

## **Chapter 14: Renal Transplantation**

Editor:

Dr. Goh Bak Leong

Expert Panel:

Dato' Dr. Zaik Morad (Chair)

Dr. Goh Bak Leong (Co-Chair)

Dr. Fan Kin Sing

Sr. Lily Mushahar

Mr. Rohan Malek

Dr. S Prasad Menon

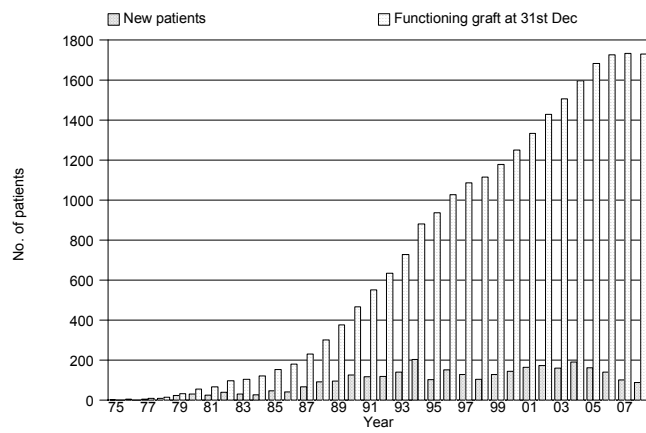
Prof Dr. Tan Si Yen

*16th Report of the Malaysian Dialysis and Transplant Registry 2008*

**Table 14.1.1: Stock and Flow of Renal Transplantation, 1999-2008**

| Year   | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--|------|------|------|------|------|------|------|------|------|------|
| New transplant patients                        | 127  | 143  | 163  | 172  | 160  | 190  | 162  | 141  | 100  | 88   |
| Died   | 25   | 30   | 37   | 33   | 37   | 42   | 43   | 50   | 39   | 48   |
| Graft failure                                  | 37   | 32   | 40   | 39   | 42   | 44   | 21   | 38   | 37   | 32   |
| Lost to Follow up                              | 1    | 9    | 3    | 5    | 4    | 14   | 10   | 10   | 18   | 10   |
| Functioning graft at 31 <sup>st</sup> December | 1178 | 1250 | 1333 | 1428 | 1505 | 1595 | 1683 | 1726 | 1732 | 1730 |

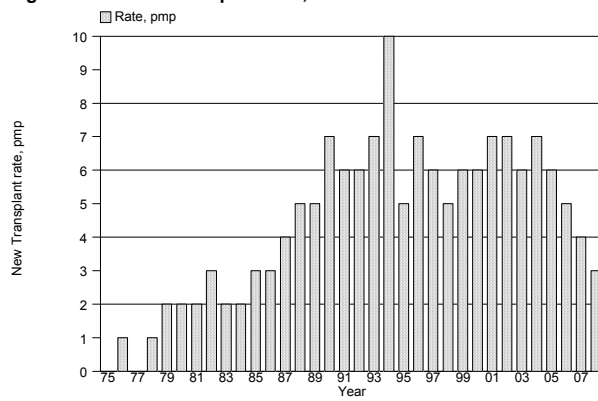
**Figure 14.1.1: Stock and Flow of Renal Transplantation, 1975-2008**



**Table 14.1.2: New transplant rate per million population (pmp), 1999-2008**

| Year                     | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--------------------------|------|------|------|------|------|------|------|------|------|------|
| New transplant patients  | 127  | 143  | 163  | 172  | 160  | 190  | 162  | 141  | 100  | 88   |
| New transplant rate, pmp | 6    | 6    | 7    | 7    | 6    | 7    | 6    | 5    | 4    | 3    |

**Figure 14.1.2: New transplant rate, 1975-2008**



**Table 14.1.4: Place of transplantation, 1999-2008**

| Year              | 1999       |            | 2000       |            | 2001       |            | 2002       |            | 2003       |            |
|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                   | No.        | %          | No.        | %          | No.        | %          | No.        | %          | No.        | %          |
| HKL               | 36         | 28         | 28         | 20         | 33         | 20         | 30         | 17         | 26         | 16         |
| UMMC              | 16         | 13         | 19         | 13         | 23         | 14         | 15         | 9          | 6          | 4          |
| Selayang Hospital | 0          | 0          | 4          | 3          | 11         | 7          | 11         | 6          | 11         | 7          |
| Other local       | 1          | 1          | 3          | 2          | 4          | 2          | 1          | 1          | 1          | 1          |
| China             | 63         | 50         | 80         | 56         | 83         | 51         | 103        | 60         | 111        | 69         |
| India             | 5          | 4          | 9          | 6          | 8          | 5          | 12         | 7          | 4          | 3          |
| Other overseas    | 2          | 2          | 0          | 0          | 1          | 1          | 0          | 0          | 1          | 1          |
| Unknown           | 4          | 3          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| <b>TOTAL</b>      | <b>127</b> | <b>100</b> | <b>143</b> | <b>100</b> | <b>163</b> | <b>100</b> | <b>172</b> | <b>100</b> | <b>160</b> | <b>100</b> |

| Year              | 2004       |            | 2005       |            | 2006       |            | 2007       |            | 2008      |            | TOTAL       |            |
|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|-------------|------------|
|                   | No.        | %          | No.        | %          | No.        | %          | No.        | %          | No.       | %          | No.         | %          |
| HKL               | 20         | 11         | 31         | 19         | 35         | 25         | 36         | 36         | 32        | 36         | 307         | 21         |
| UMMC              | 7          | 4          | 7          | 4          | 5          | 4          | 0          | 0          | 0         | 0          | 98          | 7          |
| Selayang Hospital | 11         | 6          | 5          | 3          | 9          | 6          | 14         | 14         | 7         | 8          | 83          | 6          |
| Other local       | 2          | 1          | 5          | 3          | 2          | 1          | 3          | 3          | 7         | 8          | 29          | 2          |
| China             | 137        | 72         | 108        | 67         | 81         | 57         | 41         | 41         | 41        | 47         | 848         | 59         |
| India             | 11         | 6          | 5          | 3          | 7          | 5          | 1          | 1          | 1         | 1          | 63          | 4          |
| Other overseas    | 2          | 1          | 1          | 1          | 2          | 1          | 5          | 5          | 0         | 0          | 14          | 1          |
| Unknown           | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0         | 0          | 4           | 0          |
| <b>TOTAL</b>      | <b>190</b> | <b>100</b> | <b>162</b> | <b>100</b> | <b>141</b> | <b>100</b> | <b>100</b> | <b>100</b> | <b>88</b> | <b>100</b> | <b>1446</b> | <b>100</b> |

**Table 14.2.1: Renal Transplant Recipients' Characteristics, 1999-2008**

| Year  | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|------|------|------|------|------|------|------|------|------|------|
| New Transplant Patients                       | 127  | 143  | 163  | 172  | 160  | 190  | 162  | 141  | 100  | 88   |
| Age at transplant (years), Mean               | 37   | 39   | 41   | 41   | 42   | 41   | 38   | 37   | 36   | 34   |
| Age at transplant (years), SD                 | 13   | 14   | 13   | 13   | 13   | 13   | 14   | 15   | 16   | 15   |
| % Male  | 62   | 64   | 63   | 58   | 66   | 62   | 70   | 67   | 63   | 58   |
| % Diabetic (co-morbid/ primary renal disease) | 11   | 15   | 18   | 15   | 22   | 22   | 20   | 21   | 14   | 15   |
| % HBsAg positive                              | 4    | 5    | 5    | 7    | 8    | 5    | 4    | 7    | 5    | 4    |
| % Anti-HCV positive                           | 11   | 8    | 15   | 8    | 10   | 8    | 2    | 8    | 10   | 4    |

**Table 14.2.2: Primary causes of end stage renal failure, 1999-2008**

| Year                     | 1999 |     | 2000 |     | 2001 |     | 2002 |     | 2003 |     |
|--------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|
|                          | No.  | %   | No.  | %   | No.  | %   | No.  | %   | No.  | %   |
| New transplant patients  | 127  | 100 | 143  | 100 | 163  | 100 | 172  | 100 | 160  | 100 |
| Glomerulonephritis       | 41   | 32  | 50   | 35  | 44   | 27  | 54   | 31  | 54   | 34  |
| Diabetes Mellitus        | 10   | 8   | 16   | 11  | 23   | 14  | 16   | 9   | 26   | 16  |
| Hypertension             | 7    | 6   | 20   | 14  | 17   | 10  | 24   | 14  | 25   | 16  |
| Obstructive uropathy     | 4    | 3   | 3    | 2   | 3    | 2   | 2    | 1   | 2    | 1   |
| ADPKD                    | 1    | 1   | 3    | 2   | 1    | 1   | 3    | 2   | 5    | 3   |
| Drugs/ toxic nephropathy | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   | 2    | 1   |
| Hereditary nephritis     | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   |
| Unknown                  | 62   | 49  | 54   | 38  | 61   | 37  | 70   | 41  | 58   | 36  |
| Others                   | 6    | 5   | 12   | 8   | 23   | 14  | 16   | 9   | 12   | 8   |

| Year                     | 2004 |     | 2005 |     | 2006 |     | 2007 |     | 2008 |     |
|--------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|
|                          | No.  | %   | No.  | %   | No.  | %   | No.  | %   | No.  | %   |
| New transplant patients  | 190  | 100 | 162  | 100 | 141  | 100 | 100  | 100 | 88   | 100 |
| Glomerulonephritis       | 62   | 33  | 44   | 27  | 52   | 37  | 29   | 29  | 21   | 24  |
| Diabetes Mellitus        | 32   | 17  | 29   | 18  | 22   | 16  | 9    | 9   | 10   | 11  |
| Hypertension             | 51   | 27  | 39   | 24  | 31   | 22  | 24   | 24  | 15   | 17  |
| Obstructive uropathy     | 4    | 2   | 3    | 2   | 4    | 3   | 1    | 1   | 0    | 0   |
| ADPKD                    | 5    | 3   | 3    | 2   | 1    | 1   | 1    | 1   | 0    | 0   |
| Drugs/ toxic nephropathy | 2    | 1   | 0    | 0   | 1    | 1   | 0    | 0   | 2    | 2   |
| Hereditary nephritis     | 1    | 1   | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   |
| Unknown                  | 83   | 44  | 50   | 31  | 44   | 31  | 37   | 37  | 40   | 45  |
| Others                   | 27   | 14  | 17   | 10  | 16   | 11  | 14   | 14  | 12   | 14  |

**Table 14.3.1: Type of Renal Transplantation, 1999-2008**

| Year                             | 1999       |            | 2000       |            | 2001       |            | 2002       |            | 2003       |            |
|----------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                                  | No.        | %          | No.        | %          | No.        | %          | No.        | %          | No.        | %          |
| Commercial cadaver               | 64         | 52         | 80         | 56         | 83         | 51         | 103        | 60         | 112        | 70         |
| Commercial live donor            | 4          | 3          | 9          | 6          | 7          | 4          | 11         | 6          | 3          | 2          |
| Live donor (genetically related) | 40         | 33         | 21         | 15         | 32         | 20         | 33         | 19         | 25         | 16         |
| Live donor (emotionally related) | 5          | 4          | 6          | 4          | 4          | 2          | 3          | 2          | 5          | 3          |
| Cadaver                          | 10         | 8          | 27         | 19         | 37         | 23         | 22         | 13         | 15         | 9          |
| <b>Total</b>                     | <b>123</b> | <b>100</b> | <b>143</b> | <b>100</b> | <b>163</b> | <b>100</b> | <b>172</b> | <b>100</b> | <b>160</b> | <b>100</b> |

| Year                             | 2004       |            | 2005       |            | 2006       |            | 2007      |            | 2008      |            |
|----------------------------------|------------|------------|------------|------------|------------|------------|-----------|------------|-----------|------------|
|                                  | No.        | %          | No.        | %          | No.        | %          | No.       | %          | No.       | %          |
| Commercial cadaver               | 143        | 76         | 105        | 65         | 82         | 58         | 41        | 41         | 40        | 45         |
| Commercial live donor            | 6          | 3          | 8          | 5          | 5          | 4          | 2         | 2          | 1         | 1          |
| Live donor (genetically related) | 21         | 11         | 37         | 23         | 24         | 17         | 20        | 20         | 22        | 25         |
| Live donor (emotionally related) | 2          | 1          | 3          | 1          | 4          | 3          | 11        | 12         | 3         | 4          |
| Cadaver                          | 17         | 9          | 9          | 6          | 26         | 18         | 25        | 25         | 22        | 25         |
| <b>Total</b>                     | <b>189</b> | <b>100</b> | <b>162</b> | <b>100</b> | <b>141</b> | <b>100</b> | <b>99</b> | <b>100</b> | <b>88</b> | <b>100</b> |

\*Commercial Cadaver (China, India, other oversea) \*Commercial live donor (living unrelated) \*Cadaver (local)

**Table 14.3.2: Biochemical data, 2006-2008**

| Biochemical parameters           | Summary | 2006  | 2007  | 2008 |
|----------------------------------|---------|-------|-------|------|
| Creatinine, umol/L               | N       | 1592  | 1686  | 1499 |
|                                  | Mean    | 135.7 | 131.8 | 131  |
|                                  | SD      | 81.3  | 77.6  | 80.2 |
|                                  | Median  | 120   | 116   | 113  |
|                                  | Minimum | 21.7  | 36    | 29   |
|                                  | Maximum | 1152  | 1186  | 1181 |
| Hb, g/dL                         | N       | 1592  | 1686  | 1499 |
|                                  | Mean    | 12.7  | 12.8  | 12.9 |
|                                  | SD      | 1.9   | 1.9   | 1.9  |
|                                  | Median  | 12.8  | 12.8  | 12.9 |
|                                  | Minimum | 3.3   | 4.4   | 6.2  |
|                                  | Maximum | 19.8  | 18.7  | 18.6 |
| Albumin, g/L                     | N       | 1592  | 1686  | 1499 |
|                                  | Mean    | 40    | 40    | 40   |
|                                  | SD      | 0.7   | 0.8   | 0.8  |
|                                  | Median  | 40    | 40    | 40   |
|                                  | Minimum | 29    | 29    | 30   |
|                                  | Maximum | 48    | 48    | 50   |
| Calcium, mmol/L                  | N       | 1592  | 1686  | 1499 |
|                                  | Mean    | 2.3   | 2.3   | 2.3  |
|                                  | SD      | 0.2   | 0.2   | 0.2  |
|                                  | Median  | 2.3   | 2.3   | 2.3  |
|                                  | Minimum | 1.1   | 1.4   | 1    |
|                                  | Maximum | 3.1   | 3.2   | 3.5  |
| Phosphate, mmol/L                | N       | 1592  | 1686  | 1499 |
|                                  | Mean    | 1.1   | 1.1   | 1.1  |
|                                  | SD      | 0.2   | 0.3   | 0.3  |
|                                  | Median  | 1.1   | 1.1   | 1.1  |
|                                  | Minimum | 0.5   | 0.5   | 0.5  |
|                                  | Maximum | 3.5   | 3.9   | 3.2  |
| Alkaline Phosphate<br>(ALP), U/L | N       | 1592  | 1686  | 1499 |
|                                  | Mean    | 79.1  | 79.4  | 78.4 |
|                                  | SD      | 43.2  | 39.8  | 47.9 |
|                                  | Median  | 71    | 72    | 70   |
|                                  | Minimum | 24    | 22    | 20   |
|                                  | Maximum | 700   | 508   | 985  |

| Biochemical parameters         | Summary | 2006  | 2007  | 2008  |
|--------------------------------|---------|-------|-------|-------|
| ALT, U/L                       | N       | 1592  | 1686  | 1499  |
|                                | Mean    | 29.8  | 29.8  | 28.6  |
|                                | SD      | 30.4  | 25.7  | 31    |
|                                | Median  | 22    | 23    | 22    |
|                                | Minimum | 4     | 4     | 4     |
|                                | Maximum | 433   | 356   | 733   |
| Total cholesterol, mmol/L      | N       | 1592  | 1686  | 1499  |
|                                | Mean    | 5.3   | 5.2   | 5.2   |
|                                | SD      | 1     | 1     | 1     |
|                                | Median  | 5.3   | 5.3   | 5.3   |
|                                | Minimum | 1.5   | 1.7   | 2     |
|                                | Maximum | 11.1  | 11.4  | 11.2  |
| LDL cholesterol, mmol/L        | N       | 1592  | 1686  | 1499  |
|                                | Mean    | 3     | 3     | 2.9   |
|                                | SD      | 0.8   | 0.8   | 0.8   |
|                                | Median  | 3     | 3     | 3     |
|                                | Minimum | 1     | 1     | 0.9   |
|                                | Maximum | 11.1  | 8.9   | 7.7   |
| HDL cholesterol, mmol/L        | N       | 1592  | 1686  | 1499  |
|                                | Mean    | 1.6   | 1.5   | 1.6   |
|                                | SD      | 0.5   | 0.4   | 0.5   |
|                                | Median  | 1.6   | 1.6   | 1.6   |
|                                | Minimum | 0.4   | 0.4   | 0.5   |
|                                | Maximum | 5.8   | 7.5   | 7.5   |
| Systolic Blood Pressure, mmHg  | N       | 1592  | 1686  | 1499  |
|                                | Mean    | 130.7 | 131.6 | 129.4 |
|                                | SD      | 15.9  | 15.7  | 16.1  |
|                                | Median  | 130   | 130   | 130   |
|                                | Minimum | 66    | 80    | 80    |
|                                | Maximum | 210   | 210   | 245   |
| Diastolic Blood Pressure, mmHg | N       | 1592  | 1686  | 1499  |
|                                | Mean    | 78.9  | 78.8  | 77.5  |
|                                | SD      | 9.8   | 9.4   | 9.7   |
|                                | Median  | 80    | 80    | 80    |
|                                | Minimum | 30    | 20    | 20    |
|                                | Maximum | 120   | 116   | 133   |

**Table 14.3.3: Medication data, 2006-2008**

| Medication data                                     | Single drug treatment |     |      |     |      |     | Combined drug treatment |     |      |     |      |     |
|---|-----------------------|-----|------|-----|------|-----|-------------------------|-----|------|-----|------|-----|
|   | 2006                  |     | 2007 |     | 2008 |     | 2006                    |     | 2007 |     | 2008 |     |
|   | N                     | %   | N    | %   | N    | %   | N                       | %   | N    | %   | N    | %   |
| All   | 1482                  | 100 | 1664 | 100 | 1359 | 100 | 1482                    | 100 | 1664 | 100 | 1359 | 100 |
| <b>(i) Immunosuppressive drug(s) treatment</b>      |                       |     |      |     |      |     |                         |     |      |     |      |     |
| Prednisolone  | 8                     | 1   | 9    | 1   | 6    | 0   | 1444                    | 97  | 1610 | 97  | 1321 | 97  |
| Azathioprine  | 0                     | 0   | 0    | 0   | 0    | 0   | 497                     | 34  | 479  | 29  | 374  | 28  |
| Cyclosporin A                                       | 5                     | 0   | 8    | 0   | 2    | 0   | 1119                    | 76  | 1190 | 72  | 938  | 69  |
| Tacrolimus (FK506)                                  | 0                     | 0   | 4    | 0   | 3    | 0   | 254                     | 17  | 348  | 21  | 327  | 24  |
| Mycophenolate Mofetil (MMF)                         | 0                     | 0   | 1    | 0   | 2    | 0   | 708                     | 48  | 906  | 54  | 721  | 53  |
| Rapamycin   | 0                     | 0   | 0    | 0   | 1    | 0   | 7                       | 0   | 33   | 2   | 30   | 2   |
| Others  | 0                     | 0   | 0    | 0   | 0    | 0   | 18                      | 1   | 4    | 0   | 1    | 0   |
| <b>(ii) Non-Immunosuppressive drug(s) treatment</b> |                       |     |      |     |      |     |                         |     |      |     |      |     |
| Beta blocker  | 77                    | 5   | 90   | 5   | 87   | 6   | 597                     | 40  | 735  | 44  | 609  | 45  |
| Calcium channel blocker                             | 199                   | 13  | 184  | 11  | 137  | 10  | 787                     | 53  | 904  | 54  | 680  | 50  |
| ACE inhibitor                                       | 39                    | 3   | 38   | 2   | 29   | 2   | 292                     | 20  | 384  | 23  | 282  | 21  |
| AIIRB   | 27                    | 2   | 18   | 1   | 17   | 1   | 141                     | 10  | 210  | 13  | 137  | 10  |
| Anti-lipid  | 156                   | 11  | 95   | 6   | 87   | 6   | 679                     | 46  | 731  | 44  | 616  | 45  |
| Other anti-hypertensive                             | 11                    | 1   | 6    | 0   | 24   | 2   | 159                     | 11  | 140  | 8   | 188  | 14  |

**Table 14.4.1: Post-transplant complications, 2006-2008**

| Post transplant complications                           | Complication developed before transplant (regardless of complication after transplantation) |     |      |     |      |     | Complication developed only after transplantation |     |      |     |      |     |
|---|---|-----|------|-----|------|-----|---|-----|------|-----|------|-----|
|   | 2006  |     | 2007 |     | 2008 |     | 2006  |     | 2007 |     | 2008 |     |
|   | No.   | %   | No.  | %   | No.  | %   | No.   | %   | No.  | %   | No.  | %   |
| All patients  | 1592  | 100 | 1686 | 100 | 1499 | 100 | 1592  | 100 | 1686 | 100 | 1499 | 100 |
| Diabetes (either as Primary Renal Disease or co-morbid) | 216   | 14  | 230  | 14  | 204  | 14  | 125   | 8   | 112  | 7   | 112  | 7   |
| Cancer  | 2   | 0   | 3    | 0   | 2    | 0   | 20  | 1   | 21   | 1   | 26   | 2   |
| Cardiovascular disease + cerebrovascular disorder       | 73  | 5   | 72   | 4   | 61   | 4   | 45  | 3   | 54   | 3   | 70   | 5   |
| Hypertension  | 1035  | 65  | 1062 | 63  | 927  | 62  | 354   | 22  | 450  | 27  | 400  | 27  |

\*Hypertension: BP systolic >140 and BP diastolic >90  
OR have either Beta blocker/ Calcium channel blocker / ACE inhibitor / AIIIRB / Other anti-hypertensive

**Table 14.4.2: Transplant Patients Death Rate and Graft Loss, 1999-2008**

| Year                    | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| No. at risk             | 1145 | 1213 | 1291 | 1380 | 1466 | 1549 | 1638 | 1704 | 1728 | 1730 |
| Transplant death        | 25   | 30   | 37   | 33   | 37   | 42   | 43   | 50   | 39   | 48   |
| Transplant death rate % | 2    | 2    | 3    | 2    | 3    | 3    | 3    | 3    | 2    | 3    |
| Graft loss              | 37   | 32   | 40   | 39   | 42   | 44   | 21   | 38   | 37   | 32   |
| Graft loss rate %       | 3    | 3    | 3    | 3    | 3    | 3    | 1    | 2    | 2    | 2    |
| Acute rejection         | 0    | 0    | 0    | 0    | 3    | 19   | 14   | 18   | 12   | 0    |
| Acute rejection rate %  | 0    | 0    | 0    | 0    | 0    | 1    | 1    | 1    | 1    | 0    |
| All losses              | 62   | 62   | 77   | 72   | 79   | 86   | 64   | 88   | 76   | 80   |
| All losses rate %       | 5    | 5    | 6    | 5    | 5    | 6    | 4    | 5    | 4    | 5    |

\*Graft loss=graft failure

\*All losses=death / graft loss (acute rejection happens concurrently with graft failure / death)

Figure 14.4.2(a): Transplant Recipient Death Rate, 1976-2008

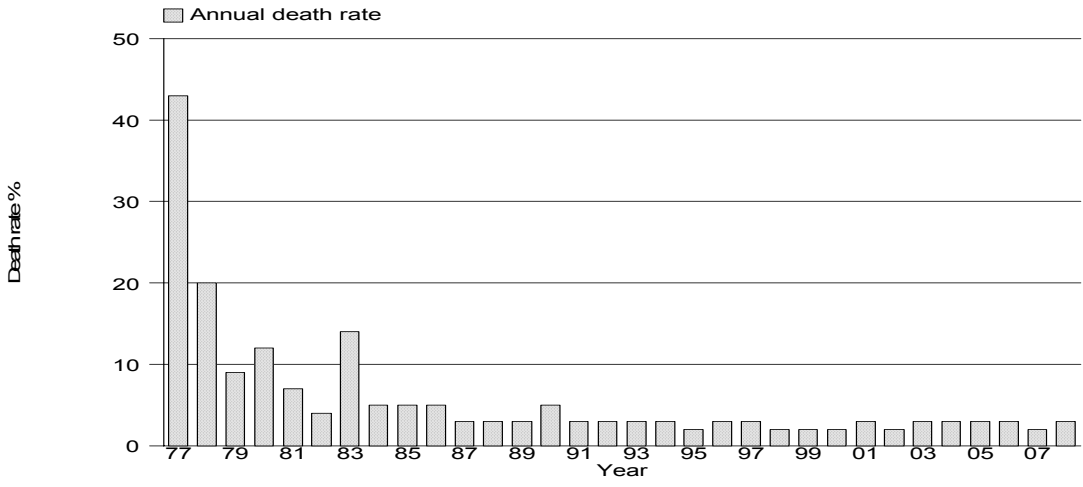
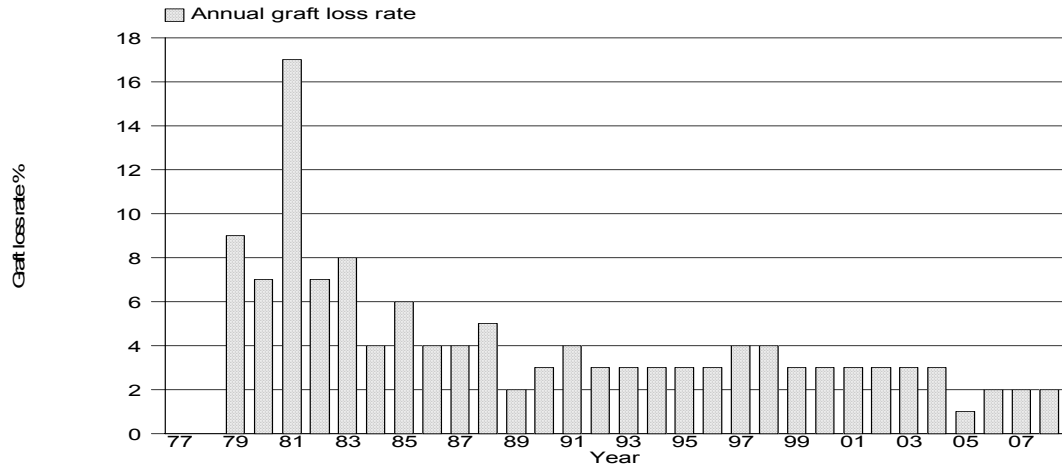


Figure 14.4.2(b): Transplant Recipient Graft Loss Rate, 1976-2008



**Table 14.4.3: Causes of Death in Transplant Recipients, 1999-2008**

| Year             | 1999 |     | 2000 |     | 2001 |     | 2002 |     | 2003 |     |
|------------------|------|-----|------|-----|------|-----|------|-----|------|-----|
|                  | No.  | %   | No.  | %   | No.  | %   | No.  | %   | No.  | %   |
| Cardiovascular   | 4    | 13  | 10   | 29  | 7    | 16  | 5    | 15  | 9    | 23  |
| Died at home     | 6    | 19  | 1    | 3   | 5    | 12  | 5    | 15  | 5    | 13  |
| Infection        | 7    | 23  | 12   | 35  | 20   | 47  | 10   | 30  | 11   | 28  |
| Graft failure    | 0    | 0   | 2    | 6   | 0    | 0   | 0    | 0   | 0    | 0   |
| Cancer           | 3    | 10  | 2    | 6   | 6    | 14  | 4    | 12  | 6    | 15  |
| Liver disease    | 3    | 10  | 1    | 3   | 1    | 2   | 3    | 9   | 2    | 5   |
| Accidental death | 1    | 3   | 1    | 3   | 1    | 2   | 1    | 3   | 0    | 0   |
| Others           | 5    | 16  | 3    | 9   | 2    | 5   | 3    | 9   | 5    | 13  |
| Unknown          | 2    | 6   | 2    | 6   | 1    | 2   | 2    | 6   | 2    | 5   |
| TOTAL            | 31   | 100 | 34   | 100 | 43   | 100 | 33   | 100 | 40   | 100 |

| Year             | 2004 |     | 2005 |     | 2006 |     | 2007 |     | 2008 |     |
|------------------|------|-----|------|-----|------|-----|------|-----|------|-----|
|                  | No.  | %   | No.  | %   | No.  | %   | No.  | %   | No.  | %   |
| Cardiovascular   | 4    | 9   | 5    | 11  | 10   | 18  | 7    | 16  | 7    | 13  |
| Died at home     | 6    | 13  | 5    | 11  | 7    | 13  | 5    | 11  | 12   | 23  |
| Infection        | 11   | 24  | 22   | 50  | 22   | 40  | 15   | 34  | 14   | 26  |
| Graft failure    | 3    | 7   | 0    | 0   | 0    | 0   | 4    | 9   | 1    | 2   |
| Cancer           | 8    | 17  | 5    | 11  | 4    | 7   | 6    | 14  | 10   | 19  |
| Liver disease    | 3    | 7   | 3    | 7   | 5    | 9   | 0    | 0   | 0    | 0   |
| Accidental death | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   |
| Others           | 10   | 22  | 3    | 7   | 4    | 7   | 3    | 7   | 8    | 15  |
| Unknown          | 1    | 2   | 1    | 2   | 3    | 5   | 4    | 9   | 1    | 2   |
| TOTAL            | 46   | 100 | 44   | 100 | 55   | 100 | 44   | 100 | 53   | 100 |

**Table 14.4.4: Causes of Graft Failure, 1999-2008**

| Year                             | 1999 |     | 2000 |     | 2001 |     | 2002 |     | 2003 |     |
|----------------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|
|                                  | No.  | %   | No.  | %   | No.  | %   | No.  | %   | No.  | %   |
| Rejection                        | 23   | 62  | 19   | 59  | 25   | 61  | 23   | 56  | 21   | 47  |
| Calcineurin toxicity             | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   |
| Other drug toxicity              | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   |
| Ureteric obstruction             | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   |
| Infection                        | 0    | 0   | 1    | 3   | 2    | 5   | 0    | 0   | 2    | 4   |
| Vascular causes                  | 1    | 3   | 3    | 9   | 1    | 2   | 0    | 0   | 3    | 7   |
| Recurrent/ de novo renal disease | 0    | 0   | 0    | 0   | 2    | 5   | 2    | 5   | 2    | 4   |
| Others                           | 0    | 0   | 2    | 6   | 0    | 0   | 4    | 10  | 1    | 2   |
| Unknown                          | 13   | 35  | 7    | 22  | 11   | 27  | 12   | 29  | 16   | 36  |
| TOTAL                            | 37   | 100 | 32   | 100 | 41   | 100 | 41   | 100 | 45   | 100 |
| Year                             | 2004 |     | 2005 |     | 2006 |     | 2007 |     | 2008 |     |
|                                  | No.  | %   | No.  | %   | No.  | %   | No.  | %   | No.  | %   |
| Rejection                        | 33   | 70  | 18   | 75  | 28   | 65  | 26   | 68  | 26   | 72  |
| Calcineurin toxicity             | 0    | 0   | 0    | 0   | 1    | 2   | 0    | 0   | 0    | 0   |
| Other drug toxicity              | 1    | 2   | 0    | 0   | 0    | 0   | 0    | 0   | 0    | 0   |
| Ureteric obstruction             | 0    | 0   | 0    | 0   | 0    | 0   | 1    | 3   | 0    | 0   |
| Infection                        | 1    | 2   | 1    | 4   | 3    | 7   | 1    | 3   | 2    | 6   |
| Vascular causes                  | 4    | 9   | 2    | 8   | 4    | 9   | 1    | 3   | 2    | 6   |
| Recurrent/ de novo renal disease | 1    | 2   | 0    | 0   | 1    | 2   | 0    | 0   | 0    | 0   |
| Others                           | 0    | 0   | 1    | 4   | 3    | 7   | 4    | 11  | 2    | 6   |
| Unknown                          | 7    | 15  | 2    | 8   | 3    | 7   | 5    | 13  | 4    | 11  |
| TOTAL                            | 47   | 100 | 24   | 100 | 43   | 100 | 38   | 100 | 36   | 100 |

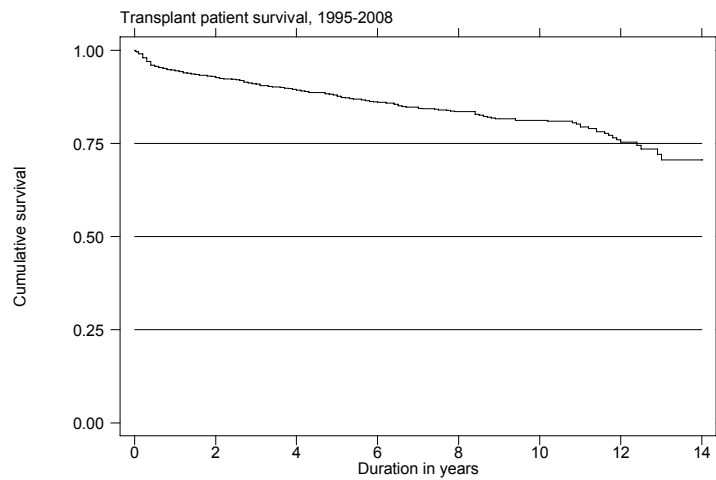
**Table 14.5.1: Patient survival, 1995-2008**

| Interval (years) | No.  | % Survival | SE |
|------------------|------|------------|----|
| 0                | 1925 | 100        | -  |
| 1                | 1689 | 95         | 1  |
| 3                | 1351 | 91         | 1  |
| 5                | 971  | 88         | 1  |
| 10               | 296  | 81         | 1  |
| 12               | 125  | 75         | 2  |

\*No.=Number at risk

SE=standard error

**Figure 14.5.1: Patient survival, 1995-2008**



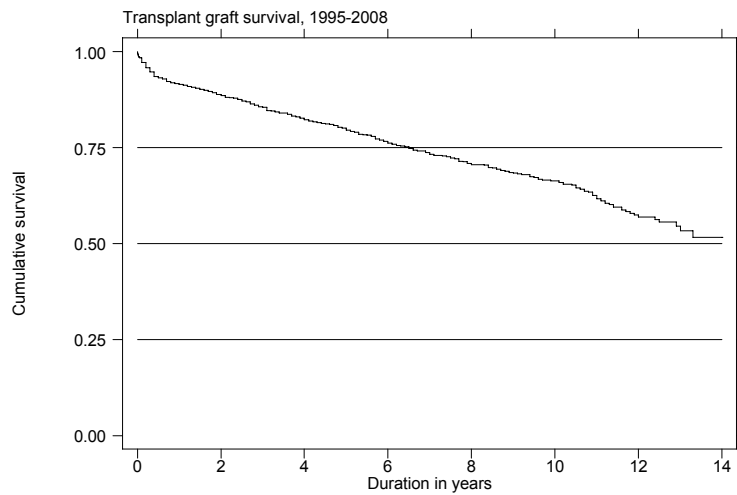
**Table 14.5.2: Graft survival, 1995-2008**

| Interval (years) | No.  | % Survival | SE |
|------------------|------|------------|----|
| 0                | 1925 | 100        | -  |
| 1                | 1689 | 91         | 1  |
| 3                | 1351 | 85         | 1  |
| 5                | 971  | 80         | 1  |
| 10               | 296  | 66         | 1  |
| 12               | 125  | 57         | 2  |

\*No.=Number at risk

SE=standard error

**Figure 14.5.2: Graft survival, 1995-2008**



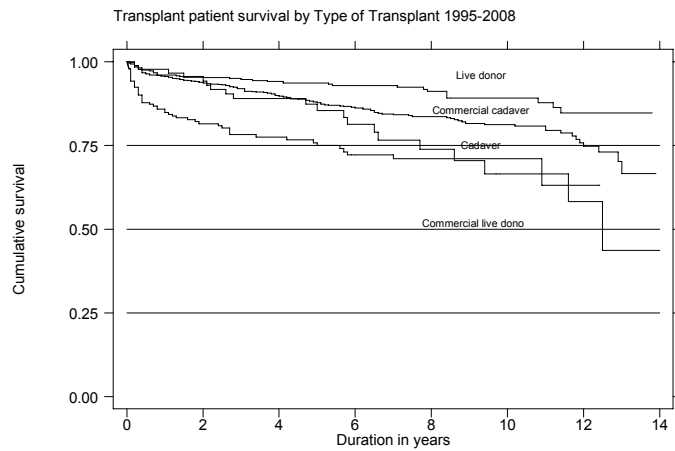
**Table 14.5.3: Patient survival by type of transplant, 1995-2008**

| Type of Transplant Interval (years) | Commercial Cadaver |            |    | Commercial Live Donor |            |    | Live Donor |            |    | Cadaver |            |    |
|-------------------------------------|--------------------|------------|----|-----------------------|------------|----|------------|------------|----|---------|------------|----|
|                                     | No.                | % Survival | SE | No.                   | % Survival | SE | No.        | % Survival | SE | No.     | % Survival | SE |
| 0                                   | 1125               | 100        | -  | 89                    | 100        | -  | 454        | 100        | -  | 235     | 100        | -  |
| 1                                   | 1022               | 96         | 1  | 85                    | 98         | 2  | 395        | 96         | 1  | 168     | 85         | 2  |
| 3                                   | 843                | 92         | 1  | 64                    | 89         | 3  | 320        | 95         | 1  | 110     | 78         | 3  |
| 5                                   | 576                | 88         | 1  | 46                    | 85         | 4  | 249        | 94         | 1  | 90      | 75         | 3  |
| 10                                  | 177                | 81         | 2  | 16                    | 67         | 7  | 83         | 89         | 2  | 15      | 71         | 4  |
| 12                                  | 74                 | 75         | 3  | 5                     | 58         | 10 | 44         | 85         | 3  | 4       | 63         | 8  |

\*No.=Number at risk

SE=standard error

**Figure 14.5.3: Patient survival by type of transplant, 1995-2008**



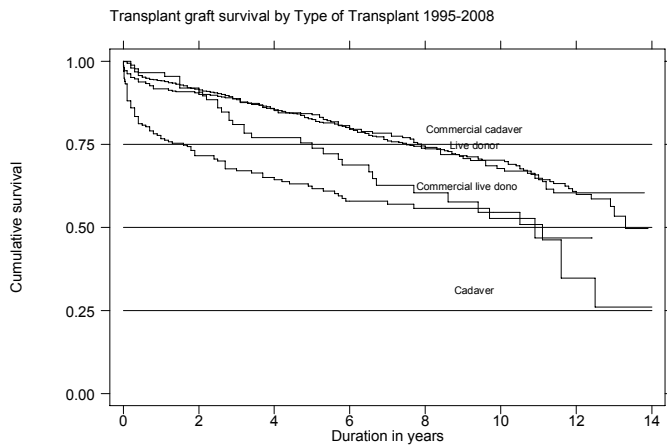
**Table 14.5.4: Graft survival by type of transplant, 1995-2008**

| Type of Transplant Interval (years) | Commercial Cadaver |            |    | Commercial Live Donor |            |    | Live Donor |            |    | Cadaver |            |    |
|-------------------------------------|--------------------|------------|----|-----------------------|------------|----|------------|------------|----|---------|------------|----|
|                                     | No.                | % Survival | SE | No.                   | % Survival | SE | No.        | % Survival | SE | No.     | % Survival | SE |
|                                     | 1125               | 100        | -  | 89                    | 100        | -  | 454        | 100        | -  | 235     | 100        | -  |
| 1                                   | 1022               | 94         | 1  | 85                    | 97         | 2  | 395        | 92         | 1  | 168     | 77         | 3  |
| 3                                   | 843                | 89         | 1  | 64                    | 81         | 4  | 320        | 88         | 2  | 110     | 67         | 3  |
| 5                                   | 576                | 82         | 1  | 46                    | 74         | 5  | 249        | 84         | 2  | 90      | 62         | 3  |
| 10                                  | 177                | 70         | 2  | 16                    | 54         | 7  | 83         | 68         | 3  | 15      | 53         | 5  |
| 12                                  | 74                 | 60         | 3  | 5                     | 35         | 9  | 44         | 60         | 4  | 4       | 47         | 7  |

\*No.=Number at risk

SE=standard error

**Figure 14.5.4: Graft survival by type of transplants, 1995-2008**



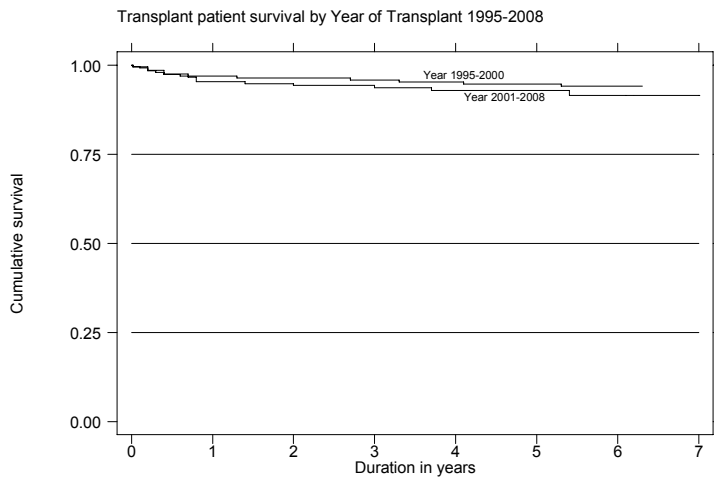
**Table 14.5.5: Patient survival by year of transplant (Living related transplant, 1995-2008)**

| Year of Transplant<br>Interval (years) | 1995-2000 |            |    | 2001-2008 |            |    |
|--|-----------|------------|----|-----------|------------|----|
|  | No.       | % Survival | SE | No.       | % Survival | SE |
| 0                                      | 206       | 100        | -  | 248       | 100        | -  |
| 1                                      | 184       | 97         | 1  | 212       | 95         | 1  |
| 3                                      | 175       | 96         | 1  | 146       | 94         | 2  |
| 5                                      | 164       | 95         | 2  | 86        | 93         | 2  |
| 7                                      | 155       | 94         | 2  | 27        | 92         | 2  |

\*No.=Number at risk

SE=standard error

**Figure 14.5.5: Patient survival by year of transplant (Living related transplant, 1995-2008)**



**Table 14.5.6: Graft survival by year of transplant (Living related transplant, 1995-2008)**

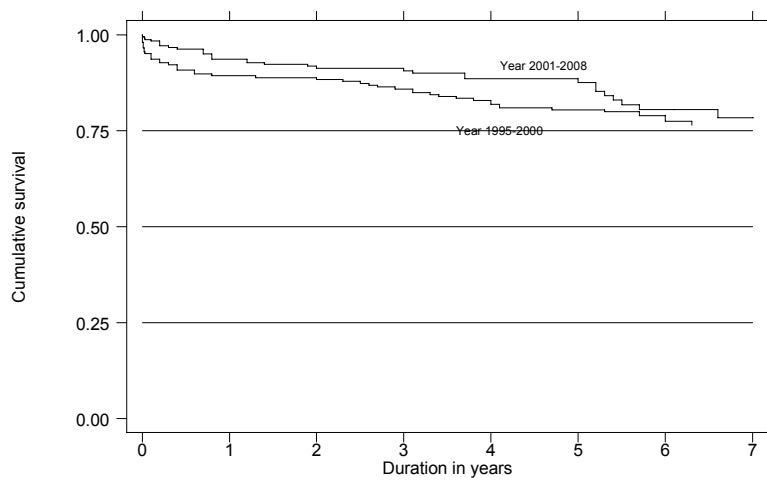
| Year of Transplant Interval (years) | 1994-1999 |            |    | 2000-2007 |            |    |
|-------------------------------------|-----------|------------|----|-----------|------------|----|
|                                     | No.       | % Survival | SE | No.       | % Survival | SE |
| 0                                   | 206       | 100        | -  | 248       | 100        | -  |
| 1                                   | 184       | 89         | 2  | 212       | 94         | 2  |
| 3                                   | 175       | 86         | 2  | 146       | 91         | 2  |
| 5                                   | 164       | 80         | 3  | 86        | 87         | 2  |
| 7                                   | 155       | 76         | 3  | 27        | 78         | 4  |

\*No.=Number at risk

SE=standard error

**Figure 14.5.6: Graft survival by year of transplant (Living related transplant, 1995-2008)**

Transplant graft survival by Year of Transplant 1995-2008



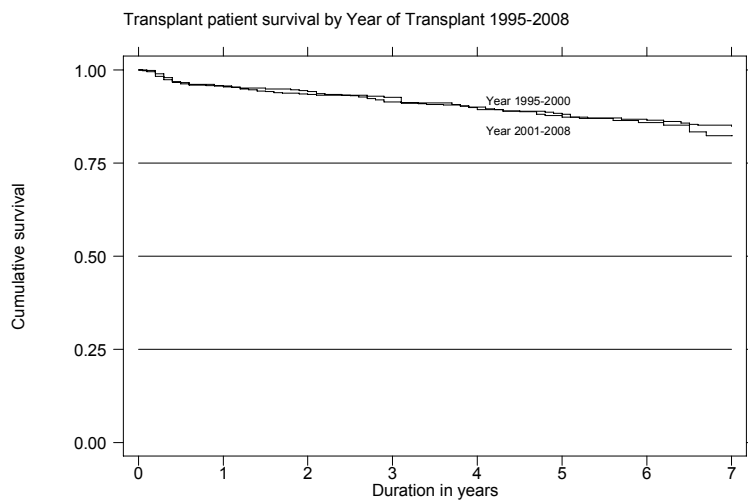
**Table 14.5.7: Patient survival by year of transplant (Commercial cadaver transplant, 1995-2008)**

| Year of Transplant Interval (years) | 1995-2000 |            |    | 2001-2008 |            |    |
|-------------------------------------|-----------|------------|----|-----------|------------|----|
|                                     | No.       | % Survival | SE | No.       | % Survival | SE |
| 0                                   | 417       | 100        | -  | 708       | 100        | -  |
| 1                                   | 394       | 96         | 1  | 630       | 95         | 1  |
| 3                                   | 373       | 93         | 1  | 473       | 91         | 1  |
| 5                                   | 336       | 88         | 2  | 240       | 87         | 1  |
| 7                                   | 305       | 85         | 2  | 57        | 82         | 2  |

\*No.=Number at risk

SE=standard error

**Figure 14.5.7: Patient survival by year of transplant (Commercial cadaver transplant, 1995-2008)**



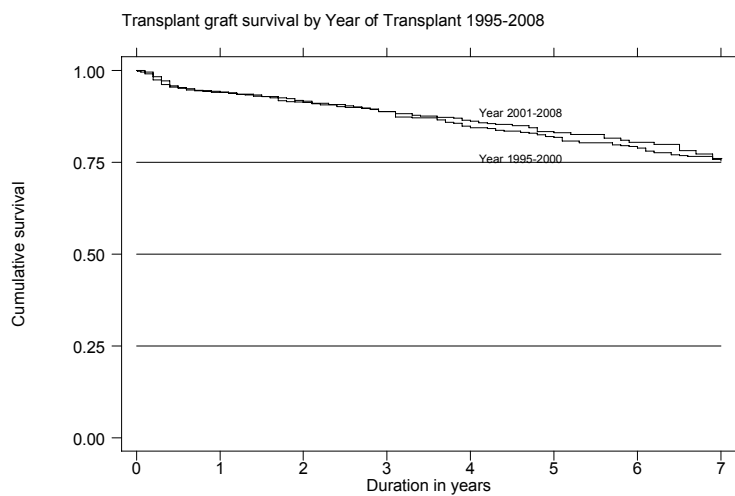
**Table 14.5.8: Graft survival by year of transplant (Commercial cadaver transplant, 1995-2008)**

| Year of Transplant Interval (years) | 1995-2000 |            |    | 2001-2008 |            |    |
|-------------------------------------|-----------|------------|----|-----------|------------|----|
|                                     | No.       | % Survival | SE | No.       | % Survival | SE |
| 0                                   | 417       | 100        | -  | 708       | 100        | -  |
| 1                                   | 394       | 94         | 1  | 630       | 94         | 1  |
| 3                                   | 373       | 89         | 2  | 473       | 89         | 1  |
| 5                                   | 336       | 82         | 2  | 240       | 83         | 2  |
| 7                                   | 305       | 75         | 2  | 57        | 76         | 3  |

\*No.=Number at risk

SE=standard error

**Figure 14.5.8: Graft survival by year of transplant (Commercial cadaver transplant, 1995-2008)**



**Table 14.6.1: Risk factors for IHD in renal transplant recipients at year 2006, 2007 and 2008**

|                                 | 2006       | 2007       | 2008       |
|---------------------------------|------------|------------|------------|
| Diabetes                        | 21 (1.4)   | 25 (1.6)   | 17 (1.2)   |
| Hypertension**                  | 455 (31.1) | 590 (37.5) | 514 (36.8) |
| CKD                             | 177 (12.1) | 127 (8.1)  | 116 (8.3)  |
| Diabetes + Hypertension**       | 155 (10.6) | 174 (11.0) | 172 (12.3) |
| Diabetes + CKD                  | 18 (1.2)   | 11 (0.7)   | 21 (1.5)   |
| CKD + Hypertension**            | 490 (33.5) | 516 (32.8) | 451 (32.3) |
| Diabetes + CKD + Hypertension** | 147 (10.0) | 132 (8.4)  | 106 (7.6)  |

\*\*Hypertension: BP systolic > 140 and BP diastolic > 90 OR have either Beta blocker / Calcium channel blocker / ACE inhibitor / AIIIRB /

Other anti-hypertensive drugs

GFR (mL/min/1.73m<sup>2</sup>) = 1.2\*(140-age(year))\*weight(kg) / creatinine (µmol/L) if male

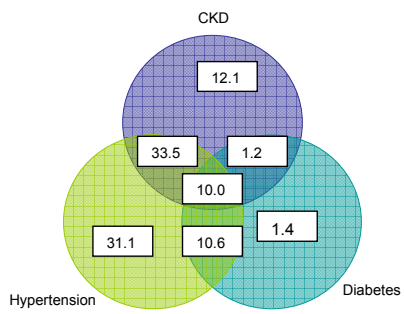
GFR (mL/min/1.73m<sup>2</sup>) = 0.85\*(1.2\*(140-age(year))\*weight(kg) / creatinine (µmol/L) if female

CKD stage III-GFR, 30-60

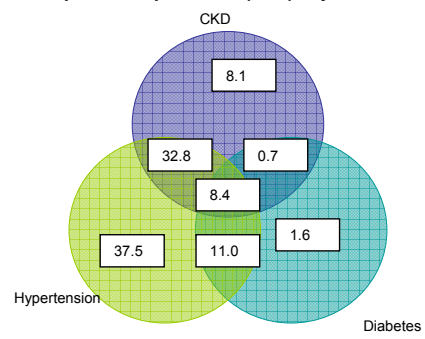
CKD stage IV-GFR, 15-30

CKD stage V-GFR, <15

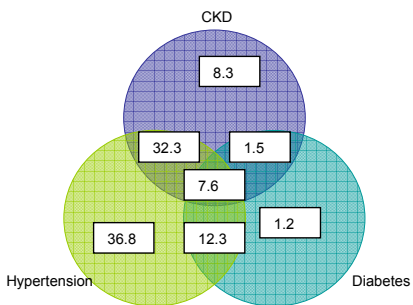
**Figure 14.6.1(a); Venn Diagram for Pre and Post Transplant Complications (in %) at year 2006**



**Figure 14.6.1(b); Venn Diagram for Pre and Post Transplant Complications (in %) at year 2007**



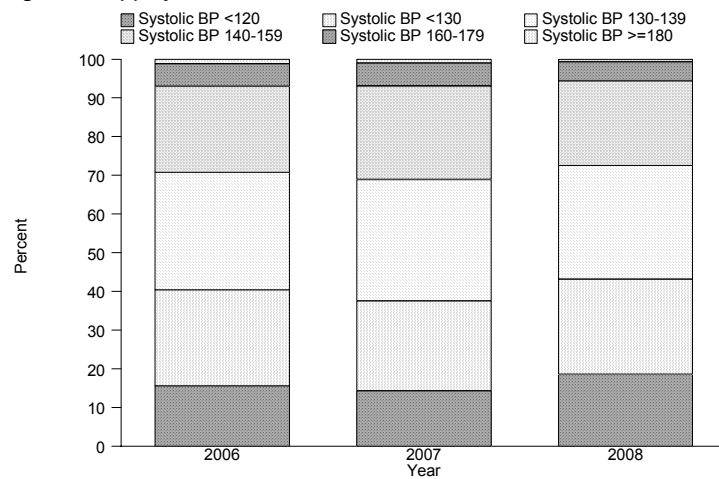
**Figure 14.6.1 (c): Venn Diagram for Pre and Post Transplant Complications (in %) at year 2008**



**Table 14.6.2(a): Systolic BP, 2006-2008**

| Year                | 2006 |         | 2007 |         | 2008 |         |
|---------------------|------|---------|------|---------|------|---------|
|                     | No.  | (%)     | No.  | (%)     | No.  | (%)     |
| Systolic BP <120    | 249  | (15.64) | 240  | (14.23) | 279  | (18.61) |
| Systolic BP <130    | 395  | (24.81) | 392  | (23.25) | 367  | (24.48) |
| Systolic BP 130-139 | 483  | (30.34) | 529  | (31.38) | 441  | (29.42) |
| Systolic BP 140-159 | 353  | (22.17) | 409  | (24.26) | 329  | (21.95) |
| Systolic BP 160-179 | 93   | (5.84)  | 99   | (5.87)  | 73   | (4.87)  |
| Systolic BP >=180   | 19   | (1.19)  | 17   | (1.01)  | 10   | (0.67)  |

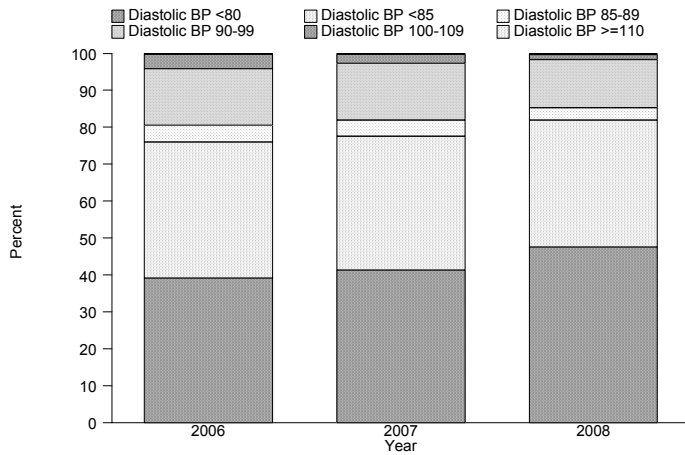
**Figure 14.6.2(a): Systolic BP, 2006-2008**



**Table 14.6.2(b): Diastolic BP, 2006-2008**

| Year                 | 2006 |         | 2007 |         | 2008 |         |
|----------------------|------|---------|------|---------|------|---------|
|                      | No.  | (%)     | No.  | (%)     | No.  | (%)     |
| Diastolic BP <80     | 624  | (39.20) | 698  | (41.40) | 714  | (47.63) |
| Diastolic BP <85     | 586  | (36.81) | 609  | (36.12) | 514  | (34.29) |
| Diastolic BP 85-89   | 73   | (4.59)  | 74   | (4.39)  | 50   | (3.34)  |
| Diastolic BP 90-99   | 244  | (15.33) | 261  | (15.48) | 195  | (13.01) |
| Diastolic BP 100-109 | 61   | (3.83)  | 39   | (2.31)  | 21   | (1.40)  |
| Diastolic BP >=110   | 4    | (0.25)  | 5    | (0.30)  | 5    | (0.33)  |

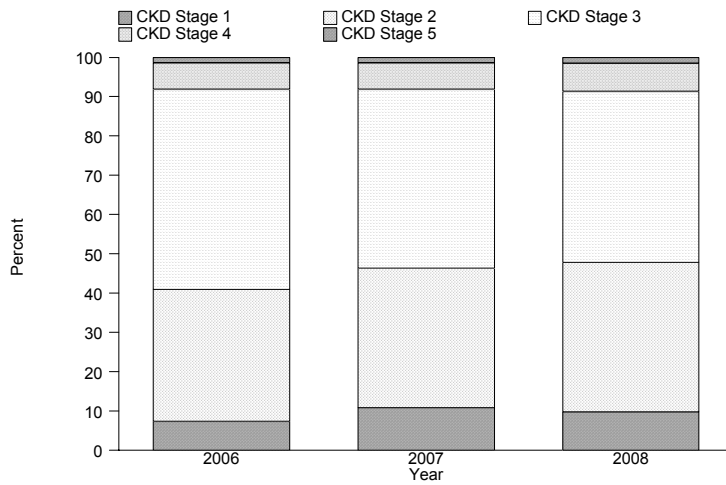
**Figure 14.6.2(b): Diastolic BP, 2006-2008**



**Table 14.6.3: CKD stages, 2006-2008**

| Year        | 2006 |         | 2007 |         | 2008 |         |
|-------------|------|---------|------|---------|------|---------|
|             | No.  | (%)     | No.  | (%)     | No.  | (%)     |
| CKD stage 1 | 116  | (7.33)  | 180  | (10.79) | 145  | (9.82)  |
| CKD stage 2 | 533  | (33.67) | 592  | (35.49) | 561  | (37.98) |
| CKD stage 3 | 805  | (50.85) | 760  | (45.56) | 642  | (43.47) |
| CKD stage 4 | 107  | (6.76)  | 113  | (6.77)  | 106  | (7.18)  |
| CKD stage 5 | 22   | (1.39)  | 23   | (1.38)  | 23   | (1.56)  |

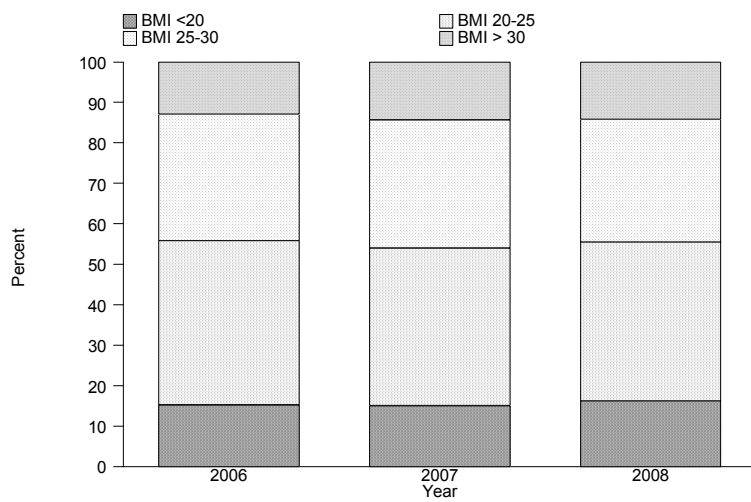
**Figure 14.6.3: CKD stages by year**



**Table 14.6.4: BMI, 2006-2008**

| Year      | 2006 |         | 2007 |         | 2008 |         |
|-----------|------|---------|------|---------|------|---------|
|           | No.  | (%)     | No.  | (%)     | No.  | (%)     |
| BMI <20   | 242  | (15.20) | 253  | (15.01) | 244  | (16.28) |
| BMI 20-25 | 647  | (40.64) | 658  | (39.03) | 588  | (39.23) |
| BMI 25-30 | 498  | (31.28) | 533  | (31.61) | 455  | (30.35) |
| BMI > 30  | 205  | (12.88) | 242  | (14.35) | 212  | (14.14) |

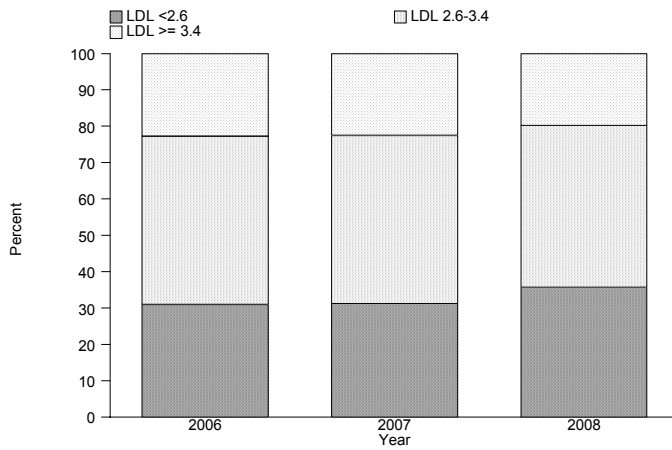
**Figure 14.6.4: BMI by year**



**Table 14.6.5(a): LDL, 2006-2008**

| Year        | 2006 |         | 2007 |         | 2008 |         |
|-------------|------|---------|------|---------|------|---------|
|             | No.  | (%)     | No.  | (%)     | No.  | (%)     |
| LDL < 2.6   | 492  | (30.90) | 527  | (31.26) | 534  | (35.62) |
| LDL 2.6-3.4 | 738  | (46.36) | 778  | (46.14) | 669  | (44.63) |
| LDL >= 3.4  | 362  | (22.74) | 381  | (22.60) | 296  | (19.75) |

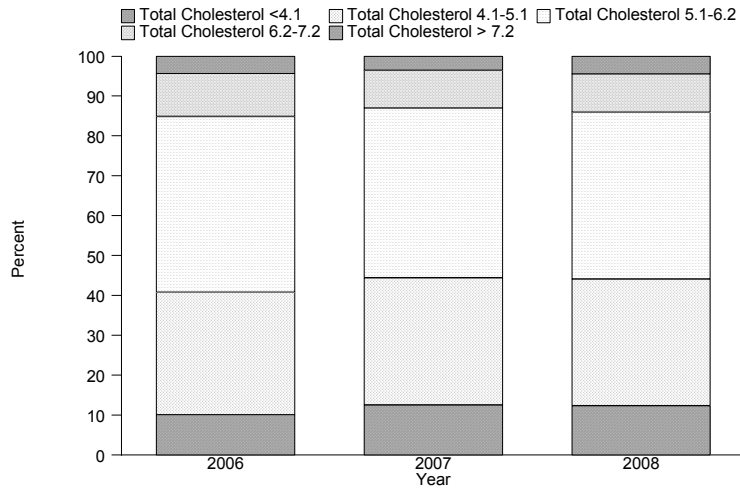
**Figure 14.6.5(a): LDL, 2006-2008**



**Table 14.6.5(b): Total Cholesterol, 2006-2008**

| Year                       | 2006 |         | 2007 |         | 2008 |         |
|----------------------------|------|---------|------|---------|------|---------|
|                            | No.  | (%)     | No.  | (%)     | No.  | (%)     |
| Total Cholesterol <4.1     | 160  | (10.05) | 210  | (12.46) | 184  | (12.27) |
| Total Cholesterol 4.1-5.1  | 490  | (30.78) | 539  | (31.97) | 476  | (31.75) |
| Total Cholesterol 5.1-6.2  | 700  | (43.97) | 719  | (42.65) | 629  | (41.96) |
| Total Cholesterol 6.2- 7.2 | 173  | (10.87) | 159  | (9.43)  | 143  | (9.54)  |
| Total Cholesterol > 7.2    | 69   | (4.33)  | 59   | (3.50)  | 67   | (4.47)  |

**Figure 14.6.5(b): Total Cholesterol, 2006-2008**



**Table 14.6.5(c): HDL, 2006-2008**

| Year      | 2006 |         | 2007 |         | 2008 |         |
|-----------|------|---------|------|---------|------|---------|
|           | No.  | (%)     | No.  | (%)     | No.  | (%)     |
| HDL <1    | 104  | (6.53)  | 108  | (6.41)  | 93   | (6.20)  |
| HDL 1-1.3 | 302  | (18.97) | 350  | (20.76) | 338  | (22.55) |
| HDL >1.3  | 1186 | (74.50) | 1228 | (72.84) | 1068 | (71.25) |

**Figure 14.6.5(c): HDL by year**



**Table 14.6.6(a): Treatment for hypertension, 2006-2008**

| Year | No.  | % on anti-hypertensives | % no 1 anti-hypertensive drug | % on 2 anti-hypertensives | % on 3 anti-hypertensives |
|------|------|-------------------------|-------------------------------|---------------------------|---------------------------|
| 2006 | 1592 | 86                      | 34                            | 26                        | 17                        |
| 2007 | 1686 | 85                      | 25                            | 31                        | 21                        |
| 2008 | 1499 | 86                      | 27                            | 31                        | 21                        |

**Table 14.6.6(b): Distribution of Systolic BP without anti-hypertensives, 2006-2008**

| Year | No. | Mean  | SD   | Median | LQ  | UQ  | % Patients $\geq$ 160mmHg |
|------|-----|-------|------|--------|-----|-----|---------------------------|
| 2006 | 189 | 123.8 | 14.4 | 120    | 117 | 130 | 4                         |
| 2007 | 196 | 125.2 | 16.5 | 120    | 113 | 134 | 4                         |
| 2008 | 171 | 124   | 15.6 | 120    | 110 | 130 | 4                         |

**Table 14.6.6(c): Distribution of Diastolic BP without anti-hypertensives, 2006-2008**

| Year | No. | Mean | SD   | Median | LQ | UQ | % patients $\geq$ 90mmHg |
|------|-----|------|------|--------|----|----|--------------------------|
| 2006 | 189 | 76.4 | 10.3 | 80     | 70 | 80 | 11                       |
| 2007 | 196 | 76.6 | 10   | 80     | 70 | 80 | 12                       |
| 2008 | 170 | 75.2 | 10.2 | 80     | 70 | 80 | 11                       |

**Table 14.6.6(d): Distribution of Systolic BP on anti-hypertensives, 2006-2008**

| Year | No.  | Mean  | SD   | Median | LQ  | UQ  | % Patients<br>≥ 160mmHg |
|------|------|-------|------|--------|-----|-----|-------------------------|
| 2006 | 1334 | 131.7 | 16.3 | 130    | 120 | 140 | 8                       |
| 2007 | 1388 | 132.6 | 16   | 130    | 120 | 140 | 8                       |
| 2008 | 1241 | 129.9 | 16.6 | 130    | 120 | 140 | 6                       |

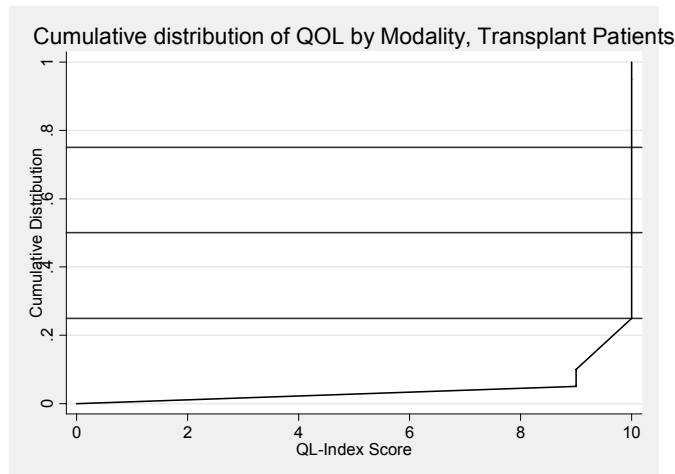
**Table 14.6.6(e): Distribution of Diastolic BP on anti-hypertensives, 2006-2008**

| Year | No.  | Mean | SD  | Median | LQ | UQ | % Patients<br>≥ 90 mmHg |
|------|------|------|-----|--------|----|----|-------------------------|
| 2006 | 1334 | 79.2 | 9.9 | 80     | 70 | 86 | 22                      |
| 2007 | 1387 | 79.1 | 9.6 | 80     | 70 | 85 | 20                      |
| 2008 | 1227 | 77.6 | 9.9 | 80     | 70 | 80 | 17                      |

**Table 14.7.1: Cumulative distribution of QoL-Index score in Transplant recipients 1999 - 2008**

|                    | QoL score |
|--------------------|-----------|
| Number of patients | 1179      |
| Centile            |           |
| 0                  | 0         |
| 0.05               | 9         |
| 0.1                | 9         |
| 0.25 (LQ)          | 10        |
| 0.5 (median)       | 10        |
| 0.75 (UQ)          | 10        |
| 0.9                | 10        |
| 0.95               | 10        |
| 1                  | 10        |

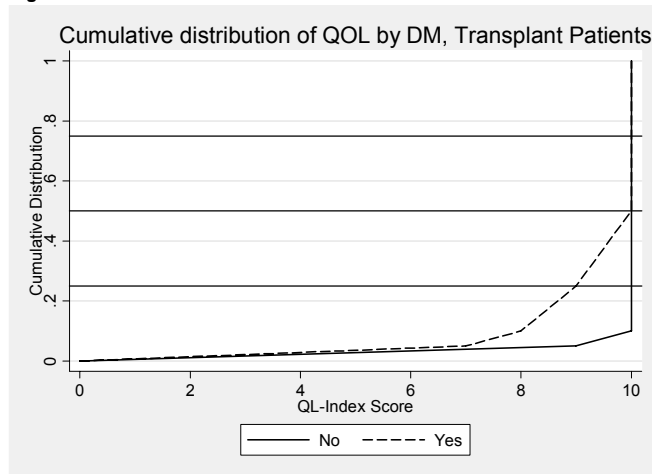
**Figure 14.7.1: Cumulative distribution of QoL-Index score in Transplant recipients, 1999 - 2008**



**Table 14.7.2: Cumulative distribution of QoL-Index score in relation to Diabetes mellitus, Transplant recipients 1999 - 2008**

| Diabetes mellitus  | No   | Yes |
|--------------------|------|-----|
| Number of patients | 1054 | 125 |
| Centile            |      |     |
| 0                  | 0    | 0   |
| 0.05               | 9    | 7   |
| 0.1                | 10   | 8   |
| 0.25 (LQ)          | 10   | 9   |
| 0.5 (median)       | 10   | 10  |
| 0.75 (UQ)          | 10   | 10  |
| 0.9                | 10   | 10  |
| 0.95               | 10   | 10  |
| 1                  | 10   | 10  |

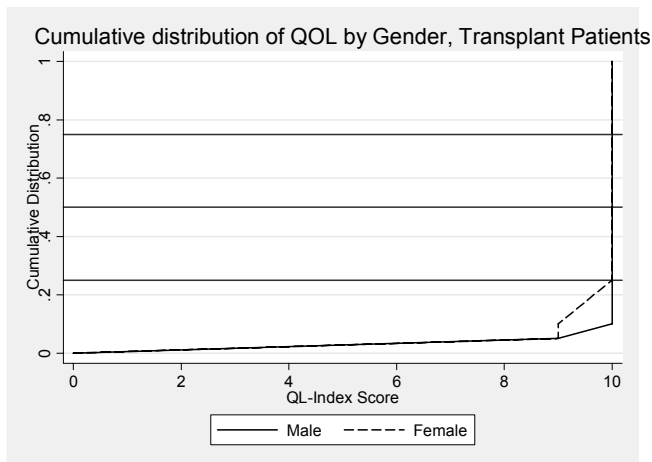
**Figure 14.7.2: Cumulative distribution of QoL-Index score in relation to Diabetes mellitus, Transplant recipients 1999 – 2008**



**Table 14.7.3: Cumulative distribution of QoL-Index score in relation to Gender, Transplant recipients 1999-2008**

| Gender             | Male | Female |
|--------------------|------|--------|
| Number of patients | 730  | 449    |
| Centile            |      |        |
| 0                  | 0    | 0      |
| 0.05               | 9    | 9      |
| 0.1                | 10   | 9      |
| 0.25 (LQ)          | 10   | 10     |
| 0.5 (median)       | 10   | 10     |
| 0.75 (UQ)          | 10   | 10     |
| 0.9                | 10   | 10     |
| 0.95               | 10   | 10     |
| 1                  | 10   | 10     |

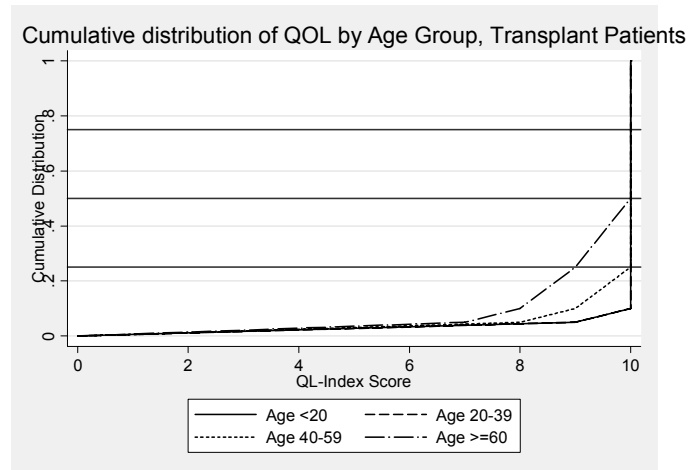
**Figure 14.7.3: Cumulative distribution of QoL-Index score in relation to Gender, Transplant recipients 1999 – 2008**



**Table 14.7.4: Cumulative distribution of QoL-Index score in relation to Age, Transplant recipients 1999-2008**

| Age group (years)  | <20 | 20-39 | 40-59 | ≥60 |
|--------------------|-----|-------|-------|-----|
| Number of patients | 117 | 472   | 515   | 75  |
| Centile            |     |       |       |     |
| 0                  | 0   | 0     | 0     | 0   |
| 0.05               | 9   | 9     | 8     | 7   |
| 0.1                | 10  | 10    | 9     | 8   |
| 0.25 (LQ)          | 10  | 10    | 10    | 9   |
| 0.5 (median)       | 10  | 10    | 10    | 10  |
| 0.75 (UQ)          | 10  | 10    | 10    | 10  |
| 0.9                | 10  | 10    | 10    | 10  |
| 0.95               | 10  | 10    | 10    | 10  |
| 1                  | 10  | 10    | 10    | 10  |

**Figure 14.7.4: Cumulative distribution of QoL-Index score in relation to Age, Transplant recipients 1999-2008**



**Table 14.7.5: Cumulative distribution of QoL-Index score in relation to Year of entry, Transplant recipients 1999-2008**

| Year of Entry      | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--------------------|------|------|------|------|------|------|------|------|------|------|
| Number of patients | 101  | 110  | 126  | 143  | 136  | 167  | 137  | 128  | 76   | 55   |
| Centile            |      |      |      |      |      |      |      |      |      |      |
| 0                  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| 0.05               | 9    | 8    | 9    | 9    | 8    | 9    | 9    | 9    | 7    | 6    |
| 0.1                | 10   | 9    | 9    | 10   | 9    | 10   | 10   | 10   | 9    | 8    |
| 0.25 (LQ)          | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 0.5 (median)       | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 0.75 (UQ)          | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 0.9                | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 0.95               | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| 1                  | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |

**Figure 14.7.5: Cumulative distribution of QoL-Index score in relation to Year of entry, Transplant recipients 1999 – 2008**

Cumulative distribution of QOL by Year of Entry, Transplant Patients

