	Pregnant N=20	Non-pregnant N=20
Age (years)	33.3 (4.2)	34.5 (9.25)
Ethnicity, n (%)		
European	16 (80)	12 (60)
Chinese	1 (5)	1 (5)
Black African	1 (5)	0 (0)
Black Carribean	0 (0)	1 (5)
Mixed: Asian-European	2 (10)	1 (5)
Other	0 (0)	5 (25)
Gestation (weeks)	35.8 (4.2)	
AKI Risk Score (ng/ml^2/10^3)	0.28 (1.07)	0.17 (1.96) [a]
>0.3 n (%)	10 (50)	7 (20)
>2.0 n (%)	0 (0)	0 (0)

Median and inter-quartile range given unless stated otherwise
[a] p=0.16

Table 1: Demographics and AKI Risk Scores for pregnant and non-pregnant cohorts.

women had an AKI Risk Score >0.3 ng/ml^2/10^3 compared to 35% (7/20) non-pregnant women (Table 1). There were no AKI Risk Scores above 2.0 ng/ml^2/10^3.

Conclusions: Nephrocheck AKI Risk Scores were not significantly higher in pregnant women but the study may be underpowered to show a difference. The high proportion of healthy pregnant women with AKI Risk Scores >0.3 ng/ml^2/10^3 suggestive of development of AKI Stage 2 or 3 indicates that a higher threshold for prediction of AKI may be needed in pregnancy. This observed trend supports other small cohort studies which have demonstrated high AKI Risk Scores in pregnant women without progressing to KDIGO defined AKI, regardless of pre-eclampsia diagnosis, serum creatinine or gestation at sampling, highest blood pressure or urinary protein:creatinine ratio.

Further work, including a larger validation study, is needed to explore the utility, validity and pregnancy specific thresholds for NephroCheck AKI Risk Scores in prediction of Pr-AKI.

No conflict of interest

POS-184

MATERNAL CHARACTERISTICS AND BIRTH OUTCOMES FOR MOTHERS RECEIVING KIDNEY REPLACEMENT THERAPY: AN ANALYSIS OF LINKED ANZDATA REGISTRY AND PERINATAL DATASETS OVER 22 YEARS

HEWAWASAM, E*[1,2], Davies, C[1,2], Gulyani, A[3], Li, Z[4], Clayton, P[1,2,5], Sullivan, E[4], McDonald, S[1,2,5], Jesudason, S[2,5]

[1]South Australian Health and Medical Research Institute, Australia and New Zealand Dialysis and Transplant Registry, Adelaide, Australia, [2]The University of Adelaide, Faculty of Health and Medical Sciences, Adelaide, Australia, [3]University of South Australia, School of Pharmacy and Medical Sciences, Adelaide, Australia, [4]University of Newcastle, Faculty of Health and Medicine, Callaghan, Australia, [5]Royal Adelaide Hospital, Central Northern Adelaide Renal and Transplantation Services, Adelaide, Australia

Introduction: Women receiving kidney replacement therapy (KRT; dialysis or kidney transplantation) are at an increased risk of pregnancy complications. However, there are very few studies in Australia which have compared outcomes directly with women with chronic kidney disease or women without kidney failure. We aimed to define maternal demographics and outcomes for births in transplanted mothers and dialysed mothers, compared to births occurring before a mother started any KRT (before-KRT), and mothers who never received KRT (non-KRT).

Methods: The Australia and New Zealand Dialysis and Transplant Registry (ANZDATA) was linked to perinatal datasets (which capture all births ≥20 weeks gestation) in South Australia, Western Australia, Australian Capital Territory and New South Wales from 1991-2013. Birth outcomes were compared between the four cohorts using chi-squared test or Fisher's exact test as appropriate.

Results: We analysed 2,948,084 births (1,628,181 mothers) representing approximately 50% of all births in Australia during 1991-2013 (Table 1). Transplanted mothers were older compared to dialysed mothers, mothers in the before-KRT and non-KRT cohorts. Both transplanted (4.8%) and dialysed mothers (11.1%) had higher rates of pre-existing diabetes than non-KRT cohort (0.6%), p<0.001. Mothers in the before-KRT cohort (15.5%) had significantly higher rates of pre-existing diabetes than transplanted mothers, p<0.001. Higher rate of pre-existing hypertension was also noted in dialysed mothers (41.7%), followed by transplanted mothers (24.5%), compared to mothers in both non-KRT (1.1%) and before-KRT (15.2%) cohorts, p<0.001. A higher proportion of mothers receiving KRT underwent caesarean sections similar to mothers in the before-KRT cohort, compared to mothers in the non-KRT cohort. A lower proportion of livebirth outcome was noted in dialysed mothers. Live birth outcome was considerably higher in transplanted mothers and mothers in the before-KRT cohort but not normalised compared to the non-KRT cohort. A large proportion of babies born to mothers receiving KRT and mothers in the before-KRT cohort were admitted to the neonatal intensive care unit or special care nursery. Babies born to mothers receiving KRT had lower gestational age and birthweight. These babies had lower APGAR scores, needed resuscitation, and stayed longer in the hospital.

Table 1: Maternal characteristics and birth outcomes for mothers according to KRT status at birth

Maternal characteristics and birth outcomes	Non-KRT n=2,946,640 babies n=1,628,032 mothers	Before-KRT n= 1196 babies n=761 mothers	Dialysis n=37 babies n=31 mothers	Transplant n=211 babies n=137 mothers	p-value
Maternal age, years, median (IQR)	30.0 (26.0-33.7)	29.0 (24.4-33.3)	30.4 (26.0-34.1)	33.0 (29.6-36.0)	<0.001
Caesarean section, n (%)	790,612 (43.7)	546 (63.1)	24 (75.0)	135 (73.0)	<0.001
Birth status, n (%)					<0.001
Livebirth	2,926,962 (99.4)	1147 (96.1)	35 (94.6)	204 (96.7)	
Stillbirth	18,564 (0.6)	47 (3.9)	2 (5.4)	7 (3.3)	
NICU/SCN admission, n (%)	371,764 (14.6)	458 (42.2)	24 (66.7)	96 (49.7)	<0.001
Neonatal death, n (%)	11,601 (0.4)	29 (2.4)	4 (10.8)	6 (2.8)	<0.001
Gestational age, weeks, median (IQR)	39 (38-40)	38 (35-39)	34 (31-35)	36 (33-38)	<0.001
Birthweight, grams, median (IQR)	3400 (3052-3730)	2960 (2240-3420)	2008 (1540-2440)	2580 (1910-3055)	<0.001
APGAR score 1 min					<0.001
≥7 (normal)	2,596,888 (88.4)	861 (73.2)	23 (63.9)	145 (69.1)	
<7 (low)	340,226 (11.6)	316 (26.9)	13 (36.1)	65 (31.0)	
APGAR score 5 min					<0.001
≥7 (normal)	2,875,768 (97.9)	1,082 (92.3)	31 (86.1)	185 (88.1)	
<7 (low)	60,592 (2.1)	90 (7.7)	5 (13.9)	25 (11.9)	
Needed resuscitation, n (%)	946,102 (37.4)	461 (54.6)	17 (58.6)	87 (52.4)	<0.001
Hospital length of stay for baby, days, median (IQR)	4 (2-5)	6 (4-15)	20 (6-29)	6 (5-18)	<0.001

Abbreviations: KRT, Kidney Replacement Therapy; NICU, neonatal intensive care unit; SCN, special care nursery; IQR, interquartile range; APGAR, appearance, pulse, grimace, activity and respiration score.

Conclusions: This is the first study to directly compare mothers receiving KRT to before-KRT and non-KRT cohorts. One of the novel aspects of the findings was the fact that birth outcomes in before-KRT cohort were similar to that of transplanted mothers, better compared to dialysed mothers, but worse compared to the non-KRT cohort. These findings will underpin pregnancy counselling and shared decision making.

No conflict of interest

POS-185

POINT OF CARE TESTING FOR CAPILLARY CREATININE CONCENTRATION IN PREGNANT WOMEN AT LOW AND HIGH RISK FOR PREGNANCY-RELATED ACUTE KIDNEY INJURY

MARTIN, H*[1], Kelly, C[2], Dan, S[3], Smith, P[4], Kametas, N[1], Bramham, K[2], Clark, K[5]

[1]King's College Hospital NHS Foundation Trust, Women's Health, London, United Kingdom, [2]King's College London, Women and Children's Health, London, United Kingdom, [3]University College London Hospitals NHS Foundation Trust, Women's Health, London, United Kingdom, [4]King's College London, Women's Health, London, United Kingdom, [5]King's College London, Women & Children's Health, London, United Kingdom

Introduction: Pregnancy related acute kidney injury (PR-AKI) is associated with increased morbidity and mortality. Diagnosis remains challenging due to gestational physiological adaptations affecting serum creatinine and a lack of definitions validated perinatally. Point of care testing (PoCT) for creatinine has potential to enhance identification and triaging of women at risk of PR-AKI, and may in turn improve prevention, diagnosis and timely treatment. Before implementing creatinine PoCT within maternity care, accuracy must be established in both low-and high-risk pregnant women. This study aimed to i) perform a validation study of PoCT for capillary creatinine using the StatSensor Xpress Creatinine analyser (Nova Biomedical) across all gestations in low-risk women with normal renal function ii) to develop a model to improve PoCT accuracy in low-