

CHAPTER 8

TRANSPLANTATION

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TRANSPLANTS PERFORMED IN 2002

Figure 8.1

Number of Renal Transplant Operations (Living 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	588	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	384	63	6	4	1	458 (65)	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	42	9	0	0	454 (168)	97	11	4	0	112 (42)
2000	475	47	7	1	0	530 (180)	91	13	2	0	106 (31)
2001	487	45	6	2	0	540 (212)	101	9	0	0	110 (43)
2002	535	60	5	2	0	602 (228)	103	12	2	0	117 (48)

AUSTRALIA

The 602 transplant operations performed in 2002 was an increase of 11% compared to 2001 (540 operations). This was a transplant rate of 31 per million of population compared to 28 per million in 2001.

The living donor transplant rate was 38% (228 grafts) in 2002, compared to 39% (212 grafts) in 2001.

Of the kidneys transplanted, 89% were to primary recipients, similar to 2001 (90%).

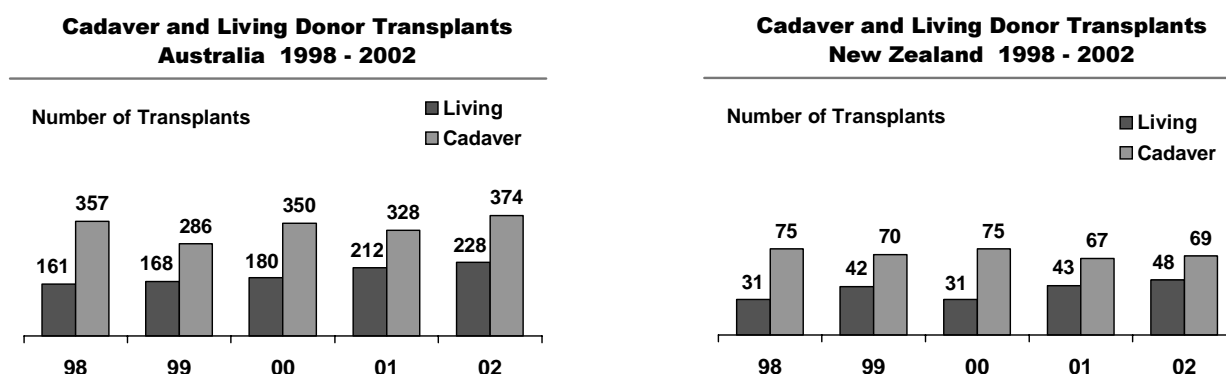
NEW ZEALAND

The number of transplant operations (117) performed in 2002 represents a transplant rate of 30 per million (an increase of 6% from 2001).

The percentage of living donors was 41% of all operations compared to 39% in 2001.

Of the grafts performed in 2002, 88% were to primary recipients, (92% in 2001).

Figure 8.2



TRANSPLANT RATE OF PATIENTS DIALYSED

Figure 8.3

In Australia the proportion of patients receiving dialysis in 2002 who were transplanted that year was 6.8% compared to 6.4% in 2001. Of all patients in the 15-59 year age group on dialysis, 12.3% were transplanted in 2002, compared to 11.3% in 2001.

In New Zealand the number of operations represents 6.0% of all dialysed patients, the same as last year and 8% of dialysed patients in the age group 15-59 years (fig 8.3 and 8.4).

In Australia, the rate of transplantation was highest for those 5-14 years of age and declined with increasing age.

In New Zealand, the rate of transplantation was highest among those 0-24 years and declined with age thereafter (fig 8.5 and 8.6).

Rate of Transplantation 2002 Related to Patients Dialysed

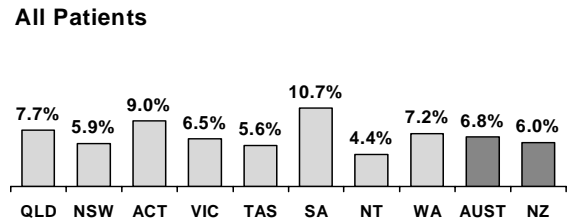


Figure 8.4

Rate of Transplantation 2002 Related to Patients Dialysed

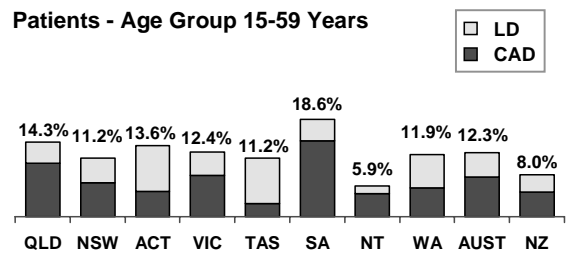


Figure 8.5

Rate of Transplantation 2002 Related to Patients Dialysed

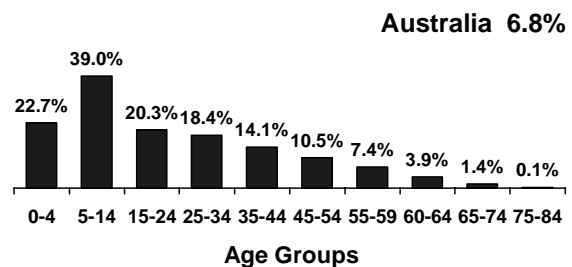
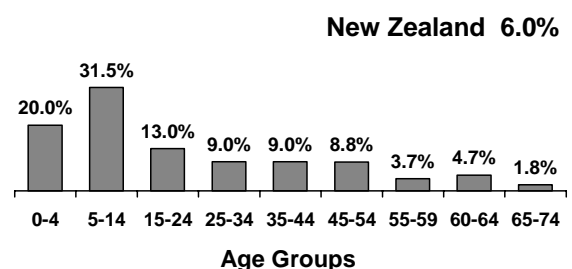


Figure 8.6

Rate of Transplantation 2002 Related to Patients Dialysed





AGE OF RECIPIENTS TRANSPLANTED IN 2002

AUSTRALIA

The median age of transplant recipients in 2002 was 44.5 years, the same as 2001. Forty nine percent of recipients fell into the 35-54 year age group. Twenty three percent of recipients in 2002 were over 54 years of age compared to 22% in 2001. The age range was 1.6 to 76.5 years (fig 8.7 and 8.8).

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 2002 was 48.6 years compared to 42.1 years in 2001.

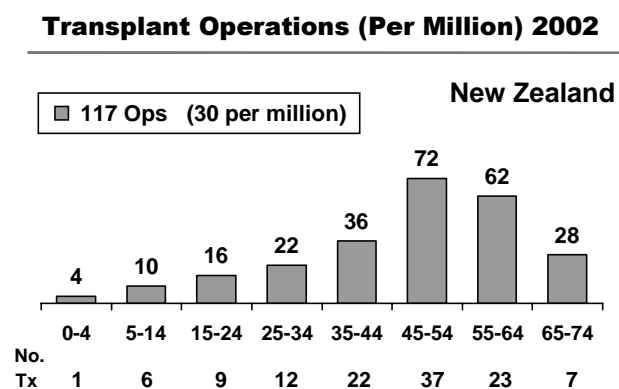
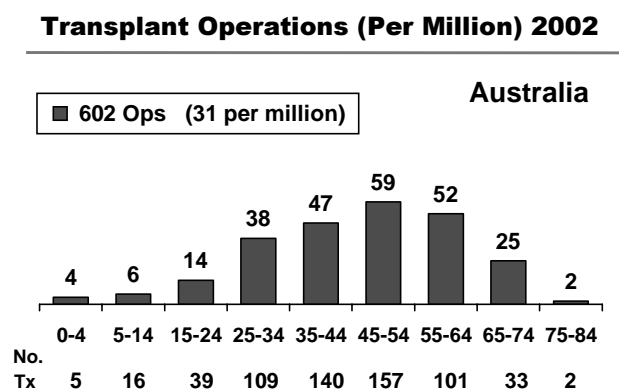
Recipients aged between 35 and 54 years comprised 50% of the total. Twenty six percent of recipients in 2002 were over 54 years of age.

The age range of recipients was 3.8 to 71.8 years (fig 8.6 and 8.8).

Figure 8.7

Graft Number and Age of Patients Transplanted 1-Jan-2002 to 31-Dec-2002											
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	1	5	14	41	73	103	65	22	2	326
	2	0	3	4	5	22	7	2	1	0	44
	3	0	0	0	0	1	0	1	0	0	2
	4	0	0	0	2	0	0	0	0	0	2
Living Donor	1	4	8	19	55	39	41	33	10	0	209
	2	0	0	2	5	5	4	0	0	0	16
	3	0	0	0	1	0	2	0	0	0	3
Total		5	16	39	109	140	157	101	33	2	602
New Zealand											
Cadaver	1	0	2	2	6	12	19	13	5	0	59
	2	0	0	1	1	2	3	1	0	0	8
	3	0	0	0	0	1	0	1	0	0	2
Living Donor	1	1	4	5	3	7	14	8	2	0	44
	2	0	0	1	2	0	1	0	0	0	4
Total		1	6	9	12	22	37	23	7	0	117

Figure 8.8



ETHNICITY OF TRANSPLANT RECIPIENTS

AUSTRALIA

Figures 8.9 and 8.11.

For the 15-59 year age group in 2002, 14.9% of dialysed Caucasoid patients were transplanted. For Australian Aboriginals and Torres Strait Islanders (ATSI), the corresponding transplant rate for 2002 was 2.5%.

The gradual decrease in proportion of ATSI patients who received a transplant must be balanced against the increased number commencing dialysis.

Transplantation Rate - Age Group 15-59 years 1993 - 2002									
Year	Caucasoid			Aboriginal and Torres St. Islanders			All Patients		
	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate
1993	2077	328	15.8%	235	10	4.2%	2569	375	14.6%
1994	2225	334	15.0%	289	13	4.4%	2803	369	13.1%
1995	2319	317	13.6%	345	13	3.7%	2994	365	12.1%
1996	2448	358	14.6%	388	8	2.0%	3187	402	12.6%
1997	2527	358	14.2%	441	20	4.5%	3364	426	12.7%
1998	2654	357	13.4%	480	26	5.4%	3556	436	12.2%
1999	2743	322	11.7%	514	20	3.9%	3696	387	10.5%
2000	2864	386	13.5%	540	17	3.1%	3883	440	11.3%
2001	2943	391	13.3%	598	20	3.3%	4047	456	11.3%
2002	2960	441	14.9%	629	16	2.5%	4131	509	12.3%

NEW ZEALAND

Figures 8.10 and 8.11

Amongst the 15-59 year age group, 2002 has seen further increases in the number of ethnic minorities accepted onto dialysis, particularly Pacific Islander patients. However, the proportion of Maori and Pacific Islanders who received a renal transplant in 2002 was 2.9% and 6.2% respectively, compared with 13.9% for Caucasoid dialysis patients.

Transplantation Rate - Age Group 15-59 years 1993 - 2002												
Year	Caucasoid			Maori			Pacific Islander			All Patients		
	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate
1993	316	53	16.7%	211	4	1.8%	88	3	3.4%	639	63	9.8%
1994	317	52	16.4%	228	11	4.8%	96	5	5.2%	673	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	370	73	19.7%	279	9	3.2%	134	3	2.2%	827	91	11.0%
1998	372	60	16.1%	320	14	4.3%	151	7	4.6%	896	85	9.4%
1999	388	67	17.2%	317	16	5.0%	159	8	5.0%	928	98	10.5%
2000	400	68	17.0%	329	10	3.0%	183	4	2.1%	973	86	8.8%
2001	415	64	15.4%	359	13	3.6%	214	5	2.3%	1054	92	8.7%
2002	431	60	13.9%	382	11	2.9%	224	14	6.2%	1102	89	8.1%

Figure 8.11

New Transplanted Patients Related to Ethnicity

Race	1998	1999	2000	2001	2002
Australia	(518)	(454)	(530)	(540)	(602)
Caucasoid	434 (84%)	380 (84%)	463 (88%)	469 (87%)	527 (88%)
Aboriginal/Torres St.Isl.	28 (5%)	23 (5%)	18 (3%)	21 (4%)	17 (3%)
Asian	37 (7%)	39 (9%)	38 (7%)	32 (6%)	45 (7%)
Other	19 (4%)	12 (2%)	11 (2%)	18 (3%)	13 (2%)
New Zealand	(106)	(112)	(106)	(110)	(117)
Caucasoid	77 (73%)	78 (70%)	81 (76%)	79 (72%)	83 (71%)
Maori	17 (16%)	17 (15%)	13 (12%)	15 (14%)	13 (11%)
Pacific Islander	7 (7%)	8 (7%)	4 (4%)	6 (5%)	15 (13%)
Asian	4 (4%)	9 (8%)	8 (8%)	10 (9%)	5 (4%)
Other	1 (<1%)	0	0	0	1 (1%)



AUSTRALIAN STATE TRANSPLANTATION ACTIVITY 2002

Figure 8.12

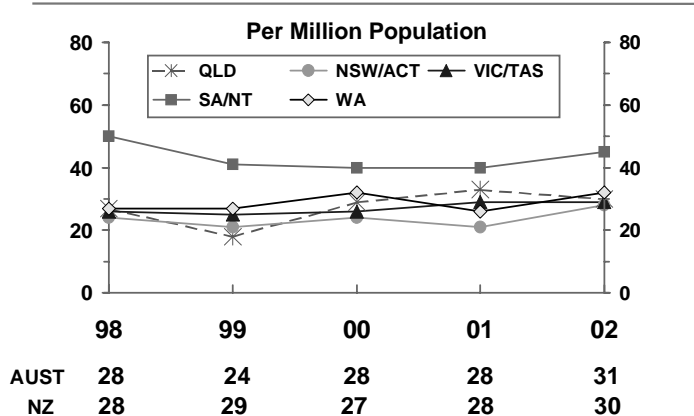
Transplants in each Region 1998 - 2002
Number of Operations
 (per Million Population)

State	1998	1999	2000	2001	2002
Queensland	93 (27)	64 (18)	105 (29)	121 (33)	111 (30)
New South Wales/ACT *	160 (24)	142 (21)	161 (24)	145 (21)	196 (28)
Victoria/Tasmania *	131 (26)	127 (25)	136 (26)	155 (29)	157 (29)
South Australia/NT *	84 (50)	70 (41)	68 (40)	69 (40)	77 (45)
Western Australia	50 (27)	51 (28)	60 (32)	50 (26)	61 (32)
Australia	518 (28)	454 (24)	530 (28)	540 (28)	602 (31)

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

Figure 8.13

Transplant Operations 1998 - 2002
Australian Transplant Regions

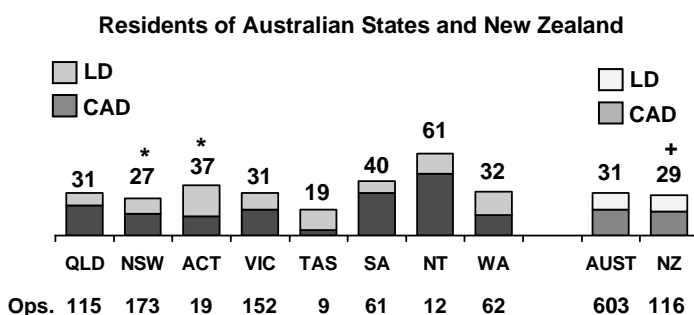


The rate of transplantation for each transplant region is shown in Figures 8.12 and 8.13. Transplants performed for Tasmania and Northern Territory patients are included in figures for Victoria and South Australia respectively.

The South Australia/Northern Territory region continued to have the highest transplant rate (45 per million) in 2002.

Figure 8.14

Rate of Transplantation 2002
Related to Population (Per Million)



* 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
 + One NZ patient transplanted in Australia

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

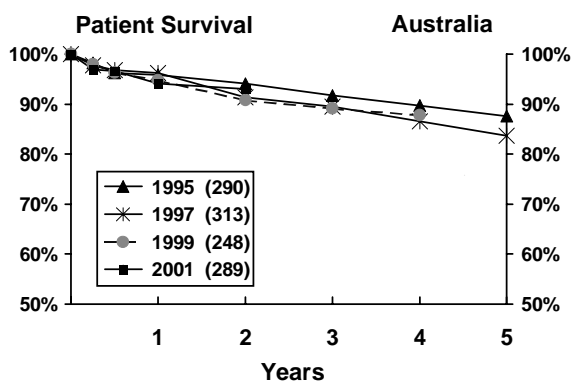
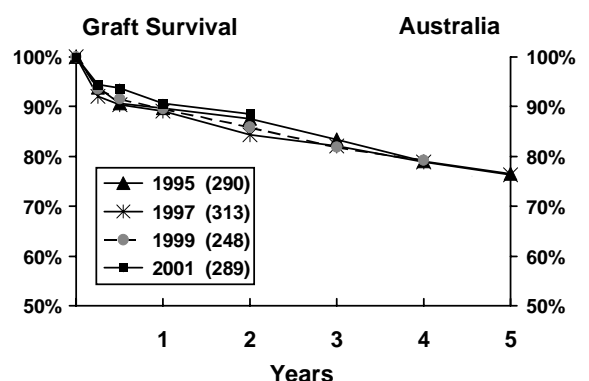
The transplant rate increased for most states except for Queensland and Victoria. The lowest rate (19 per million) occurred in Tasmania and the highest (61 per million) in the Northern Territory.

TRANSPLANT SURVIVAL - PRIMARY CADAVERIC GRAFTS

AUSTRALIA

Figure 8.15

Primary Cadaver Patient and Graft Survival 1991 - 2002													
% 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=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	272	-	-
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	-	-	-	-
2001	n=289	99 ± 0.7	284	97 ± 1.0	279	97 ± 1.1	278	94 ± 1.4	271	-	-	-	-
2002	n=326	99 ± 0.4	324	98 ± 0.7	319	98 ± 0.8	227	-	-	-	-	-	-
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	254	-	-
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	-	-	-	-
2001	n=289	96 ± 1.2	277	94 ± 1.4	273	94 ± 1.4	271	91 ± 1.7	262	-	-	-	-
2002	n=326	96 ± 1.1	313	95 ± 1.2	308	95 ± 1.2	218	-	-	-	-	-	-

Figure 8.16
Primary Cadaver Patient Survival 1995 - 2001 Related to Year of Transplant

Primary Cadaver Graft Survival 1995 - 2001 Related to Year of Transplant




TRANSPLANT SURVIVAL - PRIMARY CADAVERIC GRAFTS

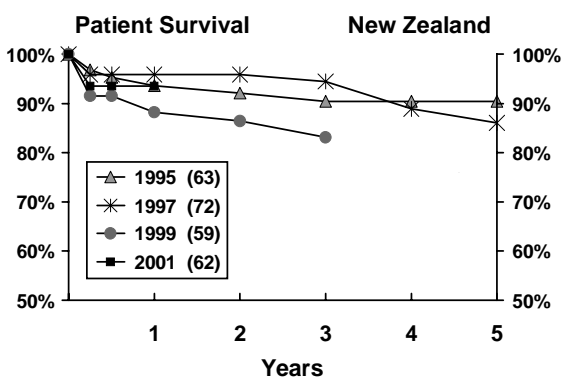
NEW ZEALAND

Figure 8.17

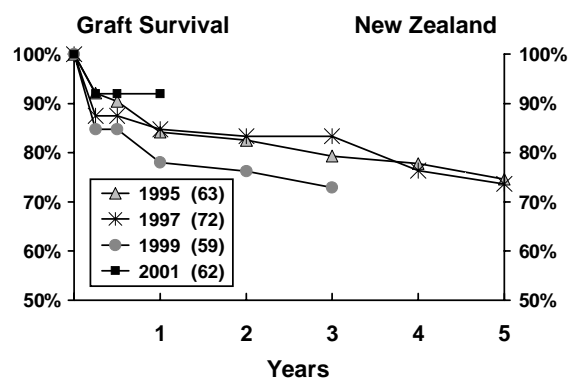
Year of Transplant		Survival					
		1 month	3 months	6 months	1 year	3 years	5 years
Patient Survival							
1991	n=50	100 ± 0.0 50	96 ± 2.8 48	96 ± 2.8 48	96 ± 2.8 48	88 ± 4.6 44	78 ± 5.9 39
1992	n=90	99 ± 1.1 89	97 ± 1.9 87	96 ± 2.2 86	92 ± 2.8 83	86 ± 3.7 77	83 ± 3.9 74
1993	n=53	96 ± 2.6 51	91 ± 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	-
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	-	-
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 55	97 ± 2.4 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	-
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	90 ± 4.0 56	89 ± 4.0 56	-	-
2001	n=62	97 ± 2.2 60	92 ± 3.5 57	92 ± 3.5 57	92 ± 3.5 57	-	-
2002	n=59	93 ± 3.3 55	91 ± 3.6 52	91 ± 3.6 36	-	-	-

Figure 8.18

Primary Cadaver Patient Survival 1995 - 2001 Related to Year of Transplant



Primary Cadaver Graft Survival 1995 - 2001 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, 2000-2002; 1997-99; 1994-96; 1991-93 and 1988-90.

Figure 8.19

Year of Transplant		Survival											
		1 month		3 months		6 months		1 year		3 years		5 years	
Patient Survival													
1988-90	n=170	99 ± 0.8	168	97 ± 1.3	165	94 ± 1.8	160	92 ± 2.0	157	87 ± 2.6	148	81 ± 3.0	138
1991-93	n=214	100 ± 0.5	213	98 ± 1.0	209	97 ± 1.2	207	95 ± 1.5	203	91 ± 1.9	195	85 ± 2.4	182
1994-96	n=158	99 ± 0.9	156	97 ± 1.2	154	97 ± 1.2	154	96 ± 1.5	152	92 ± 2.1	146	86 ± 2.8	136
1997-99	n=147	100 ± 0.0	147	98 ± 1.2	144	97 ± 1.3	143	95 ± 1.8	140	93 ± 2.2	136	-	-
2000-02	n=126	98 ± 1.1	124	96 ± 1.7	121	95 ± 1.9	112	94 ± 2.1	85	-	-	-	-
Graft Survival													
1988-90	n=170	86 ± 2.6	147	84 ± 2.8	142	81 ± 3.0	137	78 ± 3.2	133	66 ± 3.6	113	61 ± 3.7	104
1991-93	n=214	83 ± 2.6	178	80 ± 2.7	172	79 ± 2.8	170	78 ± 2.8	167	73 ± 3.0	157	64 ± 3.3	138
1994-96	n=158	87 ± 2.7	137	84 ± 3.0	132	82 ± 3.0	130	81 ± 3.1	128	73 ± 3.5	116	65 ± 3.8	103
1997-99	n=147	93 ± 2.1	137	90 ± 2.5	132	90 ± 2.5	132	86 ± 2.9	126	78 ± 3.4	115	-	-
2000-02	n=126	91 ± 2.5	115	89 ± 2.8	112	85 ± 3.2	101	83 ± 3.4	75	-	-	-	-

Figure 8.20

Second and Subsequent Cadaver Patient Survival Related to Years of Transplant 1988 - 2002

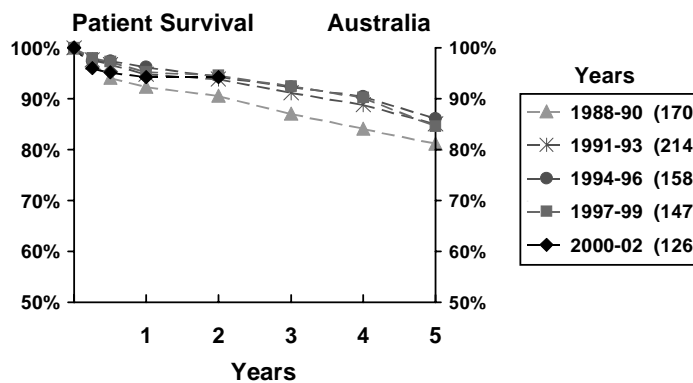
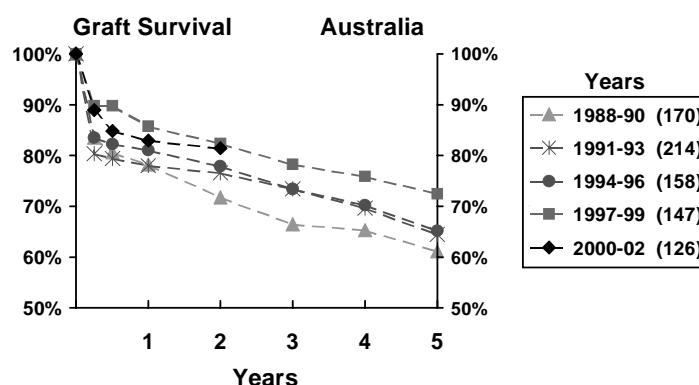


Figure 8.21

Second and Subsequent Cadaver Graft Survival Related to Years of Transplant 1988 - 2002





LIVING DONOR TRANSPLANTS

Recipient Age Groups		Year of Transplantation				
		1998	1999	2000	2001	2002
00-04 years		67%	100%	83%	86%	80%
05-14 years		47%	58%	63%	75%	50%
15-24 years		54%	61%	65%	68%	54%
25-34 years		37%	39%	38%	37%	56%
35-44 years		32%	41%	35%	37%	31%
45-54 years		21%	26%	25%	40%	30%
55-64 years		21%	27%	23%	27%	33%
65-74 years		19%	0%	25%	33%	30%
All Recipients		31%	37%	34%	39%	38%

AUSTRALIA

The year 2002 saw the largest absolute number of living donor transplants being performed in Australia, (228), representing 38% of all transplant operations. Annual increases have continued since 1994 (fig 8.1, 8.22 and 8.26).

Figure 8.23 shows the age-related proportion of living donor transplants for the years 1998 and 2002. The overall proportion of living donor transplants continued to rise between these years. The proportion of living donors increased in most age groups, the largest increases were in the 25-34 and 55-64 year age groups.

The proportion of living donor transplants for each State and New Zealand for recipients aged 25-44 years is shown in Figure 8.24 for the years 1995-98 and 1999-2002. There have been increases in all regions except South Australia/ Northern Territory.

The proportion of unrelated donors has risen over the last few years and in 2002 was 34%. Sixty four percent of living unrelated donors were spouses. The number of related donors was similar to last year, 151 donors (66%) compared to 148 (70%) in 2001 (fig 8.26).

NEW ZEALAND

Forty one percent of grafts were from a living donor (39% in 2001 and 29% in 2000). There were seventeen living unrelated donors (54% of living donors).

Figure 8.23

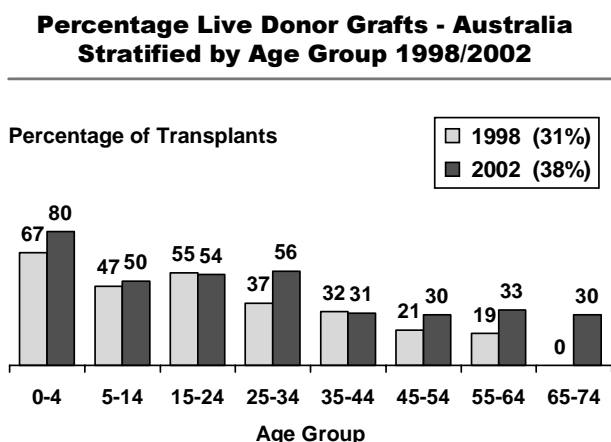
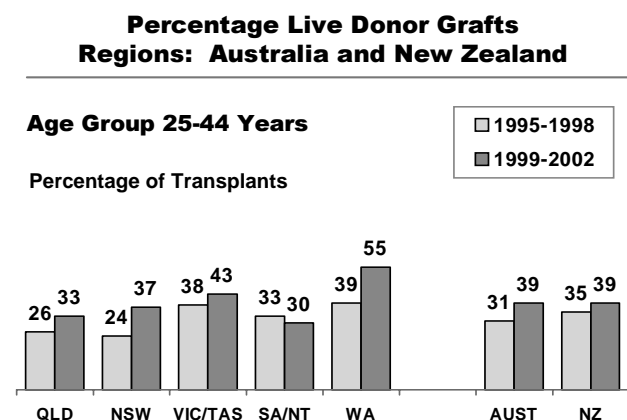


Figure 8.24



TIMING OF LIVING DONOR TRANSPLANTS

The timing of living donor transplants is shown in Figure 8.25. A higher proportion of living donor transplants in New Zealand have been performed prior to commencement of dialysis over this period.

The proportion of pre-emptive living donor transplants in Australia has increased and now accounts for 25% of all living donor transplantation.

Figure 8.25

Timing of Living Donor Transplantation for Primary Grafts in Relation to Date of Dialysis Start by Year 1998 - 2002						
		1998	1999	2000	2001	2002
Aust.	Pre-dialysis	17%	19%	21%	22%	25%
	<1 month post dialysis	4%	4%	7%	4%	3%
	1-5.9 months post dialysis	23%	15%	17%	18%	14%
	6-11.9 months post dialysis	20%	18%	15%	16%	19%
	>12 months post dialysis	35%	45%	40%	40%	39%
N.Z.	Pre-dialysis	32%	24%	50%	26%	27%
	<1 month post dialysis	0%	0%	0%	3%	0%
	1-5.9 months post dialysis	21%	21%	18%	20%	9%
	6-11.9 months post dialysis	4%	8%	14%	23%	18%
	>12 months post dialysis	43%	47%	18%	28%	46%

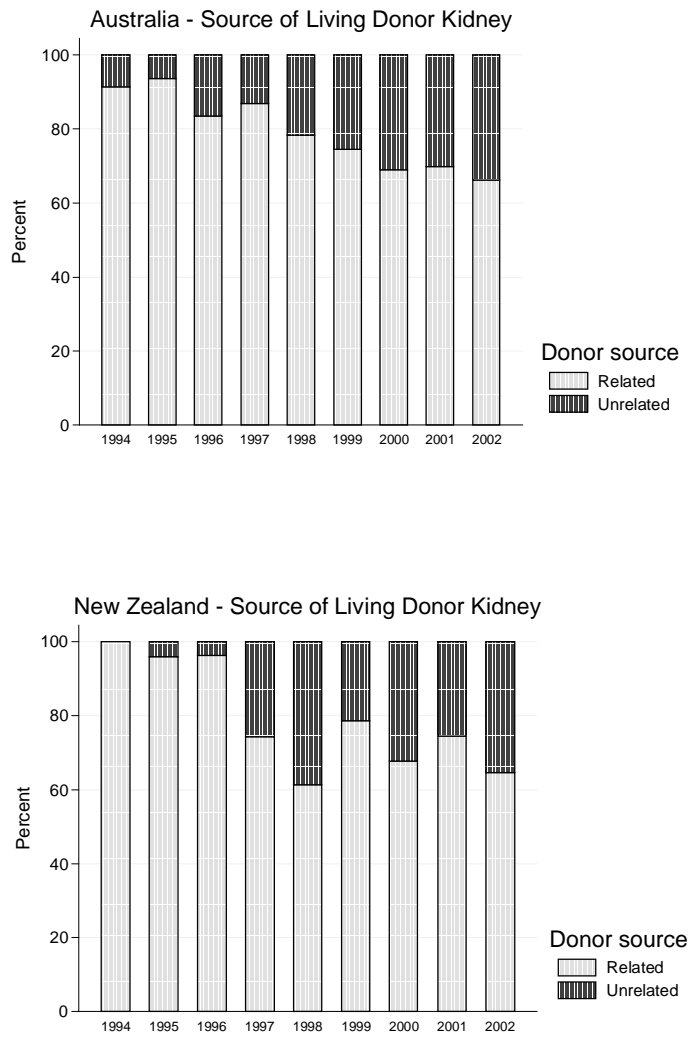
Figure 8.26

Source of Living Donor Kidney 1998 - 2002										
(x = identical twin)										
Source	Australia					New Zealand				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Total Living Donors	161	168	180	212	228	31	42	31	43	48
Related	(126)	(124)	(124)	(148)	(151)	(19)	(33)	(21)	(32)	(31)
Mother	27	32	40	34	46	4	9	4	9	7
Father	25	28	35	39	19	5	5	1	7	6
Brother	28 (1x)	17	15 (1x)	32 (1x)	33	6	9	6 (1x)	4	5
Sister	32	28	22	24 (1x)	36 (1x)	2	6	10	8	7
Offspring	5	8	8	9	5	2	2	0	4	3
Grandfather	0	2	1	2	0	0	0	0	0	0
Grandmother	4	3	0	1	3	0	0	0	0	0
Cousin	1	5	2	5	4	0	1	0	0	1
Nephew	0	0	0	0	1	0	0	0	0	0
Niece	0	0	0	0	0	0	0	0	0	1
Uncle	0	1	0	0	1	0	0	0	0	0
Aunt	4	1	1	2	3	0	1	0	0	1
Unrelated	(35)	(43)	(56)	(64)	(77)	(12)	(9)	(10)	(11)	(17)
Wife	17	23	30	21	31	7	4	5	5	6
Husband	13	10	15	23	18	2	3	3	1	3
Mother-in-Law	0	0	1	0	2	0	0	0	0	0
Adoptive Mother	0	0	0	0	0	0	0	0	0	1
Adoptive Father	0	0	0	1	0	0	0	0	0	0
Stepfather	0	0	0	2	2	0	0	0	0	0
Sister-in-Law	1	1	0	1	0	0	0	0	0	0
Brother-in-Law	0	0	0	1	1	0	1	0	0	0
Partner	1	0	1	4	4	0	0	0	0	0
Other	3	9	8	11	15	3	1	2	5	7
Aunt	0	0	1	0	1	0	0	0	0	0
Adopted Sister	0	0	0	0	1	0	0	0	0	0
Step-Sister	0	0	0	0	1	0	0	0	0	0
Step-Son	0	0	0	0	1	0	0	0	0	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 8.26 a



FUNCTIONING TRANSPLANTS AT 31-DEC-2002 TRANSPLANT OPERATIONS 1963 - 2002

Figure 8.27

Summary of Renal Transplantation Australia 1963 - 2002			
		Performed	Functioning *
Cadaver	First	9549	3654
	Second	1502	476
	Third	226	61
	Fourth	32	13
	Fifth	2	1
Living Donor	First	2002	1406
	Second	175	109
	Third	25	16
	Fourth	5	4
	Fifth	1	-
Total		13,519	5740
* Lost to follow up not included			

AUSTRALIA

There have been 13,519 transplant operations performed on 11,551 patients since 1963. Of these, 5,740 grafts were functioning at 31st December 2002 (292 per million population). Fifteen percent of operations and 12% of functioning grafts were regrafts. Living donor transplants accounted for 16% of operations and 27% of functioning grafts (fig 8.27). 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 2002 is a 5% increase over the previous year. The annual rate of increase has remained steady (fig 8.29 and 8.30). Eighty eight percent of the functioning grafts were primary, and 73% were from cadaveric donors. The number of functioning grafts from living donors increased by 12% from 2001 to 2002.

The prevalence of functioning grafts in each State is shown in Figures 8.29 and 8.31. South Australia/Northern Territory has the highest prevalence of functioning renal transplants (410 per million). The lowest prevalence was in New South Wales (269 per million, increased from 259 in 2001). Patients with functioning grafts numbered in excess of those dependent on dialysis in South Australia and Tasmania (Appendix I).

The age dependence on a functioning transplant as a proportion of patients on renal replacement therapy is shown in Figure 8.32. The proportion drops with age and the proportion of patients depending on living donor grafts is greater in the younger age groups (fig 8.33).

The modal age group for transplant dependent patients was 45-54 years and the mean and median ages were 48.5 and 49.5 years respectively (fig 8.33 and 8.34). The modal age group for living donor recipients was 35-44 years and 60% of recipients dependent on living 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 8.35).

The 5,740 grafts functioning at the end of 2002 represent 42% of all kidneys transplanted since 1963. Thirty three percent of grafts were functioning ten or more years and 7% 20 or more years. There are now 57 recipients with grafts functioning 30 years or longer.

Figure 8.28

Summary of Renal Transplantation New Zealand 1965 - 2002			
	Transplant	Performed	Functioning *
Cadaver	First	1794	676
	Second	350	80
	Third	67	17
	Fourth	6	1
Living Donor	First	483	312
	Second	47	25
	Third	4	3
Total		2751	1114
* Lost to follow up not included			

NEW ZEALAND

There have been 2,751 operations performed on 2,277 patients since 1965 with 1,114 grafts (283 per million) still functioning at 31st December 2002 (fig 8.28). This represents a 5% increase from the previous year. Seventeen percent of operations and 11% of functioning grafts were regrafts. Kidneys from living donors accounted for 19% 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 living or cadaveric donor source are shown in Figure 8.32.

The majority were male (59%) and the racial distribution was Caucasoid 79%, Maori 9%, Pacific Islander 5% and Asian 6% (fig 8.35).

The majority (69%) of functioning grafts were in the 35-64 year age group and the mean and median ages were 47.5 and 47.8 years respectively. The modal age group for living donors was 45-54 years (fig 8.33).

The 1,114 grafts functioning at the end of 2002 represent 40% of all kidneys transplanted since 1965. The longest surviving graft has reached 33 years. Seventy two grafts have been functioning for 20 or more years and eight for 30 or more years. Thirty one percent of functioning grafts were from living donors (fig 8.36).



Figure 8.29

**Functioning Transplants
Transplanting State, Australia and New Zealand
1992 - 2002**
(Number Per Million Population)

Year	Qld	NSW/ACT *	Vic./Tas *	SA/NT *	WA	Aust.	N.Z.
1992	688 (227)	1321 (211)	966 (196)	429 (264)	292 (176)	3696 (211)	677 (192)
1993	738 (237)	1356 (215)	1031 (209)	425 (261)	316 (188)	3866 (219)	705 (197)
1994	785 (246)	1415 (223)	1054 (213)	459 (280)	342 (201)	4055 (227)	731 (202)
1995	812 (247)	1478 (230)	1097 (220)	478 (290)	358 (207)	4223 (234)	783 (213)
1996	847 (254)	1546 (238)	1160 (231)	515 (311)	363 (206)	4431 (242)	823 (220)
1997	900 (265)	1630 (248)	1225 (241)	539 (323)	377 (210)	4691 (252)	881 (233)
1998	942 (273)	1673 (252)	1293 (253)	582 (347)	396 (216)	4886 (261)	934 (245)
1999	955 (272)	1709 (254)	1333 (258)	621 (368)	432 (232)	5050 (267)	983 (256)
2000	1002 (281)	1753 (258)	1383 (265)	640 (376)	467 (248)	5245 (274)	1022 (265)
2001	1061 (292)	1785 (259)	1450 (275)	667 (390)	495 (260)	5458 (281)	1062 (274)
2002	1105 (298)	1873 (269)	1534 (287)	700 (407)	528 (274)	5740 (292)	1114 (283)

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

Figure 8.30

Functioning Transplants by Region 1997 - 2002

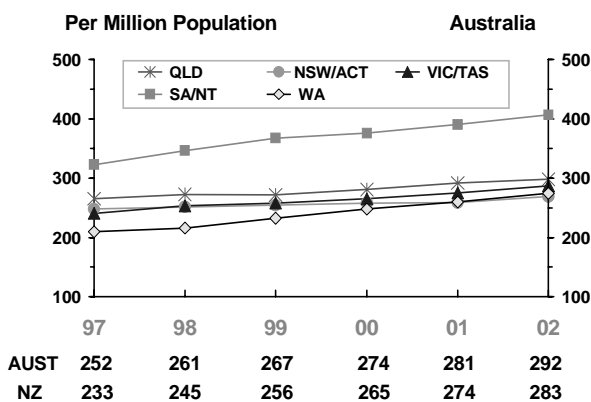


Figure 8.31

Prevalence of Functioning Transplants (Per Million Population) 31-Dec-2002

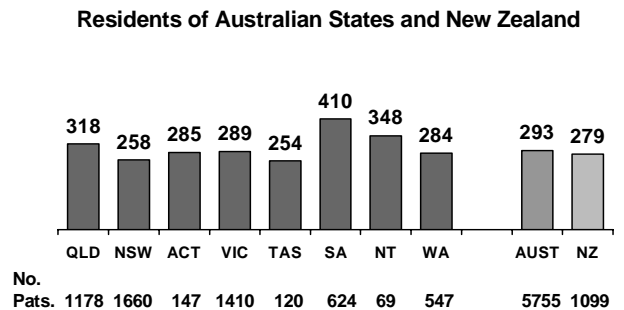
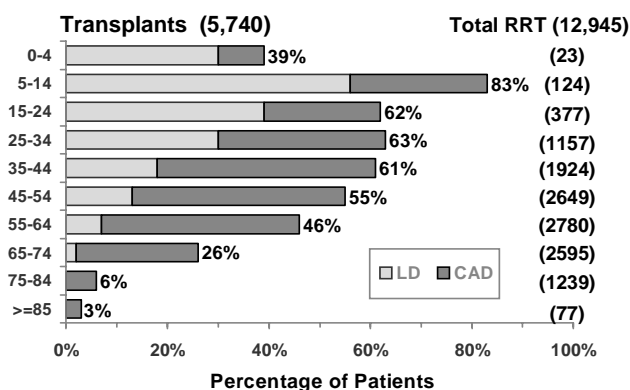


Figure 8.32

Prevalence of Functioning Transplants By Age Group Australia 2002



Prevalence of Functioning Transplants By Age Group New Zealand 2002

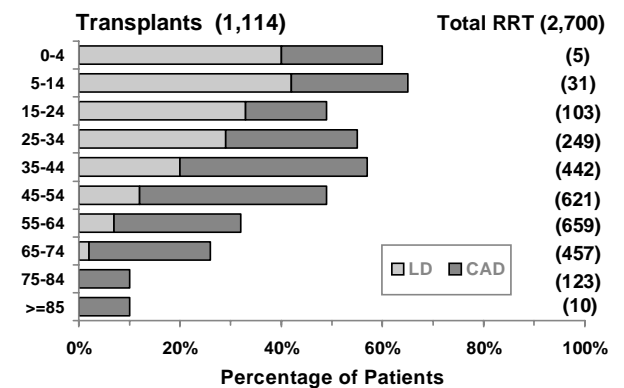


Figure 8.33

Age of All Functioning Transplant Patients Resident Country at Transplant (31-Dec-2002)												
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		9	103	235	729	1177	1450	1270	687	78	2	5740
Cadaver	1	2	30	74	320	661	965	955	573	72	2	3654
	2	0	3	15	54	139	129	95	37	4	0	476
	3	0	1	0	10	19	12	15	4	0	0	61
	4	0	0	0	3	4	4	1	1	0	0	13
	5	0	0	0	0	0	1	0	0	0	0	1
	Total	2	34	89	387	823	1111	1066	615	76	2	4205
Living Donor	1	7	68	136	316	311	305	192	69	2	0	1406
	2	0	1	9	23	36	29	8	3	0	0	109
	3	0	0	1	1	6	4	4	0	0	0	16
	4	0	0	0	2	1	1	0	0	0	0	4
	Total	7	69	146	342	354	339	204	72	2	0	1535
New Zealand		3	20	50	137	254	303	213	121	12	1	1114
Cadaver	1	1	6	15	53	134	188	159	107	12	1	676
	2	0	1	1	10	27	30	8	3	0	0	80
	3	0	0	0	2	5	8	2	0	0	0	17
	4	0	0	0	0	0	1	0	0	0	0	1
	Total	1	7	16	65	166	227	169	110	12	1	774
Living Donor	1	2	13	33	63	77	70	43	11	0	0	312
	2	0	0	1	7	10	6	1	0	0	0	25
	3	0	0	0	2	1	0	0	0	0	0	3
	Total	2	13	34	72	88	76	44	11	0	0	340

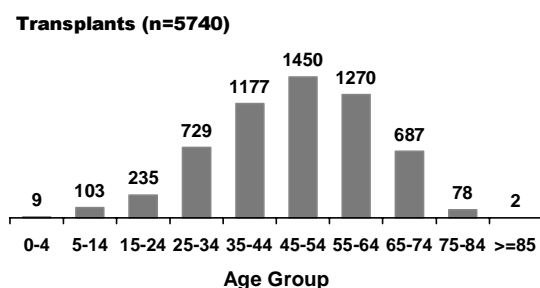
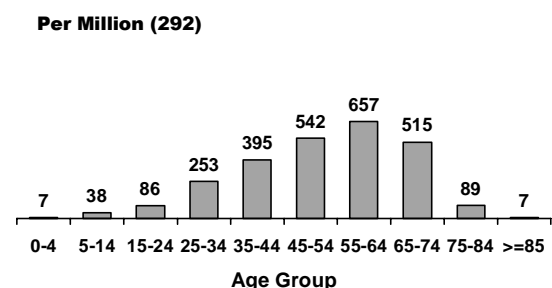
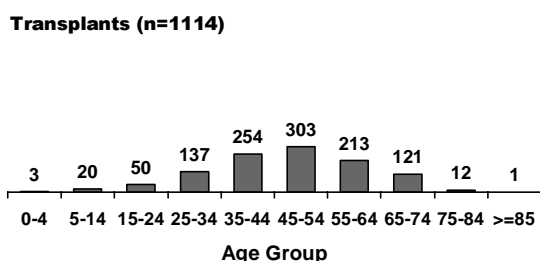
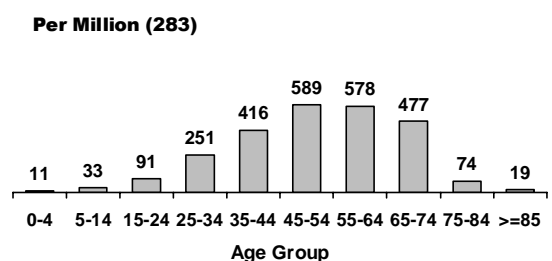
Figure 8.34
Age Distribution of Functioning Transplants Australia 2002

Age Distribution of Functioning Transplants Australia 2002

Age Distribution of Functioning Transplants New Zealand 2002

Age Distribution of Functioning Transplants New Zealand 2002


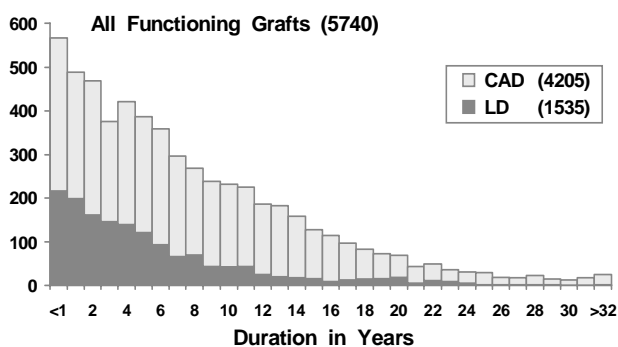


Figure 8.35

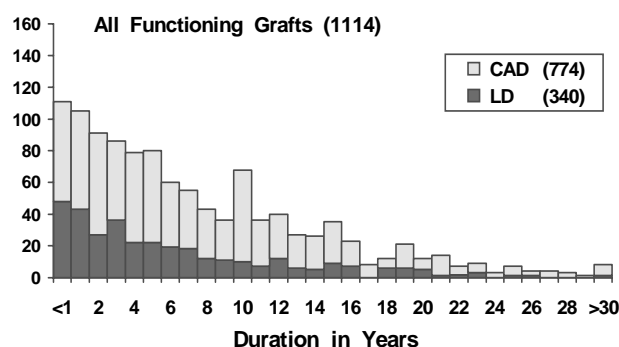
Functioning Transplant Patients - Resident Country at Transplant Related to Ethnicity and Age Group 31-Dec-2002												
Sex	Racial Origin	Age Groups										Total
		00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-94	
Australia		9	103	235	729	1177	1450	1270	687	78	2	5740
Female	Caucasoid	2	35	81	277	418	461	450	331	35	1	2091
	Aboriginal	0	2	1	6	14	12	8	2	0	0	45
	Torres St. Isl.	0	0	0	0	1	2	0	0	0	0	3
	Asian	0	1	6	19	35	60	29	10	0	0	160
	Other	0	5	4	7	6	10	8	4	0	0	44
	Total	2	43	92	309	474	545	495	347	35	1	2343
Male	Caucasoid	7	52	128	380	639	793	710	317	40	1	3067
	Aboriginal	0	1	4	7	16	27	14	3	0	0	72
	Torres St. Isl.	0	0	0	0	0	0	1	0	0	0	1
	Asian	0	5	7	24	41	65	36	16	3	0	197
	Other	0	2	4	9	7	20	14	4	0	0	60
	Total	7	60	143	420	703	905	775	340	43	1	3397
New Zealand		3	20	50	137	254	303	213	121	12	1	1114
Female	Caucasoid	0	9	17	48	69	98	66	40	8	0	355
	Maori	0	0	1	7	11	9	8	5	0	0	41
	Pacific Isl.	0	0	2	2	8	7	6	1	0	0	26
	Asian	0	0	3	1	13	6	5	2	0	0	30
	Total	0	9	23	58	101	120	85	48	8	0	452
Male	Caucasoid	2	10	18	66	127	146	89	64	4	1	527
	Maori	0	1	2	7	12	20	17	5	0	0	64
	Pacific Isl.	1	0	3	6	5	5	9	1	0	0	30
	Asian	0	0	4	0	9	9	13	3	0	0	38
	Other	0	0	0	0	0	3	0	0	0	0	3
	Total	3	11	27	79	153	183	128	73	4	1	662

Figure 8.36

Number and Duration of Functioning Grafts
Australia 2002



Number and Duration of Functioning Grafts
New Zealand 2002



RATES OF GRAFT LOSS

The rates of graft failure and death with a functioning graft have been constant over the last five years in both Australia and New Zealand (fig 8.37).

The cause of graft failure from 1993 to 2002 is shown in Figure 8.38.

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

Figure 8.37

Graft Loss Rate 1998 - 2002 (Number of Grafts at Risk)

	1998	1999	2000	2001	2002
Australia	(5189)	(5340)	(5580)	(5785)	(6060)
Graft Failure	3.0%	3.0%	2.7%	2.8%	2.9%
Death	2.4%	2.2%	2.9%	2.6%	2.2%
All Losses	5.4%	5.2%	5.7%	5.4%	5.1%
New Zealand	(987)	(1046)	(1089)	(1132)	(1179)
Graft Failure	2.9%	3.9%	3.4%	3.8%	2.7%
Death	2.5%	2.1%	2.6%	2.2%	2.7%
All Losses	5.4%	6.0%	6.0%	6.0%	5.4%

Figure 8.38

Year of Graft Loss Due to Death or Failure 1993 - 2002

Loss	Cause of Failure	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total
Australia												
Death		111	107	118	113	109	124	117	166	151	132	1248
	Rejection - Acute	18	12	20	19	8	11	7	9	7	8	119
	Rejection - Chronic Allograft Nephropathy	90	77	74	87	79	105	105	91	108	105	921
	Rejection - Hyperacute	4	0	4	2	1	0	2	1	0	0	14
Failed	Vascular	24	14	16	13	15	9	15	7	11	16	140
	Technical Problems	5	3	4	1	3	0	3	4	2	3	28
	Recurrence Primary Disease	11	11	13	7	19	10	10	16	9	15	121
	Non Compliance	9	2	3	4	7	6	5	7	7	11	61
	Other	12	10	13	15	13	15	15	17	18	19	147
Total		284	236	265	261	254	280	279	318	313	309	2799
New Zealand												
Death		17	18	14	26	27	25	22	28	25	32	234
	Rejection - Acute	8	5	5	3	1	1	4	0	1	1	29
	Rejection - Chronic Allograft Nephropathy	17	18	11	12	14	19	24	20	30	21	186
	Rejection - Hyperacute	0	2	0	1	0	0	0	0	0	0	3
Failed	Vascular	4	4	2	4	5	0	6	8	1	1	35
	Technical Problems	5	1	1	0	2	0	2	0	2	1	14
	Recurrence Primary Disease	1	3	4	2	0	3	4	3	2	1	23
	Non Compliance	1	1	0	1	0	3	0	5	2	3	16
	Other	2	5	5	6	2	3	1	2	5	4	35
Total		55	57	42	55	51	54	63	66	68	64	575



IMMUNOSUPPRESSION

In 2002, cyclosporin, mycophenolate and prednisolone triple therapy remained the most commonly prescribed initial therapy for prophylaxis of rejection among recipients of a primary cadaver graft. Over half of all such recipients were initiated on this combination, however, a significant minority of these were changed to alternative therapies during the first year post-transplant.

The proportion of primary cadaver graft recipients initiated on tacrolimus, mycophenolate and prednisolone triple therapy was more than in 2001, and the proportion receiving this combination increased at later time points post-transplant.

It is likely that the choice of initial immunosuppressive therapy continues to be heavily influenced by participation in “multi-centre trials”.

Figure 8.39

Australia

Immunosuppressive Therapy - Primary Cadaver Graft 1994 - 2002

	Year	Cya / Aza	Cya / MMF	Tac / Aza	Tac / MMF	Cya / Sirol	Tac/Sirol	Sirol / MMF	Other	Total
Initial treatment	1994	274 (96%)	0	3 (1%)	0	0	0	0	8 (3%)	285
	1995	240 (83%)	0	22 (8%)	0	0	0	0	27 (9%)	289
	1996	264 (85%)	8 (3%)	0	0	19 (6%)	0	0	19 (6%)	310
	1997	129 (41%)	128 (41%)	0	1 (0%)	39 (13%)	0	0	15 (5%)	312
	1998	37 (13%)	168 (57%)	0	1 (0%)	69 (24%)	0	2 (1%)	16 (5%)	293
	1999	19 (8%)	142 (58%)	1 (0%)	33 (13%)	22 (9%)	0	1 (0%)	29 (12%)	247
	2000	21 (7%)	185 (60%)	0	81 (26%)	0	3 (1%)	4 (1%)	16 (5%)	310
	2001	16 (6%)	181 (63%)	1 (0%)	32 (11%)	0	32 (1%)	0	27 (9%)	289
2002	7 (3%)	142 (62%)	0	50 (22%)	0	0	2 (1%)	29 (13%)	230	
Treatment at 1 month	1994	249 (91%)	0	3 (1%)	0	0	0	0	21 (8%)	273
	1995	228 (82%)	1 (0%)	24 (9%)	0	0	0	0	25 (9%)	278
	1996	228 (78%)	23 (8%)	3 (1%)	2 (1%)	15 (5%)	0	0	21 (7%)	292
	1997	99 (33%)	133 (45%)	0	5 (2%)	35 (12%)	0	0	25 (8%)	297
	1998	26 (9%)	169 (60%)	0	7 (2%)	65 (23%)	0	1 (0%)	16 (6%)	284
	1999	13 (6%)	136 (57%)	2 (1%)	41 (17%)	24 (10%)	0	3 (1%)	20 (8%)	239
	2000	19 (6%)	170 (56%)	5 (2%)	94 (31%)	1 (0%)	4 (1%)	5 (2%)	4 (1%)	302
	2001	12 (4%)	160 (58%)	3 (1%)	54 (19%)	0	27 (10%)	2 (1%)	20 (7%)	278
2002	6 (3%)	126 (57%)	0	62 (28%)	0	0	2 (1%)	27 (12%)	223	
Treatment at 3 months	1994	246 (92%)	0	4 (1%)	0	0	0	0	17 (6%)	267
	1995	223 (82%)	3 (1%)	23 (8%)	0	0	0	0	23 (8%)	272
	1996	219 (77%)	27 (9%)	8 (3%)	4 (1%)	15 (5%)	0	1 (0%)	11 (4%)	285
	1997	89 (31%)	136 (47%)	1 (0%)	5 (2%)	25 (9%)	0	1 (0%)	31 (11%)	288
	1998	23 (8%)	168 (61%)	1 (0%)	11 (4%)	58 (21%)	0	1 (0%)	15 (5%)	277
	1999	13 (6%)	129 (55%)	4 (2%)	45 (19%)	18 (8%)	0	3 (1%)	21 (9%)	233
	2000	19 (6%)	159 (53%)	7 (2%)	96 (32%)	1 (0%)	4 (1%)	6 (2%)	8 (3%)	300
	2001	12 (4%)	143 (52%)	4 (2%)	61 (22%)	0	26 (9%)	4 (2%)	24 (9%)	274
2002	10 (5%)	114 (52%)	1 (0%)	68 (31%)	2 (1%)	1 (0%)	5 (2%)	19 (9%)	220	
Treatment at 6 months	1994	240 (91%)	0	4 (2%)	0	0	0	0	19 (7%)	263
	1995	216 (82%)	3 (1%)	20 (8%)	0	0	0	0	26 (10%)	265
	1996	213 (76%)	27 (10%)	8 (3%)	4 (1%)	14 (5%)	0	1 (0%)	15 (5%)	282
	1997	93 (33%)	140 (50%)	1 (0%)	5 (2%)	22 (8%)	0	0	21 (7%)	282
	1998	24 (9%)	167 (61%)	1 (0%)	15 (5%)	45 (16%)	0	4 (1%)	20 (7%)	276
	1999	15 (7%)	125 (55%)	4 (2%)	44 (19%)	8 (4%)	0	3 (1%)	28 (12%)	227
	2000	21 (7%)	145 (49%)	10 (3%)	93 (32%)	1 (0%)	4 (1%)	4 (1%)	16 (5%)	294
	2001	14 (5%)	130 (48%)	3 (1%)	69 (25%)	0	23 (8%)	5 (2%)	28 (10%)	272
2002	8 (4%)	102 (47%)	8 (4%)	67 (31%)	0	0	4 (2%)	29 (13%)	218	
Treatment at 12 months	1994	235 (91%)	0	2 (1%)	1 (0%)	0	0	0	20 (8%)	258
	1995	211 (81%)	2 (1%)	18 (7%)	1 (0%)	0	0	0	28 (11%)	260
	1996	200 (72%)	34 (12%)	8 (3%)	4 (2%)	12 (4%)	0	1 (0%)	18 (7%)	277
	1997	106 (38%)	124 (45%)	3 (1%)	4 (1%)	19 (7%)	0	0	22 (8%)	278
	1998	30 (11%)	160 (59%)	2 (1%)	18 (7%)	34 (13%)	0	7 (3%)	18 (7%)	269
	1999	16 (7%)	118 (53%)	3 (2%)	43 (19%)	5 (2%)	0	3 (1%)	34 (15%)	222
	2000	29 (10%)	127 (44%)	13 (5%)	91 (32%)	1 (0%)	4 (1%)	5 (2%)	17 (6%)	287
	2001	18 (7%)	118 (45%)	4 (2%)	77 (30%)	0	20 (8%)	6 (2%)	18 (7%)	261
2002	3 (6%)	24 (45%)	4 (8%)	11 (21%)	0	0	5 (9%)	6 (11%)	53	

Figure 8.40		New Zealand					
		Immunosuppressive Therapy - Primary Cadaver Graft					1994 - 2002
	Year	Cya / Aza	Cya / MMF	Tac / Aza	Tac / MMF	Other	Total
Initial treatment	1994	43 (86%)	0	0	0	7 (14%)	50
	1995	59 (94%)	0	0	0	4 (6%)	63
	1996	60 (97%)	0	0	0	2 (3%)	62
	1997	65 (90%)	2 (3%)	0	0	5 (7%)	72
	1998	34 (51%)	30 (45%)	0	1 (1%)	3 (4%)	67
	1999	0	57 (97%)	0	2 (3%)	0	59
	2000	0	60 (95%)	0	3 (5%)	0	63
	2001	0	59 (95%)	0	3 (5%)	0	62
	2002	0	40 (98%)	0	1 (2%)	0	41
Treatment at 1 month	1994	39 (93%)	0	0	0	3 (7%)	42
	1995	57 (97%)	0	0	0	2 (3%)	59
	1996	50 (86%)	3 (5%)	0	0	5 (9%)	58
	1997	60 (91%)	5 (8%)	0	0	1 (2%)	66
	1998	33 (50%)	29 (44%)	0	2 (3%)	2 (3%)	66
	1999	0	48 (92%)	0	4 (8%)	0	52
	2000	0	51 (88%)	0	7 (12%)	0	58
	2001	0	54 (86%)	0	6 (10%)	1 (4%)	61
	2002	0	32 (86%)	0	5 (14%)	0	37
Treatment at 3 months	1994	39 (98%)	0	0	0	1 (3%)	40
	1995	56 (97%)	0	0	0	2 (3%)	58
	1996	51 (93%)	3 (5%)	0	0	1 (2%)	55
	1997	52 (83%)	7 (11%)	2 (3%)	0	2 (3%)	63
	1998	30 (49%)	28 (46%)	0	3 (5%)	0	61
	1999	0	46 (92%)	0	4 (8%)	0	50
	2000	0	47 (82%)	0	8 (14%)	2 (4%)	57
	2001	1 (2%)	48 (84%)	1 (2%)	6 (11%)	1 (2%)	57
	2002	0	29 (81%)	0	7 (19%)	0	36
Treatment at 6 months	1994	36 (92%)	0	0	0	3 (8%)	39
	1995	55 (96%)	0	0	0	2 (4%)	57
	1996	51 (94%)	2 (4%)	0	0	1 (2%)	54
	1997	50 (79%)	6 (10%)	3 (5%)	1 (2%)	3 (5%)	63
	1998	28 (49%)	27 (46%)	0	2 (3%)	1 (2%)	59
	1999	0	41 (82%)	0	8 (16%)	1 (2%)	50
	2000	3 (5%)	43 (75%)	0	11 (19%)	0	57
	2001	1 (2%)	46 (81%)	1 (2%)	7 (12%)	2 (4%)	57
	2002	0	28 (78%)	0	8 (22%)	0	36
Treatment at 12 months	1994	35 (92%)	0	0	0	3 (8%)	38
	1995	51 (96%)	0	0	0	2 (4%)	53
	1996	49 (92%)	2 (4%)	0	0	2 (4%)	53
	1997	45 (74%)	10 (16%)	1 (2%)	1 (2%)	4 (7%)	61
	1998	32 (55%)	18 (31%)	3 (5%)	2 (3%)	3 (5%)	58
	1999	12 (26%)	24 (52%)	2 (4%)	6 (13%)	2 (4%)	46
	2000	19 (34%)	22 (39%)	3 (5%)	12 (21%)	0	56
	2001	23 (40%)	21 (37%)	4 (7%)	6 (11%)	3 (5%)	57
	2002	2 (17%)	6 (50%)	1 (8%)	1 (8%)	2 (17%)	12

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