Guidelines for the evaluation of living donors for Paired Kidney Donation (PKD)

The purpose of these guidelines is to define the appropriate information and/or investigations that must be completed for consideration for entrance into the Australian Paired Kidney Exchange Program (AKX).

AKX does not evaluate donor suitability but rather confirms that the respective Transplant Centre has evaluated and accepted the donor(s) as a suitable candidate.

Step 1: Initial evaluations required prior to registration in AKX Program:
The overall purpose is to ensure that the potential donor is in good health, has normal kidney function and structure and is not a risk to the recipient with respect to transmission of viral or other infections. The following information can be collected and the necessary investigations requested at the first visit with the nephrologist.

A. Medical history and physical examination including:
   - Age
   - Gender
   - Height, weight (BMI), blood pressure and heart rate
   - Relationship to the potential recipient
   - Reason for incompatibility (ABO or positive crossmatch)
   - History of hypertension:
     - Hypertension no/yes
     - On current medication no/yes
     - If yes, no. of drugs (1, 2, ≥3)
     - The system will not accept a registration for any donor with treated hypertension on ≥3 drugs
   - Glycaemic status:
     - Impaired fasting glucose no/yes
     - Impaired glucose tolerance no/yes
     - The system will not accept a registration for any donor with diabetes
   - History of malignant cancer:
     - Cancer no/yes
     - The system will not accept a registration for any donor who had a previous history of cancer other than: Colon cancer Dukes A ≥5 yr ago, Non-melanoma skin cancer, Carcinoma in situ of the cervix
   - History of renal stone disease:
     - Previous history no/yes
     - If yes, recurrent no/yes, if yes, when last
     - The system will not accept a registration for any donor who had a previous history of recurrent renal stone disease.

B. Lab tests:
   - Blood group, UEC, LFT, BSL, FBP with differential, coagulation profile

C. Urine tests:
   - Urinalysis and culture, urine protein/creatinine (or albumin/creatinine ratio)

D. Virology:
   - CMV, EBV, HIV, HBV & HCV, Syphilis
     - The system will not accept a registration for any donor who tests positive for the Hepatitis B surface antigen, Hepatitis B core antibody, or Hepatitis C antibody

E. Other tests:
   - Renal Ultrasound, CXR
   - ECG
STEP 2: Additional evaluations required prior to registration in AKX Program:

F. Cancer screening:
   In individuals aged >50 years:
   ➢ Bowel cancer testing kit
   Women aged >50 years:
   ➢ Pap smear and mammogram

G. Tissue typing:
   ➢ HLA typing as per agreed criteria

H. Renal function and anatomy:
   ➢ CT Angiogram
   ➢ Radioisotope GFR as measured by appropriate technique must be ≥80 ml/min
     o Method must be 51Cr-EDTA or 99Tc-DTPA
     o Split function range of 45%-55% if nGFR<100.

A radioisotope GFR of at least 80 ml/min has been agreed to satisfy the minimum requirement of acceptable quality of the donated kidney. The GFR value is an absolute value and NOT per body surface area, as it is a measure of the adequacy of the kidney for a recipient, not the safety for its removal from the donor which has been assessed separately. It eliminates the potentially perceived bias that two donor kidneys may differ because of age and body size and, as such, exchanges could not be considered “equal”.

STEP 3: Additional evaluations prior to registration in AKX Program:

I. Mandatory specialists consults:
   ➢ Psychosocial evaluation
   ➢ Surgical evaluation

J. Optional investigations / consults:
   ➢ Cardiology consult as indicated
   ➢ Pulmonary function tests if donor has significant smoking history/COPD

All of the above assessments must be complete prior to activation on the AKX program.

STEP 4: Annual nephrology review/tests required for maintenance on Program:

➢ Medical history/physical examination/updated medication list
➢ UEC, LFT, BSL
➢ FBP
➢ Urinalysis/protein-creatinine ratio
➢ Other consults as indicated

Confirmation of compliance with these tests and reviews at each 12-month anniversary of entry into AKX must be provided to the Program Coordinator by the local transplant unit.