

CHAPTER 8

TRANSPLANTATION

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TRANSPLANTS PERFORMED IN 2003

Figure 8.1

Number of Renal Transplant Operations (Live Donors)											
Year	Australia						New Zealand				
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	Total
1963	5	1	0	0	0	6 (1)	0	0	0	0	0
1964	2	0	0	0	0	2 (0)	0	0	0	0	0
1965	12	1	1	0	0	14 (3)	1	0	0	0	1 (1)
1966	18	2	0	0	0	20 (5)	10	3	0	0	13 (0)
1967	69	2	0	0	0	71 (2)	18	4	1	0	23 (1)
1968	97	10	0	0	0	107 (0)	17	4	0	0	21 (2)
1969	149	12	0	0	0	161 (0)	39	5	0	0	44 (0)
1970	168	12	2	0	0	182 (1)	21	3	1	0	25 (0)
1971	207	22	1	0	0	230 (1)	26	6	0	0	32 (1)
1972	183	16	0	0	0	199 (2)	43	8	0	0	51 (1)
1973	213	30	1	0	0	244 (7)	50	10	2	0	62 (0)
1974	224	35	4	0	0	263 (6)	35	5	1	0	41 (3)
1975	271	29	3	1	0	304 (7)	61	13	0	0	74 (2)
1976	223	41	4	0	0	268 (10)	38	13	1	0	52 (1)
1977	265	57	4	0	0	326 (16)	46	10	2	0	58 (4)
1978	269	43	2	0	0	314 (17)	43	11	3	0	57 (11)
1979	293	35	5	0	0	333 (34)	61	13	3	2	79 (16)
1980	287	63	9	0	0	359 (36)	57	13	4	0	74 (18)
1981	306	58	9	1	0	374 (35)	51	8	1	0	60 (10)
1982	321	72	6	0	0	399 (53)	48	17	0	0	65 (8)
1983	272	63	10	2	0	347 (48)	69	25	4	0	98 (11)
1984	362	72	10	1	0	445 (48)	63	11	0	0	74 (16)
1985	318	79	17	1	0	415 (36)	60	25	3	0	88 (6)
1986	366	63	7	2	0	438 (32)	79	19	6	1	105 (13)
1987	310	58	21	3	0	392 (40)	57	17	4	1	79 (20)
1988	391	62	10	2	1	466 (46)	61	11	6	0	78 (8)
1989	433	46	10	2	0	491 (48)	71	11	1	0	83 (12)
1990	387	45	9	2	0	443 (59)	86	14	2	0	102 (23)
1991	385	70	11	3	0	469 (77)	62	10	4	1	77 (13)
1992	404	57	13	3	0	477 (70)	105	5	5	0	115 (17)
1993	385	63	6	4	1	459 (66)	69	13	2	0	84 (20)
1994	384	41	12	2	1	440 (103)	70	11	1	1	83 (20)
1995	370	60	11	0	0	441 (93)	84	7	3	0	94 (24)
1996	416	50	9	0	0	475 (115)	88	7	1	0	96 (26)
1997	444	51	6	1	0	502 (144)	101	10	1	0	112 (31)
1998	443	62	11	2	0	518 (161)	95	10	1	0	106 (31)
1999	403	43	9	0	0	455 (169)	97	11	4	0	112 (42)
2000	476	47	7	1	0	531 (181)	91	13	2	0	106 (31)
2001	488	45	6	2	0	541 (213)	101	9	0	0	110 (43)
2002	537	60	5	2	0	604 (230)	103	12	2	0	117 (48)
2003	472	60	10	1	0	543 (218)	94	13	4	0	111 (44)

AUSTRALIA

The 543 transplant operations performed in 2003 represents a decrease of 10% compared to 2002 (604 operations). This was a transplant rate of 27 per million of population compared to 31 per million in 2002. Most of this decrease was due to fewer cadaver donor kidneys. For more up to date figures on the cadaveric organ donor rate, see www.anzdata.org.au/anzod/updates/anzodupdate.htm

Live donor transplants accounted for 40% (218 grafts) in 2003, compared to 38% (230 grafts) in 2002.

Of the kidneys transplanted, 87% were to primary recipients, similar to 2002 (89%).

NEW ZEALAND

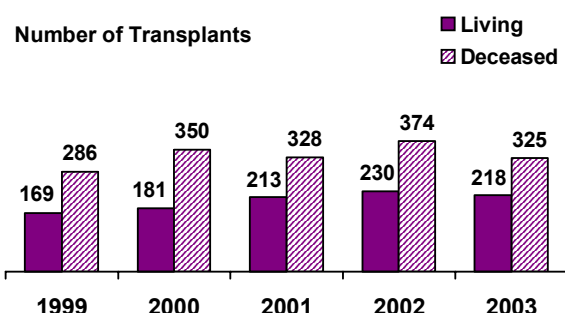
The number of transplant operations (111) performed in 2003 represents a transplant rate of 28 per million (a decrease of 5% from 2002).

The percentage of live donors was 40% of all operations compared to 41% in 2002.

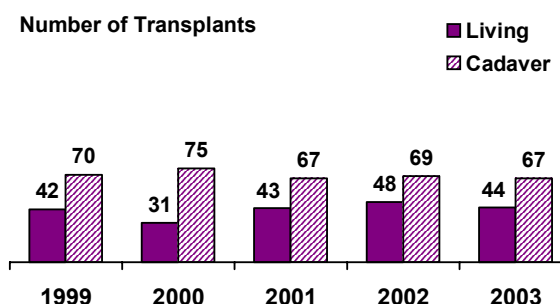
Of the grafts performed in 2003, 85% were to primary recipients, (88% in 2002).

Figure 8.2

Cadaver and Live Donor Transplants
Australia 1999 - 2003



Cadaver and Live Donor Transplants
New Zealand 1999 - 2003

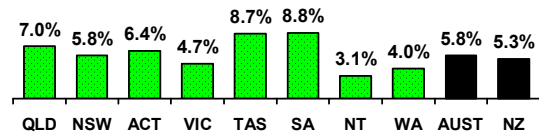


TRANSPLANT RATE OF PATIENTS DIALYSED

Figure 8.3

Ratio of Transplantation 2003 Related to Patients Dialysed*

All Patients

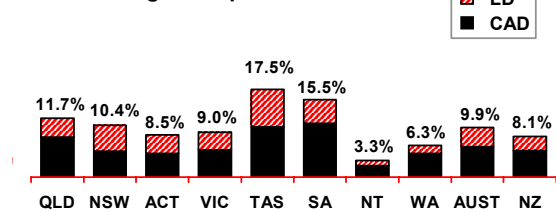


In Australia the proportion of patients receiving dialysis in 2003 who were transplanted that year was 5.8% compared to 6.8% in 2002.

Figure 8.4

Ratio of Transplantation 2003 Related to Patients Dialysed*

Patients - Age Group 15-59 Years



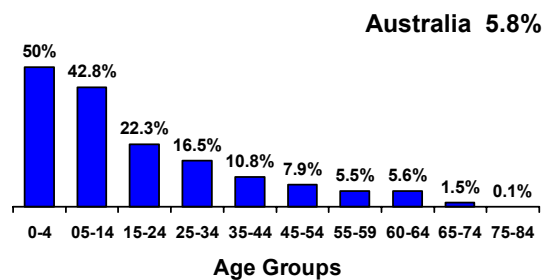
Of all patients in the 15-59 year age group on dialysis, 9.9% were transplanted in 2003, compared to 12.3% in 2002.

In New Zealand 5.3% of all dialysed patients were transplanted in 2003 compared to 6.0% in 2002. In the 15-59 year age group on dialysis, 8.1% were transplanted in 2003 (fig 8.3 and 8.4).

In Australia, the rate of transplantation was highest for those 0-4 years of age (50%) and 5-14 years of age (42.8%) and declined with increasing age.

Figure 8.5

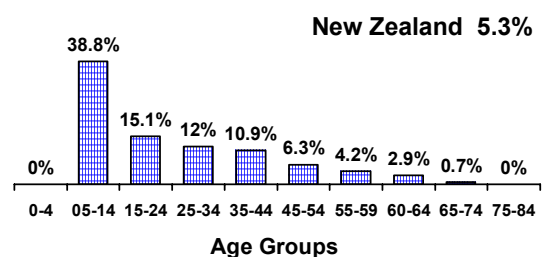
Ratio of Transplantation 2003 Related to Patients Dialysed*



In New Zealand, the rate of transplantation was highest among those 5-14 years and declined with age thereafter (fig 8.5 and 8.6).

Figure 8.6

Ratio of Transplantation 2003 Related to Patients Dialysed*



* Preemptive transplants included



AGE OF RECIPIENTS TRANSPLANTED IN 2003

Figure 8.7

		Graft Number and Age of Patients Transplanted 1-Jan-2003 to 31-Dec-2003									
Donor Source	Graft No.	Age Groups									Total
		00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	
Australia											
Cadaver	1	2	9	16	40	54	68	63	22	-	274
	2	-	-	2	10	7	13	8	2	-	42
	3	-	-	-	3	4	-	1	-	-	8
	4	-	-	-	-	1	-	-	-	-	1
Live Donor	1	7	9	27	35	36	35	34	14	1	198
	2	-	-	2	6	5	4	1	-	-	18
	3	-	-	-	-	-	2	-	-	-	2
Total	7	9	18	47	94	107	122	107	38	1	543
New Zealand											
Cadaver	1	-	1	4	3	15	16	14	1	-	54
	2	-	-	2	4	1	2	-	-	-	9
	3	-	-	-	1	-	2	1	-	-	4
Live Donor	1	-	6	6	7	9	5	5	2	-	40
	2	-	-	-	2	1	1	-	-	-	4
Total			7	12	17	26	26	20	3		111

AUSTRALIA

The median age of transplant recipients in 2003 was 44.8 years, similar to 2002. The age range was 2.3 to 77.6 years (fig 8.7 and 8.8). Forty two percent of recipients fell into the 35-54 year age group. Twenty seven percent of recipients in 2003 were over 54 years of age compared to 23% in 2002.

The transplantation rate per million for each age group and as a percentage of dialysed patients for each age group is shown in Figures 8.5 and 8.8.

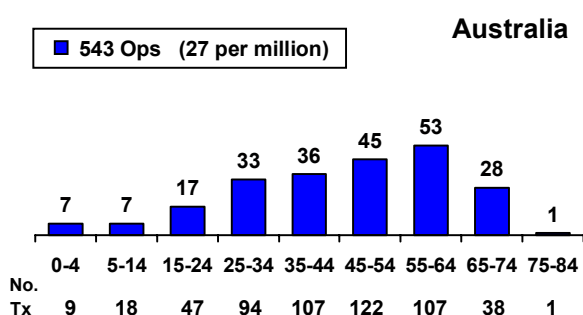
NEW ZEALAND

The median age of transplant recipients in 2003 was 43.4 years compared to 48.6 years in 2002. The age range of recipients was 5.9 to 68.3 years (fig 8.6 and 8.8).

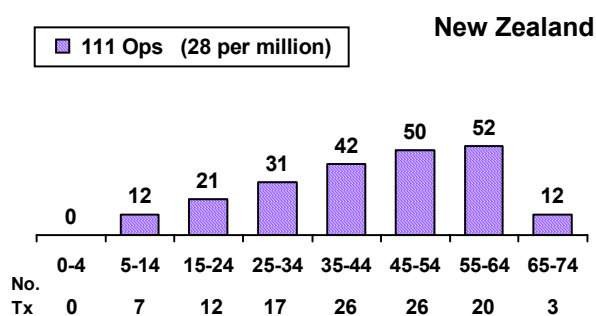
Recipients aged between 35 and 54 years comprised 47% of the total. Twenty one percent of recipients in 2003 were over 54 years of age.

Figure 8.8

Transplant Operations (Per Million) 2003



Transplant Operations (Per Million) 2003



ETHNICITY OF TRANSPLANT RECIPIENTS

AUSTRALIA

Figures 8.9 and 8.11.

For the 15-59 year age group in 2003, 12.1% of dialysed Caucasoid patients were transplanted. For Australian Aboriginals and Torres Strait Islanders (ATSI), the corresponding transplant rate for 2003 was 1.9% which represents a decline over time as the number of ATSI patients commencing dialysis has increased whereas the number receiving a transplant each year has not (fig 8.9).

Figure 8.9		Australia								
Transplantation Rate - Age Group 15-59 years 1994 - 2003										
Year	Caucasoid			Aboriginal and Torres St. Islanders			All Patients			
	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate	
1994	2225	334	15.0%	289	13	4.4%	2803	369	13.1%	
1995	2319	316	13.6%	345	13	3.7%	2994	365	12.1%	
1996	2447	358	14.6%	388	8	2.0%	3186	402	12.6%	
1997	2526	359	14.2%	440	20	4.5%	3361	426	12.6%	
1998	2655	357	13.4%	479	26	5.4%	3555	436	12.2%	
1999	2746	322	11.7%	513	19	3.7%	3697	386	10.4%	
2000	2869	388	13.5%	540	17	3.1%	3885	441	11.3%	
2001	2946	391	13.2%	598	20	3.3%	4051	456	11.2%	
2002	2976	443	14.8%	633	16	2.5%	4151	511	12.3%	
2003	3003	364	12.1%	674	13	1.9%	4253	422	9.9%	

NEW ZEALAND

Figures 8.10 and 8.11

Amongst the 15-59 year age group, the proportion of Maori and Pacific Islanders who received a renal transplant in 2003 was 3.7% and 5.3% respectively, compared with 13.2% for Caucasoid dialysis patients.

Figure 8.10		New Zealand										
Transplantation Rate - Age Group 15-59 years 1994 - 2003												
Year	Caucasoid			Maori			Pacific Islander			All Patients		
	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate
1994	317	52	16.4%	227	11	4.8%	96	5	5.2%	671	71	10.5%
1995	332	54	16.2%	240	11	4.5%	113	6	5.3%	725	78	10.7%
1996	349	58	16.6%	262	7	2.6%	129	7	5.4%	785	79	10.0%
1997	371	73	19.6%	279	9	3.2%	134	3	2.2%	828	91	10.9%
1998	372	60	16.1%	320	14	4.3%	151	7	4.6%	896	85	9.4%
1999	388	67	17.2%	319	16	5.0%	159	8	5.0%	929	98	10.5%
2000	400	68	17.0%	331	10	3.0%	183	4	2.1%	976	86	8.8%
2001	415	64	15.4%	361	13	3.6%	214	5	2.3%	1056	92	8.7%
2002	434	60	13.8%	384	11	2.8%	224	14	6.2%	1109	89	8.0%
2003	429	57	13.2%	403	15	3.7%	223	12	5.3%	1128	92	8.1%

Figure 8.11

New Transplanted Patients 1999 - 2003 Related to Ethnicity

Race	1999	2000	2001	2002	2003
Australia	(455)	(531)	(541)	(604)	(543)
Caucasoid	381 (84%)	465 (88%)	469 (87%)	529 (88%)	473 (87%)
Aboriginal/Torres St. Isl.	23 (5%)	18 (3%)	21 (4%)	17 (3%)	14 (3%)
Asian	39 (9%)	37 (7%)	33 (6%)	45 (7%)	42 (7%)
Other	12 (2%)	11 (2%)	18 (3%)	13 (2%)	14 (3%)
New Zealand	(112)	(106)	(110)	(117)	(111)
Caucasoid	78 (70%)	81 (76%)	79 (72%)	83 (71%)	72 (65%)
Maori	17 (15%)	13 (12%)	15 (14%)	13 (11%)	16 (14%)
Pacific Islander	8 (7%)	4 (4%)	6 (5%)	15 (13%)	14 (13%)
Asian	9 (8%)	8 (8%)	10 (9%)	5 (4%)	9 (8%)
Other	-	-	-	1 (1%)	-



AUSTRALIAN STATE TRANSPLANTATION ACTIVITY 2003

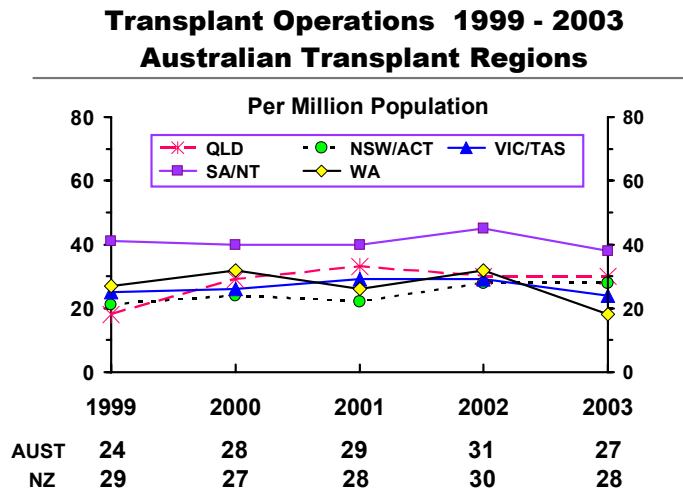
Figure 8.12

Transplants in each Region 1999 - 2003
Number of Operations
(per Million Population)

State	1999	2000	2001	2002	2003
Queensland	64 (18)	105 (29)	121 (33)	111 (30)	114 (30)
New South Wales/ACT *	142 (21)	162 (24)	146 (22)	198 (28)	198 (28)
Victoria/Tasmania *	128 (25)	136 (26)	155 (29)	157 (29)	129 (24)
South Australia/NT *	70 (41)	68 (40)	69 (40)	77 (45)	66 (38)
Western Australia	51 (28)	60 (32)	50 (26)	61 (32)	36 (18)
Australia	455 (24)	531 (28)	541 (28)	604 (31)	543 (27)

* For calculation of population related totals, the populations of these States were amalgamated

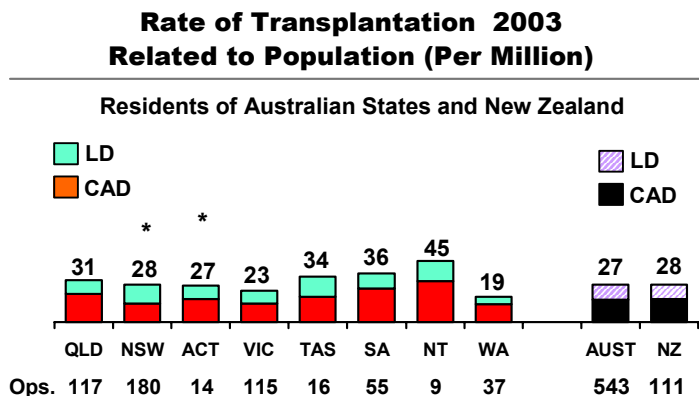
Figure 8.13



The rate of transplantation for each transplant region is shown in Figures 8.12 and 8.13. Transplants performed for Tasmania and Northern Territory patients are included in figures for Victoria and South Australia respectively.

The South Australia/Northern Territory region continued to have the highest transplant rate (38 per million) in 2003.

Figure 8.14



The transplant rate for residents of each State and the Northern Territory is shown in Figure 8.14.

The transplant rate increased in only two States, New South Wales and Tasmania, whilst Queensland remained the same. The lowest rate (19 per million) occurred in Western Australia and the highest (45 per million) in the Northern Territory.

* NSW population excludes residents of the Southern Area Health Service
 * ACT population includes residents of the Southern Area Health Service
 Medical services in the ACT service the Southern Area Region

TRANSPLANT SURVIVAL - PRIMARY CADAVERIC GRAFTS

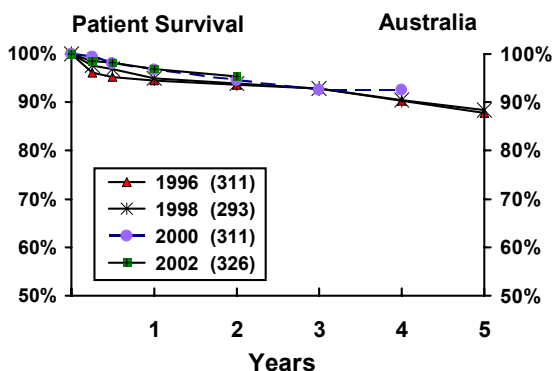
AUSTRALIA

Figure 8.15

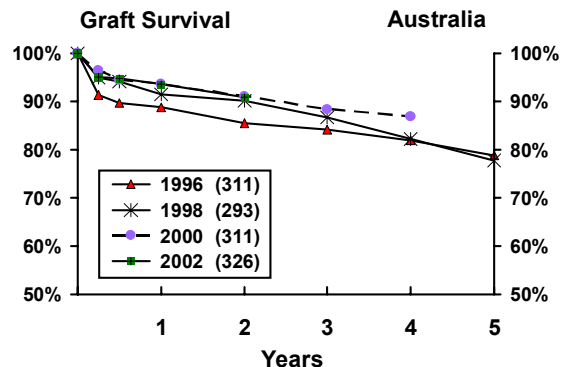
Year of Transplant		Survival											
		1 month		3 months		6 months		1 year		3 years		5 years	
Patient Survival													
1991	n=313	99 ± 0.6	309	95 ± 1.2	298	95 ± 1.3	296	93 ± 1.4	292	89 ± 1.8	278	85 ± 2.0	267
1992	n=342	99 ± 0.5	339	97 ± 0.9	333	95 ± 1.1	326	93 ± 1.4	319	89 ± 1.7	305	83 ± 2.0	284
1993	n=323	98 ± 0.7	318	98 ± 0.9	315	96 ± 1.1	309	95 ± 1.2	307	92 ± 1.5	298	87 ± 1.9	280
1994	n=286	99 ± 0.6	283	98 ± 0.9	279	96 ± 1.1	275	96 ± 1.2	274	92 ± 1.6	262	84 ± 2.2	240
1995	n=290	100 ± 0.3	289	98 ± 0.8	285	96 ± 1.1	279	96 ± 1.2	278	92 ± 1.6	266	88 ± 1.9	254
1996	n=311	99 ± 0.6	307	96 ± 1.1	299	95 ± 1.2	296	95 ± 1.3	294	93 ± 1.5	289	88 ± 1.9	273
1997	n=313	98 ± 0.7	308	98 ± 0.8	306	97 ± 1.0	303	96 ± 1.1	300	89 ± 1.7	279	85 ± 2.0	264
1998	n=293	99 ± 0.6	290	98 ± 0.9	286	97 ± 1.0	284	95 ± 1.3	278	93 ± 1.5	271	88 ± 1.9	255
1999	n=248	99 ± 0.6	246	98 ± 0.9	243	96 ± 1.2	239	95 ± 1.4	235	89 ± 2.0	221	-	-
2000	n=311	100 ± 0.3	310	99 ± 0.4	309	98 ± 0.8	305	97 ± 1.0	301	93 ± 1.5	288	-	-
2001	n=289	99 ± 0.7	284	97 ± 1.0	279	97 ± 1.1	278	94 ± 1.4	270	-	-	-	-
2002	n=326	99 ± 0.4	324	98 ± 0.7	321	98 ± 0.7	320	97 ± 1.0	316	-	-	-	-
2003	n=274	100 ± 0.0	273	99 ± 0.5	271	98 ± 1.0	206	-	-	-	-	-	-
Graft Survival													
1991	n=313	91 ± 1.6	286	88 ± 1.9	275	86 ± 2.0	269	84 ± 2.1	262	76 ± 2.4	239	72 ± 2.6	224
1992	n=342	91 ± 1.5	312	90 ± 1.6	307	88 ± 1.8	300	86 ± 1.9	293	79 ± 2.2	269	72 ± 2.4	247
1993	n=323	92 ± 1.5	296	89 ± 1.7	288	87 ± 1.9	281	85 ± 2.0	276	81 ± 2.2	260	74 ± 2.4	237
1994	n=286	95 ± 1.3	271	94 ± 1.4	268	92 ± 1.6	262	91 ± 1.7	259	83 ± 2.2	236	72 ± 2.7	205
1995	n=290	96 ± 1.2	277	94 ± 1.4	272	91 ± 1.7	263	90 ± 1.8	260	83 ± 2.2	242	77 ± 2.5	222
1996	n=311	94 ± 1.4	291	91 ± 1.6	284	90 ± 1.7	279	89 ± 1.8	276	84 ± 2.1	262	79 ± 2.3	245
1997	n=313	94 ± 1.4	293	92 ± 1.5	288	90 ± 1.7	283	89 ± 1.8	279	82 ± 2.2	257	76 ± 2.4	239
1998	n=293	97 ± 1.1	283	95 ± 1.3	278	94 ± 1.4	276	91 ± 1.6	268	87 ± 2.0	253	78 ± 2.4	224
1999	n=248	95 ± 1.4	236	94 ± 1.6	232	92 ± 1.8	227	90 ± 2.0	222	82 ± 2.4	203	-	-
2000	n=311	97 ± 0.9	303	96 ± 1.0	300	95 ± 1.3	294	94 ± 1.4	291	88 ± 1.8	275	-	-
2001	n=289	96 ± 1.2	277	94 ± 1.4	273	94 ± 1.4	271	91 ± 1.7	261	-	-	-	-
2002	n=326	96 ± 1.1	313	95 ± 1.2	310	95 ± 1.2	309	94 ± 1.4	305	-	-	-	-
2003	n=274	94 ± 1.4	258	93 ± 1.5	256	92 ± 1.7	193	-	-	-	-	-	-

Figure 8.16

Primary Cadaver Patient Survival 1996 - 2002 Related to Year of Transplant



Primary Cadaver Graft Survival 1996 - 2002 Related to Year of Transplant





TRANSPLANT SURVIVAL - PRIMARY CADAVERIC GRAFTS

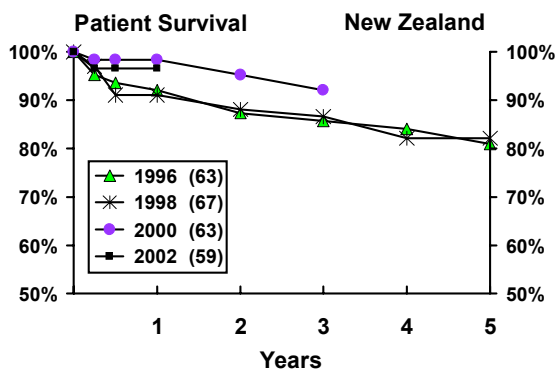
NEW ZEALAND

Figure 8.17

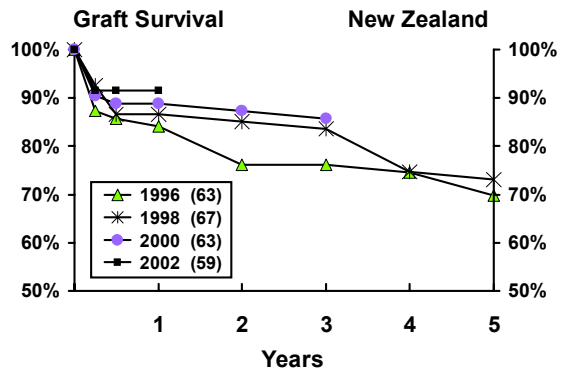
		Primary Cadaver Patient and Graft Survival 1991 - 2003											
		% Survival ± S.E. / Number at Risk											
		n = Number of Patients											
Year of Transplant		Survival											
		1 month	3 months	6 months	1 year	3 years	5 years						
Patient Survival													
1991	n=50	100 ± 0.0	50	96 ± 2.8	48	96 ± 2.8	48	96 ± 2.8	48	88 ± 4.6	44	78 ± 5.9	39
1992	n=90	99 ± 1.1	89	97 ± 1.9	87	96 ± 2.2	86	92 ± 2.8	83	86 ± 3.7	77	83 ± 3.9	74
1993	n=53	96 ± 2.6	51	91 ± 4.0	48	89 ± 4.4	47	83 ± 5.2	44	81 ± 5.4	43	72 ± 6.2	38
1994	n=51	96 ± 2.7	49	92 ± 3.8	47	88 ± 4.5	45	88 ± 4.5	45	86 ± 4.8	44	84 ± 5.1	43
1995	n=63	98 ± 1.6	62	97 ± 2.2	61	95 ± 2.7	60	94 ± 3.1	59	90 ± 3.7	57	90 ± 3.7	57
1996	n=63	98 ± 1.6	62	95 ± 2.7	60	94 ± 3.1	59	92 ± 3.4	58	86 ± 4.4	54	81 ± 5.0	51
1997	n=72	99 ± 1.4	71	96 ± 2.4	69	96 ± 2.4	69	96 ± 2.4	69	94 ± 2.7	68	86 ± 4.1	62
1998	n=67	99 ± 1.5	66	97 ± 2.1	65	91 ± 3.5	61	91 ± 3.5	61	87 ± 4.2	58	82 ± 4.7	55
1999	n=59	93 ± 3.3	55	92 ± 3.6	54	92 ± 3.6	54	88 ± 4.2	52	83 ± 4.9	49	-	-
2000	n=63	100 ± 0.0	63	98 ± 1.6	62	98 ± 1.6	62	98 ± 1.6	62	92 ± 3.4	58	-	-
2001	n=62	100 ± 0.0	62	94 ± 3.1	58	94 ± 3.1	58	94 ± 3.1	58	-	-	-	-
2002	n=59	98 ± 1.7	58	97 ± 2.4	57	97 ± 2.4	57	97 ± 2.4	57	-	-	-	-
2003	n=54	98 ± 1.8	53	94 ± 3.1	51	90 ± 4.1	39	-	-	-	-	-	-
Graft Survival													
1991	n=50	88 ± 4.6	44	84 ± 5.2	42	82 ± 5.4	41	82 ± 5.4	41	74 ± 6.2	37	62 ± 6.9	31
1992	n=90	91 ± 3.0	82	87 ± 3.6	78	83 ± 3.9	75	80 ± 4.2	72	76 ± 4.5	68	73 ± 4.7	65
1993	n=53	85 ± 4.9	45	81 ± 5.4	43	79 ± 5.6	42	74 ± 6.1	39	68 ± 6.4	36	57 ± 6.8	30
1994	n=51	80 ± 5.6	41	78 ± 5.8	40	76 ± 5.9	39	75 ± 6.1	38	71 ± 6.4	36	63 ± 6.8	32
1995	n=63	94 ± 3.1	59	92 ± 3.4	58	90 ± 3.7	57	84 ± 4.6	53	79 ± 5.1	50	75 ± 5.5	47
1996	n=63	89 ± 4.0	56	87 ± 4.2	55	86 ± 4.4	54	84 ± 4.6	53	76 ± 5.4	48	70 ± 5.8	44
1997	n=72	90 ± 3.5	65	88 ± 3.9	63	88 ± 3.9	63	85 ± 4.2	61	83 ± 4.4	60	74 ± 5.2	53
1998	n=67	96 ± 2.5	64	93 ± 3.2	62	87 ± 4.2	58	87 ± 4.2	58	84 ± 4.5	56	73 ± 5.4	49
1999	n=59	86 ± 4.5	51	85 ± 4.7	50	85 ± 4.7	50	78 ± 5.4	46	73 ± 5.8	43	-	-
2000	n=63	92 ± 3.4	58	90 ± 3.7	57	89 ± 4.0	56	89 ± 4.0	56	86 ± 4.4	54	-	-
2001	n=62	97 ± 2.2	60	92 ± 3.5	57	92 ± 3.5	57	92 ± 3.6	57	-	-	-	-
2002	n=59	93 ± 3.3	55	92 ± 3.6	54	92 ± 3.6	54	92 ± 3.6	54	-	-	-	-
2003	n=54	87 ± 4.6	47	87 ± 4.6	47	83 ± 5.2	36	-	-	-	-	-	-

Figure 8.18

Primary Cadaver Patient Survival 1996 - 2002 Related to Year of Transplant



Primary Cadaver Graft Survival 1996 - 2002 Related to Year of Transplant



AUSTRALIAN TRANSPLANT SURVIVAL SUBSEQUENT CADAVERIC GRAFTS

Patient and graft survivals for second or subsequent cadaveric grafts are examined in three year cohorts, 2001-2003; 1998-2000; 1995-1997; 1992-94 and 1989-91.

Figure 8.19

Second and Subsequent Cadaver Patient and Graft Survival 1989 - 2003
% Survival ± S.E. / Number at Risk
n = Number of Patients

Year of Transplant	Survival					
	1 month	3 months	6 months	1 year	3 years	5 years
Patient Survival						
1989-91 n=182	99 ± 0.8 180	97 ± 1.3 176	95 ± 1.7 172	92 ± 2.0 168	86 ± 2.6 157	81 ± 2.9 147
1992-94 n=186	99 ± 0.8 184	97 ± 1.2 181	97 ± 1.3 180	95 ± 1.7 176	91 ± 2.1 170	84 ± 2.7 157
1995-97 n=152	99 ± 0.7 151	98 ± 1.1 149	97 ± 1.3 148	97 ± 1.3 148	92 ± 2.2 140	87 ± 2.7 132
1998-00 n=141	99 ± 0.7 140	97 ± 1.4 137	96 ± 1.6 136	94 ± 2.0 133	92 ± 2.3 130	-
2001-03 n=138	99 ± 1.0 136	96 ± 1.7 132	95 ± 1.9 120	90 ± 2.6 89	-	-
Graft Survival						
1989-91 n=182	85 ± 2.7 154	83 ± 2.8 151	80 ± 3.0 145	77 ± 3.1 141	68 ± 3.5 123	60 ± 3.6 109
1992-94 n=186	86 ± 2.5 160	83 ± 2.7 155	83 ± 2.7 154	81 ± 2.9 151	75 ± 3.2 140	68 ± 3.4 126
1995-97 n=152	86 ± 2.8 131	83 ± 3.0 126	82 ± 3.1 125	81 ± 3.2 123	72 ± 3.6 110	66 ± 3.8 100
1998-00 n=141	92 ± 2.3 130	89 ± 2.7 125	87 ± 2.8 123	84 ± 3.1 118	77 ± 3.5 109	-
2001-03 n=138	92 ± 2.3 127	90 ± 2.6 124	88 ± 2.8 110	82 ± 3.4 80	-	-

Figure 8.20

Second and Subsequent Cadaver Graft Survival Related to Years of Transplant 1989 - 2003

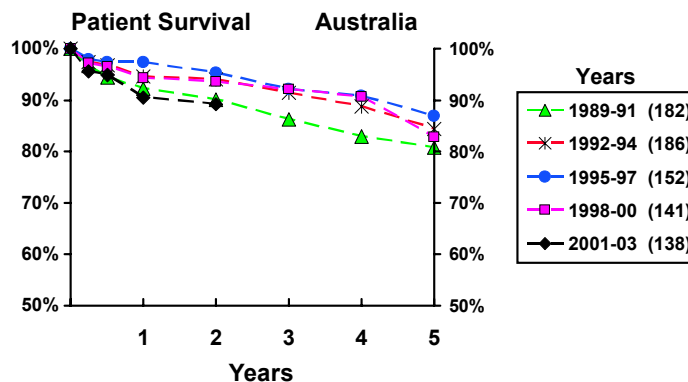
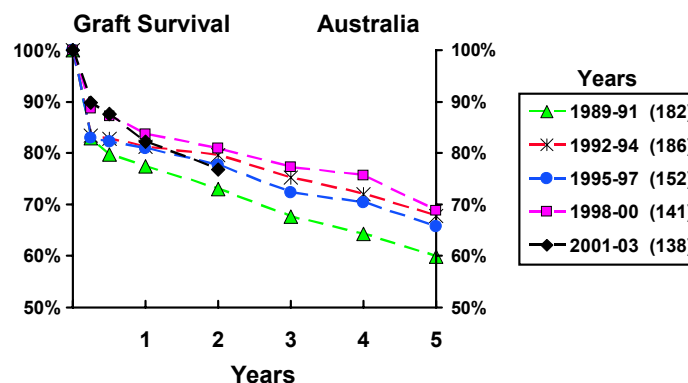


Figure 8.21

Second and Subsequent Cadaver Graft Survival Related to Years of Transplant 1989 - 2003





LIVE DONOR TRANSPLANTS

Recipient Age Groups		Year of Transplantation				
		1999	2000	2001	2002	2003
00-04 years		100%	83%	86%	80%	78%
05-14 years		58%	63%	75%	50%	50%
15-24 years		61%	65%	68%	54%	62%
25-34 years		39%	38%	37%	56%	44%
35-44 years		41%	35%	37%	31%	38%
45-54 years		26%	25%	40%	30%	34%
55-64 years		27%	23%	27%	33%	33%
65-74 years		0%	25%	33%	30%	37%
75-84 years		0%	0%	0%	0%	100%
All Recipients		37%	34%	39%	38%	40%

Figure 8.22

Australia

Live Donor Operations as a Proportion (%) of Annual Transplantation 1999 - 2003

AUSTRALIA

Two hundred and eighteen Live Donor (LD) kidney transplants were performed in 2003 in Australia, representing 40% of all transplant operations compared to 38% in 2002 (fig 8.1, 8.22 and 8.26).

Figure 8.23 shows the age-related proportion of live donor transplants for the years 1999 and 2003. The overall proportion of live donor transplants continued to rise between these years. The proportion of live donors increased in most age groups, particularly in the 45-54 and 55-64 year age groups. There were 14 recipients (37%) of live donors in the 65-74 year group and for the first time one recipient was aged between 75 and 84 years.

The proportion of live donor transplants for each State and New Zealand for recipients aged 25-44 years is shown in Figure 8.24 for the years 1996-99 and 2000-2003. There have been increases in all regions except Western Australia.

The proportion of genetically unrelated donors has risen over the last few years reaching 34% in 2003. Fifty nine percent of live unrelated donors were spouses. The number of related donors was less than last year, 144 donors (66%) compared to 153 (67%) in 2002 (fig 8.26).

NEW ZEALAND

Forty percent of grafts were from a live donor (41% in 2002 and 39% in 2001). There were twelve live unrelated donors (27% of live donors).

Figure 8.23

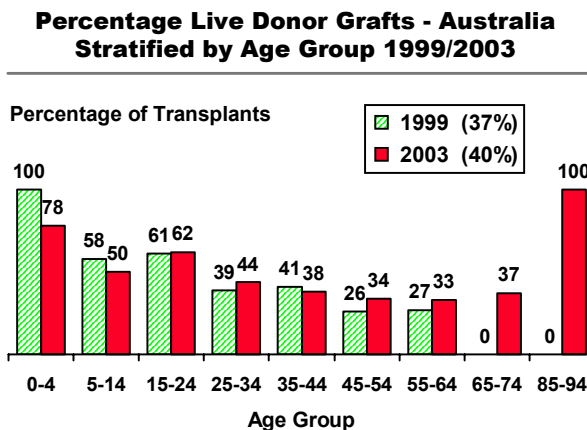
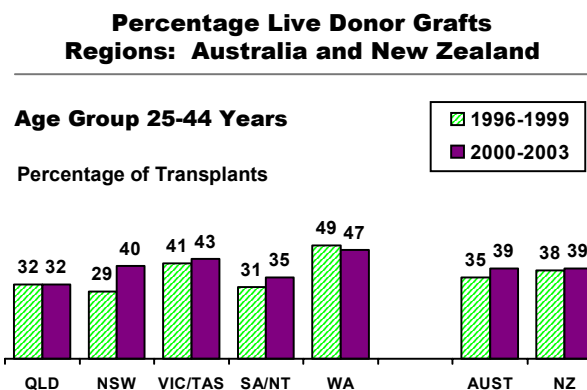


Figure 8.24



TIMING OF LIVE DONOR TRANSPLANTS

The timing of live donor transplants is shown in Figure 8.25.

The proportion of preemptive live donor transplants in Australia has increased and now accounts for 25% of all live donor transplantation.

The proportion of preemptive live donor transplants in New Zealand decreased to 22% in 2003.

Figure 8.25

Timing of Live Donor Transplantation for Primary Grafts in Relation to Date of Dialysis Start by Year of Transplant 1998 - 2003

		1999	2000	2001	2002	2003
Aust	Pre-dialysis	30 (19%)	36 (22%)	43 (22%)	55 (26%)	50 (25%)
	<1 month post dialysis	6 (4%)	11 (7%)	7 (4%)	5 (2%)	5 (2%)
	1-5.9 months post dialysis	23 (15%)	28 (17%)	38 (19%)	30 (14%)	29 (15%)
	6-11.9 months post dialysis	27 (17%)	24 (14%)	31 (16%)	38 (18%)	30 (15%)
	>=12 months post dialysis	69 (44%)	66 (40%)	80 (40%)	83 (39%)	84 (42%)
NZ	Pre-dialysis	9 (24%)	14 (50%)	10 (26%)	12 (27%)	9 (22%)
	<1 month post dialysis	-	-	1 (3%)	-	-
	1-5.9 months post dialysis	8 (21%)	8 (18%)	5 (20%)	4 (9%)	7 (18%)
	6-11.9 months post dialysis	3 (8%)	4 (14%)	9 (23%)	8 (18%)	8 (20%)
	>=12 months post dialysis	18 (47%)	5 (18%)	11 (28%)	20 (46%)	16 (40%)

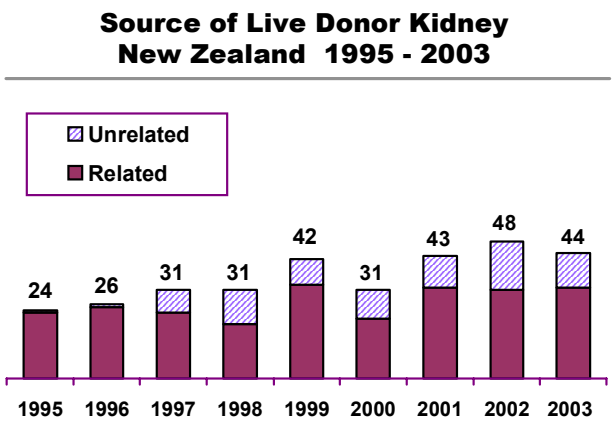
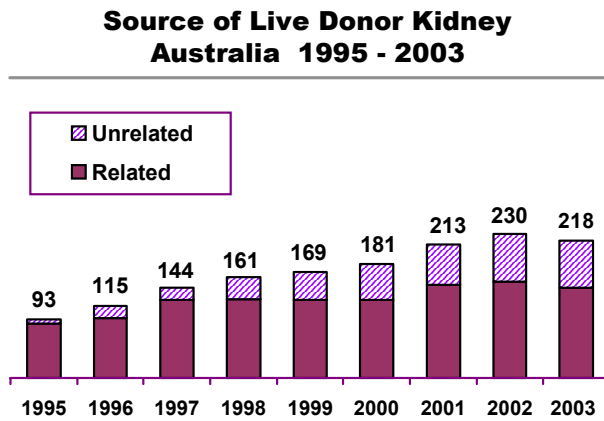
Figure 8.26

Source of Live Donor Kidneys 1999 - 2003 (x = identical twin)

Source	Australia					New Zealand				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
Total Live Donors	169	181	213	230	218	42	31	43	48	44
Related	(125)	(125)	(149)	(153)	(144)	(33)	(21)	(32)	(31)	(32)
Mother	32	40	34	47	40	9	4	9	7	13
Father	28	35	39	19	30	5	1	7	6	4
Brother	17	15 (1x)	32 (1x)	33	23 (1x)	9	6 (1x)	4	5	3
Sister	28	23	25 (1x)	37 (1x)	30 (1x)	6	10	8	7	7
Offspring	8	8	9	5	10	2	0	4	3	4
Grandfather	2	1	2	0	1	0	0	0	0	0
Grandmother	3	0	1	3	0	0	0	0	0	0
Cousin	5	2	5	4	4	1	0	0	1	0
Nephew	0	0	0	1	2	0	0	0	0	1
Niece	0	0	0	0	2	0	0	0	1	0
Uncle	1	0	0	1	1	0	0	0	0	0
Aunt	1	1	2	3	1	1	0	0	1	0
Unrelated	(44)	(56)	(64)	(77)	(74)	(9)	(10)	(11)	(17)	(12)
Wife	23	30	21	31	25	4	5	5	6	2
Husband	11	15	23	18	19	3	3	1	3	6
Mother-in-Law	0	1	0	2	0	0	0	0	0	0
Father-in-Law	0	0	0	0	1	0	0	0	0	0
Adoptive Mother	0	0	0	0	0	0	0	0	1	0
Adoptive Father	0	0	1	0	0	0	0	0	0	0
Stepfather	0	0	2	2	1	0	0	0	0	0
Stepmother	0	0	0	0	1	0	0	0	0	0
Sister-in-Law	1	0	1	0	2	0	0	0	0	0
Brother-in-Law	0	0	1	1	1	1	0	0	0	0
Partner	0	1	4	4	3	0	0	0	0	0
Friend	7	5	9	11	18	1	2	4	6	4
Aunt	0	1	0	1	0	0	0	0	0	0
Adopted Sister	0	0	0	1	0	0	0	0	0	0
Stepsister	0	0	0	1	0	0	0	0	0	0
Stepson	0	0	0	1	1	0	0	0	0	0
Other	2	3	2	4	2	0	0	1	1	0

The proportion of all live donor transplants from unrelated donors has increased, and this is a major factor in the increasing numbers of live donor transplants.

Figure 8.27



FUNCTIONING TRANSPLANTS AT 31-DEC-2003 TRANSPLANT OPERATIONS 1963 - 2003

AUSTRALIA

There have been 14,068 transplant operations performed on 12,028 patients since 1963. Of these, 5,951 grafts were functioning at 31st December 2003 (299 per million population). Fifteen percent of operations and 12% of functioning grafts were regrafts. Live donor transplants accounted for 17% of operations and 28% of functioning grafts (fig 8.28). The number of operations performed by each hospital during this period is shown in Appendix I at the end of this Report.

The number of functioning grafts at the end of 2003 is a 4% increase over the previous year. The annual rate of increase has remained steady (fig 8.30 and 8.31). Eighty eight percent of the functioning grafts were primary, and 72% were from cadaveric donors. The number of functioning grafts from live donors increased by 11% from 2002 to 2003.

The prevalence of functioning grafts in each State is shown in Figures 8.30 and 8.32. South Australia/Northern Territory has the highest prevalence of functioning renal transplants (425 per million). The lowest prevalence was in Western Australia (267 per million, decreased from 272 in 2002). Patients with functioning grafts numbered in excess of those dependent on dialysis in South Australia only (Appendix I).

The age dependence on a functioning transplant as a proportion of patients on renal replacement therapy is shown in Figure 8.33. The proportion drops with age and the proportion of patients depending on live donor grafts is greater in the younger age groups (fig 8.34).

The modal age group for transplant dependent patients was 45-54 years and the mean and median ages were 48.8 and 49.8 years respectively (fig 8.34 and 8.35). The modal age group for live donor recipients was 35-44 years and 57% of recipients

dependent on live donor grafts were less than 45 years of age. The ethnic origin of people with functioning grafts was Caucasoid 90%, Asian 6%, Aboriginal and Torres Strait Islanders 2% and Others 2% (fig 8.36).

The 5,951 grafts functioning at the end of 2003 represent 42% of all kidneys transplanted since 1963. Thirty three percent of grafts were functioning ten or more years and 7% for 20 or more years. There are now 67 recipients with grafts functioning 30 years or longer.

NEW ZEALAND

There have been 2,862 operations performed on 2,371 patients since 1965 with 1,166 grafts (291 per million) still functioning at 31st December 2003 (fig 8.29). This represents a 5% increase from the previous year. Seventeen percent of operations and 12% of functioning grafts were regrafts. Kidneys from live donors accounted for 20% of operations and 31% of functioning grafts.

The number of operations performed by individual hospitals is shown in Appendix I at the end of this Report.

The age related dependence on a transplant and the live or cadaveric donor source are shown in Figure 8.33.

The majority were male (58%) and the racial distribution was Caucasoid 78%, Maori 10%, Pacific Islander 5% and Asian 7% (fig 8.36).

The majority (70%) of functioning grafts were in the 35-64 year age group and the mean and median ages were 47.7 and 48.3 years respectively. The modal age group for live donors was 45-54 years (fig 8.34).

The 1,166 grafts functioning at the end of 2003 represent 41% of all kidneys transplanted since 1965. The longest surviving graft has reached 34 years. Eighty five grafts have been functioning for 20 or more years and seven for 30 or more years. Thirty one percent of functioning grafts were from live donors (fig 8.37).

Figure 8.28

Summary of Renal Transplantation Australia 1963 - 2003			
		Performed	Functioning *
Cadaver	First	9823	3700
	Second	1544	479
	Third	234	66
	Fourth	33	13
	Fifth	2	1
Live Donor	First	2205	1548
	Second	194	124
	Third	27	16
	Fourth	5	4
	Fifth	1	-
Total		14,068	5951
* Lost to follow up not included			

Figure 8.29

Summary of Renal Transplantation New Zealand 1965 - 2003			
Transplant			Functioning *
		Performed	Functioning *
Cadaver	First	1848	694
	Second	359	87
	Third	71	19
	Fourth	6	0
Live Donor	First	523	335
	Second	51	28
	Third	4	3
Total		2862	1166
* Lost to follow up not included			



Figure 8.30

**Functioning Transplants
Transplanting State, Australia and New Zealand
1992 - 2003
(Number Per Million Population)**

Year	QLD	NSW/ACT *	VIC/TAS *	SA/NT *	WA	AUST	NZ
1992	689 (227)	1320 (211)	966 (196)	429 (264)	292 (176)	3696 (211)	677 (192)
1993	739 (238)	1356 (215)	1031 (209)	425 (261)	316 (188)	3867 (219)	705 (197)
1994	786 (247)	1415 (223)	1054 (213)	459 (280)	342 (201)	4056 (227)	731 (202)
1995	813 (249)	1478 (230)	1097 (220)	477 (290)	358 (207)	4223 (234)	783 (213)
1996	848 (254)	1547 (238)	1160 (231)	514 (311)	363 (206)	4432 (242)	823 (220)
1997	901 (265)	1632 (248)	1225 (241)	538 (323)	377 (210)	4673 (252)	881 (233)
1998	943 (274)	1676 (252)	1293 (253)	581 (347)	396 (216)	4889 (261)	935 (245)
1999	956 (273)	1711 (254)	1334 (258)	620 (368)	432 (232)	5053 (267)	983 (256)
2000	1003 (282)	1756 (258)	1383 (265)	640 (376)	468 (248)	5250 (274)	1021 (265)
2001	1061 (292)	1786(259)	1448 (274)	666 (390)	493 (260)	5454 (281)	1060 (273)
2002	1104 (297)	1871 (269)	1529 (287)	698 (406)	523 (272)	5725 (291)	1113 (283)
2003	1145 (302)	1979 (282)	1572 (291)	734 (425)	521 (267)	5951 (299)	1166 (291)

* For calculation of population related totals, the population of these States were amalgamated
Patients lost to follow up are not included

Figure 8.31

Functioning Transplants by Region 1998 - 2003

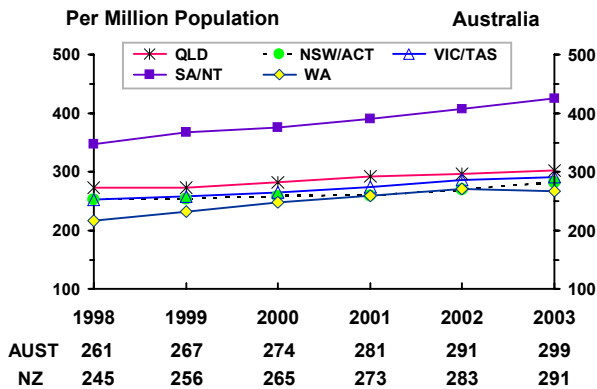


Figure 8.32

Prevalence of Functioning Transplants (Per Million Population) 31-Dec-2003

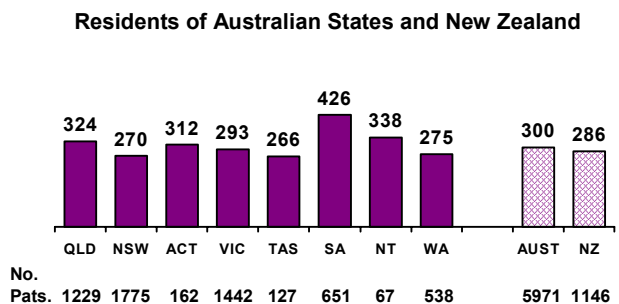
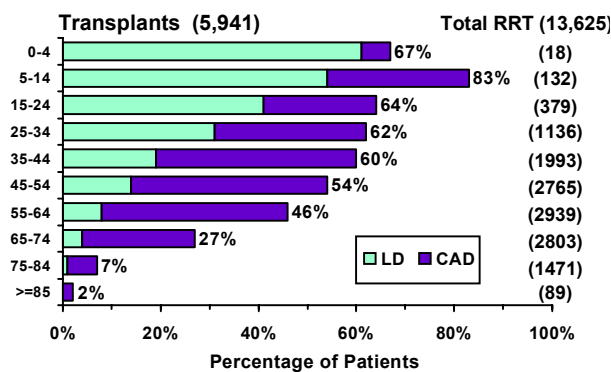


Figure 8.33

Prevalence of Functioning Transplants By Age Group Australia 2003



Prevalence of Functioning Transplants By Age Group New Zealand 2003

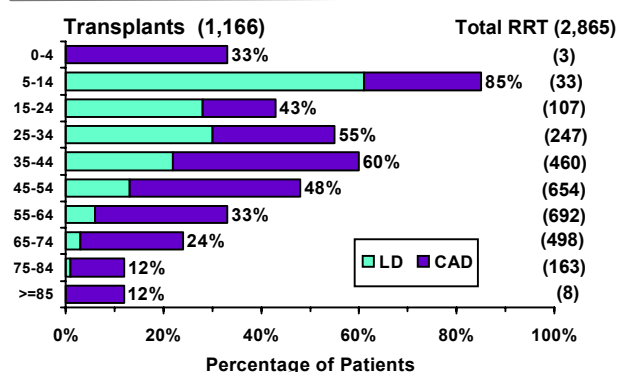
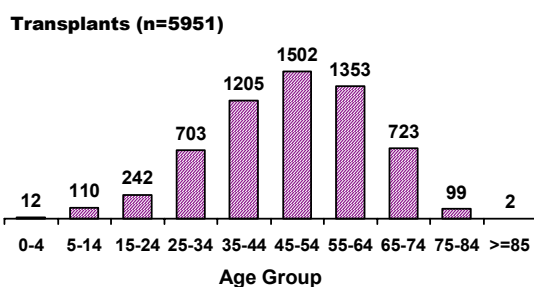


Figure 8.34

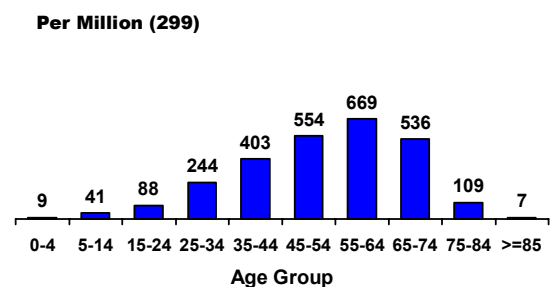
Age of All Functioning Transplant Patients Resident Country at Transplant (31-Dec-2003)												
Donor Source	Graft No.	Age Groups										Total
		00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-94	
Australia		12	110	242	703	1205	1502	1353	723	99	2	5951
Cadaver	1	1	35	77	291	664	962	995	583	90	2	3700
	2	0	3	10	50	132	137	101	41	5	0	479
	3	0	1	0	10	21	15	16	3	0	0	66
	4	0	0	0	2	5	5	0	1	0	0	13
	5	0	0	0	0	0	0	1	0	0	0	1
	Total	1	39	87	353	822	1120	1112	628	95	2	4259
Live Donor	1	11	71	144	319	339	342	229	89	4	0	1548
	2	0	0	10	28	38	34	8	6	0	0	124
	3	0	0	1	1	5	5	4	0	0	0	16
	4	0	0	0	2	1	1	0	0	0	0	4
	Total	11	71	155	350	383	382	241	95	4	0	1692
New Zealand		1	28	46	137	276	311	227	120	19	1	1166
Cadaver	1	1	7	13	48	145	189	170	105	15	1	694
	2	0	1	3	13	26	31	10	1	2	0	87
	3	0	0	0	1	5	9	4	0	0	0	19
	4	0	0	0	0	0	0	0	0	0	0	0
	Total	1	8	16	62	176	229	184	106	17	1	800
Live Donor	1	0	20	29	64	91	73	42	14	2	0	335
	2	0	0	1	9	9	8	1	0	0	0	28
	3	0	0	0	2	0	1	0	0	0	0	3
	Total	0	20	30	75	100	82	43	14	2	0	366

Figure 8.35

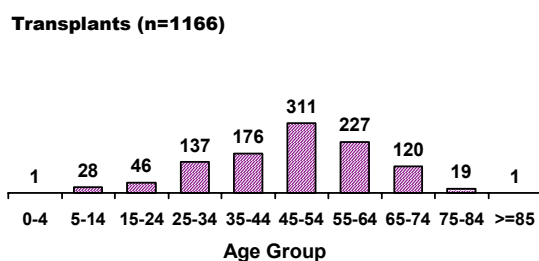
Age Distribution of Functioning Transplants Australia 2003



Age Distribution of Functioning Transplants Australia 2003



Age Distribution of Functioning Transplants New Zealand 2003



Age Distribution of Functioning Transplants New Zealand 2003

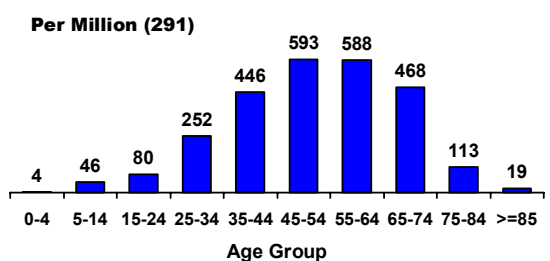


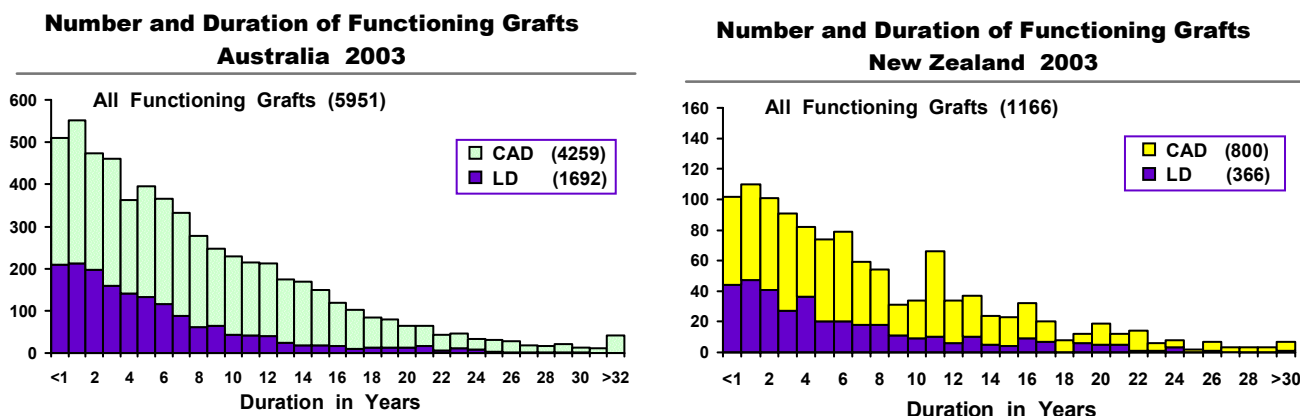


Figure 8.36

Functioning Transplant Patients - Resident Country at Transplant Related to Ethnicity and Age Group 31-Dec-2003

Sex	Racial Origin	Age Groups										Total
		00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-94	
Australia		12	110	242	703	1205	1502	1353	723	99	2	5951
Female	Caucasoid	2	33	78	263	421	495	479	341	45	1	2158
	Aboriginal	0	2	2	6	14	12	6	2	0	0	44
	Torres S. Isl.	0	0	0	0	0	2	0	0	0	0	2
	Asian	0	2	5	23	39	57	31	14	0	0	171
	Other	0	5	3	6	9	10	7	7	0	0	47
	Total	2	42	88	298	483	576	523	364	45	1	2422
Male	Caucasoid	10	59	137	362	660	816	750	334	52	1	3181
	Aboriginal	0	1	3	6	13	27	18	3	0	0	71
	Torres S. Isl.	0	0	0	0	0	0	3	0	0	0	3
	Asian	0	6	9	26	42	65	43	17	2	0	210
	Other	0	2	5	11	7	18	16	5	0	0	64
	Total	10	68	154	405	722	926	830	359	54	1	3529
New Zealand		1	28	46	137	276	311	227	120	19	1	1166
Female	Caucasoid	0	13	15	48	81	102	73	41	11	0	384
	Maori	0	0	2	7	13	9	9	6	0	0	46
	Pacific Isl.	0	0	7	2	9	6	4	1	0	0	29
	Asian	0	1	1	2	15	8	5	2	0	0	34
	Total	0	14	25	59	118	125	91	50	11	0	493
Male	Caucasoid	0	12	12	67	131	140	97	61	7	1	528
	Maori	0	1	2	4	14	22	18	4	1	0	66
	Pacific Isl.	1	1	2	5	5	9	10	1	0	0	34
	Asian	0	0	5	2	8	12	11	4	0	0	42
	Other	0	0	0	0	0	3	0	0	0	0	3
	Total	1	14	21	78	158	186	136	70	8	1	673

Figure 8.37



RATES OF GRAFT LOSS

The rates of graft failure and death with a functioning graft have been constant over the last six years in both Australia and New Zealand however a trend toward a reduction in graft losses was evident in 2003 in Australia and New Zealand, 4.8% and 4.6% respectively (fig 8.38).

The cause of graft failure from 1994 to 2003 is shown in Figure 8.39.

The relative contribution of acute rejection to overall graft loss has decreased, whereas chronic allograft nephropathy and death have increased.

Figure 8.38

Graft Loss Rate 1998 - 2003 (Number of Grafts at Risk)						
	1998	1999	2000	2001	2002	2003
Australia	(5191)	(5344)	(5584)	(5791)	(6058)	(6268)
Graft Failure	3.0%	3.0%	2.7%	2.8%	2.9%	2.6%
Death	2.4%	2.2%	3.0%	2.6%	2.2%	2.2%
All Losses	5.4%	5.3%	5.7%	5.4%	5.2%	4.8%
New Zealand	(987)	(1047)	(1089)	(1131)	(1177)	(1224)
Graft Failure	2.9%	3.9%	3.4%	3.8%	2.7%	2.5%
Death	2.5%	2.1%	2.6%	2.2%	2.7%	2.1%
All Losses	5.4%	6.0%	6.0%	6.0%	5.4%	4.6%

Figure 8.39

Year of Graft Loss Due to Death or Failure 1994 - 2003												
Loss	Cause of Failure	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Australia												
Death		107	118	113	109	124	117	167	153	136	136	1280
	Rejection - Acute	13	20	19	8	11	7	9	7	8	3	105
	Rejection - Chronic Allograft Nephropathy	77	75	87	79	105	107	91	111	108	110	950
	Rejection - Hyperacute	0	4	2	1	0	2	1	0	0	0	10
Failed	Vascular	14	16	13	15	9	15	7	11	16	15	131
	Technical Problems	3	4	1	3	0	3	4	2	3	3	26
	Recurrence Primary Disease	11	13	7	19	10	10	16	8	15	13	122
	Non Compliance	2	3	4	7	6	5	7	7	11	10	62
	Other	10	13	15	13	15	15	17	16	16	12	142
Total		237	266	261	254	280	281	319	315	313	302	2828
New Zealand												
Death		18	14	26	27	25	22	28	25	32	26	243
	Rejection - Acute	5	5	3	1	1	4	0	1	1	1	22
	Rejection - Chronic Allograft Nephropathy	18	11	12	15	19	24	20	31	22	15	187
	Rejection - Hyperacute	2	0	1	0	0	0	0	0	0	0	3
Failed	Vascular	4	2	4	5	0	6	8	1	1	1	32
	Technical Problems	1	1	0	2	0	2	0	2	1	2	11
	Recurrence Primary Disease	3	4	2	0	3	4	3	2	1	4	26
	Non Compliance	1	0	1	0	3	0	5	2	3	3	18
	Other	5	5	6	2	3	1	2	4	3	4	35
Total		57	42	55	52	54	63	66	68	64	56	577



IMMUNOSUPPRESSION

Whilst the majority of kidney transplant recipients were initiated on triple therapy with cyclosporin, mycophenolate mofetil and steroids, approximately one-third of these were subsequently switched to an alternative regimen during the first 12 months after transplantation. Tacrolimus-based therapies were used initially by a minority of recipients, however these patients tended to remain on the initial drug combination throughout their first post-transplant year. Newer combinations, including everolimus, FTY and mycophenolate sodium, were

increasingly used. As in previous years, participation in clinical trials is likely to have had a major impact on initial therapy.

Cyclosporin, mycophenolate and steroid triple therapy remained the initial choice for the majority of kidney transplant recipients in New Zealand, but was taken by a minority at the 12 month post-transplant mark, at least partly due to Government restrictions on the usage of mycophenolate.

Figure 8.40 **Australia**

Immunosuppressive Therapy - Primary Cadaver Graft 1995 - 2003

	Year	Cya /Aza	Cya / MMF	Tac / Aza	Tac / MMF	Cya / Sirol	Tac/Sirol	Sirol / MMF	Other	Total
Initial treatment	1995	240 (83%)	0	22 (8%)	0	0	0	0	28 (10%)	290
	1996	264 (85%)	6 (2%)	0	0	18 (6%)	0	0	23 (7%)	311
	1997	127 (41%)	126 (40%)	0	1 (0%)	36 (12%)	0	0	23 (7%)	313
	1998	34 (12%)	163 (56%)	0	1 (0%)	67 (23%)	0	0	28 (10%)	293
	1999	19 (8%)	142 (57%)	1 (0%)	33 (13%)	22 (9%)	0	1 (0%)	30 (12%)	248
	2000	20 (6%)	183 (59%)	0	80 (26%)	0	3 (1%)	4 (1%)	21 (7%)	311
	2001	15 (5%)	180 (62%)	1 (0%)	32 (11%)	0	32 (11%)	0	29 (10%)	289
	2002	8 (2%)	192 (59%)	1 (0%)	74 (23%)	0	5 (2%)	2 (1%)	44 (13%)	326
2003	8 (3%)	115 (42%)	0	68 (25%)	0	8 (3%)	1 (0%)	74 (27%)	274	
Treatment at 1 month	1995	227 (78%)	1 (0%)	23 (8%)	0	0	0	0	39 (13%)	290
	1996	227 (73%)	23 (7%)	3 (1%)	2 (1%)	15 (5%)	0	0	41 (13%)	311
	1997	97 (31%)	133 (42%)	0	5 (2%)	34 (11%)	0	0	44 (14%)	313
	1998	26 (9%)	169 (58%)	0	7 (2%)	64 (22%)	0	1 (0%)	26 (9%)	293
	1999	13 (5%)	134 (54%)	2 (1%)	40 (16%)	23 (9%)	0	2 (1%)	34 (14%)	248
	2000	19 (6%)	170 (55%)	5 (2%)	93 (30%)	1 (0%)	4 (1%)	5 (2%)	14 (5%)	311
	2001	12 (4%)	159 (55%)	3 (1%)	53 (18%)	0	26 (9%)	1 (0%)	35 (12%)	289
	2002	6 (2%)	168 (52%)	1 (0%)	94 (29%)	0	5 (2%)	2 (1%)	50 (15%)	326
2003	7 (3%)	100 (36%)	3 (1%)	76 (28%)	0	8 (3%)	2 (1%)	78 (28%)	274	
Treatment at 3 months	1995	223 (82%)	3 (1%)	23 (8%)	0	0	0	0	23 (8%)	272
	1996	218 (77%)	26 (9%)	8 (3%)	4 (1%)	14 (5%)	0	0	14 (5%)	284
	1997	89 (31%)	136 (47%)	1 (0%)	5 (2%)	25 (9%)	0	1 (0%)	31 (11%)	288
	1998	23 (8%)	168 (60%)	1 (0%)	11 (4%)	57 (21%)	0	1 (0%)	17 (6%)	278
	1999	13 (6%)	129 (56%)	4 (2%)	45 (19%)	18 (8%)	0	3 (1%)	20 (9%)	232
	2000	19 (6%)	158 (53%)	7 (2%)	98 (33%)	0	4 (1%)	5 (2%)	9 (3%)	300
	2001	12 (4%)	143 (52%)	4 (1%)	59 (22%)	0	25 (9%)	3 (1%)	27 (10%)	273
	2002	11 (4%)	148 (48%)	2 (1%)	103 (33%)	0	5 (2%)	3 (1%)	39 (13%)	311
2003	9 (4%)	89 (35%)	5 (2%)	81 (32%)	0	5 (2%)	6 (2%)	61 (24%)	256	
Treatment at 6 months	1995	215 (82%)	3 (1%)	18 (7%)	0	0	0	0	27 (10%)	263
	1996	212 (76%)	25 (9%)	8 (3%)	3 (1%)	13 (5%)	0	0	19 (7%)	280
	1997	93 (33%)	140 (49%)	1 (0%)	5 (2%)	22 (8%)	0	0	22 (8%)	283
	1998	23 (8%)	166 (60%)	1 (0%)	15 (5%)	44 (16%)	0	4 (1%)	23 (8%)	276
	1999	15 (7%)	125 (55%)	4 (2%)	44 (19%)	8 (4%)	0	3 (1%)	28 (12%)	227
	2000	21 (7%)	144 (49%)	9 (3%)	96 (33%)	0	4 (1%)	3 (1%)	17 (6%)	294
	2001	13 (5%)	128 (47%)	3 (1%)	69 (25%)	0	24 (9%)	5 (2%)	29 (11%)	271
	2002	9 (3%)	133 (43%)	12 (4%)	107 (35%)	0	5 (2%)	6 (2%)	37 (12%)	309
2003	10 (5%)	61 (31%)	6 (3%)	64 (33%)	0	5 (3%)	4 (2%)	44 (23%)	194	
Treatment at 12 months	1995	211 (81%)	2 (1%)	13 (5%)	1 (0%)	0	0	0	33 (13%)	260
	1996	199 (72%)	32 (12%)	7 (3%)	3 (1%)	12 (4%)	0	0	23 (8%)	276
	1997	106 (38%)	124 (44%)	3 (1%)	4 (1%)	19 (7%)	0	0	23 (8%)	279
	1998	29 (11%)	158 (59%)	2 (1%)	18 (7%)	34 (13%)	0	7 (3%)	20 (7%)	268
	1999	16 (7%)	118 (53%)	3 (1%)	43 (19%)	5 (2%)	0	3 (1%)	34 (15%)	222
	2000	28 (10%)	127 (44%)	10 (3%)	95 (33%)	0	4 (1%)	4 (1%)	23 (8%)	291
	2001	19 (7%)	118 (45%)	4 (2%)	77 (30%)	0	18 (7%)	6 (2%)	19 (7%)	261
	2002	6 (2%)	124 (41%)	14 (5%)	101 (33%)	0	4 (1%)	9 (3%)	47 (15%)	305
2003	1 (2%)	14 (25%)	2 (4%)	15 (26%)	0	5 (9%)	1 (2%)	19 (33%)	57	

Figure 8.41		New Zealand						
		Immunosuppressive Therapy - Primary Cadaver Graft						1995 - 2003
	Year	Cya /Aza	Cya / MMF	Tac / Aza	Tac / MMF	Tax/ Sirol	Other	Total
Initial treatment	1995	59 (94%)	0	0	0	0	4 (6%)	63
	1996	60 (95%)	0	0	0	0	3 (5%)	63
	1997	65 (90%)	2 (3%)	0	0	0	5 (7%)	72
	1998	34 (51%)	30 (45%)	0	1 (1%)	0	2 (3%)	67
	1999	0	57 (97%)	0	2 (3%)	0	0	59
	2000	0	60 (95%)	0	3 (5%)	0	0	63
	2001	0	59 (95%)	0	3 (5%)	0	0	62
	2002	0	56 (95%)	0	2 (3%)	0	1 (2%)	59
	2003	0	40 (74%)	0	6 (11%)	0	8 (15%)	54
Treatment at 1 month	1995	57 (90%)	0	0	0	0	6 (10%)	63
	1996	50 (79%)	2 (3%)	0	0	0	11 (17%)	63
	1997	60 (83%)	4 (6%)	0	0	0	8 (11%)	72
	1998	32 (48%)	29 (43%)	0	2 (3%)	0	4 (6%)	67
	1999	0	48 (81%)	0	3 (5%)	0	8 (14%)	59
	2000	0	51 (81%)	0	7 (11%)	0	5 (8%)	63
	2001	0	53 (85%)	0	6 (10%)	0	3 (5%)	62
	2002	0	48 (81%)	0	6 (10%)	0	5 (8%)	59
	2003	0	30 (56%)	0	9 (17%)	0	15 (28%)	54
Treatment at 3 months	1995	56 (97%)	0	0	0	0	2 (3%)	58
	1996	51 (93%)	3 (5%)	0	0	0	1 (2%)	55
	1997	52 (83%)	7 (11%)	2 (3%)	0	0	2 (3%)	63
	1998	30 (48%)	28 (45%)	0	3 (5%)	0	1 (2%)	62
	1999	0	46 (92%)	0	4 (8%)	0	0	50
	2000	0	47 (82%)	0	8 (14%)	0	2 (4%)	57
	2001	0	47 (82%)	1 (2%)	6 (11%)	0	3 (5%)	57
	2002	0	45 (83%)	0	9 (17%)	0	0	54
	2003	0	23 (49%)	0	16 (34%)	1 (2%)	7 (15%)	47
Treatment at 6 months	1995	55 (96%)	0	0	0	0	2 (4%)	57
	1996	51 (94%)	2 (4%)	0	0	0	1 (2%)	54
	1997	50 (79%)	6 (10%)	3 (5%)	1 (2%)	0	3 (5%)	63
	1998	28 (48%)	27 (47%)	0	2 (3%)	0	1 (2%)	58
	1999	0	41 (82%)	0	8 (16%)	0	1 (2%)	50
	2000	3 (5%)	42 (75%)	0	10 (18%)	0	1 (2%)	56
	2001	1 (2%)	46 (81%)	1 (2%)	7 (12%)	0	2 (4%)	57
	2002	0	41 (76%)	0	12 (22%)	0	1 (2%)	54
	2003	0	15 (41%)	0	14 (38%)	1 (3%)	7 (19%)	37
Treatment at 12 months	1995	51 (96%)	0	0	0	0	2 (4%)	53
	1996	49 (92%)	2 (4%)	0	0	0	2 (4%)	53
	1997	45 (74%)	10 (16%)	1 (2%)	1 (2%)	0	4 (7%)	61
	1998	32 (55%)	18 (31%)	3 (5%)	2 (3%)	0	3 (5%)	58
	1999	12 (26%)	24 (52%)	2 (4%)	6 (13%)	0	2 (4%)	46
	2000	19 (34%)	22 (39%)	3 (5%)	12 (21%)	0	0	56
	2001	23 (40%)	21 (37%)	4 (7%)	6 (11%)	0	3 (5%)	57
	2002	14 (26%)	23 (43%)	4 (7%)	8 (15%)	0	5 (9%)	54
	2003	3 (30%)	3 (30%)	1 (10%)	1 (10%)	0	2 (20%)	10

There were no patients treated with Cyclosporin/Sirolimus or Sirolimus/Mycophenolate immunosuppressive therapy

