

CHAPTER 8

TRANSPLANTATION

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TRANSPLANTS PERFORMED IN 2004

AUSTRALIA

The 649 transplant operations performed in 2004 represents an increase of 20% compared to 2003 (543 operations) (fig 8.1). More kidney transplants were performed in 2004 than in any previous year. This was a transplant rate of 32 per million population per year compared to 27 per million peryear in 2003. The increase was due both to more deceased donors (up 25% from 2003) and live donors (up 11% from 2003) (fig 8.2).

For more up to date figures on the deceased organ donor rate, see www.anzdata.org.au/anzod/updates/anzodupdate.htm

Live donor transplants accounted for 37% (243 grafts) in 2004, compared to 40% (218 grafts) in 2003. While these figures are similar, this proportion has slowly increased over time.

Primary recipients (those receiving a first transplant) received 90% of all kidneys transplanted in 2004, compared to 87% in 2003.

NEW ZEALAND

The number of transplant operations (105) performed in 2004 represents a transplant rate of 26 per million population per year (a decrease of 5% from 2003) and the lowest number since 1996 (fig 8.1).

The percentage of live donors increased from 40% to 46% of all operations in 2004 (fig 8.3).

Of the grafts performed in 2004, 93% were to primary recipients, (85% in 2003).

Figure 8.1

Number of Renal Transplant Operations (Live Donors)											
Year	Australia					Total	New Zealand				
	1st	2nd	3rd	4th	5th		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 (14)	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	386	70	11	3	0	470 (78)	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	371	60	11	0	0	442 (94)	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	505 (147)	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)
2004	582	53	11	3	0	649 (243)	98	7	0	0	105 (48)

Figure 8.2

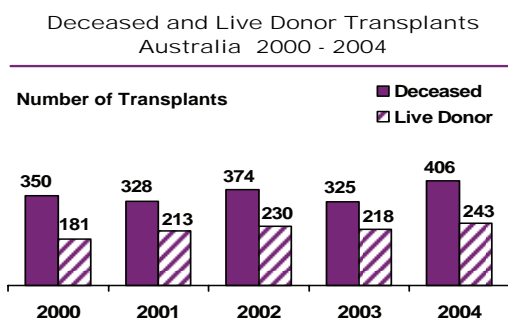
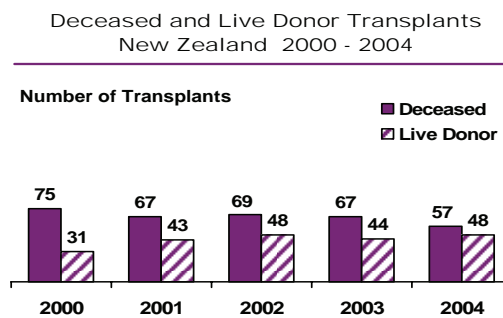


Figure 8.3

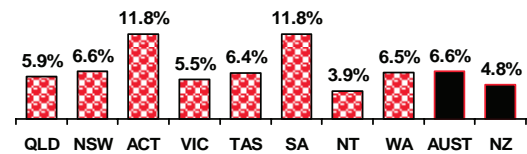


TRANSPLANT RATE OF PATIENTS DIALYSED

Figure 8.4

Ratio of Transplantation 2004
Related to Patients Dialysed*

All Patients



In Australia the proportion of patients receiving dialysis in 2004, who were transplanted that year was 6.6%, an increase from 5.8% in 2003 and similar to 2002. A further 54 patients with ESKD received pre-emptive transplantation (transplantation as he first RRT modality); thus transplantation was the mode of RRT for 649 of 9,183 (6.6%) of patients who would have otherwise been managed with dialysis in 2004.

Of all patients in the 15-59 year age group who received dialysis treatment during 2004, 11.9% were transplanted in 2004, compared to 9.9% last year.

In New Zealand, 4.8% of all dialysed patients were transplanted in 2004, compared to 5.3% in 2003. In the 15-59 year age group 7.4% of those on dialysis were transplanted in 2004 (fig 8.4 and 8.5).

The rate of transplantation in Australia was the highest in the age group 0-4 years (40%) and 5-14 years of age (38.6%) and continued to decline with increasing age.

As in Australia, the rate of transplantation for New Zealand patients was highest among those less than 14 years old and declined with age thereafter (fig 8.6 and 8.7).

Figure 8.5

Ratio of Transplantation 2004
Related to Patients Dialysed*

Patients - Age Group 15-59 Years

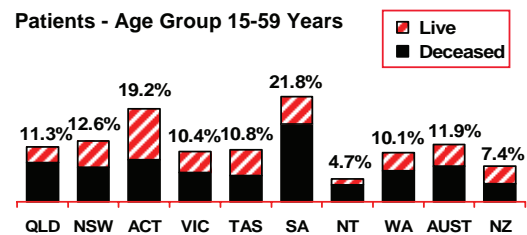


Figure 8.6

Ratio of Transplantation 2004
Related to Patients Dialysed*

Australia 6.6%

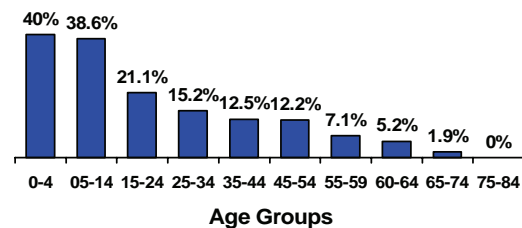
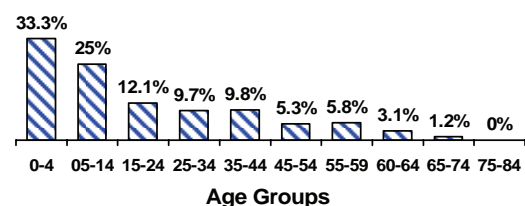


Figure 8.7

Ratio of Transplantation 2004
Related to Patients Dialysed*

New Zealand 4.8%





AGE OF RECIPIENTS TRANSPLANTED IN 2004

Figure 8.8

Graft Number and Age of Patients Transplanted 2004

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											
Deceased	1	-	6	14	45	66	118	81	32	-	362
	2	-	1	-	3	9	11	10	1	-	35
	3	-	-	1	3	3	-	-	-	-	7
	4	-	-	-	-	1	1	-	-	-	2
Live Donor	1	3	10	25	28	43	62	34	15	-	220
	2	1	-	1	6	5	5	-	-	-	18
	3	-	-	-	-	2	2	-	-	-	4
	4	-	-	1	-	-	-	-	-	-	1
Total		4	17	42	85	129	199	125	48	-	649
New Zealand											
Deceased	1	-	1	2	4	13	11	14	5	-	50
	2	-	-	1	-	-	4	2	-	-	7
Live Donor	1	1	1	6	10	11	8	10	1	-	48
Total		1	2	9	14	24	23	26	6	-	105

AUSTRALIA

The median age of transplant recipients in 2004 was 47.6 years, compared to 44.8 years in 2003. The age range was 2.9 to 74.8 years (fig 8.8 and 8.9).

Fifty one percent of recipients were in the 35-54 year age group. Twenty seven percent of recipients in 2004 were over 54 years of age, similar to 2003.

The transplantation rate per million for each age group and as a percentage of dialysed patients for each age group is shown in Figures 8.6 and 8.9.

NEW ZEALAND

The median age of transplant recipients in 2004 was 46.6 years compared to 43.4 years in 2003. The age range was 2.8 to 70.2 years (fig 8.7 and 8.10).

Recipients aged between 35 and 54 years comprised 45% of the total. Thirty percent of recipients were over 54 years of age in 2004.

Figure 8.9

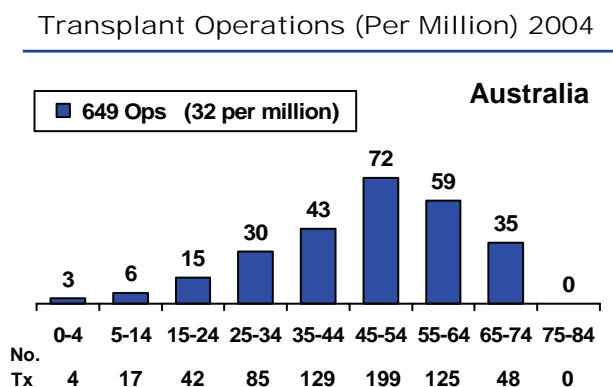
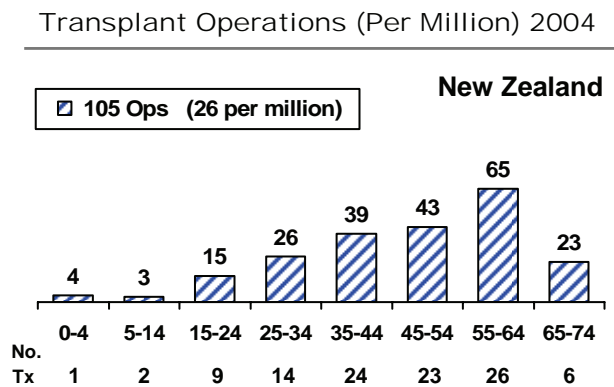


Figure 8.10



ETHNICITY OF TRANSPLANT RECIPIENTS

AUSTRALIA

Figures 8.11 and 8.13.

For the 15-59 year age group in 2004, 14.3% of dialysed Caucasoid patients were transplanted and 11.1% of Asians. For Australian Aboriginals and Torres Strait Islanders (ATSI), the transplant rate was 3.4% compared to 1.9% in 2003. This was the largest number of ATSI patients transplanted since 1998, however the number dialysed continues to increase each year.

Figure 8.11

Australia

 Transplantation Rate - Age Group 15-59 years
1995 - 2004

Year	Caucasoid			Aboriginal and Torres St. Islanders			All Patients		
	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate
1995	2320	316	13.6%	345	13	3.7%	2995	365	12.1%
1996	2448	358	14.6%	388	8	2.0%	3187	402	12.6%
1997	2527	359	14.2%	440	20	4.5%	3363	429	12.7%
1998	2655	357	13.4%	479	26	5.4%	3555	436	12.2%
1999	2746	322	11.7%	513	19	3.7%	3698	386	10.4%
2000	2869	388	13.5%	540	17	3.1%	3886	441	11.3%
2001	2947	391	13.2%	598	20	3.3%	4052	456	11.2%
2002	2975	443	14.8%	634	16	2.5%	4151	511	12.3%
2003	3013	364	12.1%	678	13	1.9%	4270	422	9.9%
2004	3081	441	14.3%	735	25	3.4%	4429	528	11.9%

Figure 8.12

New Zealand

Transplantation Rate - Age Group 15-59 years 1995 - 2004

Year	Caucasoid			Maori			Pacific Islander			All Patients		
	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate
1995	332	54	16.2%	240	11	4.5%	113	6	5.3%	725	78	10.7%
1996	348	58	16.6%	262	7	2.6%	128	7	5.4%	784	79	10.0%
1997	372	73	19.6%	279	9	3.2%	134	3	2.2%	829	91	10.9%
1998	372	60	16.1%	321	14	4.3%	151	7	4.6%	897	85	9.5%
1999	389	67	17.2%	318	16	5.0%	159	8	5.0%	928	98	10.5%
2000	401	68	17.0%	330	10	3.0%	184	4	2.1%	976	86	8.8%
2001	414	64	15.4%	360	13	3.6%	213	5	2.3%	1054	92	8.7%
2002	435	60	13.8%	383	11	2.8%	225	14	6.2%	1110	89	8.0%
2003	433	57	13.2%	406	15	3.7%	227	12	5.3%	1140	92	8.1%
2004	440	57	12.9%	417	9	2.1%	227	11	4.8%	1162	86	7.4%

NEW ZEALAND

Figures 8.12 and 8.13.

Amongst the 15-59 year age group, the proportion of Maori and Pacific People who received a renal transplant in 2004 was 2.1% and 4.8% respectively, compared with 12.9% for Caucasoid dialysis patients.

Figure 8.13

 New Transplanted Patients 2000 - 2004
Related to Ethnicity

Race	2000	2001	2002	2003	2004
Australia	(531)	(541)	(604)	(543)	(649)
Caucasoid	465 (88%)	469 (87%)	529 (88%)	473 (87%)	548 (84%)
Aboriginal/Torres St. Isl.	18 (3%)	21 (4%)	17 (3%)	14 (3%)	26 (4%)
Asian	37 (7%)	33 (6%)	45 (7%)	42 (7%)	56 (9%)
Other	11 (2%)	18 (3%)	13 (2%)	14 (3%)	19 (3%)
New Zealand	(106)	(110)	(117)	(111)	(105)
Caucasoid	81 (76%)	79 (72%)	83 (71%)	72 (65%)	72 (69%)
Maori	13 (12%)	15 (14%)	13 (11%)	16 (14%)	12 (11%)
Pacific Islander	4 (4%)	6 (5%)	15 (13%)	14 (13%)	12 (11%)
Asian	8 (8%)	10 (9%)	5 (4%)	9 (8%)	6 (6%)
Other	-	-	1 (1%)	-	3 (3%)



AUSTRALIAN REGIONAL TRANSPLANTATION ACTIVITY 2005

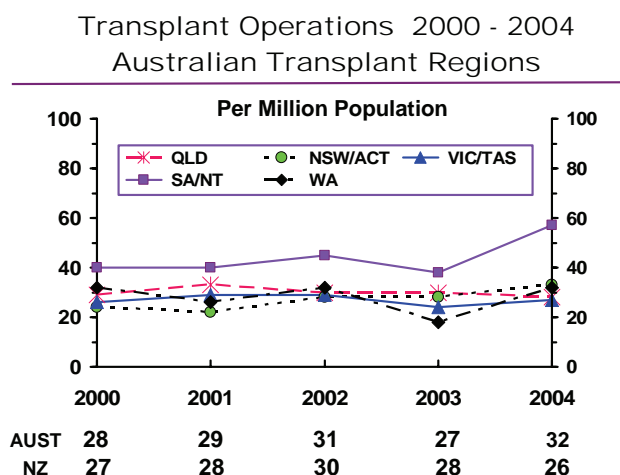
Figure 8.14

Transplants in each Region 2000 - 2004
Number of Operations
(per Million Population per year)

State	2000	2001	2002	2003	2004
Queensland	105 (29)	121 (33)	111 (30)	114 (30)	108 (28)
New South Wales/ACT *	162 (24)	146 (22)	198 (28)	198 (28)	230 (33)
Victoria/Tasmania *	136 (26)	155 (29)	157 (29)	129 (24)	150 (27)
South Australia/NT *	68 (40)	69 (40)	77 (45)	66 (38)	98 (57)
Western Australia	60 (32)	50 (26)	61 (32)	36 (18)	63 (32)
Australia	531 (28)	541 (28)	604 (31)	543 (27)	649 (32)

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

Figure 8.15



The rate of transplantation for each transplant region is shown in Figures 8.14 and 8.15.

Transplants performed for people resident in Tasmania and the Northern Territory patients are included in figures for Victoria and South Australia respectively. These regions share common waiting lists and allocation protocols.

The South Australia/Northern Territory region continued to have the highest transplant rate (57 per million) in 2004.

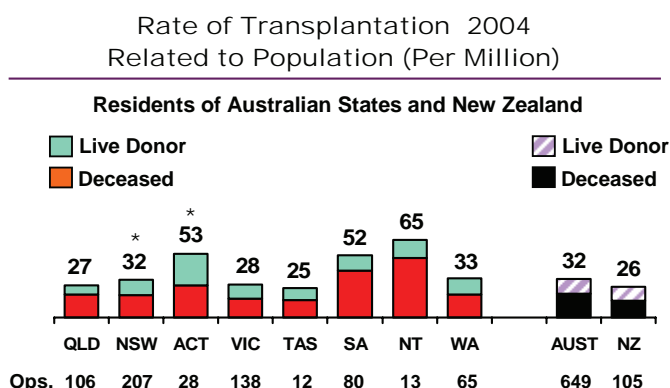
The transplant rate for residents of each State and the Northern Territory is shown in Figure 8.16.

The transplant rate increased in six States and decreased only in Queensland and Tasmania.

The highest rate occurred in the Northern Territory (65 per million), followed by the ACT (53 per million) and South Australia (52 per million).

The lowest rate (25 per million) was in Tasmania.

Figure 8.16



* 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

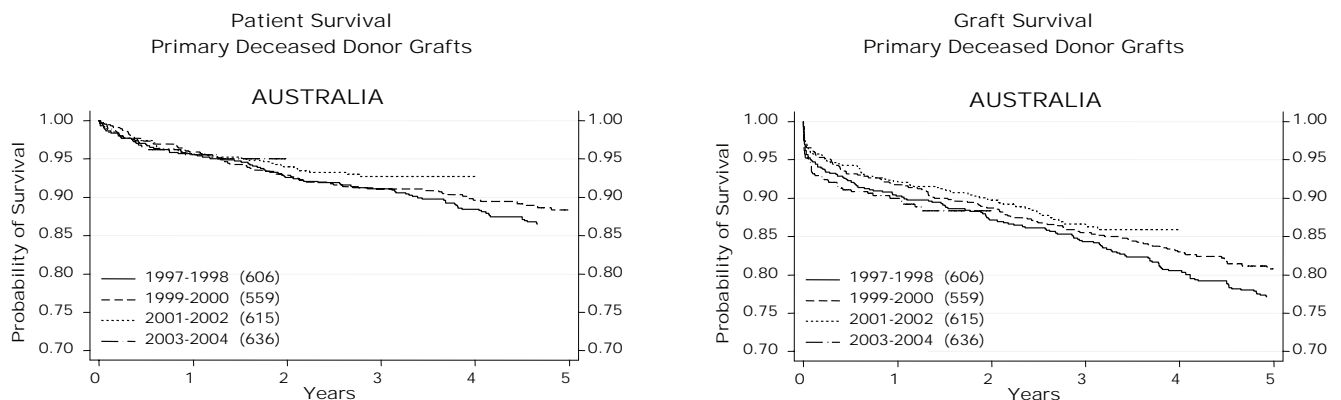
TRANSPLANT SURVIVAL - PRIMARY DECEASED DONOR GRAFTS

AUSTRALIA

Graft and patient survival for primary deceased donor grafts performed in Australia is shown in Fig 8.17. Both have shown gradual improvement over the past decade, and one year graft survival for this group is now consistently over 90%. Kaplan-Meier graphs illustrating this are shown in Figure 8.18.

Figure 8.17					
Primary Deceased Donor Recipient and Graft Survival 1991 - 2004 % [95% Confidence Interval]					
Year of Transplant	No. of Patients	Survival			
		1 month	6 months	1 year	5 years
Recipient Survival					
1991-1992	655	99 [98, 100]	95 [93, 96]	93 [91, 94]	84 [81, 87]
1993-1994	609	99 [97, 100]	96 [94, 97]	95 [93, 97]	85 [82, 88]
1995-1996	601	99 [98, 100]	96 [94, 97]	95 [93, 97]	88 [85, 90]
1997-1998	606	99 [97, 100]	97 [95, 98]	96 [94, 97]	86 [83, 89]
1999-2000	559	99 [98, 100]	97 [96, 98]	96 [94, 97]	-
2001-2002	615	99 [98, 100]	97 [96, 98]	96 [94, 97]	-
2003-2004	636	99 [98, 100]	96 [94, 98]	96 [93, 97]	-
Graft Survival					
1991-1992	655	91 [89, 93]	87 [84, 89]	85 [82, 87]	72 [68, 75]
1993-1994	609	93 [91, 95]	89 [86, 91]	88 [85, 90]	73 [69, 76]
1995-1996	601	95 [92, 96]	90 [88, 92]	89 [86, 91]	78 [74, 81]
1997-1998	606	95 [93, 97]	92 [90, 94]	90 [88, 92]	77 [73, 80]
1999-2000	559	96 [95, 98]	93 [91, 95]	92 [89, 94]	-
2001-2002	615	96 [94, 97]	94 [92, 96]	92 [90, 94]	-
2003-2004	636	94 [92, 95]	91 [89, 93]	90 [87, 92]	-

Figure 8.18





TRANSPLANT SURVIVAL - PRIMARY DECEASED DONOR GRAFTS

NEW ZEALAND

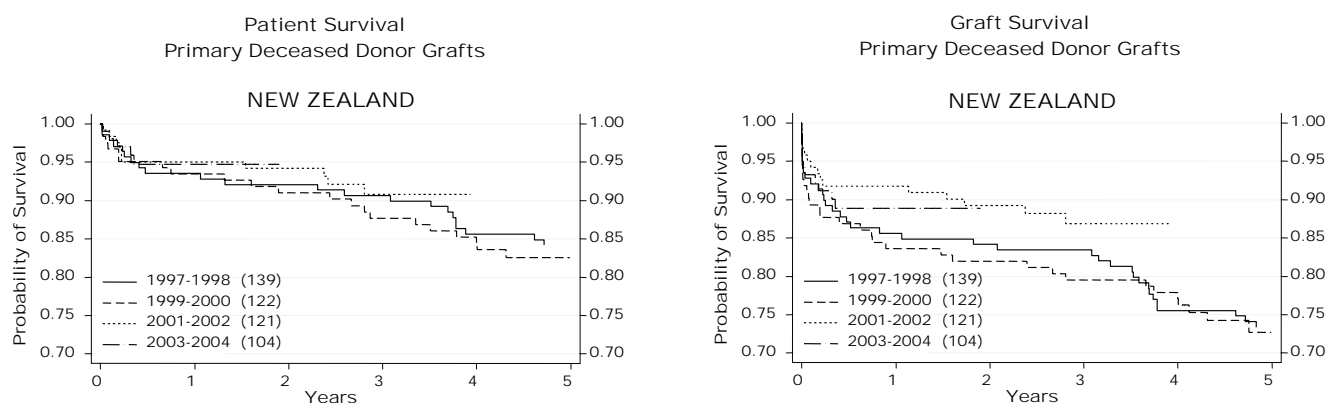
Graft and patient survival for primary deceased donor grafts performed in New Zealand is shown in Fig 8.19. Like Australia, there has been a progressive improvement over the past decade. Figure 8.20 presents these as Kaplan-Meier curves.

Figure 8.19

**Primary Deceased Donor
Recipient and Graft Survival 1991 - 2004**
% [95% Confidence Interval]

Year of Transplant	No. of Patients	Survival			
		1 month	6 months	1 year	5 years
Recipient Survival					
1991-1992	140	99 [95, 100]	95 [91, 98]	94 [88, 97]	81 [73, 87]
1993-1994	104	96 [90, 99]	88 [81, 93]	86 [77, 91]	78 [69, 85]
1995-1996	126	98 [94, 99]	94 [88, 97]	92 [87, 96]	86 [78, 91]
1997-1998	139	99 [94, 100]	94 [88, 97]	94 [88, 97]	84 [77, 89]
1999-2000	122	97 [92, 99]	95 [89, 98]	93 [87, 97]	-
2001-2002	121	99 [94, 100]	95 [89, 98]	95 [89, 98]	-
2003-2004	104	99 [93, 100]	95 [88, 98]	95 [88, 98]	-
Graft Survival					
1991-1992	140	90 [84, 94]	83 [76, 88]	80 [73, 86]	69 [61, 76]
1993-1994	104	83 [74, 89]	78 [69, 85]	74 [65, 81]	60 [50, 68]
1995-1996	126	91 [85, 95]	88 [81, 93]	84 [76, 89]	72 [64, 79]
1997-1998	139	93 [87, 96]	87 [80, 92]	86 [79, 90]	73 [65, 80]
1999-2000	122	89 [82, 94]	87 [79, 92]	84 [76, 89]	-
2001-2002	121	95 [89, 98]	92 [85, 95]	92 [85, 95]	-
2003-2004	104	93 [86, 97]	89 [81, 94]	89 [81, 94]	-

Figure 8.20



AUSTRALIAN TRANSPLANT SURVIVAL

Patient and graft survivals for second or subsequent deceased donor grafts are shown in three year cohorts, 1990-1992, 1993-1995, 1996-1998, 1999-2001 and 2002-2004 (fig 8.21). As expected, graft survival is slightly worse than for primary grafts. Again, Kaplan-Meier graphs are shown in Figure 8.22.

Figure 8.21

Second and Subsequent Deceased Donor Recipient and Graft Survival 1991 - 2004
% [95% Confidence Interval]

Year of Transplant	No. of Patients	Survival			
		1 month	6 months	1 year	5 years
Recipient Survival					
1990-1992	194	99 [96, 100]	95 [91, 97]	94 [89, 96]	83 [77, 88]
1993-1995	179	98 [95, 99]	97 [93, 99]	95 [91, 97]	87 [81, 91]
1996-1998	158	100 [- , -]	97 [92, 98]	96 [92, 98]	85 [79, 90]
1999-2001	116	98 [93, 99]	96 [90, 98]	95 [89, 98]	-
2002-2004	143	99 [95, 100]	96 [91, 98]	91 [85, 95]	-
Graft Survival					
1990-1992	194	85 [77, 89]	80 [74, 85]	78 [72, 84]	63 [56, 69]
1993-1995	179	84 [78, 89]	85 [75, 87]	80 [73, 85]	67 [60, 73]
1996-1998	158	91 [86, 95]	87 [80, 91]	84 [77, 88]	70 [62, 76]
1999-2001	116	91 [85, 95]	86 [78, 91]	84 [77, 90]	-
2002-2004	143	92 [86, 96]	90 [84, 94]	85 [77, 90]	-

Figure 8.22





LIVE DONOR TRANSPLANTS

Figure 8.23

Live Donor Operations as a Proportion (%) of Annual Transplantation 2000 - 2004

Recipient Age Groups	Year of Transplantation				
	2000	2001	2002	2003	2004
00-04 years	83%	86%	80%	78%	100%
05-14 years	63%	75%	50%	50%	59%
15-24 years	65%	68%	54%	62%	64%
25-34 years	38%	37%	56%	44%	40%
35-44 years	35%	37%	31%	38%	39%
45-54 years	25%	40%	30%	34%	35%
55-64 years	23%	27%	33%	33%	27%
65-74 years	25%	33%	30%	37%	31%
75-84 years	0%	0%	0%	100%	0%
All Recipients	34%	39%	38%	40%	37%

Figure 8.24

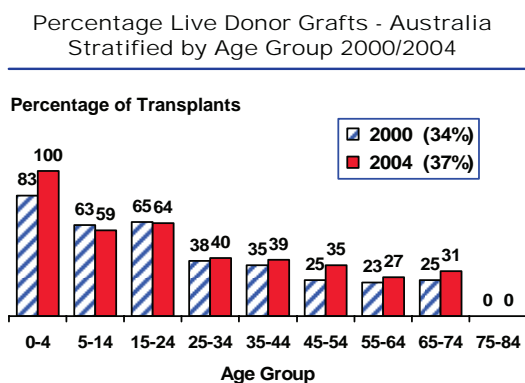
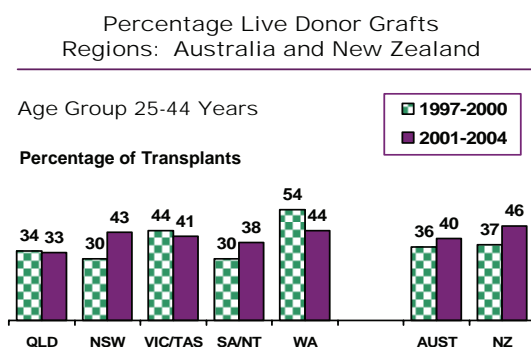


Figure 8.25



AUSTRALIA

Two hundred and forty three Live Donor (LD) kidney transplants were performed in 2004 in Australia, representing 37% of all transplant operations. This proportion has remained relatively steady for the past four years (fig 8.2 and 8.23).

The overall number of live donor transplants increased by 11%, the highest number ever done, but there was also an increase in deceased donors of 25% for 2004.

Figure 8.24 shows the age-related proportion of live donor transplants for the years 2000 and 2004. The overall proportion of live donors continued to increase in most age groups except for the groups 25-34 and 55-74 years. There were 15 recipients (31%) of live donors in the 65-74 year group.

The proportion of live donor transplants for each State and New Zealand for recipients aged 25-44 years is shown in Figure 8.25 for the years 1997-2000 and 2001-2004. There has been an increase in New Zealand in this age group for the years 2001-2004.

The proportion of genetically unrelated donors was 32% in 2004. Fifty three percent of live unrelated donors were spouses. The number of related donors increased 15% (165 donors) (fig 8.27 and 8.29), continuing a trend of recent years.

NEW ZEALAND

The rate of live donor transplantation has increased in New Zealand (fig 8.23), as has the proportion of living unrelated donor transplants (fig 8.26 and 8.29).

Forty six percent of grafts were from a live donor (40% in 2003 and 41% in 2002). There were 18 live unrelated donors (38% of live donors). Spouses accounted for 50% of all unrelated live donors in 2004 (fig 8.25).

TIMING OF LIVE DONOR TRANSPLANTS

The timing of live donor transplants is shown in Figure 8.26.

The proportion of preemptive live donor transplants in Australia was 23% of all live donor transplantation, similar to 2003. Forty five percent were waiting for twelve months or longer post dialysis.

The proportion of pre-emptive live donor transplants in New Zealand was 21% in 2004, a further decrease from previous years. Fifty percent were waiting for twelve months or longer after the start of dialysis.

Figure 8.26

Timing of Live Donor Transplantation
for Primary Grafts in Relation to
Date of Dialysis Start by Year of Transplant
2000 - 2004

		2000	2001	2002	2003	2004
Aust	Pre-dialysis	36 (22%)	43 (22%)	55 (26%)	50 (25%)	51 (23%)
	<1 month post dialysis	11 (7%)	7 (4%)	5 (2%)	5 (2%)	8 (4%)
	1-11.9 months post dialysis	52 (31%)	69 (35%)	68 (32%)	59 (30%)	62 (28%)
	>=12 months post dialysis	66 (40%)	80 (40%)	83 (39%)	84 (42%)	99 (45%)
NZ	Pre-dialysis	14 (50%)	10 (26%)	12 (27%)	9 (22%)	10 (21%)
	<1 month post dialysis	-	1 (3%)	-	-	2 (4%)
	1-11.9 months post dialysis	9 (32%)	17 (43%)	12 (27%)	15 (38%)	12 (25%)
	>=12 months post dialysis	5 (18%)	11 (28%)	20 (46%)	16 (40%)	24 (50%)

Figure 8.27

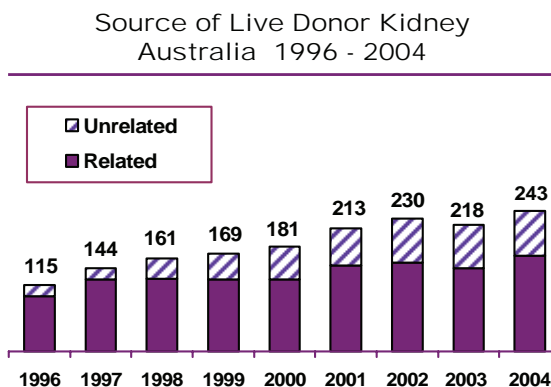


Figure 8.28

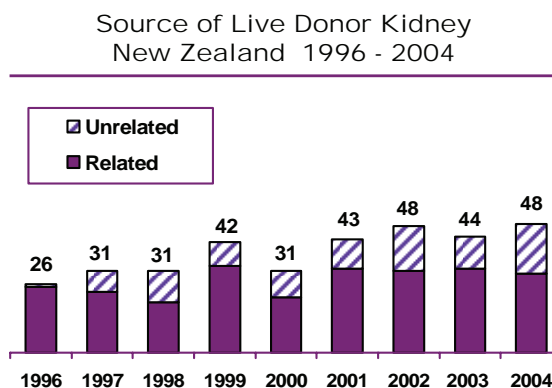




Figure 8.29

Source of Live Donor Kidneys 2000 - 2004
(x = identical twin) (+ = non identical twin)

Source	Australia					New Zealand				
	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004
Total Live Donors	181	213	230	218	243	31	43	48	44	48
Related	(125)	(149)	(153)	(144)	(165)	(21)	(32)	(31)	(32)	(30)
Mother	40	34	47	40	44	4	9	7	13	4
Father	35	39	19	30	24	1	7	6	4	5
Brother	15 (1x)	32 (1x)	33	23 (1x)	38	6 (1x)	4	5	3	6
Sister	23	25 (1x)	37 (1X)	30 (1X)	32 (1+)	10	8	7	7	9
Offspring	8	9	5	10	14	-	4	3	4	3
Grandfather	1	2	-	1	4	-	-	-	-	-
Grandmother	-	1	3	-	-	-	-	-	-	-
Cousin	2	5	4	4	4	-	-	1	-	1
Nephew	-	-	1	2	1	-	-	-	1	-
Niece	-	-	-	2	-	-	-	1	-	-
Uncle	-	-	1	1	3	-	-	-	-	1
Aunt	1	2	3	1	1	-	-	1	-	1
Unrelated	(56)	(64)	(77)	(74)	(78)	(10)	(11)	(17)	(12)	(18)
Wife	30	21	31	25	28	5	5	6	2	6
Husband	15	23	18	19	13	3	1	3	6	3
Mother-in-Law	1	-	2	-	-	-	-	-	-	-
Father-in-Law	-	-	-	1	-	-	-	-	-	-
Adoptive Mother	-	-	-	-	-	-	-	1	-	-
Adoptive Father	-	1	-	-	-	-	-	-	-	-
Son-in-Law	-	-	-	-	1	-	-	-	-	-
Stepfather	-	2	2	1	1	-	-	-	-	-
Stepmother	-	-	-	1	-	-	-	-	-	-
Sister-in-Law	-	1	-	2	4	-	-	-	-	-
Brother-in-Law	-	1	1	1	1	-	-	-	-	-
Partner	1	4	4	3	2	-	-	-	-	-
Friend	5	9	11	18	19	2	4	6	4	5
Aunt	1	-	1	-	-	-	-	-	-	-
Adopted Sister	-	-	1	-	-	-	-	-	-	-
Stepsister	-	-	1	-	-	-	-	-	-	-
Stepson	-	-	1	1	-	-	-	-	-	-
Other	3	2	4	2	9	-	1	1	-	4

For primary live donor graft recipients in Australia, excellent early survival rates have been evident since 1991, however five year patient survival has progressively improved to 97 [90-96]% for the 1999-2000 cohort (fig 8.30).

Parallel improvement in graft survival is also evident, improving from 76 [68-83]% to 86 [82-90]% from 1991-1992 to 1999-2000. This is reassuring given the increased rates of live donor transplantation and corresponding increase in performing less ideal live donor transplants (particularly older donors and recipients and more live unrelated donor transplants (fig 8.8 and 8.23)).

Current patient and graft survival for primary live donor recipients in New Zealand are not different to Australia, indicating excellent outcomes for both countries.

Figure 8.30

Primary Live Donor Recipient and Graft Survival 1991 - 2004 % [95% Confidence Interval]					
Year of Transplant	No. of Patients	AUSTRALIA			
		Survival			
		1 month	6 months	1 year	5 years
Recipient Survival					
1991-1992	135	99 [95, 100]	99 [94, 100]	99 [94, 100]	86 [79, 91]
1993-1994	160	100 [-, -]	99 [95, 100]	98 [94, 99]	94 [89, 97]
1995-1996	186	100 [-, -]	98 [95, 99]	97 [94, 99]	94 [90, 97]
1997-1998	284	100 [-, -]	99 [96, 99]	98 [96, 99]	96 [94, 98]
1999-2000	320	99 [98, 100]	98 [96, 99]	98 [96, 99]	97 [90, 96]
2001-2002	410	100 [98, 100]	99 [97, 100]	99 [97, 100]	-
2003-2004	418	100 [98, 100]	99 [97, 100]	-	-
Graft Survival					
1991-1992	135	96 [90, 98]	93 [88, 96]	92 [86, 95]	76 [68, 83]
1993-1994	160	97 [93, 99]	96 [91, 98]	95 [90, 97]	85 [78, 90]
1995-1996	186	93 [88, 96]	91 [86, 94]	90 [84, 93]	85 [79, 89]
1997-1998	284	98 [96, 99]	97 [94, 98]	96 [93, 98]	87 [83, 91]
1999-2000	320	97 [94, 98]	95 [92, 97]	94 [91, 96]	86 [82, 90]
2001-2002	410	98 [96, 99]	96 [94, 98]	96 [93, 97]	-
2003-2004	418	99 [97, 100]	97 [95, 99]	-	-

Figure 8.31

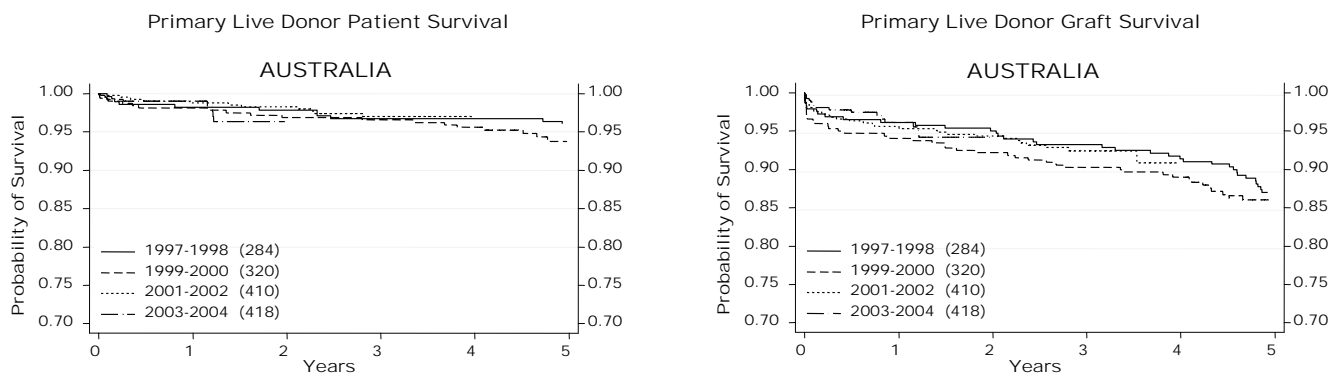


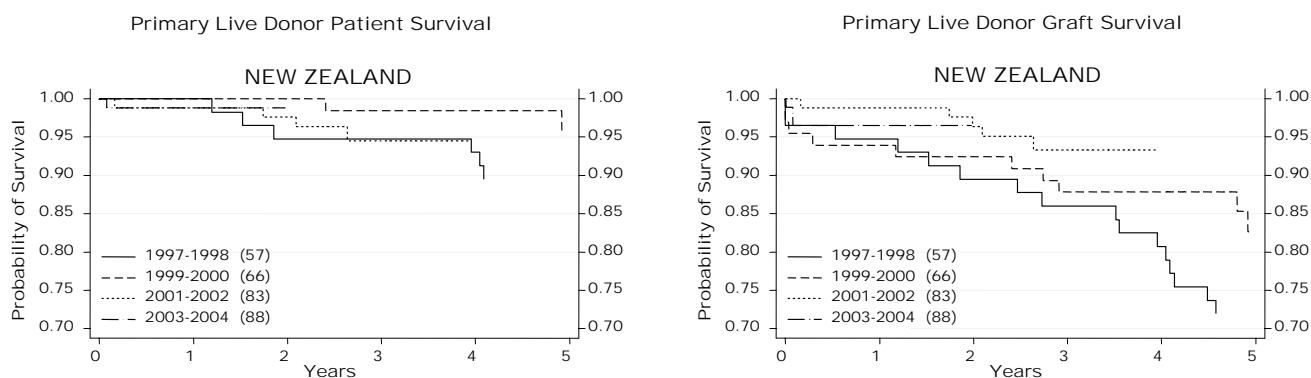


Figure 8.32

**Primary Live Donor
Recipient and Graft Survival 1991 - 2004**
% [95% Confidence Interval]

Year of Transplant	No. of Patients	NEW ZEALAND			
		Survival			
		1 month	6 months	1 year	5 years
Recipient Survival					
1991-1992	27	100 [-, -]	96 [76, 99]	96 [76, 99]	96 [76, 99]
1993-1994	35	100 [-, -]	100 [-, -]	97 [81, 100]	88 [72, 95]
1995-1996	46	100 [-, -]	100 [-, -]	100 [-, -]	91 [78, 97]
1997-1998	57	100 [-, -]	100 [-, -]	100 [-, -]	89 [78, 95]
1999-2000	66	100 [-, -]	100 [-, -]	100 [-, -]	96 [83, 99]
2001-2002	83	100 [-, -]	99 [92, 100]	99 [92, 100]	-
2003-2004	88	99 [92, 100]	99 [92, 100]	-	-
Graft Survival					
1991-1992	27	96 [76, 99]	93 [74, 98]	93 [74, 98]	81 [61, 92]
1993-1994	35	91 [76, 97]	89 [72, 96]	89 [72, 96]	74 [56, 86]
1995-1996	46	98 [86, 99]	98 [86, 99]	98 [86, 99]	76 [61, 86]
1997-1998	57	96 [87, 99]	96 [87, 99]	95 [85, 98]	72 [58, 82]
1999-2000	66	95 [87, 99]	94 [85, 98]	94 [85, 98]	83 [69, 90]
2001-2002	83	100 [-, -]	99 [92, 100]	99 [92, 100]	-
2003-2004	88	97 [90, 99]	97 [90, 99]	-	-

Figure 8.33



FUNCTIONING TRANSPLANTS AT 31ST DECEMBER 2004 TRANSPLANT OPERATIONS 1963 - 2004

AUSTRALIA

There have been 14,722 transplant operations performed on 12,615 patients since 1963. Of these, 6,269 grafts were functioning at 31st December 2004 (312 per million population). Fourteen percent of operations and 12% of functioning grafts were regrafts. Live donor transplants accounted for 18% of operations and 30% of functioning grafts (fig 8.34). 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 2004 is a 5% increase over the previous year. The annual rate of increase has remained steady (fig 8.36 and 8.37). Eighty eight percent of the functioning grafts were primary, and 70% were from deceased donors. The number of functioning grafts from live donors increased by 11% from 2003 to 2004, a similar rise as seen in previous years.

The prevalence of functioning grafts in each State is shown in Figures 8.36 and 8.37. South Australia/Northern Territory has the highest prevalence of functioning renal transplants (453 per million). The lowest prevalence was in Western Australia (281 per million) an increase from (269 per million) in 2003. Patients with functioning grafts numbered in excess of those dependent on dialysis in South Australia only (Appendix I).

The age relationship of functioning transplants as a proportion of patients on renal replacement therapy is shown in Figure 8.39. The proportion depending on live donor grafts is greater in the younger age groups (fig 8.39 and 8.41).

The modal age group for transplant dependent patients was 45-54 years and the mean and median ages were 49.3 and 50.4 years respectively (fig 8.41 and 8.42). The modal age group for live donor recipients was 45-54 years and 54% of recipients dependent on live donor grafts were less than 45 years of age. The majority of recipients with functioning

grafts were male (59%). The ethnic origin of people was Caucasoid 89%, Asian 7%, Aboriginal and Torres Strait Islanders 2% and Others 2% (fig 8.44).

The 6,269 grafts functioning at the end of 2004 represent 43% of all kidneys transplanted since 1963. Thirty three percent of grafts were functioning ten or more years and 8% for 20 or more years. There are now 84 recipients with grafts functioning 30 years or longer. The longest graft had functioned for 38 years and 2 months as at 31st December, 2004.

Figure 8.34

Summary of Renal Transplantation Australia 1963 - 2004			
		Performed	Functioning *
Deceased Donor	First	10,185	3,824
	Second	1,579	481
	Third	241	66
	Fourth	35	14
	Fifth	2	1
	Total	12,042	4,386
Live Donor	First	2,430	1,721
	Second	212	137
	Third	31	20
	Fourth	6	5
	Fifth	1	-
	Total	2,680	1,883
Total	14,722	6,269	

* Lost to follow up not included

NEW ZEALAND

There have been 2,967 operations performed on 2,469 patients since 1965 with 1,224 grafts (301 per million) still functioning at 31st December 2004 (fig 8.35). This represents a 5% increase. Seventeen percent of operations and 11% of functioning grafts were regrafts. Kidneys from live donors accounted for 21% of operations and 32% of functioning grafts.

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

The age relationship and donor source are shown in Figure 8.41. The majority were male (58%) and the racial distribution was Caucasoid 78%, Maori 9%, Pacific People 6% and Asian 7% (fig 8.44).

The majority (70%) of functioning grafts were in the 35-64 year age group and the mean and median ages were 48.3 and 49.1 years respectively. The modal age group for live donors was 35-44 years (fig 8.41).

The 1,224 grafts functioning at the end of 2004 represent 41% of all kidneys transplanted since 1965. The longest surviving graft has reached 35 years and 1 month as at 31st December 2004. Ninety four grafts have been functioning for 20 or more years and nine for 30 or more years (fig 8.46).

Figure 8.35

Summary of Renal Transplantation New Zealand 1965 - 2004			
		Performed	Functioning *
Deceased Donor	First	1,898	720
	Second	366	90
	Third	71	19
	Fourth	6	-
	Total	2,341	829
Live Donor	First	571	366
	Second	51	27
	Third	4	2
	Total	626	395
Total	2,967	1,224	

* Lost to follow up not included



Figure 8.36

Functioning Transplants Transplanting Region, Australia and New Zealand 1993 - 2004 (Number Per Million Population)

Year	QLD	NSW/ACT *	VIC/TAS *	SA/NT *	WA	AUST	NZ
1993	739 (238)	1357 (215)	1032 (209)	425 (261)	316 (188)	3869 (219)	706 (198)
1994	786 (247)	1416 (223)	1055 (213)	459 (280)	342 (201)	4058 (227)	732 (202)
1995	813 (249)	1480 (230)	1098 (220)	478 (290)	358 (206)	4227 (234)	784 (213)
1996	848 (254)	1549 (234)	1161 (231)	515 (311)	363 (206)	4436 (242)	825 (221)
1997	901 (265)	1637 (249)	1226 (241)	540 (324)	377 (210)	4681 (253)	883 (233)
1998	943 (274)	1681 (253)	1294 (253)	583 (347)	396 (217)	4897 (262)	937 (246)
1999	957 (273)	1717 (255)	1336 (259)	622 (368)	432 (234)	5064 (268)	986 (257)
2000	1004 (282)	1762 (259)	1385 (266)	642 (378)	468 (250)	5261 (275)	1024 (265)
2001	1062 (293)	1793 (260)	1451 (275)	667 (390)	493 (259)	5466 (282)	1063 (271)
2002	1105 (298)	1878 (270)	1533 (288)	700 (408)	524 (272)	5740 (292)	1116 (283)
2003	1145 (302)	1982 (283)	1575 (292)	735 (426)	525 (269)	5962 (300)	1168 (291)
2004	1183 (305)	2095 (297)	1649 (302)	785 (453)	557 (281)	6269 (312)	1224 (301)

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

Figure 8.37

Functioning Transplants by Region 1999 - 2004

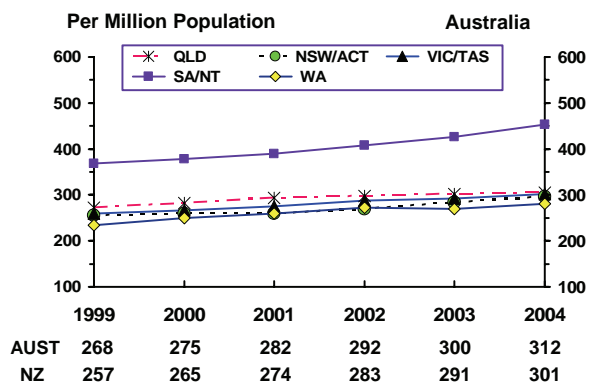


Figure 8.39

Prevalence of Functioning Transplants as Mode of RRT By Age Group Australia 2004

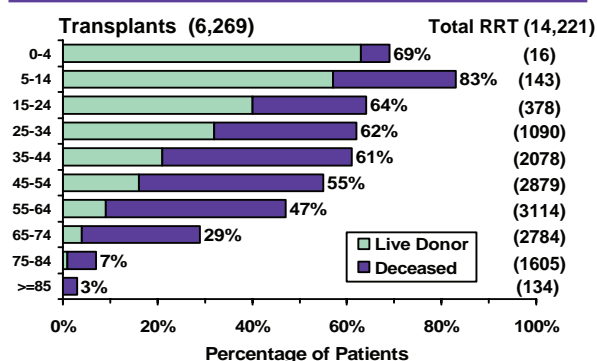


Figure 8.38

Prevalence of Functioning Transplants (Per Million Population) 31-Dec-2004

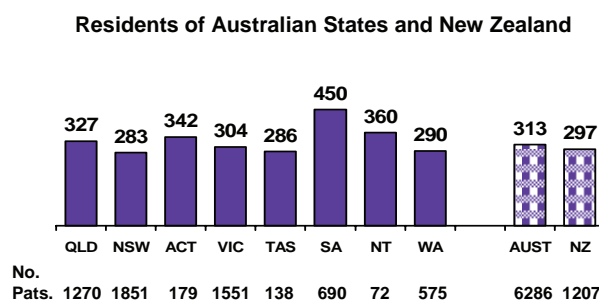


Figure 8.40

Prevalence of Functioning Transplants as Mode of RRT By Age Group New Zealand 2004

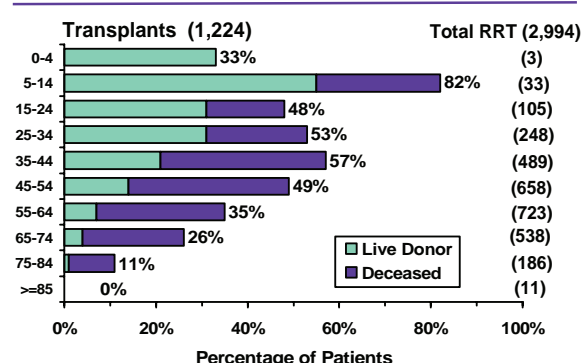


Figure 8.41

Age of All Functioning Transplant Patients
Resident Country at Transplant 31-Dec-2004

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		11	118	242	676	1273	1583	1455	797	110	4	6269
Deceased Donor	1	1	32	81	271	697	974	1035	632	97	4	3824
	2	-	4	7	43	122	134	120	44	7	-	481
	3	-	1	1	11	18	16	15	4	-	-	66
	4	-	-	-	2	5	5	1	1	-	-	14
	5	-	-	-	-	-	1	-	-	-	-	1
	Total	1	37	89	327	842	1130	1171	681	104	4	4386
Live Donor	1	9	81	143	315	380	408	268	111	6	-	1721
	2	1	-	9	32	41	38	11	5	-	-	137
	3	-	-	1	-	8	6	5	-	-	-	20
	4	-	-	-	2	2	1	-	-	-	-	5
	Total	10	81	153	349	431	453	284	116	6	-	1883
New Zealand		1	27	50	132	280	322	252	139	21	-	1224
Deceased Donor	1	-	8	14	44	146	190	181	119	18	-	720
	2	-	1	4	10	26	30	16	1	2	-	90
	3	-	-	-	1	4	9	5	-	-	-	19
	Total	-	9	18	55	176	229	202	120	20	-	829
Live Donor	1	1	18	32	68	96	82	49	19	1	-	366
	2	-	-	-	9	7	10	1	-	-	-	27
	3	-	-	-	-	1	1	-	-	-	-	2
	Total	1	18	32	77	104	93	50	19	1	-	395

Figure 8.42

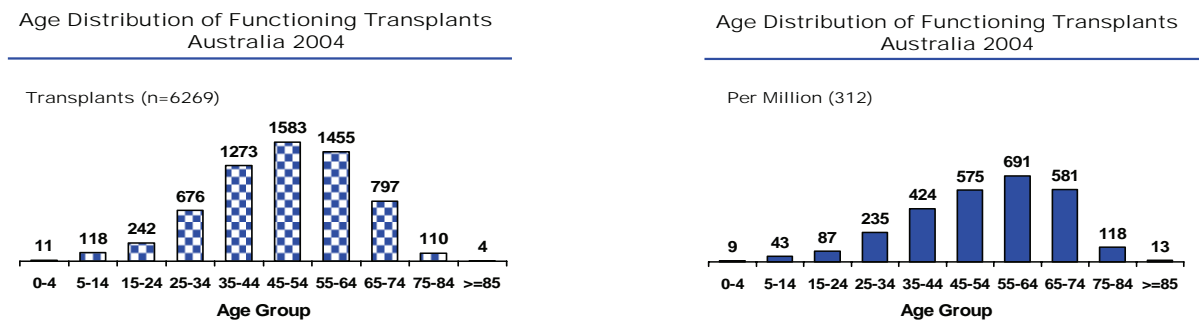


Figure 8.43

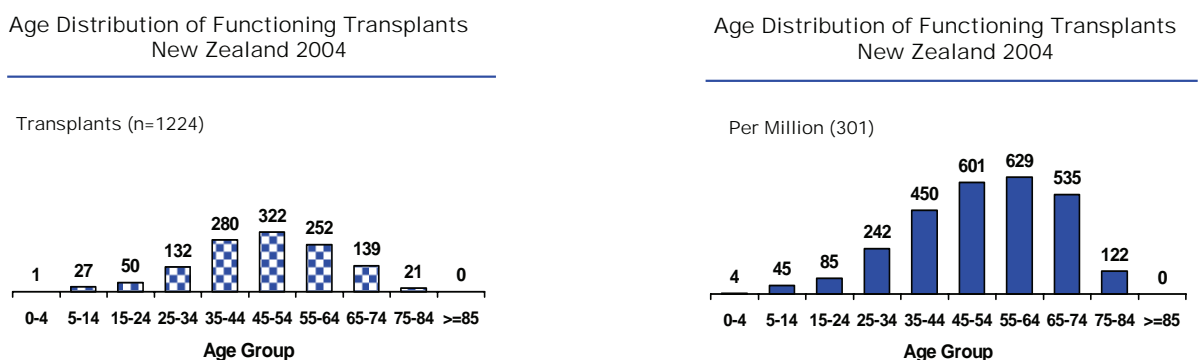




Figure 8.44

Functioning Transplant Patients - Resident Country at Transplant
Related to Ethnicity and Age Group 31-Dec-2004

Sex	Racial Origin	Prevalent Age Groups										Total
		00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-94	
Australia		11	118	242	676	1273	1583	1455	797	110	4	6269
Female	Caucasoid	2	35	85	246	437	558	488	358	54	1	2264
	Aboriginal/TSI	-	2	2	4	17	15	7	1	-	-	48
	Asian	-	2	5	22	39	63	37	16	-	-	184
	Other	-	4	2	8	14	13	11	8	-	-	60
	Total	2	43	94	280	507	649	543	383	54	1	2556
Male	Caucasoid	8	66	133	349	704	816	823	381	55	3	3338
	Aboriginal/TSI	-	1	2	7	13	28	22	6	-	-	79
	Asian	1	7	8	28	41	74	49	22	1	-	231
	Other	-	1	5	12	8	16	18	5	-	-	65
	Total	9	75	148	396	766	934	912	414	56	3	3713
New Zealand		1	27	50	132	280	322	252	139	21	-	1224
Female	Caucasoid	-	12	15	43	85	99	84	49	11	-	398
	Maori	-	1	3	7	11	9	9	5	1	-	46
	Pacific People	-	-	7	5	9	7	3	1	-	-	32
	Asian	-	1	1	1	13	9	7	2	-	-	34
	Total	-	14	26	56	118	124	103	57	12	-	510
Male	Caucasoid	1	10	18	60	134	147	108	68	8	-	554
	Maori	-	1	1	5	12	23	20	7	1	-	70
	Pacific People	-	2	-	8	6	10	9	3	-	-	38
	Asian	-	-	5	2	8	16	11	4	-	-	46
	Total	-	-	-	1	2	2	1	-	-	-	6

2

Figure 8.45

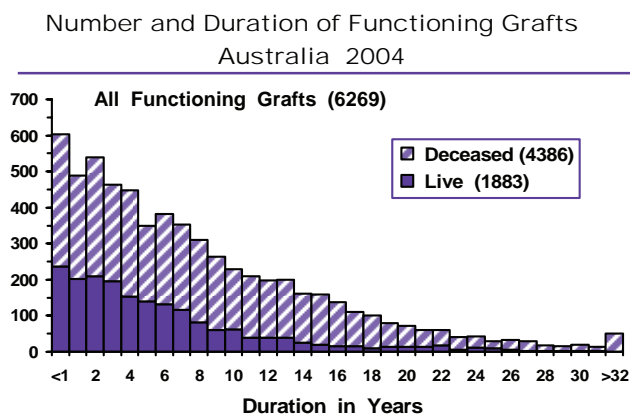
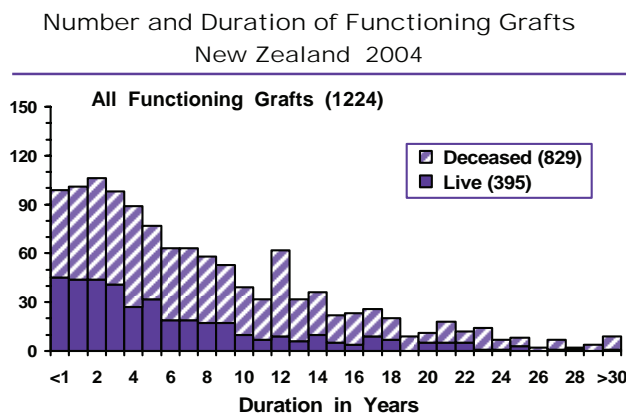


Figure 8.46



RATES OF GRAFT LOSS

The rates of graft failure increased in Australia in 2004 to 3.2% from 2.7% the previous year, while death decreased to 1.9% of those at risk (fig 8.47).

The rates of graft failure and death in New Zealand decreased further in 2004, 1.8% and 2.0% respectively (fig. 8.48).

The cause of graft failure from 1995 to 2004 is shown in Figure 8.48 .

Chronic allograft nephropathy, particularly in Australia, and death with function remain the key impediments to long term graft survival. While the rate of death with function has been falling, rates of graft failure have been steady in Australia (fig 8.47). The importance of chronic allograft rejection, recurrence of primary disease and death with function as causes of graft loss after one year is evident in Figure 8.49.

Figure 8.47					
Graft Loss Rate 2000 - 2004					
% [95% Confidence Interval]					
	2000	2001	2002	2003	2004
Australia	(5995)	(5802)	(6070)	(6283)	(6611)
Graft Failure	2.7 [2.3, 3.2]	2.8 [2.4, 3.3]	2.9 [2.5, 3.4]	2.7 [2.3, 3.1]	3.2 [2.8, 3.7]
Death with Function	3.0 [2.5, 3.5]	2.6 [2.2, 3.1]	2.2 [1.9, 2.7]	2.2 [1.8, 2.6]	1.9 [1.5, 2.2]
All Losses	5.7 [5.1, 6.4]	5.4 [4.8, 6.1]	5.2 [4.6, 5.8]	4.9 [4.4, 5.5]	5.1 [4.6, 5.7]
New Zealand	(1092)	(1134)	(1180)	(1227)	(1273)
Graft Failure	3.5 [2.5, 4.8]	3.8 [2.7, 5.1]	2.7 [1.9, 3.8]	2.5 [1.7, 3.6]	1.8 [1.1, 2.7]
Death with Function	2.6 [1.7, 3.7]	2.2 [1.4, 3.3]	2.7 [1.9, 3.8]	2.1 [1.4, 3.1]	2.0 [1.3, 3.0]
All Losses	6.0 [4.7, 7.7]	6.0 [4.7, 7.6]	5.4 [4.2, 6.9]	4.6 [3.5, 6.0]	3.8 [2.8, 5.1]

Figure 8.48												
Year of Graft Loss Due to Death or Failure 1995 - 2004												
Loss	Cause of Failure	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Australia												
	Death with Function	118	113	109	124	117	167	153	136	138	123	1298
Failed	Rejection - Acute	20	19	8	11	7	9	7	8	3	5	97
	Rejection - Chronic Allograft Nephropathy	75	87	79	105	107	91	111	108	113	142	1018
	Rejection - Hyperacute	4	2	1	-	2	1	-	-	-	-	10
	Vascular	16	13	15	9	15	7	11	16	15	17	134
	Technical Problems	4	1	3	-	3	4	2	3	3	2	25
	Recurrence Primary Disease	13	7	19	10	10	16	8	15	13	12	123
	Non Compliance	3	4	7	6	5	7	7	11	10	8	68
	Other	13	15	13	15	15	17	16	16	12	27	159
Total		226	261	254	280	281	319	315	313	307	336	2932
New Zealand												
	Death with Function	14	26	27	25	22	28	25	32	26	26	251
Failed	Rejection - Acute	5	3	1	1	4	-	1	1	1	-	17
	Rejection - Chronic Allograft Nephropathy	11	12	15	19	24	20	31	22	16	15	185
	Rejection - Hyperacute	-	1	-	-	-	-	-	-	-	1	2
	Vascular	2	4	5	-	6	8	1	1	1	-	28
	Technical Problems	1	-	2	-	2	-	2	1	2	-	10
	Recurrence Primary Disease	4	2	-	3	4	3	2	1	4	2	25
	Non Compliance	-	1	-	3	-	5	2	3	3	1	18
	Other	5	6	2	3	1	2	4	3	4	4	34
Total		42	55	52	54	63	66	68	64	57	49	570



Figure 8.49

Graft Failures 2000 - 2004

Cause of Failure	Australia			New Zealand		
	Graft Function			Graft Function		
	<1 year	>= 1 year	Anytime	<1 year	>= 1 year	Anytime
Death with functioning Graft						
Cardiac	14 (20.9%)	187 (28.2%)	201 (28%)	-	28 (22.8%)	28 (20.4%)
Vascular	5 (7.5%)	73 (11.2%)	78 (10.9%)	5 (35.7%)	18 (14.6%)	23 (16.8%)
Infection	33 (49.3%)	87 (13.4%)	120 (16.7%)	4 (28.6%)	18 (14.6%)	22 (16.1%)
Social	-	17 (2.6%)	17 (2.4%)	-	5 (4.1%)	5 (3.6%)
Malignancy	5 (7.5%)	213 (32.8%)	218 (30.4%)	2 (14.3%)	42 (34.1%)	44 (32.1%)
Miscellaneous	10 (14.9%)	73 (11.2%)	83 (11.6%)	3 (21.4%)	12 (9.8%)	15 (10.9%)
Total	67 (100%)	650 (100%)	717 (100%)	14 (100%)	123 (100%)	137 (100%)
Graft Failure						
Rejection - Acute	27 (18.1%)	5 (0.7%)	32 (3.7%)	3 (9.7%)	-	3 (1.8%)
Rejection - Chronic Allograft	4 (2.7%)	561 (77.5%)	565 (64.7%)	-	104 (76.5%)	104 (62.3%)
Rejection - Hyperacute	1 (0.7%)	-	1 (0.1%)	1 (3.2%)	-	1 (0.6%)
Vascular Rejection	60 (40.3%)	6 (0.8%)	66 (7.6%)	10 (32.3%)	1 (0.7%)	11 (6.6%)
Technical Problems	10 (6.7%)	4 (0.6%)	14 (1.6%)	4 (12.9%)	1 (0.7%)	5 (3.0%)
Recurrence of Primary Disease	1 (0.7%)	63 (8.7%)	64 (7.3%)	-	12 (8.8%)	12 (7.2%)
Non Compliance	1 (0.7%)	42 (5.8%)	43 (4.9%)	1 (3.2%)	13 (9.6%)	14 (8.4%)
Other	45 (30.2%)	43 (5.9%)	88 (10.1%)	12 (38.7%)	5 (3.7%)	17 (10.2%)
Total	149 (100%)	724 (100%)	873 (100%)	31 (100%)	136 (100%)	167 (100%)

IMMUNOSUPPRESSION

AUSTRALIA

Cyclosporin/Mycophenolate Mofetil based therapy remains the most common initial regimen, and remains so at month 12 despite a departure from this regime by approximately one third of recipients during the first post-transplant year.

Initial usage of Tacrolimus/Mycophenolate Mofetil has steadily increased over the past decade. A significant switch to this regimen during the initial 12 months after transplantation had been evident throughout this period.

Figure 8.50 Australia

Immunosuppressive Therapy - Primary Deceased Donor Graft 2000 - 2004

	Year	Aza	Cya	Tac	MMF	Sirol	Everolimus	Pred	MPA	No. of Deceased Donor Grafts
Initial treatment	2000	22 (6%)	208 (59%)	84 (24%)	282 (81%)	9 (3%)	0 (0%)	284 (81%)	0 (0%)	350
	2001	16 (5%)	215 (66%)	65 (20%)	221 (67%)	33 (10%)	1 (0%)	277 (84%)	0 (0%)	328
	2002	9 (2%)	239 (64%)	81 (22%)	272 (73%)	7 (2%)	22 (6%)	318 (85%)	15 (4%)	374
	2003	8 (2%)	187 (58%)	77 (24%)	190 (58%)	10 (3%)	0 (0%)	258 (79%)	52 (16%)	325
	2004	5 (1%)	214 (53%)	140 (34%)	309 (76%)	10 (2%)	0 (0%)	360 (89%)	24 (6%)	406
Treatment at 12 months	2000	41 (13%)	164 (51%)	118 (36%)	228 (70%)	10 (3%)	0 (0%)	248 (77%)	0 (0%)	324
	2001	23 (8%)	149 (51%)	102 (35%)	204 (70%)	26 (9%)	1 (0%)	224 (77%)	1 (0%)	292
	2002	24 (7%)	161 (47%)	124 (36%)	240 (70%)	14 (4%)	19 (6%)	278 (81%)	11 (3%)	345
	2003	22 (8%)	125 (43%)	102 (35%)	160 (55%)	15 (5%)	0 (0%)	221 (75%)	44 (15%)	293
Treatment at 24 months	2000	50 (16%)	151 (48%)	117 (37%)	212 (67%)	9 (3%)	0 (0%)	203 (64%)	0 (0%)	316
	2001	32 (11%)	144 (51%)	99 (35%)	189 (66%)	23 (8%)	1 (0%)	204 (72%)	1 (0%)	285
	2002	23 (7%)	151 (45%)	118 (36%)	231 (70%)	20 (6%)	19 (6%)	247 (74%)	13 (4%)	332

Aza = azathioprine
 Cya = cyclosporine
 Tac = tacrolimus
 MMF = mycophenolate mofetil
 Sirol = sirolimus
 Pred = Prednisolone
 MPA = mycophenolic acid (enteric coated)



IMMUNOSUPPRESSION

NEW ZEALAND

Cyclosporin/Mycophenolate Mofetil is clearly the dominant combination for initial therapy, however the majority are switched to an alternate regime by month 12, evenly divided between Cyclosporin/Mycophenolate Mofetil or Azathioprine, Tacrolimus/Mycophenolate Mofetil or Azathioprine, or others.

Figure 8.51		New Zealand								
Immunosuppressive Therapy - Primary Deceased Donor Graft 2000 - 2004										
	Year	Aza	Cya	Tac	MMF	Sirol	Everolimus	Pred	MPA	No. of Deceased Donor Grafts
Initial treatment	2000	0 (0%)	60 (80%)	3 (4%)	63 (84%)	0 (0%)	0 (0%)	63 (84%)	0 (0%)	75
	2001	0 (0%)	59 (88%)	3 (4%)	62 (93%)	0 (0%)	0 (0%)	62 (93%)	0 (0%)	67
	2002	0 (0%)	57 (83%)	3 (4%)	59 (86%)	0 (0%)	0 (0%)	59 (86%)	0 (0%)	69
	2003	0 (0%)	47 (70%)	7 (10%)	46 (69%)	0 (0%)	0 (0%)	52 (78%)	3 (4%)	67
	2004	0 (0%)	47 (82%)	3 (5%)	48 (84%)	0 (0%)	0 (0%)	50 (88%)	0 (0%)	57
Treatment at 12 months	2000	22 (33%)	41 (61%)	15 (22%)	34 (51%)	0 (0%)	0 (0%)	54 (81%)	0 (0%)	67
	2001	27 (44%)	45 (73%)	12 (19%)	27 (44%)	0 (0%)	0 (0%)	56 (90%)	0 (0%)	62
	2002	18 (29%)	41 (65%)	13 (21%)	31 (49%)	0 (0%)	0 (0%)	53 (84%)	0 (0%)	63
	2003	15 (26%)	24 (42%)	21 (37%)	22 (39%)	1 (2%)	0 (0%)	42 (74%)	3 (5%)	57
Treatment at 24 months	2000	50 (77%)	40 (62%)	15 (23%)	3 (5%)	0 (0%)	0 (0%)	48 (74%)	0 (0%)	65
	2001	48 (80%)	39 (65%)	16 (27%)	3 (5%)	0 (0%)	0 (0%)	53 (88%)	0 (0%)	60
	2002	48 (77%)	38 (61%)	14 (23%)	1 (2%)	0 (0%)	0 (0%)	47 (76%)	0 (0%)	62

Aza = azathioprine
 Cya = cyclosporine
 Tac = tacrolimus
 MMF = mycophenolate mofetil
 Sirol = sirolimus
 Pred = Prednisolone
 MPA = mycophenolic acid (enteric coated)