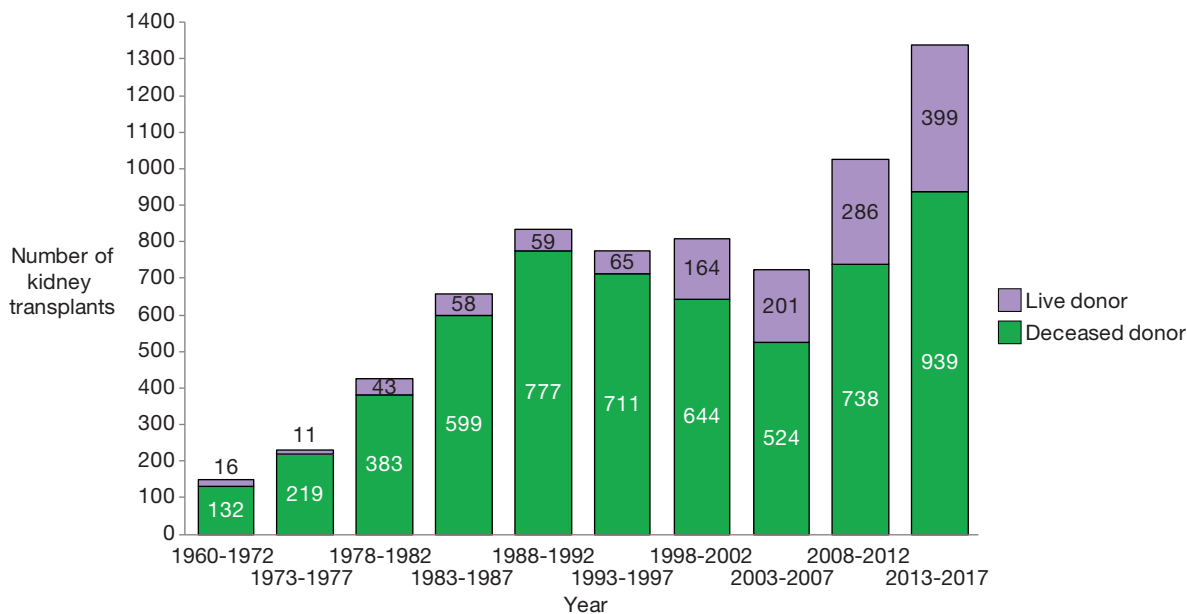


SECTION F TRANSPLANTATION

 This section's data are available on-line in Tableau format which enables interaction with the data: <http://www.srr.scot.nhs.uk/publications/Dashboards/Transplant.html>.

F1 Frequency of kidney transplantation in Scotland

F1.1 Frequency and donor type, kidney transplants performed in Scotland 1960 - 2017



Between 1960 and 31 December 2017, 6968 kidney transplants were performed in Scotland in 5897 patients with postcode of residence in Scotland at the time of transplantation.

The kidney donor was deceased for 5666 (81%) transplants, 1302 (19%) of transplanted kidneys were donated by live donors.

5865 first kidney transplants were performed, 904 second transplants, 169 third transplants, 27 fourth and 3 fifth kidney transplants.

226 individuals resident in Scotland have received a simultaneous kidney and pancreas transplant, 16 individuals have received a simultaneous kidney and liver transplant.

Kidney transplants performed outside of Scotland are excluded. Transplants performed in Scotland for patients not resident in Scotland are also excluded.

F1.2 Frequency, transplant type and donor type, kidney transplants performed in Scotland 2008-2017

| Year of transplant | Deceased donor kidney alone | | Live donor kidney | | Kidney and pancreas | | Kidney and Liver | | Total kidney transplants |
|--------------------|-----------------------------|-------------|-------------------|-------------|---------------------|------------|------------------|------------|--------------------------|
| | n | % | n | % | n | % | n | % | |
| 2008-2012 | 671 | 65.6 | 286 | 27.9 | 61 | 6.0 | 6 | 0.6 | 1024 |
| 2013 | 166 | 62.4 | 84 | 31.6 | 16 | 6.0 | 0 | - | 266 |
| 2014 | 172 | 65.6 | 74 | 28.2 | 15 | 5.7 | 1 | 0.4 | 262 |
| 2015 | 159 | 64.1 | 77 | 31.0 | 11 | 4.4 | 1 | 0.4 | 248 |
| 2016 | 160 | 64.5 | 73 | 29.4 | 15 | 6.0 | 1 | 0.4 | 249 |
| 2017 | 208 | 66.5 | 91 | 29.0 | 14 | 4.5 | 0 | - | 313 |

F1.3a Frequency and donor type of kidney transplants performed in Scotland 2008-2017 by transplanting centre

| Year | GLASGOW | | | | | | | | |
|------|---------|-------------|-----|-------------|----|-------------|------------|-------------------------|-------------|
| | DBD | | DCD | | LD | | Total | Pre-emptive transplants | |
| | n | % | n | % | n | % | | n | % of total |
| 2008 | 42 | 45.7 | 12 | 13.0 | 38 | 41.3 | 92 | 9 | 9.8 |
| 2009 | 57 | 63.3 | 14 | 15.6 | 19 | 21.1 | 90 | 6 | 6.7 |
| 2010 | 52 | 61.9 | 13 | 15.5 | 19 | 22.7 | 84 | 5 | 6.0 |
| 2011 | 55 | 56.7 | 14 | 14.4 | 28 | 28.8 | 97 | 11 | 11.3 |
| 2012 | 59 | 48.4 | 33 | 27.0 | 30 | 24.6 | 122 | 19 | 15.6 |
| 2013 | 56 | 39.4 | 41 | 28.9 | 45 | 31.7 | 142 | 21 | 14.8 |
| 2014 | 65 | 46.4 | 39 | 27.9 | 36 | 25.8 | 140 | 25 | 17.9 |
| 2015 | 59 | 44.4 | 35 | 26.3 | 39 | 29.3 | 133 | 26 | 19.5 |
| 2016 | 56 | 39.7 | 48 | 34.0 | 37 | 26.3 | 141 | 19 | 13.5 |
| 2017 | 78 | 46.7 | 47 | 28.1 | 42 | 25.2 | 167 | 31 | 18.6 |

DBD - Deceased after brain death; DCD - Deceased after circulatory death; LD - Living donor.

F1.3b Frequency and donor type of kidney transplants performed in Scotland 2008-2017 by transplanting centre

| Year | RIE | | | | | | | | |
|------|------|-------------|------|-------------|----|-------------|------------|-------------------------|-------------|
| | DBD* | | DCD* | | LD | | Total | Pre-emptive transplants | |
| | n | % | n | % | n | % | | n | % of total |
| 2008 | 63 | 60.0 | 19 | 18.1 | 23 | 21.9 | 105 | 8 | 7.6 |
| 2009 | 71 | 63.4 | 13 | 11.6 | 28 | 25.0 | 112 | 6 | 5.4 |
| 2010 | 49 | 52.1 | 17 | 18.1 | 28 | 29.8 | 94 | 5 | 5.3 |
| 2011 | 52 | 55.3 | 17 | 18.1 | 25 | 26.6 | 94 | 10 | 10.6 |
| 2012 | 45 | 46.4 | 24 | 24.7 | 28 | 28.9 | 97 | 15 | 15.5 |
| 2013 | 48 | 41.0 | 33 | 28.2 | 36 | 30.8 | 117 | 14 | 12.0 |
| 2014 | 50 | 45.5 | 29 | 26.4 | 31 | 28.2 | 110 | 13 | 11.8 |
| 2015 | 45 | 41.3 | 28 | 25.7 | 36 | 33.0 | 109 | 23 | 21.1 |
| 2016 | 39 | 37.9 | 32 | 31.1 | 32 | 31.1 | 103 | 13 | 12.6 |
| 2017 | 61 | 45.2 | 32 | 23.7 | 42 | 31.1 | 135 | 19 | 14.1 |

* Includes combined kidney + pancreas and kidney + liver transplants.

DBD - Deceased after brain death; DCD - Deceased after circulatory death; LD - Living donor.

F1.3c Frequency and donor type of kidney transplants performed in Scotland 2008-2017 by transplanting centre

| Year | RHC | | | | | | | | |
|------|-----|-------------|-----|---|----|-------------|-----------|-------------------------|-------------|
| | DBD | | DCD | | LD | | Total | Pre-emptive transplants | |
| | n | % | n | % | n | % | | n | % of total |
| 2008 | 7 | 50.0 | 0 | - | 7 | 50.0 | 14 | 3 | 21.4 |
| 2009 | 4 | 57.1 | 0 | - | 3 | 42.9 | 7 | 2 | 28.6 |
| 2010 | 2 | 33.3 | 0 | - | 4 | 66.7 | 6 | 2 | 33.3 |
| 2011 | 2 | 66.7 | 0 | - | 1 | 33.3 | 3 | 0 | - |
| 2012 | 2 | 28.6 | 0 | - | 5 | 71.4 | 7 | 2 | 28.6 |
| 2013 | 4 | 57.1 | 0 | - | 3 | 42.9 | 7 | 2 | 28.6 |
| 2014 | 5 | 41.7 | 0 | - | 7 | 58.3 | 12 | 3 | 25.0 |
| 2015 | 4 | 66.7 | 0 | - | 2 | 33.3 | 6 | 3 | 50.0 |
| 2016 | 1 | 20.0 | 0 | - | 4 | 80.0 | 5 | 1 | 20.0 |
| 2017 | 4 | 36.4 | 0 | - | 7 | 63.6 | 11 | 4 | 36.4 |

DBD - Deceased after brain death; DCD - Deceased after circulatory death; LD - Living donor.

Since 2005 kidney transplantation for adult patients in Scotland has been undertaken in two units the Glasgow renal and transplant unit (GLAS) and the transplant unit of the Royal Infirmary of Edinburgh (RIE).

F1.4 Age of patients at time of kidney transplantation

| Year of transplant | First kidney transplants | | | | Second and subsequent transplants | | | |
|--------------------|--------------------------|----------|------|-------------|-----------------------------------|----------|------|-------------|
| | n | Mean Age | SD | Age Range | n | Mean Age | SD | Age Range |
| 1960-1972 | 139 | 31.4 | 12.3 | 8.0 - 64.8 | 9 | 24.3 | 9.3 | 11.6 - 40.4 |
| 1973-1977 | 202 | 34.3 | 11.7 | 11.3 - 65.1 | 28 | 32.9 | 10.1 | 11.6 - 55.2 |
| 1978-1982 | 358 | 37.1 | 13.4 | 8.5 - 68.6 | 68 | 34.8 | 11.4 | 10.0 - 68.9 |
| 1983-1987 | 533 | 38.5 | 15.4 | 1.5 - 77.6 | 124 | 35.8 | 12.2 | 3.4 - 63.6 |
| 1988-1992 | 696 | 42.1 | 15.7 | 0.3 - 76.2 | 140 | 36.3 | 13.5 | 5.1 - 69.5 |
| 1993-1997 | 651 | 42.4 | 15.5 | 2.1 - 76.1 | 125 | 37.5 | 12.8 | 5.0 - 66.1 |
| 1998-2002 | 669 | 41.5 | 15.5 | 4.0 - 78.4 | 139 | 39.0 | 12.1 | 5.2 - 71.3 |
| 2003-2007 | 604 | 43.1 | 15.0 | 4.2 - 77.7 | 121 | 40.3 | 10.9 | 16.4 - 69.2 |
| 2008-2012 | 874 | 47.0 | 15.2 | 2.4 - 79.3 | 150 | 44.0 | 11.7 | 18.2 - 75.3 |
| 2013-2017 | 1139 | 48.4 | 14.8 | 1.9 - 77.4 | 199 | 44.8 | 12.0 | 14.4 - 75.5 |

F1.5 Year of first kidney transplant and primary renal diagnosis group

| Year of transplant | Glomerulo-nephritis | | Interstitial | | Multisystem | | Diabetic Nephropathy | | Unknown | |
|--------------------|---------------------|-------------|--------------|-------------|-------------|-------------|----------------------|-------------|---------|-------------|
| | n | % | n | % | n | % | n | % | n | % |
| 1960-1972* | 58 | 41.7 | 42 | 30.2 | 13 | 9.4 | 0 | - | 25 | 18 |
| 1973-1977 | 94 | 46.5 | 68 | 33.7 | 22 | 10.9 | 0 | - | 18 | 8.9 |
| 1978-1982 | 120 | 33.5 | 155 | 43.3 | 40 | 11.2 | 11 | 3.1 | 32 | 8.9 |
| 1983-1987 | 143 | 26.8 | 218 | 40.9 | 72 | 13.5 | 39 | 7.3 | 61 | 11.4 |
| 1988-1992 | 192 | 27.6 | 246 | 35.3 | 114 | 16.4 | 56 | 8 | 88 | 12.6 |
| 1993-1997 | 186 | 28.6 | 237 | 36.4 | 86 | 13.2 | 75 | 11.5 | 67 | 10.3 |
| 1998-2002 | 173 | 25.9 | 247 | 36.8 | 82 | 12.3 | 72 | 10.8 | 95 | 14.2 |
| 2003-2007 | 138 | 22.8 | 223 | 36.9 | 76 | 12.6 | 89 | 14.7 | 78 | 12.9 |
| 2008-2012 | 192 | 22.0 | 347 | 39.7 | 113 | 12.9 | 109 | 12.5 | 113 | 12.9 |
| 2013-2017 | 299 | 26.3 | 412 | 36.2 | 136 | 11.9 | 180 | 15.8 | 112 | 9.8 |

* One patient who received a first kidney transplant between 1960-1972 has missing PRD

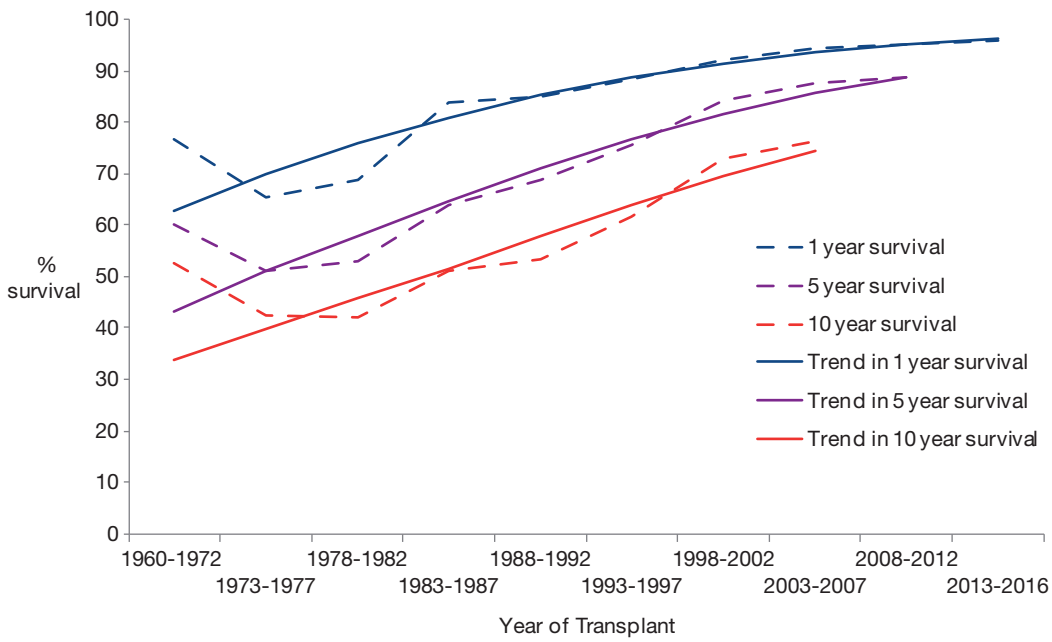
F2 Transplanted Kidney Survival

| F2.1 Graft survival of first kidney transplants by year of transplantation 1960 - 2016 | | | | | | |
|---|-------------------------|-----------|--------------------------|-----------|---------------------------|-----------|
| Year of transplant | Grafts surviving 1 year | | Grafts surviving 5 years | | Grafts surviving 10 years | |
| | n | % | n | % | n | % |
| 1960-1972 | 85 | 77 | 53 | 60 | 41 | 53 |
| 1973-1977 | 111 | 65 | 80 | 51 | 62 | 42 |
| 1978-1982 | 232 | 69 | 168 | 53 | 124 | 42 |
| 1983-1987 | 427 | 84 | 306 | 64 | 215 | 51 |
| 1988-1992 | 557 | 85 | 413 | 69 | 286 | 53 |
| 1993-1997 | 552 | 88 | 441 | 75 | 318 | 62 |
| 1998-2002 | 594 | 92 | 509 | 84 | 407 | 73 |
| 2003-2007 | 558 | 94 | 482 | 87 | 380 | 76 |
| 2008-2012 | 803 | 95 | 695 | 89 | / | / |
| 2013 | 212 | 97 | / | / | / | / |
| 2014 | 218 | 96 | / | / | / | / |
| 2015 | 190 | 95 | / | / | / | / |
| 2016 | 204 | 97 | / | / | / | / |

Survival of first kidney transplants (including those as part of combined kidney-liver and kidney-pancreas transplants) for transplants performed in Scotland, are shown in the table.

Grafts with insufficient follow-up have been excluded from the table and those that did not fail in patients dying within the relevant period have been excluded from the table.

F2.2 Trends in first graft survival by year of transplantation 1960-2016



Trend in 1 year survival: year to year OR 1.06 (95% CI 1.06-1.07).

Trend in 5 year survival: year to year OR 1.06 (95% CI 1.05-1.07).

Trend in 10 year survival: year to year OR 1.05 (95% CI 1.04-1.06).

The trends in 1 year, 5 year and 10 year graft survival are all statistically significant. (Wald-statistic, df=1, p<0.001)

F2.3 Graft survival by NHS Health Board of residence at transplantation 2007-2016

| | Number of first kidney transplants 2007-2016 | Grafts surviving 1 year | | Number of first kidney transplants 2007-2016 | Grafts surviving 2 years | | Number of first kidney transplants 2007-2012 | Grafts surviving 5 years | |
|-----------------|--|-------------------------|--------------|--|--------------------------|--------------|--|--------------------------|--------------|
| | | n | % | | n | % | | n | % |
| A&A | 127 | 122 | 96.1 | 100 | 93 | 93.0 | 50 | 43 | 86.0 |
| BORD | 50 | 48 | 96.0 | 42 | 40 | 95.2 | 24 | 23 | 95.8 |
| D&G | 48 | 46 | 95.8 | 44 | 41 | 93.2 | 22 | 19 | 86.4 |
| FIFE | 120 | 111 | 92.5 | 112 | 101 | 90.2 | 72 | 58 | 80.6 |
| FV | 111 | 107 | 96.4 | 98 | 94 | 95.9 | 56 | 53 | 94.6 |
| GRAM | 194 | 186 | 95.9 | 173 | 162 | 93.6 | 97 | 84 | 86.6 |
| GG&C | 439 | 416 | 94.8 | 380 | 350 | 92.1 | 211 | 190 | 90.0 |
| HIGH | 114 | 108 | 94.7 | 101 | 95 | 94.1 | 61 | 55 | 90.2 |
| LAN | 265 | 256 | 96.6 | 228 | 212 | 93.0 | 127 | 114 | 89.8 |
| LOTH | 252 | 240 | 95.2 | 227 | 210 | 92.5 | 146 | 123 | 84.2 |
| ORKN | 4 | 4 | 100.0 | 3 | 3 | 100.0 | 2 | 2 | 100.0 |
| SHET | 6 | 6 | 100.0 | 4 | 4 | 100.0 | 4 | 4 | 100.0 |
| TAY | 116 | 111 | 95.7 | 102 | 97 | 95.1 | 56 | 49 | 87.5 |
| WI | 7 | 7 | 100.0 | 5 | 5 | 100.0 | 3 | 3 | 100.0 |
| Scotland | 1853 | 1768 | 95.4 | 1619 | 1507 | 93.1 | 931 | 820 | 88.1 |

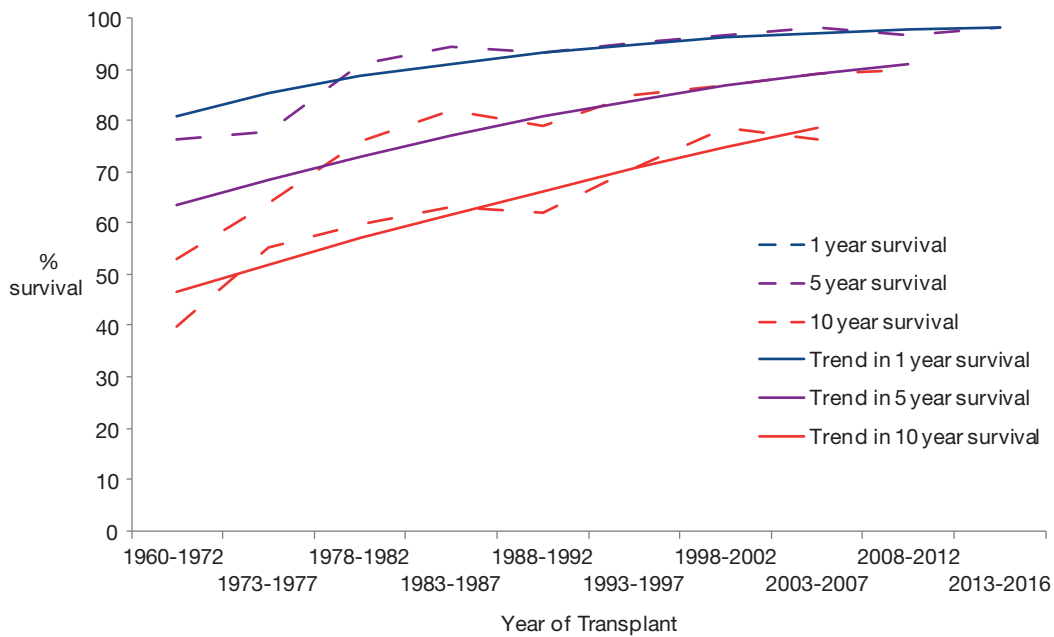
Grafts with insufficient follow-up and those that did not fail in dying patients within the relevant period have been excluded from the table.

F3 Patient survival after Kidney Transplantation

| F3.1 Patient survival after first kidney transplant by year of transplantation 1960-2016 | | | | | | |
|---|---------------------------|-----------|----------------------------|-----------|-----------------------------|-----------|
| Year of transplant | Patients surviving 1 year | | Patients surviving 5 years | | Patients surviving 10 years | |
| | n | % | n | % | n | % |
| 1960-1972 | 106 | 76 | 73 | 53 | 55 | 40 |
| 1973-1977 | 156 | 78 | 128 | 64 | 111 | 55 |
| 1978-1982 | 325 | 91 | 272 | 76 | 213 | 60 |
| 1983-1987 | 502 | 94 | 437 | 82 | 334 | 63 |
| 1988-1992 | 647 | 93 | 547 | 79 | 431 | 62 |
| 1993-1997 | 619 | 95 | 545 | 85 | 448 | 71 |
| 1998-2002 | 644 | 97 | 579 | 87 | 519 | 79 |
| 2003-2007 | 589 | 98 | 535 | 89 | 456 | 76 |
| 2008-2012 | 841 | 97 | 772 | 90 | / | / |
| 2013 | 217 | 96 | / | / | / | / |
| 2014 | 227 | 98 | / | / | / | / |
| 2015 | 201 | 97 | / | / | / | / |
| 2016 | 209 | 99 | / | / | / | / |

Patient survival is reported from the time of first kidney transplant for transplants performed in Scotland. Patients with insufficient follow-up are excluded.

F3.2 Trends in patient survival by year of first kidney transplantation 1960-2016



Trend in 1 year survival: year to year OR 1.06 (95% CI 1.05-1.07).

Trend in 5 year survival: year to year OR 1.05 (95% CI 1.04-1.05).

Trend in 10 year survival: year to year OR 1.04 (95% CI 1.03-1.05).

The trends in 1 year, 5 year and 10 year graft survival are all statistically significant. (Wald-statistic, df=1, p<0.001).

F4 Transplant Kidney Function

F4.1 Transplanted kidney function at one year in adult recipients after first kidney transplant performed 2008-2016

| Year | Transplants performed | Surviving patients with functioning graft at 1 year | | Patients with creatinine result | Serum creatinine (micromole/L) | | eGFR (ml/min) | |
|-----------|-----------------------|---|-------------|---------------------------------|--------------------------------|----------|---------------|-------------|
| | | n | % | | n | Median | IQR | Median |
| 2008-2012 | 834 | 766 | 91.8 | 710 | 118 | 97 - 146 | 55.2 | 42.7 - 69.0 |
| 2013 | 218 | 206 | 94.5 | 169 | 111 | 88 - 135 | 58.4 | 46.8 - 73.0 |
| 2014 | 219 | 206 | 94.5 | 186 | 119 | 95 - 151 | 54.4 | 41.4 - 67.5 |
| 2015 | 201 | 184 | 91.5 | 174 | 113 | 95 - 152 | 55.4 | 42.2 - 72.5 |
| 2016 | 208 | 199 | 95.7 | 178 | 113 | 90 - 150 | 58.2 | 40.2 - 72.8 |

Patients dying within the first year post transplant are excluded as are those where graft failed within one year.

Patients aged under 18 years at the time of transplantation are excluded.

Kidney transplants performed outside of Scotland are excluded. Transplants performed in Scotland for patients not resident in Scotland are also excluded.

Patients receiving a kidney with a pancreas or liver are included.

F4.2 Transplanted kidney function at five years in adult recipients after first kidney transplant performed 1993-2012

| Year | Transplants performed | Surviving patients with functioning graft at 1 year | | Patients with creatinine result | Serum creatinine (micromole/L) | | eGFR (ml/min) | |
|-----------|-----------------------|---|-------------|---------------------------------|--------------------------------|-----------|---------------|-------------|
| | | n | % | | n | Median | IQR | Median |
| 1993-1997 | 607 | 413 | 68.0 | 390 | 144 | 120 - 184 | 43.5 | 31.8 - 54.6 |
| 1998-2002 | 617 | 465 | 75.4 | 448 | 138 | 114 - 173 | 46.8 | 34.6 - 56.8 |
| 2003-2007 | 562 | 447 | 79.5 | 425 | 124 | 100 - 155 | 50.9 | 38.6 - 64.5 |
| 2008-2012 | 834 | 660 | 79.1 | 620 | 122 | 97 - 156 | 52.7 | 38.0 - 65.9 |

F4.3 Transplanted kidney function at one year in adult recipients after first kidney transplant performed 2008-2016 by primary renal diagnosis group

| Recipient primary renal diagnosis group | Transplants performed | Surviving patients with functioning graft at 1 year | | Patients with creatinine result | Serum creatinine (micromole/L) | | eGFR (ml/min) | |
|---|-----------------------|---|-------------|---------------------------------|--------------------------------|-----------|---------------|-------------|
| | | n | % | | n | Median | IQR | Median |
| Glomerulonephritis | 409 | 381 | 88.8 | 334 | 123 | 102 - 156 | 54.3 | 40.8 - 67.6 |
| Interstitial | 625 | 592 | 94.7 | 537 | 113 | 93 - 144 | 55.2 | 42.5 - 69.2 |
| Multisystem | 204 | 186 | 91.2 | 169 | 115 | 92 - 147 | 57.1 | 42.8 - 70.0 |
| Diabetic nephropathy ¹ | 244 | 226 | 92.6 | 216 | 111 | 86 - 136 | 60.6 | 46.3 - 74.1 |
| Diabetic nephropathy ² | 131 | 120 | 91.6 | 113 | 117 | 96 - 146 | 53.8 | 41.5 - 70.7 |
| Unknown | 198 | 176 | 88.9 | 161 | 113 | 92 - 149 | 55.1 | 42.5 - 70.1 |

1 Includes patients receiving simultaneous kidney and pancreas transplant.

2 Excludes patients receiving simultaneous kidney and pancreas transplant.

F4.4 Transplanted kidney function at one year in adult recipients after first kidney transplant performed 2012-2016 by donor type

| Donor type | Transplants performed | Surviving patients with functioning graft at 1 year | | Patients with creatinine result | Serum creatinine (micromole/L) | | eGFR (ml/min) | |
|----------------|-----------------------|---|-------------|---------------------------------|--------------------------------|-----------|---------------|-------------|
| | | n | % | | n | Median | IQR | Median |
| Deceased - DBD | 438 | 408 | 93.2 | 371 | 112 | 88 - 139 | 57.4 | 44.2 - 74.4 |
| Deceased - DCD | 298 | 272 | 91.3 | 252 | 129 | 102 - 174 | 46.6 | 33.0 - 63.4 |
| Live donor | 335 | 327 | 97.6 | 281 | 107 | 87 - 132 | 62.6 | 50.6 - 77.8 |

F4.5 Transplanted kidney function at one year in adult recipients after first kidney transplant performed 2008-2016 by transplanting unit

| Transplant unit | Transplants performed | Surviving patients with functioning graft at 1 year | | Patients with creatinine result | Serum creatinine (micromole/L) | | eGFR (ml/min) | |
|-----------------|-----------------------|---|-------------|---------------------------------|--------------------------------|----------|---------------|-------------|
| | | n | % | | n | Median | IQR | Median |
| GLAS | 876 | 809 | 92.4 | 698 | 118 | 96 - 147 | 54.9 | 41.6 - 70.1 |
| RIE | 808 | 755 | 93.4 | 726 | 114 | 93 - 125 | 56.3 | 43.5 - 71.2 |

F5 Biopsy Proven Transplant Kidney Rejection

All adult renal units in Scotland have reported all transplant kidney biopsy procedures to the Scottish Renal Biopsy Registry since 2015.

Biopsies at the time of transplant (implantation/ time zero biopsies) are not included.

We identified all transplant kidney biopsies performed in Scotland the first year following kidney transplantation in Scotland 2015-2016, to determine the incidence of biopsy proven acute rejection episodes in the first twelve months following kidney transplant.

F5.1 Frequency of kidney transplants in adult transplant centres in Scotland 2015 and 2016

| Year | Total number adult transplants | Kidney | Kidney Pancreas | Kidney Liver | First kidney transplants | Second kidney transplants | Third and subsequent |
|------|--------------------------------|--------|-----------------|--------------|--------------------------|---------------------------|----------------------|
| 2015 | 242 | 230 | 11 | 1 | 201 | 35 | 6 |
| 2016 | 244 | 228 | 15 | 1 | 208 | 28 | 8 |

In the two years 2015-2016 a total of 486 kidney transplants were performed in Scotland for 483 adult individuals.

F5.2 Frequency of kidney transplant biopsy in adult patients 2015-2017

| Year | Total adult transplant biopsies | Patients undergoing transplant kidney biopsy |
|------|---------------------------------|--|
| 2015 | 351 | 247 |
| 2016 | 320 | 229 |
| 2017 | 278 | 206 |

In the three years 2015-2017 a total of 949 transplant kidney biopsies were performed in 598 adult kidney transplant patients.

In that time 215 patients had two biopsies, 81 had three biopsies, 35 had 4 and 19 patients had 5 or more biopsies performed.

F5.3 Kidney Biopsy in first 12 months following transplant performed 2015-2016

| Year of Transplant | Total number adult transplants | Biopsy in first 12 months post Transplant | |
|--------------------|--------------------------------|---|-------------|
| | | n | % |
| 2015 | 242 | 108 | 44.6 |
| 2016 | 244 | 93 | 38.2 |

The proportion of patients undergoing a transplant kidney biopsy in the first year after transplant was similar for those with kidney alone transplant 188 of 458 patients (41%), or combined kidney and pancreas 12 of 26 patients (46%) or kidney and liver transplant 1 of 2 patients (50%).

F5.4 Kidney Biopsy in first 12 months following transplant performed 2015-2016 by donor type

| Donor type | Total transplants 2015-2016 | Patients undergoing biopsy in first 12 months | |
|------------|-----------------------------|---|-------------|
| | | n | % |
| DBD | 199 | 67 | 33.7 |
| DCD | 143 | 80 | 55.9 |
| Live Donor | 144 | 54 | 37.5 |

DBD - Deceased after brain death; DCD - Deceased after circulatory death.

F5.5 Biopsy Diagnosis of Rejection in first 12 months following transplant performed 2015-2016

| Rejection Category | Number of Patients | % of Transplants 2015-2016 |
|--|--------------------|----------------------------|
| Borderline Rejection | 13 | 2.67 |
| T Cell Mediated Rejection* | 29 | 5.96 |
| Antibody Mediated Rejection | 5 | 1.03 |
| Mixed T-cell and Antibody Mediated Rejection | 4 | 0.82 |
| Total | 51 | 10.49 |

* Includes chronic allograft arteriopathy.

For kidney transplants performed in Scotland in the two years 2015-2016, 10.5% of cases had biopsy proven acute rejection in the first year after transplantation.

The first biopsy diagnosis and severity of rejection for each case is shown in the table.

In all but one case the initial biopsy (when repeat biopsy was performed) demonstrated the most severe grade of rejection.

In one case the initial biopsy made a diagnosis of borderline rejection but a subsequent biopsy made a diagnosis of T-cell mediated rejection.

F6 Listing for kidney transplantation

F6.1 Percentage and prevalence per 100000 population of RRT patients with functioning kidney transplant or on transplant waiting list 31 December 2017 by NHS Health Board of residence

| | All RRT patients 31/12/2017 | Patients with kidney transplant | | Transplant or transplant listed | | NHS Health Board population | Prevalence per 100000 population |
|-----------------|--------------------------------|---------------------------------|-----------|---------------------------------|-----------|-----------------------------|----------------------------------|
| | | n | % | n | % | | |
| A&A | 409 | 238 | 58 | 267 | 65 | 370410 | 110.4 |
| BORD | 111 | 70 | 63 | 80 | 72 | 115020 | 96.5 |
| D&G | 142 | 95 | 67 | 105 | 74 | 149200 | 95.2 |
| FIFE | 342 | 202 | 59 | 216 | 63 | 371410 | 92.1 |
| FV | 269 | 185 | 69 | 209 | 78 | 305580 | 88.0 |
| GG&C | 1227 | 820 | 67 | 940 | 77 | 1169110 | 80.4 |
| GRAM | 551 | 337 | 61 | 375 | 68 | 586380 | 64.0 |
| HIGH | 309 | 217 | 70 | 235 | 76 | 321990 | 96.0 |
| LAN | 669 | 454 | 68 | 520 | 78 | 658130 | 101.7 |
| LOTH | 689 | 439 | 64 | 471 | 68 | 889450 | 77.5 |
| ORKN | 15 | 9 | 60 | 9 | 60 | 22000 | 68.2 |
| SHET | 16 | 7 | 44 | 9 | 56 | 23080 | 69.3 |
| TAY | 413 | 238 | 58 | 266 | 64 | 416090 | 99.3 |
| WI | 29 | 14 | 48 | 16 | 55 | 26950 | 107.6 |
| Scotland | 5191 | 3325 | 64 | 3718 | 72 | 5424800 | 68.5 |

The percentage of patients in each NHS Health Board area treated by all forms of RRT (PD, HD, Transplant) who are either on the transplant waiting list or have a functioning transplant are shown.

Patients who were on the transplant waiting list but had suspended rather than active status are included.

F6.2 Frequency of first kidney transplants by NHS Health Board of residence at transplantation 2013-2017

| | First Tx 2013-2017 (n) | Pre-emptive transplants (DD) | LD Tx in first year of RRT* |
|-----------------|---------------------------|----------------------------------|--------------------------------|
| | | Total Number (Number from DD) | |
| A&A | 86 | 21 (11) | 17 |
| BORD | 28 | 3 (0) | 6 |
| D&G | 33 | 7 (2) | 10 |
| FIFE | 62 | 9 (2) | 13 |
| FV | 70 | 16 (9) | 13 |
| GG&C | 305 | 68 (29) | 59 |
| GRAM | 109 | 16 (5) | 16 |
| HIGH | 65 | 13 (8) | 12 |
| LAN | 163 | 26 (14) | 26 |
| LOTH | 129 | 19 (9) | 25 |
| ORKN | 3 | 0 (0) | 1 |
| SHET | 2 | 0 (0) | 0 |
| TAY | 76 | 16 (5) | 21 |
| WI | 7 | 3 (3) | 2 |
| Scotland | 1138 | 217 (95) | 221 |

* Includes pre-emptive LD transplants

217 patients received a pre-emptive transplant in 2013-2017, 122 from a live donor (LD), 95 from a deceased donor (DD).

A further 99 patients received a LD transplant within one year of starting RRT.