

CHAPTER 8

TRANSPLANTATION

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TRANSPLANTS PERFORMED IN 2001

Figure 8.1

Number of Renal Transplant Operations (Living 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 (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	309	58	21	3	0	391 (39)	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	383	63	6	4	1	457 (64)	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	402	42	9	0	0	453 (167)	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)

AUSTRALIA

The 540 transplant operations performed in 2001 was an increase of 2% compared to 2000 (530 operations). This was a transplant rate of 28 per million of population (similar to 2000).

The living donor transplant rate was 39% (212 grafts) in 2001, compared to 34% (180 grafts) in 2000.

Of the kidneys transplanted, 90% were to primary recipients, the same proportion as 2000.

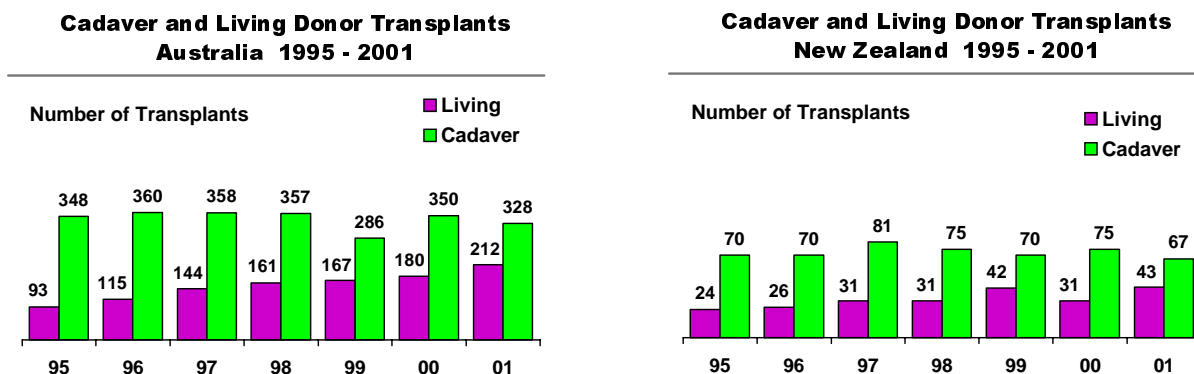
NEW ZEALAND

The number of transplant operations (110) performed in 2001 represents a transplant rate of 29 per million (an increase of 4% from 2000).

The percentage of living donors was 39% of all operations compared to 29% in 2000.

Of the grafts performed in 2001, 92% were to primary recipients, compared to 86% in 2000.

Figure 8.2



TRANSPLANT RATE OF PATIENTS DIALYSED

Figure 8.3

In Australia the proportion of patients receiving dialysis in 2001 who were transplanted that year was 6.4% compared to 6.7% in 2000. Of all patients in the 15-59 year age group on dialysis, 11.3% were transplanted in 2001, the same as in 2000.

In New Zealand the number of operations represents 6.0% of all dialysed patients and 8.8% 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 <4 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 2001 Related to Patients Dialysed

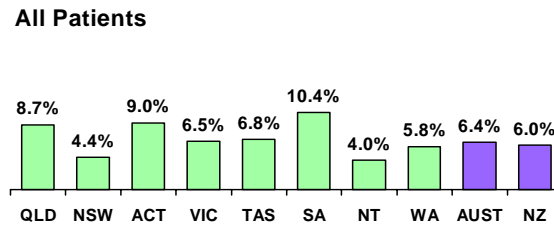


Figure 8.4

Rate of Transplantation 2001 Related to Patients Dialysed

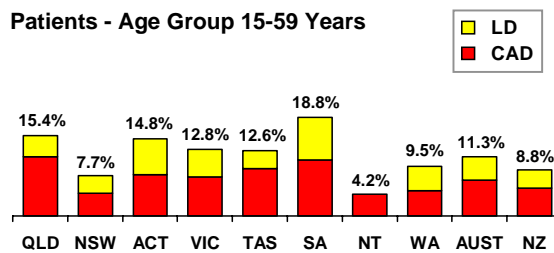


Figure 8.5

Rate of Transplantation 2001 Related to Patients Dialysed

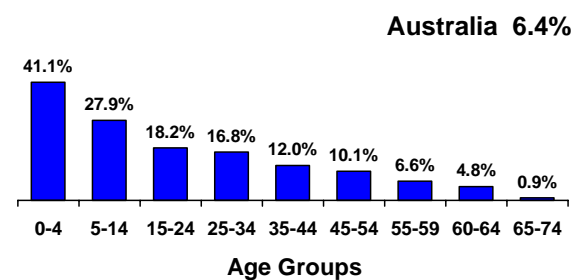
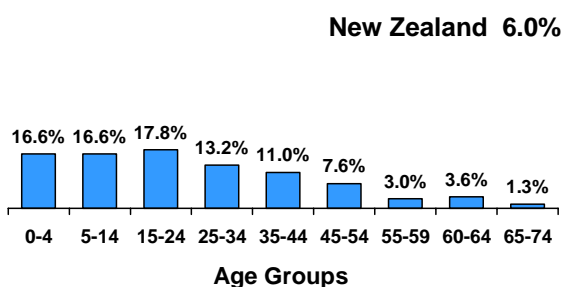


Figure 8.6

Rate of Transplantation 2001 Related to Patients Dialysed





AGE OF RECIPIENTS TRANSPLANTED IN 2001

AUSTRALIA

The median age of transplant recipients in 2001 was 44.5 years, similar to 44.4 years in 2000. Forty nine percent of recipients fell into the 35-54 year age group. Twenty two percent of recipients in 2001 were over 54 years of age compared to 24% in 2000. The age range was 1.7 to 74.1 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 2001 was 42.1 years.

Recipients aged between 35 and 54 years comprised 49% of the total. Twenty percent of recipients in 2001 were over 54 years of age.

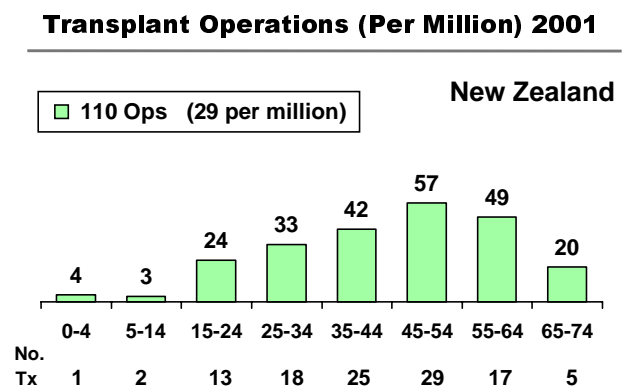
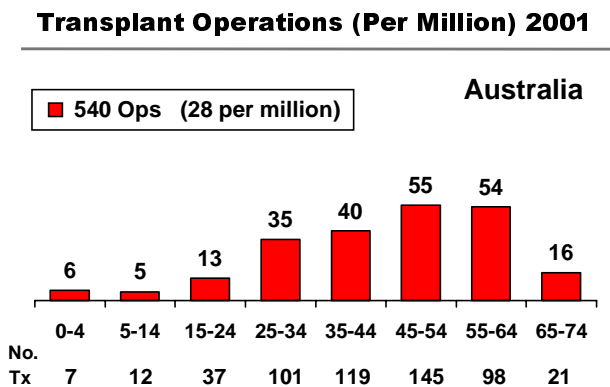
The age range of recipients was 1.7 to 72.8 years (fig 8.6 and 8.8).

Figure 8.7

Graft Number and Age of Patients Transplanted 1-Jan-2001 to 31-Dec-2001

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	3	9	52	67	77	67	13	0	289
	2	0	0	3	11	6	9	5	0	0	34
	3	0	0	0	1	2	0	0	1	0	4
	4	0	0	0	0	0	1	0	0	0	1
Living Donor	1	6	8	25	37	40	52	23	7	0	198
	2	0	0	0	0	3	6	2	0	0	11
	3	0	1	0	0	0	0	1	0	0	2
	4	0	0	0	0	1	0	0	0	0	1
Total		7	12	37	101	119	145	98	21	0	540
New Zealand											
Cadaver	1	1	0	5	7	13	18	13	5	0	62
	2	0	0	0	1	2	2	0	0	0	5
Living Donor	1	0	2	6	10	8	9	4	0	0	39
	2	0	0	2	0	2	0	0	0	0	4
Total		1	2	13	18	25	29	17	5	0	110

Figure 8.8



ETHNICITY OF TRANSPLANT RECIPIENTS
AUSTRALIA

Figures 8.9 and 8.11.

For the 15-59 year age group in 2001, 13.3% of dialysed Caucasoid patients were transplanted. For Australian Aboriginals and Torres Strait Islanders (ATSI), the corresponding transplant rate for 2001 was 3.3%.

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

Figure 8.9										Australia		
Transplantation Rate - Age Group 15-59 years 1991 - 2001												
Year	Caucasoid			Aboriginal and Torres St. Islanders			All Patients					
	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate			
1991	1963	363	18.4%	167	12	7.1%	2325	401	17.2%			
1992	2005	350	17.4%	196	20	10.2%	2441	403	16.5%			
1993	2075	328	15.8%	235	10	4.2%	2567	375	14.6%			
1994	2224	334	15.0%	289	13	4.4%	2802	369	13.1%			
1995	2320	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	2526	358	14.1%	441	20	4.5%	3362	426	12.6%			
1998	2653	357	13.4%	480	26	5.4%	3555	436	12.2%			
1999	2743	322	11.7%	514	20	3.8%	3695	387	10.4%			
2000	2864	386	13.4%	538	17	3.1%	3881	440	11.3%			
2001	2932	391	13.3%	592	20	3.3%	4025	456	11.3%			

NEW ZEALAND

Figures 8.10 and 8.11

Amongst the 15-59 year age group, 2001 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 2001 was 3.6% and 2.3% respectively, compared with 15.5% for Caucasoid dialysis patients.

Figure 8.10													New Zealand		
Transplantation Rate - Age Group 15-59 years 1991 - 2001															
Year	Caucasoid			Maori			Pacific Islander			All Patients					
	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate	Dialysed	Tx	Rate			
1991	314	44	14.0%	188	15	7.9%	61	5	8.1%	579	67	11.5%			
1992	336	80	23.8%	203	11	5.4%	64	3	4.7%	625	104	16.6%			
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	412	64	15.5%	355	13	3.6%	212	5	2.3%	1044	92	8.8%			

Figure 8.11
New Transplanted Patients Related to Race 1997 - 2001

Race	1997	1998	1999	2000	2001
Australia	(502)	(518)	(453)	(530)	(540)
Caucasoid	425 (85%)	434 (84%)	379 (84%)	463 (88%)	469 (87%)
Aboriginal/Torres St. Isl.	22 (4%)	28 (5%)	23 (5%)	18 (3%)	21 (4%)
Asian	44 (9%)	37 (7%)	39 (9%)	38 (7%)	32 (6%)
Other	13 (2%)	19 (4%)	12 (2%)	12 (2%)	20 (3%)
New Zealand	(112)	(106)	(112)	(106)	(110)
Caucasoid	91 (81%)	77 (73%)	78 (70%)	81 (76%)	79 (72%)
Maori	11 (10%)	17 (16%)	17 (15%)	13 (12%)	15 (14%)
Pacific Islander	4 (4%)	7 (7%)	8 (7%)	4 (4%)	6 (5%)
Asian	6 (5%)	4 (4%)	9 (8%)	8 (8%)	10 (9%)
Other	0	1 (<1%)	0	0	0



AUSTRALIAN STATE TRANSPLANTATION ACTIVITY 2001

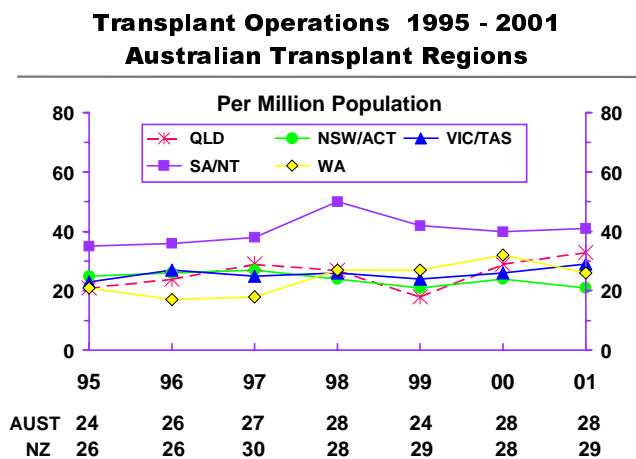
Figure 8.12

Transplants in each Region 1997 - 2001
Number of Operations
(per Million Population)

State	1997	1998	1999	2000	2001
Queensland	98 (29)	93 (27)	64 (18)	105 (29)	121 (33)
New South Wales/ACT ★	179 (27)	160 (24)	142 (21)	161 (24)	145 (21)
Victoria/Tasmania ★	128 (25)	131 (26)	126 (24)	136 (26)	155 (29)
South Australia/NT ★	64 (38)	84 (50)	70 (42)	68 (40)	69 (41)
Western Australia	33 (18)	50 (27)	51 (27)	60 (32)	50 (26)
Australia	502 (27)	518 (28)	453 (24)	530 (28)	540 (28)

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

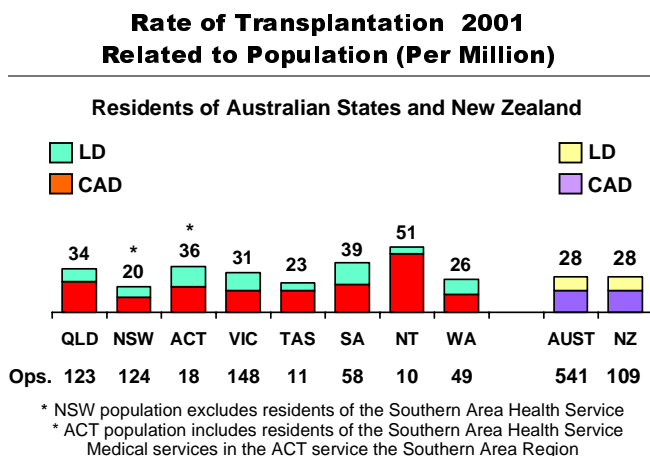
Figure 8.13



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 (41 per million) in 2001.

Figure 8.14



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

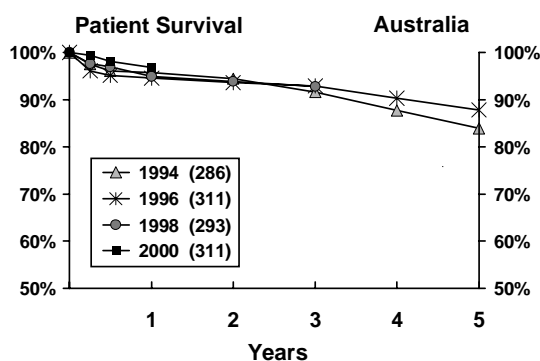
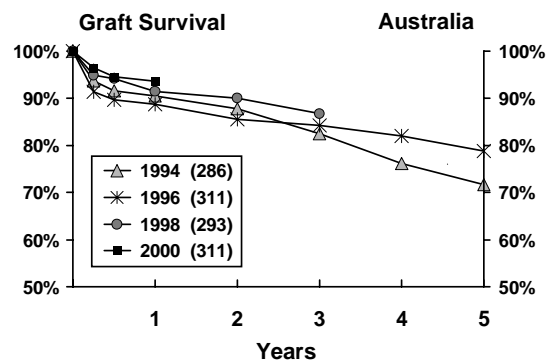
The transplantation rate increased for most states. New South Wales remained the same whilst Tasmania and the Northern Territory fell slightly. The lowest rate (20 per million) was in New South Wales, the highest (51 per million) in the Northern Territory.

TRANSPLANT SURVIVAL - PRIMARY CADAVERIC GRAFTS

AUSTRALIA

Figure 8.15

Primary Cadaver Patient and Graft Survival 1991 - 2001													
% 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	272
1997	n=313	98 ± 0.7	308	98 ± 0.8	306	97 ± 1.0	303	96 ± 1.1	300	89 ± 1.7	279	-	-
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	-	-	-	-
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 ± 1.0	210	-	-	-	-	-	-
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	244
1997	n=313	94 ± 1.4	293	92 ± 1.5	288	90 ± 1.7	283	89 ± 1.8	279	82 ± 2.2	257	-	-
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	-	-	-	-
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	205	-	-	-	-	-	-

Figure 8.16
Primary Cadaver Patient Survival 1994 - 2000 Related to Year of Transplant

Primary Cadaver Graft Survival 1994 - 2000 Related to Year of Transplant




TRANSPLANT SURVIVAL - PRIMARY CADAVERIC GRAFTS

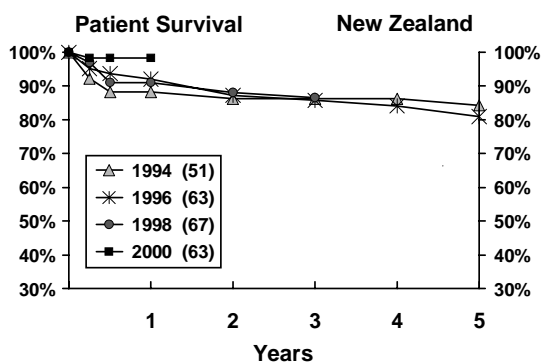
NEW ZEALAND

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	-
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	-	-
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 32	-	-	-
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	-
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	-	-
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 32	-	-	-

Figure 8.18

Primary Cadaver Patient Survival 1994 - 2000 Related to Year of Transplant



Primary Cadaver Graft Survival 1994 - 2000 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, 1999-2001; 1996-98; 1993-95; 1990-92 and 1987-89.

Figure 8.19

Second and Subsequent Cadaver Patient and Graft Survival 1987 - 2001													
% 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													
1987-89	n=199	100 ± 0.0	199	98 ± 1.0	195	96 ± 1.4	191	94 ± 1.6	188	88 ± 2.3	176	81 ± 2.8	162
1990-92	n=194	99 ± 0.7	192	97 ± 1.2	188	95 ± 1.6	184	94 ± 1.7	182	89 ± 2.3	172	83 ± 2.7	161
1993-95	n=179	98 ± 1.0	176	97 ± 1.2	174	97 ± 1.2	174	95 ± 1.6	170	92 ± 2.0	165	87 ± 2.6	155
1996-98	n=158	100 ± 0.0	158	98 ± 1.1	155	97 ± 1.2	154	96 ± 1.5	152	93 ± 2.0	147	85 ± 3.3	51
1999-2001	n=116	98 ± 1.2	114	97 ± 1.7	112	96 ± 1.9	96	95 ± 2.2	80	-	-	-	-
Graft Survival													
1987-89	n=199	83 ± 2.6	166	79 ± 2.9	158	76 ± 3.0	152	74 ± 3.1	147	62 ± 3.4	124	57 ± 3.5	114
1990-92	n=194	85 ± 2.6	164	82 ± 2.8	159	80 ± 2.9	155	78 ± 3.0	152	72 ± 3.2	140	63 ± 3.5	122
1993-95	n=179	84 ± 2.7	151	82 ± 2.9	147	82 ± 2.9	146	80 ± 3.0	143	73 ± 3.3	131	67 ± 3.5	120
1996-98	n=158	91 ± 2.3	144	87 ± 2.7	138	87 ± 2.7	137	84 ± 3.0	132	77 ± 3.3	122	67 ± 4.2	39
1999-2001	n=116	91 ± 2.6	106	90 ± 2.8	104	88 ± 3.1	88	86 ± 3.3	73	-	-	-	-

Figure 8.20

Second and Subsequent Cadaver Patient Survival Related to Years of Transplant 1987 - 2001

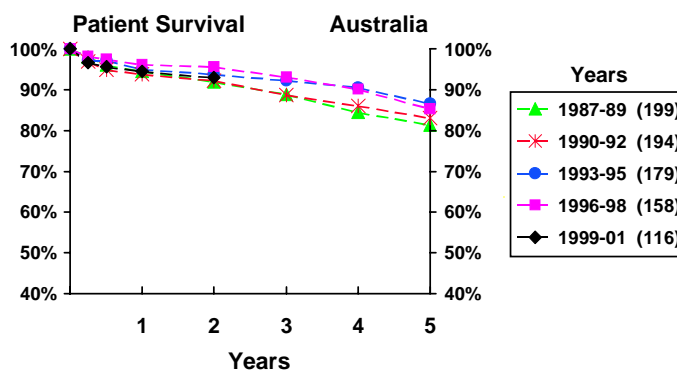
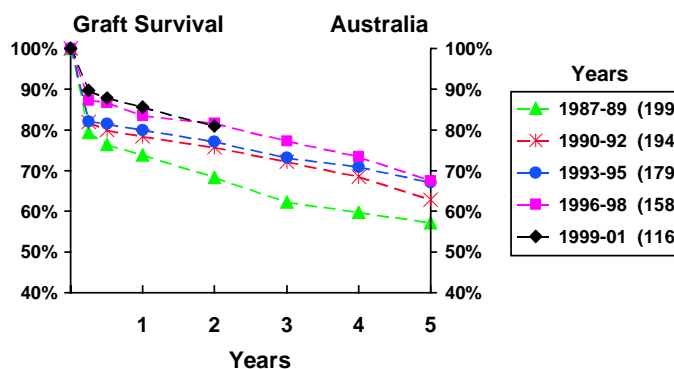


Figure 8.21

Second and Subsequent Cadaver Graft Survival Related to Years of Transplant 1987 - 2001





LIVING DONOR TRANSPLANTS

Figure 8.22 **Australia**

**Living Donor Operations
as Proportion (%) of Annual
Transplantation 1997 - 2001**

Recipient Age Groups	Year of Transplantation				
	1997	1998	1999	2000	2001
00-04 years	100%	67%	100%	83%	86%
05-14 years	60%	47%	58%	63%	75%
15-24 years	57%	54%	61%	65%	68%
25-34 years	44%	37%	39%	38%	37%
35-44 years	27%	32%	41%	35%	37%
45-54 years	18%	21%	26%	25%	40%
55-64 years	10%	21%	27%	23%	27%
65-74 years	0%	19%	0%	25%	33%
All Recipients	29%	31%	37%	34%	39%

Figure 8.23

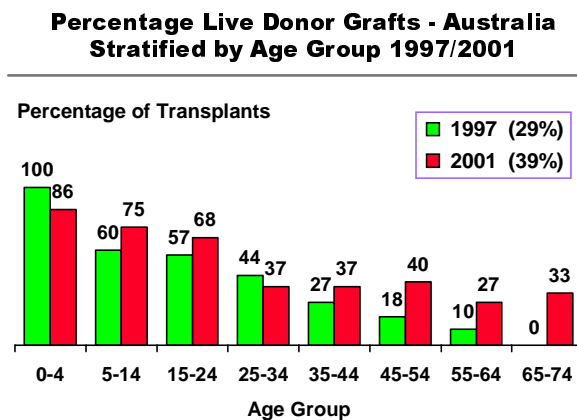
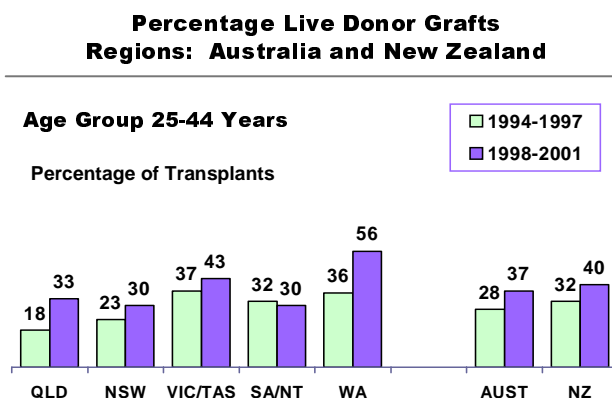


Figure 8.24



AUSTRALIA

The year 2001 saw the largest absolute number of living donor transplants being performed in Australia representing 39% of all transplant operations. Annual increases have continued since 1994 (fig 8.22 and 8.26).

Figure 8.23 shows the age-related proportion of living donor transplants for the years 1997 and 2001. The overall proportion of living donor transplants continued to rise between these years. The proportion of living donors increased in all age groups, the largest increases were in the 5-14 and 45-54 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 1994-97 and 1998-2001. There have been increases in most regions.

The proportion of unrelated donors has risen over the last few years and in 2001 was 30%. Sixty nine percent of living unrelated donors were spouses. The number of related donors rose 19% in 2001 after remaining unchanged since 1997 (fig 8.26).

NEW ZEALAND

Thirty nine percent of grafts were from a living donor (29% in 2000 and 38% in 1999). There were eleven living unrelated donors.

TIMING OF LIVING DONOR TRANSPLANTS

The timing of living donor transplants is shown in Figure 8.25. New Zealand has over this period had a higher proportion of living transplants performed before dialysis commencement.

For the years 1997-2001, the proportion of living donor transplants performed pre-dialysis was greatest in South Australia/Northern Territory (31%).

Figure 8.25

Timing of Living Donor Transplantation for Primary Grafts in Relation to Date of Dialysis Start by Year 1997 - 2001

		1997	1998	1999	2000	2001
Aust.	Pre-dialysis	19%	17%	19%	21%	22%
	<1 month post dialysis	5%	4%	4%	7%	4%
	1-5.9 months post dialysis	21%	23%	15%	17%	18%
	6-11.9 months post dialysis	15%	20%	18%	15%	16%
	>12 months post dialysis	40%	35%	45%	40%	40%
N.Z.	Pre-dialysis	21%	32%	24%	50%	26%
	<1 month post dialysis	0%	0%	0%	0%	3%
	1-5.9 months post dialysis	17%	21%	21%	18%	20%
	6-11.9 months post dialysis	10%	4%	8%	14%	23%
	>12 months post dialysis	52%	43%	47%	18%	28%

Figure 8.26

Source of Living Donor Kidney 1997 - 2001

Source	Australia					New Zealand				
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
Total Living Donors	144	161	167	180	212	31	31	42	31	43
Related	(125)	(126)	(124)	(124)	(148)	(23)	(19)	(33)	(21)	(32)
Mother	39	27	32	40	34	6	4	9	4	9
Father	22	25	28	35	39	6	5	5	1	7
Brother	29+	28+	17	15 x	32 x	3	6	9	6 x	4
Sister	23+	32	28	22	24 x	5	2	6	10	8
Offspring	3	5	8	8	9	3	2	2	0	4
Grandfather	1	0	1	1	2	0	0	0	0	0
Grandmother	0	4	3	0	1	0	0	0	0	0
Cousin	4	1	5	2	5	0	0	1	0	0
Nephew	0	0	0	0	0	0	0	0	0	0
Niece	1	0	0	0	0	0	0	0	0	0
Uncle	1	0	1	0	0	0	0	0	0	0
Aunt	2	4	1	1	2	0	0	1	0	0
Unrelated	(19)	(35)	(43)	(56)	(64)	(8)	(12)	(9)	(10)	(11)
Wife	10	17	23	30	21	4	7	4	5	5
Husband	8	13	10	15	23	1	2	3	3	1
Mother in Law	0	0	0	1	0	1	0	0	0	0
Stepmother	0	0	0	0	0	0	0	0	0	0
Adoptive Mother	0	0	0	0	0	0	0	0	0	0
Adoptive Father	0	0	0	0	1	0	0	0	0	0
Stepfather	0	0	0	0	2	0	0	0	0	0
Sister in Law	0	1	1	0	1	1	0	0	0	0
Brother in Law	0	0	0	0	1	0	0	1	0	0
Partner	0	1	0	1	4	0	0	0	0	0
Uncle	0	0	0	0	0	0	0	0	0	0
Other	1	3	9	8	11	1	3	1	2	5
Aunt	0	0	0	1	0	0	0	0	0	0



FUNCTIONING TRANSPLANTS AT 31-DEC-2001 TRANSPLANT OPERATIONS 1963 - 2001

Figure 8.27

Summary of Renal Transplantation Australia 1963 - 2001			
		Performed	Functioning ★
Cadaver	First	9223	3535
	Second	1458	484
	Third	224	68
	Fourth	30	11
	Fifth	2	1
Living Donor	First	1790	1248
	Second	159	101
	Third	22	14
	Fourth	5	4
	Fifth	1	0
Total		12914	5466

★ Lost to follow up not included

AUSTRALIA

There have been 12,914 transplant operations performed on 11,013 patients since 1963. Of these, 5,466 grafts were functioning at 31st December 2001 (282 per million population). Fifteen percent of operations and 12% of functioning grafts were regrafts. Living donor transplants accounted for 15% of operations and 25% 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 2001 is a 4% 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 75% were from cadaveric donors. The number of functioning grafts from living donors increased by 14% from 1,203 to 1,367 patients.

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 (394 per million). The lowest prevalence was in Western Australia (259 per million, increased from 248 in 2000). 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 48.3 and 49.3 years respectively (fig 8.33 and 8.34). The modal age group for living donor recipients was 35-44 years and 62% 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 5,466 grafts functioning at the end of 2001 represent 42% of all kidneys transplanted since 1963. Thirty two percent of grafts were functioning 10 or more years and 6% 20 or more years. There are now 46 recipients with grafts functioning 30 years or longer.

Figure 8.28

Summary of Renal Transplantation New Zealand 1965 - 2001			
	Transplant	Performed	Functioning ★
Cadaver	First	1735	656
	Second	342	81
	Third	65	19
	Fourth	6	1
Living Donor	First	439	280
	Second	43	22
	Third	4	3
Total		2634	1062

★ Lost to follow up not included

NEW ZEALAND

There have been 2,634 operations performed on 2,174 patients since 1965 with 1,062 grafts (276 per million) still functioning at 31st December 2001 (fig 8.28). This represents a 4% increase from the previous year. Seventeen percent of operations and 12% of functioning grafts were regrafts. Kidneys from living donors accounted for 18% of operations and 29% 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 (60%) and the racial distribution was Caucasoid 80%, Maori 10%, Pacific Islander 4% 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 and 46.9 years respectively. The modal age group for living donors was 45-54 years (fig 8.33).

The 1,062 grafts functioning at the end of 2001 represent 40% of all kidneys transplanted since 1965. The longest surviving graft has reached 32 years. Sixty four grafts have been functioning for 20 or more years and four for 30 or more years. Twenty nine percent of functioning grafts were from living donors (fig 8.36).

Figure 8.29

Functioning Transplants Transplanting State, Australia and New Zealand 1992 - 2001 (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 (193)
1993	738 (237)	1355 (215)	1031 (209)	425 (261)	316 (188)	3865 (219)	705 (198)
1994	785 (246)	1415 (223)	1054 (213)	459 (280)	342 (201)	4055 (227)	731 (203)
1995	811 (247)	1478 (230)	1096 (220)	478 (290)	358 (207)	4221 (234)	783 (214)
1996	846 (252)	1546 (238)	1159 (231)	515 (311)	363 (206)	4429 (242)	823 (222)
1997	899 (264)	1631 (248)	1224 (241)	539 (323)	377 (210)	4670 (252)	881 (234)
1998	942 (273)	1674 (252)	1292 (252)	582 (347)	396 (216)	4886 (261)	934 (246)
1999	955 (272)	1709 (254)	1332 (257)	621 (368)	432 (232)	5049 (266)	982 (258)
2000	1002 (281)	1754 (259)	1380 (264)	641 (379)	467 (248)	5244 (274)	1020 (266)
2001	1063 (293)	1789 (261)	1450 (274)	669 (394)	495 (259)	5466 (282)	1062 (276)

★ For calculation of Population Related totals, the population of these States were amalgamated
Patients lost to follow up are not included
Vic/Tas includes patients transplanted in Tasmania prior to 1975 (one functioning transplant since 1990)

Figure 8.30

Functioning Transplants by Region 1995 - 2001

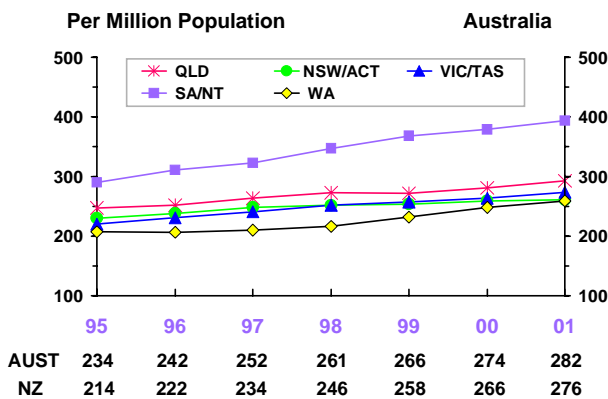


Figure 8.31

Prevalence of Functioning Transplants (Per Million Population) 31-Dec-2001

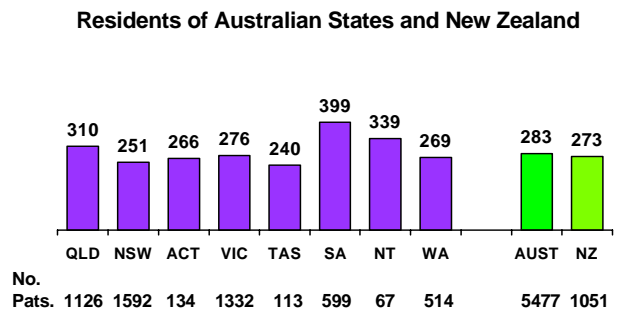
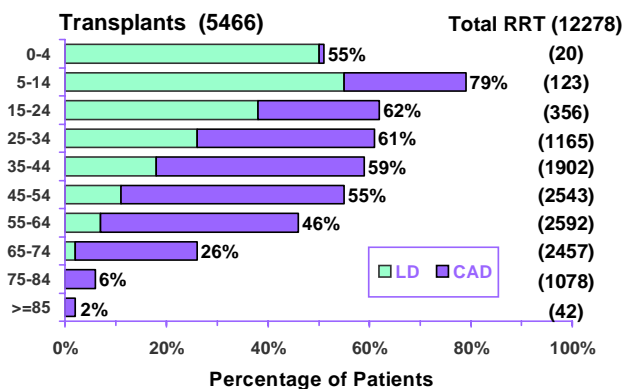


Figure 8.32

Prevalence of Functioning Transplants By Age Group Australia 2001



Prevalence of Functioning Transplants By Age Group New Zealand 2001

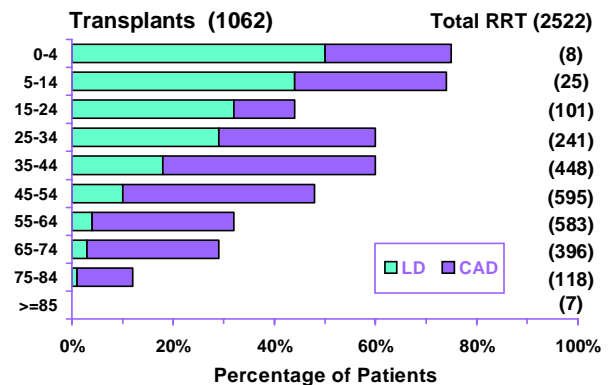


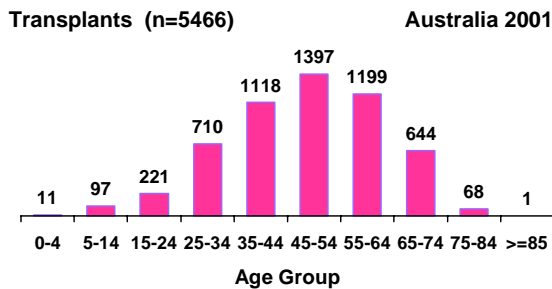


Figure 8.33

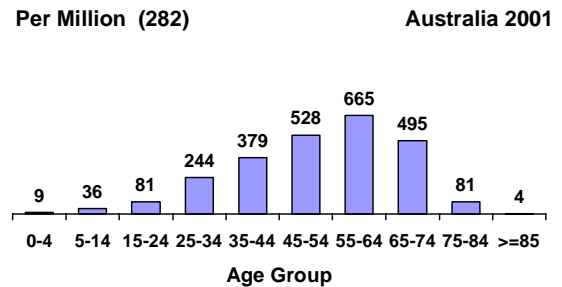
Age of All Functioning Transplant Patients Resident Country at Transplant (31-Dec-2001)												
Donor Source	Graft No.	Age Groups										Total
		00-04	05-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	> 85	
Australia		11	97	221	710	1118	1397	1199	644	68	1	5466
Cadaver	1	1	27	72	331	632	946	917	543	65	1	3535
	2	0	1	14	69	121	136	98	42	3	0	484
	3	0	1	0	10	24	19	10	4	0	0	68
	4	0	0	0	1	4	4	1	1	0	0	11
	5	0	0	0	0	0	1	0	0	0	0	1
	Total	1	29	86	411	781	1106	1026	590	68	1	4099
Living Donor	1	10	63	131	276	297	259	163	49	0	0	1248
	2	0	4	4	21	32	28	7	5	0	0	101
	3	0	1	0	0	7	3	3	0	0	0	14
	4	0	0	0	2	1	1	0	0	0	0	4
	Total	10	68	135	299	337	291	173	54	0	0	1367
New Zealand		3	17	47	142	260	284	192	101	16	0	1062
Cadaver	1	1	6	14	54	142	186	148	90	15	0	656
	2	0	1	0	12	27	27	10	3	1	0	81
	3	0	0	0	3	4	10	2	0	0	0	19
	4	0	0	0	0	0	1	0	0	0	0	1
	Total	1	7	14	69	173	224	160	93	16	0	757
Living Donor	1	2	10	31	66	75	56	32	8	0	0	280
	2	0	0	2	5	11	4	0	0	0	0	22
	3	0	0	0	2	1	0	0	0	0	0	3
	Total	2	10	33	73	87	60	32	8	0	0	305

Figure 8.34

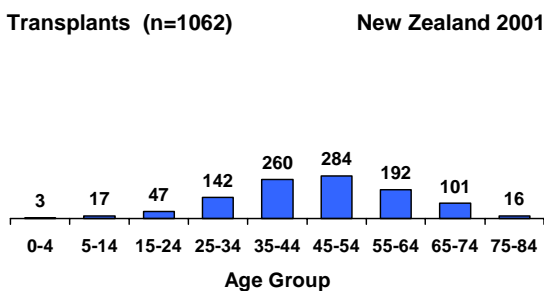
Age Distribution of Functioning Transplants By Country of Transplant



Age Distribution of Functioning Transplants By Country of Transplant



Age Distribution of Functioning Transplants By Country of Transplant



Age Distribution of Functioning Transplants By Country of Transplant

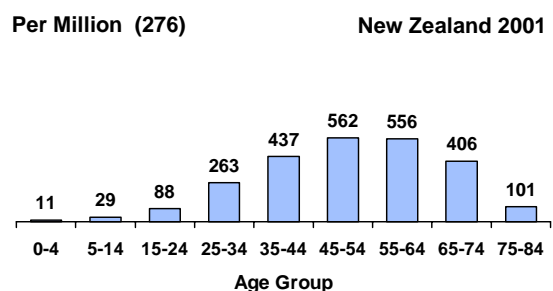
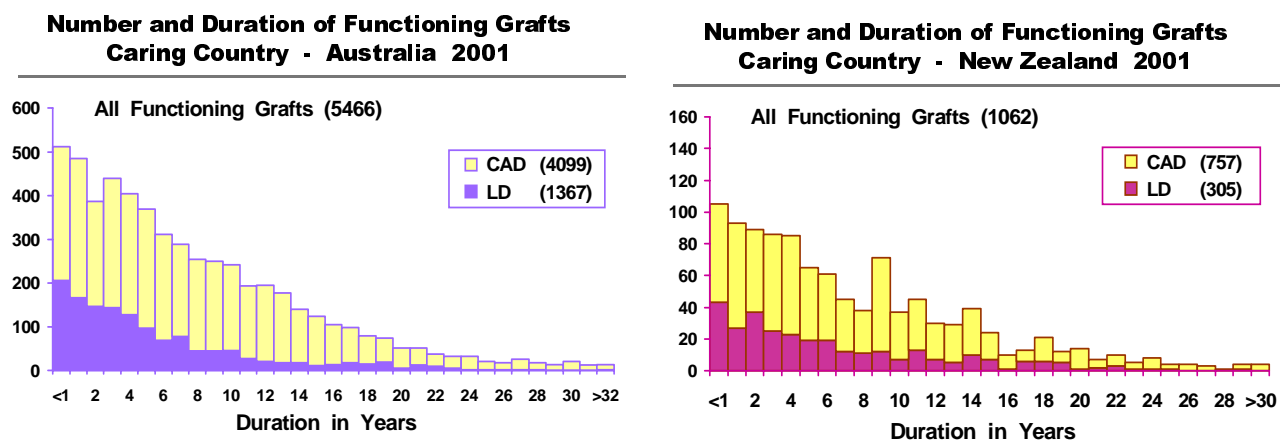


Figure 8.35

Functioning Transplant Patients Related to Race and Age Group 31-Dec-2001												
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		11	97	221	710	1118	1397	1199	644	68	1	5466
Female	Caucasoid	4	33	71	265	396	434	426	305	32	0	1966
	Aboriginal	0	2	1	6	14	12	12	2	0	0	49
	Torres St. Isl.	0	0	0	0	1	2	0	0	0	0	3
	Asian	0	1	8	13	33	57	24	8	1	0	145
	Other	0	6	3	6	7	10	7	2	0	0	41
	Total	4	42	83	290	451	515	469	317	33	0	2204
Male	Caucasoid	7	49	121	378	610	773	668	308	33	1	2948
	Aboriginal	0	1	5	8	9	28	14	3	0	0	68
	Torres St. Isl.	0	0	0	0	0	0	1	1	0	0	2
	Asian	0	4	7	25	43	61	35	12	2	0	189
	Other	0	1	5	9	5	20	12	3	0	0	55
	Total	7	55	138	420	667	882	730	327	35	1	3262
New Zealand		3	17	47	142	260	284	192	101	16	0	1062
Female	Caucasoid	0	8	15	47	76	84	59	35	6	0	330
	Maori	0	1	1	7	13	10	8	4	0	0	44
	Pacific Isl.	0	0	1	2	4	5	6	1	0	0	19
	Asian	0	0	3	1	12	10	1	1	0	0	28
	Total	0	9	20	57	105	109	74	41	6	0	421
Male	Caucasoid	2	7	19	75	129	137	85	54	10	0	518
	Maori	0	0	2	6	13	18	16	4	0	0	59
	Pacific Isl.	1	0	3	4	4	6	6	1	0	0	25
	Asian	0	1	3	0	9	12	11	1	0	0	37
	Other	0	0	0	0	0	2	0	0	0	0	2
	Total	3	8	27	85	155	175	118	60	10	0	641

Figure 8.36





RATES OF GRAFT LOSS

Figure 8.37

Graft Loss Rate 1997 - 2001 (Number of Grafts at Risk)					
	1997	1998	1999	2000	2001
Australia					
	(4931)	(5188)	(5339)	(5579)	(5784)
Graft Failure	2.9%	3.0%	3.0%	2.7%	2.7%
Death	2.2%	2.3%	2.2%	2.9%	2.4%
All Losses	5.1%	5.3%	5.2%	5.6%	5.2%
New Zealand					
	(935)	(987)	(1046)	(1088)	(1130)
Graft Failure	2.6%	2.9%	3.9%	3.4%	3.7%
Death	2.8%	2.5%	2.1%	2.5%	2.1%
All Losses	5.4%	5.4%	6.0%	6.0%	5.8%

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 1992 to 2001 is shown in Figure 8.38.

The relative contributions of acute and subacute rejection to overall graft loss have decreased, whereas chronic rejection and death have increased.

Figure 8.38

Year of Graft Loss Due to Death or Failure 1992 - 2001 By Country of Transplant												
Loss	Cause of Failure	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Australia												
Death		104	111	108	118	113	110	124	118	165	144	1215
	Rejection - Acute	20	15	9	15	16	6	7	5	6	7	106
	Rejection - Chronic	74	90	76	74	87	78	105	104	90	107	885
	Rejection - Hyperacute	4	4	0	4	2	1	0	2	1	0	18
	Rejection - Subacute	1	3	3	5	3	2	4	2	3	0	26
Failed	Vascular	17	24	14	16	13	15	9	15	7	11	141
	Technical Problems	4	5	3	4	1	3	0	3	4	2	29
	Recurrence Primary Disease	15	11	11	13	7	19	10	10	16	9	121
	Non Compliance	10	9	2	3	4	7	6	5	7	7	60
	Other	10	12	10	13	15	13	15	15	17	18	138
Total		259	284	236	265	261	254	280	279	316	305	2739
New Zealand												
Death		11	17	18	14	26	27	25	22	28	24	212
	Rejection - Acute	9	6	3	3	3	1	0	3	0	1	29
	Rejection - Chronic	16	17	18	11	12	14	19	24	20	29	180
	Rejection - Hyperacute	0	0	2	0	1	0	0	0	0	0	3
	Rejection - Subacute	4	2	2	2	0	0	1	1	0	0	12
Failed	Vascular	0	4	4	2	4	5	0	6	8	1	34
	Technical Problems	1	5	1	1	0	2	0	2	0	2	14
	Recurrence Primary Disease	1	1	3	4	2	0	3	4	3	2	23
	Non Compliance	2	1	1	0	1	0	3	0	5	2	15
	Other	1	2	5	5	6	2	3	1	2	5	32
Total		45	55	57	42	55	51	54	63	66	66	554

IMMUNOSUPPRESSION

In 2001, 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 less than in 2000, however 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 1993 - 2001

	Year	Cya / Aza	Cya / MMF	Tac / Aza	Tac / MMF	Cya / Sirol	Sirol / MMF	Other	Total
Initial treatment	1993	253 (78%)	51 (16%)	0	0	0	0	19 (6%)	323
	1994	274 (96%)	0	3 (1%)	0	0	0	9 (3%)	286
	1995	240 (83%)	0	22 (8%)	0	0	0	28 (10%)	290
	1996	264 (85%)	6 (2%)	0	0	18 (6%)	0	23 (7%)	311
	1997	127 (41%)	126 (40%)	0	1 (0%)	36 (12%)	0	23 (7%)	313
	1998	34 (12%)	163 (56%)	0	1 (0%)	67 (23%)	0	28 (10%)	293
	1999	19 (8%)	142 (57%)	1 (0%)	33 (13%)	22 (9%)	1 (0%)	30 (12%)	248
	2000	20 (6%)	183 (59%)	0	80 (26%)	0	4 (1%)	24 (8%)	311
	2001	15 (5%)	180 (62%)	1 (0%)	32 (11%)	0	0	61 (21%)	289
Treatment at 1 month	1993	229 (71%)	46 (14%)	0	0	0	0	48 (15%)	323
	1994	249 (87%)	0	3 (1%)	0	0	0	34 (12%)	286
	1995	228 (79%)	1 (0%)	23 (8%)	0	0	0	38 (13%)	290
	1996	228 (73%)	23 (7%)	3 (1%)	2 (1%)	15 (5%)	0	40 (13%)	311
	1997	99 (32%)	133 (42%)	0	5 (2%)	35 (11%)	0	41 (13%)	313
	1998	26 (9%)	169 (58%)	0	7 (2%)	65 (22%)	1 (0%)	25 (9%)	293
	1999	13 (5%)	135 (54%)	2 (1%)	41 (17%)	23 (9%)	2 (1%)	33 (13%)	248
	2000	19 (6%)	170 (55%)	5 (2%)	94 (30%)	1 (0%)	5 (2%)	17 (5%)	311
	2001	12 (4%)	159 (55%)	3 (1%)	53 (18%)	0	1 (0%)	61 (21%)	289
Treatment at 3 months	1993	228 (79%)	45 (16%)	0	0	0	0	15 (5%)	288
	1994	246 (92%)	0	4 (1%)	0	0	0	18 (7%)	268
	1995	223 (82%)	3 (1%)	23 (8%)	0	0	0	23 (8%)	272
	1996	218 (77%)	26 (9%)	8 (3%)	4 (1%)	14 (5%)	0	14 (5%)	284
	1997	89 (31%)	136 (47%)	1 (0%)	5 (2%)	25 (9%)	1 (0%)	31 (11%)	288
	1998	23 (8%)	168 (60%)	1 (0%)	11 (4%)	57 (21%)	1 (0%)	17 (6%)	278
	1999	13 (6%)	129 (56%)	4 (2%)	45 (19%)	18 (8%)	3 (1%)	20 (9%)	232
	2000	19 (6%)	158 (53%)	7 (2%)	96 (32%)	0	5 (2%)	15 (5%)	300
	2001	12 (4%)	143 (52%)	4 (1%)	56 (21%)	0	3 (1%)	55 (20%)	273
Treatment at 6 months	1993	221 (79%)	44 (16%)	0	0	0	0	16 (6%)	281
	1994	240 (92%)	0	3 (1%)	0	0	0	19 (7%)	262
	1995	215 (82%)	3 (1%)	18 (7%)	0	0	0	27 (10%)	263
	1996	212 (76%)	25 (9%)	8 (3%)	4 (1%)	13 (5%)	0	18 (6%)	280
	1997	93 (33%)	140 (49%)	1 (0%)	5 (2%)	22 (8%)	0	22 (8%)	283
	1998	23 (8%)	166 (60%)	1 (0%)	15 (5%)	44 (16%)	4 (1%)	23 (8%)	276
	1999	15 (7%)	125 (55%)	4 (2%)	44 (19%)	8 (4%)	3 (1%)	28 (12%)	227
	2000	21 (7%)	144 (49%)	9 (3%)	93 (32%)	0	3 (1%)	24 (8%)	294
	2001	9 (4%)	95 (45%)	3 (1%)	49 (23%)	0	4 (2%)	49 (23%)	209
Treatment at 12 months	1993	216 (78%)	38 (14%)	0	0	0	0	22 (8%)	276
	1994	234 (90%)	0	2 (1%)	1 (0%)	0	0	22 (8%)	259
	1995	211 (81%)	2 (1%)	13 (5%)	1 (0%)	0	0	33 (13%)	260
	1996	200 (72%)	32 (12%)	7 (3%)	3 (1%)	12 (4%)	0	22 (8%)	276
	1997	106 (38%)	124 (44%)	3 (1%)	4 (1%)	19 (7%)	0	23 (8%)	279
	1998	29 (11%)	158 (59%)	2 (1%)	18 (7%)	34 (13%)	7 (3%)	20 (7%)	268
	1999	16 (7%)	118 (53%)	3 (1%)	43 (19%)	5 (2%)	3 (1%)	34 (15%)	222
	2000	28 (10%)	126 (43%)	10 (3%)	91 (31%)	0	4 (1%)	32 (11%)	291
	2001	3 (4%)	36 (54%)	1 (1%)	19 (28%)	0	0	8 (12%)	67



Figure 8.40 **NEW ZEALAND**

Immunosuppressive Therapy - Primary Cadaver Graft 1993 - 2001

	Year	Cya / Aza	Cya / MMF	Tac / Aza	Tac / MMF	Other	Total
Initial treatment	1993	50 (94%)	0	0	0	3 (6%)	53
	1994	43 (84%)	0	0	0	8 (16%)	51
	1995	59 (94%)	0	0	0	4 (6%)	63
	1996	60 (95%)	0	0	0	3 (5%)	63
	1997	65 (90%)	2 (3%)	0	0	5 (7%)	72
	1998	34 (51%)	30 (45%)	0	1 (1%)	2 (3%)	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
Treatment at 1 month	1993	45 (85%)	0	0	0	8 (15%)	53
	1994	39 (76%)	0	0	0	12 (24%)	51
	1995	57 (90%)	0	0	0	6 (10%)	63
	1996	50 (79%)	3 (5%)	0	0	10 (16%)	63
	1997	60 (83%)	5 (7%)	0	0	7 (10%)	72
	1998	33 (49%)	29 (43%)	0	2 (3%)	3 (4%)	67
	1999	0	48 (81%)	0	4 (7%)	7 (12%)	59
	2000	0	51 (81%)	0	7 (11%)	5 (8%)	63
	2001	0	54 (87%)	0	6 (10%)	2 (3%)	62
Treatment at 3 months	1993	42 (95%)	0	0	0	2 (5%)	44
	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 (48%)	28 (45%)	0	3 (5%)	1 (2%)	62
	1999	0	46 (92%)	0	4 (8%)	0	50
	2000	0	47 (82%)	0	8 (14%)	2 (4%)	57
	2001	0	47 (82%)	1 (2%)	6 (11%)	3 (5%)	57
Treatment at 6 months	1993	40 (95%)	0	0	0	2 (5%)	42
	1994	36 (92%)	0	0	0	3 (8%)	39
	1995	55 (96%)	0	0	0	2 (4%)	57
	1996	51 (94%)	02 (4%)	0	0	1 (2%)	54
	1997	50 (79%)	6 (10%)	3 (5%)	1 (2%)	3 (5%)	63
	1998	28 (48%)	27 (47%)	0	2 (3%)	1 (2%)	58
	1999	0	41 (82%)	0	8 (16%)	1 (2%)	50
	2000	3 (5%)	42 (75%)	0	10 (18%)	1 (2%)	56
	2001	0	29 (85%)	0	4 (12%)	1 (3%)	34
Treatment at 12 months	1993	38 (97%)	0	0	0	1 (3%)	39
	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%)	11 (20%)	1 (2%)	56
	2001	6 (50%)	4 (33%)	1 (8%)	1 (8%)	0	12

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