



SECTION 5

Deceased Donor Kidney Donation

This section summarises kidney donation activity from deceased donors in 2024, compared with previous years. The rate of kidney transplant procedures in 2024 was 29.8 pmp in Australia and 21.6 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 kidney donation and transplantation from deceased actual organ donors.

SUGGESTED CITATION

H Opdam, C Davies, K Marshall, G Irish, 29th Report, Section 5: Deceased Donor Kidney Donation. Australia and New Zealand Organ Donation Registry, Adelaide, Australia. 2025. Available at: <https://www.anzdata.org.au/anzod/publications-2/annual-reports/>

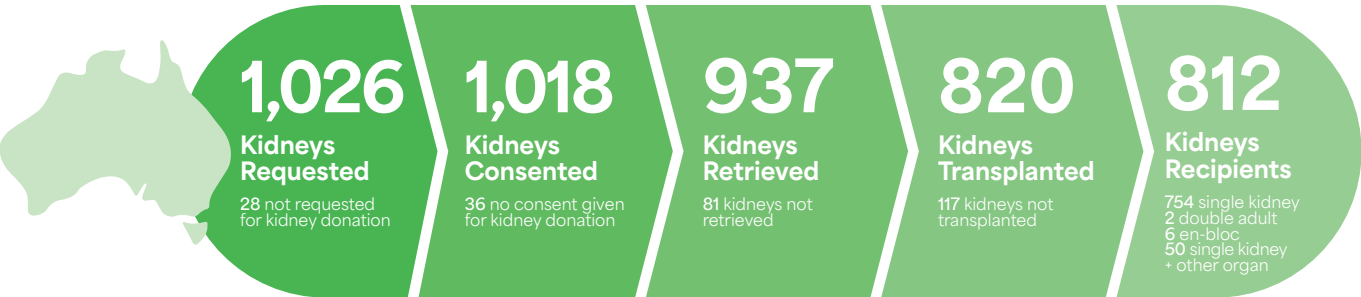
KIDNEY DONATION

Of the 527 deceased actual organ donors in 2024 in Australia, in 509 (96.6%) there was consent for kidney donation. From these kidney donors, 937 kidneys were retrieved and transplanted into 812 recipients. Of the 812 kidney transplant recipients, there were 40 kidney-pancreas recipients, 2 double adult kidney recipients, 6 en-bloc kidney recipients, 8 combined single kidney-liver recipients and 2 combined kidney-heart transplant recipients.

There were 537 kidneys following donation after neurological determination of death (DNDD) and 283 kidneys following donation after circulatory determination of death (DCDD) in 2024, compared with 546 and 292 respectively in 2023.

There was an overall decrease of 2.1% in the total number of kidney transplant recipients (812) in 2024 compared to the previous year (829); and a decrease to 29.8 per million population (pmp) from 31.1 (pmp). Figure 5.1.1 shows the outcomes of requests for kidney donation in Australia.

Figure 5.1.1
Outcomes of requests for kidney donation in Australia - 2024

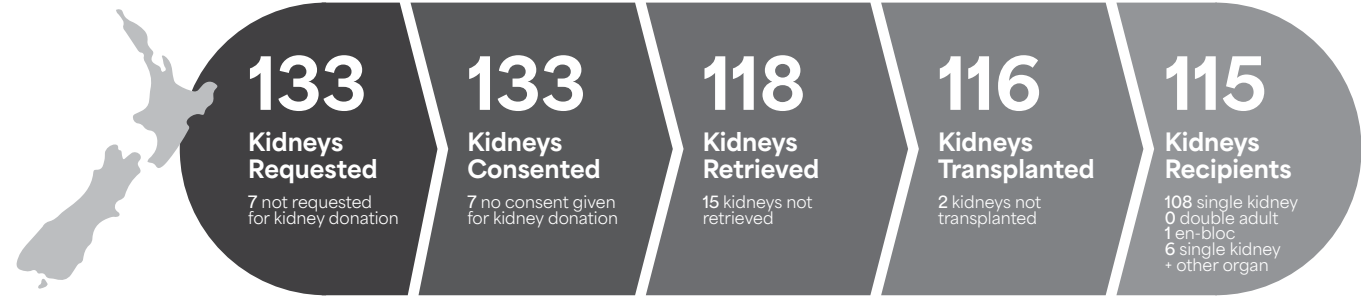


In New Zealand, there were 67 actual donors (95.7%) who consented to kidney donation. From these kidney donors, 118 kidneys were retrieved, of which 116 were transplanted into 115 recipients. There were 91 kidneys transplanted following DNDD and 25 kidneys transplanted following DCDD.

Of the 115 recipients, 4 received a combined kidney-pancreas and 2 a combined kidney-liver. There were no double adult kidney transplants and one en-bloc kidney transplant in 2024.

There was an overall increase of 13.9% in the total number of kidney transplant recipients (115) in 2024 compared to the previous year (101); the rate of transplantation rose to 21.6 per million population in 2024 from 19.3 pmp in 2023. Figure 5.1.2 shows the outcomes of requests for kidney donation in New Zealand.

Figure 5.1.2
Outcomes of requests for kidney donation in New Zealand - 2024



Figures 5.2 and 5.3 show the number of kidneys transplanted by the donation pathway and the number of kidney recipients by transplant region.

Figure 5.2.1
Kidneys Transplanted by Donation Pathway Australia 1998-2024

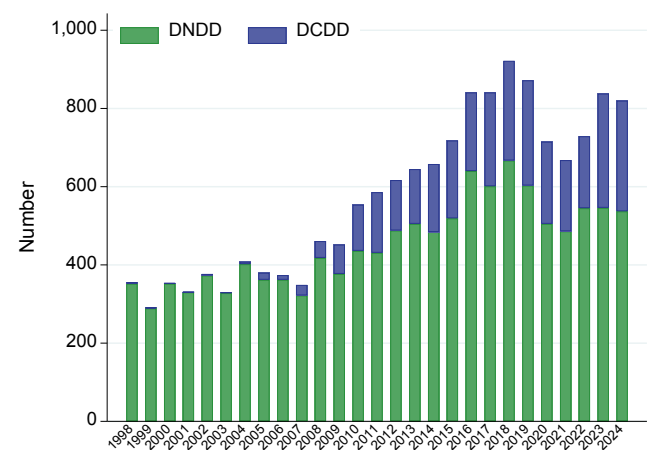


Figure 5.2.2
Kidneys Transplanted by Donation Pathway New Zealand 1998-2024

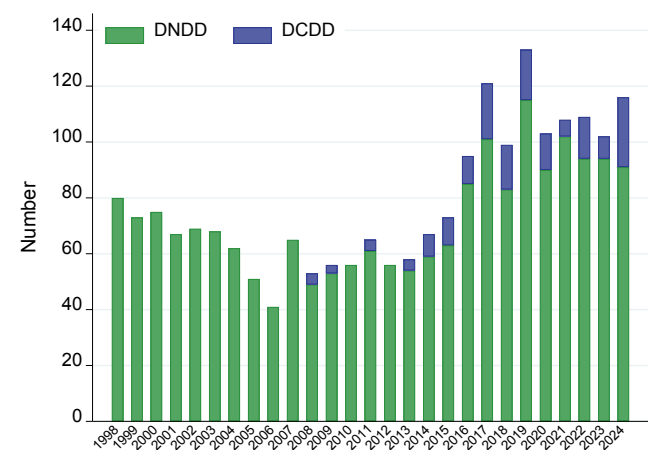
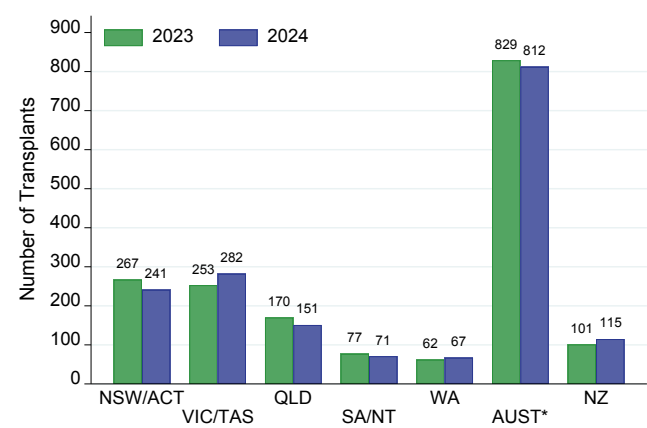


Figure 5.3
Deceased Donor Kidney Transplant Recipients by Transplant Region, Australia and New Zealand, 2023-2024^*



* These numbers include the exchange of organ between States and Territories of Australia and New Zealand
^Year of donation.

AGE OF KIDNEY DONORS

The age distribution of donors providing retrieved kidneys for Australia and New Zealand is presented in Figure 5.4.

Figure 5.4.1
Age of Donors Providing Retrieved Kidneys Australia 2024

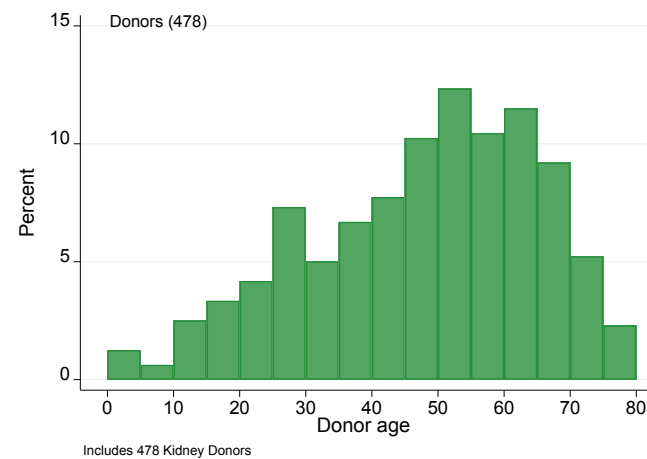
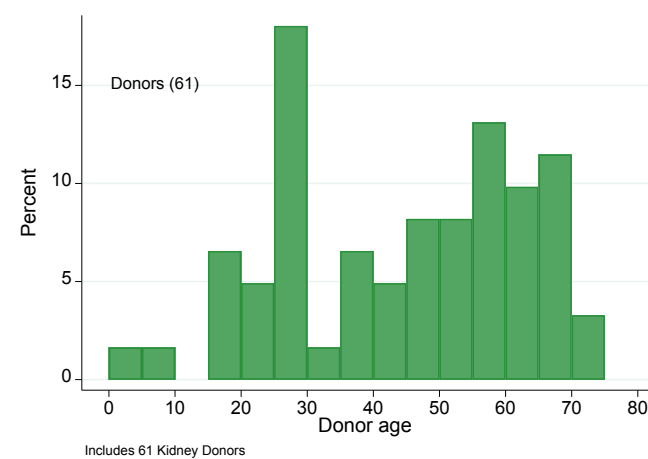


Figure 5.4.2
Age of Donors Providing Retrieved Kidneys New Zealand 2024



DONOR KIDNEY FUNCTION

In 2024 in Australia, 92 donors (17%) had a terminal serum creatinine concentration of ≥ 125 $\mu\text{mol/L}$ (Table 5.1). In 2024 in New Zealand, 4 donors (6%) had a terminal serum creatinine concentration of ≥ 125 $\mu\text{mol/L}$.

Table 5.1
Terminal Serum Creatinine Concentration 2020-2024

Terminal Serum Creatinine ($\mu\text{mol/L}$)	Australia					New Zealand				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
0-99	78%	77%	72%	70%	75%	72%	80%	81%	84%	90%
100-124	5%	6%	9%	9%	8%	17%	5%	6%	7%	4%
125-149	4%	3%	4%	4%	5%	5%	7%	3%	-	-
150-174	2%	2%	2%	2%	2%	2%	2%	3%	3%	-
175-199	2%	2%	2%	3%	2%	2%	-	2%	2%	1%
200-224	1%	2%	0%	2%	1%	-	-	2%	2%	-
225-249	2%	1%	1%	0%	2%	2%	2%	-	-	1%
≥ 250	7%	6%	10%	10%	7%	2%	5%	3%	2%	3%

In Australia, 74 donors (14%) had a terminal serum urea concentration of ≥ 9 mmol/L and a creatinine concentration of ≥ 125 $\mu\text{mol/L}$. In New Zealand, 4 donors (6%) had a terminal serum urea concentration of ≥ 9 mmol/L and a creatinine concentration of ≥ 125 $\mu\text{mol/L}$.

KIDNEYS NOT RETRIEVED

The reasons why kidneys were not retrieved for organ transplantation are presented in Table 5.2.

Table 5.2
Reasons for Kidney Not Retrieved in 2024

Reason	Australia	New Zealand
Intraoperative assessment	11	2
Surgical retrieval injury	3	0
Declined in offer process	27	12
Organ not offered - age of donor	2	0
Organ not offered - not medically suitable	37	1
Organ not offered - Other	1	0
Total	80	15

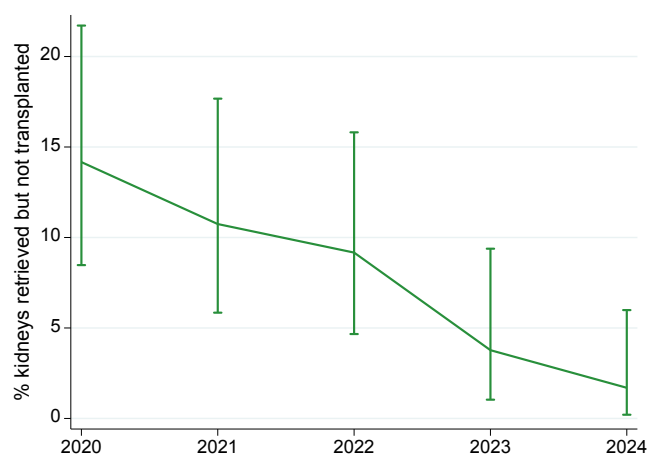
KIDNEYS RETRIEVED AND NOT UTILISED FOR TRANSPLANTATION

Figure 5.5 shows the non-utilisation rate of retrieved kidneys – the proportion of kidneys that were retrieved for the purpose of organ transplantation, but not ultimately transplanted into a recipient (either due to an absence of suitable recipients, or the kidney being found to be medically or surgically unsuitable after retrieval).

Figure 5.5.1
Non-utilisation Rate of Retrieved Kidneys - Australia 2020-2024



Figure 5.5.2
Non-utilisation Rate of Retrieved Kidneys - New Zealand 2020-2024



The reasons why kidneys were not utilised for organ transplantation are presented in Table 5.3.

Table 5.3
Reasons Kidneys Retrieved & Not Utilised for Transplantation, 2021-2024

Country	Reason	2021	2022	2023	2024
Australia	Intraoperative assessment	27	16	22	46
	Assessment at transplant unit	20	21	28	42
	Surgical retrieval injury	3	2	4	3
	Other	6	9	7	23
	Total	56	48	61	114
New Zealand	Intraoperative assessment	6	7	4	0
	Assessment at transplant unit	4	2	0	0
	Surgical retrieval injury	0	0	0	0
	Other	3	2	0	2
	Total	13	11	4	2

OUTCOME OF KIDNEY DONATION

Kidneys are counted as separate organs. The information relating to the request for kidney donation refers only to those patients who became kidney organ donors. If consent for donation for transplantation was sought and not obtained the Registry has no record of these potential donors. The difference between a request and a consent is a known objection by the donor or family refusal for a specific organ to be donated for transplantation. Organ donation for the purpose of research is excluded when calculating a specific organ's non-utilisation rate for transplantation.

The outcome of kidney donation activity in Australia and New Zealand throughout the donation process is presented in table 5.4.

Table 5.4.1
Outcome of Request for Kidney Donation in Australia, 2020-2024

Outcome of Request	2020	2021	2022	2023	2024
Total Donors	463	421	454	513	527
Kidneys Requested for Donation	888	817	892	1006	1026
Kidneys Not Requested for Donation	38	25	16	20	28
Kidneys with Consent Given	878	809	890	1004	1018
Kidneys with Consent Not Given	10	8	2	2	8
Kidneys Retrieved	771	726	782	907	937
Kidneys Not Retrieved	107	83	108	97	81
Kidneys Transplanted	715	668	729	838	820
Left Kidney Transplanted	349	322	354	415	403
Right Kidney Transplanted	344	322	347	405	401
Double/En-bloc Kidney Transplanted	22	24	28	18	16
Total Kidneys Not Used for Transplantation	56	58	53	69	117
Left Kidney Not Used	27	25	21	28	51
Right Kidney Not Used	25	29	27	33	59
Double/En-bloc Kidney Not Used	4	2	0	0	4
Kidneys Retrieved for Research*	0	0	1	5	0
Kidneys Retrieved for Transplantation and Used for Research**	0	2	4	3	3
Recipients Transplanted	704	656	715	829	812
Double Adult Kidney Procedures	6	7	12	5	2
En-bloc Kidney Procedures	5	5	2	4	6
Kidney Non-Utilisation Rate	7.3%	8.0%	6.7%	7.1%	12.5%
Kidney Utilisation Rate	92.7%	92.0%	93.3%	92.9%	87.5%

*Use for research primary intention of retrieval

**Use for research secondary intention of retrieval

Table 5.4.2

Outcome of Request for Kidney Donation in New Zealand, 2020-2024

Outcome of Request	2020	2021	2022	2023	2024
Total Donors	64	66	63	64	70
Kidneys Requested for Donation	126	128	124	116	133
Kidneys Not Requested for Donation	2	4	2	12	7
Kidneys with Consent Given	126	128	124	116	133
Kidneys with Consent Not Given	0	0	0	0	0
Kidneys Retrieved	120	121	120	106	118
Kidneys Not Retrieved	6	7	4	10	15
Kidneys Transplanted	103	108	109	102	116
Left Kidney Transplanted	48	50	50	50	58
Right Kidney Transplanted	49	46	49	50	56
Double/En-bloc Kidney Transplanted	6	12	10	2	2
Total Kidneys Not Used for Transplantation	17	13	11	4	2
Left Kidney Not Used	8	5	4	2	1
Right Kidney Not Used	7	8	5	2	1
Double/En-bloc Kidney Not Used	2	0	2	0	0
Kidneys Retrieved for Research*	0	0	0	0	0
Kidneys Retrieved for Transplantation and Used for Research**	0	0	0	0	0
Recipients Transplanted	100	102	104	101	115
Double Adult Kidney Procedures	3	1	4	1	0
En-bloc Kidney Procedures	0	5	1	0	1
Kidney Non-Utilisation Rate	14.2%	10.7%	9.2%	3.8%	1.7%
Kidney Utilisation Rate	85.8%	89.3%	90.8%	96.2%	98.3%

*Use for research primary intention of retrieval

**Use for research secondary intention of retrieval



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Deceased Donor Kidney Donation