



SECTION 6

Deceased Donor Liver and Intestine Donation

This section summarises liver and intestinal donation activity from deceased donors in 2024, compared with previous years. The rate of liver transplant procedures in 2024 was 10.5 pmp in Australia and 10.3 pmp in New Zealand.

CONTENTS

Executive Summary	3
Suggested Citation	3
Liver Donation	4
Age of Liver Donors	6
Donor Liver Function	7
Livers Not Retrieved	7
Livers Retrieved and Not Utilised for Transplantation	8
Outcome of Liver Donation	9
Intestine Donation	11

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 liver and intestinal donation and transplantation from deceased actual organ donors.

SUGGESTED CITATION

H Opdam, C Davies, K Marshall, G Irish, 29th Report, Section 6: Deceased Donor Liver and Intestine Donation. Australia and New Zealand Organ Donation Registry, Adelaide, Australia. 2025. Available at: <https://www.anzdata.org.au/anzod/publications-2/annual-reports/>

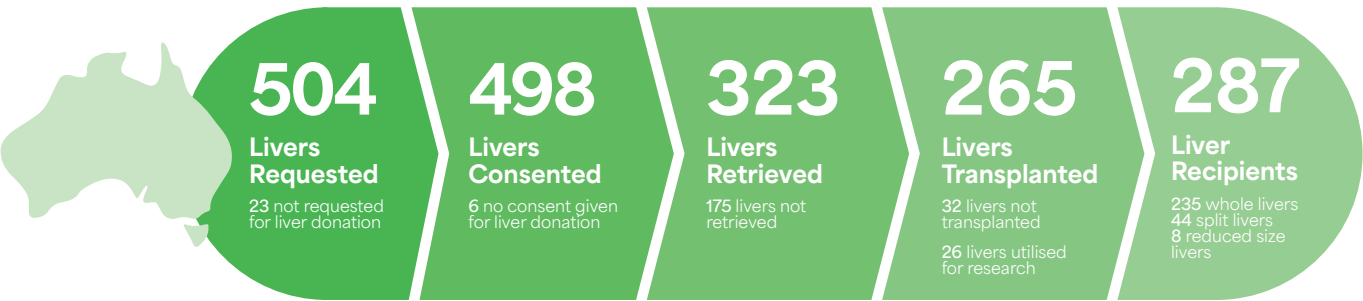
LIVER DONATION

Of the 527 deceased actual organ donors in Australia in 2024, 323 (61.3%) had the liver retrieved. From these liver donors, there were 287 recipients in Australia. Eight recipients received a combined liver/single kidney transplant, one received a combined liver/pancreas and one received a combined liver/pancreas/intestine.

44 partial liver transplants were performed in Australia using 22 livers and the ‘split’ liver technique (transplanting one liver into two recipients) and 8 recipients received a ‘reduced size’ liver.

The rate of liver transplants in Australia for 2024 was 10.5 per million population (pmp). Figure 6.1.1 shows the outcomes of requests for liver donation in Australia.

Figure 6.1.1
Outcomes of requests for liver donation in Australia - 2024



In New Zealand there were 54 livers retrieved, and 53 utilised for transplantation into 55 liver recipients. Of these, there were four split liver transplants performed and no reduced size livers transplanted. Two recipients received a combined liver/kidney transplant.

In 2024 in New Zealand, there was a rate of 10.3 liver transplant procedures per million population (pmp). Figure 6.1.2 shows the outcomes of requests for liver donation in New Zealand.

Figure 6.1.2
Outcomes of requests for liver donation in New Zealand - 2024



Figure 6.2 shows the number of recipients of liver transplants by donation pathway in Australia and New Zealand from 1998 to 2024. Figure 6.3 compares the number of deceased donor liver recipients by transplant region for 2023 and 2024.

Figure 6.2.1
Recipients of Liver Transplantation by Donation Pathway Australia 1998-2024

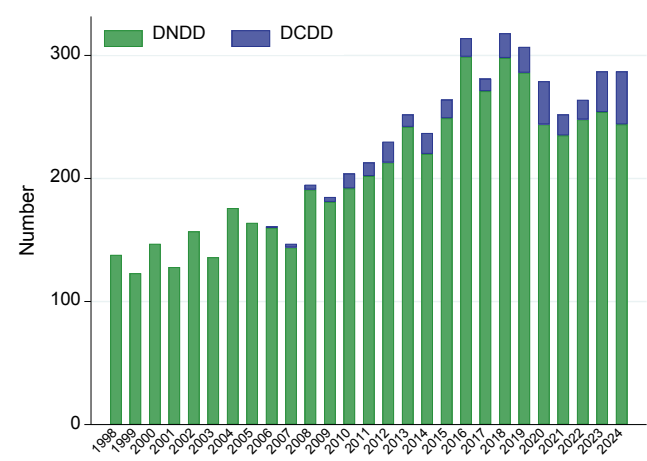


Figure 6.2.2
Recipients of Liver Transplantation by Donation Pathway New Zealand 1998-2024

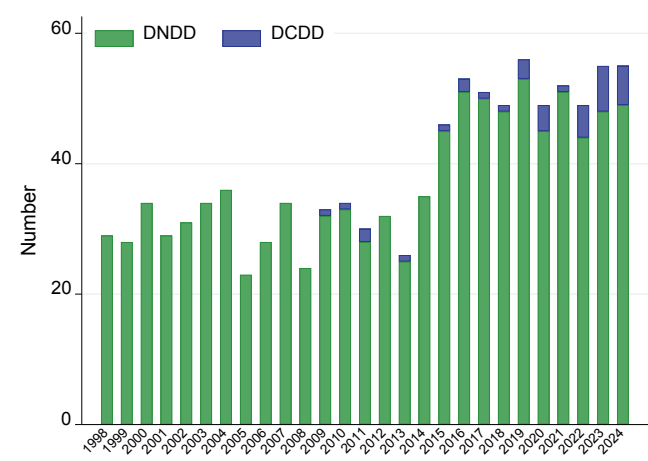
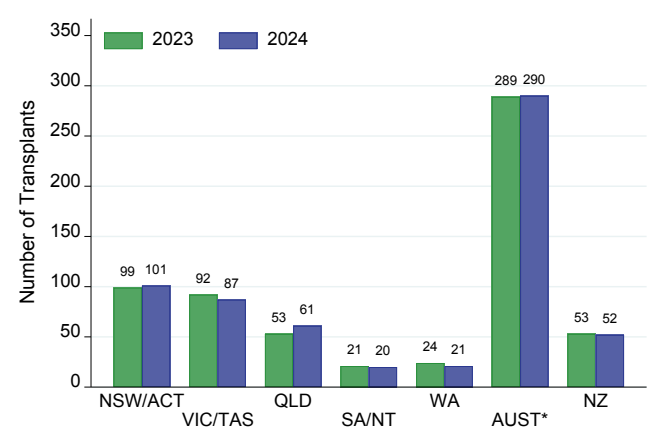


Figure 6.3
Deceased Donor Liver Transplant Recipients* by Transplant Region, Australia and New Zealand, 2023-2024^



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

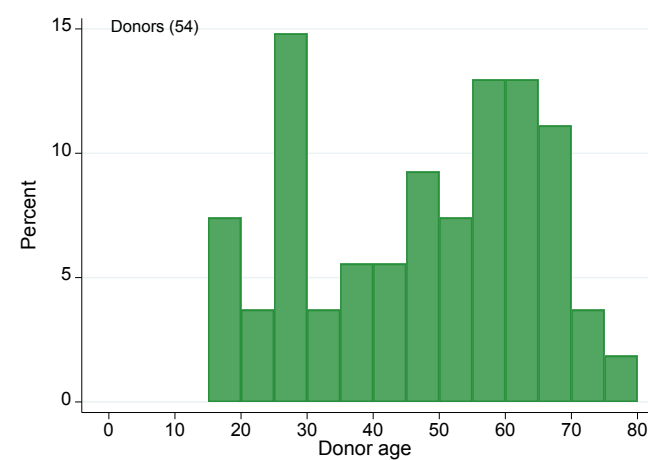
AGE OF LIVER DONORS

The age distribution of donors providing retrieved livers for Australia and New Zealand is shown in Figure 6.4.

Figure 6.4.1
Age of Donors Providing Retrieved Livers Australia 2024



Figure 6.4.2
Age of Donors Providing Retrieved Livers New Zealand 2024



DONOR LIVER FUNCTION

Table 6.1 shows the number of donors whose liver function was above the normal range prior to donation.

Table 6.1
Number of Donors with Liver Function Tests Above Normal 2024

Liver Function Tests	Australia		New Zealand	
	Donors with value recorded*	Above Normal	Donors with value recorded*	Above Normal
Alanine Transaminase ALT > 40 µ/L	319	146	54	23
Aspartate Transaminase AST > 40 µ/L	305	182	53	22
Gamma Glutamyl Transferase GGT > 60 µ/L	319	135	54	14
Alkaline Phosphatase > 116 µ/L	319	64	54	3
Total Bilirubin > 20 µmol/L	319	41	54	9
All 5 tests completed	305	.	53	.
At least 1 test completed	319	.	54	.

*Not all donors have all tests reported

LIVERS NOT RETRIEVED

Table 6.2 provides a breakdown of the reasons why livers were not retrieved.

Table 6.2
Reasons for Liver Not Retrieved 2024

Reason	Australia	New Zealand
Intraoperative assessment	43	2
Post WCRS* did not die in timeframe	7	3
Surgical retrieval injury	1	0
Declined in offer process	97	11
Organ not offered - pathway	3	0
Organ not offered - not medically suitable	23	0
Organ not offered - no suitable recipients	1	0
Total	174	16

*WCRS - Withdrawal of cardio-respiratory support

LIVERS RETRIEVED AND NOT UTILISED FOR TRANSPLANTATION

Figure 6.5 shows the non-utilisation rate of retrieved livers – the proportion of livers 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 liver 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 6.5.1
Non-utilisation Rate of Retrieved Livers - Australia 2020-2024

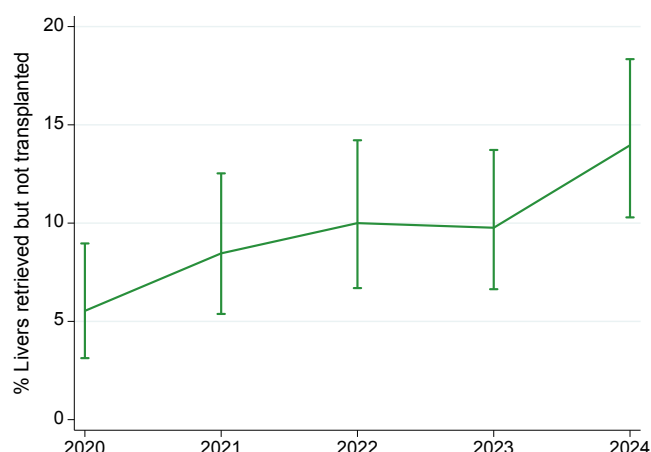


Figure 6.5.2
Non-utilisation Rate of Retrieved Livers - New Zealand 2020-2024

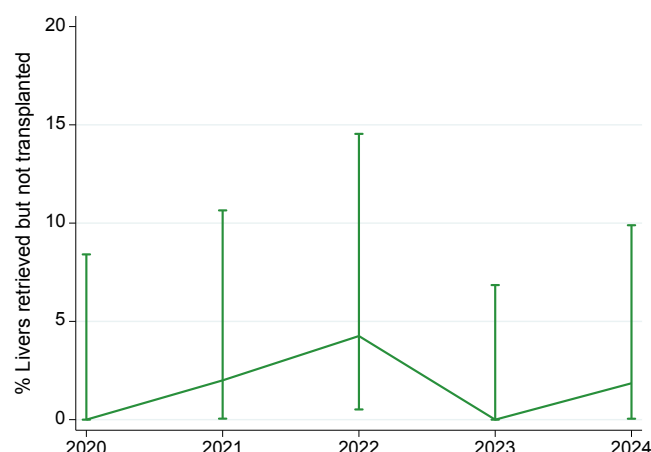


Table 6.3 tabulates the reasons livers were not used after retrieval for the purpose of transplantation since 2021.

Of the reduced size liver transplants since 2021, 9 were orphaned split liver procedures due to the recipient of the other split liver being unwell (2), the other split liver having no suitable recipients (2), not being suitable in intraoperative assessment (4) or not being suitable at transplant unit assessment (1).

Table 6.3
Reasons Liver Retrieved & Not Utilised for Transplantation, 2021 - 2024

Country	Reason	2021	2022	2023	2024
Australia	Intraoperative assessment	5	6	8	13
	Assessment at transplant unit	11	13	10	16
	Other	2	2	1	3
	Total	18	21	19	32
New Zealand	Intraoperative assessment	0	0	0	1
	Assessment at transplant unit	1	0	0	0
	Other	0	1	0	0
	Total	1	1	0	1

OUTCOME OF LIVER DONATION

The outcome of liver donation activity in Australia and New Zealand through the donation process is shown in table 6.4.

Table 6.4.1
Outcome of Request for Liver Donation in Australia, 2020-2024

Outcome of Request	2020	2021	2022	2023	2024
Total Donors	463	421	454	513	527
Liver Requested for Donation	432	393	428	486	504
Liver Not Requested for Donation	31	28	26	27	23
Liver Consent Given	427	386	418	480	498
Liver Consent Not Given	5	7	10	6	6
Liver Retrieved	280	270	275	307	323
Liver Not Retrieved	147	116	143	173	175
Total Livers Transplanted	256	238	243	268	265
Whole Liver Not Used	15	18	21	19	32
Intended Split Liver (L) Not Used	0	0	0	0	0
Intended Split Liver (R) Not Used	0	1	3	3	5
Liver Used for Research*	8	0	0	0	0
Liver Retrieved for Research**	1	10	5	10	15
Liver Retrieved for Transplantation and Used for Research***	0	4	6	10	11
Recipients Transplanted	279	252	264	287	287
Whole Liver Transplants	233	223	219	244	235
Split Liver Transplants	46	28	42	38	44
Reduced Size Liver Transplants	0	1	3	5	8
Liver Non-Utilisation Rate	5.5%	8.5%	10.0%	9.8%	14.0%
Liver Utilisation Rate	94.5%	91.5%	90.0%	90.2%	86.0%

*Primary/Secondary Intention not recorded prior to Nov 2020

**Use for research primary intention of retrieval

***Use for research secondary intention of retrieval

Table 6.4.2

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

Outcome of Request	2020	2021	2022	2023	2024
Total Donors	64	66	63	64	70
Liver Requested for Donation	59	61	61	62	70
Liver Not Requested for Donation	5	5	2	2	0
Liver Consent Given	59	61	61	61	70
Liver Consent Not Given	0	0	0	1	0
Liver Retrieved	42	50	47	52	54
Liver Not Retrieved	17	11	14	9	16
Total Livers Transplanted	42	49	45	52	53
Whole Liver Not Used	0	1	1	0	1
Intended Split Liver (L) Not Used	0	0	0	0	0
Intended Split Liver (R) Not Used	0	0	0	1	0
Liver Used for Research*	0	0	0	0	0
Liver Retrieved for Research**	0	0	0	0	0
Liver Retrieved for Transplantation and Used for Research***	0	0	1	0	0
Recipients Transplanted	49	52	49	55	55
Whole Liver Transplants	35	46	41	48	51
Split Liver Transplants	14	6	8	6	4
Reduced Size Liver Transplants	0	0	0	1	0
Liver Non-Utilisation Rate	0.0%	2.0%	4.3%	0.0%	1.9%
Liver Utilisation Rate	100.0%	98.0%	95.7%	100.0%	98.1%

*Primary/Secondary Intention not recorded prior to Nov 2020

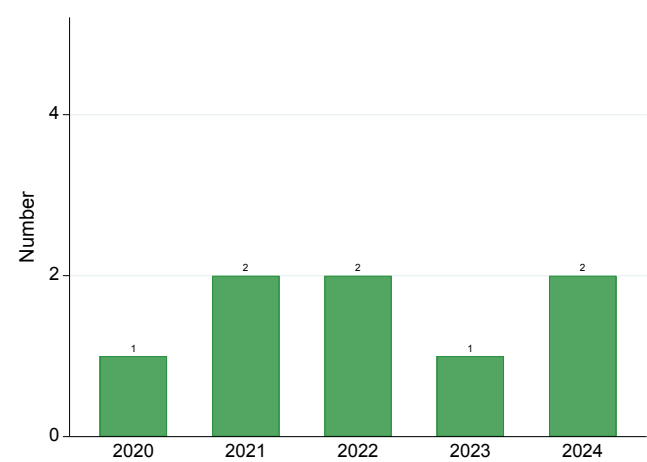
**Use for research primary intention of retrieval

***Use for research secondary intention of retrieval

INTESTINE DONATION

Patients with irreversible intestinal failure and who are developing severe complications from parenteral nutrition can benefit from intestinal transplantation. Intestinal transplants are infrequent in Australia. Only 15 intestinal transplants have been performed in Australia since 2010. Figure 6.6 shows intestinal transplants since 2020. There have been no intestines retrieved and not utilised for the purpose of transplantation.

Figure 6.6
Intestine Transplants Australia 2020-2024





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