Guidelines for the Evaluation of Living Donors for the NZKE Programme

The purpose of these guidelines is to define the appropriate information and/or investigations that must be completed for entrance into the New Zealand Kidney Exchange Programme (NZKE), where they are treated/considered to be non-directed donors.

There are two broad goals of evaluation of living donors for NZKE:

1) To ensure donors are assessed as suitable for donation from the point of view of the donor, in terms of current health, future risks to kidney health, operative risks, and informed consent. This process is the same as that undertaken for directed living kidney donors. The unit that will perform the donor surgery therefore undertakes the testing and assessment of the donor in accordance with the unit’s protocol, and the donor must satisfy that unit’s criteria for acceptance as a donor.

2) To ensure that the potential donor will provide an acceptable kidney for the recipient. To assess this, donors entering the exchange must meet agreed minimum standards of health, has assured normal kidney function and structure and is not a risk to the recipient with respect to transmission of disease including viral or other infections and transmissible malignancies.

Following a match, NZKE will provide key information to the recipient’s team on relevant clinical features of the donor that might materially affect the outcome of transplantation. This information should be discussed with the recipient, in a generic manner to avoid identification of the donor, in order to obtain informed consent.

Acceptance into the NZKE is dependent upon the following data being provided. It is expected that donor suitability assessment must be carried out according to these accepted criteria.

**Exclusion criteria are listed at the end of the document.**

**Step 1: Initial evaluations required prior to registration in NZKE Programme**

**A. Medical history and physical examination including:**

- Age
- Gender
- Height, weight (BMI),
- Relationship to the potential recipient
- Reason for referral (ABO or positive crossmatch)
- History of hypertension (no/yes), on current medication (no/yes) If yes, number of drugs
- Glycaemic status: impaired fasting glucose (no/yes), abnormal HbA1C (no/yes)
- History of malignancy (no/yes), if yes give details
- History of renal stone disease (no/yes), if yes, recurrent? (no/yes), give details
- Completion of a health / risk assessment questionnaire
B. Blood tests:
- Blood group (Group A donors are required to be subtyped), U and E’s, LFT, BSL, HbA1c, FBC with differential, coagulation profile

C. Urine tests:
- Urinalysis and culture
- Urine PCR (<30 mg/µmol)

D. Virology:
- CMV, EBV, HIV, HBV (including Hep B core antibody) & HCV, Syphilis

E. Other tests:
- CXR
- ECG

Step 2: Additional evaluations required prior to registration in NZKE Programme

F. Tissue typing:
- HLA typing

G. Renal function and anatomy:
- CT Angiogram – refer to Attachment for recommended guidelines
- Radioisotope GFR as measured by appropriate technique must be ≥80 ml/min
  - Method must be 51Cr-EDTA or 99Tc-DTPA by slope-intercept technique

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.

- Renal scintigram technique to assess split renal function
  - Split function range should be 45% - 55%, if nGFR<100

The combination of radioisotope GFR and nuclear split function criteria eliminate 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”. A split function <45% - >55% is not an exclusion of donor acceptance, as long as the single kidney function of the donated organ is satisfactory (total measured GFR x single kidney percentage >40ml/min).

H. Cancer screening:
- Cancer screening as per national guidelines for the general population
Step 3: Additional evaluations prior to registration in AKX Programme

I. Mandatory specialists consults:
   ➢ Surgical evaluation

Psychosocial evaluation according to normal unit practice.

All of the above assessments must be completed prior to activation on the NZKE Programme.

Step 4: Annual nephrology review/tests required for maintenance on Programme

➢ Medical history/physical examination/updated medication list
➢ UEC, LFT, BSL, FBC
➢ HIV, HBV, HCV, Syphilis, and CMV/EBV as indicated (not necessary to repeat if previous positive CMV or EBV serology)
➢ Urinalysis/protein-creatinine ratio
➢ Other consults as indicated
➢ Cancer screening up to date according to national recommendations.
Exclusion criteria for the NZKE program

Any of the following will not be accepted into the NZKE system, for clinical reasons:

**Age** - A donor older than 70 years of age (due to increasing risk of contraindications to donation with age)

**History of hypertension** - Any donor with treated hypertension on ≥ 3 drugs

**Glycaemic status** - Any donor with diabetes

**History of malignancy** - 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** - Any donor who had a previous history of recurrent renal stone disease

**Laboratory testing:**

**Proteinuria** - Any donor who has urine protein/creatinine ratio >30 mg/mmol

**Virology** - Any donor who tests positive for HIV, Hepatitis B surface antigen or Hepatitis C antibody

**Renal function and anatomy:**

**CT angiogram** - Any donor with 3 renal arteries or 2 renal artery one of which has early branching <15mm from the aorta on both sides

**Radioisotope GFR** - Any donor with nGFR <80ml/min not corrected for BSA