

RENAL TRANSPLANTATION

Stock and Flow

Place and Type of Transplant

Death after Transplantation and Graft Failure

Centres of Follow-up

Characteristics of Transplant Patients

Survival Analysis

Work related Rehabilitation and Quality of Life

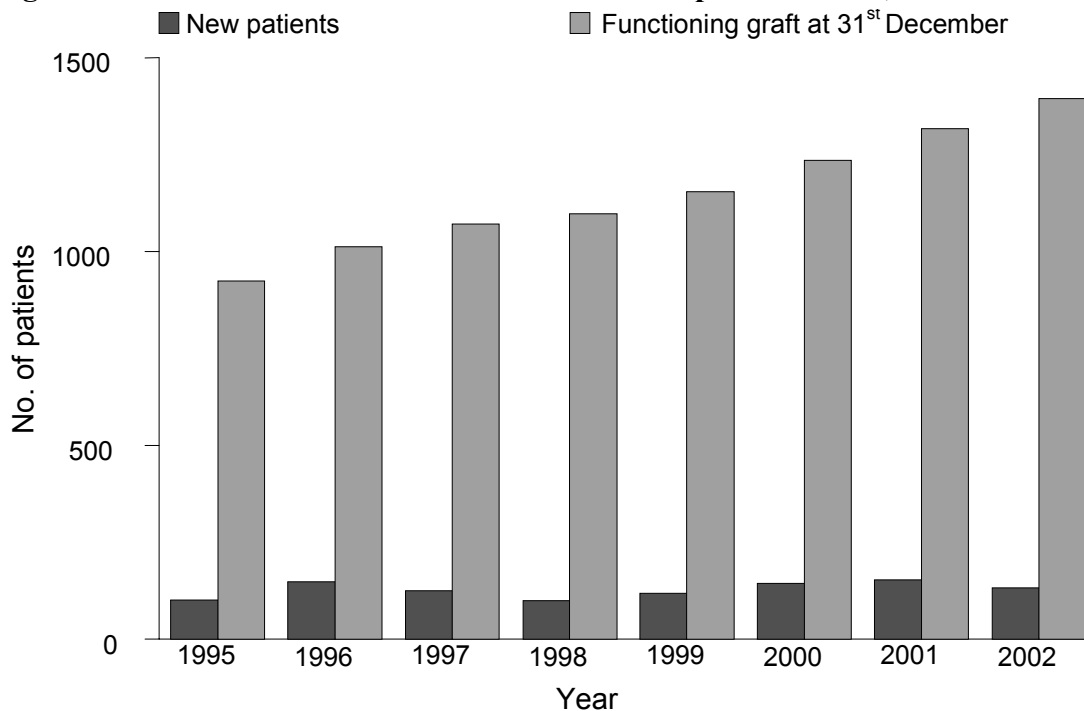
5. RENAL TRANSPLANTATION

5.1 STOCK AND FLOW

Table 5.01 Stock and Flow of Renal Transplant Patients 1995 – 2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
New transplant patients	101	148	124	99	119	143	153	132
Died	16	31	29	23	25	27	30	19
Returned to dialysis	28	28	37	47	34	32	38	32
Lost to Follow Up	3	1	0	2	3	3	3	3
Functioning graft at 31 st December	924	1012	1070	1097	1154	1235	1316	1394

Figure 5.01: Stock and Flow Renal Transplant Patients, 1995 – 2002



5.2 PLACE AND TYPE OF RENAL TRANSPLANT

Table 5.02: Place of Renal Transplantation 1995 – 2002

Year	1995		1996		1997		1998	
	No.	%	No.	%	No.	%	No.	%
HKL	36	36	33	22	29	23	33	33
UMMC	10	10	6	4	6	5	7	7
Other local	0	0	0	0	0	0	0	0
India	21	21	5	3	7	6	6	6
China	33	33	103	70	80	65	50	51
Other overseas	1	1	1	1	2	2	3	3
Total	101	100	148	100	124	100	99	100
Year	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
HKL	35	29	28	20	32	21	22	17
UMMC	16	13	19	13	22	14	13	10
Other local	1	1	1	1	2	1	0	0
India	5	4	9	6	8	5	9	7
China	60	50	80	56	76	50	84	64
Other overseas	2	2	0	0	10	7	2	2
Total	119	100	143	100	153	100	132	100

Table 5.03: Type of Renal Transplantation 1995 – 2002

Year	1995		1996		1997		1998	
	No.	%	No.	%	No.	%	No.	%
Commercial Cadaver	33	33	103	70	80	65	50	51
Commercial Live donor	18	18	4	3	7	6	4	4
Live donor	45	45	39	26	29	23	28	28
Live donor (emotionally related)	0	0	0	0	0	0	2	2
Cadaver	5	5	2	1	8	6	15	15
Total	101	100	148	100	124	100	99	100
Year	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
Commercial Cadaver	55	46	76	53	75	49	81	61
Commercial Live donor	4	3	10	7	6	4	11	8
Live donor	40	34	19	13	32	21	24	18
Live donor (emotionally related)	5	4	8	6	2	1	1	1
Cadaver	14	12	30	21	38	25	15	11
Total	119	100	143	100	153	100	132	100

5.3 DEATH AFTER TRANSPLANTATION AND GRAFT FAILURE

Table 5.04: Transplant Patients Death Rate and Graft Loss 1995 – 2002

Year	1995	1996	1997	1998	1999	2000	2001	2002
No. at risk	924	968	1041	1084	1126	1195	1276	1355
Transplant death	16	31	29	23	25	27	30	19
Transplant death rate %	2	3	3	2	2	2	2	1
Graft loss	28	28	37	47	34	32	38	32
Graft loss %	3	3	4	4	3	3	3	2
All losses	44	59	66	70	59	59	68	51
All losses rate %	5	6	6	6	5	5	5	4

Figure 5.04: Transplant Recipient Death Rate 1995– 2002

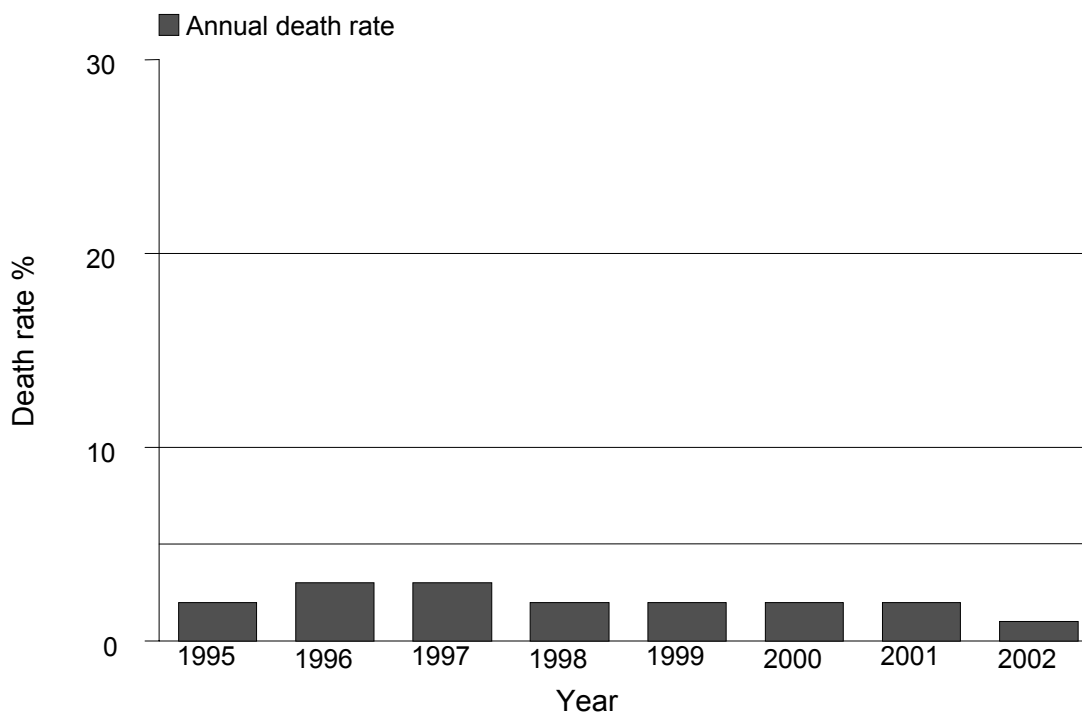


Table 5.05: Causes of Death in Transplant Recipients 1999 – 2002

Year	1999		2000		2001		2002	
	No	%	No	%	No	%	No	%
Cardiovascular	3	12	10	37	6	20	5	26
Died at home	4	16	0	0	4	13	3	16
Sepsis	7	28	9	33	17	57	3	16
GIT bleeding	1	4	1	4	0	0	0	0
Cancer	3	12	2	7	2	7	4	21
Liver disease	1	4	1	4	0	0	1	5
Others	3	12	4	15	1	3	3	16
Unknown	3	12	0	0	0	0	0	0
Total	25	100	27	100	30	100	19	100

Table 5.06: Causes of Graft Failure 1999 – 2002

Year	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
Rejection	22	65	19	59	22	58	19	59
Cyclosporine/ drug toxicity	0	0	0	0	0	0	1	3
Ureteric obstruction	0	0	0	0	0	0	0	0
Vascular causes(stenosis / thrombosis)	1	3	3	9	1	3	0	0
Renal disease, recurrent/de novo	0	0	0	0	2	5	1	3
Technical complication	0	0	3	9	1	3	0	0
Others	0	0	3	9	1	3	1	3
Unknown	11	32	4	13	11	29	10	31
Total	34	100	32	100	38	100	32	100

5.4 CENTRES OF FOLLOW-UP

Table 5.07: Distribution of Centres of Follow-up of Transplant Recipients, 20002

	Centre	No	Percent
	Number with function graft at 31 st December	1394	100
1	Alor Setar Hospital	3	0
2	Ampang Puteri Specialist Hospital	4	0
3	Batu Pahat Hospital	11	1
4	Bintulu Hospital	4	0
5	C.S. Loo Kidney & Medical Specialist Centre	3	0
6	Duchess of Kent Hospital	4	0
7	Healthcare Dialysis Centre, Petaling Jaya	19	1
8	Ipoh Hospital	48	3
9	Kemaman Hospital	2	0
10	Kluang Hospital	12	1
11	Kota Bharu Hospital	5	0
12	Kuala Lumpur Hospital	351	25
13	Kuala Lumpur Hospital (Paed.)	2	0
14	Kuala Terengganu Hospital	12	1
15	Kuching Hospital	57	4
16	Labuan Hospital	1	0
17	Mahkota Medical Centre	6	0
18	Melaka Hospital	40	3
19	Mentakab Hospital	2	0
20	Miri Hospital	16	1
21	Muar Hospital	16	1
22	Normah Medical Specialist Centre	1	0
23	Pantai Mutiara Hospital, Penang	1	0
24	Pulau Pinang Hospital	164	12
25	Pusat Pakar Tawakal	7	1
26	Queen Elizabeth Hospital	48	3
27	Renal Dialysis Centre, Gleneagles Intan Medical Centre	7	1
28	Renal Healthcare, Kuala Lumpur	1	0
29	Sabah Medical Centre	1	0

30	Segamat Hospital	10	1
31	Selangor Medical Centre	2	0
32	Selayang Hospital	29	2
33	Seremban Hospital	34	2
34	Sibu Hospital	30	2
35	Subang Jaya Medical Centre	18	1
36	Sultanah Aminah Hospital	149	11
37	Sunway Medical Centre	1	0
38	Taiping Hospital	2	0
39	Tawau Hospital	5	0
40	Teluk Intan Hospital	1	0
41	Tengku Ampuan Afzan Hospital, Kuantan	30	2
42	Tengku Ampuan Rahimah Hospital, Klang	55	4
43	Timberland Medical Centre	13	1
44	Universiti Kebangsaan Malaysia Hospital	7	1
45	Universiti Sains Malaysia Hospital	3	0
46	University Malaya Medical Centre	157	11

5.5 TRANSPLANT RECIPIENTS' CHARACTERISTICS

Table 5.08: Percentage age distribution of transplant recipients 1999 – 2002

Year	1999	2000	2001	2002
New transplant patients	119	143	153	132
1-14 years	2	0	5	3
15-24 years	9	9	14	6
25-34 years	22	13	22	6
35-44 years	28	24	27	39
45-54 years	28	40	14	23
55-64 years	12	7	16	19
≥65 years	0	7	3	3
Functioning graft at 31 st December	1154	1235	1316	1394
1-14 years	3	3	3	3
15-24 years	14	13	13	13
25-34 years	31	31	29	29
35-44 years	30	30	30	30
45-54 years	16	17	18	19
55-64 years	5	5	5	6
≥65 years	0	0	1	1

Table 5.09: Renal Transplant Recipients' Characteristics 1999 – 2002

Year	1999	2000	2001	2002
New transplant patients	119	143	153	132
Mean age ± sd	40 ± 12	43 ± 13	39 ± 15	44 ± 13
% Male	71	60	73	45
% Diabetic	17	20	16	16
% HBsAg+	3	4	0	6
% Anti-HCV+	3	2	8	0

5.6 SURVIVAL ANALYSIS

Table 5.10: Transplant Patient Survival related to Year of Transplant 1997 – 2002

Year	1997			1998			1999		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	97	2	116	95	2		99	1	117
12	95	2	113	95	2		99	1	116
24	94	2	110	95	2		98	1	113
36	91	3	101	95	2		97	2	
48	88	3	96	95	2				
60	87	3	92						

Year	2000			2001			2002		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	95	2	130	96	2	145	96	2	
12	94	2	128	95	2				
24	92	2							

No. = number at risk

SE = standard error

Figure 5.10: Transplant Patient Survival by Year of Transplant 1997 – 2002

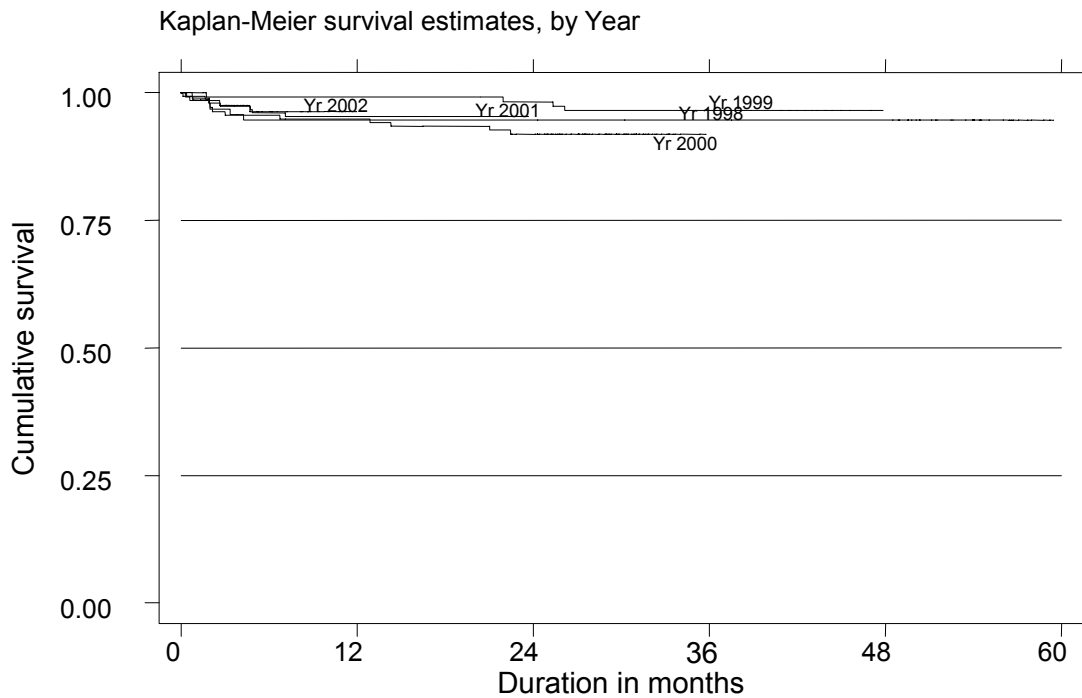


Table 5.11: Transplant Allograft Survival related to Year of Transplant 1997 – 2002

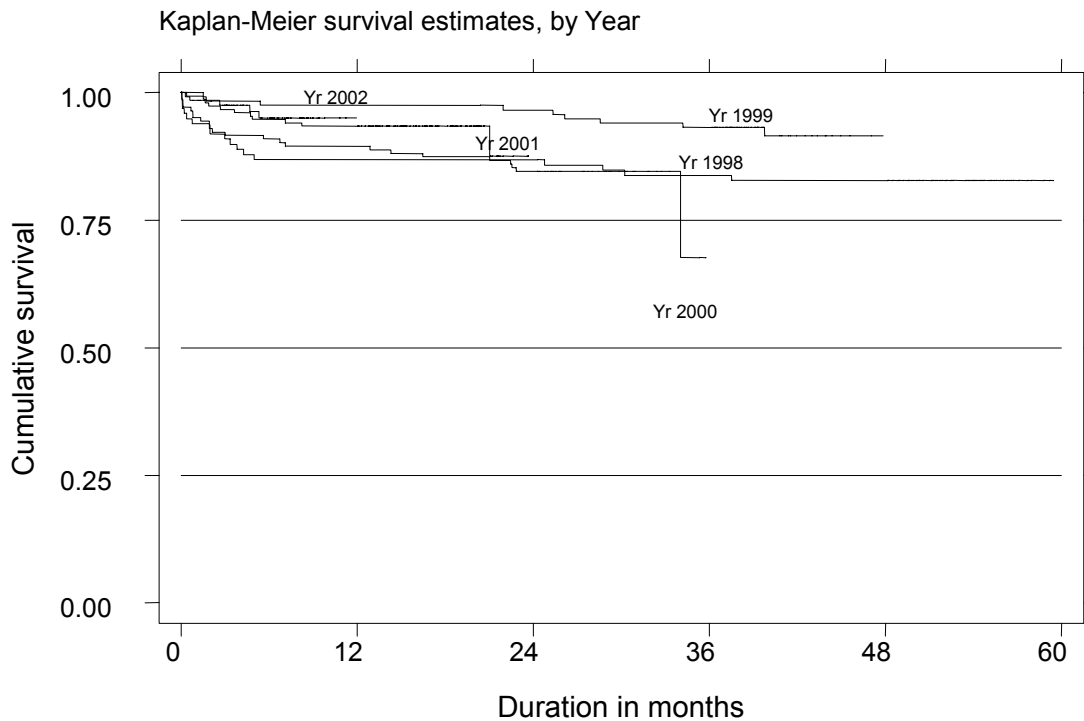
Year	1997			1998			1999		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	93	2	116	87	3	87	97	1	116
12	90	3	113	87	3	86	97	1	115
24	87	3	109	87	3	85	96	2	113
36	81	3	101	83	4	82	93	2	93
48	77	4	96	83	4				
60	76	4	92						

Year	2000			2001			2002		
Interval (months)	% survival	SE	No	% survival	SE	No	% survival	SE	No
6	91	2	131	94	2	145	95	2	
12	89	3	128	93	2	106			
24	85	3	110						

No. = number at risk

SE = standard error

Figure 5.11: Transplant Allograft Survival by Year of Transplant 1997-2002



**5.7 WORK RELATED REHABILITATION AND QUALITY OF LIFE IN
TRANSPLANT RECIPIENTS**

Table 5.12: Work Related Rehabilitation in Transplant Recipients 1999 – 2002

REHABILITATION STATUS	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
Full time work for pay	543	62	548	66	611	63	645	60
Part time work for pay	62	7	60	7	65	7	73	7
Able to work but unable to get a job	8	1	10	1	15	2	28	3
Able to work but not yet due to dialysis schedule	0	0	1	0	1	0	0	0
Able but disinclined to work	6	1	7	1	11	1	5	0
Home maker	174	20	138	17	163	17	178	17
Full time student	32	4	30	4	46	5	49	5
Age<15 years	3	0	3	0	5	1	2	0
Retired	32	4	31	4	25	3	44	4
Age>65 years	7	1	5	1	17	2	33	3
Unable to work due to poor health	11	1	2	0	13	1	11	1
Total	878	100	835	100	972	100	1068	100

Table 5.13: Quality of Life, Transplant recipients 1999 – 2002

QOL Index Summated Score	1999		2000		2001		2002	
	No.	%	No.	%	No.	%	No.	%
0 (Worst QOL)	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	4	0	1	0
4	0	0	2	0	0	0	1	0
5	1	0	0	0	4	0	2	0
6	4	0	2	0	4	0	2	0
7	8	1	1	0	5	1	13	1
8	5	1	12	1	16	2	21	2
9	9	1	23	3	19	2	15	1
10 (Best QOL)	852	97	780	95	914	95	1022	95
Total	879	100	820	100	966	100	1077	100