WG1

Urinary Extracellular Vesicles a Source of Biomarkers for Kidney Allograft Rejection: a Systematic Review

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Introduction:
Extracellular vesicles (EVs) are lipid bilayer-bound particles released by various cell types and found in biofluids such as urine. Urinary EVs (uEVs) reflect the physiological state of kidney cells and have shown potential as non-invasive biomarkers for early detection of kidney allograft rejection. Unlike serum creatinine and invasive biopsies, uEVs may offer greater specificity and sensitivity for monitoring transplant health.
Methods:
This systematic review followed the 2020 PRISMA guidelines. We searched MEDLINE, Scopus, CENTRAL, Web of Science, and Embase for studies published up to September 2025. Inclusion criteria were original human studies investigating uEVs in the diagnosis of kidney transplant rejection. Studies using only animal or cell models, or not analysing uEVs, were excluded.
Results:
Out of 65 screened articles, 16 met the inclusion criteria. One study conducted genomic analysis of uEVs, six studies analysed the uEV transcriptome, including mRNAs (n=4) and microRNAs (miRNAs) (n=2), and nine studies analysed the uEV proteome. Of the nine proteomics publications, two examined a single protein: cluster of differentiation 3 (CD3) and synaptotagmin 17 (SYT17), respectively. Overall, seven studies isolated uEVs by ultracentrifugation (conventional, n=2; differential, n=3; ultracentrifugation combined with radioimmunoprecipitation, n=1; ultracentrifugation combined with ultrafiltration, n=1), seven used commercial isolation kits, and one used size-exclusion chromatography (SEC). One study adopted an isolation-free approach for uEV analysis. Only one paper used urine samples from paediatric kidney transplant recipients; the remaining studies used adult samples (n=15). We classified the 16 studies into nine categories based on the proposed diagnostic use of uEVs for kidney transplant rejection: (1) distinguishing rejection from no rejection; (2) distinguishing acute rejection from no rejection; (3) distinguishing acute T cell-mediated rejection (TCMR) from no rejection; (4) distinguishing TCMR from other kidney allograft injuries; (5) distinguishing antibody-mediated rejection (ABMR) from no ABMR; (6) distinguishing chronic active ABMR from no chronic active ABMR; (7) distinguishing TCMR from ABMR; (8) distinguishing kidney graft dysfunction from stable kidney function; and (9) distinguishing acute rejection from acute tubular necrosis. This review was constrained by few eligible studies in an emerging field and marked heterogeneity in design, cohorts, methods (genomics, transcriptomics, proteomics), and outcomes. Across studies, uEV biomarkers rarely overlapped and none were consistently validated, likely reflecting methodological variability, small samples, and differing inclusion criteria, which together precluded a robust meta-analysis.
Summary/Conclusion:

uEVs show promise as diagnostic biomarkers for kidney allograft rejection, offering a non-invasive alternative to current methods. However, inconsistencies in isolation and analysis techniques highlight the need for standardisation. Future studies should aim to validate findings, refine omics approaches, and explore the potential for clinical translation, including home-based monitoring tools.

WG2

Serum and plasma TTV viral load show near-perfect agreement

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Introduction
Torque Teno Virus (TTV) load is an emerging pharmacodynamic biomarker after kidney transplantation. Quantification is typically performed in plasma or whole blood. We evaluated whether serum can be used interchangeably with plasma—offering simpler handling and faster turnaround.
Methods
Paired serum and plasma samples from 21 participants in the "TTV: A biomarker for Immunosuppression" study were analysed on the same platform (single laboratory). All samples were obtained on the day of transplantation. TTV load (log_{10} copies/mL) was compared using Wilcoxon signed-rank testing (primary; robust to small n and non-normal tails) with a paired t-test as sensitivity analysis. Association was assessed by Spearman and Pearson correlations. Agreement was quantified using a two-way, absolute-agreement intraclass correlation coefficient (ICC) and difference by root-mean-square error (RMSE). Bland–Altman plots evaluated bias and proportional error.
Results
Mean (SD) TTV was 3.455 (1.706) log_{10} copies/mL in plasma and 3.425 (1.638) in serum. There was no systematic paired difference (Wilcoxon V=111, p=0.53; paired t p=0.48). Correlation between matrices was near-perfect (Spearman ρ=0.992, $p<10^{-17}$; Pearson r=0.994, p<0.001). Agreement was excellent (ICC=0.994, 95% CI 0.984–0.997, p<0.001) with minimal dispersion (RMSE=0.189 log units). Bland–Altman analysis showed negligible bias around zero and no visual evidence of proportional bias across the observed range.
Discussion
Serum and plasma TTV measurements obtained on the same day and platform were statistically indistinguishable and highly concordant, indicating practical interchangeability for clinical and research use. Using serum could streamline laboratory workflows, reduce hands-on processing, and enable analyses from routinely archived serum. Limitations include small sample size, single assay/site, and pre-transplant sampling, where titres are typically low; validation at higher post-transplant titres and across platforms is warranted.
Conclusion
Serum TTV quantification closely tracks plasma with excellent agreement, supporting serum as a valid—and often more practical—matrix for TTV monitoring.

WG3

PTLD and relationship to EBV viremia: a retrospective analysis from the north of England

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Introduction

Post-transplant lymphoproliferative disorder (PTLD) remains a significant cause of morbidity, mortality, and graft loss after kidney transplantation. The strongest established risk factor is an EBV-seronegative recipient receiving an organ from an EBV-seropositive donor (D+/R−), particularly under early intense immunosuppression. Although EBV DNA monitoring is widely adopted, the literature consistently shows that there is no universally reliable viral-load cut-off for predicting PTLD; early presentations are more often EBV-driven, whereas late PTLD is frequently EBV-independent. Antivirals have not demonstrated a preventive benefit, whereas pre-emptive reduction of immunosuppression remains the most evidence-supported strategy

Methodology

We conducted a single-centre, retrospective analysis (Newcastle upon Tyne Hospitals NHS Foundation Trust, 2014–2024) of adult kidney and SPK recipients. Two cohorts were evaluated: (1) 20 recipients who developed PTLD, and (2) 27 recipients with high EBV DNAemia, defined as ≥50,000 copies/mL. For PTLD cases, we recorded the time from transplant, EBV DNA titre at diagnosis, categorised as not detected, <10,000, 11,000–50,000, and >50,000 copies/mL, along with EBER status on tissue. For the high-titre group, which is above 50000 copies/ml, we ascertained subsequent PTLD development and recipient EBV serostatus. An augmented study to include the other two hospitals in the north (Sunderland Hospital, James Cook University Hospital) is in progress.

Results

Twenty recipients developed PTLD. Disease onset was predominantly late: 18/20 (90%) occurred ≥5 years post-transplant (5–10 years: 8; 10–20 years: 8; >20 years: 2), with only two cases within five years. At PTLD diagnosis, EBV DNA spanned the full range: not detected (n=8; EBER-positive 1), <10,000 (n=5; EBER-positive 2), 11,000–50,000 (n=2; EBER-positive 2), >50,000 (n=4; EBER-positive 2). Thus, 40% of PTLD presented with undetectable EBV DNA, and EBER positivity was variably present across titre strata.
In the surveillance cohort of recipients with high EBV DNAemia (n=27), 4 (15%) developed PTLD while 23 (85%) did not. Among these high-titre recipients, serostatus distribution was predominantly R-positive (n=18) with R-negative (n=4) and unknown (n=5); R-negative status was not consistently linked to progression in this sample.

Discussion

These findings reinforce key messages from the wider literature. First, EBV DNA load by itself has limited positive predictive value, particularly beyond the early post-transplant period. Our data show that a substantial proportion of PTLD arises with undetectable viral loads, while most patients with very high DNAemia do not develop PTLD. Second, histopathology (including EBER) and clinical context must anchor diagnosis; EBV markers should inform but not replace tissue confirmation. Third, management should prioritise risk-adapted immunosuppression reduction when DNAemia is rising or sustained, rather than routine antiviral therapy, which has not been shown to prevent PTLD. Evidence for pre-emptive rituximab is largely observational and heterogeneous; any prophylactic use should be limited to carefully selected high-risk patients (e.g., D+/R− with escalating, sustained DNAemia plus compatible clinical or imaging features), with benefits weighed against infectious risk, hypogammaglobulinaemia, and the potential to blunt vaccine responses. Nonetheless, the alignment between our results and published cohorts supports a pragmatic approach: maintain high clinical suspicion guided by symptoms, imaging, and biopsy; use EBV monitoring to guide immunosuppression, not as a stand-alone trigger for invasive investigation or therapy; and recognise that late PTLD is often EBV-independent. Ongoing multicentre aggregation will refine risk estimates and may clarify how serostatus and DNAemia kinetics can be integrated into more precise surveillance algorithms.

WG4

Cardiovascular risk factors after kidney transplant

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Background
Cardiovascular cause is an increasing cause of mortality in kidney transplant recipients (KTRs). Cardiovascular disease risk is increased within the transplant population by a variety of factors, including development of post-transplant diabetes mellitus (PTDM), hypertension, weight gain and immunosuppression. Previous evidence indicates that HTN and PTDM are predictive of both cardiovascular and graft survival, and obesity and hypercholesteremia is associated with worse graft outcomes. Much of the data available predates modern immunosuppression regimes and cardiovascular risk strategy management.

Methods
We conducted a single centre, retrospective cohort study of kidney transplant recipients from 2014-2019. Data was collected from the renal electronic patient record for co-morbidities, death or graft failure, cardiovascular risk factors: blood pressure, height and weight, cholesterol, HbA1c at 1, 3 and 5 years post-transplant.
We aimed to characterise the development of cardiovascular risk factors over time.

Results
The study included 169 KTRs. The median age was 51 (IQR 40-60), and 24.9% were over 60. 63.9% were male. 16 (9.2%) died and 19 (11.0%) had graft failure within 5 years.

Weight gain
The mean BMI was 26.86 (SD 4.80) at baseline and 28.4 (SD 5.67) at 5 years. 48.9% gained more than 5% of the starting bodyweight over 5 years.
There was an increase in patients with BMI over 35 at 1 year and 3 years which was maintained at 5 years. (table one)
There was a greater degree of weight gain over the first year, however this continued to a lesser degree at the 3 year and 5-year time point.
A greater than 5% increase in weight in the first year was associated with increased risk of PTDM over 5 years.
Younger transplant recipients (<40 years of age) were significantly more likely to gain weight than older recipients.

Hypertension
At baseline 54.4% of KTRs had a diagnosis of hypertension.
There was a consistently high percentage of KTRs with systolic BP above target range of either a target of systolic of 130 or 140mmHg. (table 2)
13 KTRs were diagnosed with hypertension post-transplant, 8 within the first year.

PTDM
10.7% had a diagnosis of diabetes at baseline. 22 KTRs (13%) developed PTDM over 5 years. 10 were diagnosed in year 1 and 12 were later diagnosed.

Cholesterol
The number of KTRs with high cholesterol (total cholesterol > 5mmol/L) changed from 22.6% at one year to 14.60% at 5 years.

Cardiovascular events
10 patients developed new ischaemic heart disease over 5 years, increasing the proportion from 9.5% to 18.7%.
10 patients developed new Heart Failure (1.8% to 9.4%)
6 patients developed new Stroke or TIA (5.3% to 10.8%)

Conclusion

KTRs continue to develop cardiovascular risk factors after transplant, including weight gain, new or poorly controlled hypertension and development of PTDM. Significant changes across multiple risk factors occur across the 5 years. This is consistent with previous literature on changes after transplant. For further study, prospective data would be beneficial, as well as patient experience data to be able to shape an intervention to reduced cardiovascular risk for KTRs.

WG5

Multimorbidity in kidney transplant recipients

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Background

A high proportion of kidney transplant recipients (KTRs) have a high baseline comorbidity burden. Current data focusses on comorbidity at time of transplant with the aim of predicting outcomes. There is little data on patterns and progression of multimorbidity for KTRs. In the CKD population multimorbidity is associated with increasing risk of mortality, renal progression, hospitalisation and healthcare resource utilisation. We aimed to better characterise development of multimorbidity in a renal transplant cohort.

Methods

We conducted a retrospective cohort study of KTRs from 2014-2019 followed up at a single centre for 5 years. Data was collected from the electronic patient record (EPR)including baseline demographics, diagnosis and blood results and then data from 1, 3 and 5 year timepoints post-transplant. Comorbidities were assessed using the EPR and a comorbidity count of pre-defined conditions.
Death and modality change to dialysis (taken as graft failure) were recorded from the EPR.
We measured the increase in comorbidity counts in individuals. We tested the association between increased comorbidity count and other factors, including age, weight gain after transplant, sex and graft failure or death.
We recorded the specific comorbidities gained over the first 5 years.

Results

The study included 169 KTRs. The median age was 51 years (IQR 40-60), and 43 (24.9%) were over 60. 63.9% were male. 16 (9.2%) died within 5 years and 19 (11.0%) had graft failure.
68.8% were deceased donor recipients, 14.5% were live donor recipients, 8.7% are simultaneous pancreas/kidney recipients. The rest were unknown.

The mean number of comorbidities at baseline was 1.46 (SD 1.09), at 1 years was 1.761 (SD1.196), at 3 years was 2.142 (SD 1.440) and at 5 years was 2.40 (SD 1.54).
76 (50.6%) of patients had an increased comorbidity count from baseline, with an average increase of 1.1 over 5 years (table 1).
There was no association between baseline BMI, diabetes or sex and an increase comorbidity count at 5 years.
KTR's over 60 years old at time of transplant were more likely to develop comorbidities compared to under those under 60.

Development of post-transplant diabetes was associated with an increase in other comorbidities gained.
An increase in comorbidity count over 5 years is associated with an increased risk of death or modality change at 5 years.
Weight gain of 10% or greater at one year was associated with less comorbidities gained over 5 years.
The most common comorbidities gained over 5 years were PTDM, osteoporosis, hypertension, Ischemic heart disease and heart failure.

Conclusion
Multimorbidity is common in kidney transplant recipients, and post-transplant there is a development of further multimorbidity. Increasing multimorbidity is associated with increased death or modality change at 5 years.
At risk groups for increasing multimorbidity include KTRs above the age of 60 and those who develop PTDM.
Increased weight gain appears protective, and further investigation of the nature of weight gain using body composition could be helpful to further understand this.
Possible areas of further research include prospective studies to better capture comorbidity, and to gather patient reported outcomes.

WG6

"Turning the Corner”: How improved documentation and a robust co-ordination boosted kidney transplant referrals and activations: A Quality Improvement Initiative in a non-transplanting renal unit.

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Introduction
The national renal guidelines recommend early engagement in discussions regarding pre-emptive kidney transplantation with a view to listing suitable patients at least six months prior to anticipated dialysis initiation or when patients' estimated glomerular filtration rate (eGFR) drops below 20 ml/min/1.73m², (UK Kidney Association (UKKA), 2023; British Transplantation Society (BTS), 2020). However, non-transplanting units often face systemic barriers to achieving timely referrals, including inconsistent documentation, limited coordination, and communication gaps with transplant centres (Getting it right first (GIRFT), 2021; Watters et al 2025). This quality improvement (QI) project evaluates the impact of a transplant Listing Coordinator in addressing these barriers by improving documentation and acting as a catalyst for transplant referrals and listing.

Methods
The Transplant Listing Coordinator introduced a systematic approach to improve documentation for patients with advanced chronic kidney disease (CKD) (eGFR <20 ml/min/1.73m²), as well as those on dialysis, involving renal consultants and specialist nurses across two linked sites (Wolverhampton and Walsall). A unified digital documentation system (E-med) was used to ensure visibility and continuity across the sites. The coordinator engaged in frequent on-site visits and participated regularly in multidisciplinary team (MDT) meetings, including the Advanced Kidney Care Clinic (AKCC) MDT and MDTs across six satellite dialysis units to support shared decision-making and promote timely listing discussions. In collaboration with the renal IT team, a tracking system was developed to monitor the transplant workup process and generate structured documentation notes, enhancing continuity and standardisation. Data from 2022 and 2023 were collected retrospectively and compared with 2024 outcomes. The project followed a PDSA (Plan-Do-Study-Act) methodology, as recommended for quality improvement initiatives in renal services (NHS England, 2022).
Results
Accurate documentation was key to improving transplant referral outcomes. For CKD patients with eGFR 15–20 ml/min, documented transplant plans improved from 38.8% (58/149) in 2022 to 43.2% (60/139) in 2023 and 74.4% (119/160) in 2024. For eGFR <15 ml/min, documentation improved from 70.4% (126/179) to 80.5% (144/179) and 96.4% (106/110) in 2024.

The transplant plan documentation in haemodialysis patients increased from 92% (388/421) to 97% (446/461) and 98.4% (495/503); peritoneal dialysis reached 100% by 2024 (up from 96% in 2022 and 97% in 2023; n=62).

Transplant referrals increased from 50 (2022) to 69 (2023) and to 75 (2024) , reflecting a 50% rise. Active listings grew from 51 to 61 and 84 over the same period. Pre-emptive referrals varied (6 in 2022, 9 in 2023, and 5 in 2024), but pre-emptive activations increased modestly: 12 in 2022, 13 in 2023, and 15 in 2024.

Conclusion

The Transplant Listing Coordinator plays a key role in improving documentation, closing communication gaps, and supporting timely transplant referrals in a non-transplanting unit. By overseeing transplant planning and using a standard dedicated digital system, the coordinator helped improve compliance with national guidance and increased both referrals and listings. This highlights the impact of a dedicated transplantation listing coordinator in improving the efficiency of the transplant listing process resulting in positive outcomes.

WG7

Structured Multi-Disciplinary Renal Transplant Assessment Clinics for Older and Frail Patients – A Pilot Study

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Introduction:
A quarter of people registered for a transplant in a large UK renal centre are currently over the age of 65 years. Nationally, these patients wait longer for a transplant, are less likely to receive a living donor transplant, and more likely to receive a D4 deceased donor kidney. Subjective local reports from the post-transplant team of some patients 'not doing well' after transplantation despite adequately functioning grafts prompted pilot clinics to be proposed for patients in this cohort to enable a detailed multidisciplinary review.

Method:
Four pilot clinics were established for multidisciplinary pre-transplant patient review with a Geriatrician (specialist interest in perioperative medicine for older people), Transplant Surgeon and Transplant Co-ordinator.
Patients identified by the Transplant Co-ordinator team were aged over 63 years and potentially frail. Potential patients were telephoned to offer them an in-depth conversation with the transplant team.

Assessment during the one-hour appointment included formal review of patients' frailty and optimisation of comorbidities, discussion with patients regarding their expectations of transplantation and ascertainment of their life priorities.

Results:
Thirteen patients were reviewed, aged from 63 to 81 years (mean 71 years). Patients' Rockwood Frailty Scores ranged from 1 to 6 (mean 4.2). Seven of the patients were active on the transplant register and six were under assessment.

Two patients (15%) requested suspension, and later removal, from the transplant register as they felt well on dialysis and opted not to take the risks associated with a transplant. One assessment was discontinued at the patient's request once they had considered transplantation in more depth.

Three patients were advised that prehabilitation would be likely to improve their post-transplant outcomes and were directed to support programmes to enable this.

One patient had a strong appetite to undergo transplantation and was active on the register. The MDT consensus was that outcomes would be suboptimal in the post-operative recovery period, and they were later suspended on the transplant register due to previously unknown medical concerns which were identified through the pilot clinic.

On review of the clinic experience, patients reported to value the in-depth discussions and opportunity to reflect on what having a transplant meant to them and likely outcomes.

Discussion:
This pilot demonstrates that multidisciplinary transplant clinics incorporating frailty expertise provides meaningful benefits for older patients. These support shared decision-making, clarify patient expectations, and identify opportunities for prehabilitation. Opportunities arise to assess and optimise comorbidities, and gather valuable information regarding social and functional circumstances to support early discharge planning. Anticipatory care planning may also be included in these clinics. Importantly, they are not intended to create barriers to transplantation, but rather to ensure clinically appropriate treatment decisions align with individual health status and personal values.

As the transplant population ages and comorbidity becomes more common, structured frailty clinics may improve patient selection, enhance outcomes for those who proceed to surgery, and ensure that transplantation is pursued only when in the patient's best interest.

WG8

Optimising Immunosuppressant Transition Strategies: Population Pharmacokinetic Analysis of Tacrolimus to Sirolimus Conversion in Renal Transplantation

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Background: Tacrolimus remains a cornerstone immunosuppressant in kidney transplantation; however, long-term use is associated with nephrotoxicity and metabolic complications. In those affected, an alternative agent, sirolimus, may be appropriate, though the optimal conversion protocol remains unclear. Current conversion strategies are based primarily on empirical experience rather than quantitative pharmacokinetic evidence, potentially resulting in periods of inadequate or excessive immunosuppression. Therapeutic drug monitoring provides only retrospective guidance during this critical transition, while both drugs exhibit narrow therapeutic windows and significant inter-patient variability influenced by factors such as age, haematocrit, and CYP3A5 polymorphisms. The hypothesis was that population pharmacokinetic modelling could identify conversion strategies that minimise periods of under- or over-immunosuppression while accounting for patient-specific characteristics and clinical outcomes.

Methods: This retrospective service improvement project examined kidney transplant recipients who switched from tacrolimus-to-sirolimus between March 2007 and January 2024. Comprehensive clinical data was collected from electronic hospital databases including demographics, conversion strategies, therapeutic drug monitoring levels, and laboratory parameters. Population pharmacokinetic models were developed to characterise drug concentration profiles and identify factors influencing tacrolimus and sirolimus dosing requirements. Covariates including age, sex, time since transplant, and haematocrit were evaluated in the model using a stepwise approach, based on statistical significance and physiological plausibility. After establishing the final model, six different conversion strategies were simulated, including standard overlap protocols, loading dose approaches, and immediate switching scenarios.

Results: Forty-five kidney transplant recipients underwent tacrolimus-to-sirolimus conversion. The most common strategy involved initiating sirolimus while reducing tacrolimus maintenance dose by 50% for 5-7 days, though substantial protocol heterogeneity was observed. One-compartment models best described both drugs' pharmacokinetics. Age significantly influenced both tacrolimus (1.65% clearance decrease per year) and sirolimus (0.95% decrease per year) disposition, while haematocrit affected sirolimus clearance (4.1% decrease per percentage point increase). Pre-conversion tacrolimus dose strongly correlated with sirolimus maintenance requirements ($r=0.622$, $p<0.001$), likely reflecting shared metabolic pathways (Figure 1). Combined drug exposure correlated with alanine aminotransferase elevation ($r=0.536$, $p=0.004$). Mean estimated

glomerular filtration rate improved by 4.59 mL/min/1.73m² post-conversion ($p<0.001$) (Figure 2), with expected haematological changes including 13.9% reduction in white blood cells and 19.2% decrease in platelets. No acute rejection episodes occurred during the first month post-conversion. Simulations identified two optimal strategies: standard overlap (50% tacrolimus reduction with concurrent sirolimus initiation) and abbreviated overlap with loading doses, both maintaining adequate immunosuppression while minimising excessive exposure (Figure 3).

Conclusion: These findings support current practice while suggesting optimisation opportunities. Population pharmacokinetic modelling provides a quantitative framework for individualising tacrolimus-to-sirolimus conversion. Sirolimus doses should be adjusted for age and haematocrit while being guided by pre-conversion tacrolimus requirements. Conversion protocols should consider immunologic risk with comprehensive therapeutic drug monitoring before and after conversion. This model-informed approach enables safer, individualised transitions and supports development of evidence-based dosing tools for immunosuppressant transitions in renal transplantation.

WG10

CMV Prophylaxis in Renal Transplant Recipients: An Audit of Monitoring and Treatment Practices

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

Introduction

Cytomegalovirus (CMV) remains a significant cause of morbidity and mortality in transplant recipients. Effective management requires balancing prophylaxis to prevent infection against pre-emptive therapy guided by regular monitoring. Careful surveillance ensures early detection, timely intervention, and optimal outcomes, while minimising drug toxicity and resistance in this vulnerable population. We aimed to audit our current adherence to monitoring and treatment of CMV in our incident transplant population.

Methods

All patients undergoing transplantation between February 2024 and February 2025 were screened for inclusion in this audit. Patient identification was established using nursing record books, and relevant clinical and laboratory data were extracted from the Lorenzo electronic health record system. Patients were stratified according to cytomegalovirus risk into high (D+R-), intermediate (D+R+, D-R+), and low-risk (D-R-) categories. Data was systematically tabulated and analysed to assess the adequacy and robustness of the current hospital protocol.

Results

All low-risk patients remained CMV-negative within the first year, consistent with current recommendations that prophylaxis is unnecessary in this group. Among high-risk patients, all received prophylaxis; however, a breakthrough infection occurred in 16% (n = 1). In contrast, 69.2% (n=9) of intermediate-risk patients developed CMV viraemia, which all received treatment (56% asymptomatic, 33% CMV syndrome, 11% invasive disease). As per our existing unit guidelines, none of our intermediate-risk recipients received CMV prophylaxis.

Our estimated total cost of treatment, excluding blood tests and clinic visits for the 9 intermediate-risk patients, was £1080 compared with the estimated cost of prophylaxis in all 13 intermediate-risk patients of £1124.67.

Discussion

An audit of our local CMV infection rates demonstrates that almost two-thirds of intermediate-risk patients developed CMV, largely as asymptomatic viraemia. Given the high incidence of CMV infection in this cohort, a strategy of three months of prophylaxis may be justified to mitigate associated morbidity and improve long-term outcomes. A repeat audit would be required to evaluate the impact of this intervention on infection rates.

WG11

MORTALITY IN RENAL TRANSPLANT – HAS IT CHANGED OVER THE DECADES? A 15 YEAR REVIEW OF MORTALITY

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WEDNESDAY - Moderated Poster Session, HALL Q, March 11, 2026, 13:45 - 14:45

We have performed a 15 year retrospective analysis of deaths in kidney transplant recipients (KTRs) in the Southern Trust, Northern Ireland, from the period 2009 to 2024. 74 deaths were recorded, with analysis done on 49 KTRs given lack of data on others.

Methods :

Data were collected Emed Renal, NIECR and GP records. Detailed clinical records were obtainable from both the transplant centre (Belfast City Hospital) and the parent renal department (Daisy Hill Hospital).

Results :

Within this population, cancer was the most common cause of death (30%). This is followed by non-COVID19 infective deaths (27%) and COVID19 deaths (14%). Of note, only 8% of deaths were attributable to cardiac disease and there were no deaths from allograft failure (see figure 1). Median GFR one month prior to death was 35ml/min. In comparison, the UK Renal Registry 26th Annual report 2022 quoted cancer as the cause of death in 15% of KTRs, 26% due to infection and 16% due to cardiac disease.

Cancer deaths represented a very heterogeneous group of primary cancers (see figure 2) with one recorded death from Burkitt's lymphoma and no deaths recorded from skin malignancy. Infective deaths were predominantly respiratory accounting for 60% of all infective deaths (35% COVID19 and 25% non-COVID19).

Diabetic KTRs had a higher rate of infection as cause of death whereas in non-diabetic KTRs there was higher rate of cancer (see figure 3).

The prevalence of cancer and infection deaths follow a linear relationship over time with no apparent deviation between either causes of death.

During this period, the percentage of KTRs with co-existent diabetes and/or major adverse cardiovascular events (MACE) has significantly increased, representing the fact that older, more complex and multi-morbid patients are now undergoing renal transplantation. In the period 2000-2009, the mean age of time of transplantation was 55 years old with 10% KTRs having a history of MACE and 20% KTRs being diabetic. By comparison, in the period 2010-2019, the mean age of transplantation was just over 60 years old, with 35% of KTRs having a history of MACE and 47% being diabetic (see figure 4).

Conclusion :

Cancer and infection remain the predominant cause of death in KTRs. In our study population, there were zero deaths from allograft failure.

The increasing age, co-morbidities and immunosuppression of KTRs will inevitably impact on mortality data. It remains a challenge to balance the risk and benefit of immunosuppression alteration given insufficient solid data and the wide demographics of KTRs. Individualised approach with multi-specialty, patient and family involvement remain the key approach in managing KTRs with cancer.

During follow up, blood tests, urinalysis, weight and symptoms may guide towards potential malignancy however might detect cancer at a later stage. There is lack of evidence and data to support cancer screening in KTRs beyond population-based screening programmes. Limitations of this study pertain to the small population size assessed and no comparison made to the living KTRs.