

# **CHAPTER 10**

## **PAEDIATRIC**

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Following the focus in the 2002 report on the long term outcomes of “integrated” therapy, the Paediatric Working Group has turned its focus to transplant outcomes.

This year’s paediatric report therefore emphasises transplant outcomes, and also contains the traditional “stock and flow” data.

The graft survival of transplants from living donors was considerably better than that of cadaveric transplants, for both initial and subsequent transplants (fig 10.2 and 10.3).

Grafts performed to children aged <15 years of age from a cadaveric donor had better outcome than those aged 15-19 years (fig 10.4), whereas grafts performed to children aged <5 years of age from a living donor had better outcome (fig 10.5).

Patient survival was best in the 5-9 year age group regardless of donor source. These patterns were similar in Australia and New Zealand.

**Figure 10.1**

**Number of Grafts Performed Over The Twenty Year Period 1-Jan-1983 to 31-Dec-2002**

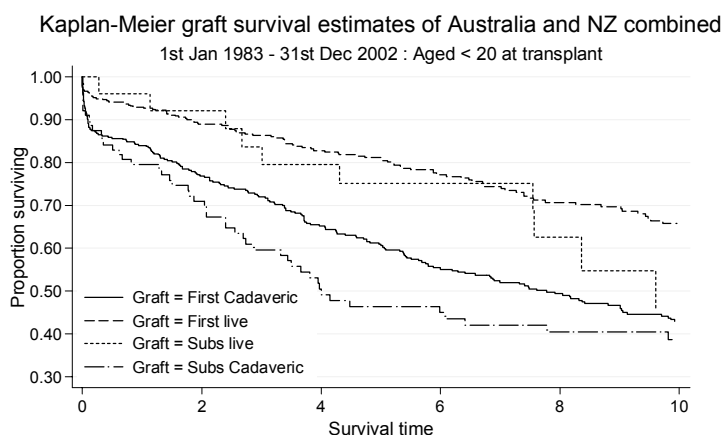
Country	Donor Source	First Graft	Subsequent Graft	Total
Australia	Cadaveric	335	78	413
	Living	333	22	355
	<b>Total</b>	<b>668</b>	<b>100</b>	<b>768</b>
New Zealand	Cadaveric	51	16	67
	Living	79	3	82
	<b>Total</b>	<b>130</b>	<b>19</b>	<b>149</b>
Both	Cadaveric	386	94	480
	Living	412	25	437
	<b>Total</b>	<b>798</b>	<b>119</b>	<b>917</b>

**Both Countries by Age Groups**

Age Group	Donor Source	First Graft	Subsequent Graft	Total
<5 years	Cadaveric	30	2	32
	Living	70	1	71
	<b>Total</b>	<b>100</b>	<b>3</b>	<b>103</b>
5-9 years	Cadaveric	56	11	67
	Living	74	7	81
	<b>Total</b>	<b>130</b>	<b>18</b>	<b>148</b>
10-14 years	Cadaveric	96	25	121
	Living	134	7	141
	<b>Total</b>	<b>230</b>	<b>32</b>	<b>262</b>
15-19 years	Cadaveric	204	56	260
	Living	134	10	144
	<b>Total</b>	<b>338</b>	<b>66</b>	<b>404</b>

**Figure 10.2**

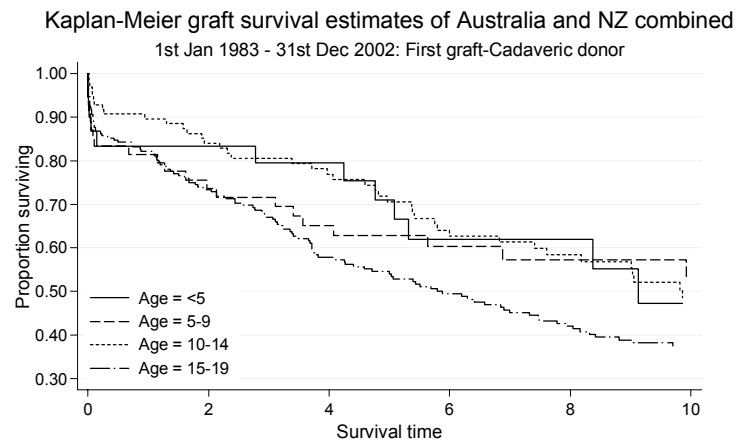
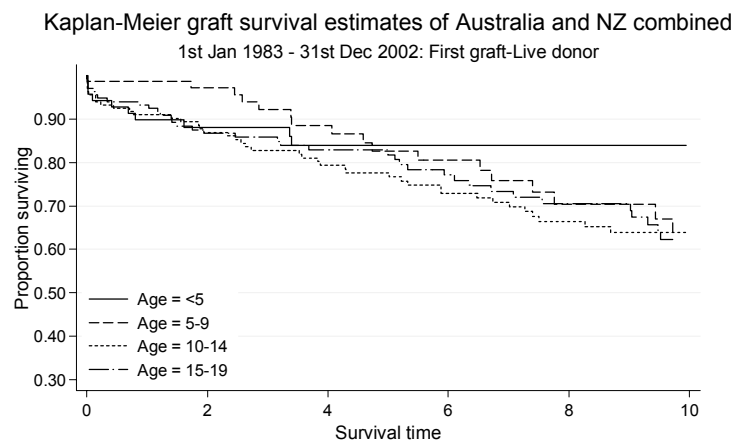
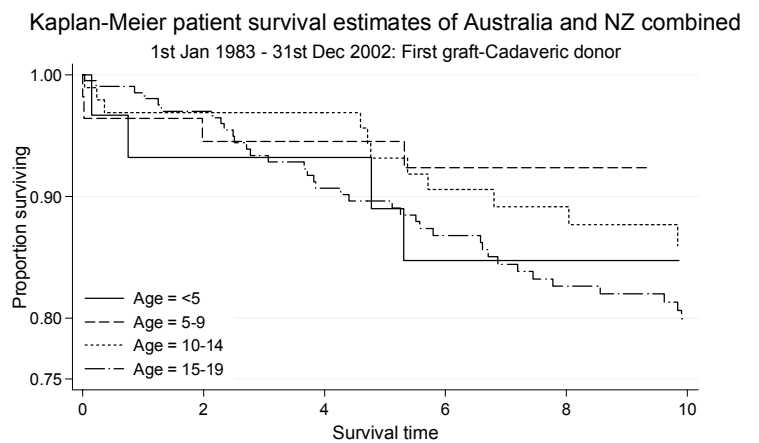


**Figure 10.3**
**Cadaveric and Living Graft Survival  
Initial and Subsequent Transplants  
1-Jan-1983 to 31-Dec-2002**

Source	Graft survival after	Survival	(95% CI)
<b>First Cadaveric Graft</b>	1 year	0.83	(0.79, 0.87)
	2 years	0.76	(0.71, 0.80)
	5 years	0.60	(0.55, 0.65)
	10 years	0.42	(0.37, 0.48)
<b>Subsequent Cadaveric Graft</b>	1 year	0.74	(0.64, 0.82)
	2 years	0.66	(0.55, 0.75)
	5 years	0.43	(0.33, 0.53)
	10 years	0.36	(0.26, 0.46)
<b>First Living Graft</b>	1 year	0.92	(0.89, 0.94)
	2 years	0.88	(0.85, 0.91)
	5 years	0.80	(0.76, 0.84)
	10 years	0.66	(0.59, 0.71)
<b>Subsequent Living Graft</b>	1 year	0.96	(0.75, 0.99)
	2 years	0.95	(0.72, 0.98)
	5 years	0.75	(0.53, 0.88)
	10 years	0.46	(0.20, 0.68)

**Figure 10.6**
**Patient Survival Following  
Cadaveric and Living Graft  
Initial and Subsequent Transplants  
1-Jan-1983 to 31-Dec-2002**

Source	Patient survival after	Survival	(95% CI)
<b>First Cadaveric Graft</b>	1 year	0.97	(0.95, 0.99)
	2 years	0.96	(0.94, 0.98)
	5 years	0.91	(0.88, 0.94)
	10 years	0.83	(0.79, 0.87)
<b>Subsequent Cadaveric Graft</b>	1 year	0.95	(0.88, 0.98)
	2 years	0.94	(0.86, 0.97)
	5 years	0.83	(0.73, 0.89)
	10 years	0.77	(0.66, 0.85)
<b>First Living Graft</b>	1 year	0.98	(0.96, 0.99)
	2 years	0.97	(0.95, 0.98)
	5 years	0.95	(0.92, 0.97)
	10 years	0.93	(0.89, 0.95)
<b>Subsequent Living Graft</b>	1 year	1	
	2 years	0.96	(0.74, 0.99)
	5 years	0.92	(0.71, 0.98)
	10 years	0.80	(0.55, 0.92)

**Figure 10.4**

**Figure 10.5**

**Figure 10.7**




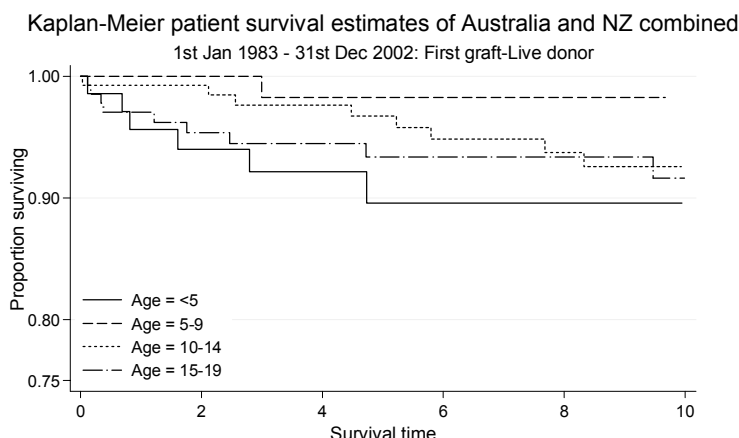
## STOCK AND FLOW

Prevalent patients <20 years of age at 31 December 2002, are shown for Australia and New Zealand in Figure 10.9.

Numbers are small across all groups except functioning transplants.

Incident patients are summarised in Figures 10.10 and 10.11. Clearly, numbers are small in all categories reflecting the low incidence rates of end-stage renal disease among this proportion of the population. Summary tables of historical data were published in last year's report.

**Figure 10.8**



**Figure 10.9**

**Point Prevalent Paediatric Patients at 31-Dec-2002**

Country	Age at 31-Dec-2002	Peritoneal Dialysis APD	Peritoneal Dialysis CAPD	Haemo-dialysis	Functioning Transplant	Total
Australia	<1 year	2	0	0	0	2
	1-4 years	6	2	4	9	21
	5-9 years	7	0	4	42	53
	10-14 years	4	3	3	61	71
	15-19 years	13	5	26	89	133
	<b>Total</b>		<b>32</b>	<b>10</b>	<b>37</b>	<b>201</b>
New Zealand	<1 year	0	0	0	0	0
	1-4 years	2	0	0	3	5
	5-9 years	2	0	0	9	11
	10-14 years	7	0	2	11	20
	15-19 years	10	6	10	15	41
	<b>Total</b>		<b>21</b>	<b>6</b>	<b>12</b>	<b>38</b>

**Figure 10.10**

**Incident Paediatric Patients 1-Jan-2002 to 31-Dec-2002**

Age at Initial Treatment	Qld	NSW	ACT	Vic	Tas	SA	NT	WA	AUST.	N.Z.	Total
<1 year	1	1	0	2	0	0	0	0	4	0	4
1-4 years	1	4	0	3	0	1	0	0	9	0	9
5-9 years	3	2	0	1	0	0	0	0	6	4	10
10-14 years	0	0	0	3	0	1	0	2	6	7	13
15-19 years	3	7	1	4	0	1	0	0	16	8	24
<b>Total</b>	<b>8</b>	<b>14</b>	<b>1</b>	<b>13</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>41</b>	<b>19</b>	<b>60</b>

**Figure 10.11**

**Primary Renal Disease Incidence in Paediatric Patients  
1-Jan-2002 to 31-Dec-2002**

Country	Primary Renal Disease	Age Groups					Total
		<01	01-04	05-09	10-14	15-19	
<b>Australia</b>	Other	1	3	2	0	4	<b>10</b>
	Glomerulonephritis	0	1	2	2	8	<b>13</b>
	Reflux	0	0	0	0	2	<b>2</b>
	Hypoplasia and Dysplasia	3	2	0	3	0	<b>8</b>
	Medullary Cystic	0	0	1	1	1	<b>3</b>
	Haemolytic Uraemic	0	1	1	0	1	<b>3</b>
	Posterior Urethral Valves	0	2	0	0	0	<b>2</b>
<b>Total</b>		<b>4</b>	<b>9</b>	<b>6</b>	<b>6</b>	<b>16</b>	<b>41</b>
<b>New Zealand</b>	Other	0	0	4	3	1	<b>8</b>
	Glomerulonephritis	0	0	0	3	4	<b>7</b>
	Reflux	0	0	0	0	3	<b>3</b>
	Medullary Cystic	0	0	0	1	0	<b>1</b>
	<b>Total</b>		<b>0</b>	<b>0</b>	<b>4</b>	<b>7</b>	<b>8</b>

**Figure 10.12**

**Transplant Operations on Paediatric Patients  
1-Jan-2002 to 31-Dec-2002**

	Age at Transplant	CD		LD		Total
		First	Subsequent	First	Subsequent	
<b>Australia</b>	<1 year	0	0	0	0	<b>0</b>
	1-4 years	1	0	4	0	<b>5</b>
	5-9 years	1	2	2	0	<b>5</b>
	10-14 years	4	1	6	0	<b>11</b>
	15-19 years	6	2	8	0	<b>16</b>
	<b>Total</b>		<b>12</b>	<b>5</b>	<b>20</b>	<b>0</b>
<b>New Zealand</b>	<1 year	0	0	0	0	<b>0</b>
	1-4 years	0	0	1	0	<b>1</b>
	5-9 years	1	0	3	0	<b>4</b>
	10-14 years	1	0	1	0	<b>2</b>
	15-19 years	0	1	2	0	<b>3</b>
	<b>Total</b>		<b>2</b>	<b>1</b>	<b>7</b>	<b>0</b>

A total of 37 transplant operations were performed on paediatric recipients in 2002 in Australia, and 10 in New Zealand.

In both Australia and New Zealand, the number of graphs from living donors outnumbered those from cadaveric donor's, consistent with recent trends.

Of note, one quarter of paediatric recipients in Australia waited more than two years for the first graft whereas this did not occur in New Zealand.

**Figure 10.13**

**Time from Replacement Therapy to First Graft**

	Donor of first graft	Pre-emptive	<6 months	6-24 months	>2 years	Total
<b>Australia</b>	Cadaveric	0	1	5	6	<b>12</b>
	Living	3	4	11	2	<b>20</b>
	<b>Total</b>	<b>3</b>	<b>5</b>	<b>16</b>	<b>8</b>	<b>32</b>
<b>New Zealand</b>	Cadaveric	1	0	1	0	<b>2</b>
	Living	2	0	5	0	<b>7</b>
	<b>Total</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>9</b>