

Australia & New Zealand Pancreas Transplant Registry Report 1984-2010



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 22nd June, 2010. Please note some data fields were incomplete at the time of data extraction.



Summary

- ▲ 526 Pancreas transplants have been performed in Australia and New Zealand (ANZ) from 1984-2010 (Excluding Islet transplants)
- ▲ In 2010, 36 transplants were performed:
Auckland (3), Monash (14), Westmead (19).
Transplant by category: SPK (36), PTA (0), PAK (0)
- ▲ From 2002-2010, 40 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
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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 526 pancreas transplants in Australia and New Zealand (ANZ) between the dates of November 1984 to December 2010 excluding Islet transplants. No activity was recorded in 1985 and 1986.

There have been 40 Islets transplants in Australia between the dates of January 2002 to December 2010.

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 three periods (1997-2000, 2001-2004 and 2004-2010), 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 2010. The transplants were performed in Westmead (352), Monash (139), Auckland (35), RPA (1), RMH (1), QEH (1). In 2010, 36 transplants were performed: Auckland (3), Monash (14), and Westmead (19).

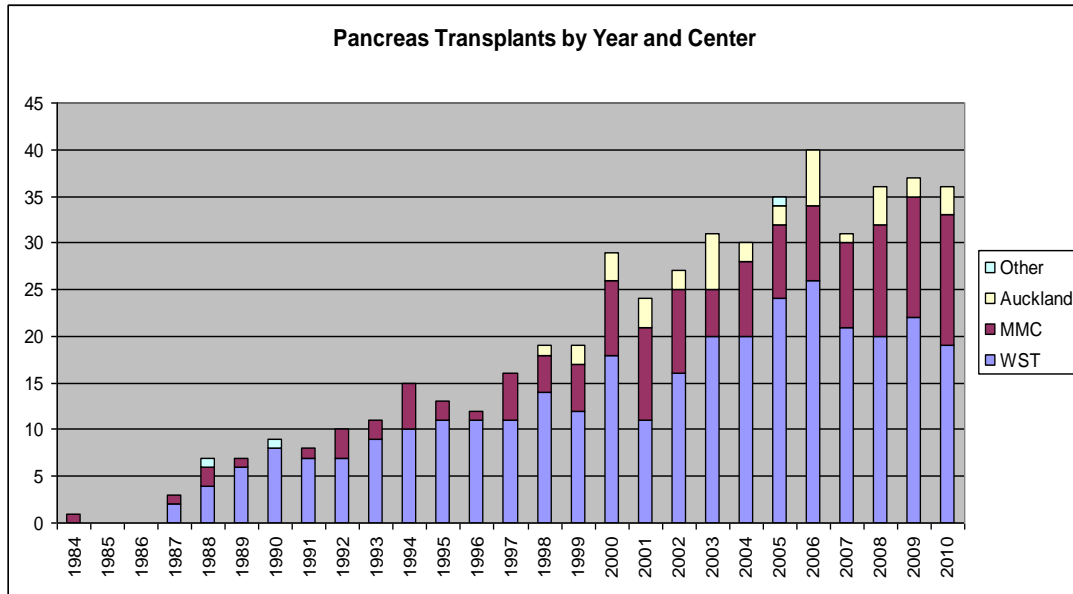


Figure 1. Number of Pancreas transplants by centre in Australia and New Zealand, 1984-2010

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 93% with one simultaneous Pancreas/Liver and Kidney which was performed in 2005.

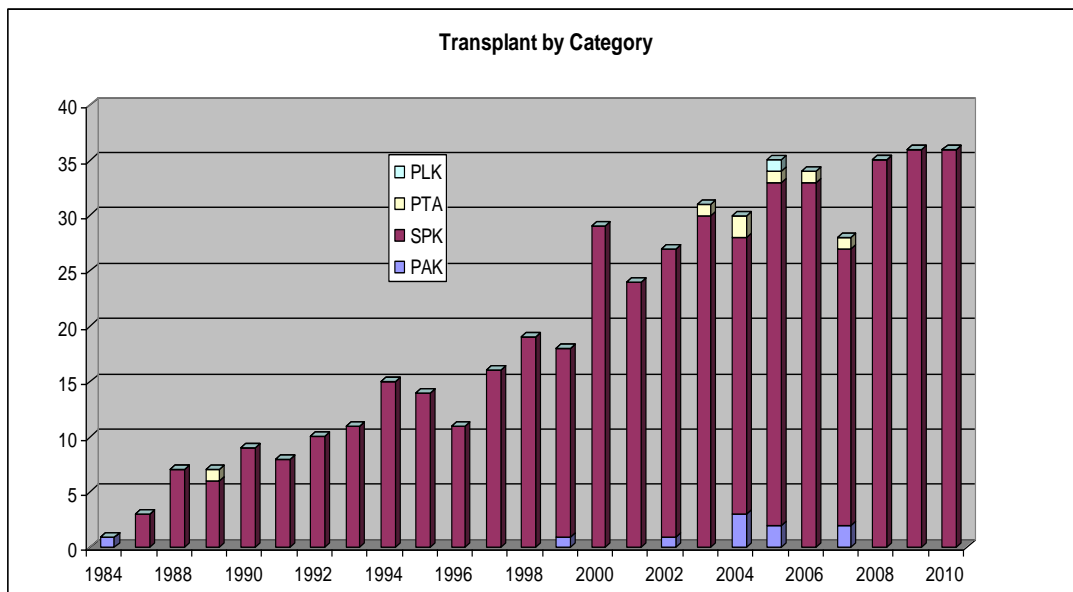


Figure 2. Pancreas transplant by category in Australia and New Zealand, 1984-2010

By Pancreas duct management

ED was introduced in ANZ during 2001. Figure 4 illustrates the number of transplant by duct management.

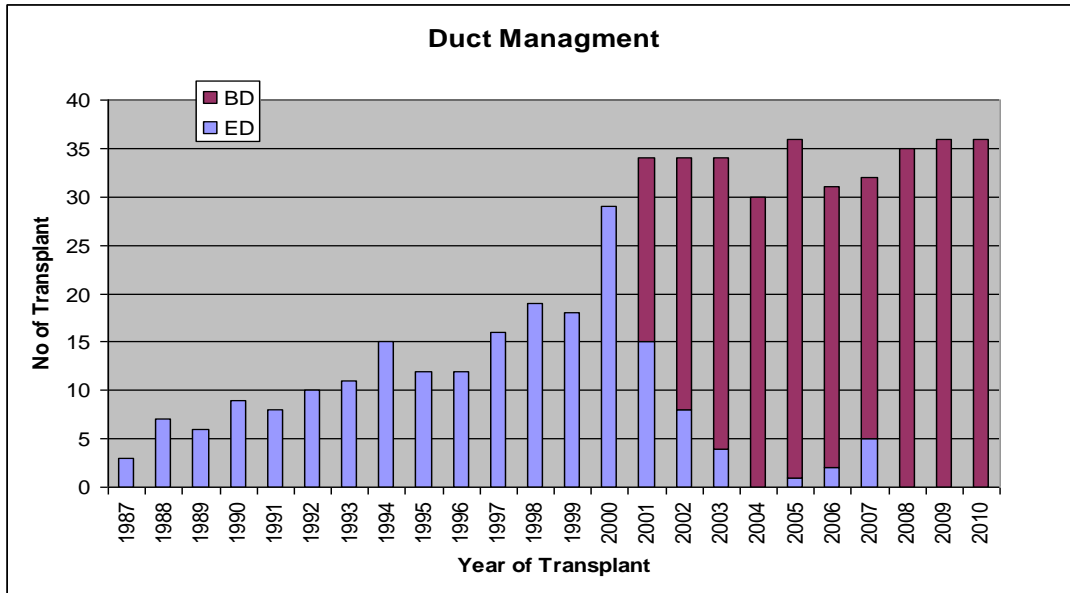


Figure 3. Pancreas duct management in ANZ, 1984-2010

Number of Islets transplants

Figure 4 illustrates the number of islets transplants in Australia between 2002 and 2010. The transplants were performed in Westmead (26), St Vincent (9) and RAH (5). In 2010, 11 transplants were performed: RAH (5), and Westmead (6).

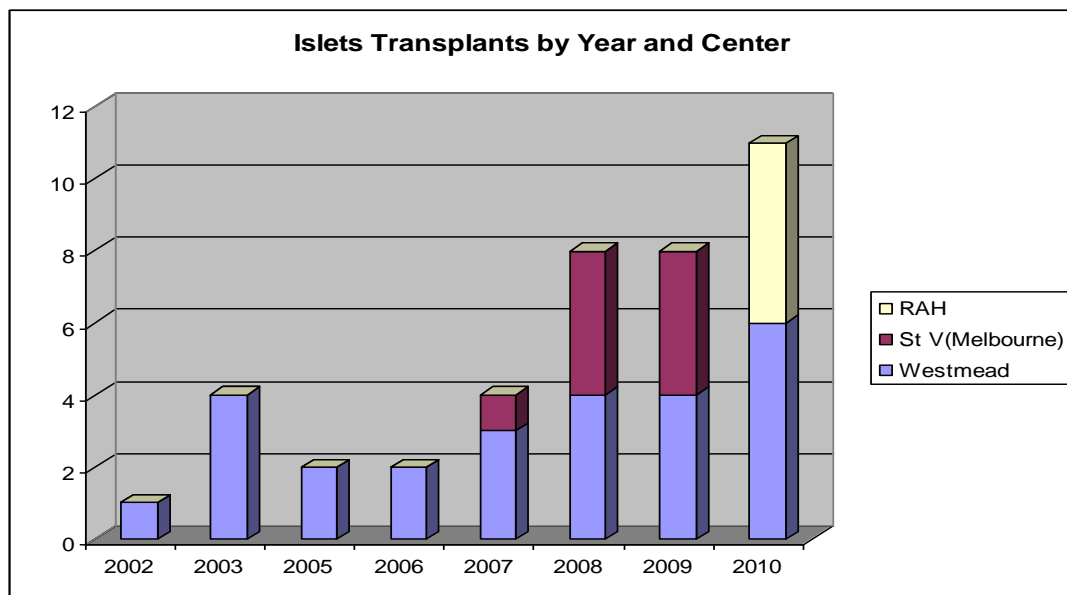


Figure 4. Number of Islets transplants by centre in Australia, 2002-2010

SECTION 1: DONOR REVIEW

Donor Demographics

Donor Gender

From 1984 – 2010, 57.47% of pancreas donors were males and 37.26% were females (the remaining 5.26% were unknown)

Donor Age

The mean donor age was 27.49yrs with the range from 4 yrs (minimum) to 55yrs (maximum). The median of donor age was 25 yrs.

Donor Statistics

Donor Ventilation

From 1984 – 2010 the average number of days donors were ventilated was 2.26 days

Donor Blood Group

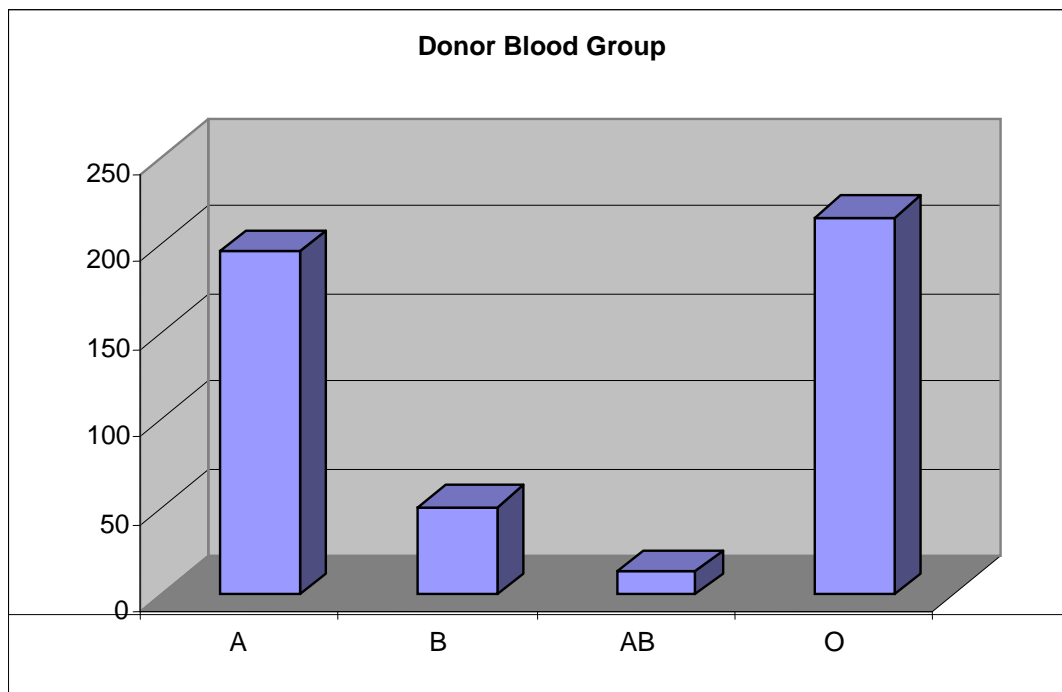


Figure 5. Donor Blood Group, 1984-2010

Donor Kidney Side

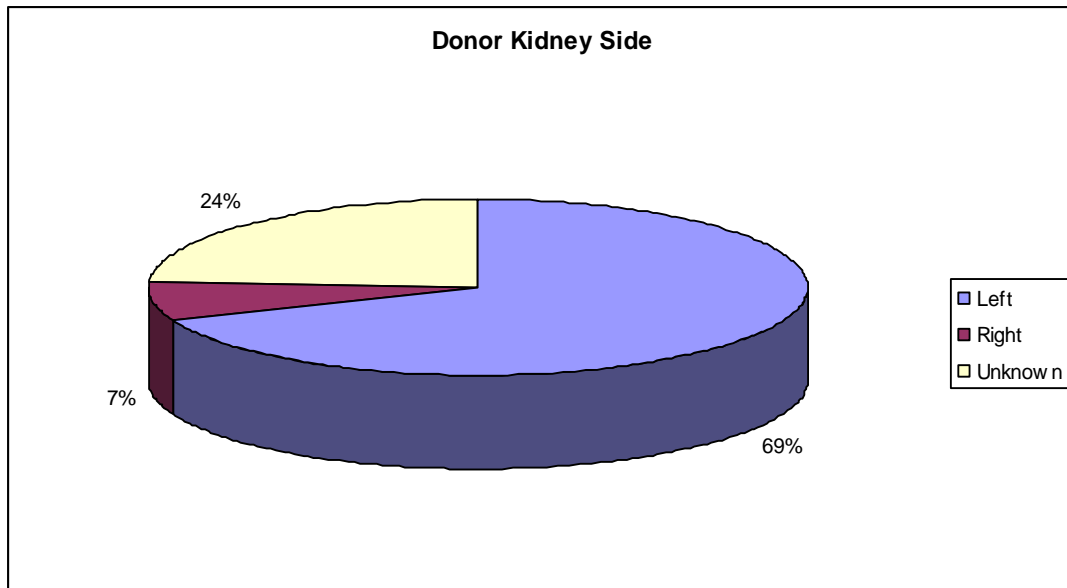


Figure 6. Donor Kidney Side, 1984-2010

From 1984 – 2010;

Donor Biopsies

Yes = 13.77%
No = 86.53%
Unknown = 1.68%

Donor Height

173cm (Mean) 174cm (Median)

Donor CMV Status

Ig G Neg = 26.95%
Ig G Pos = 58.32%
Unknown = 14.7%

Average Donor Weight

71kg (Mean), 70kg (Median)

Donor Smoking & Alcohol Status

Alcohol consumption defined by > than 40g/day

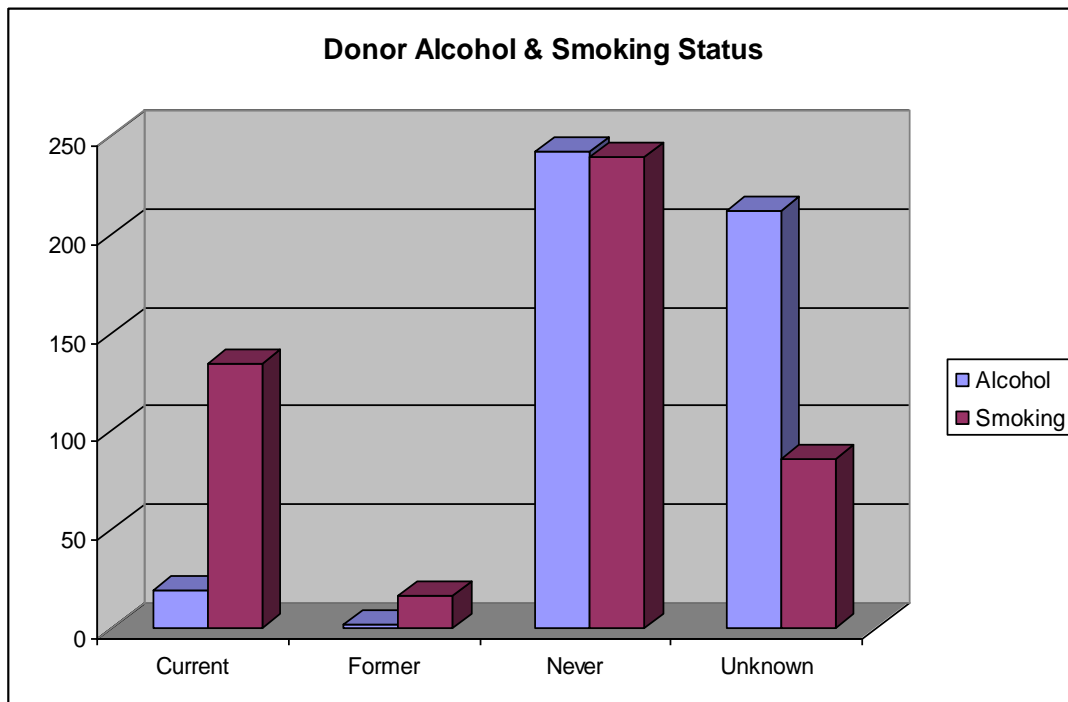


Figure 7. Donor Alcohol & Smoking Status, 1984-2010

Donor Glucose

The terminal donor **glucose** range from 1984 – 2010 was **2.8 to 81mmol**

Donor Amylase

The donor **amylase** range from 1984 – 2010 was **9 to 530units**

SECTION 2 : RECIPIENT REVIEW

Anastomosis Time Range

Anastomosis time for transplantation ranged from **9 to 16mins** over 1984 - 2010

Ischaemia Time Range

5hrs to 35hrs

Exocrine Drainage

56% of drainage is Enteric compared with 44% for the bladder.

Recipient Vein

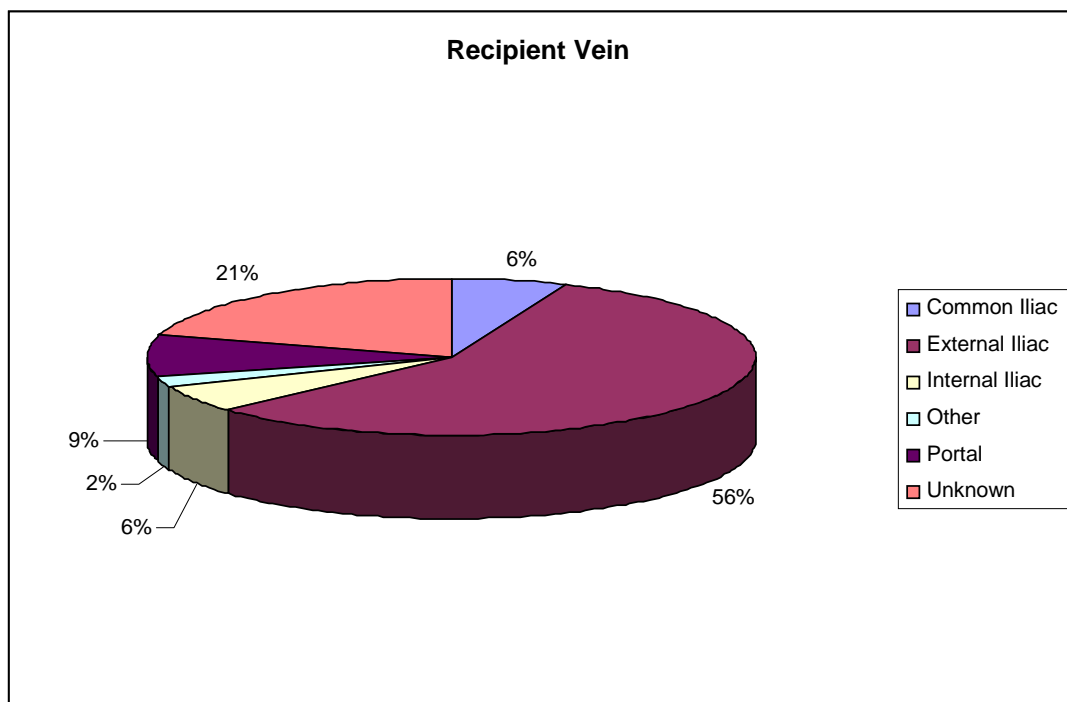


Figure 8. Recipient Vein, 1984-2010



Recipient Artery

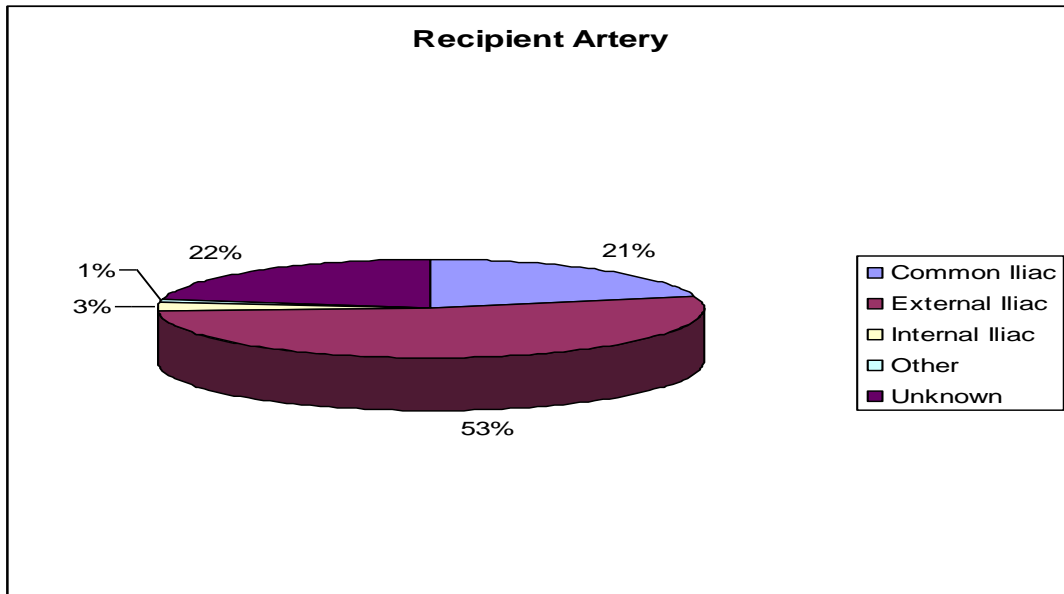


Figure 9. Recipient Artery, 1984-2010



SECTION 3: GRAFT OUTCOME REVIEW

Year of Transplant	Patient Survival*			Pancreas graft Survival*			Kidney graft Survival*		
	1yrs	5yrs	10yrs	1yrs	5yrs	10yrs	1yrs	5yrs	10yrs
1997-2000	93(0.02)	90(0.03)	80(0.04)	81(0.04)	73(0.05)	61(0.05)	92(0.02)	85(0.04)	73(0.05)
2001-2004	99(0.01)	97(0.01)	89(0.03)	87(0.03)	82(0.03)	74(0.04)	95(0.02)	87(0.03)	82(0.04)
2005-2010	97(0.01)	94(0.02)	NA**	88(0.02)	86(0.02)	NA**	96(0.01)	91(0.02)	NA**

* Actuarial Survival percentage (with Standard Error)

** Not applicable

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

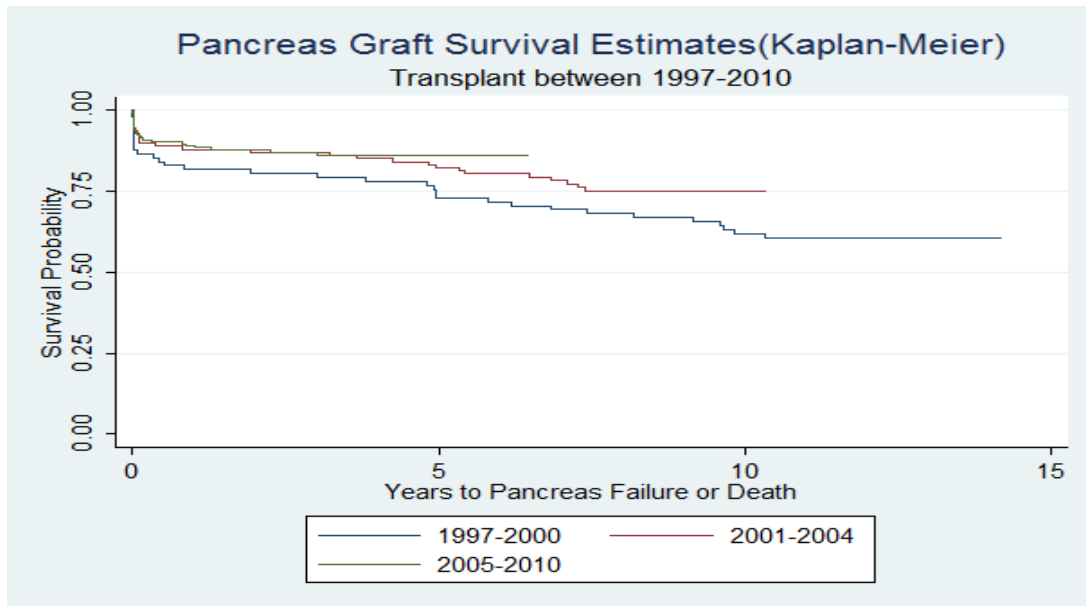


Figure 10. Pancreas Graft Survival (by Era), 1997-2010

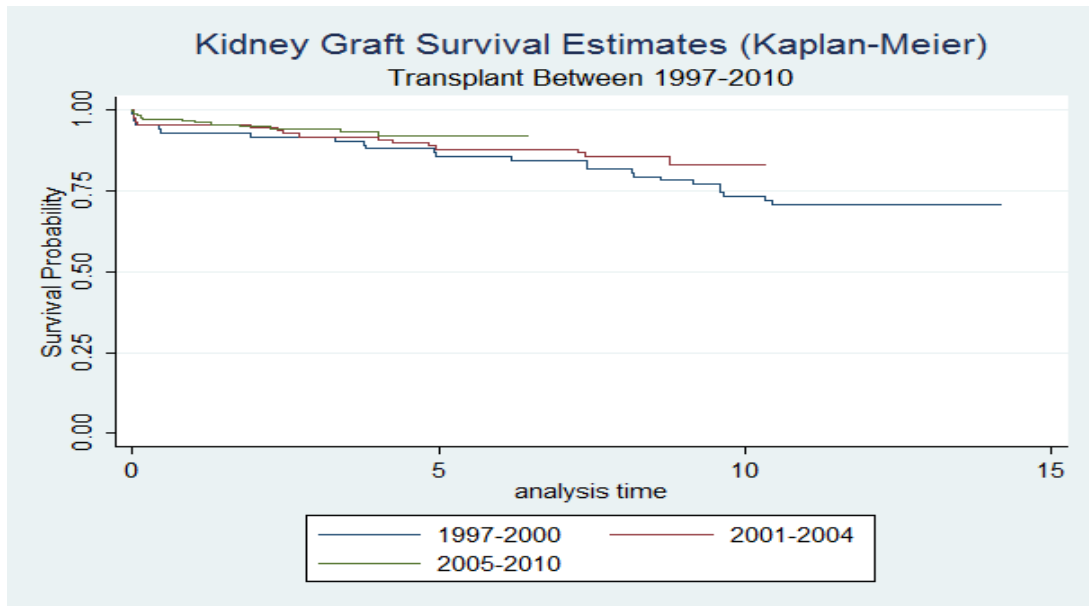


Figure 11. Kidney Graft Survival (by Era), 1997-2010

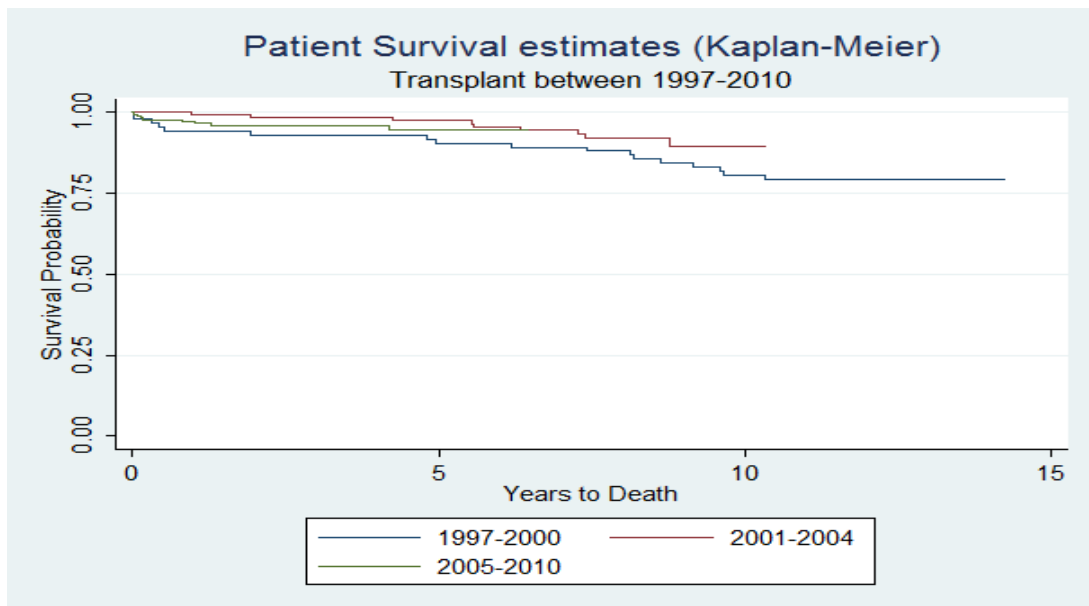


Figure 12. Patient Survival (by Era), 1997-2010

SECTION 4 : PANCREAS WAITLIST REVIEW

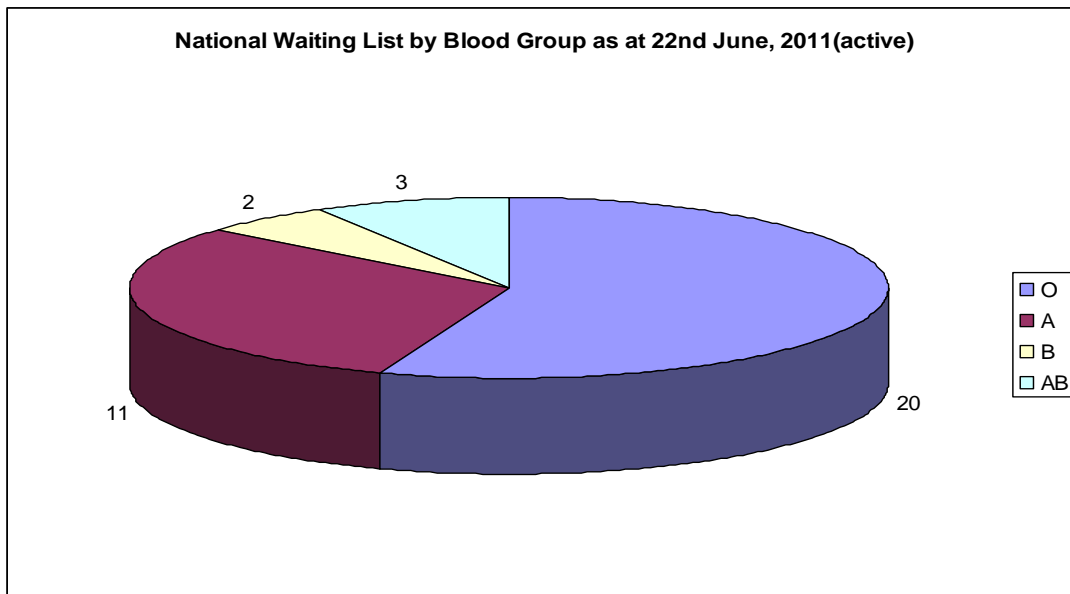


Figure 13. Pancreas Waitlist, as at June, 22nd 2010

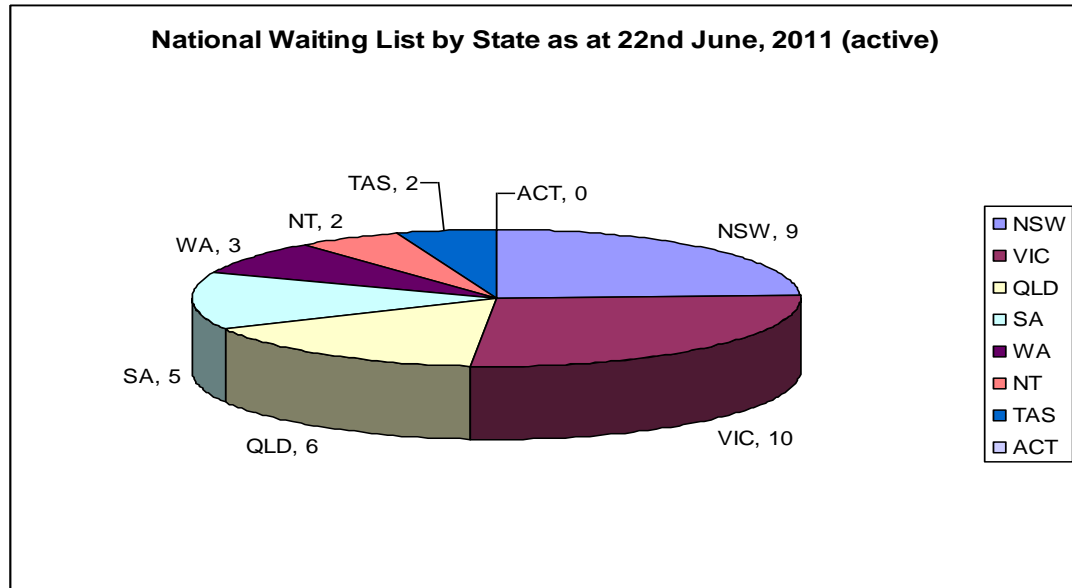


Figure 14. National Pancreas Waitlist (active), as at June, 22nd 2010