



## SECTION 9

### Deceased Donor Pancreas Donation

#### SUMMARY

*This section summarises pancreas donation activity from deceased donors in 2022 compared with previous years. The rate of pancreas transplantation in 2022 was 1.8 pmp in Australia and 1.0 pmp in New Zealand.*

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## Executive Summary

Since its inception in 1989 in Australia and 1993 in New Zealand, the Australian and New Zealand Organ Donation Registry (ANZOD) continues to record and report on organ donation within Australia and New Zealand.

Data related to organ donation and transplantation activity is essential in identifying opportunities for improving the care of donors, informing on the quality of transplant organs and transplant recipient outcomes.

One organ donor can benefit a number of recipients suffering from end stage organ disease. One donor could donate up to nine organs including, kidneys (left and right), liver (split left and right), heart, lungs (left and right), pancreas and intestine, improving the lives of people wait listed for an organ transplant.

The impact of the COVID-19 pandemic continued to be felt across the health sector in 2022, causing a decrease in organ and tissue donation activity across the last 3 years. However, a small increase in organ donors and the number of people receiving transplants in 2022 points to early signs of recovery from the impacts of COVID-19.

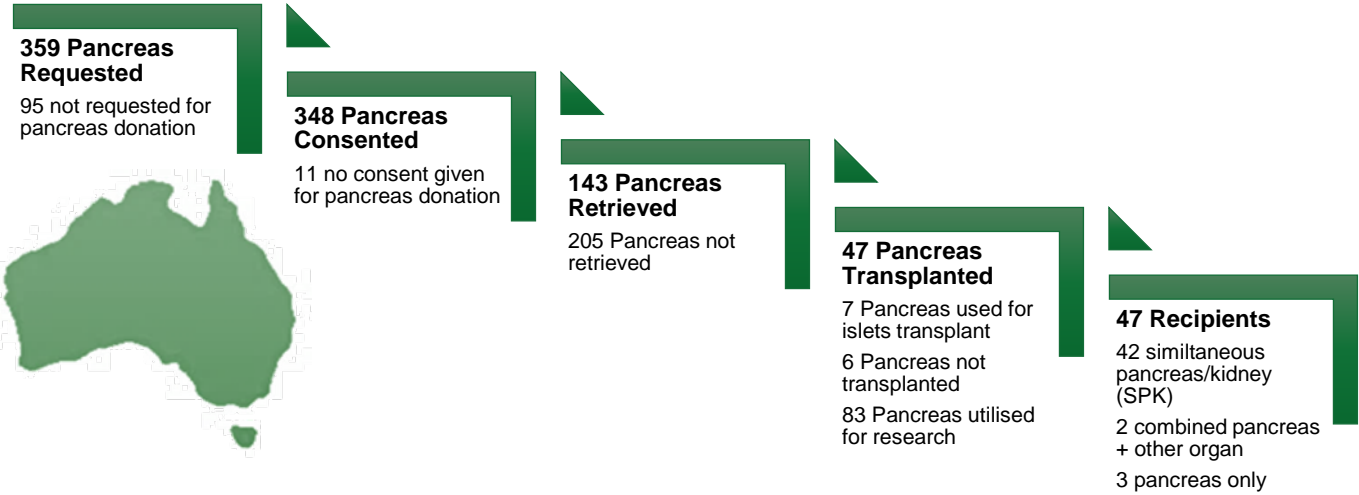
## Suggested Citation

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## Pancreas Donation

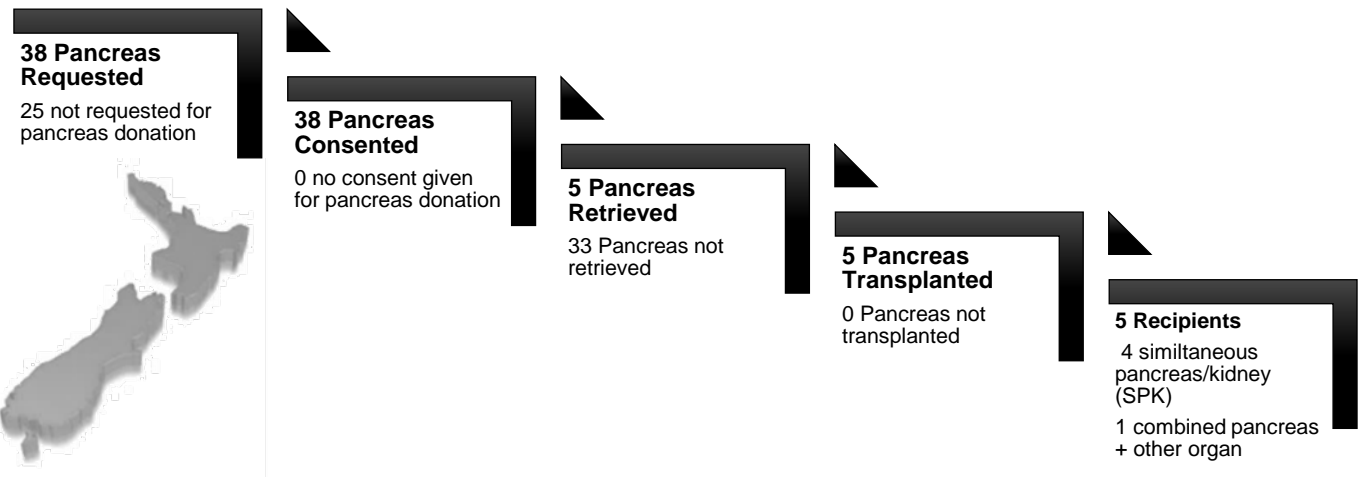
In Australia, there were 47 pancreas transplants in 2022. 44 pancreas were transplanted simultaneously with another organ resulting in 42 simultaneous pancreas/kidney transplant recipients and 2 combined pancreas/liver/intestine recipients. There were 3 pancreas only transplants. The rate of pancreas transplants in 2022 was 1.8 per million population (pmp) compared to 1.4 pmp in 2021. Figure 9.1.1 shows the outcomes of requests for pancreas donation in Australia for 2022.

Table 9.1.1 Outcomes of Request for Pancreas Donation from Actual Donors for Australia 2022



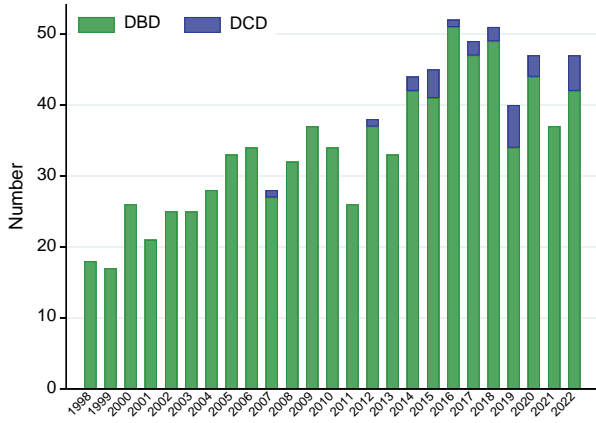
In New Zealand, there were 5 pancreas transplants (1.0 pmp) in 2022. 5 pancreas were transplanted simultaneously with another organ resulting in 4 simultaneous pancreas/kidney transplant recipients and 1 combined pancreas/liver recipient. The number of pancreas transplant recipients (5) in 2022 was lower than in 2021 (6). Figure 9.1.2 shows the outcomes of requests for pancreas donation in New Zealand for 2022.

Table 9.1.2 Outcomes of Request for Pancreas Donation from Actual Donors for New Zealand 2022

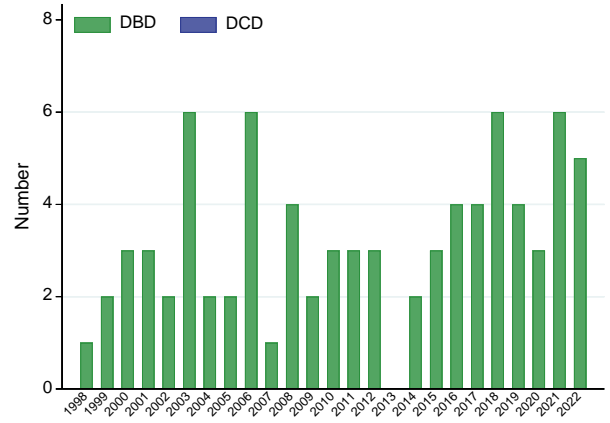


Figures 9.2 and 9.3 show the number of pancreas recipients by donation pathway and transplant region.

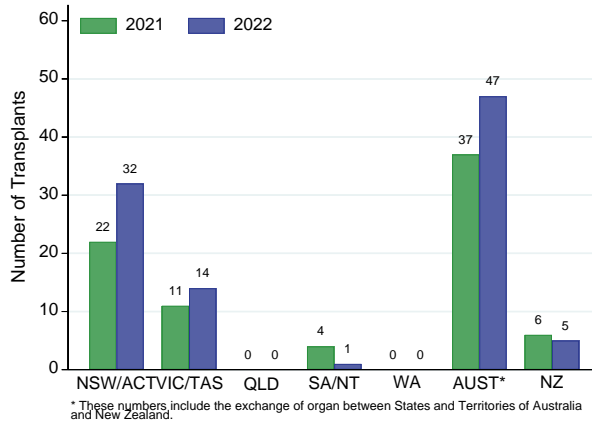
**Figure 9.2.1 - Recipients of Whole Pancreas Transplant by Donation Pathway, Australia 1998–2022**



**Figure 9.2.2 - Recipients of Whole Pancreas Transplant by Donation Pathway, New Zealand 1998–2022**



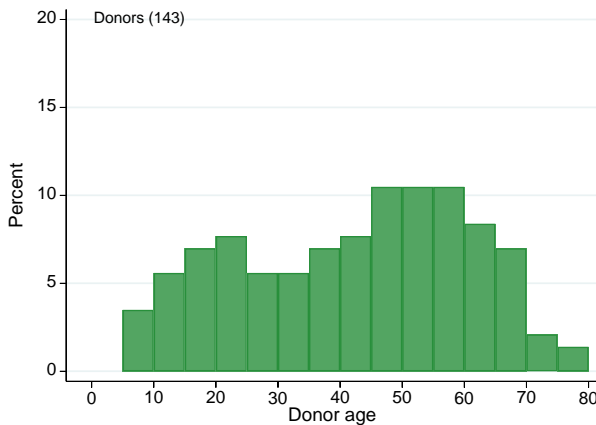
**Figure 9.3 - Deceased Donor Pancreas Transplant Recipients\* by Transplant Region, Australia and New Zealand, 2021–2022**



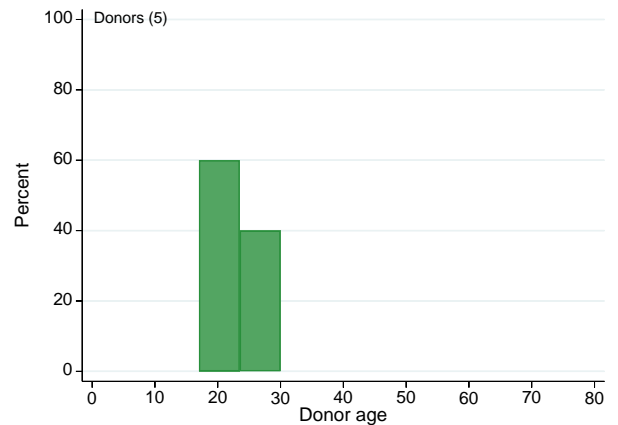
## Age of Pancreas Donors

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

**Figure 9.4.1 - Age of Donors Providing Retrieved Pancreas Australia 2022**



**Figure 9.4.2 - Age of Donors Providing Retrieved Pancreas New Zealand 2022**



## 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 378 donors in 2022 with a measurement taken, 80.4% had blood sugar levels greater than 8mmol/L. Of those 129 donors with pancreas retrieved and a measurement taken, 76.0% had blood sugar levels greater than 8mmol/L.

Of the 277 donors with a measurement taken, 87.4% had normal amylase levels or lipase less than 80 U/L. Of the 115 donors with pancreas retrieved and a measurement taken, 93.0% had normal amylase levels or lipase less than 80 U/L.

### New Zealand

In New Zealand, of the 15 donors in 2022 with a measurement taken, 73.3% had blood sugar levels greater than 8mmol/L. Of those 5 donors with pancreas retrieved and a measurement taken, 100.0% had blood sugar levels greater than 8mmol/L.

Of the 12 donors with a measurement taken, 75.0% had normal amylase levels or lipase less than 80 U/L. Of the 4 donors with pancreas retrieved and a measurement taken, 100.0% had normal amylase levels or lipase less than 80 U/L.

## Pancreas Not Retrieved

In 2022, there were 205 pancreases not retrieved from Australian donors and 33 not retrieved from New Zealand donors. The reasons why pancreas was not retrieved for organ transplantation are presented in Table 9.1.

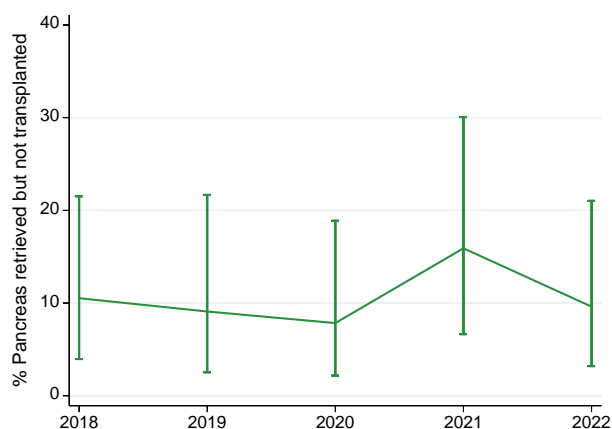
*Table 9.1 Reasons for Pancreas Not Retrieved 2022*

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	117	20
Organ not offered - pathway	15	1
Organ not offered - age of donor	36	11
Organ not offered - not medically suitable	32	0
No consent from Coroner	1	0
Family withdrew consent	0	0
<b>Total</b>	<b>205</b>	<b>33</b>

## 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 Pancreas Retrieved for Organ Transplantation - Australia 2018–2022**



**Figure 9.5.2 - Non-utilisation Rate of Pancreas Retrieved for Organ Transplantation - New Zealand 2018–2022**

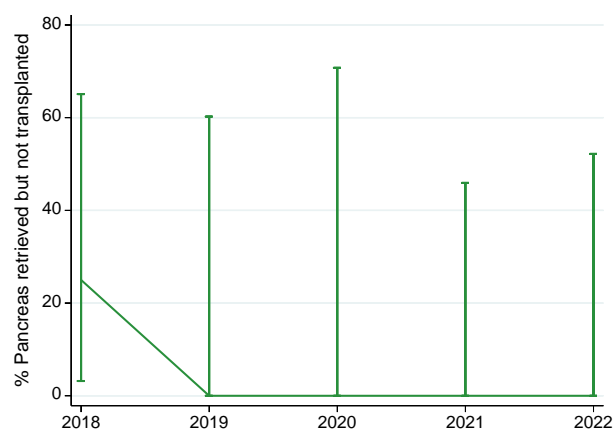


Table 9.2 tabulates the reasons pancreas were not used for transplantation after retrieval for that purpose since 2021.

**Table 9.2 Reasons Pancreas Retrieved & Not Utilised for Transplantation, 2021 – 2022**

Country	Reason	2021	2022
Australia	Intraoperative assessment	0	1
	Assessment at transplant unit	2	2
	Surgical retrieval injury	0	0
	Other	5	3
<b>Total</b>		<b>7</b>	<b>6</b>
New Zealand	Intraoperative assessment	0	0
	Assessment at transplant unit	0	0
	Surgical retrieval injury	0	0
	Other	0	0
<b>Total</b>		<b>0</b>	<b>0</b>

## Outcome of Pancreas Donation

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

**Table 9.3.1 Outcome of Request for Pancreas Donation in Australia, 2018–2022**

Outcome of Request	2018	2019	2020	2021	2022
<b>Total Donors</b>	<b>554</b>	<b>548</b>	<b>463</b>	<b>421</b>	<b>454</b>
Pancreas Requested for Donation	443	407	347	327	359
Pancreas Not Requested for Donation	111	141	116	94	95
Pancreas with Consent Given	416	391	327	306	348
Pancreas with Consent Not Given	27	16	20	21	11
<b>Pancreas Retrieved</b>	<b>96</b>	<b>82</b>	<b>70</b>	<b>70</b>	<b>143</b>
Pancreas Not Retrieved	320	309	257	236	205
<b>Whole Pancreas Transplanted</b>	<b>51</b>	<b>40</b>	<b>47</b>	<b>37</b>	<b>47</b>
Pancreas Only Transplanted	3	2	1	2	3
Pancreas Transplanted with Other Organ	48	38	46	35	44
Pancreas Islets Transplanted	14	16	6	5	7
Pancreas Not Used	16	8	10	7	6
Pancreas Used for Research*	5	6	4	0	0
Pancreas Retrieved for Research**	0	0	1	12	73
Pancreas Retrieved for Transplantation and Used for Research***	0	0	0	5	4
Pancreas Islets Used for Research^	10	12	2	4	6
<b>Whole Pancreas Recipients</b>	<b>51</b>	<b>40</b>	<b>47</b>	<b>37</b>	<b>47</b>
Pancreas Only Recipients	3	2	1	2	3
Pancreas with Other Organ Recipients	48	38	46	35	44
Pancreas Islets Recipients	14	16	6	5	7
<b>Pancreas (including Islets) Non-utilisation Rate</b>	<b>19.8%</b>	<b>12.5%</b>	<b>15.9%</b>	<b>22.2%</b>	<b>15.6%</b>
<b>Pancreas (Whole, no Islets) Utilisation Rate</b>	<b>63.0%</b>	<b>62.5%</b>	<b>74.6%</b>	<b>68.5%</b>	<b>73.4%</b>

\*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, 2018–2022**

Outcome of Request	2018	2019	2020	2021	2022
<b>Total Donors</b>	<b>62</b>	<b>74</b>	<b>64</b>	<b>66</b>	<b>63</b>
Pancreas Requested for Donation	44	42	38	31	38
Pancreas Not Requested for Donation	18	32	26	35	25
Pancreas with Consent Given	43	42	38	30	38
Pancreas with Consent Not Given	1	0	0	1	0
<b>Pancreas Retrieved</b>	<b>8</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>5</b>
Pancreas Not Retrieved	35	38	35	24	33
<b>Whole Pancreas Transplanted</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>5</b>

Pancreas Only Transplanted	0	0	0	0	0
Pancreas Transplanted with Other Organ	6	4	3	6	5
Pancreas Islets Transplanted	0	0	0	0	0
Pancreas Not Used	2	0	0	0	0
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
<b>Whole Pancreas Recipients</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>5</b>
Pancreas Only Recipients	0	0	0	0	0
Pancreas with Other Organ Recipients	6	4	3	6	5
Pancreas Islets Recipients	0	0	0	0	0
<b>Pancreas (including Islets) Non-utilisation Rate</b>	<b>25.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Pancreas (Whole, no Islets) Utilisation Rate</b>	<b>75.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

\*Primary/Secondary Intention not recorded prior to Nov 2020

\*\*Use for research primary intention of retrieval

\*\*\*Use for research secondary intention of retrieval

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