

KIDNEY DONATION

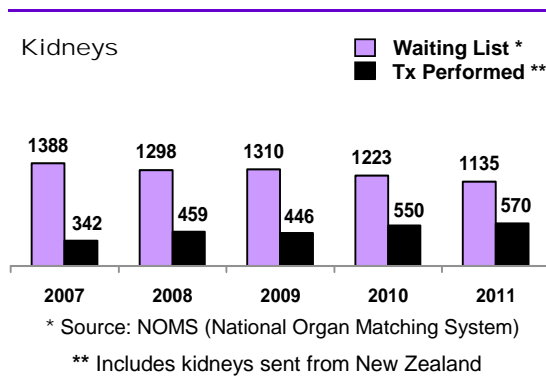
Figure 56 shows the number of Australian and New Zealand patients waiting for a kidney transplant and the number of deceased donor transplants performed for each year from 2007-2011.

There were 26 combined kidney/pancreas, four liver/kidney, one double lung/kidney and one pancreas islets/kidney transplanted in 2011.

In New Zealand there were three combined kidney/pancreas and one liver/kidney transplanted in 2011.

Figure 56

Waiting List vs Deceased Donor Transplants
Australia 2007 - 2011



Waiting List vs Deceased Donor Transplants
New Zealand 2007 - 2011

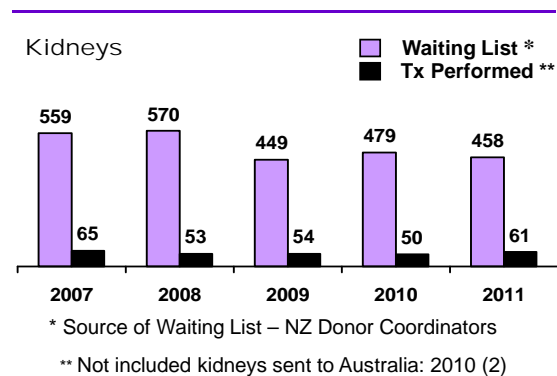
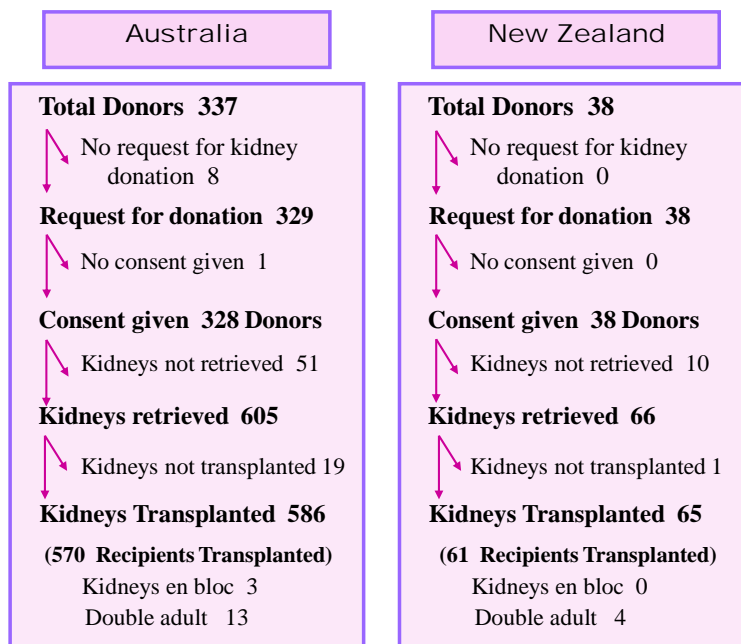


Figure 57

Outcome of Request for Kidney Donation 2011



Refer to Appendices for reasons kidneys were not requested, not retrieved and not transplanted

Figure 58

| Age of Donors Providing Transplanted Kidneys 2006 - 2011 | | | | | | | | | | | | |
|--|------|-----------|-------|---------|-------|--------|---------|---------|---------|--------|-------|-------|
| | | Age Group | | | | | | | | | | Total |
| | Year | 00-04 | 05-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75-84 | 85-94 | |
| Australia | 2006 | 1 (1) | 11 | 34 | 19 | 28 | 39 | 36 (1x) | 20 (1x) | 3 (1x) | 0 | 191 |
| | 2007 | 3 (3) | 4 | 35 | 25 | 21 | 32 (1x) | 40 (1x) | 14 (1x) | 6 (1x) | 0 | 180 |
| | 2008 | 1 (1) | 6 | 36 | 31 | 42 | 43 | 49 (1x) | 23 | 7 | 0 | 238 |
| | 2009 | 2 (2) | 4 | 33 | 29 | 28 | 55 | 53 (1x) | 23 (2x) | 2 (1x) | 0 | 229 |
| | 2010 | 3 (2) | 5 | 26 (1*) | 36 | 59 | 56 | 63 | 30 (2x) | 7 (1x) | 0 | 285 |
| | 2011 | 3 (3) | 10 | 34 (1x) | 29 | 40 | 68 | 71 (5x) | 38 (3x) | 6 (4x) | 0 | 299 |
| New Zealand | 2006 | 0 | 1 | 6 | 5 | 3 | 3 | 3 | 1 | 0 | 0 | 22 |
| | 2007 | 0 | 1 | 5 | 1 | 6 | 12 | 9 | 1 | 0 | 0 | 35 |
| | 2008 | 0 | 1 | 5 | 3 | 8 | 7 | 2 | 1 | 0 | 0 | 27 |
| | 2009 | 1 (1) | 2 (1) | 6 | 2 | 5 | 9 | 4 | 2 | 0 | 0 | 31 |
| | 2010 | 0 | 0 | 6 | 4 | 7 (1x) | 7 (1x) | 3 (2x) | 1 | 0 | 0 | 28 |
| | 2011 | 0 | 3 | 9 | 4 | 4 | 8 (1x) | 4 (2x) | 1 (1x) | 0 | 0 | 33 |

() En-Bloc Kidneys * Horseshoe Kidney (Adult) x Double Adult

Figure 59

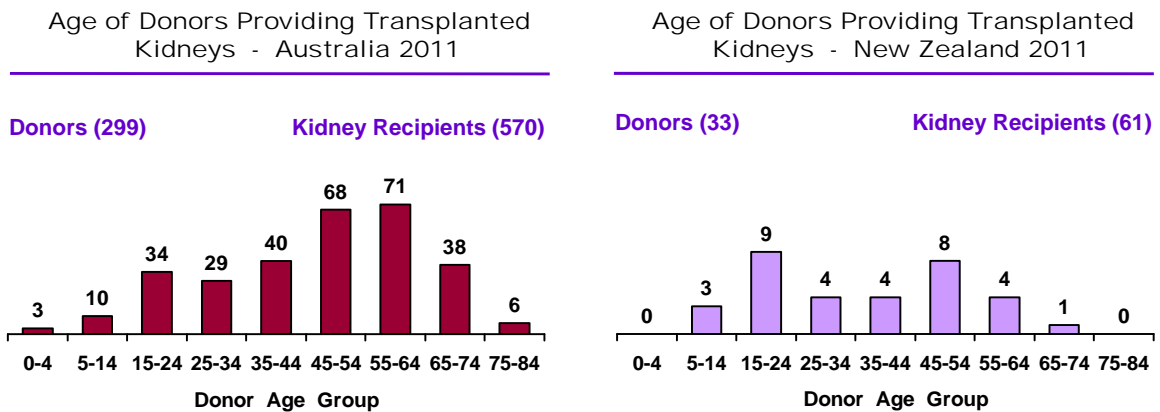


Figure 60

Deceased Donor Kidney Transplants by Transplant State 2010 - 2011
Australia and New Zealand

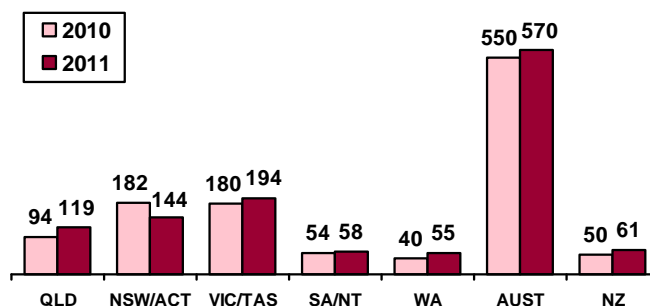


Figure 61

| Regional Outcome of Requests for Kidney Donation 1989 - 2011 | | | | | | | | | | |
|---|------------|-------------|------------|-------------|-----------|------------|-----------|------------|-------------|------------|
| | QLD | NSW | ACT | VIC | TAS | SA | NT | WA | AUST | NZ ** |
| Total Donors | 964 | 1454 | 118 | 1189 | 92 | 637 | 51 | 426 | 4931 | 708 |
| Requested | 961 | 1433 | 117 | 1169 | 91 | 626 | 50 | 422 | 4869 | 703 |
| Consented | 961 | 1429 | 117 | 1166 | 91 | 625 | 50 | 421 | 4860 | 703 |
| Retrieved | 1867 | 2726 | 223 | 2238 | 173 | 1175 | 100 | 805 | 9307 | 1311 |
| Transplanted * | 1812 | 2636 | 216 | 2132 | 164 | 1108 | 94 | 776 | 8938 | 1219 |
| | (14) (10x) | (14) (9x) | (2) | (10) (1x) | (2) | (5) (18x) | (1x) | (5) (6x) | (52) (45x) | (5) (13x) |
| * Recipients () En bloc (x) Double Adult ** New Zealand 1993 - 2011 | | | | | | | | | | |

DONOR KIDNEY FUNCTION

TERMINAL LEVELS OF SERUM CREATININE

AUSTRALIA

In 2011 in Australia, 12% (38 donors) had a terminal serum creatinine concentration of $\geq 125 \mu\text{mol/L}$ and 19% (57 donors) had a terminal serum urea concentration of $\geq 9 \text{ mmol/L}$, shown in Figure 62.

NEW ZEALAND

There were 9% (three donors) in New Zealand with a terminal serum creatinine concentration of $\geq 125 \mu\text{mol/L}$ and 9% (three donors) with a terminal serum urea concentration of $\geq 9 \text{ mmol/L}$ in 2011.

Figure 62

| Terminal Serum Creatinine Levels 2006 - 2011 | | | | | | | | | | | | |
|--|-----------|------|------|------|------|------|-------------|------|------|------|------|------|
| Creatinine ($\mu\text{mol/L}$) | Australia | | | | | | New Zealand | | | | | |
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| 00-99 | 77% | 73% | 72% | 77% | 78% | 76% | 74% | 85% | 87% | 87% | 90% | 81% |
| 100-124 | 10% | 11% | 12% | 9% | 6% | 11% | 10.5% | 15% | 7% | 5% | 3% | 9% |
| 125-149 | 6% | 8% | 4% | 5% | 4% | 5% | 10.5% | 0% | 3% | 5% | 3% | 7% |
| 150-174 | 2% | 2% | 4% | 2% | 4% | 3% | 5% | 0% | 3% | 3% | 3% | 0% |
| 175-199 | 1% | 1% | 2% | 1% | 2% | 1% | 0% | 0% | 0% | 0% | 0% | 0% |
| 200-224 | <1% | 0% | <1% | 1% | 2% | 1% | 0% | 0% | 0% | 0% | 0% | >3% |
| 225-249 | 1% | 1% | 1% | 1% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% |
| >250 | 3% | 4% | 5% | 4% | 3% | 2% | 0% | 0% | 0% | 0% | 0% | 0% |

REASONS KIDNEYS WERE UNUSABLE

KIDNEY BIOPSY AT RETRIEVAL

There were 32 donors (10%) who had a biopsy of the kidneys taken at retrieval in 2011 in Australia and ten donors (30%) in New Zealand.

Since 2000, there have been 13% (325) biopsies from 2580 kidney donors in Australia and 34% (137) from 399 kidney donors in New Zealand.

The reasons for kidneys that were unusable and the donor age are shown in Figures 63 and 64.

Figure 63

| Reasons Kidneys Unused 2006 - 2011 | | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|------------------------------------|---------------------------------|----------|-----------|----------|-----------|-----------|----------|
| Australia | Renal disease in donor | 6 | 5 | 6 | 1 | 4 | 7 |
| | Cancer in donor | 1 | 0 | 3 | 2 | 2 | 2 |
| | Anatomical | 0 | 0 | 1 | 1 | 2 | 2 |
| | Surgical | 3 | 0 | 2 | 0 | 0 | 1 |
| | Trauma | 0 | 0 | 1 | 0 | 0 | 0 |
| | Marginal donor | 0 | 0 | 0 | 0 | 3 | 2 |
| | Poor perfusion | 0 | 0 | 0 | 0 | 4 | 0 |
| | Recipient problems | 1 | 1 | 3 | 1 | 0 | 0 |
| | Hepatitis B Nat Positive | 0 | 0 | 0 | 0 | 0 | 1 |
| | Hepatitis C Positive | 0 | 1 | 0 | 0 | 0 | 2 |
| | High risk donor | 0 | 1 | 0 | 0 | 0 | 0 |
| | No suitable recipient | 0 | 0 | 0 | 0 | 1 | 1 |
| | Recent asymptomatic peritonitis | 0 | 1 | 0 | 0 | 0 | 0 |
| | Transport Delays | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 11 | 9 | 16 | 5 | 16 | 19 | |
| New Zealand | Renal disease in donor | 1 | 3 | 6 | 16 | 4 | 0 |
| | Anatomical | 0 | 0 | 0 | 1 | 0 | 0 |
| | No suitable recipient | 0 | 0 | 0 | 0 | 0 | 1 |
| | Surgical | 0 | 0 | 0 | 0 | 2 | 0 |
| | Total | 1 | 3 | 6 | 17 | 6 | 1 |

Figure 64

| Donor Age of Unused Kidneys 2006 - 2011 | | Age Groups | | | | | | | | | Total |
|---|------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|
| | | 00-04 | 05-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75-84 | |
| Australia | 2006 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 2 | 1 | 7 |
| | 2007 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 1 | 1 | 7 |
| | 2008 | 0 | 0 | 1 | 1 | 0 | 4 | 3 | 2 | 2 | 13 |
| | 2009 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 4 |
| | 2010 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 5 | 0 | 10 |
| | 2011 | 0 | 0 | 0 | 2 | 0 | 1 | 3 | 6 | 1 | 13 |
| New Zealand | 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| | 2007 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 |
| | 2008 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 3 |
| | 2009 | 0 | 0 | 0 | 0 | 1 | 4 | 3 | 2 | 0 | 10 |
| | 2010 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 3 |
| | 2011 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |

KIDNEY PERFUSION METHODS

Where kidneys were perfused with only one solution, Ross (95%) and UW (5%) were the only solutions used in Australia in 2011.

In New Zealand UW was the only solution used in 2011 (Figure 65).

UW was used as the second perfusion solution in 99% of cases and Ross (1%) in Australia in 2011 (Figure 66).

Figure 65

| Kidney Perfusion with Only One Solution 2006 - 2011 | | | | | | | | | | | | | |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|--|
| | Australia | | | | | | New Zealand | | | | | | |
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | |
| Ross | 16 | 18 | 16 | 17 | 46 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | |
| UW | 0 | 2 | 2 | 2 | 12 | 4 | 42 | 36 | 0 | 41 | 62 | 66 | |
| HTK | 38 | 7 | 24 | 10 | 0 | 0 | 0 | 28 | 59 | 32 | 0 | 0 | |
| Celsior | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | 56 | 27 | 42 | 29 | 58 | 79 | 42 | 64 | 59 | 73 | 62 | 66 | |

Figure 66

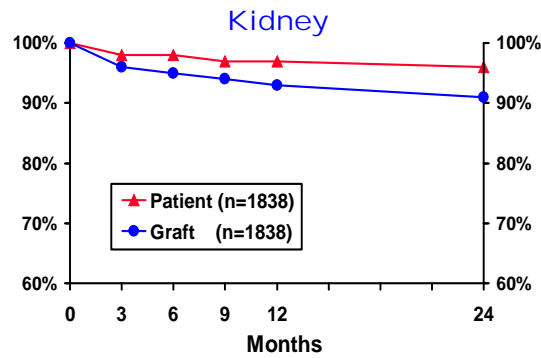
| Second Perfusion Solution - Kidneys 2006 - 2011 | | | | | | | | | | | | | |
|---|------------|------------|------------|------------|------------|------------|-------------|----------|----------|----------|----------|----------|--|
| | Australia | | | | | | New Zealand | | | | | | |
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | |
| Ross | 4 | 8 | 16 | 16 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | |
| UW | 323 | 320 | 399 | 402 | 508 | 522 | 0 | 4 | 0 | 0 | 0 | 0 | |
| HTK | 2 | 0 | 20 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | 329 | 328 | 435 | 428 | 512 | 526 | 0 | 4 | 0 | 0 | 0 | 0 | |

KIDNEY TRANSPLANT OUTCOME

Figure 67 shows the patient and graft outcome for kidney transplants performed over the preceding five years in Australia and New Zealand.

Figure 67

Primary Deceased Patient and Graft Survival
Australia 2006 - 2010



Primary Deceased Patient and Graft Survival
New Zealand 2006 - 2010

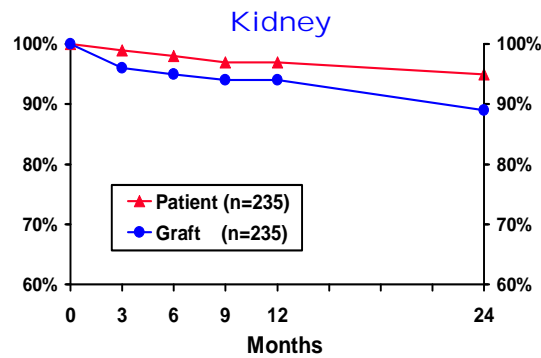
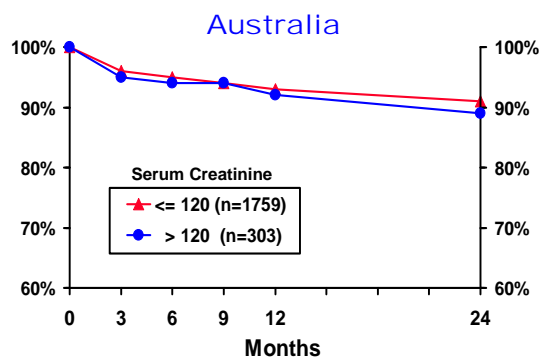


Figure 68

Primary Deceased Kidney Graft Survival
Terminal Serum Creatinine 2006 - 2010



This data has been provided by the ANZDATA (Australia and New Zealand Dialysis and Transplant) Registry and further information on kidney transplant outcome is available from their website - www.anzdata.org.au