



SECTION 9

Deceased Donor Pancreas Donation

This section summarises pancreas donation activity from deceased donors in 2023, compared with previous years. The rate of pancreas transplantation in 2023 was 1.7 pmp in Australia and 0.6 pmp in New Zealand.

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EXECUTIVE SUMMARY

Every organ donor provides a precious opportunity for the chance of an improved quality of life and survival through transplantation. It is important to understand the donation and transplant outcomes including the specific organs consented for donation, the organs retrieved and whether they were transplanted or not (non-utilised). This section provides information about the outcomes for pancreas donation and transplantation from deceased actual organ donors.

SUGGESTED CITATION

H Opdam, C Davies, K Marshall, G Irish 28th Report, Section 9: Deceased Donor Pancreas Donation. Australia and New Zealand Organ Donation Registry, Adelaide, Australia. 2024. Available at <https://www.anzdata.org.au/anzod/publications-2/annual-reports/>

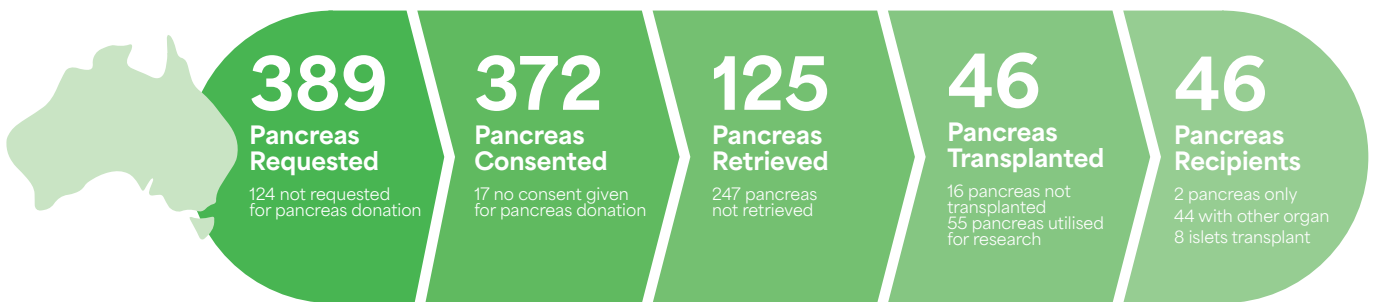
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PANCREAS DONATION

In Australia, there were 46 pancreas transplants in 2023. 44 pancreases were transplanted simultaneously with another organ resulting in 41 simultaneous pancreas/kidney transplant recipients, 1 combined pancreas/double lung/liver recipient, 1 combined pancreas/kidney/liver recipient and 1 combined pancreas/liver/intestine recipient. There were 2 pancreas only transplants. The rate of pancreas transplants in 2023 was 1.7 per million population (pmp) compared to 1.8 pmp in 2022.

Figure 9.1.1 shows the outcomes of requests for pancreas donation in Australia for 2023.

Figure 9.1.1
Outcomes of requests for pancreas donation in Australia - 2023



In New Zealand, there were 3 pancreas transplants (0.6 pmp) in 2023. 3 pancreases were transplanted simultaneously with another organ, with all being simultaneous pancreas/kidney transplants. The number of pancreas transplant recipients (3) in 2023 was lower than in 2022 (5)

Figure 9.1.2 shows the outcomes of requests for pancreas donation in New Zealand for 2023..

Figure 9.1.2
Outcomes of requests for pancreas donation in New Zealand - 2023



Figures 9.2 and 9.3 show the number of pancreas recipients by donation pathway and transplant region.

Figure 9.2.1
Recipients of Whole Pancreas Transplant by Donation Pathway, Australia 1998-2023

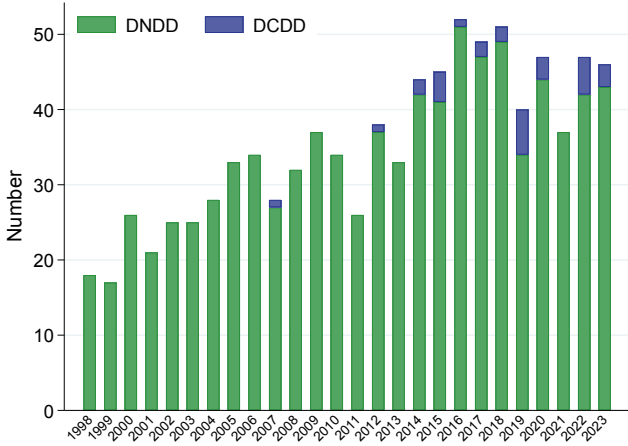


Figure 9.2.2
Recipients of Whole Pancreas Transplant by Donation Pathway, New Zealand 1998-2023

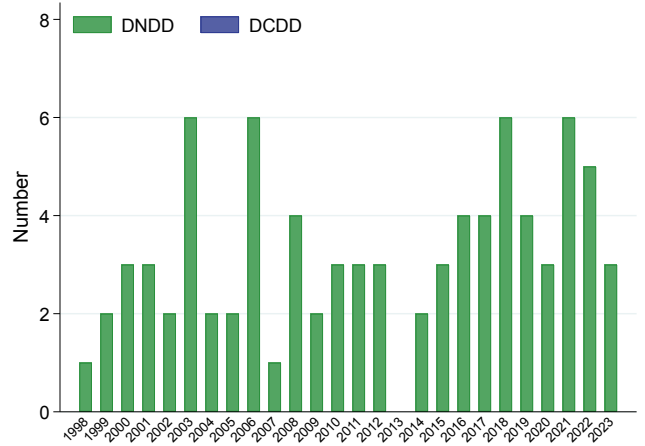
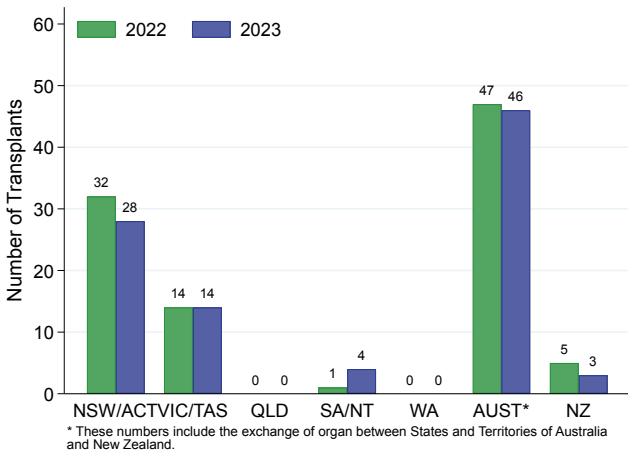


Figure 9.3
Deceased Donor Pancreas Transplant Recipients* by Transplant Region, Australia and New Zealand, 2022-2023



AGE OF PANCREAS DONORS

The age distribution of donors providing retrieved pancreases for Australia and New Zealand is presented in Figure 9.4.

Figure 9.4.1
Age of Donors Providing Retrieved Pancreases Australia 2023

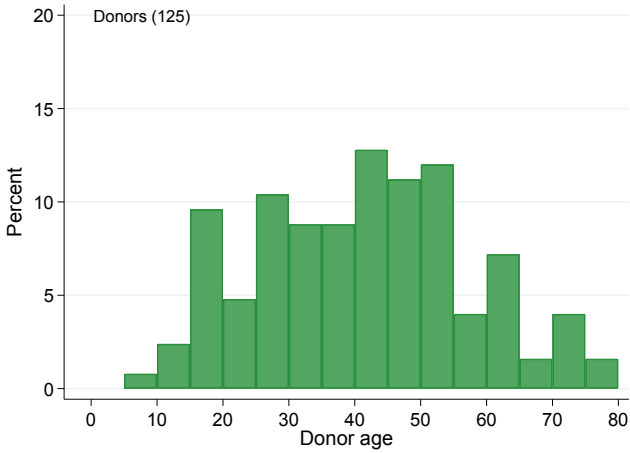
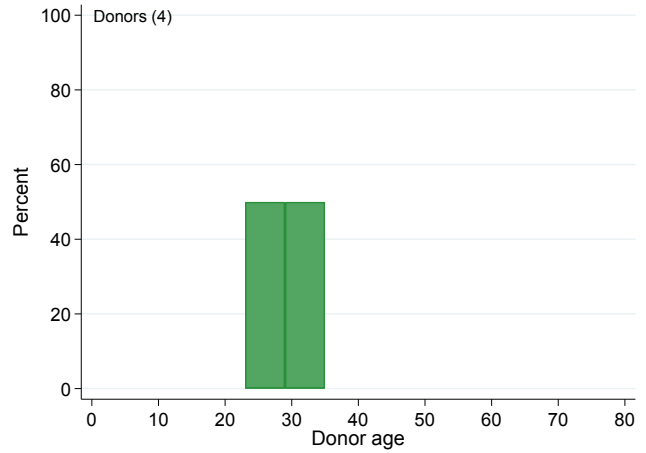


Figure 9.4.2
Age of Donors Providing Retrieved Pancreases New Zealand 2023



DONOR PANCREAS FUNCTION

Tests for pancreas function of deceased donors include blood sugar levels, serum amylase and serum lipase tests.

AUSTRALIA

In Australia, of the 407 donors in 2023 with a measurement taken, 80.1% had blood sugar levels greater than 8mmol/L. Of those 115 donors with the pancreas retrieved and a measurement taken, 76.5% had blood sugar levels greater than 8mmol/L.

Of the 338 donors with a measurement taken, 87.0% had normal amylase levels or lipase less than 80 U/L. Of the 113 donors with the pancreas retrieved and a measurement taken, 92.0% had normal amylase levels or lipase less than 80 U/L.

NEW ZEALAND

In New Zealand, of the 35 donors 2023 with a measurement taken, 54.3% had blood sugar levels greater than 8mmol/L. 1 donor with the pancreas retrieved and a measurement taken had blood sugar levels greater than 8mmol/L.

Of the 25 donors with a measurement taken, 72.0% had normal amylase levels or lipase less than 80 U/L. Of the 4 donors with the pancreas retrieved and a measurement taken, 75.0% had normal amylase levels or lipase less than 80 U/L.

PANCREAS NOT RETRIEVED

In 2023, there were 247 pancreases not retrieved from Australian donors and 33 not retrieved from New Zealand donors. The reasons why pancreases were not retrieved for organ transplantation are presented in Table 9.1.

Table 9.1
Reasons for Pancreases Not Retrieved 2023

Reason	Australia	New Zealand
Intraoperative assessment	3	1
Post WCRS* did not die in timeframe	1	0
Cardiac arrest prior to WCRS*/X- Clamp	0	0
Surgical retrieval injury	0	0
Declined in offer process	138	21
Organ not offered - pathway	19	1
Organ not offered - age of donor	62	7
Organ not offered - not medically suitable	23	3
No consent from Coroner	1	0
Family withdrew consent	0	0
Total	247	33

*WCRS = Withdrawal of cardio-respiratory support

PANCREAS RETRIEVED AND NOT UTILISED FOR TRANSPLANTATION

Figure 9.5 shows the non-utilisation rate of retrieved pancreases - the proportion of pancreases that were retrieved for the purpose of solid organ transplantation, but not ultimately transplanted into a recipient (either due to an absence of suitable recipients, or the pancreas being found to be medically or surgically unsuitable after retrieval). Organ donation for the purpose of research is excluded when calculating a specific organ's non-utilisation rate for transplantation.

Figure 9.5.1
Non-utilisation Rate of Pancreases Retrieved for Organ Transplantation - Australia 2019-2023

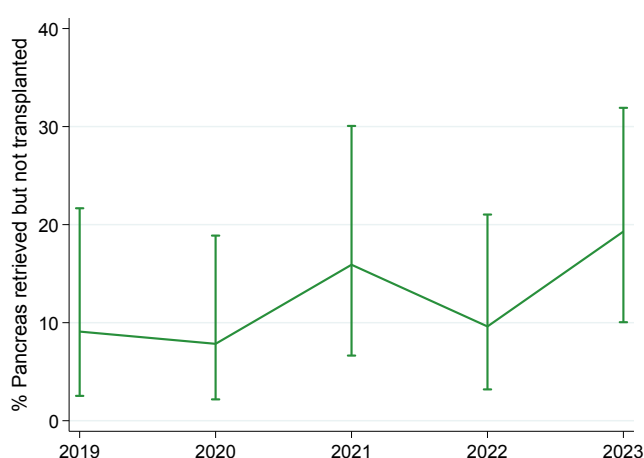


Figure 9.5.2
Non-utilisation Rate of Pancreases Retrieved for Organ Transplantation - New Zealand 2019-2023

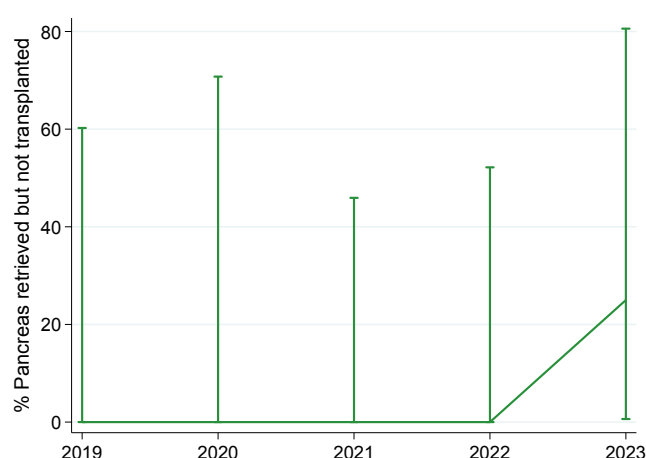


Table 9.2 tabulates the reasons pancreases were not used for transplantation after retrieval for that purpose since 2021.

Table 9.2
Reasons Pancreas Retrieved & Not Utilised for Transplantation, 2021 - 2023

Country	Reason	2021	2022	2023
Australia	Intraoperative assessment	0	1	0
	Assessment at transplant unit	2	2	6
	Surgical retrieval injury	0	0	1
	Other	5	3	9
	Total	7	6	16
New Zealand	Intraoperative assessment	0	0	0
	Assessment at transplant unit	0	0	1
	Surgical retrieval injury	0	0	0
	Other	0	0	0
	Total	0	0	1

OUTCOME OF PANCREAS DONATION

The outcome of pancreas donation activity in Australia and New Zealand through the donation process is presented in table 9.3.

Table 9.3.1
Outcome of Request for Pancreas Donation in Australia, 2019-2023

Outcome of Request	2019	2020	2021	2022	2023
Total Donors	548	463	421	454	513
Pancreas Requested for Donation	407	347	327	359	389
Pancreas Not Requested for Donation	141	116	94	95	124
Pancreas with Consent Given	391	327	306	348	372
Pancreas with Consent Not Given	16	20	21	11	17
Pancreas Retrieved	82	70	70	143	125
Pancreas Not Retrieved	309	257	236	205	247
Whole Pancreas Transplanted	40	47	37	47	46
Pancreas Only Transplanted	2	1	2	3	2
Pancreas Transplanted with Other Organ	38	46	35	44	44
Pancreas Islets Transplanted	16	6	5	7	8
Pancreas Not Used	8	10	7	6	16
Pancreas Used for Research*	6	4	0	0	0
Pancreas Retrieved for Research**	0	1	12	73	50
Pancreas Retrieved for Transplantation and Used for Research***	0	0	5	4	4
Pancreas Islets Used for Research^	12	2	4	6	1
Whole Pancreas Recipients	40	47	37	47	46
Pancreas Only Recipients	2	1	2	3	2
Pancreas with Other Organ Recipients	38	46	35	44	44
Pancreas Islets Recipients	16	6	5	7	8
Pancreas (including Islets) Non-utilisation Rate	12.5%	15.9%	22.2%	15.6%	27.0%
Pancreas (Whole, no Islets) Utilisation Rate	62.5%	74.6%	68.5%	73.4%	62.2%

*Primary/Secondary Intention not recorded prior to Nov 2020

**Use for research primary intention of retrieval

***Use for research secondary intention of retrieval

^Primary/Secondary Intention not recorded

Table 9.3.2
Outcome of Request for Pancreas Donation in New Zealand, 2019-2023

Outcome of Request	2019	2020	2021	2022	2023
Total Donors	74	64	66	63	64
Pancreas Requested for Donation	42	38	31	38	38
Pancreas Not Requested for Donation	32	26	35	25	26
Pancreas with Consent Given	42	38	30	38	37
Pancreas with Consent Not Given	0	0	1	0	1
Pancreas Retrieved	4	3	6	5	4
Pancreas Not Retrieved	38	35	24	33	33
Whole Pancreas Transplanted	4	3	6	5	3
Pancreas Only Transplanted	0	0	0	0	0
Pancreas Transplanted with Other Organ	4	3	6	5	3
Pancreas Islets Transplanted	0	0	0	0	0
Pancreas Not Used	0	0	0	0	1
Pancreas Used for Research*	0	0	0	0	0
Pancreas Retrieved for Research**	0	0	0	0	0
Pancreas Retrieved for Transplantation and Used for Research***	0	0	0	0	0
Pancreas Islets Used for Research^	0	0	0	0	0
Whole Pancreas Recipients	4	3	6	5	3
Pancreas Only Recipients	0	0	0	0	0
Pancreas with Other Organ Recipients	4	3	6	5	3
Pancreas Islets Recipients	0	0	0	0	0
Pancreas (including Islets) Non-utilisation Rate	0.0%	0.0%	0.0%	0.0%	25.0%
Pancreas (Whole, no Islets) Utilisation Rate	100.0%	100.0%	100.0%	100.0%	75.0%

*Primary/Secondary Intention not recorded prior to Nov 2020

**Use for research primary intention of retrieval

***Use for research secondary intention of retrieval

^Primary/Secondary Intention not recorded



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