

## 2005

### SUMMARY - AUSTRALIA

1. In 2005 there were: 204 donors (10.0 donors per million population [dpmp] with 380 kidneys (including four en bloc and three double adult), (373 recipients), 153 livers (164 recipients), 78 hearts (including six heart/lungs), 159 lungs (69 double, six heart/lungs and nine single lungs), 33 pancreas and one pancreas islets transplanted into recipients. In addition there were 161 corneas, 34 heart valves and ten bone donations which were sent to the tissue bank. Included in the 204 donors were nine donation after cardiac death donors.
2. In 2005 there was an increase in the number of DCD donors to nine. Eight of these donations occurred in New South Wales. This represents a significant increase over previous experience.
3. The highest donor rate was in the Northern Territory (20 dpmp), followed by the (ACT) Australian Capital Territory (17 dpmp), Western Australia (15 dpmp), South Australia (13 dpmp), Victoria (10 dpmp), Queensland (9 dpmp), New South Wales (8 dpmp) and Tasmania (4 dpmp).
4. The mean age of donors was 42.8 years, median 45.3 years with an age range of 0.6 - 79.5 years.
5. The major cause of death was (CVA) cerebrovascular accident in 55% while road trauma caused 16% of all donor deaths.
6. Fifty six percent of donors with a known occupation were classified as students, white and blue collar, tradesperson and professional worker. An additional 9% were retired and 17% unknown.  
The majority of donors were Caucasoid and their religion was recorded as Christian.
7. Authority for organ donation was sought in 53% of cases by the Intensive Care Clinician, the Donor Coordinator in 12% and volunteered by the family in 66 (32%) of cases.  
Coronial inquiries were required in 48% of all donors.
8. The donation of more than one organ occurred in 81% of donors. The average number of organs transplanted per donor was 3.6.
9. The consent rate for specific organs were 100% of kidneys, 99% livers, 96% hearts, 97% lungs and 96% pancreas.
10. In 2005, from donors where organs had been retrieved, 97% of kidneys, 96% of livers, 90% of hearts, 99% of lungs and 51% of pancreas (33 pancreas and one pancreas islets) were actually transplanted.
11. Six livers were sent from Australia to New Zealand in 2005.

### SUMMARY - NEW ZEALAND

1. In 2005 there were: 29 donors (7.0 donors per million population [dpmp]), which resulted in 51 kidneys (51 recipients), 21 livers (23 recipients) 16 hearts, 21 lungs (ten double and one single lungs) and two pancreas being transplanted into recipients. In addition 24 corneas, five heart valves and one bone donation were sent to the tissue bank. There were no donation after cardiac death donors in 2005.
2. The mean age of donors was 45.3 years and median 48.6years, with an age range of 17.4 - 64.4 years.
3. The major cause of death was cerebrovascular accident (CVA) in 59% of donors, followed by road trauma and non road trauma, both 10%.
4. Forty five percent of donors with a known occupation were classified as students, white and blue collar workers, professional and a small business owner. Fifteen donors (52%) were unknown. No donors were retired.  
The majority of donors were Caucasoid. The religion was unknown for 93% of donors.
5. Authority for organ donation was sought in 83% of cases by the Intensive Care Clinician and volunteered by the family in four (14%) of cases.  
Coronial inquiries were required in 31% of all donors.
6. The donation of more than one organ occurred in 86% of donors. The average number of organs transplanted per donor was 3.6.
7. The consent rate for specific organs were 100% of kidneys, 100% livers, 100% hearts, 100% lungs and 100% pancreas.s
8. In 2005, from donors where organs had been retrieved, 93% of kidneys, 95% of livers, 100% of hearts, 100% of lungs and 100% of pancreas were actually transplanted.
9. New Zealand has provided 21 kidneys,200 livers, 22 hearts and 65 lungs to the Australian Transplant Programs since 1989.
10. Five livers, four kidneys, three hearts and five lungs were sent from New Zealand to Australia in 2005.

## ORGAN DONORS IN AUSTRALIA AND NEW ZEALAND

**Figure 1**

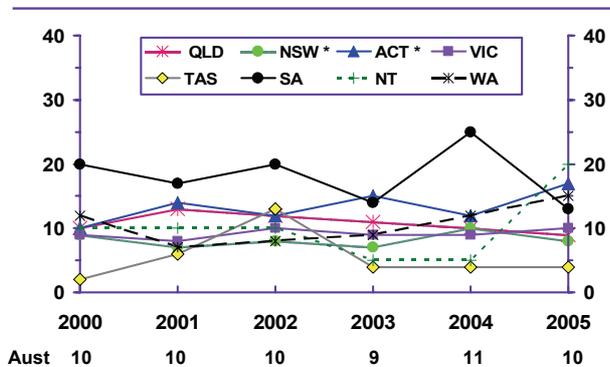
<b>Number of Donors 2001 - 2005 **</b>					
	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Queensland	48 (13)	44 (12)	40 (11)	39 (10)	35 (9)
New South Wales +*	47 (7+) (7*)	55 (9+) (8*)	46 (7+) (7*)	63 (10+) (9*)	54 (8+) (8*)
ACT + *	7 (14+) (22*)	6 (12+) (19*)	8 (15+) (25*)	6 (12+) (19*)	9 (17+) (28*)
Victoria	40 (8)	47 (10)	42 (9)	45 (9)	50 (10)
Tasmania	3 (6)	6 (13)	2 (4)	2 (4)	2 (4)
South Australia	25 (17)	31 (20)	22 (14)	39 (25)	20 (13)
Northern Territory	2 (10)	2 (10)	1 (5)	1 (5)	4 (20)
Western Australia	13 (7)	15 (8)	18 (9)	23 (12)	30 (15)
<b>Australia</b>	<b>185 (10)</b>	<b>206 (10)</b>	<b>179 (9)</b>	<b>218 (11)</b>	<b>204 (10)</b>
<b>New Zealand</b>	<b>37 (10)</b>	<b>38 (10)</b>	<b>40 (10)</b>	<b>40 (10)</b>	<b>29 (7)</b>

( ) Donors Per Million of Population  
 + NSW population excludes residents of the NSW Southern Area Health Service (included in ACT population  
 \* NSW population includes residents of the NSW Southern Area Health Service (excluded from ACT population)  
 Medical services in the ACT service the NSW Southern Area Health Region  
 Population data—June 2005 ABS 3101.0  
 Refer to Appendix for the number of donors by State and Hospital and population

\*\*This figure relates to the number of donors for whom the retrieval operation commenced for the purpose of transplantation. This includes donors who may have been deemed medically unsuitable at the time of surgery or after removal of organs.

**Figure 2**

**Number of Donors in Australia 2000 - 2005  
Per Million Population**



\* NSW population excludes residents of the NSW Southern Area Health Service  
 \* ACT population includes residents of the NSW Southern Area Health Service

Donor figures for Australia for 2005 include four donors who went to the operating theatre but organs were not retrieved.

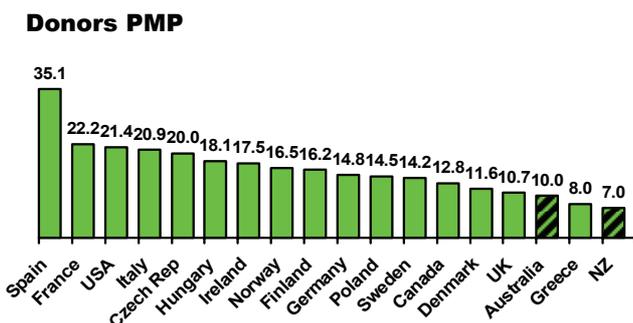
One Queensland donor had a malignancy and one had medically unsuitable organs. One Victorian donor had emboli evident and one Western Australian donor had diseased organs.

There was one New Zealand donor whose organs were not retrieved due to disease.

In 2005 there was a range between the States of four donors per million population (dpmp) in Tasmania to 20 dpmp in the Northern Territory. The ACT had 28 dpmp when the NSW Southern Area Health Service population was excluded.

**Figure 3**

**International Donor Statistics 2005**



Source: IRODaT  
 (International Registry of Organ Donation and Transplantation)

Figure 3 shows the number of donors per million population (dpmp) of Australia and New Zealand compared to other Countries. Note that the international definition of an organ donor is used for these comparisons (i.e. at least one organ is transplanted from that donor). This definition differs to that used in Figure 1 above.

**Figure 4**

<b>Waiting List for Organs by Transplant Centre 01-Jan-2006</b>							
<b>Organs</b>	<b>QLD</b>	<b>NSW/ACT</b>	<b>VIC/TAS</b>	<b>SA/NT</b>	<b>WA</b>	<b>AUST</b>	<b>NZ</b>
Kidney	139	699	395	64	110	<b>1407</b>	<b>339</b>
Liver	39	38	26	11	11	<b>125</b>	<b>17</b>
Heart	4	19	13	-	5	<b>41</b>	<b>6</b>
Heart/Lung	4	3	2	-	2	<b>11</b>	<b>1</b>
Lung	6	27	57	-	4	<b>94</b>	<b>9</b>
Pancreas/Kidney	-	21	10	-	-	<b>31</b>	<b>7</b>
Pancreas only	-	0	1	-	-	<b>1</b>	-
Pancreas Islets	-	6	-	-	-	<b>6</b>	-
<b>Total</b>	<b>192</b>	<b>813</b>	<b>504</b>	<b>75</b>	<b>132</b>	<b>1716</b>	<b>379</b>

Data provided by NOMS (National Organ Matching System), Liver, ANZ Cardiothoracic and Pancreas Registries - The New Zealand Donor Coordinators Dr John Kanellis (Pancreas-Victoria) and Dr Helen Pilmore (Pancreas-New Zealand)

**Figure 5**

<b>Transplanted Organs Donated in Australia and New Zealand by Transplanting States 2005</b>							
<b>Organs</b>	<b>QLD</b>	<b>NSW</b>	<b>VIC</b>	<b>SA</b>	<b>WA</b>	<b>AUST</b>	<b>NZ</b>
Kidneys (Total)	99	212	163	68	81	<b>623</b>	<b>93</b>
Deceased	55	130	94	44	54	<b>377</b>	<b>47</b>
Live *	44 (44%)	82 (39%)	69 (42%)	24 (35%)	27 (33%)	<b>246 (39%)</b>	<b>46 (49%)</b>
Liver (Recipients)	32	57	36	14	24	<b>163</b>	<b>24</b>
Live +	0	0	0	0	0	<b>0</b>	<b>4</b>
Heart	12	26	25	-	12	<b>75</b>	<b>13</b>
Domino #	1	0	0	-	0	<b>1</b>	<b>0</b>
Heart/Lung	4	1	0	-	1	<b>6</b>	<b>0</b>
Lung (Recipients)	15 14 (double) 1 (single)	31 28 (double) 3 (single)	29 27 (double) 2 (single)	-	6 2 (double) 4 (single)	<b>81</b> 71 (double) 10 (single)	<b>8</b> 8 (double) 0 (single)
Pancreas/Kidney	-	22	8	-	-	<b>30</b>	<b>2</b>
Pancreas only	-	3	-	-	-	<b>3</b>	-
Pancreas Islets	-	1	-	-	-	<b>1</b>	-
<b>Total</b>	<b>163</b>	<b>353</b>	<b>261</b>	<b>82</b>	<b>124</b>	<b>983</b>	<b>144</b>

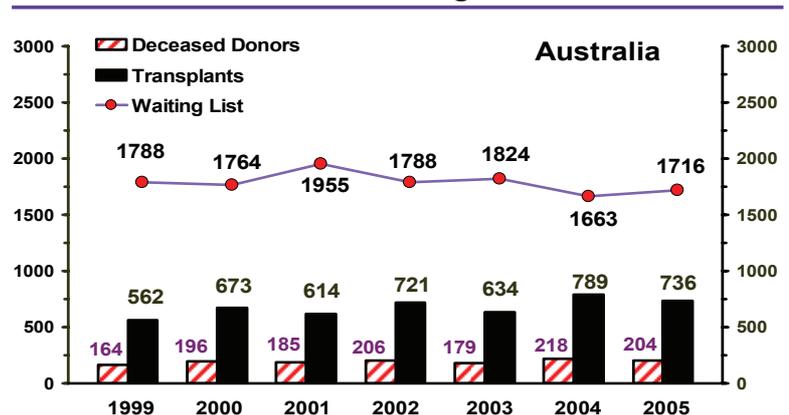
\* Living Kidney Donor Registry + National Liver Registry # ANZ Cardiothoracic Registry

**Figure 6**

Figure 6 shows the number of donors, transplants, and patients on the waiting list from 1999 to 2005.

Solid organ recipients transplanted in Australia from donors from Australia or New Zealand.

**Number of Deceased Donors and Solid Organ Transplants and Patients on the Waiting List 1999 - 2005**



## DONORS PER THOUSAND DEATHS

Historically the comparison of organ donation rates between states and countries has been based upon donors per million population (dpmpp).

However, using the number of deaths and therefore the ability of a deceased person to be a donor as the

denominator may be a more reasonable way of comparing donation rates (fig 4 and 5).

Australian data on deaths for 2005 is not available until August of 2006. New Zealand 2005 data was also not available.

**Figure 7**

<b>Donors per Million Population and Donors per Thousand Deaths ( ) Australian States - Australia and New Zealand 1999 - 2004</b>										
<b>Year</b>	<b>QLD</b>	<b>NSW *</b>	<b>ACT *</b>	<b>VIC</b>	<b>TAS</b>	<b>SA</b>	<b>NT</b>	<b>WA</b>	<b>AUST</b>	<b>NZ</b>
<b>1999</b>	6 (0.9)	8 (1.0)	4 (1.5)	9 (1.3)	13 (1.6)	20 (2.7)	16 (3.5)	7 (1.2)	<b>9 (1.3)</b>	<b>10 (1.4)</b>
<b>2000</b>	10 (1.7)	8 (1.2)	16 (3.9)	9 (1.4)	2 (0.3)	20 (2.5)	10 (2.2)	12 (2.1)	<b>10 (1.5)</b>	<b>11 (1.5)</b>
<b>2001</b>	13 (2.1)	7 (1.1)	22 (4.9)	8 (1.2)	6 (0.8)	17 (2.1)	10 (2.3)	7 (1.2)	<b>10 (1.4)</b>	<b>10 (1.3)</b>
<b>2002</b>	12 (1.9)	8 (1.2)	19 (4.6)	10 (1.4)	13 (1.5)	20 (2.7)	10 (2.4)	8 (1.3)	<b>10 (1.6)</b>	<b>10 (1.3)</b>
<b>2003</b>	11 (1.6)	7 (0.9)	25 (5.8)	9 (1.2)	4 (0.5)	14 (1.8)	5 (1.1)	9 (1.6)	<b>9 (1.3)</b>	<b>10 (1.4)</b>
<b>2004</b>	10 (1.6)	9 (1.4)	19 (4.2)	9 (1.4)	4 (0.5)	25 (3.4)	5 (1.1)	12 (2.1)	<b>11 (1.6)</b>	<b>10 (1.4)</b>

\* Donors per million population refers to the NSW and the ACT actual population.  
Southern Area Health Service data for deaths was not available.

**Figure 8**

<b>Donors per Thousand Deaths Aged less than 65 years 1999 - 2004 ( ) Represents % of Total Deaths aged less than 65 years *</b>										
<b>Year</b>	<b>QLD</b>	<b>NSW</b>	<b>ACT</b>	<b>VIC</b>	<b>TAS</b>	<b>SA</b>	<b>NT</b>	<b>WA</b>	<b>AUST</b>	<b>NZ</b>
<b>1999</b>	3.7 (24%)	4.9 (22%)	5.5 (27%)	5.7 (22%)	7.6 (21%)	13.9 (19%)	5.8 (62%)	4.9 (25%)	<b>5.7 (22%)</b>	<b>6.0 (24%)</b>
<b>2000</b>	7.1 (23%)	5.6 (21%)	15.1 (26%)	6.8 (20%)	1.3 (21%)	13.1 (19%)	3.4 (65%)	8.4 (25%)	<b>7.1 (23%)</b>	<b>6.6 (23%)</b>
<b>2001</b>	8.7 (24%)	5.1 (21%)	17.2 (29%)	6.3 (20%)	3.8 (21%)	11.4 (19%)	3.7 (62%)	5.0 (24%)	<b>6.7 (22%)</b>	<b>5.9 (22%)</b>
<b>2002</b>	8.3 (22%)	5.5 (20%)	20.9 (22%)	7.2 (19%)	7.8 (20%)	14.1 (18%)	3.8 (63%)	5.7 (22%)	<b>7.4 (20%)</b>	<b>6.0 (22%)</b>
<b>2003</b>	6.7 (23%)	4.5 (20%)	14.5 (25%)	5.6 (19%)	2.4 (20%)	7.6 (19%)	1.7 (63%)	6.9 (23%)	<b>5.7 (21%)</b>	<b>5.9 (23%)</b>
<b>2004</b>	6.8 (23%)	6.2 (19%)	17.2 (24%)	6.3 (18%)	0.0 (19%)	16.1 (19%)	1.9 (60%)	8.0 (24%)	<b>7.2 (20%)</b>	<b>5.7 (22%)</b>

\* The number of actual donors is compared to the number of deaths that are aged less than 65 years (fig 8).  
The age of less than 65 years was selected as being representative of the majority of the potential donor pool.

## DONOR POSTCODES

The Registry commenced the collection of donor residential postcodes in 1998.

In the last five years (2001-2005) there have been 13 donors from overseas. There were three donors from overseas in 2005, one each in Queensland, New South Wales and Western Australia.

In 2005, Queensland had two donors from New South Wales and one from South Australia, New South Wales had one from Western Australia, the ACT had one from Victoria, South Australia had one from Victoria and one from the Northern Territory and Western Australia had one from Queensland.

New Zealand had one donor from overseas in 2005 and a total of three between 2001 and 2005.

## DONOR PROFILE

### AGE AND GENDER DISTRIBUTION

In Australia in 2005, 10% (20 donors) were 65 years or older and 2% (five donors) were aged 75 years or older. The oldest donor was 79.5 years (fig 10).

Donor gender in each State from 1989-2005 is shown in Figure 9.

The mean age for donors in Australia decreased slightly to 42.8 years in 2005 from 43.2 years in 2004. The mean age for Australian States ranged from 29.9 years in Tasmania to 47.0 years in New South Wales.

The median age for Australia decreased from 46.6 years in 2004 to 45.3 years in 2005. The age range was between 7.6 months and 79.5 years.

In Australian States the median age ranged from 29 years in the ACT and the Northern Territory to 50.1 years in New South Wales. The mean and median age for donors from 1998 to 2005 for each State are shown in Figures 11 and 12.

In New Zealand in 2005 the mean age increased to 45.3 years from 43 years in 2004 and the median age to 48.6 years from 46.1 years previously. No donors were over 65 years. The age range was 17.4 years to 64.4 years.

Figures 13 and 14 show donors according to age and gender in Australia and New Zealand for the years 2003-2005.

**Figure 9**

<b>Donor Gender by Year for Each State 1989 - 2005</b>																			
Donor State	Gender	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	Total
QLD	Male	25	27	34	48	25	22	22	23	22	18	14	26	36	29	23	23	18	<b>435</b> (64%)
	Female	12	11	12	18	19	16	12	12	15	22	6	11	12	15	17	16	17	<b>243</b> (46%)
NSW	Male	45	55	40	39	31	39	42	39	43	39	26	30	27	33	26	42	27	<b>623</b> (59%)
	Female	41	19	32	31	37	32	18	24	22	24	22	25	20	22	20	21	27	<b>437</b> (41%)
ACT	Male	3	3	3	0	6	0	3	3	3	2	1	3	5	4	4	6	3	<b>52</b> (63%)
	Female	0	2	1	0	0	2	4	3	1	0	1	2	2	2	4	0	6	<b>30</b> (37%)
VIC	Male	39	29	23	29	32	14	19	22	23	23	21	22	24	30	26	26	27	<b>429</b> (57%)
	Female	26	16	22	13	20	12	19	27	19	17	21	22	16	17	16	19	23	<b>325</b> (43%)
TAS	Male	2	2	2	2	3	3	4	0	4	0	4	1	3	5	1	1	1	<b>38</b> (70%)
	Female	0	0	0	2	3	3	0	1	1	0	2	0	0	1	1	1	1	<b>16</b> (30%)
SA	Male	11	16	10	8	16	11	16	18	16	16	16	19	15	21	12	22	12	<b>255</b> (59%)
	Female	8	11	5	12	7	12	7	7	9	19	14	11	10	10	10	17	8	<b>177</b> (41%)
NT	Male	2	1	1	0	3	1	1	3	4	3	3	0	2	1	1	0	2	<b>28</b> (80%)
	Female	0	0	1	0	0	0	0	0	0	0	0	2	0	1	0	1	2	<b>7</b> (20%)
WA	Male	10	6	17	7	10	5	13	5	5	8	9	11	7	9	12	13	21	<b>168</b> (59%)
	Female	7	5	6	7	9	11	4	7	3	5	4	11	6	6	6	10	9	<b>116</b> (41%)
<b>Total</b>		<b>231</b>	<b>203</b>	<b>209</b>	<b>216</b>	<b>221</b>	<b>183</b>	<b>184</b>	<b>194</b>	<b>190</b>	<b>196</b>	<b>164</b>	<b>196</b>	<b>185</b>	<b>206</b>	<b>179</b>	<b>218</b>	<b>204</b>	<b>3379</b>
NZ *	Male	-	-	-	-	16	23	23	17	26	31	18	22	19	19	25	21	16	<b>276</b> (56%)
	Female	-	-	-	-	18	12	12	19	16	15	21	19	18	19	15	19	13	<b>216</b> (44%)
<b>Total</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>34</b>	<b>35</b>	<b>35</b>	<b>36</b>	<b>42</b>	<b>46</b>	<b>39</b>	<b>41</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>	<b>492</b>

\* Data for New Zealand complete from 1993 onwards

**Figure 10**

<b>Age of Male and Female Donors 1998 - 2005</b>								
	Year	Mean (years)			Median (years)			Range in Years
		All	Female	Male	All	Female	Male	
<b>Aust</b>	1998	40.4	43.8	37.7	43.2	46.2	37.2	0.94 - 73.7
	1999	39.3	43.2	36.4	42.5	47.5	36.2	0.21 - 77.1
	2000	41.1	42.6	40.0	44.1	45.1	43.0	0.4 - 77.9
	2001	40.0	43.1	38.3	42.9	47.3	39.9	6.4 - 77.4
	2002	38.7	39.4	38.3	40.8	42.1	40.0	0.01 - 78.8
	2003	42.7	46.4	40.1	45.5	48.4	42.1	0.96 - 85.3
	2004	43.2	44.0	42.7	46.6	47.4	44.1	1.12 - 80.5
	2005	42.8	46.8	39.3	45.3	50.0	40.6	0.6 - 79.5
<b>NZ</b>	1998	38.0	45.0	34.5	35.9	50.1	32.5	2.8 - 69.7
	1999	42.7	45.5	39.3	49.7	50.4	40.3	3.1 - 69.7
	2000	39.7	38.3	40.9	42.6	42.6	42.2	5.5 - 68.5
	2001	41.1	44.7	37.7	42.6	48.1	35.2	16.6 - 68.9
	2002	40.3	38.5	42.1	42.6	42.0	45.8	7.7 - 66.7
	2003	38.0	35.6	39.4	39.7	40.3	39.0	13.0 - 75.1
	2004	43.0	43.4	42.7	46.1	47.7	43.4	1.15 - 78.2
	2005	45.3	47.1	43.9	48.6	48.6	45.4	17.4 - 64.4

**Figure 11**

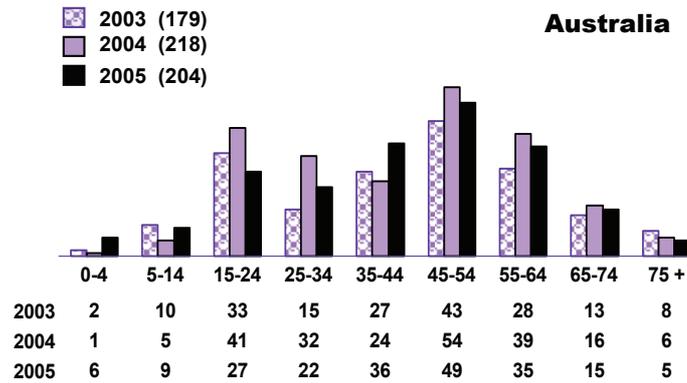
<b>Australian States Mean Age of Donors 1998 - 2005</b>								
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA
1998	35.7	42.7	42.1	43.4	0	40.3	44.7	33.9
1999	40.0	42.4	49.9	40.1	35.8	35.4	24.3	36.5
2000	40.3	40.5	30.3	45.1	63.1	39.0	44.3	39.7
2001	40.3	40.8	35.1	41.4	30.8	43.0	33.4	31.5
2002	34.8	40.8	32.1	44.0	42.7	38.3	49.8	26.5
2003	40.7	42.7	50.2	46.0	14.1	43.1	56.9	38.3
2004	38.2	47.8	46.3	43.2	34.6	41.5	59.5	42.0
2005	43.1	47.0	31.8	43.7	29.9	37.8	30.0	42.2

**Figure 12**

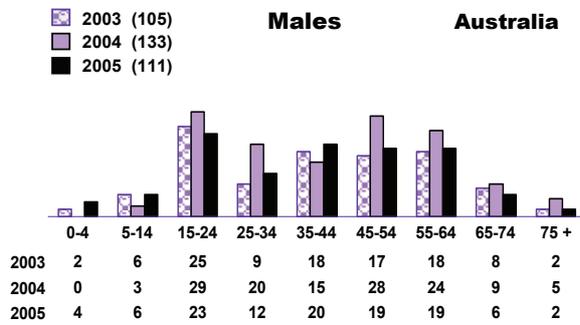
<b>Australian States Median Age of Donors 1998 - 2005</b>								
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA
1998	34.6	43.4	41.2	48.3	0	44.3	41.2	29.0
1999	41.7	46.0	26.3	45.1	40.9	33.2	26.3	44.3
2000	44.1	41.5	44.3	46.5	63.1	45.3	44.3	48.3
2001	43.5	39.9	33.4	45.7	21.1	48.1	33.4	32.3
2002	37.9	43.2	49.8	50.3	48.8	40.7	49.8	19.0
2003	44.5	43.9	56.9	48.6	14.1	44.1	56.9	40.1
2004	40.4	49.2	59.5	44.1	24.6	47.2	59.5	38.5
2005	43.4	50.1	29.0	47.8	29.9	36.2	29.0	43.6

**Figure 13**

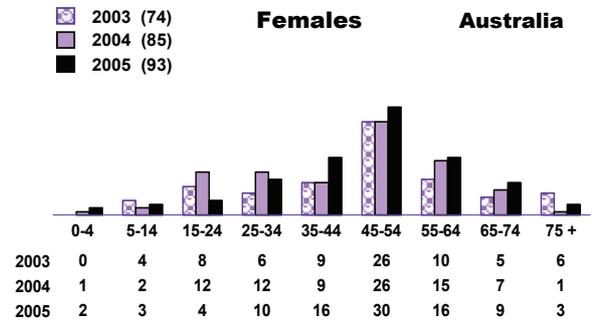
**Age Group of Deceased Donors**



**Age and Gender Distribution of Donors**

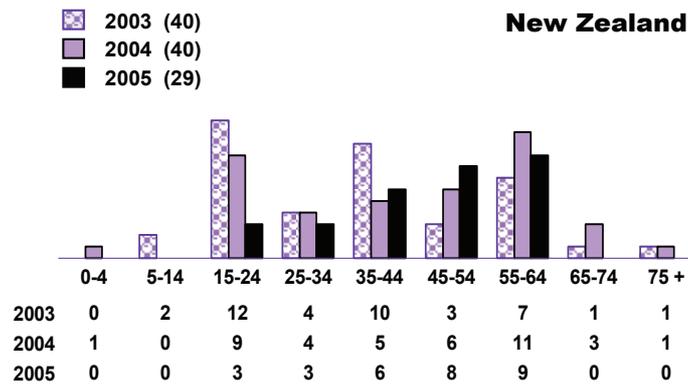


**Age and Gender Distribution of Donors**

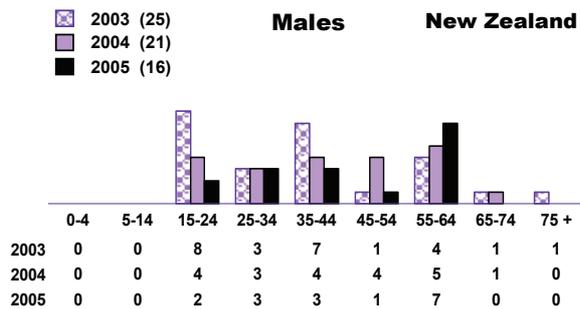


**Figure 14**

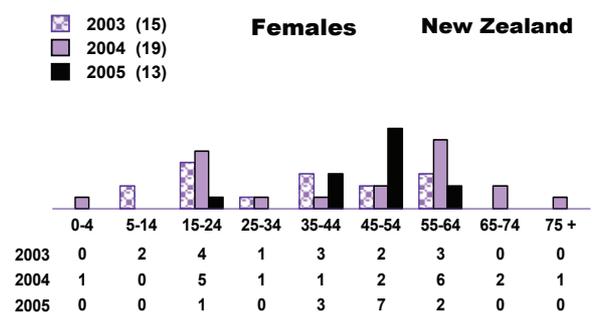
**Age Group of Deceased Donors**



**Age and Gender Distribution of Donors**



**Age and Gender Distribution of Donors**



## CAUSE OF DEATH - ALL DONORS

Figure 15 shows the cause of death for all organ donors in Australia since 1989 and for New Zealand since 1993.

The primary cause of death was cerebrovascular accident (CVA), (49% of all Australian donors and 53% of all New Zealand donors).

Figure 16 shows that CVA is the main cause of death in donors 55 years and older, 82% in Australia and 78% in New Zealand, whereas in the 15-34 year age

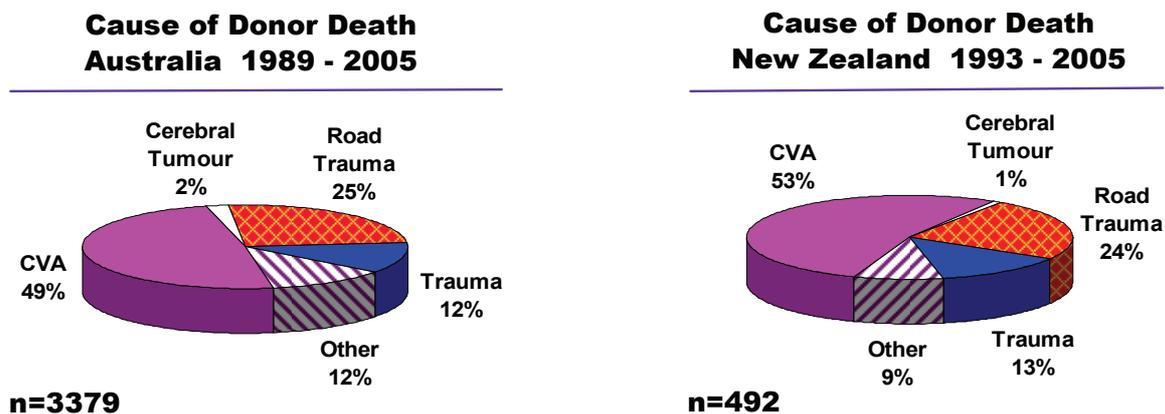
group, trauma accounted for 55% of all deaths in Australia and 50% in New Zealand in 2005.

Figure 17 shows detailed cause of death by gender for 2005.

The cause of death by age group is shown in Figure 19 for each Australian State.

Figures 21-23 show the occupation, ethnic origin and religious denomination of donors in Australia and New Zealand for 2001-2005.

**Figure 15**



**Figure 16**

Cause of Donor Death Related to Age Group 2005										
	Australia					New Zealand				
	Age Groups				Total	Age Groups				Total
	0-14	15-34	35-54	55 on		0-14	15-34	35-54	55 on	
CVA	4	9	55	45	113	0	1	9	7	17
Trauma (road)	5	19	4	4	32	0	3	0	0	3
Trauma (non-road)	1	8	9	4	22	0	0	2	1	3
Other	5	13	17	2	37	0	2	3	1	6
<b>Total</b>	<b>15</b>	<b>49</b>	<b>85</b>	<b>55</b>	<b>204</b>	<b>0</b>	<b>6</b>	<b>14</b>	<b>9</b>	<b>29</b>

**Figure 17**

<b>Cause of Donor Death 2005</b>							
<b>Causes of Death</b>		<b>Australia</b>			<b>New Zealand</b>		
		<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
CVA	Cerebral Infarct	6	8	<b>14</b>	4	5	<b>9</b>
	Intracranial Haemorrhage	24	27	<b>51</b>	3	4	<b>7</b>
	Subarachnoid Haemorrhage	18	30	<b>48</b>	1	0	<b>1</b>
Road Trauma	Cyclist	1	2	<b>3</b>	0	0	<b>0</b>
	Motor Bike Accident	5	0	<b>5</b>	1	0	<b>1</b>
	Motor Vehicle Accident	13	1	<b>14</b>	1	1	<b>2</b>
	Pedestrian	5	3	<b>8</b>	0	0	<b>0</b>
	Other Road Accident	2	0	<b>2</b>	0	0	<b>0</b>
Other Trauma	Fall	9	1	<b>10</b>	0	2	<b>2</b>
	Felony / Crime - Assault	9	2	<b>11</b>	0	0	<b>0</b>
	Gunshot	1	0	<b>1</b>	1	0	<b>1</b>
	Other Trauma	0	0	<b>0</b>	0	0	<b>0</b>
Hypoxia Anoxia	Airway Obstruction	1	0	<b>1</b>	0	0	<b>0</b>
	Anaphylaxis	0	2	<b>2</b>	0	0	<b>0</b>
	Asthma	0	3	<b>3</b>	0	0	<b>0</b>
	Cardiac Arrest	4	1	<b>5</b>	0	0	<b>0</b>
	Choking	0	1	<b>1</b>	0	0	<b>0</b>
	Drowning	2	0	<b>2</b>	0	0	<b>0</b>
	Hanging	2	2	<b>4</b>	0	0	<b>0</b>
	Nitrous Oxide Inhalation	0	1	<b>1</b>	0	0	<b>0</b>
	Organophosphate Poisoning	1	0	<b>1</b>	0	0	<b>0</b>
	Overdose	0	2	<b>2</b>	0	0	<b>0</b>
	Respiratory Arrest	2	1	<b>3</b>	0	0	<b>0</b>
Seizure	1	0	<b>1</b>	0	0	<b>0</b>	
Other	Acute Encephalitis	0	0	<b>0</b>	1	0	<b>1</b>
	Astrocytoma (Benign)	1	0	<b>1</b>	0	0	<b>0</b>
	Astrocytoma (Malignant)	1	0	<b>1</b>	1	0	<b>1</b>
	Glioma (Malignant)	0	1	<b>1</b>	0	0	<b>0</b>
	Herpes Encephalitis	0	0	<b>0</b>	1	0	<b>1</b>
	Hypovolaemic Arrest	0	0	<b>0</b>	1	0	<b>1</b>
	Insulin Overdose	1	0	<b>1</b>	0	0	<b>0</b>
	Meningioma (Benign)	0	2	<b>2</b>	0	0	<b>0</b>
	Meningitis (Meningococcal)	1	0	<b>1</b>	0	1	<b>1</b>
	Meningitis (Pneumococcal)	1	1	<b>2</b>	0	0	<b>0</b>
	Meningitis (Streptococcal)	0	1	<b>1</b>	0	0	<b>0</b>
	Pituitary (Benign)	0	1	<b>1</b>	0	0	<b>0</b>
	Suicide - Nail Gun	0	0	<b>0</b>	1	0	<b>1</b>
<b>Total</b>		<b>111</b>	<b>93</b>	<b>204</b>	<b>16</b>	<b>13</b>	<b>29</b>

**Figure 18**

<b>Cause of Donor Death 1989 - 2005</b>										
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ *
CVA	43%	52%	46%	55%	48%	45%	32%	46%	<b>49%</b>	<b>53%</b>
Trauma (road)	29%	23%	22%	21%	24%	23%	37%	33%	<b>25%</b>	<b>24%</b>
Trauma (non-road)	16%	12%	16%	8%	21%	11%	17%	10%	<b>12%</b>	<b>13%</b>
Other	12%	13%	16%	16%	7%	21%	14%	11%	<b>14%</b>	<b>10%</b>

\* N.Z. 1993 - 2005

**Figure 19**

<b>Australian States Cause of Death Related to Age Group 2005</b>						
		Age Groups				Total
		0-14	15-34	35-54	55 on	
<b>Queensland</b>	CVA	1	1	7	10	<b>19</b>
	Trauma (road)	0	3	0	0	<b>3</b>
	Trauma (non-road)	0	2	4	0	<b>6</b>
	Other	1	3	3	0	<b>7</b>
	<b>Total</b>	<b>2</b>	<b>9</b>	<b>14</b>	<b>10</b>	<b>35</b>
<b>NSW</b>	CVA	0	2	16	13	<b>31</b>
	Trauma (road)	2	2	3	2	<b>9</b>
	Trauma (non-road)	1	0	1	1	<b>3</b>
	Other	0	4	5	2	<b>11</b>
	<b>Total</b>	<b>3</b>	<b>8</b>	<b>25</b>	<b>18</b>	<b>54</b>
<b>ACT</b>	CVA	0	1	1	1	<b>3</b>
	Trauma (road)	1	2	0	1	<b>4</b>
	Trauma (non-road)	0	1	0	0	<b>1</b>
	Other	1	0	0	0	<b>1</b>
	<b>Total</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>9</b>
<b>Victoria</b>	CVA	2	2	13	13	<b>30</b>
	Trauma (road)	1	1	1	0	<b>3</b>
	Trauma (non-road)	0	2	1	2	<b>5</b>
	Other	3	4	5	0	<b>12</b>
	<b>Total</b>	<b>6</b>	<b>9</b>	<b>20</b>	<b>15</b>	<b>50</b>
<b>Tasmania</b>	CVA	0	0	1	0	<b>1</b>
	Trauma (road)	0	0	0	0	<b>0</b>
	Trauma (non-road)	0	1	0	0	<b>1</b>
	Other	0	0	0	0	<b>0</b>
	<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>
<b>South Australia</b>	CVA	0	2	6	3	<b>11</b>
	Trauma (road)	0	5	0	0	<b>5</b>
	Trauma (non-road)	0	1	1	0	<b>2</b>
	Other	0	1	1	0	<b>2</b>
	<b>Total</b>	<b>0</b>	<b>9</b>	<b>8</b>	<b>3</b>	<b>20</b>
<b>Northern Territory</b>	CVA	0	0	1	1	<b>2</b>
	Trauma (road)	1	1	0	0	<b>2</b>
	Trauma (non-road)	0	0	0	0	<b>0</b>
	Other	0	0	0	0	<b>0</b>
	<b>Total</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>
<b>Western Australia</b>	CVA	1	1	10	4	<b>16</b>
	Trauma (road)	0	5	0	1	<b>6</b>
	Trauma (non-road)	0	1	2	1	<b>4</b>
	Other	0	1	3	0	<b>4</b>
	<b>Total</b>	<b>1</b>	<b>8</b>	<b>15</b>	<b>6</b>	<b>30</b>

Figure 20

		1999	2000	2001	2002	2003	2004	2005
<b>Cause of Donor Death 1999 - 2005</b>								
<b>Queensland</b>	CVA	12	17	25	21	19	18	19
	Trauma (road)	5	9	12	12	13	11	3
	Trauma (non-road)	1	5	6	6	6	7	6
	Other	2	6	5	5	2	3	7
	<b>Total</b>	<b>20</b>	<b>37</b>	<b>48</b>	<b>44</b>	<b>40</b>	<b>39</b>	<b>35</b>
<b>NSW</b>	CVA	25	27	24	31	24	37	<b>31</b>
	Trauma (road)	8	12	7	8	12	8	<b>9</b>
	Trauma (non-road)	9	9	3	6	4	5	<b>3</b>
	Other	6	7	13	10	6	13	<b>11</b>
	<b>Total</b>	<b>48</b>	<b>55</b>	<b>47</b>	<b>55</b>	<b>46</b>	<b>63</b>	<b>54</b>
<b>ACT</b>	CVA	1	2	3	3	4	3	3
	Trauma (road)	0	2	2	1	2	1	4
	Trauma (non-road)	1	1	0	0	1	2	1
	Other	0	0	2	2	1	0	1
	<b>Total</b>	<b>2</b>	<b>5</b>	<b>7</b>	<b>6</b>	<b>8</b>	<b>6</b>	<b>9</b>
<b>Victoria</b>	CVA	29	27	22	30	28	27	30
	Trauma (road)	7	8	7	10	1	4	3
	Trauma (non-road)	1	2	1	1	4	5	5
	Other	5	7	10	6	9	9	12
	<b>Total</b>	<b>42</b>	<b>44</b>	<b>40</b>	<b>47</b>	<b>42</b>	<b>45</b>	<b>50</b>
<b>Tasmania</b>	CVA	4	1	2	4	0	1	1
	Trauma (road)	2	0	0	1	1	0	0
	Trauma (non-road)	0	0	1	1	1	0	1
	Other	0	0	0	0	0	1	0
	<b>Total</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>South Australia</b>	CVA	13	14	12	13	11	17	11
	Trauma (road)	7	5	7	8	4	3	5
	Trauma (non-road)	3	4	2	1	2	3	2
	Other	7	7	4	9	5	16	2
	<b>Total</b>	<b>30</b>	<b>30</b>	<b>25</b>	<b>31</b>	<b>22</b>	<b>39</b>	<b>20</b>
<b>Northern Territory</b>	CVA	0	1	1	1	1	1	2
	Trauma (road)	2	1	1	0	0	0	2
	Trauma (non-road)	0	0	0	1	0	0	0
	Other	1	0	0	0	0	0	0
	<b>Total</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>4</b>
<b>Western Australia</b>	CVA	4	13	6	4	7	11	16
	Trauma (road)	6	4	5	6	4	5	6
	Trauma (non-road)	3	1	1	3	6	3	4
	Other	0	4	1	2	1	4	4
	<b>Total</b>	<b>13</b>	<b>22</b>	<b>13</b>	<b>15</b>	<b>18</b>	<b>23</b>	<b>30</b>
<b>New Zealand</b>	CVA	24	24	22	21	20	20	17
	Trauma (road)	8	6	9	8	9	7	3
	Trauma (non-road)	4	5	4	5	7	7	3
	Hypoxia-Anoxia	3	4	0	4	2	6	0
	Cerebral Tumour	0	0	0	0	2	0	1
	Other	0	2	2	0	0	0	5
	<b>Total</b>	<b>39</b>	<b>41</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>

**Figure 21**

<b>Occupation of Donors 2001 - 2005</b>										
	<b>Australia</b>					<b>New Zealand</b>				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
Blue collar	38	35	40	48	41	1	4	4	1	1
Home duties	11	8	7	15	17	5	2	0	1	0
Invalid pensioner	6	9	3	8	10	0	3	2	0	1
Management	0	6	1	5	0	2	1	0	1	0
Other	3	3	0	2	2	0	0	1	0	0
Pre-school	0	5	2	1	7	0	0	0	1	0
Primary industry	3	3	2	6	2	2	1	3	2	0
Professional	9	18	11	16	15	4	4	1	3	5
Retired	16	17	22	25	18	0	1	1	4	0
Small business owner	1	2	3	1	1	0	0	2	1	1
Student	27	34	20	19	16	3	5	5	4	3
Tradesperson	13	17	17	20	8	0	3	3	2	0
Unemployed	11	7	6	6	6	0	1	0	0	0
Unknown	24	34	27	13	34	15	7	16	20	15
White collar	23	8	18	13	27	5	6	2	0	3
<b>Total</b>	<b>185</b>	<b>206</b>	<b>179</b>	<b>218</b>	<b>204</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>

**Figure 22**

<b>Ethnic Origin of Donors 2001 - 2005</b>										
	<b>Australia</b>					<b>New Zealand</b>				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
Aboriginal	2	0	1	2	1	0	0	0	0	0
Afrikaans	0	0	1	0	0	0	0	0	0	0
Caucasoid	172	197	169	208	192	34	33	39	35	24
Greek	(1)	(4)	(0)	(2)	(1)	0	0	0	0	0
Italian	(0)	(1)	(4)	(0)	(1)	0	0	0	0	0
Chinese	2	2	0	2	2	2	0	0	0	0
Columbian	0	0	1	0	0	0	0	0	0	0
Eurasian	0	0	1	0	0	0	0	0	0	0
Filipino	1	1	0	1	0	0	0	0	1	0
Indian	2	2	1	2	3	0	1	0	0	1
Japanese	0	0	0	0	0	0	0	0	0	0
Korean	0	0	0	0	0	0	0	0	0	2
Malay	2	0	0	0	0	0	0	0	0	1
Maori	1	0	3	0	0	1	3	0	3	0
Mauritian	1	0	0	0	1	0	0	0	0	0
Pacific People	0	1	1	0	1	0	1	1	1	0
Sri Lankan	2	1	0	1	2	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	1
Vietnamese	0	2	1	2	2	0	0	0	0	0
<b>Total</b>	<b>185</b>	<b>206</b>	<b>179</b>	<b>218</b>	<b>204</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>

**Figure 23**

<b>Religious Denomination of Donors 2001 - 2005</b>										
	<b>Australia</b>					<b>New Zealand</b>				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
Bahai	0	0	0	0	0	0	0	0	1	0
Buddhist	1	1	1	0	3	0	0	0	0	0
Christian	89	87	75	92	72	2	5	3	7	6
Jehovah's Witness	0	1	0	2	0	0	0	0	0	0
Jewish	0	0	0	1	0	0	0	0	0	0
Druid	0	1	0	0	0	0	0	0	0	0
Hindu	0	0	0	3	3	0	1	0	0	1
Muslim	0	0	2	0	0	0	0	0	0	0
No religion	20	24	20	16	37	4	0	0	0	0
Unknown	75	92	81	104	89	31	32	37	32	22
<b>Total</b>	<b>185</b>	<b>206</b>	<b>179</b>	<b>218</b>	<b>204</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>

## INTENDED DONORS

An intended donor is a person for whom consent has been given or volunteered, but for various reasons the donor does not proceed to the operating theatre.

(These numbers are **not** included in the donor numbers in Figure 1).

**Figure 24**

Intended Donors 1999 - 2005										
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
1999	1	4	0	0	0	0	0	0	5	1
2000	0	1	0	0	0	0	1	0	2	1
2001	1	6	1	0	0	2	0	0	10	0
2002	0	3	0	1	0	3	0	1	8	0
2003	0	2	0	3	0	0	0	1	6	0
2004	3	6	0	4	0	1	0	0	14	0
2005	3	2	0	0	1	1	0	0	7	0

**Figure 25**

Reasons Why Donation Did Not Proceed 1999 - 2005		
Year	Australia	New Zealand
1999	Cardiac Arrest Hepatitis C antibody positive Hepatitis B surface antigen and core antibody positive Hepatitis B core antibody positive and other risk factors Infection detected in operating room	Permission withdrawn
2000	Late decline of offer by Transplant Unit Malignant cerebral tumour detected	Unstable donor
2001	Cardiac Arrest Hepatitis C antibody positive (3) HTLV1 positive Disease of organ Rapid rise in creatinine Coronial refusal Hepatitis B core antibody Later withdrawal by Transplant Unit	
2002	Hepatitis C antibody positive Coronial refusal (2) Cardiac arrest in operating theatre Potential non-heart beating donor - criteria not meet Surgical team not available High risk behaviour - Hepatitis C antibody positive Risk factors Creutzfeldt-Jacob Disease	
2003	Cardiac Arrest Coronial refusal Hepatitis B surface antigen and core antibody positive Hepatitis C antibody positive - No suitable recipients High risk behaviour Hypotension and cardiac arrest	
2004	Cardiac standstill Coronial refusal Deterioration of renal function and unstable donor Family refusal prior to donation Hepatitis B surface antigen and core antibody positive Hepatitis C antibody positive (2) High risk behaviour (2) Past history of malignancy (2) Suspected malignancy (2) Reassessment of medical history, then deemed medically unfit	
2005	DCD potential donors - did not proceed to cardiac standstill (2) Disease of organs and infection Family refusal prior to donation Parainfluenza3 virus Past history of malignancy Past medical history and overall poor health	

## DONATION AFTER CARDIAC DEATH DONORS

The majority of organs are donated by heart-beating brain dead patients.

After a heart-beating donor is certified brain dead, they remain on the ventilator and the removal of organs may occur many hours later.

Donation after cardiac death donors are defined as patients who are certified dead using the criterion of irreversible cessation of circulation.

As soon as cardiac death is confirmed the retrieval procedure is commenced in order to minimize warm ischaemia time.

In 2005 there was an increase in the number of DCD donors to nine. Eight of these donations occurred in New South Wales. This represents a significant increase over previous experience.

**Figure 26**

Donation after Cardiac Death Donors 1989 - 2005										
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
1989	0	0	0	1	0	1	0	0	2	-
1990	0	2	0	0	0	1	0	0	3	-
1991	0	2	0	0	0	0	0	0	2	-
1992	0	1	0	0	0	0	0	0	1	-
1993	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	1	0	0	1	1
1995	0	3	0	1	0	0	0	0	4	0
1996	1	1	0	0	0	0	0	0	2	0
1997	0	2	0	0	0	1	0	0	3	1
1998	0	0	0	0	0	2	0	0	2	0
1999	1	0	0	0	0	0	0	0	1	0
2000	0	0	0	0	0	0	1	0	1	0
2001	0	1	0	1	0	0	0	0	2	0
2002	0	0	0	0	0	1	1	0	2	0
2003	0	1	0	0	0	0	0	0	1	0
2004	0	2	0	0	0	0	0	1	3	0
2005	0	8	0	0	0	1	0	0	9	0
<b>Total</b>	<b>2</b>	<b>23</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>8</b>	<b>2</b>	<b>1</b>	<b>39</b>	<b>2</b>

## CARDIOPULMONARY RESUSCITATION

Cardiopulmonary resuscitation is recorded for events leading up to the admission and hospital stay for the patient, prior to organ donation (fig 27 and 28).

**Figure 27**

Cardiopulmonary Resuscitation 2001 - 2005										
	Australia					New Zealand				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
Yes	44	48	39	65	47	4	10	6	12	6
No	140	157	140	153	157	33	28	34	28	23
Unknown	1	1	0	0	0	0	0	0	0	0
<b>Total</b>	<b>196</b>	<b>206</b>	<b>179</b>	<b>218</b>	<b>204</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>

**Figure 28**

Australian States Cardiopulmonary Resuscitation 2005 (2004)								
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA
Yes	9 (5)	10 (13)	3 (0)	19 (14)	1 (1)	4 (24)	0 (1)	1 (7)
No	26 (34)	44 (50)	6 (6)	31 (31)	1 (1)	16 (15)	4 (0)	29 (16)
<b>Total</b>	<b>35 (39)</b>	<b>54 (63)</b>	<b>9 (6)</b>	<b>50 (45)</b>	<b>2 (2)</b>	<b>20 (39)</b>	<b>4 (1)</b>	<b>30 (23)</b>

## VIROLOGY SCREENING

**Figure 29**

<b>Cytomegalovirus (CMV) Status of Donors 2001 - 2005</b>										
	<b>Australia</b>					<b>New Zealand</b>				
	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Positive	132	131	111	151	152	19	18	26	26	16
Negative	53	75	68	66	52	18	20	14	14	13
Not done	0	0	0	1	0	0	0	0	0	0
<b>Total</b>	<b>185</b>	<b>206</b>	<b>179</b>	<b>218</b>	<b>204</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>

**Figure 30**

<b>Epstein-Barr Virus (EBV) Status of Donors 2001 - 2005</b>										
	<b>Australia</b>					<b>New Zealand</b>				
	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Positive	61	94	96	122	118	0	5	24	19	19
Negative	21	31	21	19	21	1	0	9	3	2
Not done	103	94	62	77	65	36	33	7	18	8
<b>Total</b>	<b>185</b>	<b>206</b>	<b>179</b>	<b>218</b>	<b>204</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>

Not all Australian States require organ donors to be tested for EBV

### HEPATITIS B SURFACE ANTIGEN

Since 1993, all donors in Australia and New Zealand have been negative for Hepatitis B surface antigen, excepting one donor in 2004 who was not tested as their condition deteriorated in theatre and no organs were retrieved.

### HEPATITIS B CORE ANTIBODY

The Registry commenced collection of Hepatitis B core antibody results in 1998.

A positive result was recorded for 5% (11) of Australian donors and 7% (2) of New Zealand donors in 2005.

From the eleven Australian donors there were 18 kidneys, seven livers, one heart, four double lungs and one kidney/pancreas transplanted.

From the two New Zealand donors, four kidneys, two livers and one heart were transplanted.

### HEPATITIS C ANTIBODY

There were four positive Hepatitis C donors in Australia in 2005 and two in New Zealand.

Five kidneys were transplanted from four Hepatitis C donors; two of those donors were also Hepatitis B Core Antibody positive.

Three kidneys and one liver were transplanted from the two New Zealand donors.

## MEDICAL CONDITION OF DONORS

Information related to diabetes, hypertension and smoking has been collected since 1993. Cancer data collection commenced on 1st January 2002.

### DIABETES

There was one Type 1 (insulin dependent) and thirteen Type 2 diabetic donors in Australia in 2005. There were two diabetic Type 2 donors in New Zealand.

The one diabetic Type 1 donor provided one kidney and one liver, while the Type 2 diabetic donors provided 21 kidneys, five livers, one split liver, two hearts and one single lung. One donor did not have any organs retrieved due to disease and age.

The two diabetic Type 2 donors in New Zealand provided four kidneys, two hearts and one double lung.

### HYPERTENSION

A past history of hypertension was recorded in 23% (46 donors) in Australia and 24% (seven donors) in New Zealand in 2005 (fig 31 and 32).

These donors provided Australia with 78 kidneys, 30 livers, eight split livers, nine hearts, eleven double lungs, one kidney/pancreas and one pancreas islets for transplantation.

In New Zealand, nine kidneys, two livers, three hearts, one double and one single lung were transplanted.

### SMOKING

In 2005, 33% (67) of Australian donors were recorded as current smokers and 17% (34) as former smokers, while in New Zealand, 31% (9 donors) were reported as current and 17% (5) as former.

### CANCER IN DONOR

#### Australia ( seven donors )

- \* three renal cell carcinoma of the kidneys
- \* one astrocytoma of the brain
- \* one glioma of the (L) temporal lobe
- \* one basal cell carcinoma of the face
- \* one intraoperative finding of stomach malignancy - no organs were retrieved

Six kidneys, four livers, four hearts, three double lungs, one pancreas islets and six cornea were transplanted or stored from these donors.

#### New Zealand ( one donor)

- \* one astrocytoma of the brain
- Two kidneys were transplanted from this donor.

**Figure 31**

Donor Diabetes, Smoking and Cancer 2001 - 2005						
	2001	2002	2003	2004	2005	
<b>Australia</b>	<b>(n=185)</b>	<b>(n=206)</b>	<b>(n=179)</b>	<b>(n=218)</b>	<b>(n=240)</b>	
	Diabetes Type 1	4 (2%)	2 (1%)	1 (<1%)	6 (3%)	1 (<1%)
	Diabetes Type 2	7 (4%)	5 (2%)	4 (2%)	6 (3%)	13 (6%)
	Hypertension	31 (17%)	28 (14%)	37 (21%)	50 (23%)	46 (23%)
	Unknown	5 (3%)	3 (1.5%)	3 (2%)	7 (3%)	3 (1%)
	<b>Smoking</b>					
	Current	71 (38%)	89 (43%)	82 (46%)	90(41%)	67 (33%)
	Former	21 (11%)	30 (15%)	29 (16%)	46 (21%)	34 (17%)
	Unknown	3 (2%)	5 (2%)	1 (<1%)	2 (<1%)	0 (0%)
	<b>Cancer *</b>	-	5 (2%)	1 (<1%)	6 (3%)	7 (3%)
<b>New Zealand</b>	<b>(n=37)</b>	<b>(n=38)</b>	<b>(n=40)</b>	<b>(n=40)</b>	<b>(n=29)</b>	
	Diabetes Type 1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
	Diabetes Type 2	0 (0%)	0 (0%)	0 (0%)	1 (2.5%)	2 (7%)
	Hypertension	3 (8%)	6 (16%)	5 (12.5%)	9 (22.5%)	7 (24%)
	Unknown	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
	<b>Smoking</b>					
	Current	10 (27%)	16 (42%)	17 (43%)	13 (32.5%)	9 (31%)
	Former	4 (11%)	2 (5%)	2 (5%)	3 (7.5%)	5 (17%)
	Unknown	1 (3%)	1 (3%)	0 (0%)	0 (0%)	1 (3%)
	<b>Cancer *</b>	-	1 (3%)	2 (2%)	0 (0%)	1 (3%)

\* Cancer data collected from 1st January 2002

**Figure 32**

Medical Condition of Donors by Australian States 2005 (2004)								
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA
Diabetes Type 1	0 (1)	0 (2)	0 (0)	0 (1)	0 (1)	0 (1)	0 (0)	1 (0)
Diabetes Type 2	1 (1)	3 (0)	0 (0)	3 (2)	0 (0)	1 (2)	1 (0)	4 (1)
Hypertension	6 (7)	18 (16)	1 (2)	13 (12)	0 (0)	4 (8)	1 (0)	3 (5)
Smoking Current	12 (12)	12 (34)	1 (3)	19 (18)	2 (0)	13 (15)	0 (1)	8 (7)
Cancer *	2 (1)	0 (2)	0 (0)	3 (2)	0 (0)	0 (0)	0 (0)	2 (1)

## DONOR WEIGHT

The allocation of heart, lungs and livers are based on the matching of recipient and donor weight.

In 2005 there were eleven donors in Australia and no donors in New Zealand who weighed less than 40 kilograms (fig 33).

**Figure 33**

<b>Donor Weight 2001 - 2005</b>												
	Years	Kilograms										Total
		0-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100 +	
<b>Australia</b>	2001	0	5	3	6	18	27	47	43	27	9	<b>185</b>
	2002	5	3	4	4	17	40	51	41	28	13	<b>206</b>
	2003	2	2	2	7	12	27	43	46	23	15	<b>179</b>
	2004	1	1	3	1	21	34	59	41	32	24	<b>217</b>
	2005	6	3	2	5	16	35	50	45	23	19	<b>204</b>
<b>New Zealand</b>	2001	0	0	0	0	2	11	16	8	2	1	<b>41</b>
	2002	0	0	3	1	2	8	7	8	4	5	<b>38</b>
	2003	0	0	0	2	5	4	7	14	6	2	<b>40</b>
	2004	1	0	0	1	1	12	8	12	3	2	<b>40</b>
	2005	0	0	0	1	0	8	10	4	1	4	<b>28</b>

## BLOOD GROUP OF DONORS

The distribution of blood groups in the general population

	Australia	New Zealand
O	49%	46%
A	39%	40%
B	9%	10%
AB	3%	4%

\*\* Reference: Australian Red Cross and Auckland Regional Blood Centre

**Figure 34**

<b>Blood Group of Donors 2001 - 2005</b>						
		2001	2002	2003	2004	2005
<b>Australia</b>	O	89 (48%)	99 (48%)	95 (53%)	98 (45%)	106 (52%)
	A	66 (36%)	85 (41%)	63 (35%)	86 (39%)	71 (35%)
	B	23 (12%)	18 (9%)	17 (9%)	23 (11%)	22 (11%)
	AB	7 (4%)	4 (2%)	4 (2%)	11 (5%)	5 (2%)
	<b>Total</b>	<b>185</b>	<b>206</b>	<b>179</b>	<b>218</b>	<b>204</b>
<b>New Zealand</b>	O	23 (62%)	14 (37%)	16 (40%)	15 (38%)	17 (59%)
	A	9 (24%)	21 (55%)	21 (53%)	15 (38%)	7 (24%)
	B	4 (11%)	3 (8%)	3 (7%)	9 (22%)	4 (14%)
	AB	1 (3%)	0 (0%)	0 (0%)	1 (2%)	1 (3%)
	<b>Total</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>

## DONOR INTENTION

Figures 35 and 36 show whether the donor had recorded an intention to donate through a signed driver's licence.

In 2005, 24% of Australian and 14% of New Zealand organ donors had a signed driver's licence.

Figure 37 shows the number of donors enrolled in the Australian Organ Donation Registry, which commenced in 2000.

**Figure 35**

Driver's Licence Status 2001 - 2005										
Intention Known	Australia					New Zealand				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
Yes	48 (26%)	62 (30%)	42 (23%)	53 (24%)	48 (24%)	9 (24%)	10 (26%)	10 (25%)	10 (25%)	4 (14%)
No	38	40	40	36	31	0	1	0	0	1
Student / Not Applicable	23	34	16	24	35	1	4	2	6	1
Unknown	76	70	81	105	90	27	23	28	24	23
<b>Total</b>	<b>185</b>	<b>206</b>	<b>179</b>	<b>218</b>	<b>204</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>

**Figure 36**

Australian States 2005 (2004) Driver's Licence Status								
Intention Known	QLD	NSW	ACT	VIC	TAS	SA	NT	WA
Yes	17 (21)	13 (9)	0 (0)	2 (2)	0 (0)	8 (11)	1 (0)	7 (10)
No	2 (3)	1 (1)	1 (0)	15 (12)	0 (0)	3 (12)	1 (0)	8 (8)
Student / Not Applicable	3 (4)	6 (8)	2 (0)	10 (5)	0 (1)	2 (3)	1 (0)	11 (3)
Unknown	13 (11)	34 (45)	6 (6)	23 (26)	2 (1)	7 (13)	1 (1)	4 (2)
<b>Total</b>	<b>35 (39)</b>	<b>54 (63)</b>	<b>9 (6)</b>	<b>50 (45)</b>	<b>2 (2)</b>	<b>20 (39)</b>	<b>4 (1)</b>	<b>30 (23)</b>

**Figure 37**

Donors for 2005 (2004) Enrolled in the Australian Organ Donor Registry									
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST
Yes	16 (6)	0 (1)	1 (0)	7 (7)	0 (1)	5 (7)	1 (0)	14 (12)	<b>44 (34)</b>
Not Registered	17 (17)	2 (2)	2 (0)	39 (38)	2 (1)	5 (12)	1 (0)	15 (11)	<b>83 (81)</b>
Not Accessed	0 (16)	48 (59)	6 (6)	0 (0)	0 (0)	10 (20)	2 (1)	0 (0)	<b>66 (102)</b>
Not Applicable	2 (0)	4 (1)	0 (0)	4 (0)	0 (0)	0 (0)	0 (0)	1 (0)	<b>11 (1)</b>
<b>Total</b>	<b>35 (39)</b>	<b>54 (63)</b>	<b>9 (6)</b>	<b>50 (45)</b>	<b>2 (2)</b>	<b>20 (39)</b>	<b>4 (1)</b>	<b>30 (23)</b>	<b>204 (218)</b>

## AUTHORITY SOUGHT FOR ORGAN DONATION

The predominant group in requesting authority for organ donation in 2005 were the Intensive Care Clinicians and Registrars, (53%) in Australia and (83%) in New Zealand (fig 38).

In Australia authority for organ donation was sought by donor coordinators 12% of the time compared to 21% in 2004, shown in Figure 38. See Figure 39 for individual State and Territory statistics.

Authority for organ donation was not sought by donor coordinators in New Zealand.

In 2005, 32% of families volunteered authority for organ donation in Australia, compared to 20% in 2004 (fig 38).

Fourteen percent volunteered authority in New Zealand in 2005 compared to 20% the previous year.

**Figure 38**

Authority to Donate 2001 - 2005										
	Australia					New Zealand				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
ICU Clinician/Registrar	112	123	106	128	108	31	25	26	31	24
Renal Physician/Registrar	0	0	0	0	0	1	0	0	0	0
Emergency Consultant/Registrar	1	3	0	2	1	0	0	0	0	0
Other Physicians/Anaesthetist	0	0	0	0	2	3	0	2	0	1
Donor Coordinator	24	50	48	45	25	0	0	0	0	0
Volunteered	45	28	22	43	66	2	9	11	8	4
Nursing Staff	2	2	2	0	2	0	4	1	1	0
Social Worker	0	0	1	0	0	0	0	0	0	0
Other	1	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>185</b>	<b>206</b>	<b>179</b>	<b>218</b>	<b>204</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>

**Figure 39**

Authority to Donate 2005 (2004)								
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA
ICU Clinician/Registrar	16 (11)	35 (47)	9 (5)	27 (25)	1 (2)	7 (29)	1 (1)	12 (8)
Donor Coordinator	13 (18)	12 (11)	0 (1)	0 (14)	0 (0)	0 (0)	0 (0)	0 (1)
Volunteered	5 (10)	7 (4)	0 (0)	21 (5)	1 (0)	13 (10)	3 (0)	16 (14)
Nursing Staff	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)
Emergency/Other Physician	0 (0)	0 (1)	0 (0)	2 (1)	0 (0)	0 (0)	0 (0)	1 (0)
<b>Total</b>	<b>35 (39)</b>	<b>54 (63)</b>	<b>9 (6)</b>	<b>50 (45)</b>	<b>2 (2)</b>	<b>20 (39)</b>	<b>4 (1)</b>	<b>30 (23)</b>

## DIRECT CONTACT WITH DONOR COORDINATOR

There were six families (3%) in Australia with which the Donor Coordinator had no contact, compared to 16 families (55%) in New Zealand in 2005.

**Figure 40**

Direct Contact with Donor Coordinator 2005										
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
Face to Face	31 (89%)	47 (87%)	9 (100%)	44 (88%)	0 (0%)	19 (95%)	3 (75%)	29 (97%)	<b>182 (89%)</b>	<b>12 (41%)</b>
Telephone	4 (11%)	3 (6%)	0 (0%)	5 (10%)	2 (100%)	1 (5%)	0 (0%)	1 (3%)	<b>16 (8%)</b>	<b>1 (4%)</b>
None	0 (0%)	4 (7%)	0 (0%)	1 (2%)	0 (0%)	0 (0%)	1 (25%)	0 (0%)	<b>6 (3%)</b>	<b>16 (55%)</b>
<b>Total</b>	<b>35</b>	<b>54</b>	<b>9</b>	<b>50</b>	<b>2</b>	<b>20</b>	<b>4</b>	<b>30</b>	<b>204</b>	<b>29</b>

## CORONER'S CASES

In Australia, 48% of donors in 2005 were subject to Coronial inquiry, compared to 50% in 2004.

In New Zealand it was 31% for 2005, compared to 43% last year.

**Figure 41**

Coroner's Cases 2001 - 2005										
	Australia					New Zealand				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
Yes	87	93	88	108	97	17	18	22	17	9
No	98	113	91	110	107	20	20	18	23	20
<b>Total</b>	<b>185</b>	<b>206</b>	<b>179</b>	<b>218</b>	<b>204</b>	<b>37</b>	<b>38</b>	<b>40</b>	<b>40</b>	<b>29</b>

**Figure 42**

Australian States Coroner's Cases 2005 (2004)								
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA
Yes	19 (21)	25 (30)	7 (4)	21 (17)	1 (1)	10 (23)	2 (0)	12 (12)
No	16 (18)	29 (33)	2 (2)	29 (28)	1 (1)	10 (16)	2 (1)	18 (11)
<b>Total</b>	<b>35 (39)</b>	<b>54 (63)</b>	<b>9 (6)</b>	<b>50 (45)</b>	<b>2 (2)</b>	<b>20 (39)</b>	<b>4 (1)</b>	<b>30 (23)</b>

## SUMMARY - ORGANS REQUESTED, CONSENT GIVEN, RETRIEVED AND TRANSPLANTED

The information relating to the request for organ donation refers only to those patients who become organ donors. If consent was sought and refused, 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 the specific organ.

Reasons for not requesting organs, not retrieving and not transplanting are documented for all of the specific organs.

For further details see Appendix I for Australia and Appendix II for New Zealand.

Figure 43 shows the outcome of organs requested in 2005 (2004).

**Figure 43**

Outcome Following Request for Organ Donation 2005 (2004)						
		Kidneys	Liver	Heart	Lungs	Pancreas
<b>Australia</b>	Requested	406 (428)	194 (209)	170 (177)	336 (362)	158 (171)
	Consent Given	406 (426)	193 (208)	164 (163)	326 (348)	152 (167)
	Retrieved	391 (414)	159 (171)	87 (84)	161 (185)	67 (66)
	Recipients Transplanted	373 (405)	164 (x177)	78 (78)	159 (185)	+34 (+31)
<b>New Zealand</b>	Requested	58 (74)	28 (39)	24 (30)	48 (52)	20 (20)
	Consent Given	58 (74)	28 (39)	24 (30)	48 (52)	20 (20)
	Retrieved	55 (65)	22 (35)	16 (7)	22 (22)	2 (2)
	Recipients Transplanted	51 (58)	23 (36)	16 (6)	21 (22)	2 (2)
<p><b>Kidneys and lungs are counted as separate organs</b>            X Includes (1) 2004 Hepatocyte transplant            + Includes (1) 2005 and (3) 2004, pancreas islet transplants</p>						

## ORGANS REQUESTED

The requests for specific organs in Australia in 2005 from 204 organ donors were: kidneys 99.5%, liver 95%, heart 83%, lungs 82% and pancreas 77%.

From the 29 New Zealand donors in 2005, the requests for specific organs were: kidneys 100%, liver 97%, heart 83%, lungs 83% and pancreas 69%.

## MULTIPLE ORGAN RETRIEVAL

There were 35 (17%) of Australian donors in 2005 who donated solid organs, who had a single organ retrieved (fig 44). Kidney only donation occurred in 34 cases.

Four donors in Australia went to theatre but no solid organs were retrieved.

New Zealand had four single organ donors in 2005, three donating kidneys and one donating a liver.

In Australia and New Zealand respectively, 81% and 86% of donors had two or more organs retrieved for the purposes of transplantation.

**Figure 44**

Trend to Multiple Organ Retrieval 2001 - 2005										
Number of Organs	Australia					New Zealand				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
Single	19%	19%	18%	15%	17%	19%	13.5%	7%	13%	14%
Two	32%	24%	27%	27%	22%	31%	43%	28%	46%	34%
Three	21%	25%	20%	22%	17%	22%	30%	25%	30%	21%
Four	19%	24%	26%	23%	32%	25%	13.5%	35%	11%	28%
Five	9%	8%	9%	12%	10%	3%	0%	5%	0%	3%

**Figure 45**

State by State Comparison of Multiple Organ Retrieval 2005										
Number of Organs	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
Single	8 (23%)	15 (28%)	1 (11%)	5 (10%)	0 (0%)	3 (15%)	1 (25%)	2 (7%)	<b>35 (17%)</b>	<b>4 (14%)</b>
Two	7 (20%)	13 (24%)	1 (11%)	8 (16%)	0 (0%)	4 (20%)	2 (50%)	9 (30%)	<b>44 (22%)</b>	<b>10 (34%)</b>
Three	6 (17%)	6 (11%)	3 (33%)	8 (16%)	1 (50%)	2 (10%)	0 (0%)	9 (30%)	<b>35 (17%)</b>	<b>6 (21%)</b>
Four	9 (26%)	16 (30%)	1 (11%)	23 (46%)	0 (0%)	9 (45%)	1 (25%)	6 (20%)	<b>65 (32%)</b>	<b>8 (28%)</b>
Five	3 (9%)	4 (7%)	3 (33%)	5 (10%)	1 (50%)	2 (10%)	0 (0%)	3 (10%)	<b>21 (10%)</b>	<b>1 (3%)</b>
No organs	2 (5%)	0 (0%)	0 (0%)	1 (2%)	0 (0%)	0 (0%)	0 (0%)	1 (3%)	<b>4 (2%)</b>	<b>0 (0%)</b>
<b>Total</b>	<b>35</b>	<b>54</b>	<b>9</b>	<b>50</b>	<b>2</b>	<b>20</b>	<b>4</b>	<b>29</b>	<b>204</b>	<b>29</b>

NB: 2 kidneys = 1 organ, 2 lungs = 1 organ  
On occasions when only one kidney is retrieved, this is also defined as one organ

## ORGAN RECIPIENTS TRANSPLANTED

Both Australia and New Zealand had 3.6 organ recipients per donor used for transplantation in 2005.

The number of recipients transplanted is used for this calculation, rather than the number of organs.

Tasmania had the highest number of organs transplanted, 5.0 per donor, followed by the ACT 4.7, South Australia 4.0, New South Wales, Victoria, Western Australia 3.5, Queensland 3.3 and the Northern Territory 3.0.

These figures exclude tissue transplantation.

**Figure 46**

<b>Organ Recipients Transplanted per Donor 2005</b>										
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
No. Organs Transplanted	116	188	42	174	10	80	12	105	<b>727</b>	<b>103</b>
No. of Donors	35	54	9	50	2	20	4	30	<b>204</b>	<b>29</b>
<b>Average per Donor</b>	<b>3.3</b>	<b>3.5</b>	<b>4.7</b>	<b>3.5</b>	<b>5.0</b>	<b>4.0</b>	<b>3.0</b>	<b>3.5</b>	<b>3.6</b>	<b>3.6</b>
Double lungs = 1 organ (1 recipient) Two kidneys = 2 organs										

**Figure 47**

<b>Organs Transplanted by Donor State in Australia and New Zealand 2005</b>										
<b>Organs Transplanted</b>	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ
Kidney	60	103	17	87	4	39	7	56	<b>373</b>	<b>51</b>
Liver	21	29	4	38	2	17	3	24	<b>138</b>	<b>18</b>
Liver (Left)	3	7	4	0	0	0	0	1	<b>15</b>	<b>3</b>
Liver (Right)	3	5	3	0	0	0	0	0	<b>11</b>	<b>2</b>
Heart	13	15	4	16	1	11	1	11	<b>72</b>	<b>16</b>
Heart/Lungs	4	0	0	0	0	0	0	2	<b>6</b>	<b>0</b>
Lungs	10	19	5	21	1	8	1	4	<b>69</b>	<b>10</b>
Lung (Left)	0	0	0	1	0	1	0	2	<b>4</b>	<b>1</b>
Lung (Right)	0	0	1	0	0	1	0	3	<b>5</b>	<b>0</b>
Pancreas	2	10	4	10	2	3	0	2	<b>33</b>	<b>2</b>
Pancreas Islets	0	0	0	1	0	0	0	0	<b>1</b>	<b>0</b>
<b>Total</b>	<b>116</b>	<b>188</b>	<b>42</b>	<b>174</b>	<b>10</b>	<b>80</b>	<b>12</b>	<b>105</b>	<b>727</b>	<b>103</b>

## EXCHANGE OF ORGANS

The number of organs that were sent and received between Australian States and New Zealand in 2005 and 2004 is shown in Figure 48.

A balance is maintained between Australian regions for the allocation of kidneys. For this purpose Victoria/Tasmania, South Australia/Northern Territory and New

South Wales/Australian Capital Territory (ACT) are considered Regions.

This is achieved by the National Organ Matching System (NOMS) in which all Australian States participate. There is no monitoring of State balance for the allocation of other organs.

**Figure 48**

<b>Exchange of Organs Between States and New Zealand 2005 (2004)</b>									
<b>Organs Transplanted</b>	<b>Exchange</b>	<b>Kidneys</b>	<b>Liver <sup>+</sup></b>	<b>Heart</b>	<b>Heart/ Lung *</b>	<b>Lungs *</b>	<b>Pancreas</b>	<b>Islets</b>	<b>Total</b>
Queensland	Sent	14 (8)	5 (5)	6 (8)	1 (0)	10 (12)	2 (2)	-	<b>38 (35)</b>
	Received	9 (7)	10 (7)	5 (6)	1 (1)	19 (20)	-	-	<b>44 (41)</b>
New South Wales	Sent	21 (13)	5 (4)	1 (4)	0 (0)	2 (12)	0 (1)	-	<b>29 (34)</b>
	Received	48 (36)	21 (22)	12 (12)	1 (0)	25 (16)	15 (11)	1 (1)	<b>123 (98)</b>
ACT	Sent	17 (12)	11 (5)	4 (3)	0 (0)	11 (6)	4 (1)	-	<b>47 (27)</b>
Victoria	Sent	20 (10)	7 (9)	2 (2)	0 (0)	6 (0)	4 (3)	1 (1)	<b>40 (25)</b>
	Received	27 (15)	5 (11)	11 (12)	0 (0)	19 (41)	2 (2)	-	<b>64 (81)</b>
Tasmania	Sent	4 (3)	2 (1)	1 (0)	0 (0)	2 (4)	2 (1)	-	<b>11 (9)</b>
South Australia	Sent	8 (17)	5 (14)	11 (10)	0 (1)	18 (26)	3 (5)	-	<b>45 (73)</b>
	Received	13 (11)	2 (3)	-	-	-	-	-	<b>15 (14)</b>
Northern Territory	Sent	7 (2)	3 (1)	1 (0)	0 (0)	2 (0)	0 (0)	-	<b>13 (3)</b>
Western Australia	Sent	20 (6)	5 (6)	1 (2)	1 (0)	7 (13)	2 (0)	-	<b>36 (27)</b>
	Received	18 (3)	4 (2)	2 (1)	0 (0)	0 (0)	-	-	<b>24 (6)</b>
<b>New Zealand</b>	Sent	4 (1)	5 (7)	3 (2)	0 (0)	5 (4)	0 (0)	-	<b>17 (14)</b>
	Received	0 (0)	6 (7)	0 (0)	0 (0)	0 (0)	0 (0)	-	<b>6 (7)</b>

+ Number of recipients of livers  
\*Total number of lungs (not recipients) and includes two lungs from Heart/Lung transplants

**Figure 49**

<b>Summary of Organs Transplanted in Australia from New Zealand Donors 1989 - 2005</b>					
<b>Year</b>	<b>Kidneys</b>	<b>Liver <sup>+</sup></b>	<b>Heart</b>	<b>Lungs *</b>	<b>Total</b>
1989	0	1	0	0	<b>1</b>
1990	0	7	0	0	<b>7</b>
1991	0	11	0	0	<b>11</b>
1992	3	24	0	0	<b>27</b>
1993	0	16	0	0	<b>16</b>
1994	4	21	0	2	<b>27</b>
1995	0	21	5	9	<b>35</b>
1996	1	23	1	4	<b>29</b>
1997	2	22	2	2	<b>28</b>
1998	4	16	3	8	<b>31</b>
1999	2	7	1	2	<b>12</b>
2000	0	7	0	4	<b>11</b>
2001	0	2	0	4	<b>6</b>
2002	0	5	2	8	<b>15</b>
2003	0	5	3	13	<b>21</b>
2004	1	7	2	4	<b>14</b>
2005	4	5	3	5	<b>17</b>
<b>Total</b>	<b>21</b>	<b>200</b>	<b>22</b>	<b>65</b>	<b>308</b>

+ Number of recipients of livers  
\* Total number of lungs (not recipients)

New Zealand organs are sent to Australia when there are no compatible recipients in New Zealand.

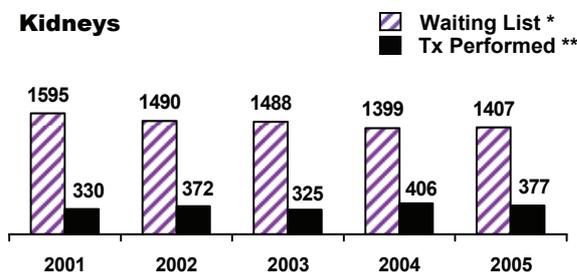
Liver transplantation commenced in New Zealand in February 1998, prior to this time, all livers were sent to Australia.

## KIDNEY DONATION

Figure 50 shows the number of Australian and New Zealand patients waiting for a kidney transplant and the number of deceased donor transplants performed for each year from 2001-2005.

**Figure 50**

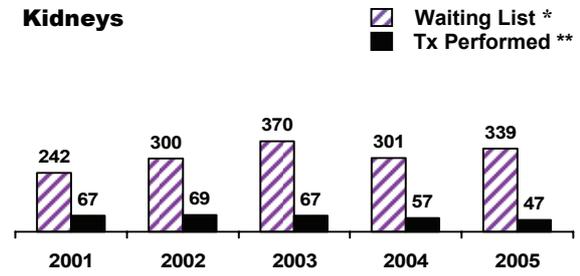
**Waiting List vs Deceased Donor Transplants  
Australia 2001 - 2005**



\* Source: NOMS (National Organ Matching System)

\*\* Includes kidneys sent from New Zealand

**Waiting List vs Deceased Donor Transplants  
New Zealand 2001 - 2005**

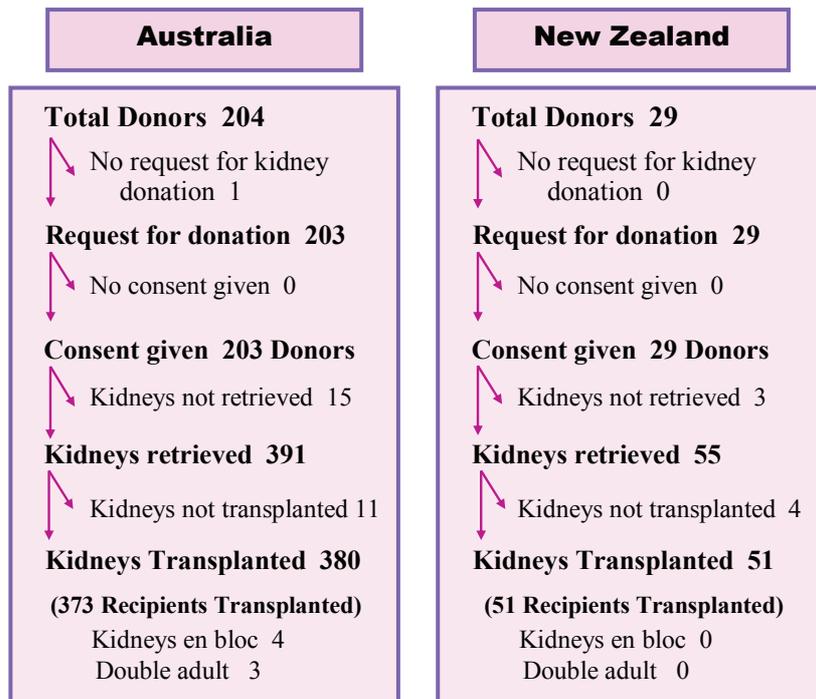


\* Source of Waiting List – NZ Donor Coordinators

\*\* Not included kidneys sent to Australia: 2004 (1) 2005 (4)

**Figure 51**

### Outcome of Request for Kidney Donation 2005



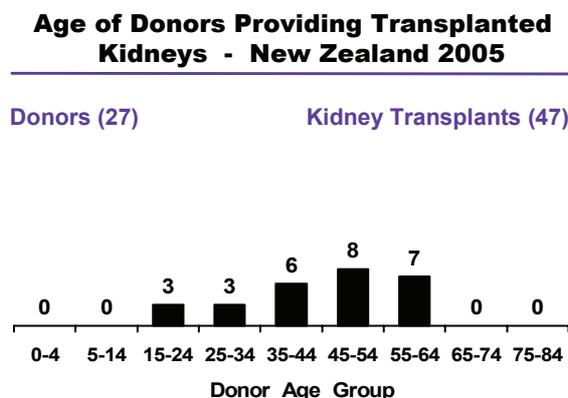
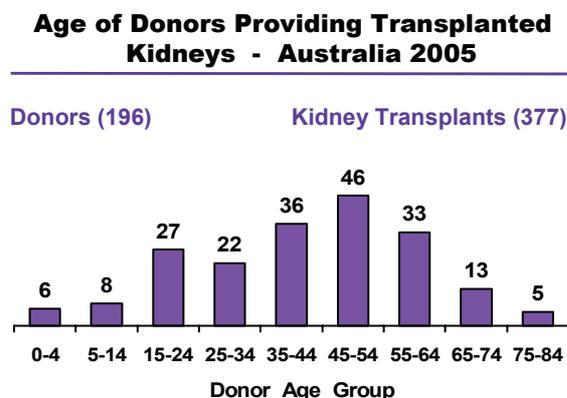
Refer to Appendices for reasons kidneys were not requested, not retrieved and not transplanted

**Figure 52**

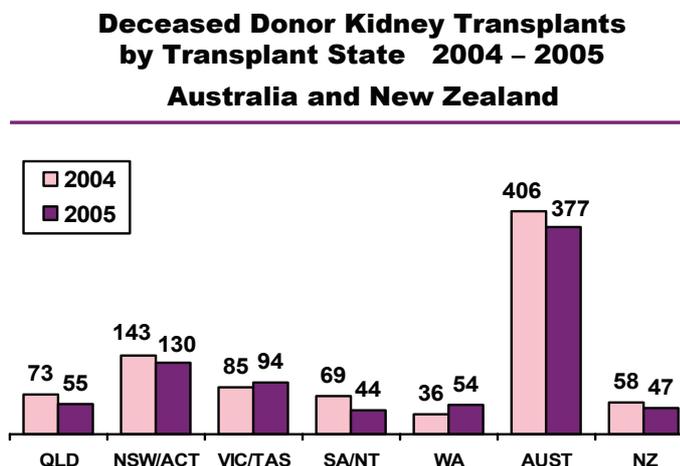
<b>Age of Donors Providing Transplanted Kidneys 2001 - 2005</b>												
	Year	Age Group									Total	
		00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84		85-94
<b>Australia</b>	2001	0 (0)	16	32	25	22	44	19	11	1 (x)	0	<b>170</b>
	2002	3 (2)	14 (2)	44	17	31	42	30	11 (1x)	1	0	<b>193</b>
	2003	2 (2)	10	32 (1*)	15	26	39	28	9 (2x)	5	1	<b>167</b>
	2004	0	5 (1)	40	30	23	50	39	15 (2x)	4	0	<b>206</b>
	2005	6 (4)	8	27	22	36	46 (1x)	33 (1x)	13	5 (x)	0	<b>196</b>
<b>New Zealand</b>	2001	0	0	9	2	7	7	8	1	0	0	<b>34</b>
	2002	0	3	5	2	11	10	3	1	0	0	<b>35</b>
	2003	0	2	11	4	8	3	6	0	1 (1x)	0	<b>35</b>
	2004	0	0	8	4	3	6	9	1	1	0	<b>32</b>
	2005	0	0	3	3	6	8	7	0	0	0	<b>27</b>

( ) En-Bloc Kidneys                      \*Horseshoe Kidney (Adult)                      x Double Adult

**Figure 53**



**Figure 54**



**Figure 55**

<b>Regional Outcome of Requests for Kidney Donation 1989 - 2005</b>										
	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	AUST	NZ **
<b>Total Donors</b>	<b>678</b>	<b>1060</b>	<b>82</b>	<b>754</b>	<b>54</b>	<b>432</b>	<b>35</b>	<b>284</b>	<b>3379</b>	<b>492</b>
Requested	676	1049	82	743	53	424	34	282	3343	488
Consented	676	1046	82	742	53	424	34	282	3339	488
Retrieved	1315	2012	159	1439	106	810	68	546	6455	941
Transplanted *	1275	1951	153	1371	97	770	64	522	6203	893
	(11) (2x)	(8) (1x)	(2)	(7) (1x)	(2)	(5) (8x)	(1x)	(5) (3x)	(40) (16x)	(3) (5x)
* Recipients ( ) En bloc (x) Double Adult **New Zealand 1993 - 2005										

## KIDNEY PERFUSION METHODS

Where kidneys were perfused with only one solution, Ross (47%), HTK (45%) and University of Wisconsin (UW) (8%) were the solutions used in Australia 2005.

In New Zealand UW (92%) and Ross (7%) were the solutions used (fig 56).

UW was used as the second perfusion solution in 99% and Ross in 1% of cases in Australia (fig 57).

**Figure 56**

<b>Kidney Perfusion with Only One Solution 2001 - 2005</b>										
	<b>Australia</b>					<b>New Zealand</b>				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
Ross	26	14	12	6	24	4	2	0	2	4
UW	4	4	10	2	4	64	66	72	61	49
Collins	2	0	0	0	0	0	0	0	0	0
HTK	0	0	8	14	23	0	0	0	0	0
Hartman's	0	0	0	2	0	0	0	0	0	0
<b>Total</b>	<b>32</b>	<b>18</b>	<b>30</b>	<b>24</b>	<b>51</b>	<b>68</b>	<b>68</b>	<b>72</b>	<b>63</b>	<b>53</b>

**Figure 57**

<b>Second Perfusion Solution - Kidneys 2001 - 2005</b>										
	<b>Australia</b>					<b>New Zealand</b>				
	2001	2002	2003	2004	2005	2001	2002	2003	2004	2005
Ross	52	54	37	42	0	0	0	0	0	0
UW	256	296	267	344	338	0	2	1	2	2
Collins	4	8	6	0	0	0	0	0	0	0
HTK	0	4	0	0	2	0	0	0	0	0
Hartman's	0	0	0	2	0	0	0	0	0	0
<b>Total</b>	<b>312</b>	<b>362</b>	<b>310</b>	<b>388</b>	<b>340</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>