New Zealand Kidney Allocation Scheme. (Version: May 2013).

GENERAL

This algorithm is used for the allocation of all deceased donor kidneys and altruistic (non-directed) live donors. The algorithm was designed by (and is reviewed by) the Renal Transplant subcommittee of the National Renal Advisory Board. The NZ renal physicians and transplant surgeons have agreed on the algorithm. The algorithm is run at the New Zealand Blood Service Tissue Typing laboratory in Auckland. All allocations are audited.

All deceased donor kidneys are allocated on a NZ-wide basis; altruistic kidneys are allocated to recipients in the Transplant Unit at which the live donor retrieval is performed.

Deceased donor kidneys are retrieved by Organ Donation NZ, who are responsible for contacting transplant teams, offering of kidneys, transport of kidneys.
DCD donor – agreed that where possible kidneys will be allocated to 2 separate transplant centres to ensure lowest possible cold ischaemia time.

Extended criteria donors. Donors are classified this way if they are older than 55 years age, have a history of hypertension, diabetes, renal disease or any other concerns. A wedge retrieval biopsy is taken from each kidney, these are processed in the A+ histopathology laboratory at ADHB and reviewed by the on-call pathologist. Scores are as described by Remuzzi (with the modification that "0" is scored for up to 5% presence of any of the indices). Scores 0-3 kidneys offered as single transplants. Scores 4-6 offered as dual transplants. Scores 7 and over, vascular score greater than 2 not used.

There is no facility for urgent listing.

Waiting time points are accrued from the date of listing for recipient on dialysis. Pre-emptive listing is allowed but recipients are not given any waiting time points.
Where a transplanted kidney has primary non-function or very early loss (after discussion and agreement at RTsC) the recipient will retain their original listing date.

Kidneys must be offered to recipients in order of algorithm; where kidney is not transplanted into recipient reason must be supplied for audit. Left kidney goes to top ranked recipient unless specific reason otherwise.

Amendment 2103. Audit has shown that the number of kidneys allocated on Rank 1 has increased to about 40%, this is well over the intention of 25-30%. Modelling has suggested that modifying the algorithm to exclude HLA-DR mismtaches on Rank 1 will rectify this issue.

ALGORITHM

1. Where another life-preserving organ (heart, liver, lungs) is to be offered to a recipient a kidney will be allocated to that recipient on request of the appropriate transplant team. Must be crossmatch negative and have no significant donor specific antibodies.

2. Combined kidney-pancreas transplants are allocated as priority (maximum of 4 transplants per year – with some ability to roll over from year to year)

   - Only blood group identical (except A to AB).

   - Date of listing.

   - Must be crossmatch negative and have no significant donor specific anti-HLA antibodies.

3. Rank 1. The purpose of this rank is to allocate kidneys with a low number of HLA mismatches.

   - Blood group identical (except A to AB). 0 and 1 HLA mismatch blood group compatible.

   - Must be crossmatch negative and have no significant donor specific anti-HLA antibodies.

   - All patients 6000 points

   - HLA mismatches

     - **Minus 2200 points each HLA-DR mismatch**

     - Minus 900 points each HLA-B mismatch

     - Minus 800 points each HLA-A mismatch

   - If score less than 4000 points (2 mismatchs) recipient excluded

     - Plus 200 points if recipient younger than 15 years

   - Waiting time

     - Plus 1 point per month on waiting list.

   - Total (ties separated by random number generation)

4. Rank 2. The purpose of this rank is to allocate kidneys to the longest waiting recipient with an acceptable degree of mismatch.

   - Blood group identical, except that A kidneys can be allocated to AB recipients when there are more than 3 AB recipients on list.

   - Must be crossmatch negative and have no significant donor specific anti-HLA antibodies.

   - All patients 2000 points

     - Plus 200 points if 1 HLA-DR mismatch, plus 300 points if 0 HLA-DR mismatch

     - Plus 200 points if recipient younger than 15 years

     - Plus 3 points per month on waiting list

   - Total (ties separated by random number generation)

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