



ANZIPTR Report 2025

Australia and New Zealand Islet and Pancreas Transplant Registry data 1984-2024

This report is a compilation of data provided by Pancreas transplant units in Australia and New Zealand. The registry is funded in part by the Organ and Tissue Authority

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Summary

Introduction

This report is produced and edited by: Angela Webster and James Hedley

Chapters 1-3 are authored by: Angela Webster, Paul Robertson, Tia Mark, Helen Pilmore, Danielle Stephenson, James Hedley

We thank all contributors who have made the registry what it is and whose work has made this report possible.

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<https://anziptr.org/>

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Governance structure

This report is a compilation of data provided by the four current solid-organ Pancreas transplant units in Australia and New Zealand: Auckland Renal Transplant Group, New Zealand; National Pancreas Transplant Unit Monash Medical Centre, Victoria; National Pancreas Transplant Unit, Westmead Hospital, NSW; South Australian/Northern Territory Transplant Service, Royal Adelaide Hospital, SA; The ANZIPTR registry is funded in part by the Organ and Tissue Authority.

Data release guidelines

The registry can provide de-identified data for at no cost to Transplant Physicians, Transplant Units, and Government Departments. Release of data for academic or clinical research projects is provisional on an agreed project plan and proof of ethical oversight. The registry will not provide any personally identifiable data.

The clinical data provided contains potentially sensitive information and should be used only within agreed guidelines. If data are further published elsewhere ANZIPTR permission is necessary prior to submission for publication, and ANZIPTR should be identified as the source of the data. If data provided by ANZIPTR is the primary source of data, then a copy of publication should be provided to ANZIPTR.

Data provided by ANZIPTR should be utilised by requesting parties only, further data sharing with other parties or projects is not permitted without prior approval from ANZIPTR. The data supplied will be in accordance with ANZIPTR data specifications. Please see www.anziptr.org for our data dictionary.

Participating Centres

Australian National Program:

Westmead Hospital

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Prof Angela Webster	Executive Director ANZIPTR
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Monash Medical Centre

Prof John Kanellis	Director of Nephrology
A/Prof William Mulley	Head of Transplantation
Mr Alan Saunder	Director of Surgery
Mr Stephen Thwaites	Head of Transplant Surgery
Mr Roger Bell	Surgeon
Mr Ming Yii	Surgeon
Miss Nancy Suh	Surgeon
Mr Michael Wu	Surgeon
Miss Sherry Salter	Surgeon
Mr Aaron Hui	Surgeon
Dr Sandy Fernando	Physician
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Mrs Tia Mark	Transplant Clinical Nurse Consultant

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Prof Toby Coates	Director of Transplantation
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Ms Hilary Styles	Transplant coordinator
Ms Alice Rickard	Transplant coordinator
Ms Colleen Etherton	Transplant coordinator

New Zealand:

Auckland Renal Transplant Group

Dr Helen Pilmore
Dr Carl Muthukumaraswamy

Analysis and Methods

The aim of this report is to record all pancreas transplant activity in Australia and New Zealand. Data included in this report was locked on 3rd February 2025, for all people transplanted up to the end of 2024. Please note new data are added to the registry regularly, and corrections are made where previous data are missing or where errors are discovered. This year the report is for solid organ pancreas transplant activity only; there is no report for islet transplant activity.

Kaplan-Meier survival curves were used to illustrate the survival distributions, and these were generated using Stata software version 19.5 (StataCorp, College Station, TX USA). Transplant survival is analysed and presented both including and excluding death with a functioning pancreas transplant. For patients receiving a second transplant, survival time was measured from first transplant.

Definitions

Pancreas transplant

A functioning pancreas transplant is defined as a recipient free of exogenous insulin dependence; thus a pancreas transplant failure is declared when either a pancreatectomy is performed, or when the recipient returns to permanent insulin therapy. Kidney transplants are defined as functioning if recipients are dialysis free. All causes of death are included in the mortality analyses.

Glossary

SPK	Simultaneous Kidney Pancreas Transplant
PTA	Pancreas Transplant Alone
PAK	Pancreas after Kidney Transplant
DBD	Donor after Brain Death
DCD	Donor after Circulatory Death
CMV	Cytomegalovirus
EBV	Epstein-Barr Virus
SD	Standard Deviation
IQI	Interquartile Interval
NSW	New South Wales
VIC	Victoria
QLD	Queensland
SA	South Australia
WA	Western Australia
TAS	Tasmania
ACT	Australian Capital Territory
NT	Northern Territory
NZ	New Zealand

Synopsis

A total of 1,138 solid organ pancreas transplants have been performed in Australia and New Zealand, in 1,112 individuals from 1984-2024 (excluding islet transplants).

In 2024, 46 pancreas transplants were performed. By centre, the number of transplants performed were: Auckland (4); Monash (11); Westmead (27); and Adelaide (4). Among the 46 transplants, 44 were SPK, one was PAK, and one was a combined liver/pancreas.

Accessing report data

The ANZIPTR website is at www.anziptr.org. This describes the registry structure and function, outlines the procedure for data requests, and provides a download area for past reports. For each ANZIPTR report, a slide set of key registry data tables and plots is available for download, to complement the main report.

The ANZIPTR welcomes suggestions for improvement or specific analyses you would like to see in the next annual report.

Chapter 1: Waiting List

Authors: Angela Webster, James Hedley.

Data contributed by: Paul Robertson, Tia Mark, Helen Pilmore, Danielle Stephenson

Overview of waiting list activity

Definitions

Patients join the waiting list on the date they are referred to the transplanting centre; however, this may occur sometime before their kidneys fail. Patients are therefore classified as “under consideration” until they medically require a kidney pancreas transplant (eGFR $\leq 15\text{ml}/\text{min}/1.72\text{m}^2$ or dependant on dialysis). Once they require a kidney pancreas transplant, they are classified as “active” on the list while they remain medically fit. The “under consideration” classification also captures people recently referred to the transplant centre, who are still undergoing assessment about their medical fitness for pancreas transplant. People referred to a transplanting centre when they are already on dialysis become “active” on the list as soon as they are accepted as medically fit. People referred to a transplanting centre when their kidneys still function become active once their kidney disease progresses to such a level that dialysis is planned in the near future (eGFR $\leq 15\text{ml}/\text{min}/1.72\text{m}^2$). Once active on the waiting list, a patient may be transplanted depending on multiple factors including waiting time, blood group, duration of dialysis and other considerations.

Patient waiting list flow

Patient referral and waiting list activity over the last three years is shown in Table 1.1 for Australia (Westmead, Monash and Royal Adelaide units), and Table 1.2 for New Zealand. In both Australia and New Zealand, the number of transplants performed annually has returned to pre-covid levels, and in Australia the backlog of patients under consideration is reducing.

Table 1.1: Referral and waiting list activity in Australia for the past three years

Activity	Patients (n)		
	2022	2023	2024
Referrals			
Under consideration (not yet active on list) at beginning of year	150	145	134
<i>New referrals during the year</i>	63	64	43
<i>Added to active list during the year</i>	60	65	37
<i>Declined for pancreas transplantation</i>	7	6	2
<i>Died while under consideration</i>	1	4	2
Under consideration (not yet active on list) at end of year	145	134	136
Waitlist			
Active on list at beginning of year	113	111	119
<i>Added to active list during the year</i>	60	65	37
<i>Removed from active list during year</i>	14	10	15
<i>Pancreas transplants to patients on waiting list</i>	45	42	42
<i>Kidney only transplants to patients on waiting list</i>	2	1	1
<i>Transplants performed outside Australia/New Zealand</i>	0	0	0
<i>Died while active on list</i>	1	4	0
On active waiting list at the end of year	111	119	98
Died within 12 months of removal from list	0	0	0

Table 1.2: Referral and waiting list activity in New Zealand for the past three years

Activity	Patients (n)		
	2022	2023	2024
Referrals			
Under consideration (not yet active on list) at beginning of year	7	8	5
<i>New referrals during the year</i>	7	9	7
<i>Added to active list during the year</i>	6	11	7
<i>Declined for pancreas transplantation</i>	0	0	0
<i>Died while under consideration</i>	0	1	0
Under consideration (not yet active on list) at end of year	8	5	5
Waitlist			
Active on list at beginning of year	8	8	13
<i>Added to active list during the year</i>	6	11	7
<i>Removed from active list during year</i>	1	3	4
<i>Pancreas transplants to patients on waiting list</i>	5	3	4
<i>Kidney only transplants to patients on waiting list</i>	0	0	0
<i>Transplants performed outside Australia/New Zealand</i>	0	0	0
<i>Died while active on list</i>	0	0	1
On active waiting list at the end of year	8	13	11
Died within 12 months of removal from list	0	0	0

Distribution of active patients by state

Figure 1.1 and Table 1.3 show the state and country of residence for people active on the pancreas waiting list, by year and the pancreas transplanting centre they were referred to (Australia only).

Figure 1.1: People active on the waiting list by state/country of residence, end of 2024

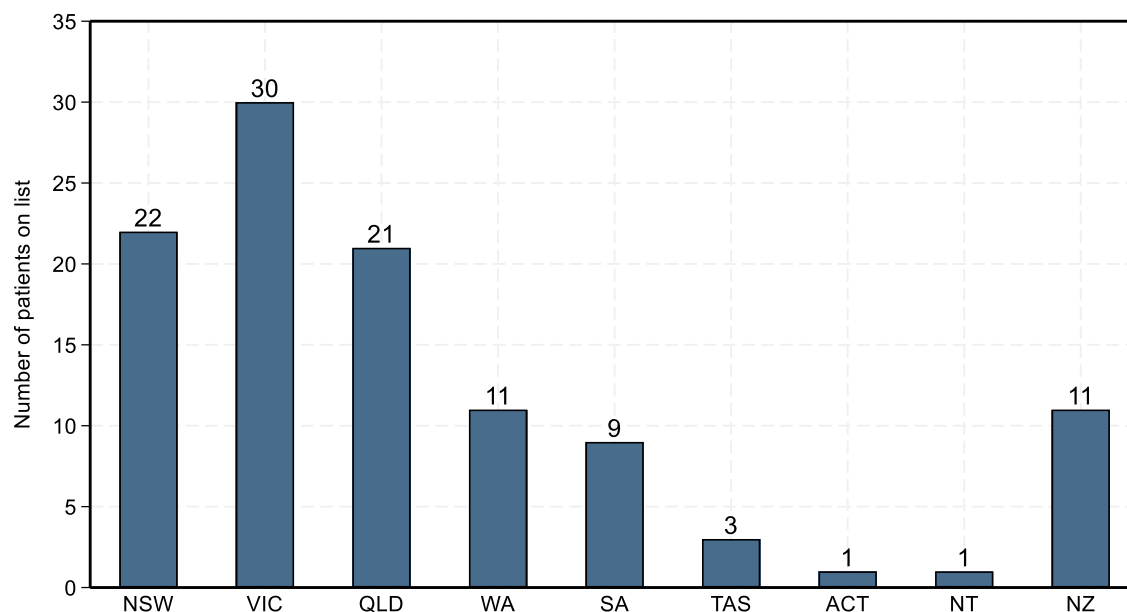


Table 1.3: People active on the waiting list in Australia at end of year, by state of residence and pancreas transplant unit, over the past three years

Year	State of residence, n (row %)														Total		
	NSW		VIC		QLD		WA		SA		TAS		ACT			NT	
Westmead (NSW)																	
2024	22	(40)	0	(0)	20	(36)	11	(20)	1	(2)	0	(0)	1	(2)	0	(0)	55
2023	30	(43)	0	(0)	24	(35)	13	(19)	1	(1)	0	(0)	1	(1)	0	(0)	69
2022	21	(33)	0	(0)	26	(41)	14	(22)	1	(2)	0	(0)	1	(2)	0	(0)	63
Monash (VIC)																	
2024	0	(0)	28	(85)	1	(3)	0	(0)	1	(3)	3	(9)	0	(0)	0	(0)	33
2023	0	(0)	35	(85)	1	(2)	0	(0)	1	(2)	4	(10)	0	(0)	0	(0)	41
2022	0	(0)	34	(79)	1	(2)	0	(0)	2	(5)	6	(14)	0	(0)	0	(0)	43
Royal Adelaide (SA)																	
2024	0	(0)	0	(0)	0	(0)	0	(0)	7	(88)	0	(0)	0	(0)	1	(13)	8
2023	0	(0)	0	(0)	0	(0)	0	(0)	6	(86)	0	(0)	0	(0)	1	(14)	7
2022	0	(0)	0	(0)	0	(0)	0	(0)	5	(100)	0	(0)	0	(0)	0	(0)	5

Summary

Table 1.4 shows the state of residence for people who are under consideration together with people who are active on the pancreas waiting list, by the pancreas transplanting centre they were referred to, in Australia. For New Zealand data, there is no breakdown beyond that seen in Table 1.2.

Table 1.4: People under consideration or active on the waiting list in Australia at end of year, by state of residence and pancreas transplant unit, over the past three years

Year	State of residence, n (row %)														Total		
	NSW		VIC		QLD		WA		SA		TAS		ACT			NT	
Westmead (NSW)																	
2024	45	(37)	0	(0)	36	(29)	34	(28)	6	(5)	1	(<1)	1	(<1)	0	(0)	123
2023	59	(41)	0	(0)	41	(28)	37	(26)	6	(4)	1	(<1)	1	(<1)	0	(0)	145
2022	56	(37)	0	(0)	45	(30)	41	(27)	6	(4)	1	(<1)	3	(2)	0	(0)	152
Monash (VIC)																	
2024	1	(1)	91	(91)	1	(1)	0	(0)	2	(2)	5	(5)	0	(0)	0	(0)	100
2023	1	(1)	84	(88)	1	(1)	0	(0)	2	(2)	7	(7)	0	(0)	0	(0)	95
2022	1	(1)	80	(88)	1	(1)	0	(0)	2	(2)	7	(8)	0	(0)	0	(0)	91
Royal Adelaide (SA)																	
2024	0	(0)	0	(0)	0	(0)	0	(0)	8	(89)	0	(0)	0	(0)	1	(11)	9
2023	0	(0)	0	(0)	0	(0)	0	(0)	10	(91)	0	(0)	0	(0)	1	(9)	11
2022	0	(0)	0	(0)	0	(0)	0	(0)	13	(100)	0	(0)	0	(0)	0	(0)	13

New referrals received over time

Table 1.5 shows the number of new referrals received by transplanting units in Australia and New Zealand over time, and by state of residence (for Australian units only).

Table 1.5: New referrals by Australian state of residence and pancreas transplant unit, over the past three years

Year	State of residence, n (row %)														Total		
	NSW		VIC		QLD		WA		SA		TAS		ACT			NT	
Westmead (NSW)																	
2024	2	(40)	0	(0)	3	(60)	0	(0)	0	(0)	0	(0)	0	(0)	0	(0)	5
2023	15	(63)	0	(0)	7	(29)	2	(8)	0	(0)	0	(0)	0	(0)	0	(0)	24
2022	15	(63)	0	(0)	5	(21)	3	(13)	0	(0)	0	(0)	1	(4)	0	(0)	24
Monash (VIC)																	
2024	0	(0)	34	(97)	0	(0)	0	(0)	0	(0)	1	(3)	0	(0)	0	(0)	35
2023	0	(0)	31	(86)	0	(0)	0	(0)	1	(3)	4	(11)	0	(0)	0	(0)	36
2022	1	(3)	27	(82)	0	(0)	0	(0)	0	(0)	5	(15)	0	(0)	0	(0)	33
Royal Adelaide (SA)																	
2024	0	(0)	0	(0)	0	(0)	0	(0)	2	(67)	0	(0)	0	(0)	1	(33)	3
2023	0	(0)	0	(0)	0	(0)	0	(0)	1	(50)	0	(0)	0	(0)	1	(50)	2
2022	0	(0)	0	(0)	0	(0)	0	(0)	7	(100)	0	(0)	0	(0)	0	(0)	7
Auckland (NZ)																	
2024	-		-		-		-		-		-		-		-		7
2023	-		-		-		-		-		-		-		-		9
2022	-		-		-		-		-		-		-		-		7

Patient characteristics for those active on the list in 2024

The following figures illustrate the distribution of other characteristics of those active on the waiting list in 2024, including the distribution of blood groups and patient ages.

Figure 1.2: People active on the waitlist by blood group, end of 2024

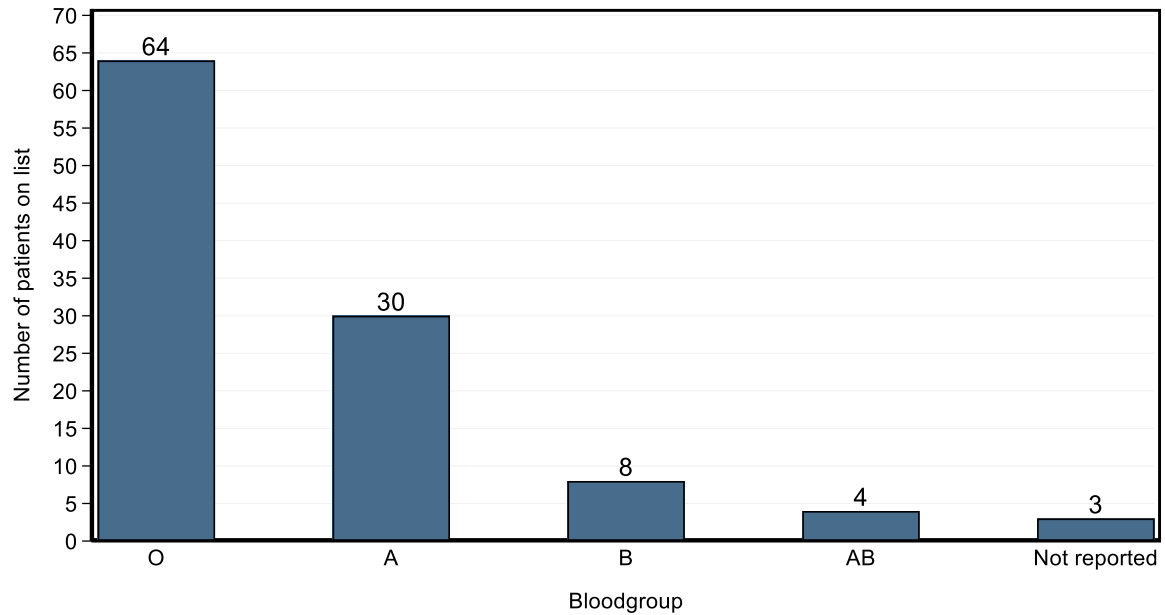
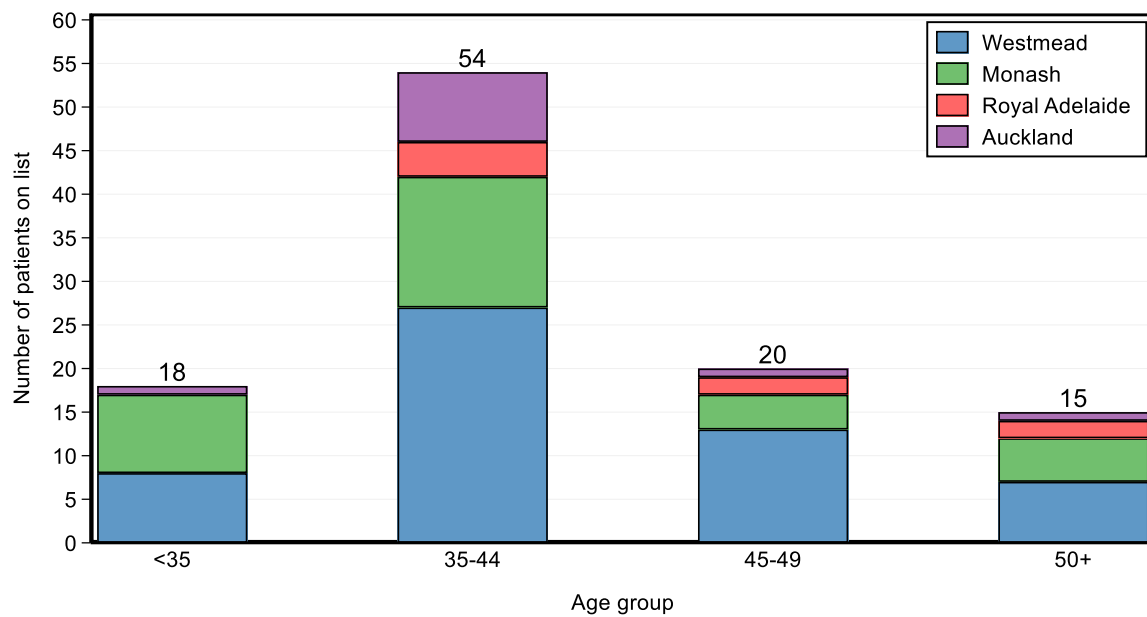


Figure 1.3: People active on the waitlist by age group and transplant centre, end of 2024

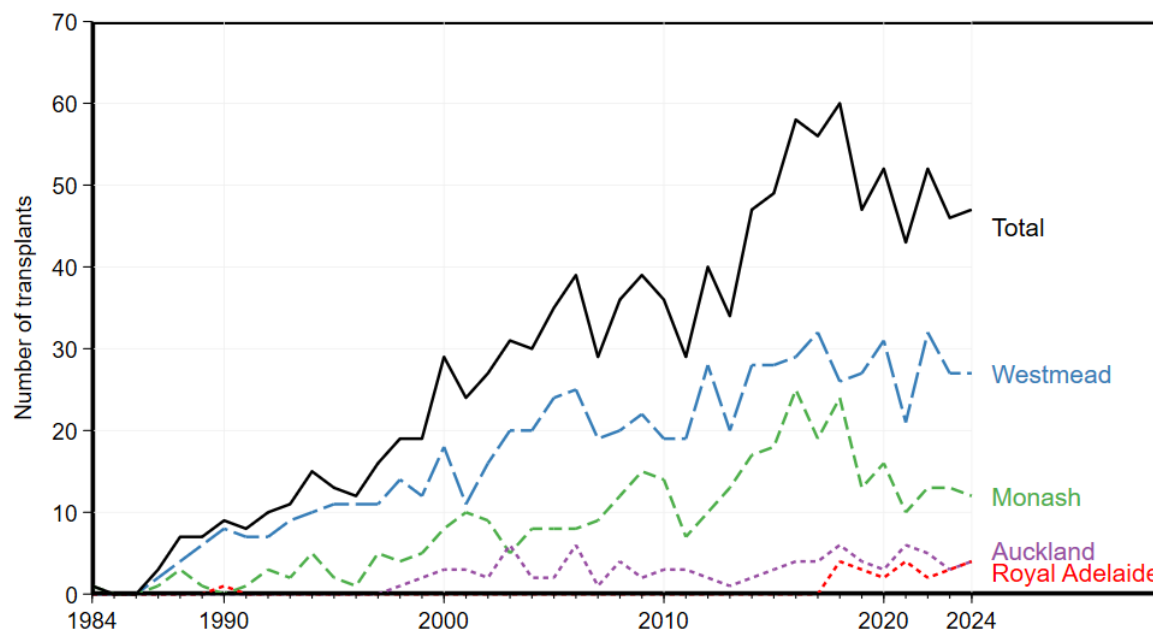


Chapter 2: Pancreas transplant recipients

Authors: Angela Webster, Paul Robertson, Tia Mark, Helen Pilmore, Danielle Stephenson, James Hedley

Pancreas transplant incidence

A total of 1,138 solid pancreas transplants have been performed in Australia and New Zealand from 1984-2024. Transplants have been performed in Westmead (696), Monash (324), Auckland (87), and Royal Adelaide (22). There have also been multi-organ transplants including pancreas in several locations over time. Since 1984 there have been a total of 3 SPK transplants conducted outside the main transplanting centres (1 at Royal Prince Alfred, 1 at Royal Melbourne Hospital, 1 at Queen Elizabeth Hospital), as well as 4 multi-organ transplants conducted at Austin Hospital (2 liver-pancreas, 1 liver-kidney-pancreas, 1 liver-kidney-pancreas-intestine). Figure 2.1 shows pancreas transplants over time, by transplant centre.

Figure 2.1: Pancreas transplants over time, by transplant centre

Note: There have been six pancreas transplants performed in Australia, which were not conducted by either Westmead, Monash, or Royal Adelaide. These occurred in 1988, 1990, 2005, and 2017, and two in 2021.

In 2024, 46 people received a pancreas transplant, by centre this was; Monash (11), Westmead (27), Royal Adelaide (4), and Auckland (4). The number of transplants performed in 2024 increased by 1 (2%) from the previous year.

Not all pancreas transplant operations are undertaken together with a kidney. In 2024, 44 of the 46 pancreas transplants were simultaneous pancreas-kidney transplant (SPK), and 1 was PAK. Pancreas after kidney (PAK) operations are performed for type 1 diabetic people who either had a first kidney transplant without a pancreas (most commonly from a living donor relative) and subsequently opt for a pancreas, or for people who underwent an SPK and have good kidney transplant function, but had a pancreas transplant failure, so need a further pancreas transplant. Pancreas transplant alone (PTA) is a less common operation and occurs very rarely. Indications for PTA include management of patients with hypoglycaemic unawareness or brittle diabetes that have failed best medical therapy. On rarer occasions, a multi-organ transplant is undertaken which includes a pancreas transplant. This includes liver-pancreas transplants (one in 2024, one in 2022, two in 2021, one in 2020, and one in 2016), liver-kidney-pancreas transplants (one in 2021, one in 2017, and one in 2005), and one liver-pancreas-intestine transplant in 2012.

The distribution of operation types is shown in Figure 2.2 and the number of transplants by operation type is shown in

Table 2.1.

Figure 2.2: Pancreas transplants over time, by operation type

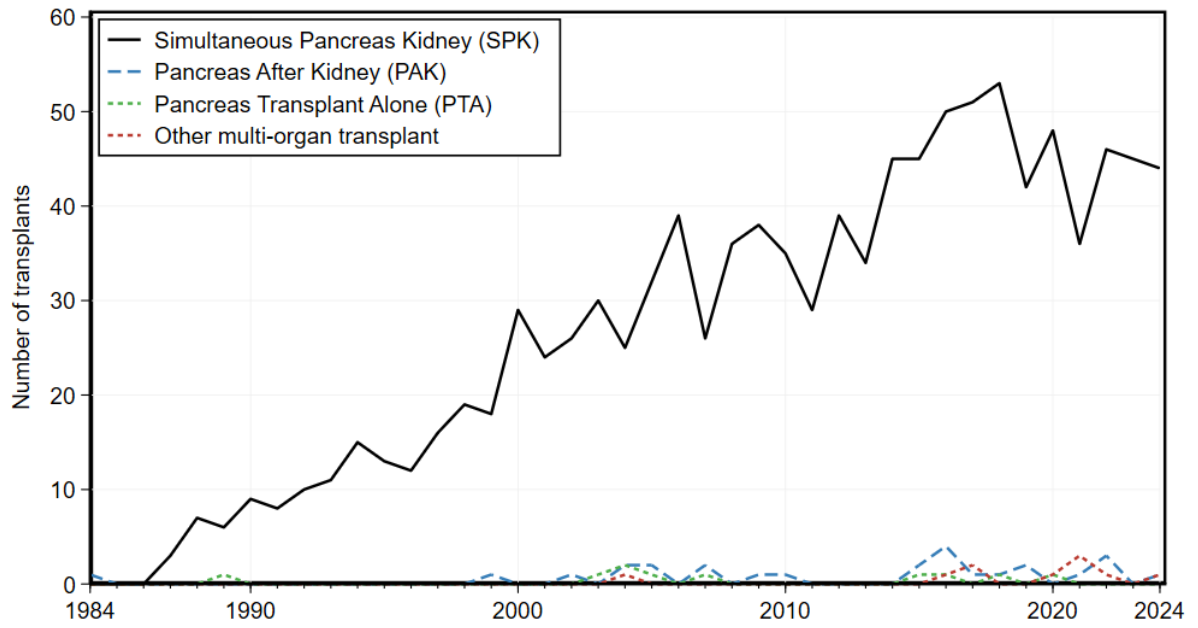


Table 2.1: Pancreas transplants over time, by transplant centre and operation type

Year	Hospital and transplant type, n (row %)												Total
	Westmead			Monash			Royal Adelaide	New Zealand	All	All	All		
	SPK	PAK	PTA	SPK	PAK	PTA	All	All					
2024	26 (58)	1 (2)	0 (0)	10 (22)	0 (0)	0 (0)	4 (9)	4 (9)			45		
2023	27 (60)	0 (0)	0 (0)	12 (27)	0 (0)	0 (0)	3 (7)	3 (7)			45		
2022	31 (62)	1 (2)	0 (0)	10 (20)	2 (4)	0 (0)	1 (2)	5 (10)			50		
2021	21 (55)	0 (0)	0 (0)	6 (16)	1 (3)	0 (0)	4 (11)	6 (16)			38		
2020	30 (60)	0 (0)	1 (2)	13 (26)	0 (0)	0 (0)	3 (6)	3 (6)			50		
2019	26 (59)	1 (2)	0 (0)	10 (23)	0 (0)	0 (0)	3 (7)	4 (9)			44		
2018	24 (44)	1 (2)	0 (0)	20 (36)	0 (0)	0 (0)	4 (7)	6 (11)			55		
2017	31 (60)	0 (0)	0 (0)	16 (31)	1 (2)	0 (0)	0 (0)	4 (8)			52		
2016	26 (47)	3 (5)	0 (0)	20 (36)	1 (2)	1 (2)	0 (0)	4 (7)			55		
2015	27 (56)	1 (2)	0 (0)	16 (33)	1 (2)	0 (0)	0 (0)	3 (6)			48		
2014	28 (62)	0 (0)	0 (0)	15 (33)	0 (0)	0 (0)	0 (0)	2 (4)			45		
2013	20 (59)	0 (0)	0 (0)	13 (38)	0 (0)	0 (0)	0 (0)	1 (3)			34		
2012	28 (72)	0 (0)	0 (0)	9 (23)	0 (0)	0 (0)	0 (0)	2 (5)			39		
2011	19 (66)	0 (0)	0 (0)	7 (24)	0 (0)	0 (0)	0 (0)	3 (10)			29		
2010	19 (53)	0 (0)	0 (0)	14 (39)	0 (0)	0 (0)	0 (0)	3 (8)			36		
2009	22 (56)	0 (0)	0 (0)	14 (36)	1 (3)	0 (0)	0 (0)	2 (5)			39		
2008	20 (56)	0 (0)	0 (0)	12 (33)	0 (0)	0 (0)	0 (0)	4 (11)			36		
2007	16 (55)	2 (7)	1 (3)	9 (31)	0 (0)	0 (0)	0 (0)	1 (3)			29		
2006	25 (64)	0 (0)	0 (0)	8 (21)	0 (0)	0 (0)	0 (0)	6 (15)			39		
2005	21 (62)	2 (6)	1 (3)	8 (24)	0 (0)	0 (0)	0 (0)	2 (6)			34		
2004	15 (52)	2 (7)	2 (7)	8 (28)	0 (0)	0 (0)	0 (0)	2 (7)			29		
2003	19 (61)	0 (0)	1 (3)	5 (16)	0 (0)	0 (0)	0 (0)	6 (19)			31		
2002	15 (56)	1 (4)	0 (0)	9 (33)	0 (0)	0 (0)	0 (0)	2 (7)			27		
2001	11 (46)	0 (0)	0 (0)	10 (42)	0 (0)	0 (0)	0 (0)	3 (13)			24		
'84-'00	128 (72)	1 (<1)	1 (<1)	40 (23)	1 (<1)	0 (0)	0 (0)	6 (3)			177		
Total	675 (60)	16 (1)	7 (<1)	314 (28)	8 (<1)	1 (<1)	22 (2)	87 (8)			1,130		

SPK, simultaneous pancreas-kidney; PAK, pancreas after kidney; PTA, pancreas alone. Excludes seven transplants performed in Australia outside of Westmead, Monash, or Royal Adelaide in 1988, 1990, 2005, 2017, two in 2021, and 2024. Also excludes one combined liver-pancreas transplant performed at Monash in 2016.

Patients transplanted by state

The state of origin of the people receiving pancreas transplants at each transplant unit over time is shown in Table 2.2.

Table 2.2: Pancreas transplants by transplant centre and recipient state of residence over the past three years

Year	State of residence, n (row %)																Total
	NSW		VIC		QLD		WA		SA		TAS		ACT		NT		
Westmead (NSW)																	
2024	16	(59)	0	(0)	8	(30)	3	(11)	0	(0)	0	(0)	0	(0)	0	(0)	27
2023	9	(33)	0	(0)	10	(37)	6	(22)	0	(0)	0	(0)	2	(7)	0	(0)	27
2022	11	(34)	0	(0)	17	(53)	4	(13)	0	(0)	0	(0)	0	(0)	0	(0)	32
Monash (VIC)																	
2024	0	(0)	#	(91)	0	(0)	0	(0)	0	(0)	1	(9)	0	(0)	0	(0)	11
2023	0	(0)	9	(75)	0	(0)	0	(0)	1	(8)	2	(17)	0	(0)	0	(0)	12
2022	0	(0)	8	(67)	0	(0)	0	(0)	0	(0)	4	(33)	0	(0)	0	(0)	12
Royal Adelaide (SA)																	
2024	0	(0)	0	(0)	0	(0)	0	(0)	4	(100)	0	(0)	0	(0)	0	(0)	4
2023	0	(0)	0	(0)	0	(0)	0	(0)	3	(100)	0	(0)	0	(0)	0	(0)	3
2022	0	(0)	0	(0)	0	(0)	0	(0)	1	(100)	0	(0)	0	(0)	0	(0)	1
Auckland (NZ)																	
2024	-		-		-		-		-		-		-		-		4
2023	-		-		-		-		-		-		-		-		3
2022	-		-		-		-		-		-		-		-		5

Demographics of new pancreas transplant recipients

The characteristics of pancreas transplant recipients in 2024 and in previous years are shown in Table 2.3. The primary diagnosis causing end stage kidney disease of recipients during 2024 and historically was type I diabetes. Type 2 diabetes is not regarded as an indication for SPK in Australia and New Zealand, though there may be rare exceptions. Consequently, the number of people with type II diabetes accepted for pancreas transplantation was also small, and none received a transplant in 2024.

Table 2.3: Demographics and characteristics of pancreas transplant recipients

Patients, n (column %)	2024		1984-2023		Total	
Total, N (row %)	46	(4)	1,092	(95)	1,138	(100)
Age, median (IQR)	41	(34, 47)	39	(33.5, 44)	39	(34, 45)
15-34	14	(30)	323	(29)	337	(29)
35-44	18	(39)	498	(45)	516	(45)
45-49	8	(17)	178	(16)	186	(16)
50+	6	(13)	93	(8)	99	(8)
Sex						
Female	21	(45)	504	(46)	525	(46)
Male	25	(54)	588	(53)	613	(53)
Cause of kidney failure						
Diabetes type 1	45	(97)	639	(58)	684	(60)
Diabetes type 2	0	(0)	2	(<1)	2	(<1)
Haemolytic uraemic syndrome	0	(0)	1	(<1)	1	(<1)
Interstitial nephritis	0	(0)	1	(<1)	1	(<1)
Wegener's granulomatosis	0	(0)	1	(<1)	1	(<1)
Polycystic kidney disease	0	(0)	0	(0)	0	(0)
Focal segmental glomerulosclerosis	0	(0)	1	(<1)	1	(<1)
No kidney disease	1	(2)	20	(1)	21	(1)
Not reported	0	(0)	427	(39)	427	(37)
Ethnicity¹						
Aboriginal & Torres Strait Islander	2	(4)	4	(<1)	6	(<1)
Māori	1	(2)	10	(<1)	11	(<1)
Pacific peoples	2	(4)	12	(1)	14	(1)
White	40	(86)	1,018	(93)	1,058	(92)
North Asian	0	(0)	5	(<1)	5	(<1)
South-East Asian	0	(0)	1	(<1)	1	(<1)
Southern and Central Asian	1	(2)	23	(2)	24	(2)
North African and Middle Eastern	0	(0)	17	(1)	17	(1)
Other	0	(0)	1	(<1)	1	(<1)
Not reported	0	(0)	1	(<1)	1	(<1)
Blood group						
O	17	(36)	482	(44)	499	(43)
A	22	(47)	452	(41)	474	(41)
B	5	(10)	108	(9)	113	(9)
AB	2	(4)	50	(4)	52	(4)

The type of pancreas transplants and the types of donors for transplants performed in 2024 is presented in

Table 2.4, stratified by country and sex.

Table 2.4: Transplant and donor pathway in 2024 by country and donor sex

	Australia		New Zealand		Overall		Total
	Female	Male	Female	Male	Female	Male	
Simultaneous pancreas-kidney	10	30	1	3	11	33	44
<i>Donation after brain death</i>	10	26	1	3	11	29	40
<i>Donation after circulatory death</i>	0	4	0	0	0	4	4
Pancreas alone	1	1	0	0	1	1	2
<i>Donation after brain death</i>	1	1	0	0	1	1	2
<i>Donation after circulatory death</i>	0	0	0	0	0	0	0

Balance of donor and recipient characteristics in 2024

Cross tabulations of donor and recipient blood group and sex for people transplanted in 2024 are displayed in Table 2.5 and Table 2.6. These distributions remain similar to previous years.

Table 2.5: Cross tabulation of recipient and donor blood groups for 2024

Recipient blood group	Donor blood group, n (row %)						
	O	A	B	AB	Total		
O	17 (100)	0 (0)	0 (0)	0 (0)	17		
A	1 (4)	21 (95)	0 (0)	0 (0)	22		
B	0 (0)	0 (0)	5 (100)	0 (0)	5		
AB	0 (0)	0 (0)	0 (0)	2 (100)	2		
Total	18 (39)	21 (45)	5 (10)	2 (4)	46		

Table 2.6: Cross tabulation of recipient and donor sex for 2024

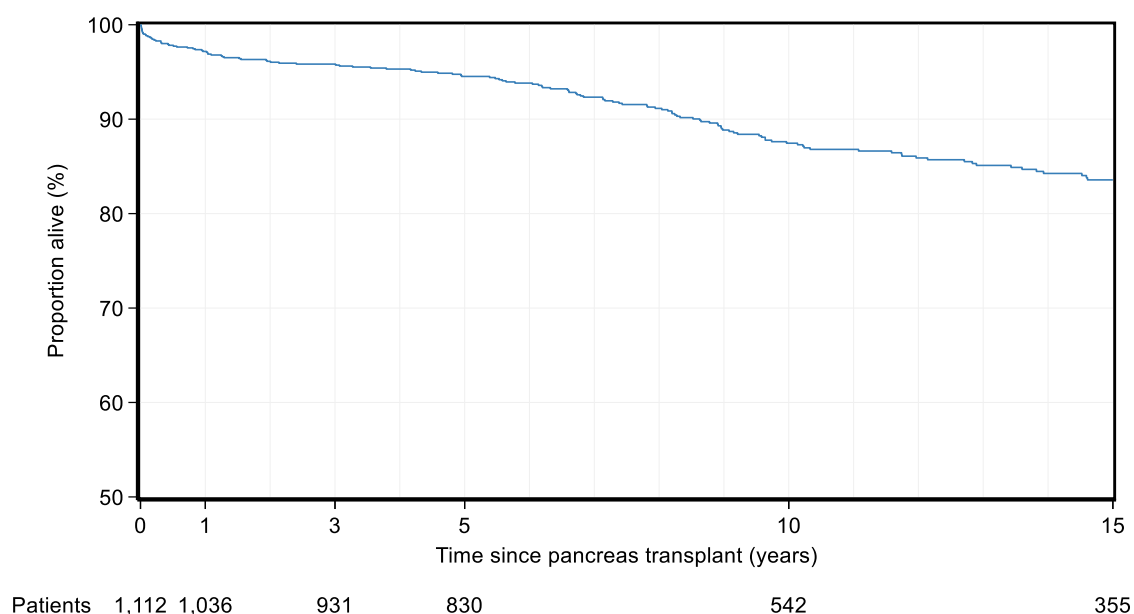
Recipient sex	Donor sex, n (row %)				Total
	Female		Male		
Female	8 (38)	13 (61)			21
Male	4 (16)	21 (84)			25
Total	12 (26)	34 (73)			46

Patient survival

Patient survival is calculated from the date of transplantation until death. Patients still alive at the end of 2024 are censored. For people who received more than one transplant, their survival is calculated from the date of their first transplant. There were 1,112 patients included, 26 of whom have received a second pancreas transplant, for a total of 1,138 pancreas transplant procedures. Note that for the following survival plots survival proportion on the y-axis does not always start at zero; this is to better demonstrate some observed differences.

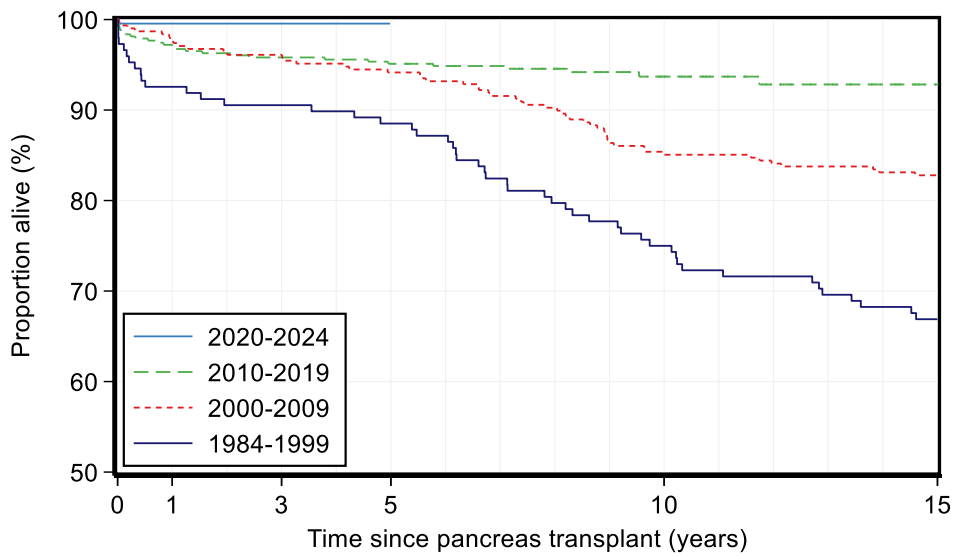
Figure 2.3 shows overall survival following pancreas transplant. There were 160 deaths over 12,781 years of follow-up. Survival at 1 year was 97.2%, at 5 years 94.5%, at 10 years 87.5%, and at 15 years 83.6%.

Figure 2.3: Kaplan-Meier plot of patient survival after pancreas transplantation



Patient survival by era of transplantation is shown in Figure 2.4. Survival has improved over time ($p < 0.001$). Survival at 1 year for people transplanted 1984-1999 was 92.6%; in recent years this has risen to 99.6%. Survival at 5 years was 88.5% for those transplanted 1984-1999, whereas for those transplanted in 2010-2019, 5-year survival was 95.1%.

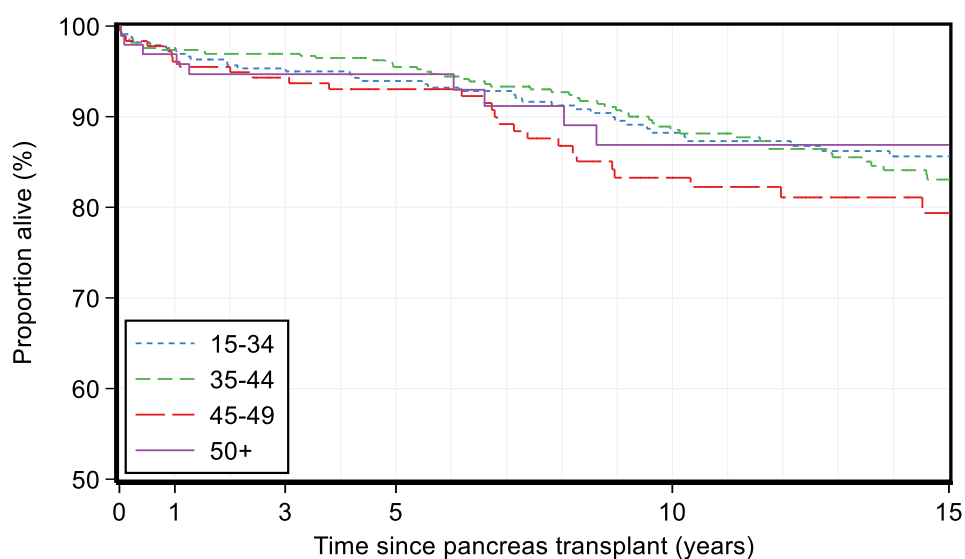
Figure 2.4: Kaplan-Meier plot of patient survival by era of transplantation



Year of transplant	2020-2024	2010-2019	2000-2009	1984-1999
0	226	430	308	148
1	180	418	301	137
5	89	412	296	134
10	0	169	262	111
15	0	1	255	99

Patient survival by age at transplantation is shown in Figure 2.5. Survival is generally similar across all age groups ($p=0.2$). There is slightly greater survival for those aged 50 and older, potentially because these recipients are a more highly selected population. However, even among those younger than 50, survival is still similar across age groups ($p=0.09$). Survival at 1 year was 97.6% for recipients aged 15-34, 97.4% for those aged 35-44, 96.1% for those aged 45-49, and 96.9% for those aged 50 or older. At 5 years, survival was 93.9% for those aged 15-34, 95.5% for those aged 35-44, 93.0% for those aged 45-49, and 94.7% for those aged 50 or older.

Figure 2.5: Kaplan-Meier plot of patient survival by age at transplantation



Age at transplant	0	1	3	5	10	15
15-34	333	311	285	260	191	134
35-44	499	469	426	381	235	157
45-49	183	168	152	134	83	45
50+	97	88	68	55	33	19

Pancreas survival

Pancreas graft survival was calculated from the time of transplant until the time of permanent return to insulin therapy or pancreatectomy. Analyses included both death-censored graft survival, and graft survival including death as graft failure. There are 26 patients who received two pancreas transplants, and therefore are included twice in the analysis, with a total of 1,138 pancreas transplants included.

Figure 2.6 shows pancreas graft survival censored at death. There were 188 pancreas failures over 10,705 years of follow-up (excluding people who died with a functioning transplant). Overall, 1-year pancreas graft survival was 89.8%, 5-year survival 86.1%, and 10-year survival 83.5%.

Figure 2.6: Kaplan-Meier plot of pancreas graft survival (censored at death)

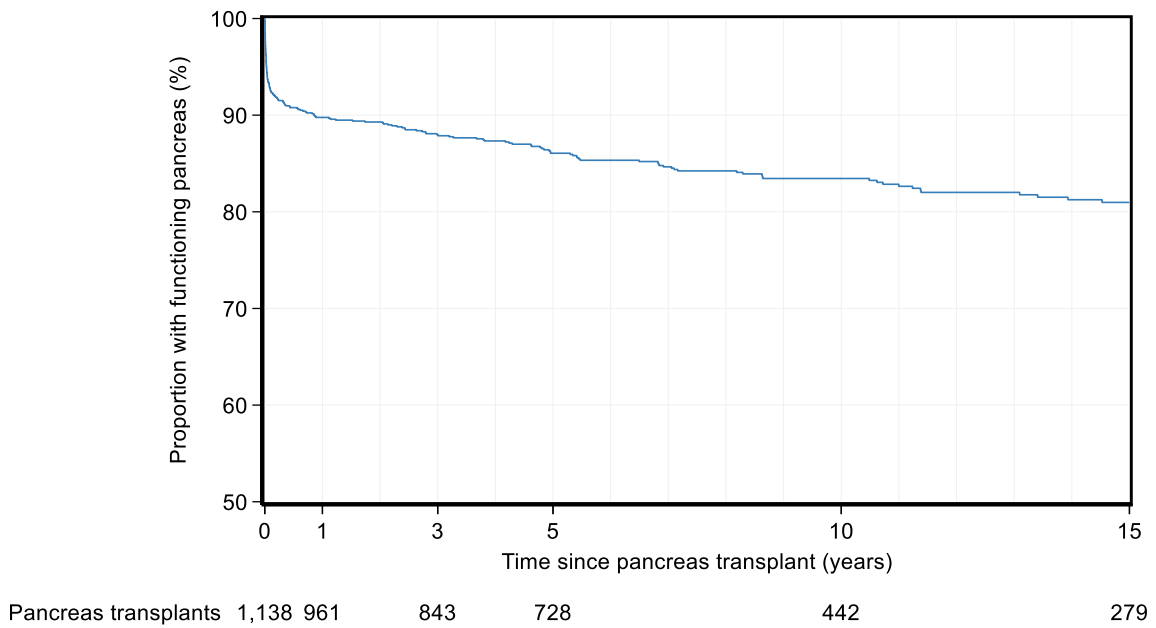
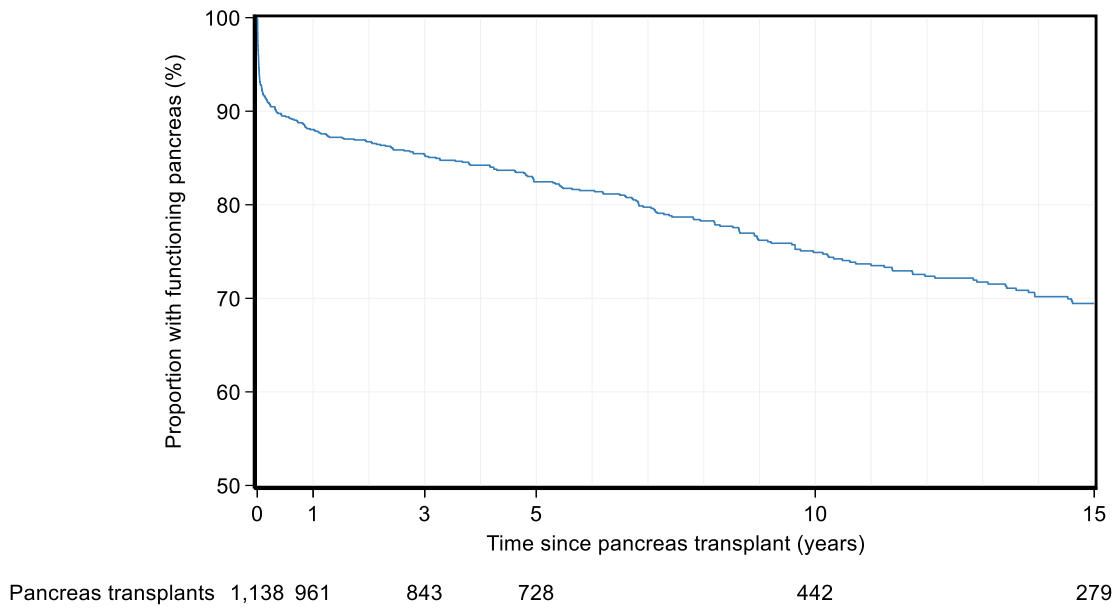


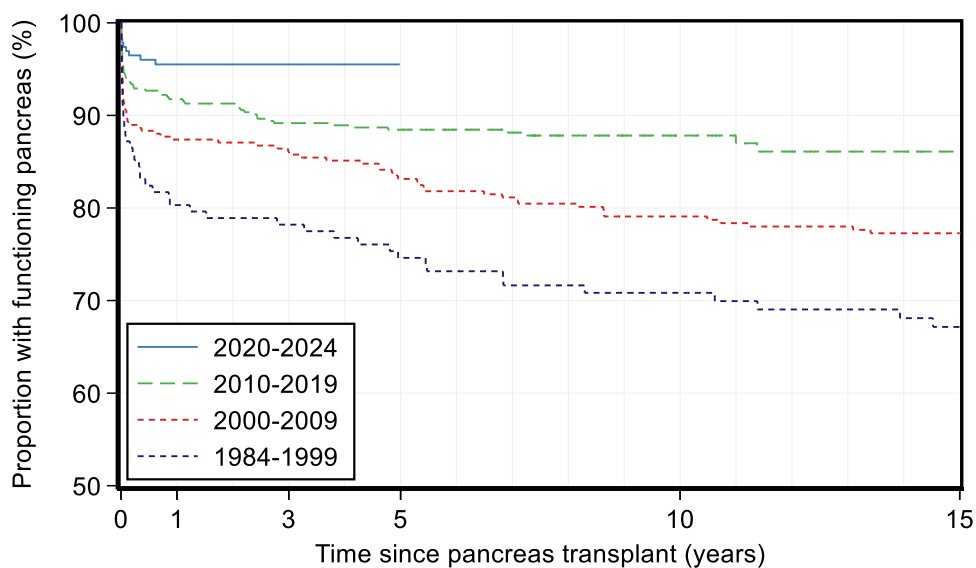
Figure 2.7 shows pancreas graft survival including death with a functioning pancreas. Over the same observation time there were 302 recipients who either died or experienced pancreas graft failure. Survival at 1, 5 and 10 years was 88.0%, 82.5% and 74.9% respectively.

Figure 2.7 Kaplan-Meier plot of pancreas graft survival (including death as graft failure)



Survival of pancreas transplants has changed over time, as shown in Figure 2.8. Survival improved markedly over time ($p < 0.001$). For those transplanted 1984-1999, 1-year pancreas graft survival was 80.3%, and 5-year survival 74.6%. For those transplanted 2010-2019, 1-year survival was 91.8% and 5-year survival 88.5%. For those transplanted 2020-2024, 1-year survival was 91.8% and 5-year survival 88.5%. For those transplanted 2020-2024, 1-year survival was 95.5% and 5-year survival 88.5%.

Figure 2.8: Kaplan-Meier plot of pancreas graft survival over time (censored at death)

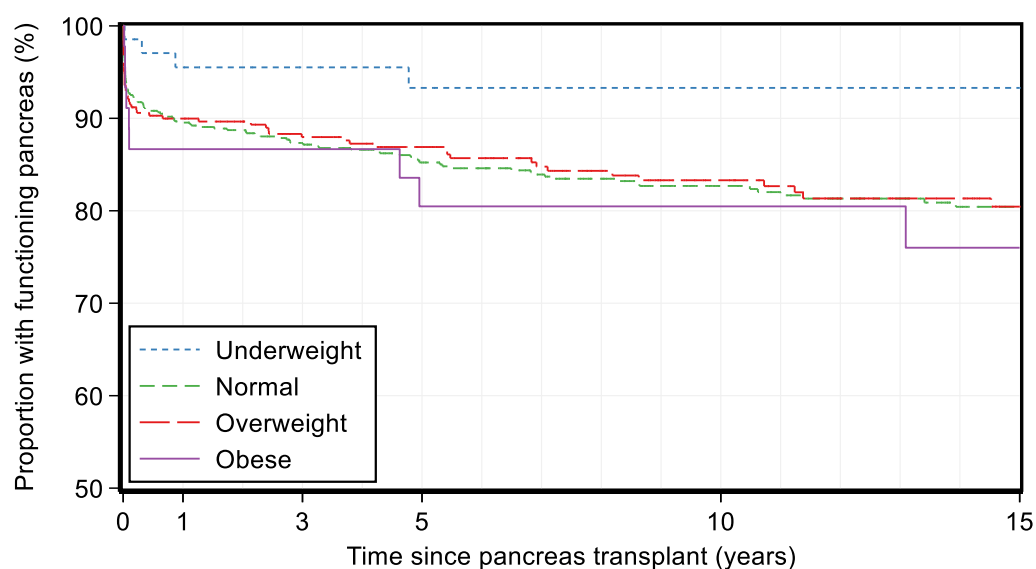


Year of transplant	2020-2024	2010-2019	2000-2009	1984-1999
2020-2024	231	178	88	0
2010-2019	439	394	379	374
2000-2009	318	274	266	251
1984-1999	150	115	110	103

Pancreas graft survival by donor BMI is presented in Figure 2.9 (censored at death) and

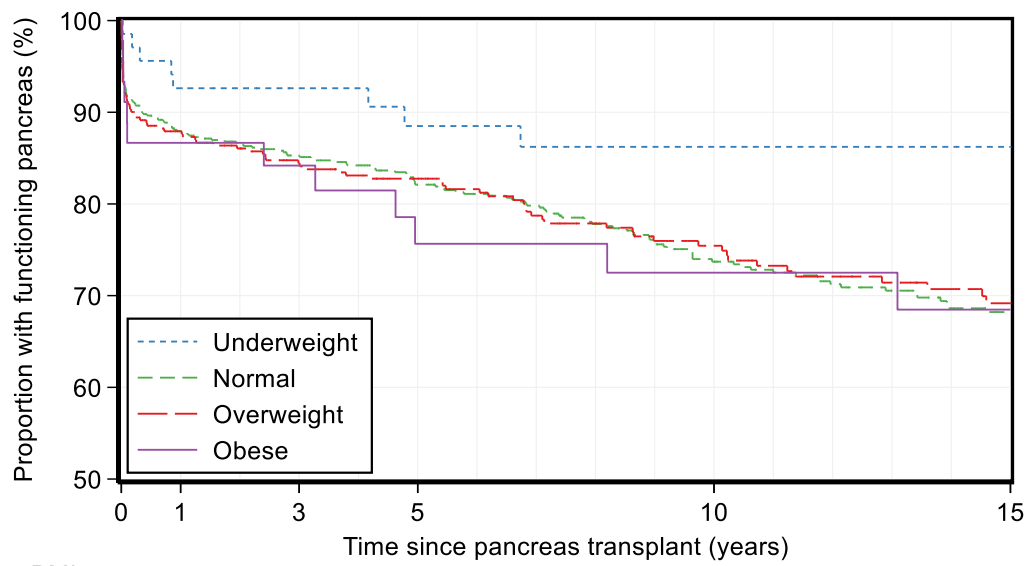
Figure 2.10 (including death as pancreas failure). Most donors (59%) were normal weight (BMI 18.5-24.9). However, 6% were underweight (BMI <18.5), 30% were overweight (BMI 25-29.9) and 4% were obese (BMI 30+). While Figures 2.9 and 2.10 show slightly higher survival from underweight donors, there was no statistically significant association between donor BMI and pancreas survival either censored at death ($p=0.2$) or including death as pancreas failure ($p=0.2$). Pancreas graft survival at 1 year (censored at death) was 89.5% for transplants where the donor was normal BMI, 95.5% for underweight donors, 90.0% for overweight donors, and 86.7% for obese donors. Including death as pancreas failure, pancreas survival at 1-year was 87.9% for normal BMI donors, 92.6% for underweight donors, 87.9% for overweight donors, and 86.7% for obese donors.

Figure 2.9: Kaplan-Meier plot of pancreas graft survival by donor BMI, censored at death



Donor BMI						
Underweight	70	62	51	42	21	16
Normal	659	557	486	420	261	160
Overweight	342	285	257	225	141	87
Obese	45	39	32	26	19	16

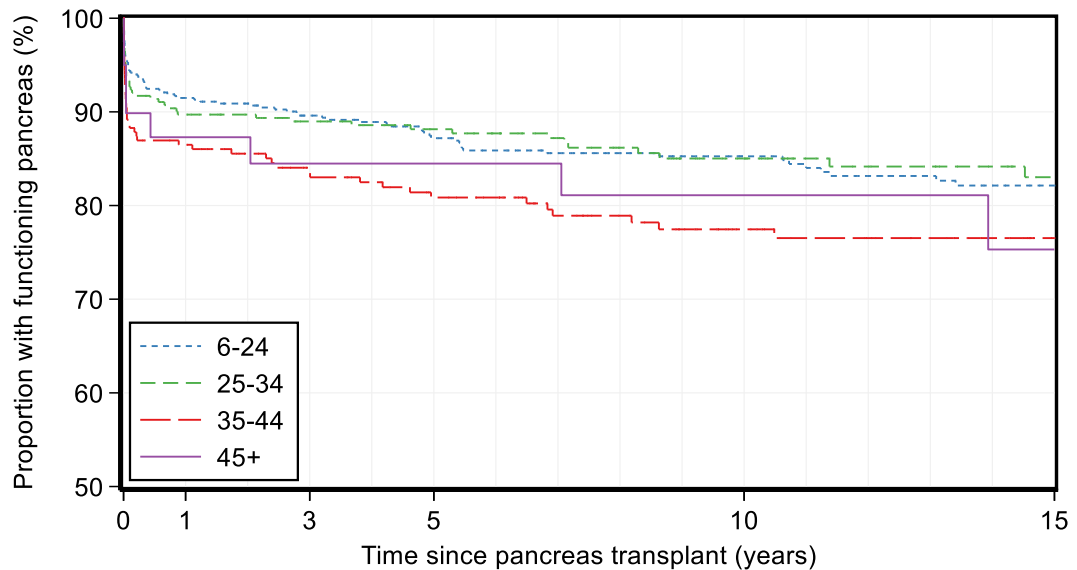
Figure 2.10: Kaplan-Meier plot of pancreas graft survival by donor BMI, including death as pancreas failure



Donor BMI	0	1	3	5	10	15
Underweight	70	62	51	42	21	16
Normal	659	557	486	420	261	160
Overweight	342	285	257	225	141	87
Obese	45	39	32	26	19	16

Pancreas graft survival by donor age is presented in Figure 2.11. The survival curves are similar across all donor age groups ($p=0.1$), although there appears to be some evidence of a survival advantage from younger donors. Pancreas graft survival at 1 year was 91.5% for transplants from donors aged 6-24 years, 89.7% for donors aged 25-34 years, 86.5% for donors aged 35-44 years, and 87.3% for donors aged 45 years or older.

Figure 2.11: Kaplan-Meier plot of pancreas graft survival by donor age (censored at death)



Donor age	535	463	403	344	212	144
6-24	535	463	403	344	212	144
25-34	315	266	235	200	122	70
35-44	233	187	163	146	89	53
45+	40	32	29	26	19	12

Pancreas graft survival at 1 year and 5 years post-transplant, censored at death and stratified by country and era of transplantation is presented in Table 2.7.

Table 2.7: Pancreas transplant survival censored at death, by country and era

Year	Transplants	Australia				New Zealand				
		1-year		5-year		1-year		5-year		
		<i>n</i>	%	<i>n</i>	%	<i>Transplants</i>	<i>n</i>	%	<i>n</i>	%
2015-2020	282	264	95.4%	214	94.3%	24	24	100.0%	19	91.7%
2016-2021	271	256	96.3%	173	95.5%	27	26	96.3%	17	92.6%
2017-2022	264	252	97.0%	126	96.6%	28	27	96.4%	14	96.4%
2018-2023	257	246	96.9%	84	96.9%	27	26	96.3%	10	96.3%
2019-2024	250	200	95.5%	38	95.5%	25	20	95.8%	4	95.8%

Prevalence of functioning pancreas transplants

The number of people in Australia and New Zealand who were alive with a functioning transplant on 31st December each year for the last five years is shown in Table 2.8. This excludes people who are alive but had pancreas graft failure and no new transplant. The number of functioning transplants is increasing over time, possibly because of increased survival of pancreas transplants while the number of new transplants performed remains relatively steady over time.

Table 2.8: People alive with a functioning pancreas transplant in Australia and New Zealand by year and residence, at year end

Location	2020	2021	2022	2023	2024
Australia	640	677	722	761	799
New South Wales	178	189	200	208	223
Victoria	198	208	216	225	235
Queensland	134	145	162	172	179
Western Australia	34	35	39	45	47
South Australia	52	56	58	60	63
Tasmania	28	28	31	33	34
Australian Capital Territory	12	12	12	14	14
Northern Territory	4	4	4	4	4
New Zealand	48	53	57	59	60
Total	688	730	779	820	859

Kidney survival

Kidney graft survival was calculated for those who received SPK transplants, from the time of transplantation until return to dialysis. Analyses included both death-censored graft survival, and graft survival including death as graft failure. Only SPK transplants were included, and there was a total of 1,094 SPK transplants.

Figure 2.12 shows kidney survival censored at death. There were 90 kidney failures over 11,613 years of observation (excluding people who died with a functioning kidney transplant). Overall, 1-year kidney transplant survival was 97.6%, 5-year survival 95.4%, and 10-year survival 92.0%.

Figure 2.12: Kaplan-Meier plot of kidney graft survival from SPK transplants (censored at death)

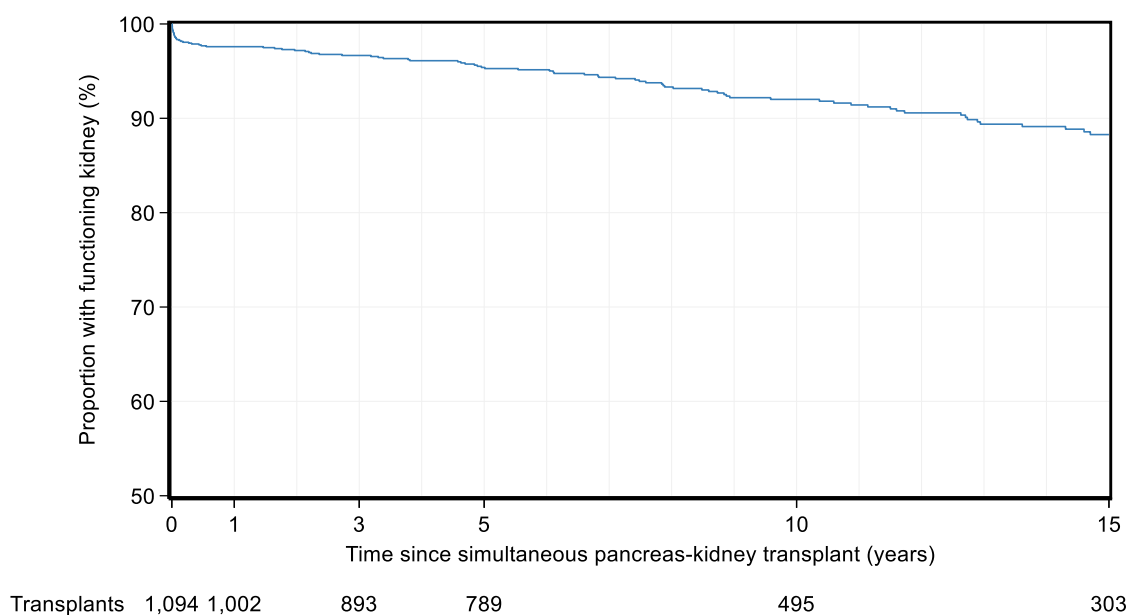
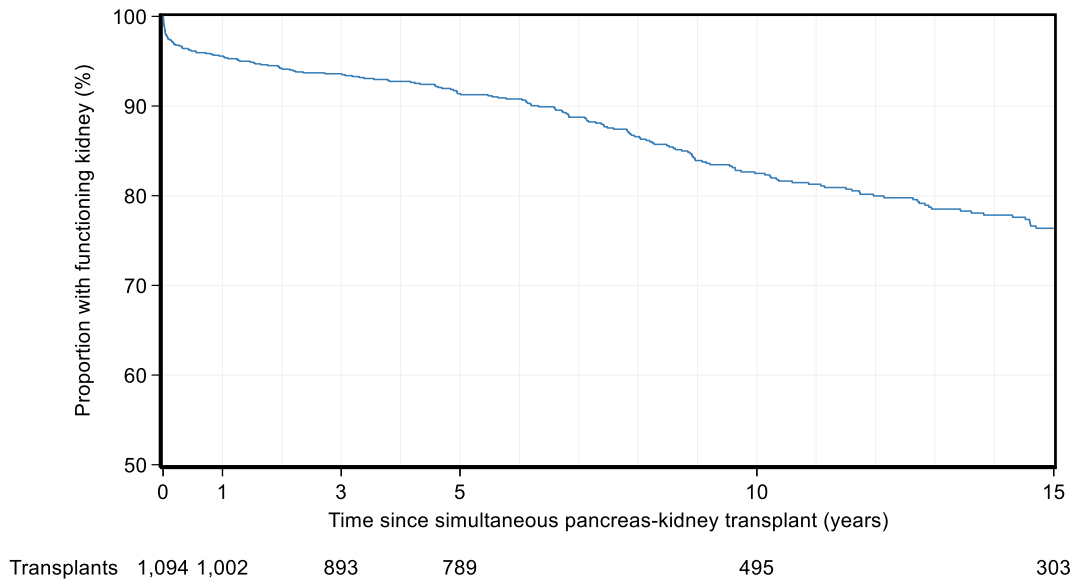


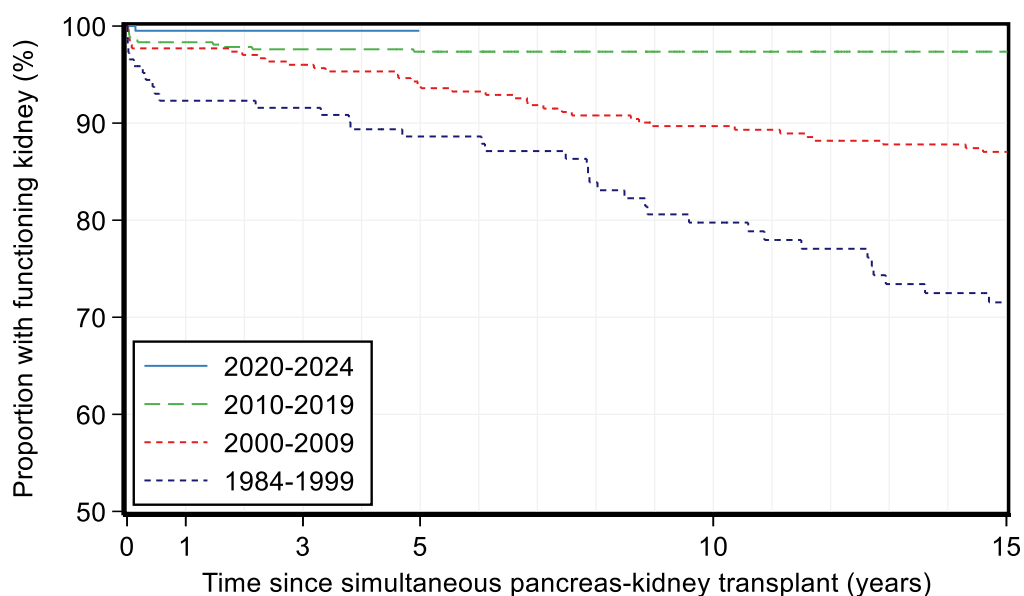
Figure 2.13 shows kidney survival including death with a functioning kidney. Over the same observation time there were 209 recipients who either died with kidney graft function or experienced kidney graft failure. Kidney graft survival at 1, 5 and 10 years was 95.6%, 91.4% and 82.5% respectively.

Figure 2.13: Kaplan-Meier plot of kidney graft survival from SPK transplants (including death as graft failure)



Kidney graft survival has improved over time, with longer survival for those transplanted in more recent years ($p < 0.001$). For those transplanted 1984-1999, kidney graft survival was 92.3% at 1 year and 88.6% at 5 years, but was 98.3% at 1 year and 97.4% at 5 years for those transplanted 2010-2019 (Figure 2.14). For those transplanted 2020-2024, 1-year kidney graft survival was 99.5%.

Figure 2.14: Kaplan-Meier plot of kidney graft survival from SPK transplants by era (censored at death)



Year of transplant	2020-2024	2010-2019	2000-2009	1984-1999
2020-2024	219	173	84	0
2010-2019	423	407	401	398
2000-2009	305	293	283	272
1984-1999	147	129	125	119

Pancreas transplant operative data

Characteristics of the pancreas transplant operations for 2024, previous years, and overall are shown in Table 2.9 below.

Table 2.9: Descriptive characteristics of pancreas transplant operations

	2024		1984-2023		Overall	
Pancreas						
Pancreas transplants, n (row %)	46	(4)	1,092	(96)	1,138	(100)
Cold ischaemic time (hours)						
N (%)	45	(98)	904	(83)	949	(83)
Mean (SD)	32.1	(116.9)	10.7	(17.3)	11.7	(30.7)
Median (IQR)	8.0	(6.0, 10.0)	10.2	(7.7, 12.4)	10.0	(7.5, 12.3)
Anastomosis time (minutes)						
N (%)	40	(87)	827	(76)	867	(76)
Mean (SD)	20.9	(7.3)	28.2	(8.6)	27.8	(8.7)
Median (IQR)	20.0	(16.0, 24.0)	28.0	(23.0, 33.0)	28.0	(22.0, 33.0)
Exocrine drainage						
Enteric, n (%)	45	(98)	856	(78)	901	(79)
Bladder, n (%)	0	(0)	164	(15)	164	(14)
Not reported, n (%)	1	(2)	72	(7)	73	(6)
Kidney						
SPK transplants, n (row %)	44	(4)	1,050	(96)	1,094	(100)
Cold ischaemic time (hours)						
N (%)	43	(93)	873	(80)	916	(80)
Mean (SD)	33.3	(119.5)	10.8	(17.6)	11.8	(31.2)
Median (IQR)	8.0	(6.0, 10.0)	10.2	(7.7, 12.4)	10.0	(7.5, 12.3)
Anastomosis time (minutes)						
N (%)	39	(85)	797	(73)	836	(73)
Mean (SD)	21.1	(7.4)	28.3	(8.5)	27.9	(8.6)
Median (IQR)	20.0	(16.0, 25.0)	28.0	(23.0, 33.0)	28.0	(23.0, 33.0)
Kidney donor arteries						
None, n (%)	0	(0)	2	(<1)	2	(<1)
One, n (%)	40	(91)	764	(73)	804	(73)
Two, n (%)	4	(9)	89	(8)	93	(9)
Three, n (%)	0	(0)	5	(<1)	5	(<1)
Not reported, n (%)	0	(0)	190	(18)	190	(17)

SPK, simultaneous pancreas-kidney

¹ Anastomosis time is not routinely recorded in New Zealand

To investigate variations in total cold ischaemic time in Australia by donor state and distance travelled to the transplanting centre, Table 2.10 displays a cross tabulation of donor state of origin with transplanting centre.

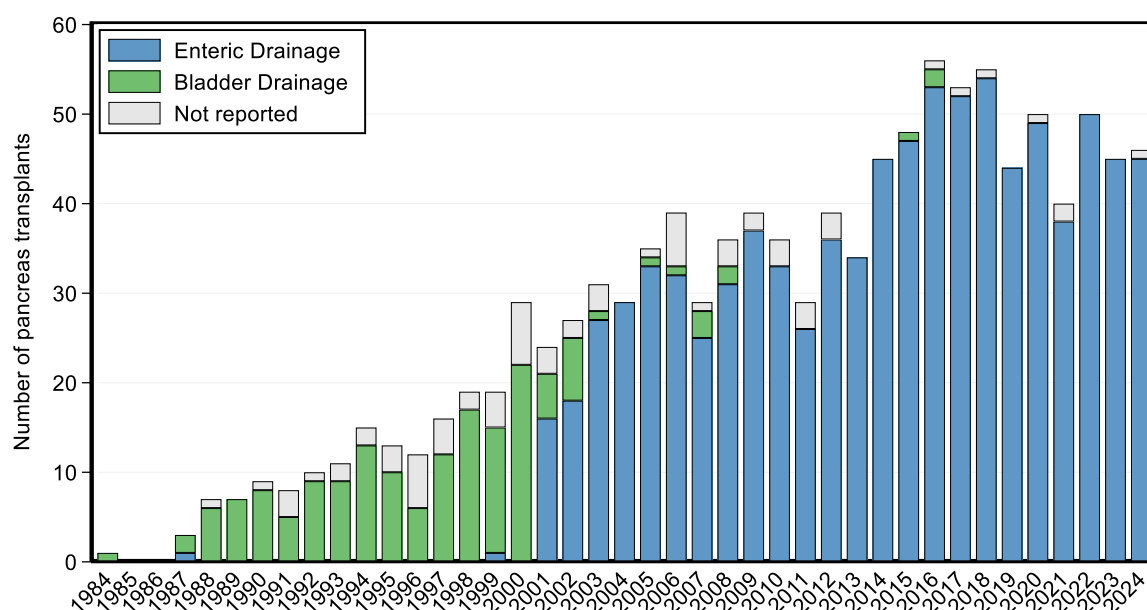
Table 2.10: Pancreas cold ischaemic time by donor state, for Australian pancreas transplants 2024

Donor state/territory	Cold ischaemic time (hours)								
	Westmead (NSW)			Monash (VIC)			Royal Adelaide (SA)		
	N	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)
New South Wales	11	7.1	(2.3)	0	-		0	-	
Victoria	1	9.0	-	9	6.0	(1.4)	0	-	
Queensland	7	9.4	(1.4)	0	-		0	-	
Western Australia	4	11.0	(1.4)	0	-		0	-	
South Australia	3	9.7	(0.6)	1	14.0	-	3	7	(1.5)
Tasmania	0	-		1	7.0	-	1	11	-
Australian Capital Territory	1	8.0	-	0	-		0	-	
Northern Territory	0	-		0	-		0	-	
Total	27	8.7	(2.2)	11	6.8	(2.7)	4	8	(2.5)

Surgical technique

Exocrine drainage of the pancreas has changed over time. Enteric drainage of the pancreas was first used in Australia and New Zealand during 2001. Figure 2.16 illustrates the number of transplants by pancreas duct management. Since 2001, most pancreas transplants have used enteric drainage of the pancreas duct.

Figure 2.16: Change in management of exocrine drainage of the pancreas over time



The site of donor vessel anastomoses onto the recipient vessels is dependent on many things, including but not limited to surgeon’s preference, surgical ease of access, length and relative calibre of donor vessels. The sites of anastomosis for donor arteries and veins are displayed in Figure 2.17 and Figure 2.18 below.

Figure 2.17: Site of donor artery anastomosis onto recipient vessel

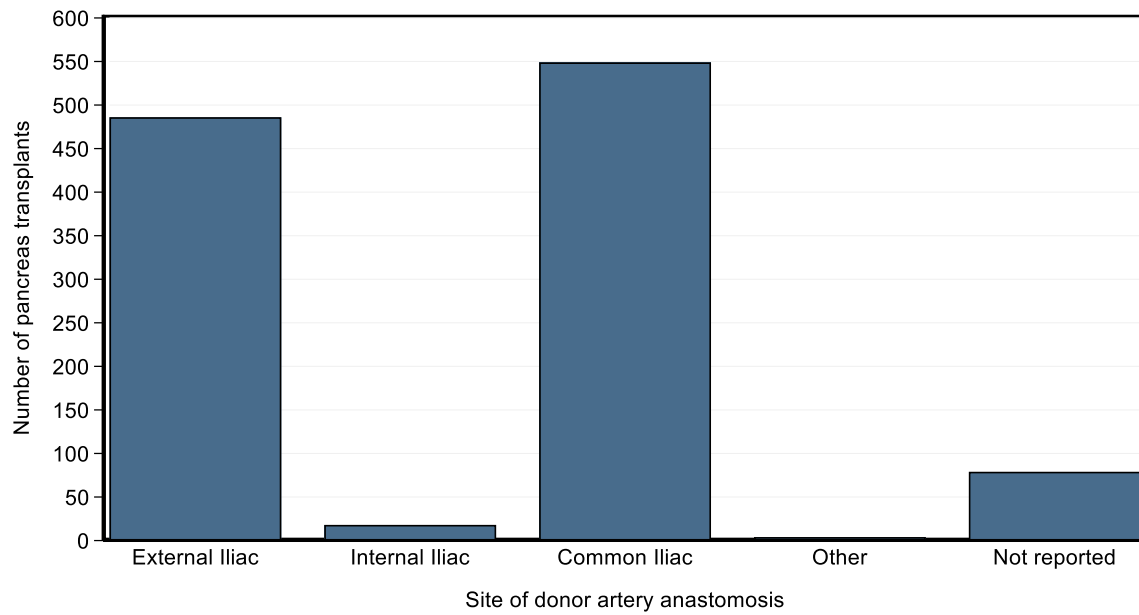
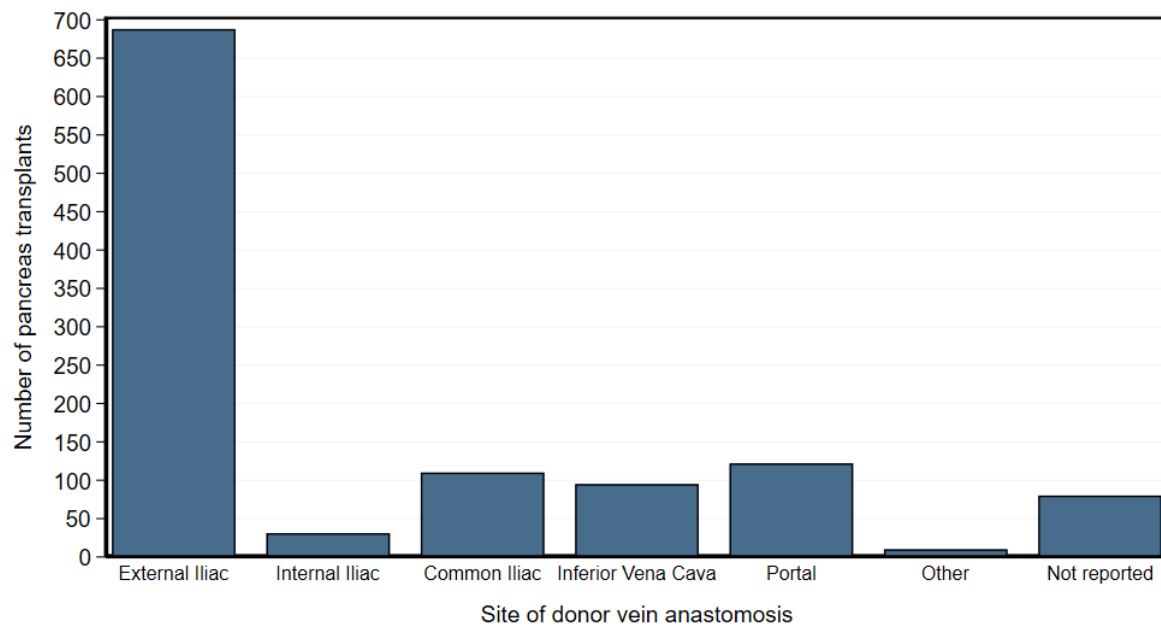


Figure 2.18: Site of donor vein anastomosis onto recipient vessel



The immunological matching of donor-recipient pairs is shown in Table 2.11, and the cytomegalovirus (CMV) and Epstein-Barr virus (EBV) matching is illustrated in Table 2.12.

Table 2.11: Immunological cross-matching of donor recipient pairs

	Donor-recipient pairs, n (column %)	
	Current	Peak
Crossmatch		
T and B cell Negative	896 (79)	855 (75)
T-cell Positive	0 (0)	3 (<1)
B-cell Positive	7 (<1)	9 (<1)
<i>DTT Negative</i>	3 (<1)	5 (<1)
None	6 (<1)	11 (<1)
Not reported	229 (20)	260 (23)
Recipient Panel Reactive Antibodies (%)		
0-49	153 (13)	148 (13)
50+	3 (<1)	12 (1)
Not reported	982 (86)	978 (86)

Table 2.12: Infectious disease serology cross-tabulation of donor-recipient pairs

Recipient serology	Donor serology, n (column %)		
	<i>Positive</i>	<i>Negative</i>	<i>Not reported</i>
Cytomegalovirus (CMV)			
Positive	239 (34)	82 (22)	4 (8)
Negative	39 (5)	24 (6)	3 (6)
Not reported	434 (61)	270 (72)	43 (86)
Epstein-Barr virus (EBV)			
Positive	286 (40)	36 (35)	42 (13)
Negative	18 (2)	3 (3)	4 (1)
Not reported	419 (58)	64 (62)	266 (85)

Chapter 3: Pancreas donors

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This chapter gives an overview of donors in 2024 and over time. Donor eligibility criteria guidelines are available in the TSANZ consensus statement <https://tsanz.com.au/guidelinesethics-documents/tsanz-clinical-guidelines.htm>, but briefly require donors to be over 25kg, and up to the age of 45, without known diabetes mellitus, or history of alcoholism, or pancreatic trauma. Donation after circulatory death may be considered up to the age of 35. As these are guidelines, there may be occasions when there is minor deviation from these criteria.

Donor BMI is perceived as impacting recipient outcomes. Obese donors are more likely to have a fatty pancreas, which results in more difficult surgery and increased postoperative complications, and suboptimal insulin secretion. Alcohol consumption is defined by a history of consumption of more than 40g/day. Table 3.1 describes pancreas donor characteristics in Australia and New Zealand to date.

Pancreas donor characteristics

Table 3.1: Demographics and characteristics of pancreas transplant donors

	Donors, n (column %)					
	2024		1984-2023		Overall	
Total (row %)	46	(4)	1,092	(96)	1,138	(100)
Age						
0-24	17	(37)	518	(47)	535	(47)
25-34	17	(37)	298	(27)	315	(28)
35-44	9	(20)	224	(21)	233	(20)
45+	3	(7)	37	(3)	40	(4)
Not reported	0	(0)	15	(1)	15	(1)
Sex						
Female	12	(26)	598	(55)	610	(54)
Male	34	(74)	482	(44)	516	(45)
Not reported	0	(0)	12	(1)	12	(1)
BMI (kg/m²)						
Underweight/Normal (<24.9)	30	(65)	699	(64)	729	(64)
Overweight (25-29.9)	16	(35)	326	(30)	342	(30)
Obese (30+)	0	(0)	45	(4)	45	(4)
Not reported	0	(0)	22	(2)	22	(2)
Pathway						
Brain death (DBD)	42	(91)	1,061	(97)	1,103	(97)
Circulatory death (DCD)	4	(9)	27	(2)	31	(3)
Not reported	0	(0)	4	(<1)	4	(<1)
Mode of death						
Cerebral hypoxia/ischaemia	25	(54)	197	(18)	222	(20)
Cerebral infarct	0	(0)	22	(2)	22	(2)
Intracranial haemorrhage	8	(17)	275	(25)	283	(25)
Non-neurological condition	0	(0)	195	(18)	195	(17)
Other neurological condition	3	(7)	23	(2)	26	(2)
Traumatic brain injury	10	(22)	363	(33)	373	(33)
Not reported	0	(0)	17	(2)	17	(1)
Alcohol consumption						
Never	29	(63)	798	(73)	827	(73)
Former	0	(0)	10	(<1)	10	(<1)
Current	16	(35)	104	(10)	120	(11)
Not reported	1	(2)	180	(16)	181	(16)
Smoking history						
Never	27	(59)	651	(60)	678	(60)
Former	4	(9)	49	(4)	53	(5)
Current	14	(30)	272	(25)	286	(25)
Not reported	1	(2)	120	(11)	121	(11)

	Donors, n (column %)					
	2024		1984-2023		Overall	
Blood group						
O	18	(39)	521	(48)	539	(47)
A	21	(46)	433	(40)	454	(40)
B	5	(11)	105	(10)	110	(10)
AB	2	(4)	27	(2)	29	(3)
Not reported	0	(0)	6	(<1)	6	(<1)
Kidney biopsy						
Not performed	17	(37)	772	(71)	789	(69)
Performed	24	(52)	274	(25)	298	(26)
Not reported	5	(11)	46	(4)	51	(4)
Cytomegalovirus (CMV)						
Positive	34	(74)	678	(62)	712	(63)
Negative	12	(26)	364	(33)	376	(33)
Not reported	0	(0)	50	(5)	50	(4)
Epstein-Barr virus (EBV)						
Positive	39	(85)	684	(63)	723	(64)
Negative	6	(13)	97	(9)	103	(9)
Not reported	1	(2)	311	(28)	312	(27)

The distribution of donor state/territory by transplanting unit for Australian pancreas donors is shown in Table 3.2.

Table 3.2: Pancreas donors in Australia by transplant unit and state of residence over time

State	Donors, n (column %)				
	2024	2023	2022	2021	2020
Westmead (NSW)	27	27	32	21	31
NSW	11 (41)	12 (44)	12 (38)	7 (33)	15 (48)
VIC	1 (4)	1 (4)	2 (6)	1 (5)	1 (3)
QLD	7 (26)	8 (30)	7 (22)	8 (38)	8 (26)
WA	4 (15)	2 (7)	7 (22)	2 (10)	5 (16)
SA	3 (11)	3 (11)	2 (6)	2 (10)	0 (0)
TAS	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)
ACT	1 (4)	1 (4)	2 (6)	1 (5)	1 (3)
NT	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Not reported	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Monash (VIC)	11	12	12	7	14
NSW	0 (0)	2 (17)	0 (0)	1 (14)	0 (0)
VIC	9 (82)	6 (50)	10 (83)	5 (71)	7 (50)
QLD	0 (0)	1 (8)	0 (0)	0 (0)	1 (7)
WA	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
SA	1 (9)	1 (8)	0 (0)	1 (14)	1 (7)
TAS	1 (9)	2 (17)	2 (17)	0 (0)	4 (29)
ACT	0 (0)	0 (0)	0 (0)	0 (0)	1 (7)
NT	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Not reported	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Royal Adelaide (SA)	4	3	1	4	2
NSW	0 (0)	1 (33)	0 (0)	0 (0)	0 (0)
VIC	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
QLD	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
WA	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
SA	3 (75)	2 (67)	1 (100)	4 (100)	2 (100)
TAS	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)
ACT	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
NT	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Not reported	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Donor and recipient state/territory

Table 3.3 shows the distribution of donor organs according to state of origin, cross-tabulated with the state of origin of the recipients who received those organs, for 2024, and from inception of the pancreas program. Note, these tables include Australian donors and recipients only.

Table 3.3: Pancreas transplants in Australia by donor and recipient state of residence for 2024 and all years

Recipient state	Donor state, n (row %)								Total	
	NSW	VIC	QLD	WA	SA	TAS	ACT	NT		Not reported
2024 only	11	10	7	4	7	2	1	0	0	42
NSW	7	1	4	3	1	0	0	0	0	16
VIC	0	8	0	0	1	1	0	0	0	10
QLD	2	0	3	1	1	0	1	0	0	8
WA	2	0	0	0	1	0	0	0	0	3
SA	0	0	0	0	3	1	0	0	0	4
TAS	0	1	0	0	0	0	0	0	0	1
ACT	0	0	0	0	0	0	0	0	0	0
NT	0	0	0	0	0	0	0	0	0	0
Not reported	0	0	0	0	0	0	0	0	0	0
1984-2024	378	293	117	79	99	34	45	3	1	1,049
NSW	182	16	42	26	25	5	20	0	0	316
VIC	24	222	4	6	10	22	3	0	1	292
QLD	94	12	48	23	27	0	14	1	0	219
WA	27	5	16	15	6	1	3	0	0	73
SA	18	21	3	5	26	2	5	2	0	82
TAS	16	16	1	0	1	4	0	0	0	38
ACT	16	1	3	2	3	0	0	0	0	25
NT	1	0	0	2	1	0	0	0	0	4
Not reported	0	0	0	0	0	0	0	0	0	0

Appendices

Previous ANZIPTR Reports, other abstracts, and publications

We have not been notified of any publications or abstracts using ANZIPTR data within the past year.