# New Zealand Pancreas Allocation Scheme

Pancreases are transplanted in NZ as a treatment for type 1 diabetes. Prior to 2021, pancreas allocation was embedded in the New Zealand Kidney Allocation Scheme (NZKAS) because most pancreases are used in NZ as part of simultaneous pancreas and kidney transplantation (SPK).

In a minority of cases, pancreases are transplanted with other solid organs from the same donor, or as individual organs. To improve transparency, and to balance clinical need of patients undergoing different transplant types, the NZPAS was developed separately.

The National Renal Transplant Leadership Team (NRTLT) provides clinical governance oversight and review of the pancreas allocation scheme.

All pancreas transplants are undertaken in Auckland by the Auckland Renal Transplant Group (ARTG).

NRTLT consults other groups with an interest in pancreas transplantation in NZ. The algorithm is run at the New Zealand Blood Service Tissue Typing laboratory in Auckland. All allocations are audited.

## ELIGIBILITY

ARTG are responsible for assessing patients for pancreas transplantation eligibility (either together with kidney transplantation as SPK, as part of another combined solid organ transplantation, or as a pancreas alone transplant). Referrals are received therefore from specialist physicians caring for patients with type 1 diabetes with or without end stage organ failure from around NZ.

Patients are eligible for pancreas transplantation (with or without another solid organ) if, in the opinion of the ARTG clinicians:

1. Successful pancreas transplantation is likely to result in independence of exogenous insulin administration, AND
2. Elimination of exogenous insulin administration is of high clinical value to the patient, due to their particular circumstances, AND
3. Acute surgical risk from pancreas transplantation is low

Patients who are eligible for the simultaneous pancreas and kidney deceased donor waiting list may be listed preemptively (before starting maintenance dialysis, either for the first time, or after failure of a prior kidney transplant) where they have chronic renal failure, with estimated or measured GFR < 15 ml/min/1.73m2, AND progressively falling eGFR, such that renal replacement therapy is estimated to be required shortly, e.g. within the next 6 months

Patient who are eligible for pancreas transplantation with another solid organ are eligible for listing at the point they are eligible for listing for the other solid organ.

## ALLOCATION

All deceased donor pancreases donated are allocated on a NZ-wide basis.

The retrieval of deceased donor pancreases is coordinated by NZ Blood and Organ Service, who are responsible for contacting transplant teams, offering organs, and transport of pancreases.

A decision to accept or decline a pancreas offered by ODNZ is made by the ARTG physician, after consultation with other members of ARTG, and other specialist teams, prior to discussion with the patient.

**Prioritized Listing**

Prioritized listing is available for use where there are individual clinical circumstances such that it is agreed that prioritization of an individual is, on balance, of sufficient clinical benefit to outweigh a more equitable approach allowing them to wait until they are the longest waiting patient on tier 2.

ARTG determine suitability for prioritized listing, in consultation with other relevant clinicians.

ARTG will intermittently review the indications for prioritized listing if transplantation has not occurred to ensure they remain valid.

Prioritized listing is available for:

1. A recipient identified as “highly sensitized” if all of the following apply at the point of activation, or subsequently
2. they have high levels of HLA antibodies, as defined by the Medical Director of the NZPAS or their delegate, and
3. they are dependent on a negative cross match (either actual or virtual) prior to proceeding to transplant (e.g. simultaneous kidney and pancreas transplantation)
4. Other clinical circumstances, including awaiting another solid organ (eg liver) where delay in transplantation is significantly detrimental to the individual.

Where there are two or more prioritized listed individuals, planned order of allocation will be determined by ARTG.

**Optional Simultaneous Pancreas Transplantation**

In some circumstances, and by agreement with the patient and other clinical teams involved, patients undergoing other solid organ transplantation may be listed for optional simultaneous pancreas transplantation. In this circumstance, where the other solid organ transplant is available, but there is no pancreas to allocate, transplantation of that solid organ without pancreas transplantation may proceed, at the discretion of the other solid organ transplanting team. Patients transplanted in this circumstance are removed from the pancreas waiting list, but could be subsequently considered for pancreas transplantation where clinically appropriate.

Waiting time is accrued from date of first activation on the list (or first date of activation subsequent to a previously failed pancreas transplant).

Where an available pancreas is not transplanted into a recipient in allocation order, a reason must be supplied for audit.

## ALGORITHM

**Tier1:** Prioritized listing **as defined** (e.g. highly sensitized recipients, other simultaneous solid organs).

**Tier2:** All other pancreas recipients (with or without other solid organs, including optional)

* Only blood group identical (except A to AB).
* Allocation by waiting time (longest first).

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**Version History**

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