CHAPTER 12

LIVING RELATED KIDNEY DONORS

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LIVE DONOR TRANSPLANTATION IN AUSTRALIA
1963 - 1999

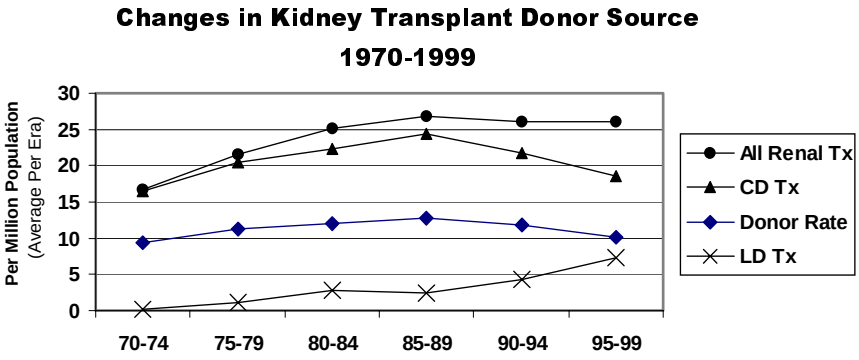


Figure 12.1

The annual rate of renal transplantation peaked in 1985-89 era (26.8 per million population per year, 440 transplants on average per year). This was due to a peak in the rate of organ donation (13.6 donors pmp in 1989) and hence cadaveric transplantation (26.1 transplants pmp in 1989). The donor rate has fallen since then to just 9.0 pmp in 1999. The overall renal transplant rate has remained above 25 pmp due to a rise in live donor transplants, from 9.1% of all transplants in the 1985-89 era to 28.4 % in the 1995-99 era. In 1999, 36.9% of all renal transplants were from a live donor, compared to 3.6% before 1980.

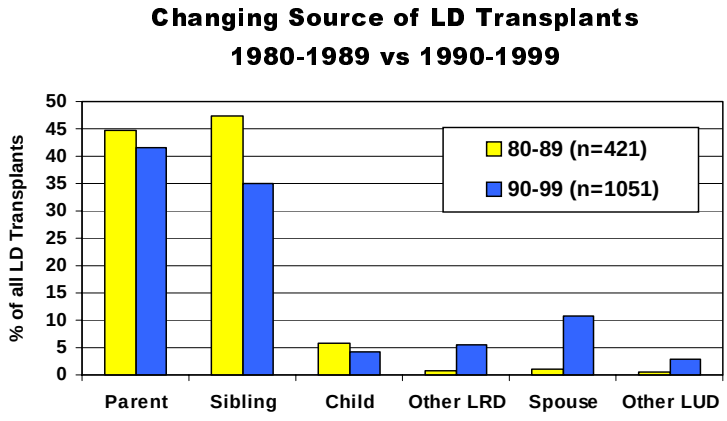


Figure 12.2

The predominant source of LD transplants during in the last 20 years was parents (44.65% of grafts in 1980-89, 41.7% in 1990-99) and siblings (47.5% in 1980-89, 34.9% in 1990-99).

An important change between 1980-89 and 1990-99 was the rise in LD transplants from less traditional sources including other related donors who were not parents, siblings or children of recipients, such as aunts, uncles or cousins (0.71% in 1980-89 to 5.5% in 1990-99).

Figure 12.3

Grafts from unrelated donors are also an increasingly utilised source. Spousal donors are now the third most likely donor source (increasing from 0.95% of transplants in 1980-89 to 10.8% in 1990-99).

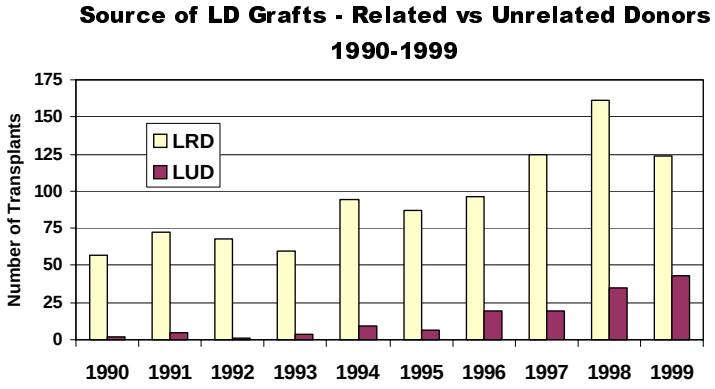


Figure 12.4

The percentage of live donor recipients receiving transplants after age 50 has increased to 16.2% in 1991-99. During the same period, 37.5% of cadaveric recipients were over age 50, which reflects the aging dialysis population.

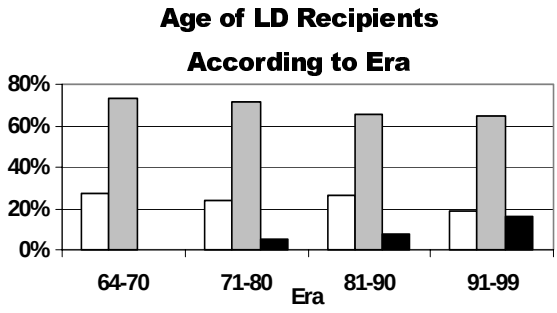


Figure 12.5

More donors over the age of 50 are being accepted.

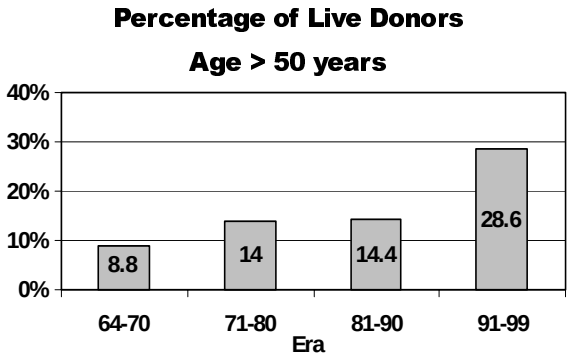
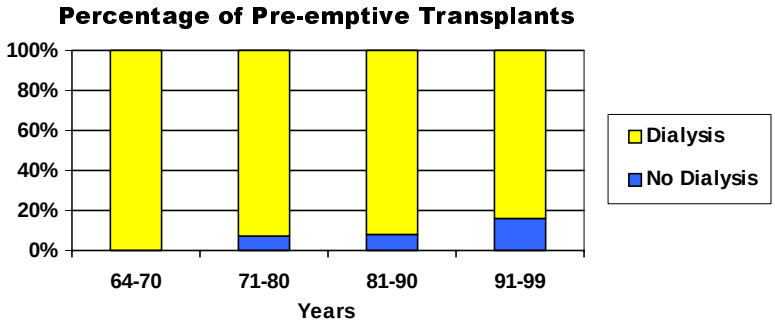


Figure 12.6

From 1964-99, 201 live donor transplants were performed prior to the commencement of dialysis. In 1999, 19% of all live donor transplants were pre-emptive.



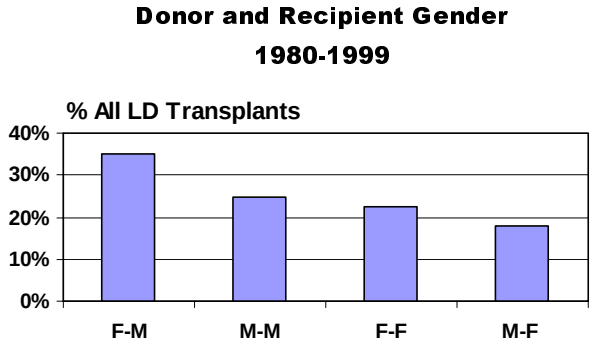
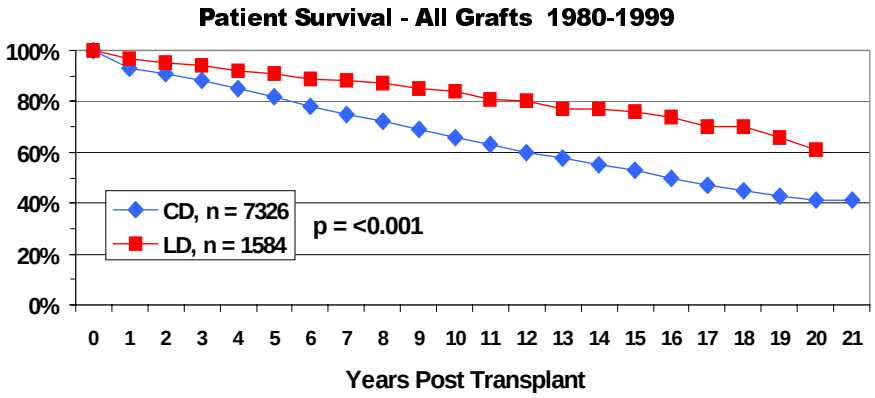


Figure 12.7

Females were more likely to be live donors than males, and were more likely to donate to males. Males are also more likely to donate to males than to women.



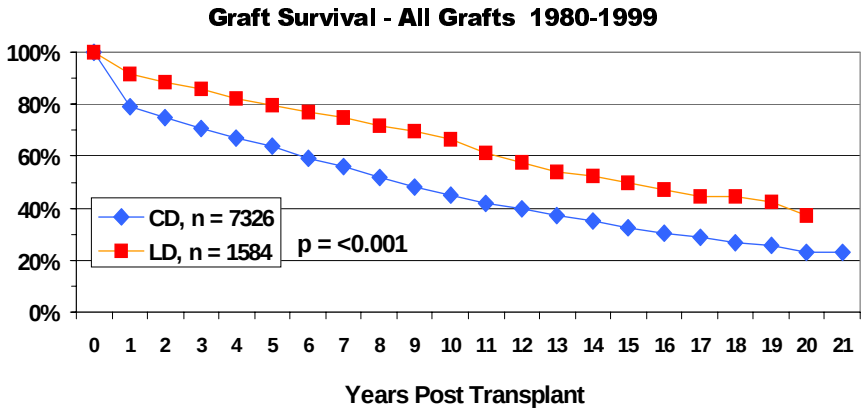


Figure 12.8 and Figure 12.9

All living donor transplants from 1964-99, as well as those performed in the era corresponding with the use of cyclosporin (1980-99), had patient and graft survival significantly superior to that of cadaver transplants.

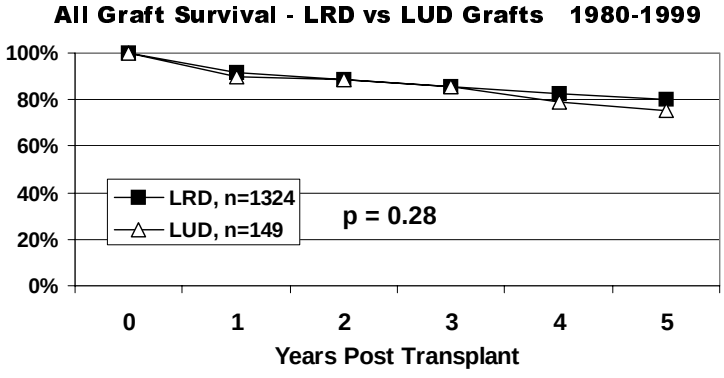


Figure 12.10

There was no statistically significant difference in graft survival between live related donor and live unrelated donor groups, up to five years post-transplantation. The number of living unrelated donor grafts after this time was too small for meaningful analysis.

Figure 12.11

Patient and graft survival of all live donor sources was superior to cadaveric donor survival. Small numbers in the child, other LRD and LUD groups, as well as variations in the age of recipients and donors between each group complicate further analysis of survival differences between donor sources.

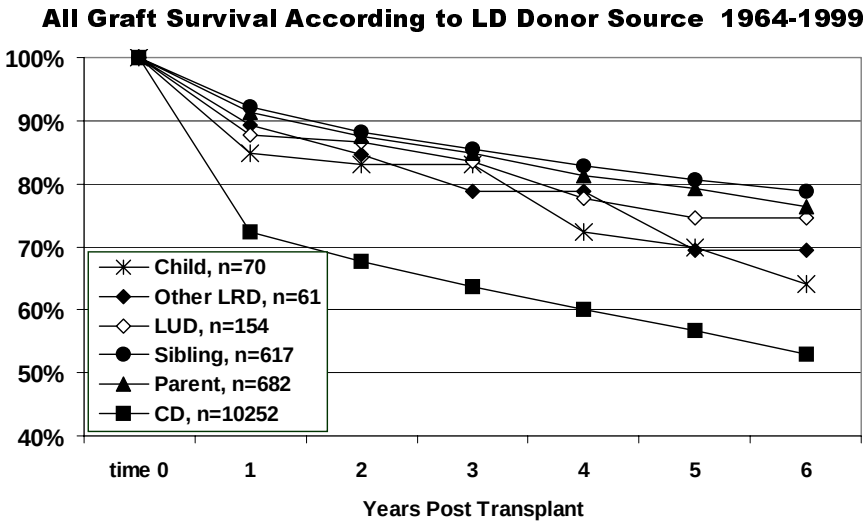


Figure 12.12

There was no statistically significant difference in survival (patient or graft) between pre-emptive transplants and transplants to recipients receiving dialysis.

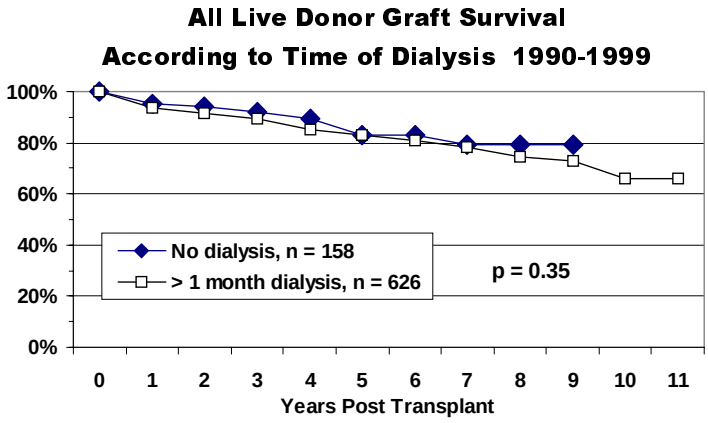


Figure 12.13

There was a statistically significantly greater chance of rejection in the first three months in primary living donor transplants compared to primary cadaveric transplants (p=0.014, Chi-square).