

# Australia & New Zealand Pancreas Transplant Registry Report 1984-2011

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*Southern Health*



This report is a compilation of data provided by the three current Pancreas transplant units in Australia and New Zealand: Auckland Renal Transplant Group, New Zealand; National Pancreas Transplant Unit Monash Medical Centre, Clayton, Victoria, and National Pancreas Transplant Unit, Westmead Hospital NSW Australia. The registry is funded in part by a grant from the Commonwealth Department of Health and Ageing.

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Data included in this report was extracted from RISC (Renal Information System Catalogue) on the 11<sup>th</sup> May, 2012. Please note some data fields were incomplete at the time of data extraction.



## Summary

- ▲ 556 Pancreas transplants have been performed in Australia and New Zealand (ANZ) from 1984-2011 (Excluding Islet transplants)
- ▲ In 2011, 30 transplants were performed:  
Auckland (3), Monash (7), Westmead (20).  
Transplant by category: SPK (30), PTA (0), PAK (0)
- ▲ From 2002-2011, 48 Islet transplants have been performed in 20 patients.

## Glossary

- ▲ SPK - Simultaneous Kidney Pancreas Transplant
- ▲ PTA - Pancreas Transplant Alone
- ▲ PAK - Pancreas after Kidney Transplant
- ▲ ITA - Islet Transplant Alone
- ▲ BD - Bladder Drained Pancreas
- ▲ ED - Enteric Drained Pancreas



## Introduction

The Australia and New Zealand (ANZ) Pancreas transplant data has been obtained from the transplant centers in Auckland Renal Transplant Group (Auckland), Monash Medical Center (Monash) and National Pancreas Transplant Unit at Westmead Hospital (Westmead). Auckland commenced in 1998. Data has also been obtained for comparison from ANZDATA.

There have been 556 pancreas transplants in Australia and New Zealand (ANZ) between the dates of November 1984 to December 2011 excluding Islet transplants. No activity was recorded in 1985 and 1986.

There have been 48 Islets transplants in Australia between the dates of January 2002 to December 2011.

## Analysis

A functioning pancreas graft is defined as insulin independent recipients. Kidney grafts are defined as functioning if recipients are dialysis free. All causes of death are included in the survival analysis. Patients receiving a second transplant after failure of the first graft are censored for Patient survival for the first graft at the date of the second graft. The aim of this report is to record all pancreas transplant activity in Australia and New Zealand.

The distribution of Patient survival, Kidney graft survival and Pancreas graft survival was analysed by four periods (1987-1996, 1997-2000, 2001-2004 and 2005-2011), in pancreas and kidney (SPK) recipients.

Kaplan-Meier survival curves were used to illustrate the survival distributions. The statistical software package, STATA® for Windows Release 10.0 was used for all analyses.

## Number of Pancreas transplants

Figure 1 illustrates the number of pancreas transplants (excluding islets) in ANZ between 1984 and 2011. The transplants were performed in Westmead (372), Monash (146), Auckland (38), RPA (1), RMH (1), QEH (1). In 2011, 30 transplants were performed: Auckland (3), Monash (7), and Westmead (20).

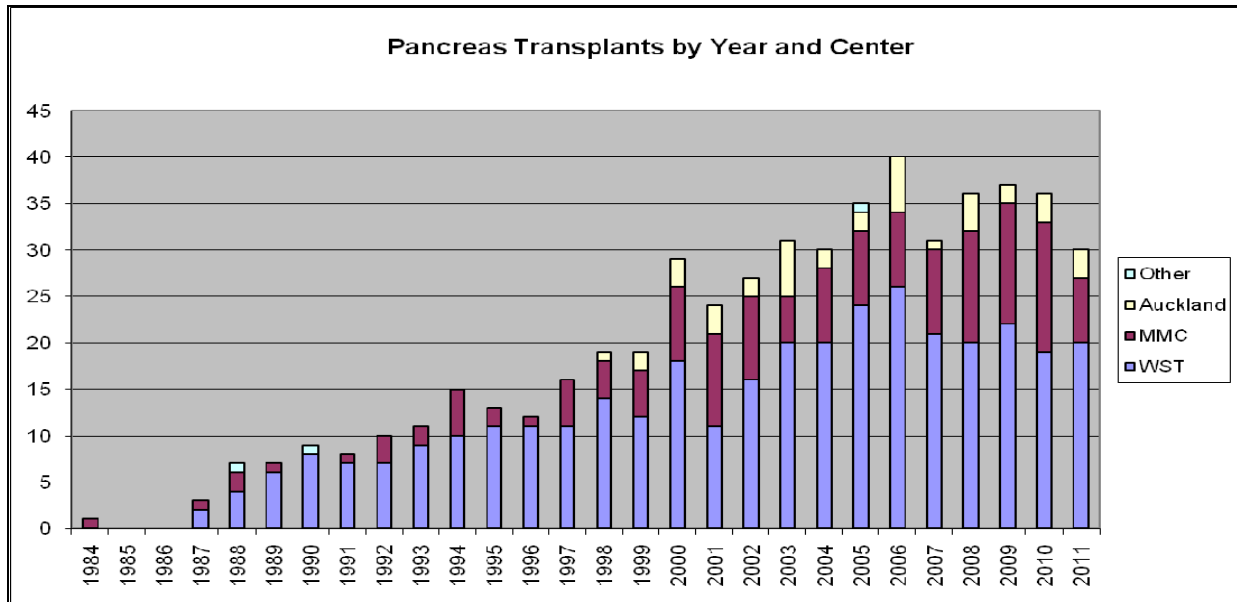


Figure 1. Number of Pancreas transplants by centre in Australia and New Zealand, 1984-2011

## Pancreas Transplant by Category

Figure 2 shows the pancreas transplants by category: Simultaneous pancreas-kidney transplant (SPK), Pancreas after kidney (PAK), Pancreas transplant alone (PTA). SPK is the major pancreas transplants by category in ANZ at 96% with one simultaneous Pancreas/Liver and Kidney which was performed in 2005.

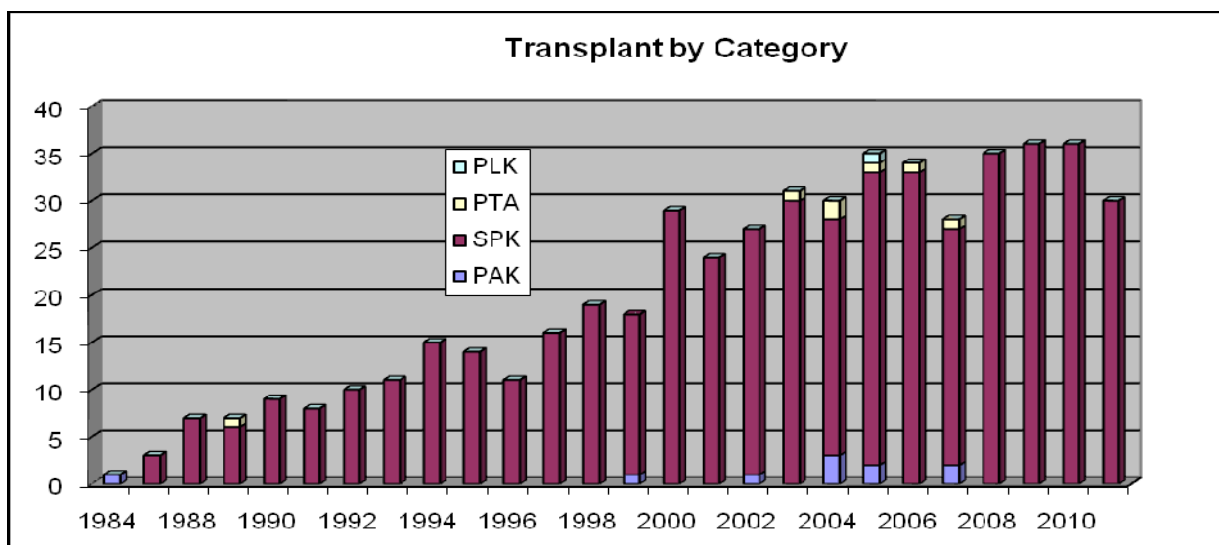


Figure 2. Pancreas transplant by category in Australia and New Zealand, 1984-2011

### By Pancreas duct management

ED was introduced in ANZ during 2001. Figure 3 illustrates the number of transplant by duct management.

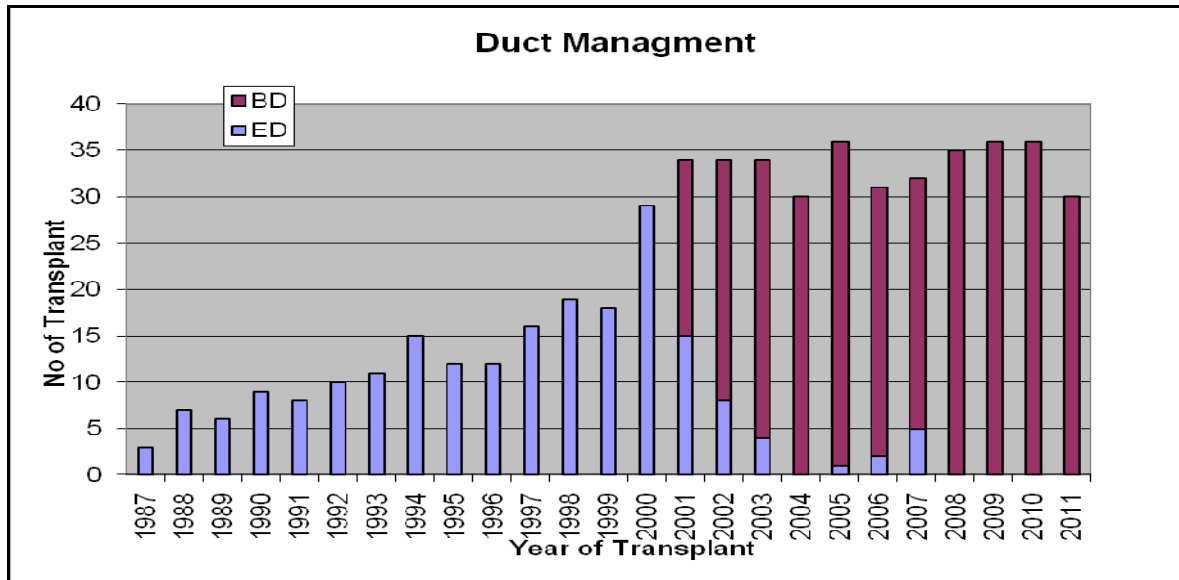


Figure 3. Pancreas duct management in ANZ, 1984-2011

### Number of Islets transplants

Figure 4 illustrates the number of islets transplants in Australia between 2002 and 2011. The transplants were performed in Westmead (29), St Vincent (11) and RAH (8). In 2011, 8 transplants were performed: RAH (3), St. V(Melbourne) (2) and Westmead (3).

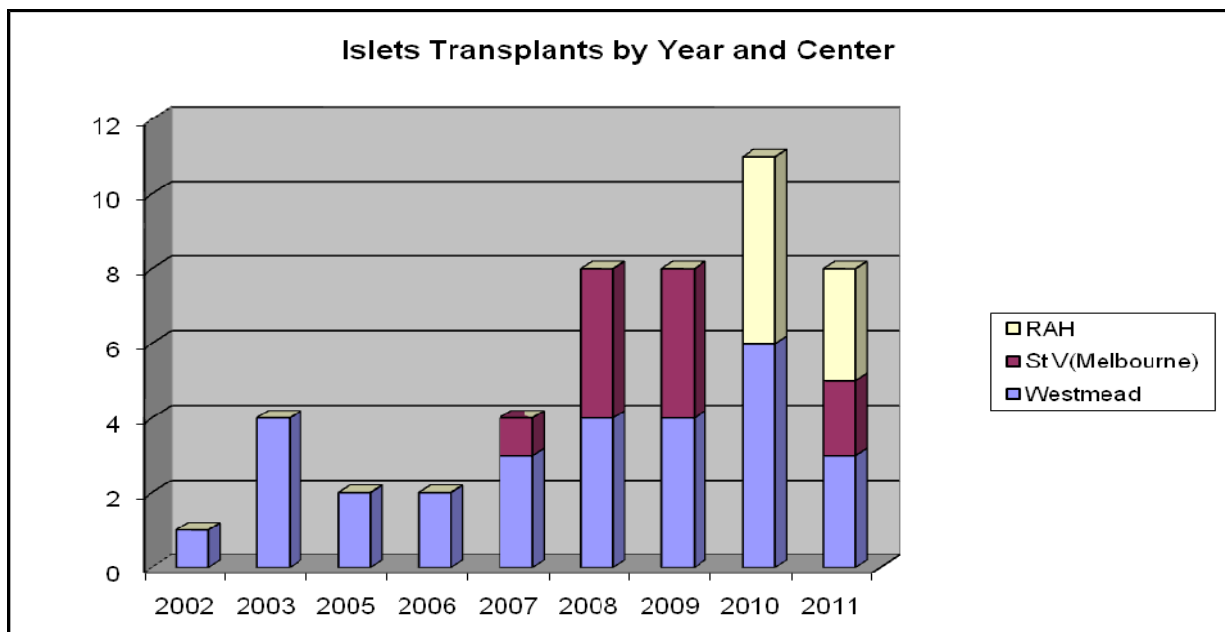


Figure 4. Number of Islets transplants by centre in Australia, 2002-2011

## Gender Comparison

### Donor and Recipient

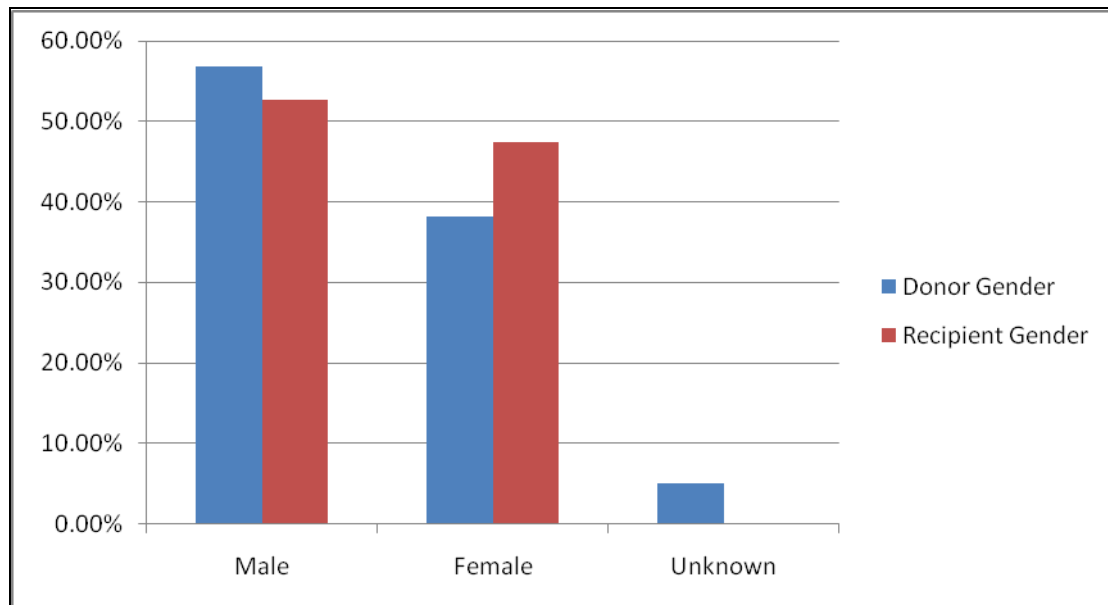


Figure 5. Gender comparison Donor and Recipient, 1984-2011

## SECTION 1: DONOR REVIEW

### Donor Demographics

#### *Donor Gender*

From 1984 – 2011, 56.85% of pancreas donors were males and 38.10% were females (the remaining 5.04% were unknown)

#### *Donor Age*

The mean donor age was 27.46yrs with the range from 4 yrs (minimum) to 55yrs (maximum). The median of donor age was 25 yrs.

### Donor Statistics

#### *Donor Ventilation*

From 1984 – 2011 the average number of days donors were ventilated was 2.27 days

### Donor Blood Group

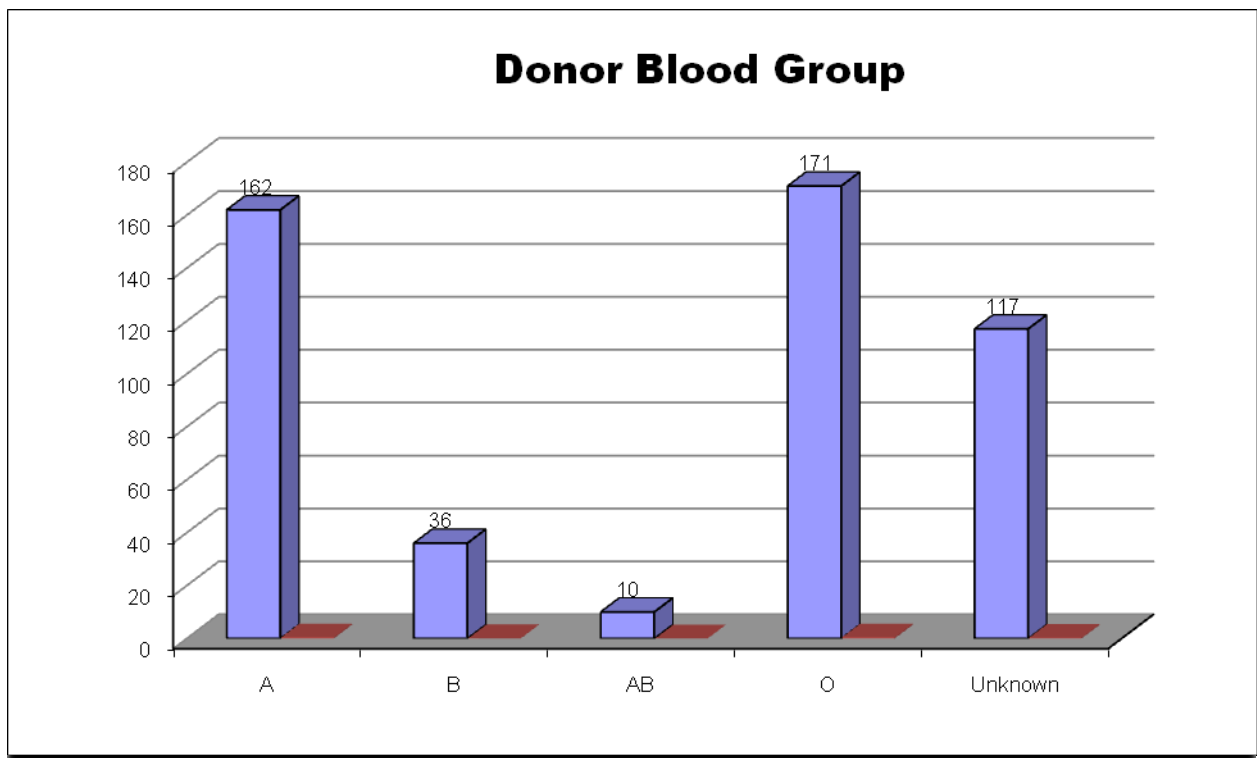


Figure 6. Donor Blood Group, 1984-2011

### Donor Kidney Side

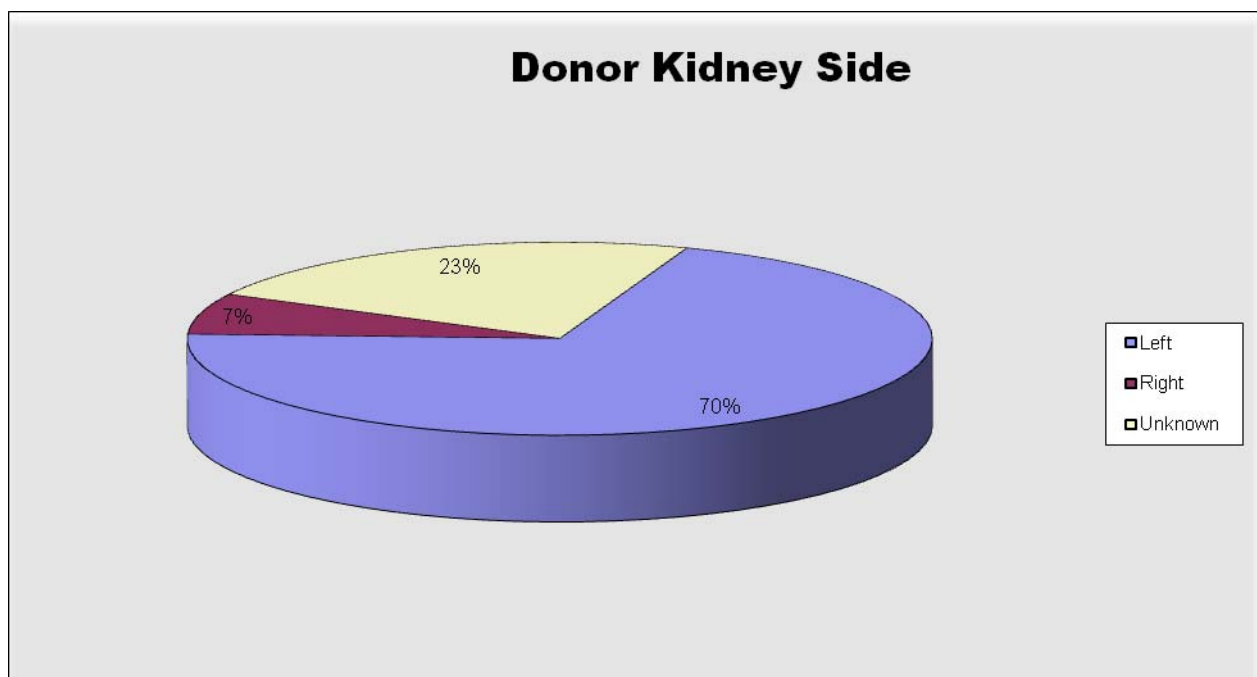


Figure 7. Donor Kidney Side, 1984-2011





**From 1984 – 2011;**

**Donor Biopsies**

Yes = 14.11%  
No = 84.27%  
Unknown = 1.61%

**Donor Height**

172cm (Mean) 174cm (Median)

**Donor CMV Status**

Ig G Pos = 58.47%  
Ig G Neg = 27.42%  
Unknown = 14.11%

**Average Donor Weight**

71kg (Mean), 70kg (Median)

**Donor Smoking & Alcohol Status**

Alcohol consumption defined by > than 40g/day

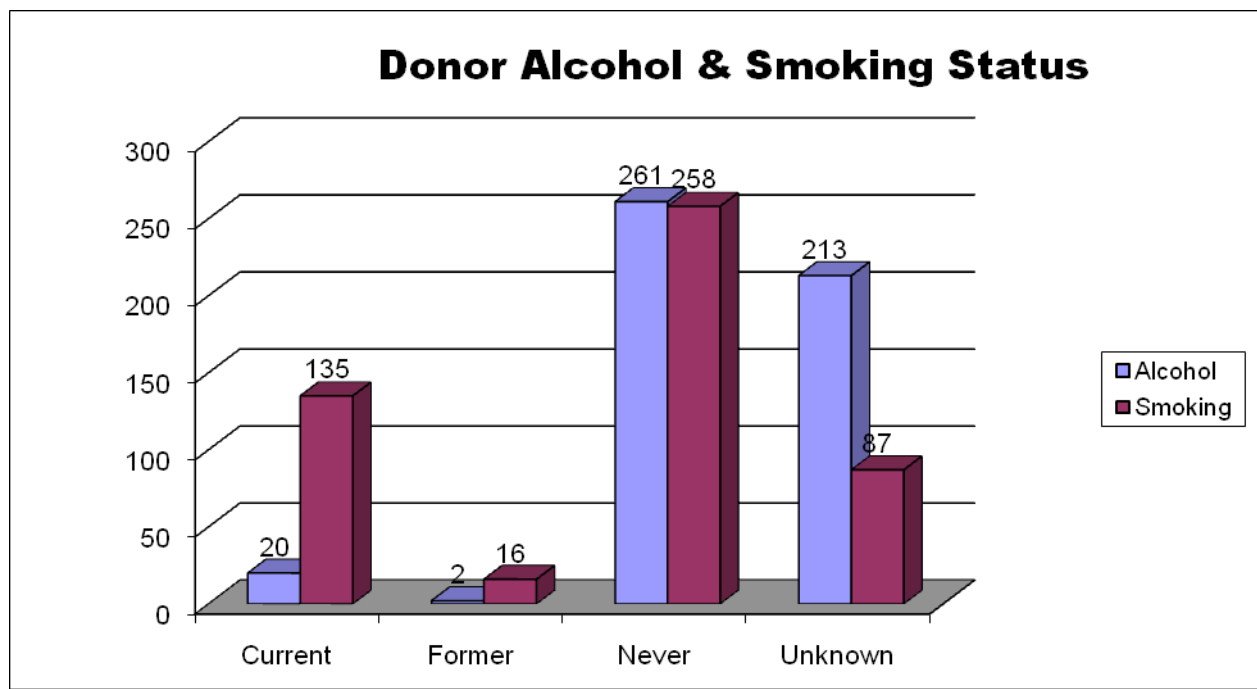


Figure 8. Donor Alcohol & Smoking Status, 1984-2011

**Donor Glucose**

The terminal donor **glucose** range from 1984 – 2011 was **2.8 to 81 mmol**

The **Mean** is 8.50 **mmol** and the **Median** is 7.4 **mmol**.

## Donor Amylase

The donor **amylase** range from 1984 – 2011 was **9 to 2550 units**

The **Mean** is 96.67 **units**.

## SECTION 2: RECIPIENT REVIEW

### *Anastomosis Time Range*

Anastomosis time for transplantation ranged from **14 to 70 mins** over 1984 - 2011

The **Mean** is 29 **mins** and **Median** is 30 **mins**.

### *Ischaemia Time Range*

**5hrs to 35hrs**

### *Exocrine Drainage*

53.01% of drainage is Enteric, 26.71% is Bladder and 20.28 is Unknown.

## Recipient Vein

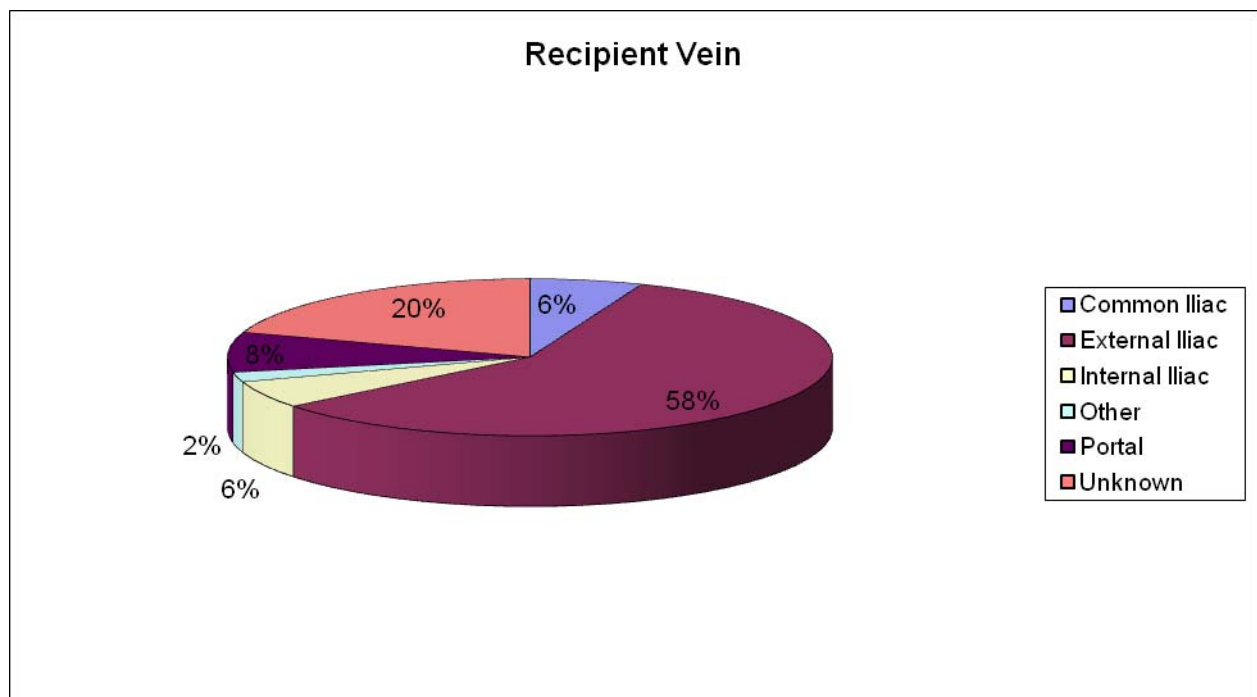


Figure 9. Recipient Vein, 1984-2011

## Recipient Artery

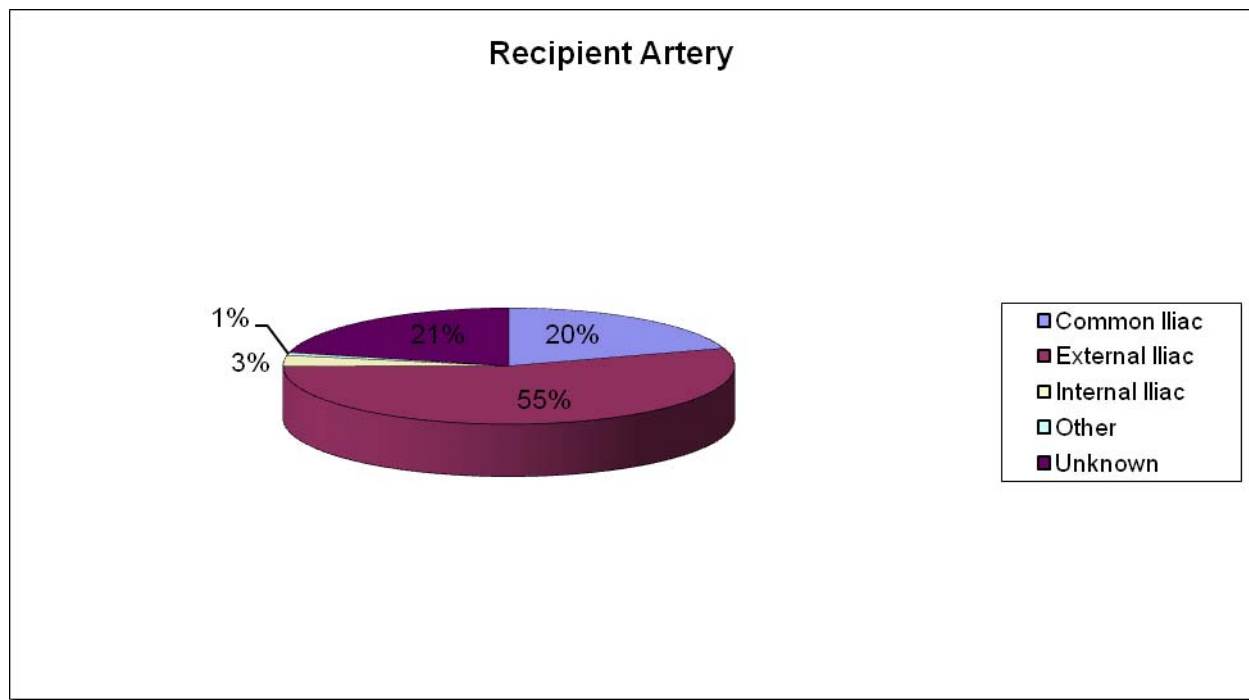


Figure 10. Recipient Artery, 1984-2011



### SECTION 3: GRAFT OUTCOME REVIEW

Year of Transplant	Patient Survival*			Pancreas Graft Survival*			Kidney Graft Survival*		
	1 Yr	5 Yrs	10 Yrs	1 Yr	5 Yrs	10 Yrs	1 Yr	5 Yrs	10 Yrs
1987-1996	92(2)	89(3)	74(4)	77(4)	69(4)	55(5)	87(3)	81(4)	63(5)
1997-2000	93(2)	90(3)	80(4)	80(4)	70(5)	59(5)	92(2)	85(3)	73(4)
2001-2004	99(0)	97(1)	92(2)	87(3)	81(3)	77(4)	95(2)	87(3)	85(3)
2005-2011	97(1)	95(1)	NA**	91(1)	88(2)	NA**	97(1)	92(2)	NA**

\* Actuarial Survival percentage (with Standard Error)

\*\* Not applicable

Actuarial Patient Survival, Kidney Graft Survival and Pancreas graft Survival by Era (Year of transplant)

#### Patient Survival Estimates (Kaplan-Meier) Transplants between 1987-2011

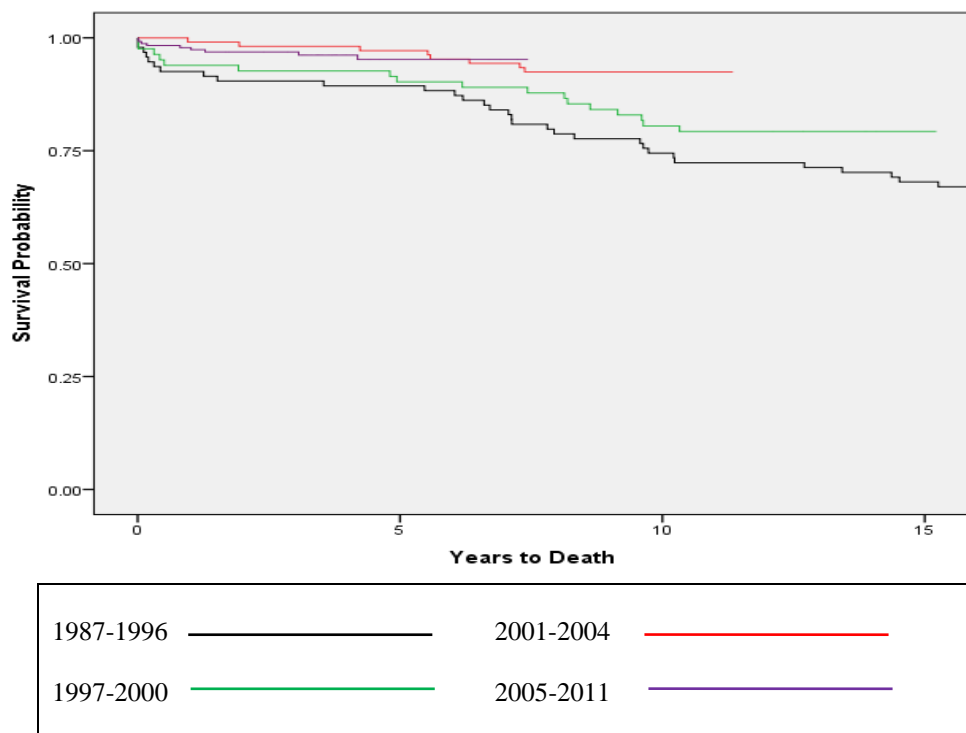


Figure 10. Patient Survival (by Era), 1987-2011



### Pancreas Graft Survival Estimates (Kaplan-Meier) Transplants between 1987-2011

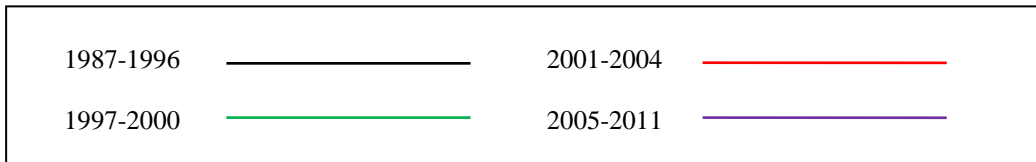
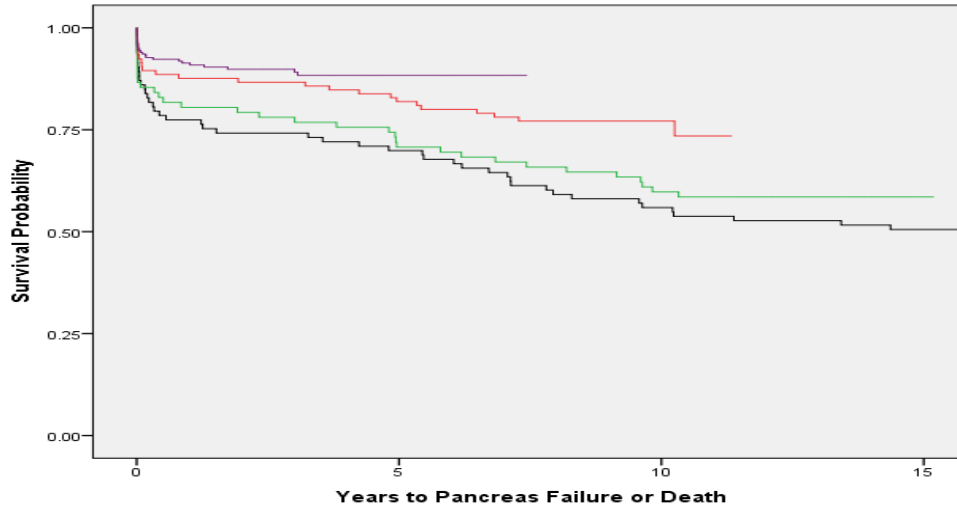


Figure 11. Pancreas Graft Survival (by Era), 1987-2011

### Kidney Graft Survival Estimates (Kaplan-Meier) Transplants between 1987-2011

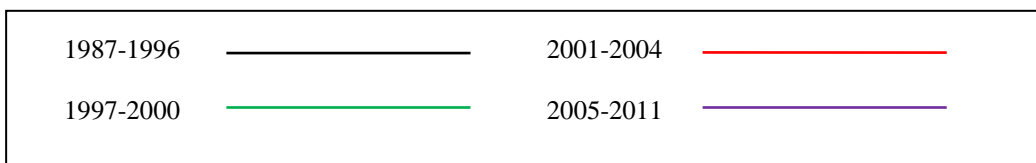
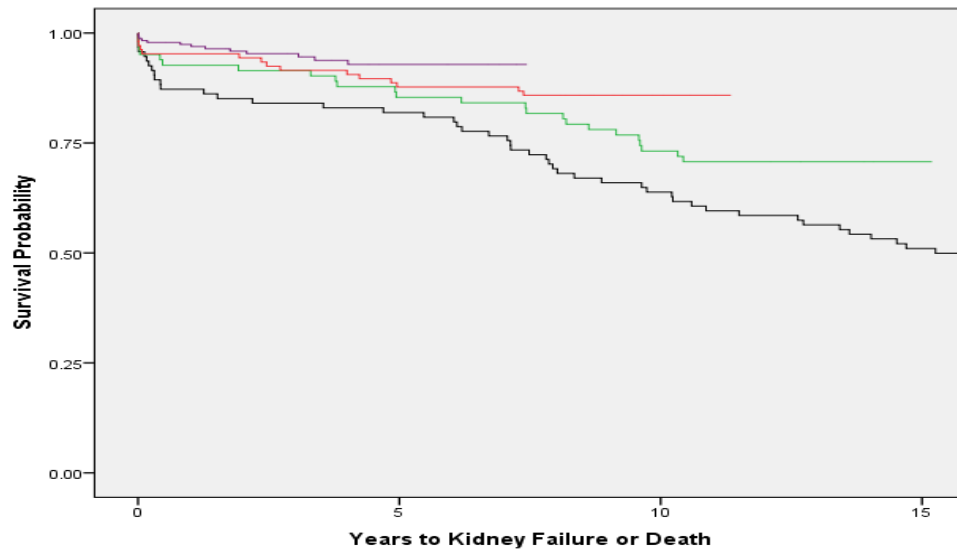


Figure 12. Kidney Graft Survival (by Era), 1987-2011

## SECTION 4 : PANCREAS WAITLIST REVIEW

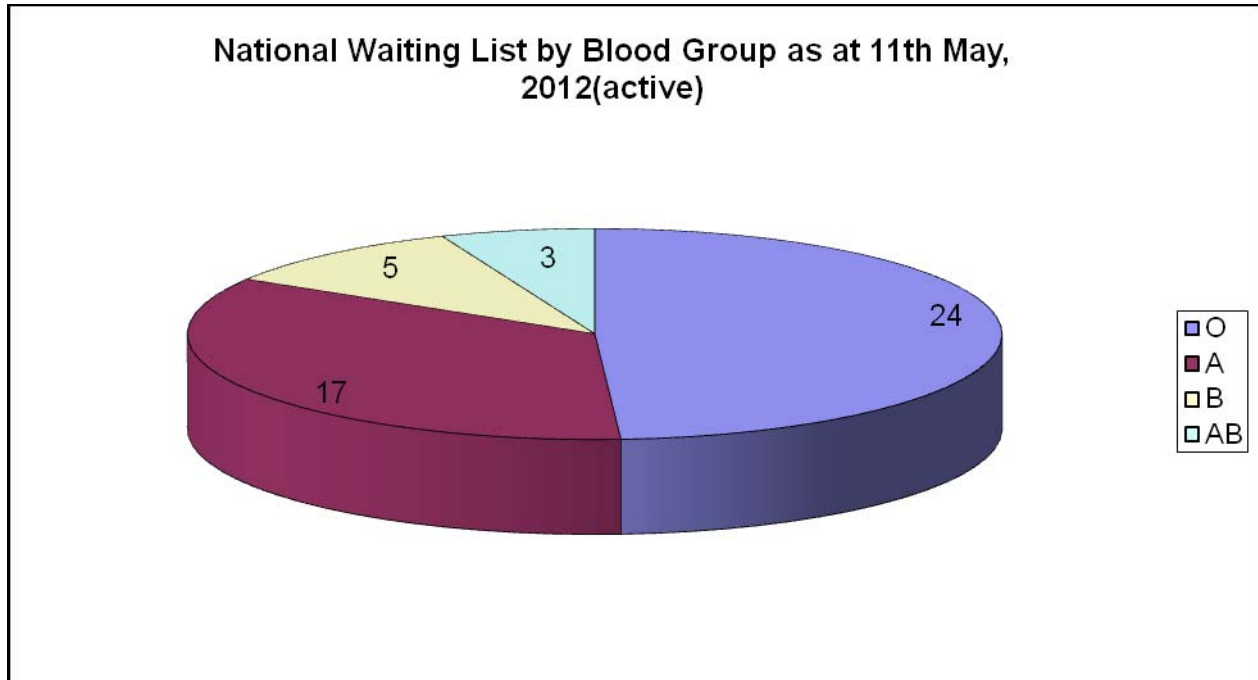


Figure 13. Pancreas Waitlist, as at May, 11<sup>th</sup> 2012

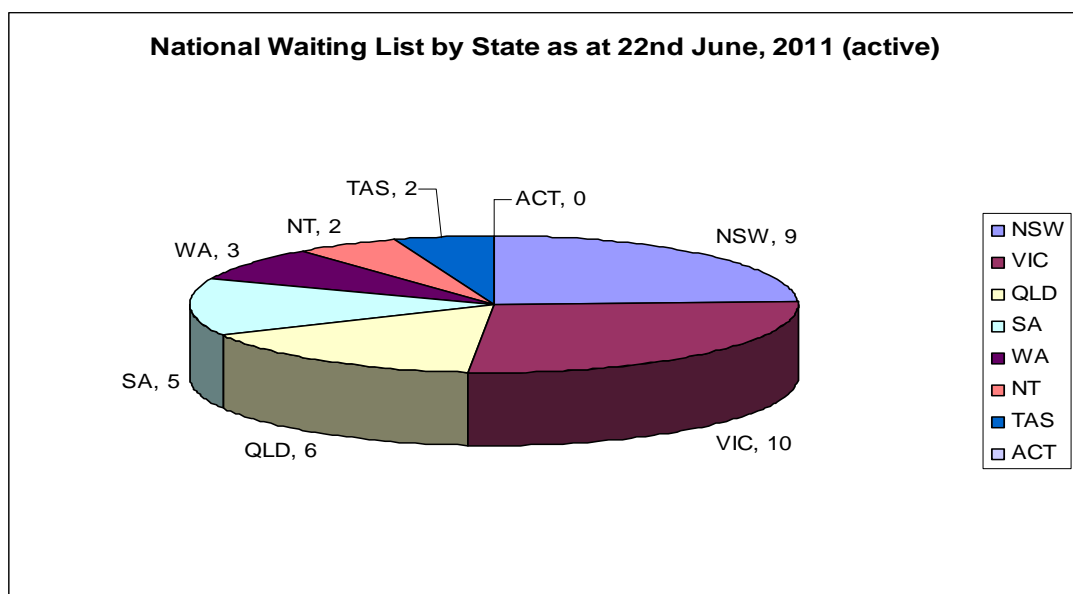


Figure 14. National Pancreas Waitlist (active), as at June, 22<sup>nd</sup> 2011