients maintained on IS and recipients enrolled in UCLA's tolerance protocol. UCLA's tolerance protocol includes hematopoietic stem cell transplantation (HPSCT) with kidney transplant, allowing certain recipients to wean off IS. Interviews were conducted with 11 recipients, using open-ended questions to explore patient experiences related to symptom burden, lifestyle limitations, and self-perceived health and well-being.

Results: Recipients on IS described burdensome side effects such as weight gain, moon-facies, fatigue, susceptibility to infections, and limitations on diet and travel due to infection risk. UCLA recipients expressed significant lifestyle adjustments to mitigate risks, often reporting "being constantly mindful" of sun exposure, diet, and social interactions to avoid infections. Conversely, UCLA trial participants reported that being IS-free was "life-changing," with noticeable physical and emotional improvements and fewer daily restrictions. They highlighted renewed vitality, a return to pre-ESRD routines, and a sense of normalcy, with many expressing deep satisfaction in resuming activities without medication-related constraints.

Conclusions: This study reveals stark HRQoL differences between recipients on IS and those off IS in a tolerance protocol. Achieving IS-free kidney transplantation has the potential to transform patients' lives, promoting physical, social, and emotional well-being and supporting long-term adherence to a healthy lifestyle. The findings underscore the importance of further research and clinical trials in tolerance protocols to minimize the long-term HRQoL burdens associated with traditional IS therapy. Source of Funding: OneLegacy Foundation Clinical Research Grant

Poster #7: Robot-assisted Kidney Transplantation (RAKT): The 8-year European Experience

Angelo Territo1*#, Luca Afferi1*, Universitat Autònoma de Barcelona,

Spain, Mireia Musquera², Josep Maria Gaya Sopena¹, Alessio Pecoraro^{3,4}, Riccardo Campi^{3,4}, Andrea Gallioli¹, Begoña Etcheverry⁵, Thomas Prudhomme⁶, Joris Vangeneugden⁷, Milla Ortved⁸, Andreas Røder⁸, Philip Zeuschner⁹, Alessandro Volpe¹⁰, Rodrigo Garcia-Baquero¹¹, Burak Kocak¹², Idu Mirza¹³, Paolo Fornara⁹, Malene Rohrsted⁸, Nicolas Doumerc⁶, Karel Decaestecker⁷, Sergio Serni^{3,4}, Francesc Vignes⁵, Antonio Alcaraz², Alberto Breda¹

Introduction and objective: Evidence regarding perioperative results and long-term functional outcomes of robotic-assisted kidney transplantation (RAKT) is limited. We evaluated perioperative surgical results and long-term functional outcomes of RAKT in patients receiving kidney transplants from living donors.

Methods: This retrospective analysis is based on a prospective multicenter cohort study conducted from July 2015 to October 2023 across 10 European centers. Patients who underwent heterotopic RAKT from living donors were included, excluding those who received orthotopic RAKT. The primary outcomes measured were long-term renal function, perioperative complications, and survival rates. Renal function was assessed with the estimated glomerular filtration rate (eGFR). The Clavien-Dindo classification (CDC) was used to describe early (within 30 days) and late (from 31 to 90 days) postoperative complications. Dialysis-free survival (DFS), graft-nephrectomy-free survival (GNFS), and overall survival (OS) were estimated using the Kaplan-Meier method.

Results: A total of 624 patients with a mean age of 35 years (IQR: 26-52) underwent RAKT. Preemptive RAKT was performed in 52.1% of cases, and the majority (84.3%) had the transplant in the right iliac fossa. The mean operative time was 229 minutes (SD: 76.3), with a rewarming time of 43.9 minutes (SD: 8.8). Intraoperative complications were rare (1.1%), and postoperative graft nephrectomy occurred in 1.9% of patients. High-grade (CDC ≥ 3) early and late postoperative complications were observed in 7.7% and 2.3% of patients, respectively. Over a median follow-up of 23 months, rates of incisional hernias, ureteral stenosis, and arterial stenosis were 1.4%, 1.1%, and 0.2%, respectively. Median eGFR values were 19 ml/min/1.73m², 52 ml/min/1.73m², and 53 ml/min/1.73m² on the 1st, 7th postoperative day, and at 6 months, respectively. The 5-year DFS, GNFS, and OS rates were 96.6%, 97.8%, and 98.9%, respectively. Main limitation is the absence of a comparator group.

Conclusions: With the largest experience worldwide on RAKT, we confirm the perioperative safety and excellent long-term functional outcomes of this procedure. Given the benefits of a minimally invasive robotic approach, these findings support the broader adoption of RAKT as a viable option for kidney transplantation. Source of funding: Luca Afferi was supported by the European Urological Scholarship Programme (EUSP).

Poster #8: The First Robotic-assisted Kidney Transplant Series In A Canadian Centre: A Case For Feasibility In The Canadian Context

Kun Sirisopana¹, Patrick Ciechanski¹, Ryan Amyotte², Andrew Rasmussen¹, Max A. Levine¹; ¹ – Division of Urology, University of Alberta, ² – Alberta Health Services, University of Alberta Level 3 OR

Introduction: Robotic assisted kidney transplantation (RAKT) is an increasingly adopted technique in select transplant centres around the world, with no implementation in Canada to date. RAKT was introduced at the University of Alberta Transplant Program in June 2024 after specialized training was obtained by one transplant surgeon with a urologic practice that includes regular robotic renal surgery. We sought to review the feasibility of implementing RAKT into a transplant centre in Canada.

Methods: A review of prospectively collected data of all RAKT completed over the initial cases was performed. Intraoperative and post-operative parameters are described and compared to published learning curve benchmarks. Data on operative times, both total and component parts, were collected prospectively for quality assurance and reviewed with calculation of mean times. These values were compared to published benchmarks of target times derived from multicenter large volume learning curve data published in the literature.

Results: Seven patients were included in this series. The initial patient underwent nephrectomy with autotransplant for Nutcracker syndrome and 6 subsequent patients have undergone living unrelated donor kidney transplants (LDKT) using robotic assistance. Mean age was 45 yr, median BMI was 26.8 (range 19-40), 3 were males. Six grafts were placed on the right side, and one on the left. One graft required backbench arterial reconstruction. All LDKT patients were unsensitized and induced with steroid and basiliximab. Mean total operative time for the LDKT cases was 283min, while mean console time was 156min. Mean rewarm time (RWT) was 40.6 min across cases (range 35-50min). Mean duration of arterial anastomosis was 17min, venous anastomosis was 15.6min, and ureteric anastomosis was 34min. No cases went beyond the scheduled operative day. RWT, arterial, and venous anastomosis times were within clinically acceptable deviation from target values based on published learning curve data (-0.01%, +3.0%, -10.5%, respectively).

Conclusions: Introducing RAKT into a Canadian transplant centre is feasible when there is adequate surgeon/surgical team experience in both robotic and transplant surgery. Components of the operation that influence graft function (RWT, anastomotic times) can be performed satisfactorily even during initial cases presumed to be early in the learning curve.

Novick Podium Session Abstracts

Podium #1: Delayed Immunological Tolerance in Recipients with Pre-Existing Kidney Transplants

Authors: Lauren Schafrank, Erik Lum, Caspian Oliai, Neil Kogut, Ann Raldow, Monica Mead, Nima Nassiri, and Jeffrey L. Veale

Introduction and Objective: The ever-increasing success of kidney transplantation for treating end stage renal disease (ESRD) is mitigated by the procedure's ongoing requirement for lifelong immunosuppression to prevent rejection. Chronic immunosuppression is associated with significant risks for cardiovascular disease, infection, malignancy, along with nephrotoxicity from calcineurin inhibitors (CNIs). Tolerance induction through hematopoietic stem cell (HPSC) transplantation may eliminate the need for immunosuppression, or at least lessen immunosuppressive dosing, but is typically limited to de novo transplants. For the first time ever, we report the applicability of tolerance induction to stable kidney transplant recipients using a delayed protocol.

Methods: Four patients with stable kidney allografts ranging from 11 to 58 months post-transplant enrolled in an IRB-approved delayed tolerance trial (NCT05525507). Donors received granulocyte-stimulating factor and plerixafor for stem cell mobilization. After conditioning with rabbit anti-thymocyte globulin and total lymphoid irradiation, recipients received cryopreserved donor stem cells. Immunosuppression was tapered based on the results of chimerism monitoring. All procedures were performed in an outpatient setting.

Results: Patients achieved durable chimerism without graft-versus-host disease or acute rejection. Two patients have fully weaned off immunosuppression while maintaining stable renal function at 14 months after tolerance induction. Both patients have a greater than 10% reduction in serum creatinine compared to pre-induction baseline. The other two patients who began the tolerance trial more recently remain on low-dose tacrolimus with anticipated withdrawal. Patient 1's serum creatinine decreased from 1.4–1.5 mg/dL to 1.2–1.3 mg/dL, and Patient 2's from 1.8–2.0 mg/dL to 1.6 mg/dL post-immunosuppression cessation.

Conclusion: Delayed donor stem cell infusion can effectively induce tolerance in kidney transplant recipients with stable allografts, expanding immunosuppression-free survival to a broader patient population. Achieving tolerance without hospitalization addresses limitations in current protocols, improving long-term graft survival by avoiding CNI toxicity. Source of Funding: OneLegacy Foundation Clinical Research Grant.

Podium #2: Sensory Reconstitution after Penile Transplantation: You Thought You Lost That Loving Feeling

Brooke Moore¹, Katya Remy¹, Samuel R. Donnenfeld³ Curtis Cetrulo², Meredith Wasserman³, Gabriella Avellino³, Kassem Safa¹, Lisa Gfrerer¹, Kyle Eberlin¹, William Austen¹, Jonathan Winograd¹, Dicken Ko³

¹Massachusetts General Hospital, Boston, MA, ²Cedars-Sinai Medical Center, Los Angeles, CA, ³Brown University Warren Alpert Medical School, Providence, RI,

INTRODUCTION AND OBJECTIVE: Penile transplantation affords patients with phallic loss a means of restoring orthotopic urinary and sexual function. However, this practice is often limited by institutional, surgical, and immunologic barriers. Only 5 penile transplants have been performed globally and only 3 recipients have retained their graft. The first U.S. penile transplant was performed on a 64-year-old male with a history of subtotal penectomy for penile cancer. Here, we discuss the 8-year sensory outcomes of his surgery. He was noted to have a SHIM score of 21 with suitable erections for penetrative intercourse.

METHODS: Quantitative sensory testing was performed on 6 areas of the penile shaft and glans using validated neurological testing. Semmes Weinstein monofilaments, developed originally by Josephine Semmes and Sidney Weinstein as a means measure touch-pressure in a standardized way by controlling the force of an applied stimulus to the skin (index values of the monofilaments ranging 2.83g - 6.65g) were used to assess pressure sense; a two-point discrimination test was performed using a two-point discrimination device (0-10 cm). Vibration was measured using a 128Hz tuning fork and evaluated on a scale of 0-8 ranging from least to most sensitive. Pinprick was assessed using 7 stimulators in μN (8, 16, 32, 74, 128, 256 and 512) (PinPrick, MRC Systems, Germany). Temperature sensitivity was assessed with a thermal testing device that ranged from 0°C to 50°C (TSA2[®], MEDOC, Israel). Subjective sensation to light touch, pressure, erogenous and temperature was also assessed. Detection was recorded using a 5-point Likert scale (1= none through 5= complete). The patient was also asked about hypersensitivity, pain, and subjective sensory satisfaction.

RESULTS: Monofilaments were detected in 6/6 areas (mean threshold $2.83 \pm 0.0\text{g}$ at the shaft and glans), vibration was detected in 6/6 areas (mean threshold $7.62 \pm 0.1\text{g}$ at the shaft; $7.75 \pm 0.0\text{g}$ at the glans), and pinprick was detected in 6/6 areas (mean threshold $16 \pm 0.0\text{g}$ at the shaft; $12.0 \pm 5.7\text{g}$ at the glans). The patient was able to detect cold in 5/6 areas (mean detection threshold of $14.3^\circ\text{C} \pm 1.4^\circ\text{C}$ at the shaft; $14.9^\circ\text{C} \pm 1.3^\circ\text{C}$ at the glans), warm in 1/6 areas (37°C on the shaft), and heat in 2/6 areas (47°C on the shaft and 42°C on the glans). Two-point discrimination was not detected. The patient reported “some” (3/5) sensation to light touch, pressure, cold, warm and erogenous sensation. He further denied any hypersensitivity or pain and was overall “very satisfied” with his penile sensation.

CONCLUSIONS: Intact penile sensation is critical for sexual stimulation. Post-transplant phallic sensation is highly dependent on regeneration of the dorsal penile nerves after transplantation. Our data confirms the first successful penile transplant nerve reconstitution, corroborated by pressure, vibratory and sharp sensation in both the shaft and glans. These data are supported by subjective sensation to various stimuli and his overall satisfaction with his post-transplant sensitivity. Source of Funding: None.

Podium #3: Minimally Invasive Donor Nephrectomy Consensus Statements: A Review of the Literature and Expert Recommendations

1Atieh D. Ashkezari, 2Lauren Schafrank, 3Inderbir S. Gill, 2Nima Nassiri
New York Institute of Technology College of Osteopathic Medicine, Old Westbury, NY, USA, UCLA Kidney Transplantation, Department of Urology, David Geffen School of Medicine, Los Angeles, CA, USA, Department of Urology, University of Southern California (USC), Keck School of Medicine, Los Angeles, CA, USA.

Background: Living donor nephrectomy, critical for kidney

transplantation, has transitioned from open approaches to minimally invasive techniques, including laparoscopic (LDN) and robotic donor nephrectomy (RDN). RDN offers potential advantages in precision, visualization, and assistive technologies, particularly in cases with high body mass index (BMI), complex vascular anatomy, and prior surgical history.

Objectives: This review aims to assess donor factors such as BMI, anatomical and vascular complexity, surgical history, and their influence on outcomes in RDN compared to LDN.

Methods: A scoping review was conducted using MEDLINE/PubMed and Scopus. Inclusion criteria focused on outcomes such as operative parameters, post-operative complications, and graft survival in RDN. Studies were assessed using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework to synthesize recommendations.

Results: Seventeen studies met inclusion criteria, comprising one randomized controlled trial, one prospective comparative study, 14 retrospective studies, and one non-comparative observational study. Key findings include:

- **Operative and Ischemia Times:** RDN showed longer operative and warm ischemia times compared to LDN in some studies, though differences were minimal.
- **Post-Operative Pain and Length of Stay (LOS):** RDN was associated with reduced analgesic requirements and shorter LOS in high-BMI donors and those with complex anatomy.
- **Complications:** Both approaches had low rates of major complications (Clavien-Dindo III or higher).
- **Recipient Outcomes:** No significant differences in graft survival or delayed graft function were observed between RDN and LDN.
- **High-BMI and Complex Anatomy:** RDN provided specific advantages in donors with high BMI, right-sided kidneys, and vascular multiplicity due to its enhanced dexterity and visualization.

Conclusions: RDN is non-inferior to LDN in terms of safety and graft outcomes. It offers distinct advantages in select cases, such as high-BMI donors and anatomically complex scenarios, though operative times may be longer. Evidence remains of low to very low quality, and recommendations are conditional. Further research is needed to standardize protocols and optimize outcomes in diverse donor populations.

Podium #4: Management of Renal Grafts with Multiple Arteries in Robotic-Assisted Kidney Transplantation: Are There Differences Between Bench Surgery and Independent Anastomosis? Results from the ERUS-RAKT Group

Núria De Fuentes¹, Begoña Etcheverry¹, Maria Fiol¹, Oscar Buisan¹, José I. Pérez¹, José F. Suárez¹, Ricardo Campi², Rodrigo García-Baquero³, Andreas Roder⁴, Milla Ortved⁴, Idu Mirza⁵, Nicolas Doumerc⁶, Thomas Prudhomme⁶, Sergio Serni², Karel Decaestecker⁷, Antonio Alcaraz⁸, Alberto Breda⁹, Mireia Musquera⁸, Francesc Vigués¹: ¹Hospital Universitari de Bellvitge, Urology, Barcelona, Spain

Introduction and Objectives: Renal transplants involving grafts with multiple arteries (MA) are associated with longer operative and ischemia times but the outcomes are comparable to single-artery graft transplants in terms of graft function, survival and complications. Robotic-assisted kidney transplantation (RAKT) has demonstrated comparable functional results to open surgery. The aim of this study is to assess the benefits of using robotic assistance for managing renal pedicles with multiple arteries.

Methods: We conducted a multicenter prospective study including patients who underwent RAKT of a renal graft from living donors with MA at centers affiliated with ERUS-RAKT. We analyzed demographic data, graft characteristics, perioperative variables, surgical complications, functional outcomes and complications during follow-up

associated with arterial anastomosis; based on the surgical technique used [Independent Anastomosis (IA) or Bench Surgery (BS)]. The primary endpoints were the presence or absence of complications associated with arterial anastomosis (graft nephrectomy, arterial thrombosis, graft hypoperfusion, anastomosis stenosis, bleeding necessitating transfusion or reoperation and large hematomas) and renal function measured by GFR at 30 days. The secondary endpoint was the ischemia time (cold ischemia and rewarming time).

Results: A total of 98 patients who underwent RAKT of grafts from living donors with MA between 2016-2024 were included. 59 (60.2%) underwent IA and 39 (39.8%) BS. The results are described in Table 1. There was a severe complication in the BS group requiring graft nephrectomy due to poor graft perfusion. In the multivariate analysis it can be observed that the GFR of the donor and bench surgery influence the renal function of the recipient at 30 days ($p=0,026$ and $p=0,01$; respectively).

Conclusions: There are no differences regarding surgical and rewarming time regardless of the technique used; with a longer cold ischemia time in the BS group. There is a lower incidence of surgical and postoperative complications in the IA group, as well as a shorter hospital stay. Although the higher risk of complications, follow-up indicates a better renal function in the BS group at 30 days.

Podium #5: Kidney Transplant Angiography: Outcomes and Predictors of Renal Artery Stenting

Jennifer Y. Lu, Arshia Aalami-Harandi, Amanda Shorey, Raymond Uduba, Adam Kressel, Frank Darras: Department of Urology, Stony Brook University Hospital, Stony Brook NY, USA

Introduction: Up to 23% of patients with renal transplant may develop renal artery stenosis (TRAS) usually treated with observation or revascularization. Angiography, the gold standard to diagnose transplant renal artery stenosis, requires contrast which may be nephrotoxic. This study aims to identify predictors of TRAS and determine the safety and outcomes of angiography.

Methods: Retrospective study of renal transplants at a single institution from August 2016 to August 2024 who underwent subsequent transplant renal artery angiography for suspected TRAS. Patient demographics, pre-operative ultrasound and creatinine, intraoperative findings, and post-operative creatinine were collected and analyzed using SPSS v.29.0.

Results: 614 patients who underwent renal transplant were queried and 103 of these also underwent primary transplant angiography (32 females, 71 males). The median contrast load 10mL +/- 13.0mL. Patients showed no significant difference in creatinine on post-op day 1 or 7 despite contrast load from angiography (ΔCr 0.02, $p=0.904$). 57 of these patients were confirmed to have TRAS requiring vascular stent insertion. These patients had higher pre-angiogram arterial velocities on ultrasound (431.5 vs. 388.6 cm/s, $p = 0.046$). Risk factors for TRAS included deceased donor kidney, longer cold ischemia time, and shorter anastomosis time (Table 1). After adjusting for all covariates, patients with pre-operative ultrasound velocity >400 cm/s have 4-fold increased odds of stenting (aOR = 4.47, 95% CI 1.43 – 13.95, $p=0.01$). By 1 month post-op, stented patients had a significant decrease in Cr (ΔCr -0.74, $p<0.001$).

Conclusion: Preoperative renal ultrasound velocity >400 cm/s is a strong predictor of patients with TRAS requiring intervention. After angiography and stenting, patients with TRAS show a significant decrease in their creatinine. Patients without TRAS have no difference in creatinine, indicating the procedure is safe, efficacious, and requires a negligible contrast load. Source of Funding: None.

Podium #6: Incidence of Lymphocele After Renal Transplantation In Open And Robotic Approach And Its Management

Ferrando, V.1, Etcheverry Giadrosich, B.1, Fiol Riera, M.1, De Fuentes Beltruz, N1, Moretó Vilella, E1, Bardella, Altarriba, C.1, Bonet Vilanova, J.M.1, Riera Canals, L.1, Buisan Rueda, O1, Castells Esteve, M.1, Vigués Julià, F.1

Introduction and objectives: Lymphocele is one of the most frequent complications of heterotopic renal transplantation, affecting up to 20% of cases according to some series. Clinical presentation is caused by compression of adjacent structures including the renal or iliac vein and the ureter, with the treatment criteria being compression and/or alteration of graft function. Treatment includes percutaneous drainage, surgical marsupialization or injection of sclerosing agents. The aim is to describe the incidence of lymphocele on ultrasound (US) performed at 1-3 months in robotic and open renal transplantation and its conservative management in a high-volume renal transplant hospital with a robotic

transplant program.

Materials and methods: Retrospective cohort study, we review our incidence of lymphocele in recent years and the need for its treatment. In our centre, a control US is performed after removal of the ureteral stent between 1 and 3 months after renal transplantation or according to clinical need. If the lymphocele compresses structures and/or affects the function of the graft, a percutaneous drainage is placed and the correct drainage is confirmed; then, daily instillation of povidone iodine is started as tolerated on an outpatient regime until output is less than 50 cc.

Results: Data from 631 transplants between 2021-2023 were reviewed, with a mean age of 65,9 years (SD 10,9) and body mass index (BMI) of 27,5 (SD 5). The overall percentage of reported lymphocele was 22,5% assessed by control US, being 18% in robotic transplants versus 24% in open transplants ($p=0,166$). 26% of lymphoceles required percutaneous drainage, being 2% in robotic group versus 6% in open ($p=0,232$); of these, 52,8% received sclerosing treatment with povidone iodine. 2 patients required laparoscopic marsupialization.