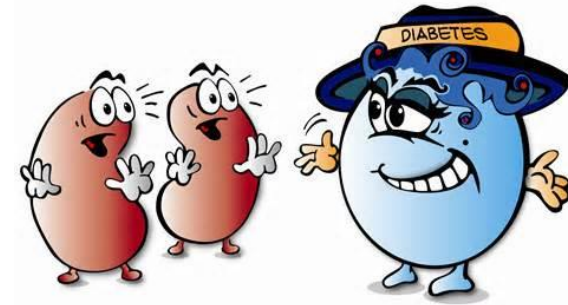


Other Questions

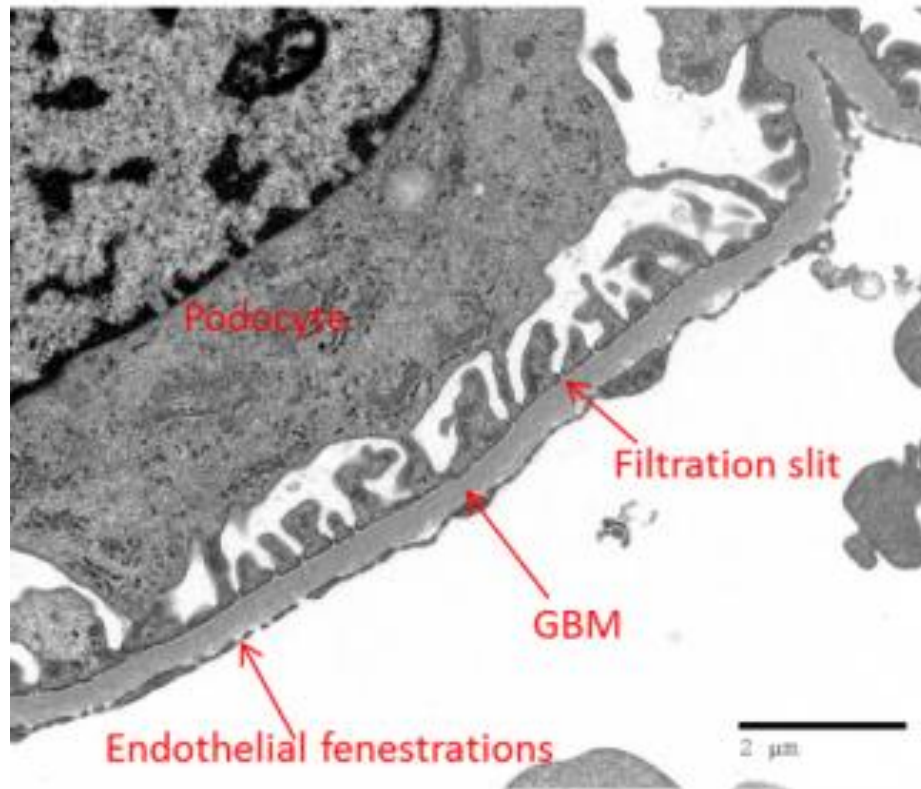
Pathophysiology of DKD



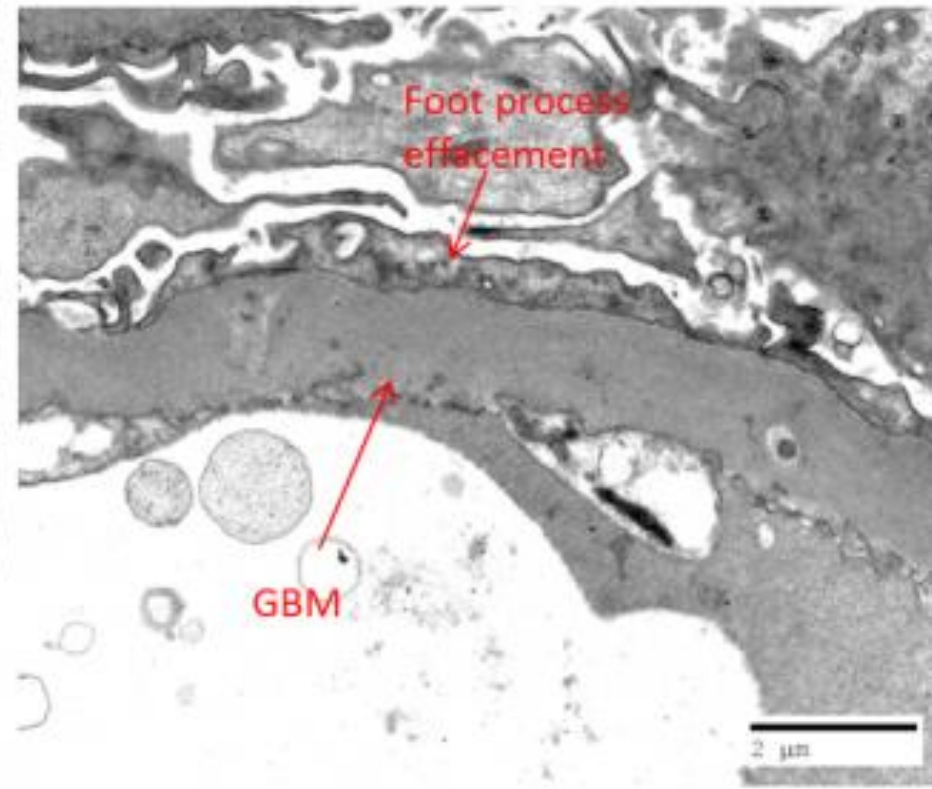
- Hyperfiltration
 - Haemodynamic changes
 - RAAS activation
 - Afferent arteriole dilatation
- Glucose-dependent shear stress
- Renal hypertrophy
 - Hyperglycaemia stimulates IGF-1, PDGF, VEGF & Ang II
- Glomerular enlargement

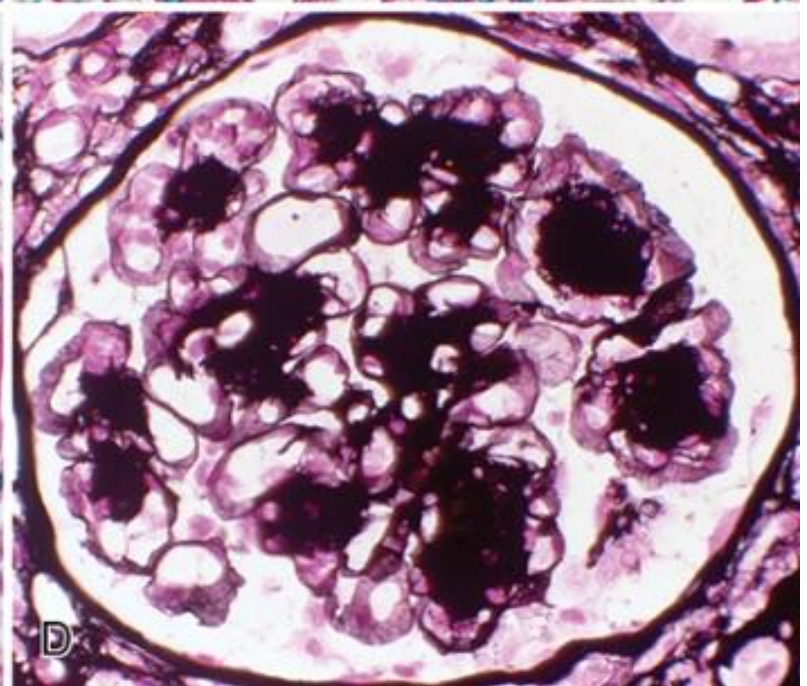
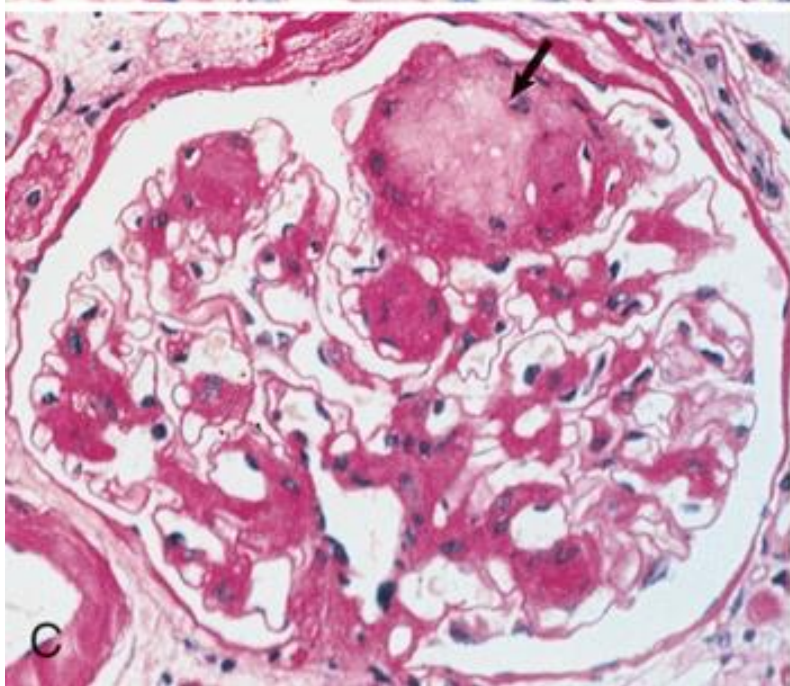
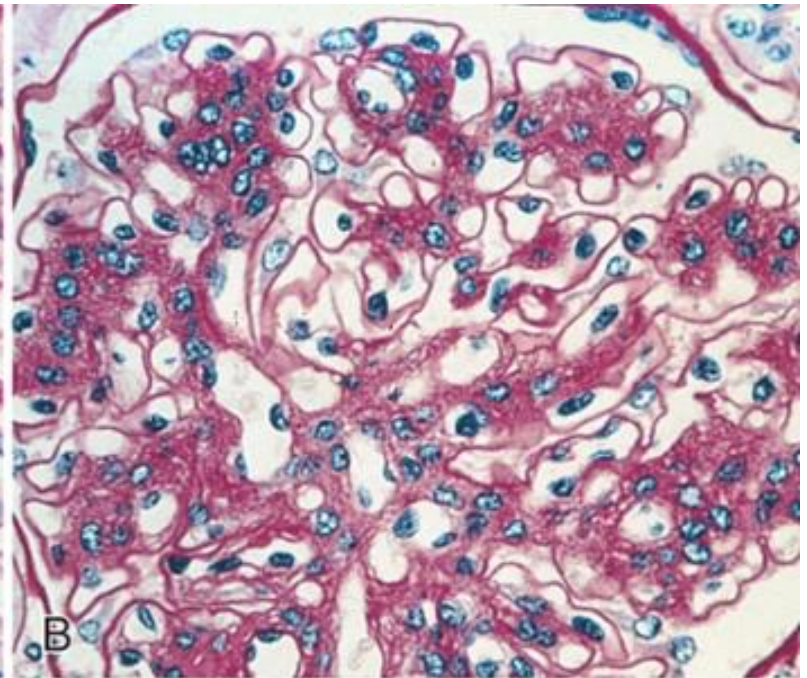
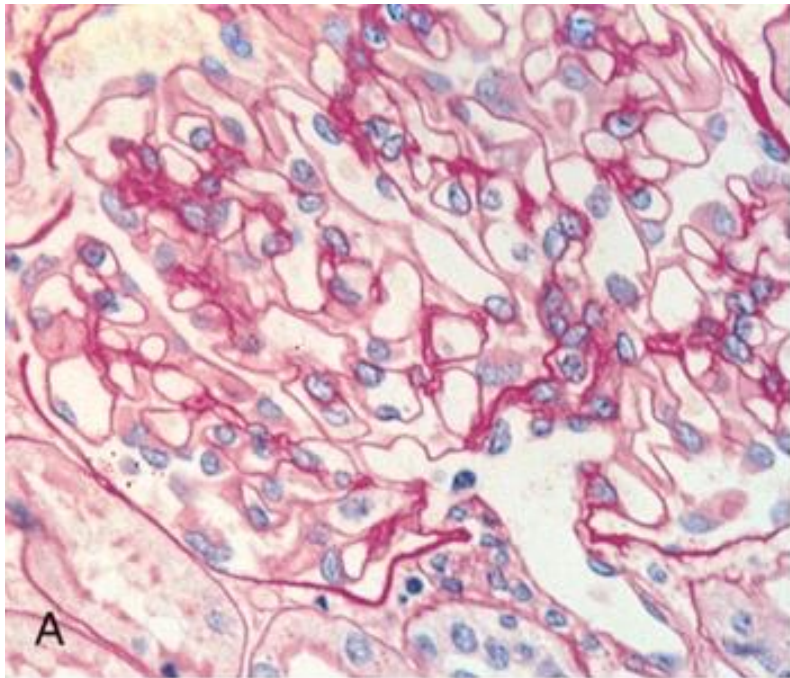
Podocyte Effacement

Non-diabetic

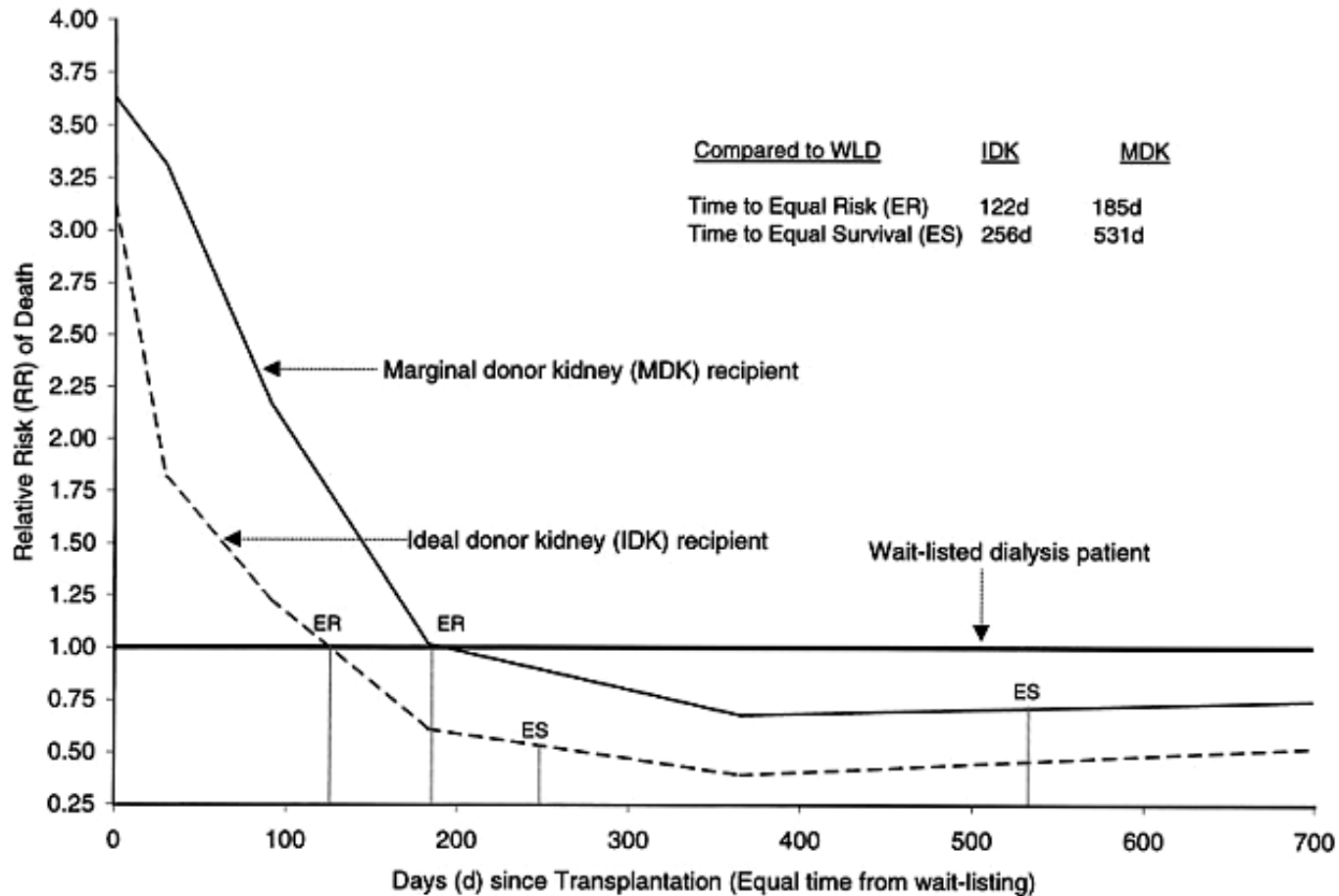


Diabetic





Transplantation Benefits



Transplant Register Waiting times

- Average wait for Kidney only – approx 500 days
- Longer for BAME recipients – aim for LDTx as better outcomes

Tier grouping

Tier A	Patients with matchability score = 10* or Patients with 100% calculated reaction frequency* or Patients that have accrued 7 years of waiting time
Tier B	All other eligible patients

*(based on comparison with pool of 10,000 donor HLA types on national database)

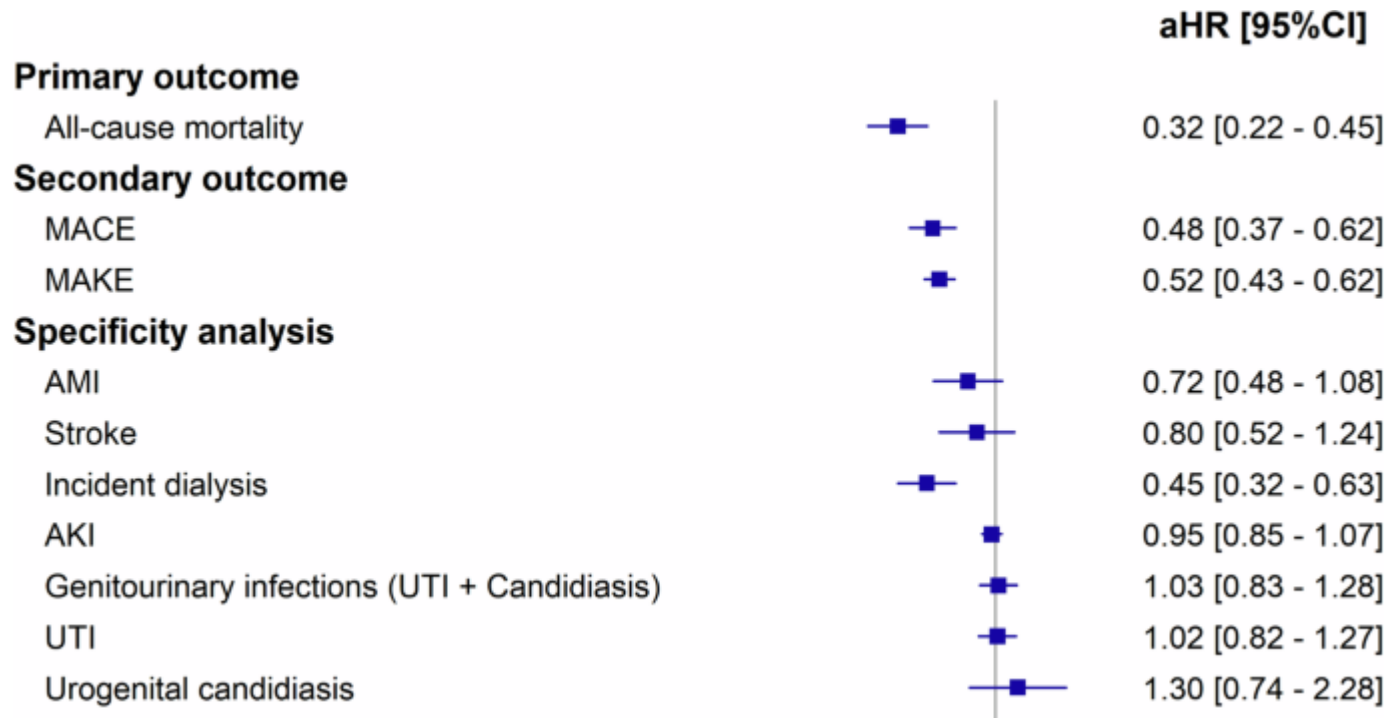
Tier A includes kidney only, simultaneous kidney/pancreas (SPK) and simultaneous kidney/islet (SIK) patients meeting the criteria. Patients waiting for a SPK or SIK are eligible to accept the offer of a kidney only. Within Tier A, patients are prioritised according to matchability score and waiting time.

Tier B includes kidney only patients. Within Tier B, patients are prioritised according to a points-based system (highest score first), based on 8 elements, these include:

- Waiting time from earliest of start of dialysis or activation on the list
- Donor-recipient risk index combinations
- HLA match and age combined
- Location of patient relative to donor
- Matchability
- Donor-recipient age difference
- Total HLA mismatch
- Blood group match

SGLT2i in Transplant patients

- Assessment of primary and secondary outcomes, specificity analysis, and outcome controls in SGLT-2i users ($n = 1970$) versus non-users ($n = 1970$) among diabetic KTR.



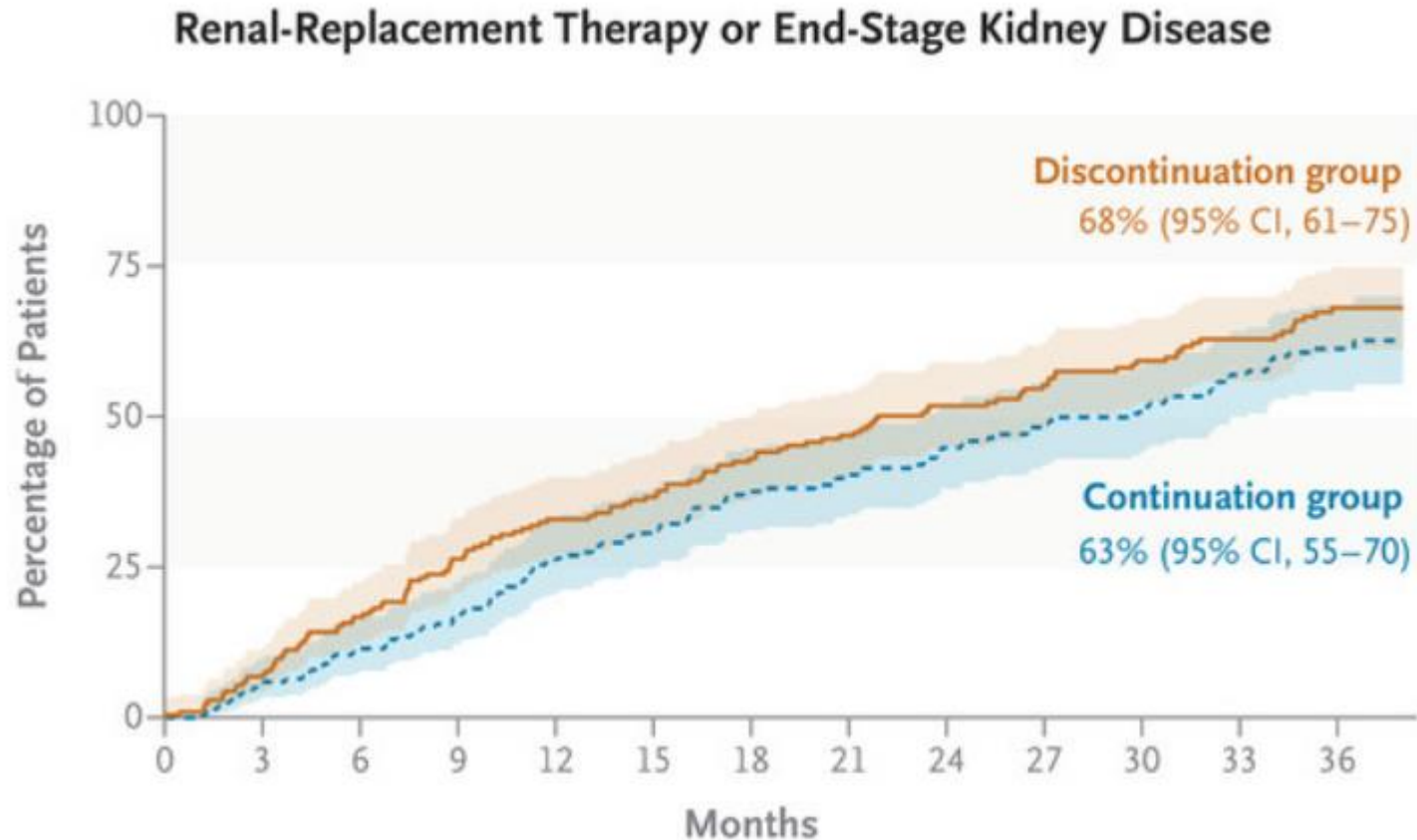
Stopping ARB/ACEi?

- Variable practice across different trusts
- Stop if developing refractory hyperkalaemia (consider using Lokelma to allow continuation)
- Some would argue continuing even down to starting dialysis depending on indication for initiation i.e. post-MI remodeling, hypertension

STOP ACEi

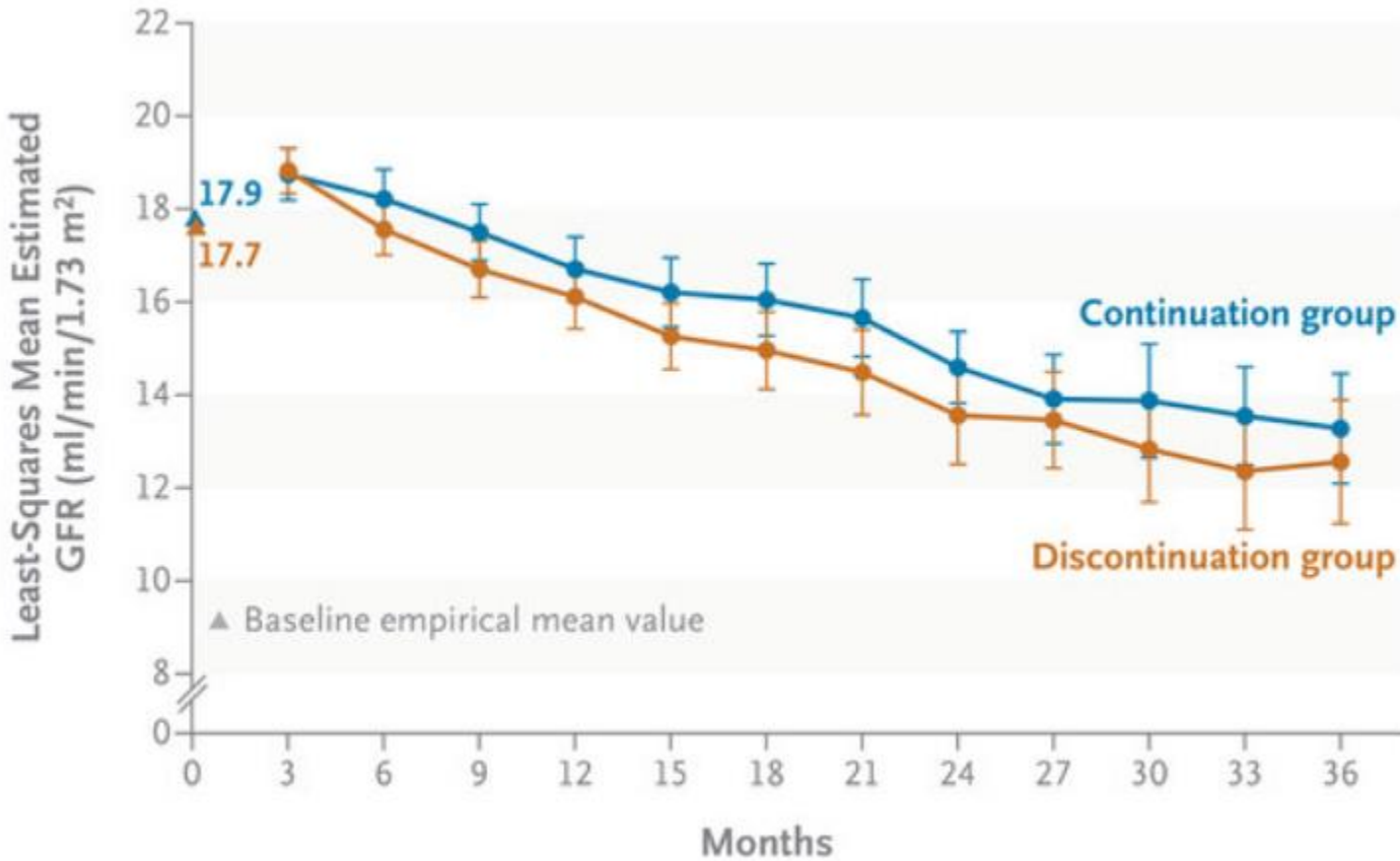
- 411 patients
 - eGFR < 30 (median 18)
 - randomized to continue RAASi or stop
 - followed up 3 monthly for 3 years
 - primary outcome was eGFR at 3 years
- i.e. no significant difference between groups.
- Adverse events were the same in both groups.

STOP ACEi

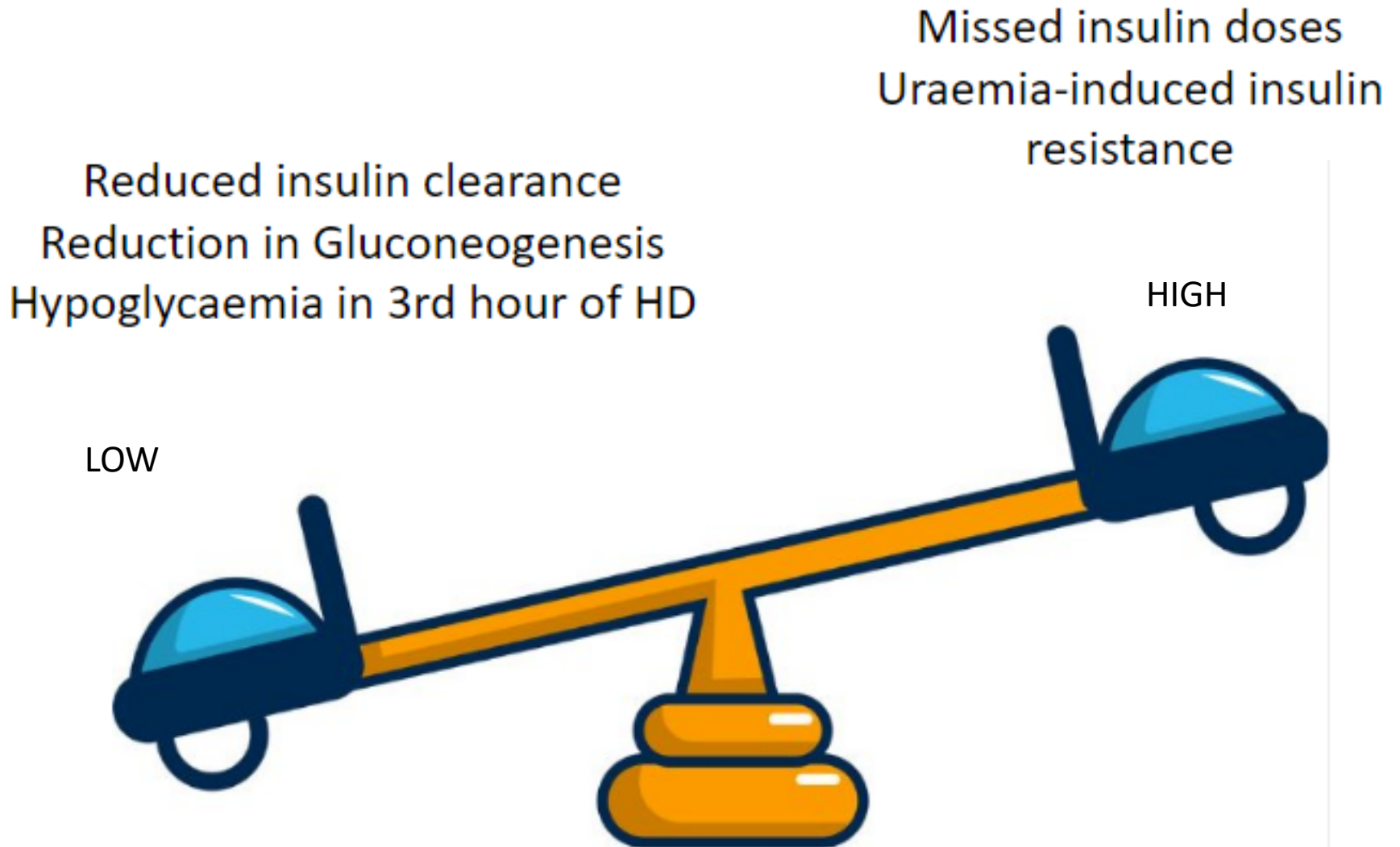


Bhandari, Sunil, et al. STOP-ACEi trial. *Nephrology Dialysis Transplantation* 31.2 (2016): 255-261.

Estimated Glomerular Filtration Rate at 3 Yr



Glucose in Dialysis



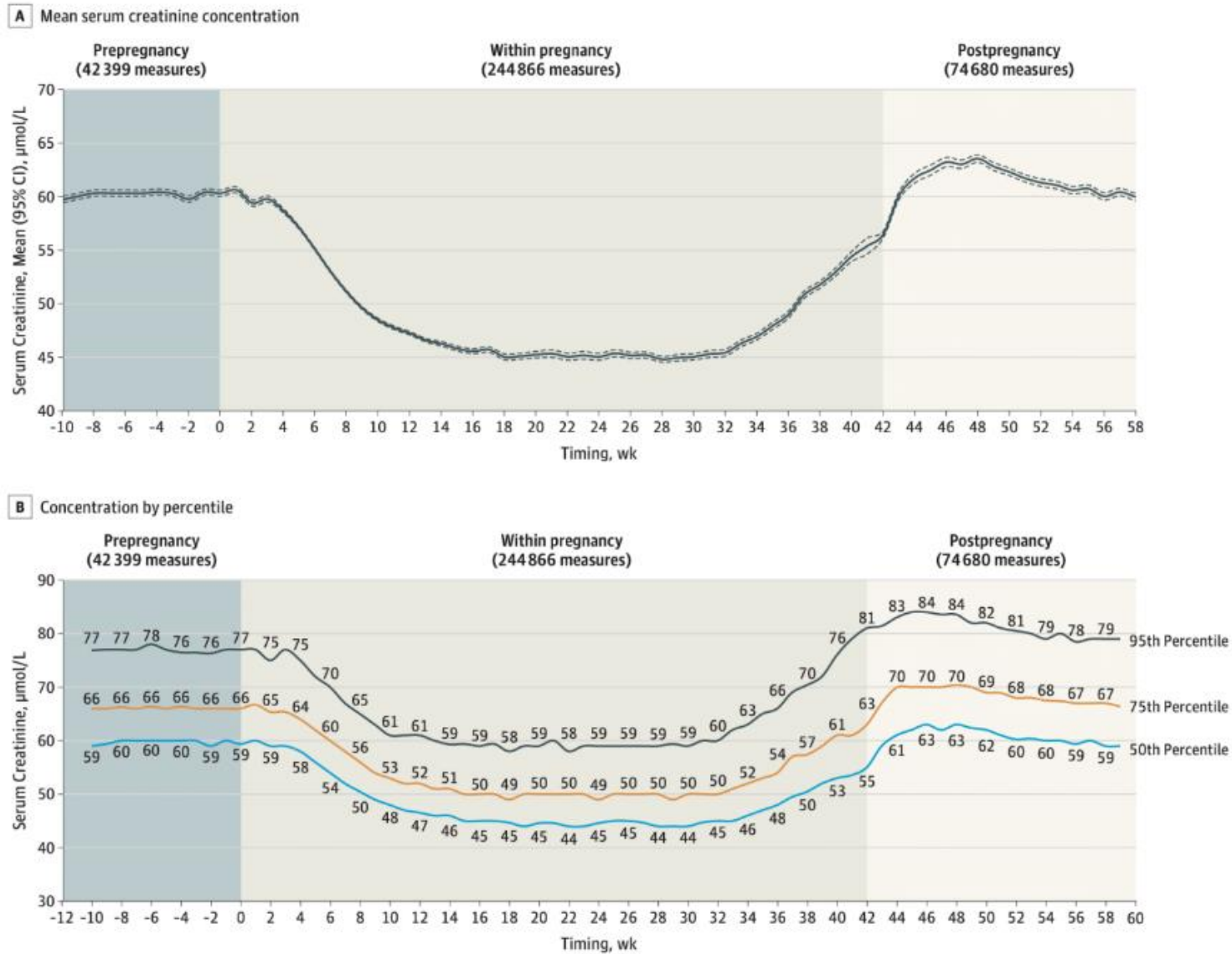
Peritoneal Dialysis – ISPD guidelines

- HbA1c monitored every 3 months (1C)
- HbA1c be targeted around 7% (53 mmol/mol) in PD patients with diabetes (2D)
 - may be up to 8.5% (69 mmol/mol) in older PD patients with diabetes. (2D)
- Once daily icodextrin be considered as the long-dwell dialysis solution in PD patients with diabetes for better glycemic control. (2C)

Pregnancy, DM and Renal disease

- Extremely specialised
- Must involve multiple specialties and requires frequent monitoring

Figure. Mean Serum Creatinine Concentrations With 50th, 75th, and 95th Percentile Values Among 243 534 Women With Singleton Pregnancies and Apparently Healthy Renal Function



A, Dashed curves indicate upper and lower 95% CI bounds. B, Values adjacent to each curve indicate the percentile-specific corresponding serum creatinine values at each time point. To convert creatinine values to mg/dL, divide by 88.4.

Pregnancy & Renal disease

Foetal and maternal complications

anaemia	placental detachment	polyhydramnios
infections	haemorrhage	low birth weight
premature rupture of membranes	uncontrolled arterial hypertension	small for gestational age
preeclampsia/ eclampsia	need for a caesarean section	miscarriage
pre-term birth	maternal death	stillbirth

Recommendations: Goals during pregnancy

- Close control of urea <12.5mmol/L
- Phosphate and magnesium supplementation
- Bicarbonate (>20 mmol/L)
- Avoidance of abnormal K⁺ and Ca⁺⁺
- Blood pressure <140/90, avoid intradialytic BP <120/70
- Frequent weight and fluid assessment
- Anaemia (>10 g/dL). Iron and EPO
- Heparin as needed during HD
- LMWH if urine PCR >150mg/mmol – high thrombo-embolic risk
- Aspirin for pre-eclampsia prevention
- Folate and multi-vitamins supplementation
- Adaption of protein to 1.5-1.8 g/kg(or 20 g supplementation) for foetal growth and sufficient calorie intake
- Avoidance of teratogenic drugs
- Diabetes HbA1c<6.5–7 %

Dialysis in pregnancy. BestPractRes ClinObstetGynaecol. 2019 May;57:33-46

Intensive dialysis and pregnancy. HemodialInt. 2016 Jul;20(3):339-48

Pregnancy during dialysis: still a challenge to get there, but worth the effort. NephrolDial Transplant. 2015 Jul;30(7):1053-5

MDT management

The Obstetrics Nephrology MDT

