

More transplants – new lives



Transplant Activity
in the UK
2004-2005

Cover pictures:

The launch of the 10th anniversary of the NHS Organ Donor Register at Trafalgar Square in October 2004.

Skilled surgeons and their teams carry out thousands of transplants every year.

Raising awareness plays a key role in increasing cornea transplants.

In 2004-05 UK Transplant funded 25 living kidney donor programmes.

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PREFACE

This transplant activity report for the financial year 2004-2005 relates throughout to the UK. All figures quoted are as reported to UK Transplant by 15 May 2005 for the National Transplant Database, maintained on behalf of the transplant community and National Health Service (NHS), or for the NHS Organ Donor Register, maintained on behalf of the UK Health Departments.

The information provided in the tables and figures given in Chapters 2-6 does not distinguish between adult and paediatric transplantation. The data also do not distinguish between patients entitled to NHS treatment (Group 1 patients) and those who are not (Group 2 patients). It should also be noted that not all cornea donors or cornea grafts are necessarily reported to UK Transplant.

The UK definition of a solid organ donor is any donor from whom at least one solid organ has been retrieved with the intention to transplant. Organs retrieved solely for research purposes have not been counted in this Activity Report. Organ donation has been recorded to reflect the number of organs retrieved. For example, if both lungs were retrieved, two lungs are recorded even if they were both used in one transplant. Similarly, if one liver is donated, one liver is recorded even if it results in two transplants. All pancreatic transplants refer to the whole organ.

Information from the British Transplantation Society "*Standards for Solid Organ Transplantation in the UK*" (*BTS Standard*) and the Office for National Statistics (ONS) *2001 Census* is quoted in this report.

The number of heartbeating (HB) and non-heartbeating (NHB) donors by hospital are documented in **Appendices IA** and **IB**, respectively. Donation and transplant rates in this report are presented per million population (pmp): population figures used throughout this report are based on ONS *2001 Census* figures and are given in **Appendices IIIA** and **IIIB**.

Following comments received on last year's report, a number of changes and additions have been incorporated. In particular, pancreas transplant activity is now described in a separate chapter, the chapter on transplant survival now includes information for pancreas and corneal transplantation and a brief summary of results from the Potential Donor Audit has been provided in chapter 10.

This report is available on the UK Transplant website:
<http://www.uktransplant.org.uk/ukt/statistics/statistics.jsp>

1 SUMMARY OF ACTIVITY

During 2004-2005, the number of patients who had their lives saved or improved by an organ transplant was 2,724. Of these, 2,241 received an organ from a cadaveric donor, and a further 483 received an organ from a living donor. In addition, 2,379 patients had their sight restored through a cornea transplant. There were 750 cadaveric donors of solid organs and 1,783 donors of ocular tissue. Compared to last year, these figures represent a fall of 5% in the number of solid organ transplants and an increase of 1% in the number of cornea transplants. There was an increase of 8% in the number of living donors but a decrease of 3% in the number of cadaveric donors. The total number of solid organ donors decreased by 1%, and the number of donors of ocular tissue decreased by 5%.

The number of patients registered for a transplant continues to increase, so that at 31 March 2004 there were a total of 7,672 patients on the active and temporarily suspended transplant lists. This represents an increase of 6% on the corresponding figure at the end of the previous year. Unfortunately, 460 patients died in 2004-2005 while waiting for their transplant, representing 4% of those waiting on the transplant lists throughout the year.

Cadaveric solid organ donation rates continue to vary across the UK, with 12.1 per million population (pmp) in Scotland, 12.4 pmp in England, 16.2 in Wales and 17.8 in Northern Ireland. These rates remain lower than that in the Republic of Ireland, which stands at 19.5 pmp.

UK Transplant is currently investing in 13 non-heartbeating donor programmes and 25 living donor programmes. As a result of this investment, the number of non-heartbeating donors rose from 73 in 2003-2004 to 86 in 2004-2005, an increase of 18%, while the number of living kidney donors rose from 461 to 476, an increase of 3%. However, the number of cadaveric heartbeating donors in the UK continued to fall from 698 in 2003-2004 to 664 in 2004-2005, a decrease of 5%.

In regard to renal transplantation, the number of kidney only transplants fell by 6%, although the number of kidney and pancreas transplants increased to 79, an increase of 68% on last year. This led to an overall reduction of 5% in the total number of kidney transplants. Of the heartbeating kidney donors, 96% were white, while 85% of the transplant recipients were white. The greatest percentage of heartbeating donors and recipients were in the 35-49 year age group, and 61% of recipients were male.

Cardiothoracic transplantation fell by 10% in 2004-2005, with decreases of 5% in the number of heart transplants and 18% in the number of lung transplants. The number of cadaveric cardiothoracic donors fell from 256 to 238 and of these donors, 97% were white, as were 91% of recipients. The greatest percentage of donors was in the 35-49 year age group, while the largest percentage of recipients was in the 50-59 year age group, and 68% of recipients were male.

The total number of liver transplants fell by 6%, due to a decrease in the number of cadaveric heartbeating liver donors. Of the liver donors, 95% were white, while 85% of the recipients were white. The greatest percentage of donors and patients on the transplant list came from the 35-49 year age group, and 55% of recipients were male.

In regard to ocular tissue transplantation, both the donor and recipient rates continue to vary considerably across the UK. In particular, donation rates ranged between 5 pmp to 79 pmp, and transplant rates from 14 pmp to 66 pmp.

The figures given for transplant survival rates in adult recipients in this report demonstrate that the one, two and five year survival rates following kidney, heart, lung and liver transplantation continue to rise. For transplants during calendar years 1997 to 1999 in adult recipients, the five year kidney transplant survival rates are 73% and 85% for cadaveric heartbeating and living donation, respectively. The five year heart transplant survival rate is 71%, that for lung transplantation is 50%, and for liver transplantation the survival rate is 66%. The one year transplant survival rates for pancreas and simultaneous kidney and pancreas transplants are 68% and 74%, respectively. The two year corneal transplant survival rate following a penetrating keratoplasty is 85%.

The number of individuals who have pledged to donate their organs after death by registering on the NHS Organ Donation Register (ODR) has increased to 12.1 million. The majority of new registrants continue to come from driving license applications and reminders through the DVLA, General Practitioner registration and through applications for a Boots Advantage Card. The percentage of the population registered ranges from 16% in Northern Ireland to 26% in both Scotland and South West England.

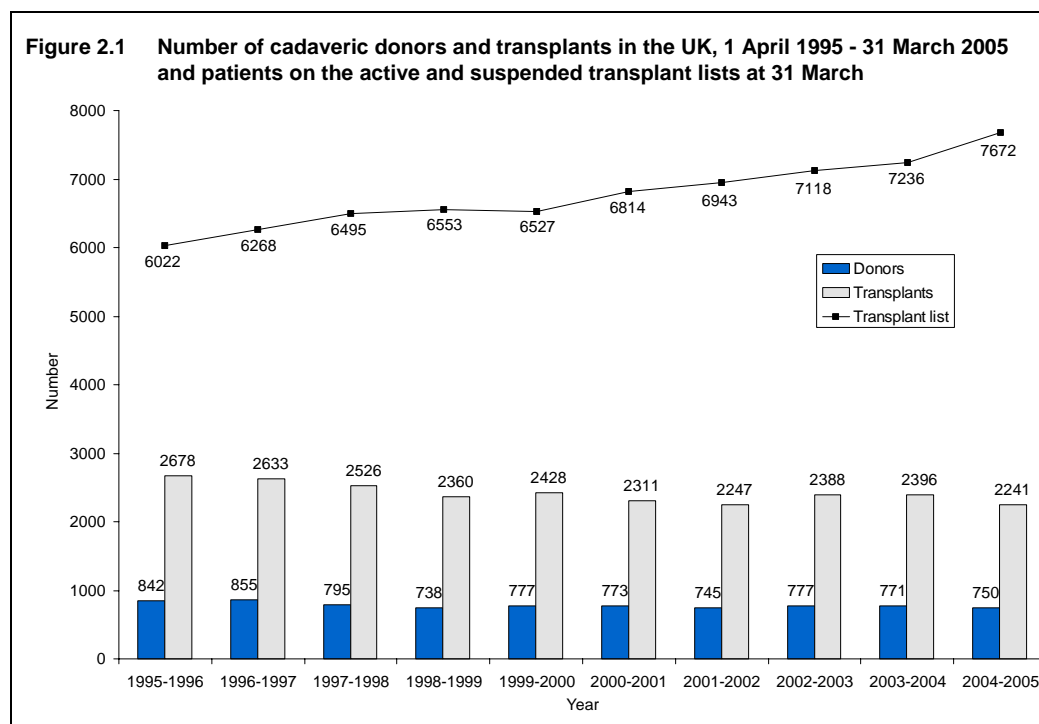
This last financial year saw a record number of kidney transplants from living and non-heartbeating donors, and the highest number of pancreas or combined kidney and pancreas transplants. Unfortunately, the percentage of relatives who refuse consent for organ donation remains at around 40%, and so this factor severely limits the supply of organs for transplantation from deceased donors.

Dave Collett
Director of Statistics and Audit

2 OVERVIEW

2.1 Summary of activity

Cadaveric donor numbers, transplant activity and numbers on the transplant lists at the year end, for 1 April 1995 to 31 March 2005, are shown in **Figure 2.1**. The total number of transplants in 2004-2005 was 155 lower than that in the previous year.



There were 750 cadaveric solid organ donors reported from the UK in 2004-2005, 21 less than in the previous financial year. A breakdown of the number of donors by organ is given in **Table 2.1**. Of the 750 cadaveric donors, 86 were non-heartbeating donors: 52 kidney only, 30 kidney and liver, 1 kidney and lung, 1 kidney, lung and liver and 2 liver only donors. There were seven living liver lobe donor transplants and one domino heart transplant.

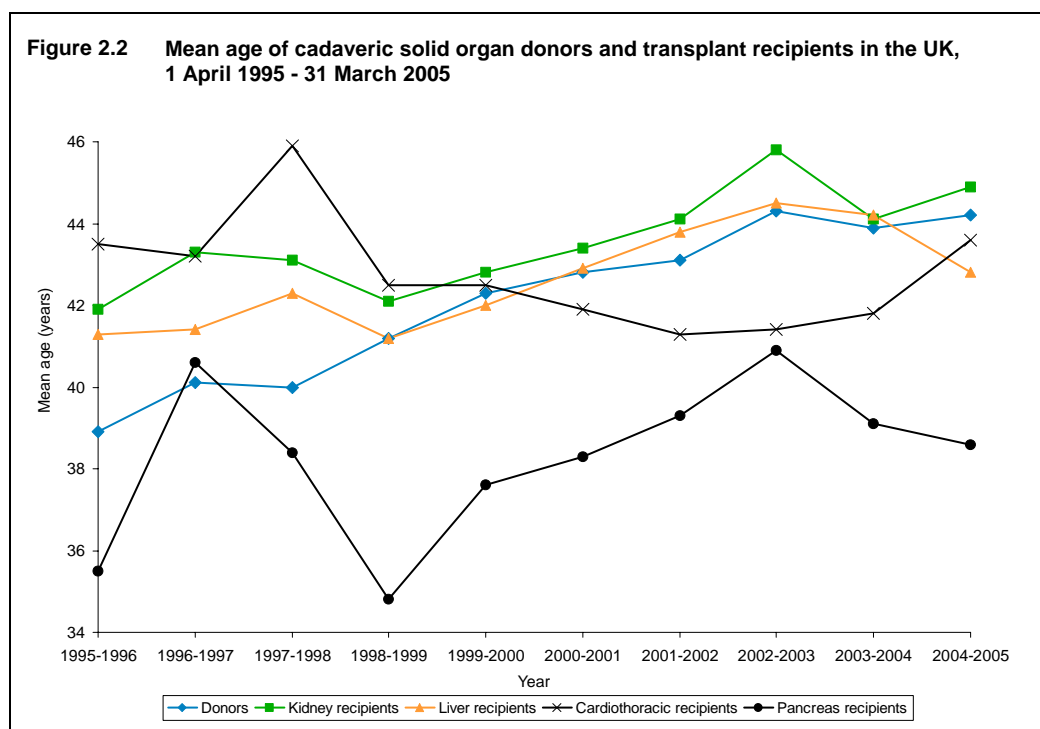
Table 2.1 UK activity summary for 1 April 2004 - 31 March 2005

| | Kidney | Pancreas | Heart | Heart/ lung | Lung | Liver | TOTAL |
|--------------------------|--------|----------|-------|----------------|------|-------|-------------------------|
| Cadaveric donors | 711 | 115 | 166 | - | 150 | 637 | 750 |
| Cadaveric organs donated | 1404 | 115 | 166 | - | 280 | 637 | 2602 |
| Cadaveric transplants | 1308 | 86 | 154 | 15 | 120 | 649 | 2241¹ |
| Living donor transplants | 475 | 0 | 1 | 0 | 0 | 7 | 483 |

¹ Includes combined transplants: 79 kidney and pancreas, 12 kidney and liver

The total number of solid organ transplants in 2004-2005 was 2,724. Of these, 2,241 (82%) transplants were through cadaveric donations. There were 483 transplants through living donations, 12 (3%) more than in 2003-2004.

Figure 2.2 shows the mean age of cadaveric solid organ donors and transplant recipients for the last ten years. The mean age of cadaveric donors has gradually increased over the ten years from 38.9 in 1995-1996 to 44.2 in 2004-2005. The mean age of liver recipients was the youngest for five years at 42.8 years, in 2004-2005. Pancreas recipients had the lowest mean age of all solid organ transplant recipients in each of the last ten years.



At 31 March 2005, 7,672 patients were registered on a solid organ transplant list in the UK. Of these 1,530 (20%) patients were temporarily suspended from the active national transplant list. Details of numbers on the transplant lists for each organ type are given in **Table 2.2**.

Table 2.2 UK transplant list summary at 31 March 2005

| | Kidney | Pancreas | Heart | Heart/ lung | Lung | Liver | TOTAL |
|-----------------------|-------------------|------------------|------------|----------------|------------|------------|-------------|
| Active list | 5425 ¹ | 132 ¹ | 106 | 49 | 260 | 264 | 6142 |
| Temporarily suspended | 1484 ² | 59 ² | 2 | 1 | 6 | 7 | 1530 |
| TOTAL | 6909 | 191 | 108 | 50 | 266 | 271 | 7672 |

¹ Includes 94 kidney and pancreas patients

² Includes 29 kidney and pancreas patients

2.2 Transplant list

Table 2.3 shows the numbers of patients waiting for a transplant at 31 March 2004 and 2005. The total number rose by 436 patients (6%) with increases in most organ transplant lists.

| Table 2.3 Active and suspended transplant lists in the UK at 31 March 2004 and 2005 | | | |
|--|-------------|-------------|-----------------|
| | 2004 | 2005 | % Change |
| Renal patients | 6592 | 6909 | +5 |
| Kidney | 6475 | 6786 | +5 |
| Kidney & pancreas | 117 | 123 | +5 |
| Pancreas patients | 39 | 68 | +74 |
| Cardiothoracic patients | 404 | 424 | +5 |
| Heart | 110 | 108 | -2 |
| Heart/lung | 54 | 50 | -7 |
| Lung(s) | 240 | 266 | +11 |
| Liver patients | 201 | 271 | +35 |
| ALL ORGANS | 7236 | 7672 | +6 |

2.3 Organ donors

In 2004-2005, 750 cadaveric solid organ donors gave 2,602 solid organs in the UK compared with 771 donors and 2,688 organs in 2003-2004. On average in the UK, 3.5 organs were retrieved per donor in 2004-2005. Overall, 81% of donors gave a kidney and at least one other solid organ.

Solid organ donor rates per million population (pmp) for 2003-2004 and 2004-2005 are given by country in **Table 2.4**. Northern Ireland achieved the highest rate in both years with 17.8 donors pmp. Scotland and Wales provided organs from non-heartbeating donors in 2004-2005 as well as England.

| Table 2.4 Cadaveric solid organ donor rates per million population (pmp) in the UK, 1 April 2003 - 31 March 2005, by country of donation | | | | | | | | |
|---|------------------|------------|--------------|---------------|------------------|------------|--------------|---------------|
| Country of donation | 2003-2004 | | | | 2004-2005 | | | |
| | HB | NHB | TOTAL | (pmp) | HB | NHB | TOTAL | (pmp) |
| England | 578 | 73 | 651 | (13.2) | 529 | 83 | 612 | (12.4) |
| Wales | 44 | 0 | 44 | (15.2) | 46 | 1 | 47 | (16.2) |
| Scotland | 46 | 0 | 46 | (9.1) | 59 | 2 | 61 | (12.1) |
| Northern Ireland | 30 | 0 | 30 | (17.8) | 30 | 0 | 30 | (17.8) |
| TOTAL | 698 | 73 | 771 | (13.1) | 664 | 86 | 750 | (12.7) |

The ethnicity of cadaveric solid organ donors in 2003-2004 and 2004-2005 is shown in **Table 2.5**. In 2004-2005, 96.3% of donors were reported as white. The proportion of Asian donors decreased from 1.7% in 2003-2004 to 1.2% in 2004-2005. Overall, the proportion of ethnic minority donors rose from 3.4% to 3.7%.

| Table 2.5 Ethnicity of cadaveric solid organ donors in the UK, 1 April 2003 - 31 March 2005 | | | | |
|--|------------------|------|------------------|------|
| Ethnicity | 2003-2004 | | 2004-2005 | |
| | N | (%) | N | (%) |
| White | 745 | 96.6 | 722 | 96.3 |
| Asian | 13 | 1.7 | 9 | 1.2 |
| Black | 7 | 0.9 | 6 | 0.8 |
| Chinese | 1 | 0.1 | 7 | 0.9 |
| Other | 5 | 0.6 | 6 | 0.8 |
| TOTAL | 771 | | 750 | |

2.4 Transplants

Table 2.6 shows that a total of 2,724 transplants were performed in 2004-2005 compared with 2,867 in 2003-2004, a decrease of 5%. All multi-organ transplants are identified separately and include 79 kidney and pancreas, 15 heart/lung and 12 kidney and liver transplants.

The cadaveric heartbeating donor kidney transplants include four en bloc kidneys in 2004-2005 (three in 2003-2004). Two non-heartbeating donor double lung transplants in 2004-2005 are reported under double lung transplants (one in 2003-2004).

The decrease in kidney transplants in 2004-2005 was due to a fall in the number of heartbeating donor kidney transplants; living and non-heartbeating donor transplants increased by 3% and 20%, respectively. The total number of cardiothoracic transplants fell by 10%, the number of liver transplants fell by 6% and the number of pancreas transplants increased by 9%.

Table 2.6 Transplants performed in the UK, 1 April 2003 - 31 March 2005

| Transplant | 2003-2004 | 2004-2005 | % Change |
|---|------------------|------------------|-----------------|
| Cadaveric heartbeating kidney | 1211 | 1074 | -11 |
| Cadaveric non-heartbeating kidney | 119 | 143 | 20 |
| Living donor kidney | 461 | 475 | 3 |
| Pancreas | 12 | 7 | - |
| Kidney & pancreas | 47 | 79 | 68 |
| Cadaveric heart | 164 | 154 | -6 |
| Domino heart | 0 | 1 | - |
| Heart/lung | 9 | 15 | - |
| Single lung | 42 | 42 | 0 |
| Double lung | 105 | 78 | -26 |
| Cadaveric heartbeating liver | 580 | 530 | -9 |
| Cadaveric non-heartbeating liver | 20 | 19 | -5 |
| Domino liver | 3 | 0 | - |
| Cadaveric liver lobe | 76 | 88 | 16 |
| Living donor liver lobe | 7 | 7 | - |
| Kidney & heart | 1 | 0 | - |
| Kidney & liver | 10 | 12 | 20 |
| TOTAL TRANSPLANTS (SOLID ORGANS) | 2867 | 2724 | -5 |
| Total kidney transplants | 1849 | 1783 | -4 |
| Total pancreas transplants | 59 | 86 | +9 |
| Total cardiothoracic transplants | 321 | 290 | -10 |
| Total liver transplants | 696 | 656 | -6 |

Percentage not reported when fewer than 10 in either year

3 KIDNEY ACTIVITY

3.1 Overview

A summary of activity for cadaveric heartbeating and non-heartbeating donor kidney transplants and the transplant list at year end for the last ten years is shown in **Figure 3.1**. The number of patients registered on the active transplant list at 31 March 2005 for a kidney or kidney and pancreas transplant has increased by 32% since 1996.

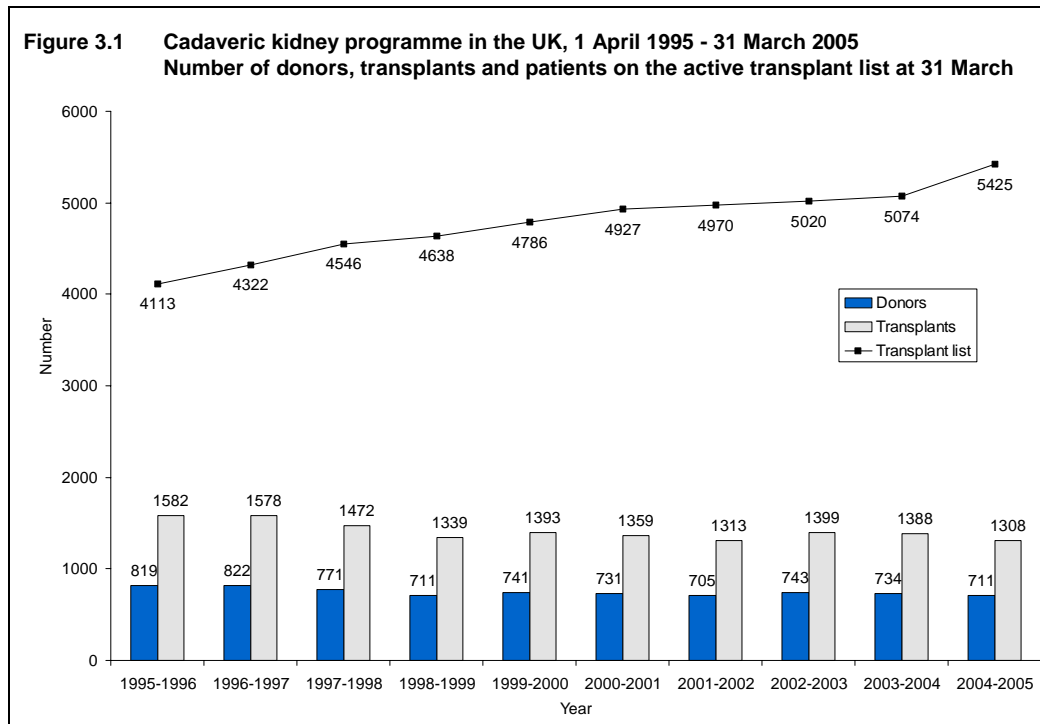


Table 3.1 shows the number of cadaveric and living donor kidney transplants carried out in 2004-2005 at each centre/alliance. The majority of centres/alliances performed non-heartbeating donor kidney transplants. The number of patients registered on the active kidney or kidney and pancreas transplant list increased to 5,425 at 31 March 2005.

The total number of cadaveric kidney donors fell to 711 in 2004-2005 from 734 in 2003-2004 and the number of transplants decreased from 1,388 to 1,308. The number of non-heartbeating kidney donors increased to 84 from 70 in 2003-2004 and the number of transplants from such donors increased by 20% to 143. Note that Aberdeen ceased transplanting kidneys in December 2003; data prior to this date have been included as part of Edinburgh's activity.

Many kidney transplant centres have joined other neighbouring centres to form an alliance to maintain a combined transplant list for the allocation of locally retained donor kidneys. At 31 March 2005, 81% of the transplant list comprised patients at an alliance centre; 82% of cadaveric heartbeating, 87% of cadaveric non-heartbeating and 81% of living donor kidney transplants were carried out by centres in an alliance.

Table 3.1 Kidney donors and transplants, 1 April 2004 - 31 March 2005 (2003-2004) and transplant list at 31 March 2005 (2004) in the UK, by centre/alliance

| Centre/alliance | Cadaveric kidney donors | | | | Cadaveric donor transplants | | | | Living donor transplants | | Active transplant list | |
|--------------------------------|-------------------------|--------------|-----------|-------------|-----------------------------|---------------|------------|--------------|--------------------------|--------------|------------------------|---------------|
| | HB | | NHB | | HB | | NHB | | | | | |
| North Thames | 66 | (78) | 10 | (9) | 111 | (131) | 13 | (13) | 71 | (61) | 730 | (662) |
| South Thames | 64 | (69) | 10 | (12) | 112 | (116) | 16 | (22) | 58 | (76) | 434 | (391) |
| Leeds | 40 | (38) | 11 | (9) | 107 | (109) | 26 | (15) | 28 | (31) | 314 | (353) |
| Liverpool | 42 | (46) | 0 | (0) | 47 | (63) | 0 | (0) | 25 | (15) | 208 | (219) |
| Manchester | 51 | (51) | 7 | (2) | 111 | (121) | 9 | (4) | 27 | (27) | 506 | (480) |
| Newcastle | 40 | (41) | 15 | (12) | 56 | (72) | 24 | (16) | 15 | (19) | 203 | (164) |
| North of England | 173 | (176) | 33 | (23) | 321 | (365) | 59 | (35) | 95 | (92) | 1231 | (1216) |
| Edinburgh | 32 | (16) | 1 | (0) | 44 | (45) | 1 | (0) | 15 | (16) | 257 | (192) |
| Glasgow | 24 | (30) | 1 | (0) | 58 | (56) | 1 | (0) | 18 | (21) | 246 | (229) |
| Scotland | 56 | (46) | 2 | (0) | 102 | (101) | 2 | (0) | 33 | (37) | 503 | (421) |
| Leicester | 14 | (7) | 0 | (2) | 35 | (11) | 0 | (2) | 26 | (27) | 232 | (201) |
| Nottingham | 10 | (19) | 0 | (0) | 24 | (22) | 0 | (0) | 16 | (13) | 162 | (152) |
| Sheffield | 24 | (15) | 0 | (0) | 25 | (43) | 0 | (0) | 4 | (9) | 230 | (245) |
| Trent | 48 | (41) | 0 | (2) | 84 | (76) | 0 | (2) | 46 | (49) | 624 | (598) |
| Bristol | 21 | (20) | 9 | (7) | 50 | (83) | 13 | (14) | 29 | (35) | 235 | (218) |
| Cardiff | 40 | (33) | 1 | (0) | 63 | (77) | 3 | (0) | 18 | (14) | 202 | (208) |
| Oxford | 29 | (32) | 6 | (7) | 55 | (48) | 13 | (13) | 17 | (16) | 184 | (170) |
| Plymouth | 14 | (28) | 1 | (0) | 28 | (38) | 2 | (0) | 5 | (4) | 98 | (87) |
| Portsmouth | 18 | (24) | 2 | (0) | 35 | (35) | 4 | (0) | 11 | (12) | 128 | (108) |
| South, West & Wales | 122 | (137) | 19 | (14) | 231 | (281) | 35 | (27) | 80 | (81) | 847 | (791) |
| Belfast | 27 | (29) | 0 | (0) | 37 | (46) | 0 | (0) | 10 | (7) | 223 | (192) |
| Birmingham | 33 | (52) | 1 | (0) | 83 | (79) | 2 | (0) | 36 | (14) | 476 | (458) |
| Cambridge | 28 | (27) | 9 | (10) | 57 | (49) | 16 | (20) | 13 | (11) | 243 | (229) |
| Coventry | 10 | (9) | 0 | (0) | 16 | (9) | 0 | (0) | 19 | (18) | 93 | (97) |
| Great Ormond Street | 0 | (0) | 0 | (0) | 11 | (16) | 0 | (0) | 14 | (15) | 21 | (19) |
| TOTAL | 627 | (664) | 84 | (70) | 1165 | (1269) | 143 | (119) | 475 | (461) | 5425 | (5074) |

There are currently six alliances in the UK: North of England, North Thames, South Thames, Scotland, Trent and South, West and Wales. At the end of March 2005, four adult transplant centres remained independent of any alliance: Belfast, Birmingham, Cambridge and Coventry. Each alliance has their own allocation scheme run on their behalf by UK Transplant for kidneys not allocated through the national scheme. Three of the six alliances use allocation systems based on the national scheme.

Centres within a kidney transplant alliance have a combined transplant list but, with the exception of those in the North and South Thames alliances, they have separate retrieval arrangements. Most centres are therefore identified separately throughout this report.

3.2 Transplant list

The number of patients registered on the kidney or kidney and pancreas transplant list increased by 7% in the year: on 31 March 2005, 5,425 patients were registered as active, compared with 5,074 at the end of March 2004. The number of patients waiting for a kidney transplant represents 92 patients per million population (pmp).

Of the 5,425 patients on the active transplant list at 31 March 2005, 94 required a kidney and pancreas transplant (85 at 31 March 2004). Additionally, 38 patients were registered for a pancreas only transplant (13 at 31 March 2004).

The outcome of patients registered on the UK kidney and kidney/pancreas transplant lists at 1 April 2004, or subsequently registered during the financial year, is shown in **Table 3.2**. Overall, 17% and 34% of patients waiting on the kidney transplant list and kidney/pancreas transplant list, respectively, during 2004-2005, had received a transplant by 31 March 2005.

Table 3.2 Transplant list and new registrations in the UK, 1 April 2004 - 31 March 2005

| Outcome of patient at 31 March 2005 | Active and suspended patients at 1 April 2004 | | New registrations in 2004-2005 ¹ | | TOTAL | |
|--|--|----|--|----|-------------|-----------|
| | N | % | N | % | N | % |
| Kidney transplant list | | | | | | |
| Remained active/suspended | 4628 | 72 | 2169 | 81 | 6797 | 75 |
| Transplanted | 1191 | 19 | 387 | 15 | 1578 | 17 |
| Removed | 338 | 5 | 82 | 3 | 420 | 5 |
| Died | 265 | 4 | 28 | 1 | 293 | 3 |
| TOTAL | 6422 | | 2666 | | 9088 | |
| Kidney/pancreas transplant list | | | | | | |
| Remained active/suspended | 55 | 45 | 80 | 67 | 135 | 56 |
| Transplanted | 49 | 41 | 33 | 28 | 82 | 34 |
| Removed | 12 | 10 | 5 | 4 | 17 | 7 |
| Died | 5 | 4 | 2 | 2 | 7 | 3 |
| TOTAL | 121 | | 120 | | 241 | |

¹ Includes re-registrations for second or subsequent transplants

3.2.1 Donor and organ supply

Of the 664 cadaveric heartbeating solid organ donors in the UK in 2004-2005, 627 (94%) donated kidney(s). From these donors, 1,242 kidneys were retrieved, 1,167 (94%) of which were transplanted. **Table 3.3** shows this activity by centre/alliance.

The overall heartbeating kidney donor rate is 10.6 pmp, with retrieval centre/alliance rates ranging from 6.6 to 17.9 pmp. The kidney retrieval rate for the UK is 21.1 pmp and varies from 13.2 to 35.7 pmp. Organ usage rates of at least 90% were observed for 17 (85%) retrieval centres.

| Table 3.3 Kidney donation and retrieval rates for heartbeating donors in the UK, 1 April 2004 - 31 March 2005, by centre/alliance | | | | | | |
|---|---|---------------|--------------------------------|---------------|-------------------------|-------------|
| Centre/alliance | Heartbeating kidney donors (pmp) | | Kidneys retrieved (pmp) | | Kidneys used (%) | |
| Belfast | 27 | (16.0) | 54 | (32.0) | 53 | (98) |
| Birmingham | 33 | (7.4) | 66 | (14.8) | 61 | (92) |
| Bristol | 21 | (10.7) | 41 | (20.8) | 38 | (93) |
| Cambridge | 28 | (11.2) | 56 | (22.4) | 52 | (93) |
| Cardiff | 40 | (17.9) | 80 | (35.7) | 79 | (99) |
| Coventry | 10 | (12.3) | 20 | (24.7) | 20 | (100) |
| Edinburgh | 32 | (13.3) | 63 | (26.3) | 58 | (92) |
| Glasgow | 24 | (9.0) | 48 | (18.0) | 46 | (96) |
| Leeds | 40 | (10.8) | 78 | (21.1) | 73 | (94) |
| Leicester | 14 | (6.6) | 28 | (13.2) | 27 | (96) |
| Liverpool | 42 | (13.0) | 84 | (25.9) | 83 | (99) |
| Manchester | 51 | (12.9) | 98 | (24.8) | 93 | (95) |
| Newcastle | 40 | (14.1) | 80 | (28.3) | 76 | (95) |
| North Thames | 66 | (9.0) | 130 | (17.8) | 114 | (88) |
| Nottingham | 10 | (7.2) | 19 | (13.8) | 16 | (84) |
| Oxford | 29 | (9.7) | 58 | (19.3) | 58 | (100) |
| Plymouth | 14 | (7.9) | 27 | (15.2) | 25 | (93) |
| Portsmouth | 18 | (7.5) | 36 | (15.1) | 35 | (97) |
| Sheffield | 24 | (13.1) | 48 | (26.2) | 42 | (88) |
| South Thames | 64 | (9.5) | 128 | (19.0) | 118 | (92) |
| TOTAL | 627 | (10.6) | 1242 | (21.1) | 1167 | (94) |

There were 84 non-heartbeating kidney donors in 2004-2005. From these donors, 162 kidneys were retrieved, 146 (90%) of which were transplanted. **Table 3.4** shows this activity by centre/alliance.

The overall non-heartbeating kidney donor rate is 1.4 pmp, with centre/alliance rates ranging from 0.2 to 5.3 pmp. The non-heartbeating donor kidney retrieval rate is 2.7 pmp and varies from 0.4 to 10.6 pmp. Organ usage rates of 100% were observed for 9 (64%) retrieval centres. Portsmouth is the only centre that provides for non-heartbeating donation without funding from UKT.

Table 3.4 Kidney donation and retrieval rates for non-heartbeating donors in the UK, 1 April 2004 - 31 March 2005, by centre/alliance

| Centre/alliance | Non-heartbeating kidney donors (pmp) | | Kidneys retrieved (pmp) | | Kidneys used (%) | |
|-----------------|---|--------------|----------------------------|--------------|---------------------|-------------|
| Birmingham | 1 | (0.2) | 2 | (0.4) | 2 | (100) |
| Bristol | 9 | (4.6) | 16 | (8.1) | 16 | (100) |
| Cambridge | 9 | (3.6) | 17 | (6.8) | 16 | (94) |
| Cardiff | 1 | (0.4) | 2 | (0.9) | 2 | (100) |
| Edinburgh | 1 | (0.4) | 1 | (0.4) | 1 | (100) |
| Glasgow | 1 | (0.4) | 2 | (0.8) | 1 | (50) |
| Leeds | 11 | (3.0) | 22 | (5.9) | 22 | (100) |
| Manchester | 7 | (1.8) | 13 | (3.3) | 13 | (100) |
| Newcastle | 15 | (5.3) | 30 | (10.6) | 27 | (90) |
| North Thames | 10 | (1.4) | 20 | (2.7) | 13 | (65) |
| Oxford | 6 | (2.0) | 12 | (4.0) | 12 | (100) |
| Plymouth | 1 | (0.6) | 2 | (1.1) | 2 | (100) |
| Portsmouth | 2 | (0.8) | 3 | (1.3) | 3 | (100) |
| South Thames | 10 | (1.5) | 20 | (3.0) | 16 | (80) |
| TOTAL | 84 | (1.4) | 162 | (2.7) | 146 | (90) |

3.3 Transplants

The number of cadaveric heartbeating donor adult kidney transplants per million population at each transplant centre is shown in **Table 3.5**. This table includes multi-organ transplants; nine kidney and liver and 77 kidney and pancreas. The transplant rate ranged from 12.3 to 28.1 pmp across centres and overall was 18.5 pmp, compared with the *BTS Standard* of 23 heartbeating kidney transplants pmp per year.

Table 3.5 Cadaveric heartbeating donor adult kidney transplants in the UK,
1 April 2003 - 31 March 2005, by transplant centre/alliance

| Transplant centre/alliance | 2003-2004 | | 2004-2005 | |
|-------------------------------|-------------|-------------|-------------|-------------|
| | Transplants | pmp | Transplants | pmp |
| Belfast | 44 | 26.0 | 34 | 20.1 |
| Birmingham | 78 | 17.5 | 69 | 15.5 |
| Bristol | 68 | 34.5 | 46 | 23.4 |
| Cambridge | 48 | 19.2 | 56 | 22.4 |
| Cardiff | 75 | 33.5 | 63 | 28.1 |
| Coventry | 9 | 11.1 | 16 | 19.8 |
| Edinburgh | 44 | 18.3 | 44 | 18.3 |
| Glasgow | 51 | 19.2 | 54 | 20.3 |
| Leeds | 94 | 25.4 | 94 | 25.4 |
| Leicester | 11 | 5.2 | 35 | 16.5 |
| Liverpool | 63 | 19.4 | 47 | 14.5 |
| Manchester | 109 | 27.6 | 100 | 25.3 |
| Newcastle | 66 | 23.3 | 53 | 18.7 |
| North Thames | 130 | 17.8 | 111 | 15.2 |
| Nottingham | 13 | 9.4 | 17 | 12.3 |
| Oxford | 47 | 15.7 | 54 | 18.0 |
| Plymouth | 38 | 21.3 | 27 | 15.2 |
| Portsmouth | 34 | 14.2 | 35 | 14.6 |
| Sheffield | 43 | 23.5 | 25 | 13.7 |
| South Thames | 110 | 16.3 | 109 | 16.2 |
| TOTAL | 1175 | 19.9 | 1089 | 18.5 |

Living donor kidney transplants increased by 3% to 475 in 2004-2005, and now represent 27% of the total kidney transplant programme. The total number of living donor adult transplants and the number of related and unrelated donor adult transplants performed by each transplant centre/alliance is shown in **Table 3.6**. Also shown are the number of living donor adult transplants per million population and the number as a percentage of patients listed at the end of the year, to indicate the size of the living donor programme relative to the centre's transplant list.

There has been an increase of 1% in the number of living related donor adult transplants and an increase of 11% in living unrelated donor adult transplants. The living donor adult transplant rate was 7.2 pmp in 2004-2005 and ranged from 2.2 to 23.5 pmp at individual transplant centres, compared with the *BTS Standard* of 6.2 living donors pmp. As a percentage of the active transplant list at 31 March 2005, the number of living donor adult transplants was 8% and ranged from 2% to 20% at individual transplant centres.

Table 3.6 **Adult living donor kidney transplants in the UK, 1 April 2003 - 31 March 2005, per million population (pmp) and percentage of active transplant list at 31 March, by transplant centre/alliance**

| Transplant centre/alliance | 2003-2004 | | | | | 2004-2005 | | | | |
|----------------------------|---------------|-----------------|------------|------------|----------|---------------|-----------------|------------|------------|----------|
| | Related donor | Unrelated donor | N | TOTAL pmp | % list | Related donor | Unrelated donor | N | TOTAL pmp | % list |
| Belfast | 7 | 0 | 7 | 4.1 | 4 | 7 | 1 | 8 | 4.7 | 4 |
| Birmingham | 11 | 3 | 14 | 3.1 | 3 | 25 | 8 | 33 | 7.4 | 7 |
| Bristol | 17 | 14 | 31 | 15.7 | 14 | 12 | 12 | 24 | 12.2 | 10 |
| Cambridge | 8 | 3 | 11 | 4.4 | 5 | 7 | 6 | 13 | 5.2 | 5 |
| Cardiff | 11 | 3 | 14 | 6.3 | 7 | 17 | 1 | 18 | 8.0 | 9 |
| Coventry | 12 | 6 | 18 | 22.2 | 19 | 14 | 5 | 19 | 23.5 | 20 |
| Edinburgh | 11 | 4 | 15 | 6.3 | 8 | 10 | 5 | 15 | 6.3 | 6 |
| Glasgow | 13 | 4 | 17 | 6.4 | 7 | 11 | 2 | 13 | 4.9 | 5 |
| Leeds | 26 | 3 | 29 | 7.8 | 8 | 20 | 7 | 27 | 7.3 | 9 |
| Leicester | 23 | 3 | 26 | 12.3 | 13 | 17 | 9 | 26 | 12.3 | 11 |
| Liverpool | 14 | 1 | 15 | 4.6 | 7 | 20 | 5 | 25 | 7.7 | 12 |
| Manchester | 22 | 1 | 23 | 5.8 | 5 | 19 | 4 | 23 | 5.8 | 5 |
| Newcastle | 15 | 2 | 17 | 6.0 | 10 | 11 | 2 | 13 | 4.6 | 6 |
| North Thames | 45 | 16 | 61 | 8.3 | 9 | 51 | 19 | 70 | 9.6 | 10 |
| Nottingham | 4 | 3 | 7 | 5.1 | 5 | 9 | 3 | 12 | 8.7 | 7 |
| Oxford | 14 | 2 | 16 | 5.3 | 9 | 12 | 5 | 17 | 5.7 | 9 |
| Plymouth | 3 | 1 | 4 | 2.2 | 5 | 5 | 0 | 5 | 2.8 | 5 |
| Portsmouth | 7 | 5 | 12 | 5.0 | 11 | 9 | 2 | 11 | 4.6 | 9 |
| Sheffield | 6 | 3 | 9 | 4.9 | 4 | 2 | 2 | 4 | 2.2 | 2 |
| South Thames | 42 | 25 | 67 | 10.0 | 17 | 36 | 15 | 51 | 7.6 | 12 |
| TOTAL | 311 | 102 | 413 | 7.0 | 8 | 314 | 113 | 427 | 7.2 | 8 |

The number of cadaveric heartbeating and living donor paediatric transplants performed by each transplant centre/alliance is shown in **Table 3.7**. The number of living donor paediatric (<18 years) transplants, at 48 in 2004-2005, is the same as last year. However, the number of cadaveric heartbeating donor transplants decreased to 76 from 94 in 2003-2004. This decrease of 22 transplants has not affected the paediatric transplant list, which has remained at around 110 patients for the last two years.

**Table 3.7 Paediatric patient kidney transplants in the UK,
1 April 2003 - 31 March 2005, by transplant centre**

| Paediatric transplant centre | 2003-2004 | | | 2004-2005 | | |
|---------------------------------|-------------|-----------------|------------|-------------|-----------------|------------|
| | HB donor | Living donor | TOTAL | HB donor | Living donor | TOTAL |
| Belfast | 2 | 0 | 2 | 3 | 2 | 5 |
| Birmingham | 1 | 0 | 1 | 14 | 3 | 17 |
| Bristol | 15 | 4 | 19 | 4 | 5 | 9 |
| Glasgow | 5 | 4 | 9 | 4 | 5 | 9 |
| Great Ormond Street | 16 | 15 | 31 | 11 | 14 | 25 |
| Guy's | 6 | 8 | 14 | 3 | 7 | 10 |
| Leeds | 15 | 2 | 17 | 13 | 1 | 14 |
| Manchester | 12 | 4 | 16 | 11 | 4 | 15 |
| Newcastle | 6 | 2 | 8 | 3 | 2 | 5 |
| Nottingham | 9 | 6 | 15 | 7 | 4 | 11 |
| Adult centres | 7 | 3 | 10 | 3 | 1 | 4 |
| TOTAL | 94 | 48 | 142 | 76 | 48 | 124 |

3.5 Demographic characteristics

The ethnicity of heartbeating donors, transplant recipients and patients on the transplant list is shown in **Table 3.8**. The proportion of Asian donors decreased from 1.8% to 1.4% in 2004-2005, but the proportion of Asian transplant recipients rose from 8.1% to 10.1% in 2004-2005. Note that the percentages quoted are based only on data where ethnicity information was available.

**Table 3.8 Ethnicity of heartbeating kidney donors and recipients,
1 April 2003 - 31 March 2005 and transplant list patients at 31 March in the UK**

| Ethnicity | Donors | | | | Transplant recipients | | | | Active transplant list patients | | | |
|--------------|------------|--------|------------|--------|-----------------------|--------|-------------|--------|---------------------------------|--------|-------------|--------|
| | 2003-2004 | | 2004-2005 | | 2003-2004 | | 2004-2005 | | 2004 | | 2005 | |
| | N | (%) | N | (%) | N | (%) | N | (%) | N | (%) | N | (%) |
| White | 644 | (97.0) | 599 | (95.5) | 1096 | (86.5) | 989 | (85.0) | 3917 | (78.0) | 4175 | (77.2) |
| Asian | 12 | (1.8) | 9 | (1.4) | 102 | (8.1) | 118 | (10.1) | 655 | (13.0) | 721 | (13.3) |
| Black | 4 | (0.6) | 6 | (1.0) | 56 | (4.4) | 41 | (3.5) | 341 | (6.8) | 380 | (7.0) |
| Chinese | 0 | (0.0) | 7 | (1.1) | 5 | (0.4) | 4 | (0.3) | 50 | (1.0) | 55 | (1.0) |
| Other | 4 | (0.6) | 6 | (1.0) | 8 | (0.6) | 12 | (1.0) | 57 | (1.1) | 74 | (1.4) |
| Not reported | 0 | - | 0 | - | 2 | - | 1 | - | 54 | - | 20 | - |
| TOTAL | 664 | | 627 | | 1269 | | 1165 | | 5074 | | 5425 | |

Table 3.9 shows the age group and sex of heartbeating kidney donors, transplant recipients and patients waiting for a kidney transplant. There was a greater proportion of male transplant recipients than female, 61% compared with 39%. Over 30% of donors, recipients and patients

on the transplant list were aged 35-49 years. Note that the total number of patients on the transplant list excludes two patients whose sex has not been reported.

Table 3.9 **Age and sex of heartbeating kidney donors and transplant recipients,
1 April 2004 - 31 March 2005, and transplant list patients at 31 March 2005**

| | Age group (years) | | | | | TOTAL | |
|------------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------|---------------|
| | 0-17 | 18-34 | 35-49 | 50-59 | 60+ | | |
| Donors | | | | | | | |
| Male | 27 | 69 | 90 | 73 | 53 | 312 | (50%) |
| Female | 19 | 35 | 109 | 91 | 61 | 315 | (50%) |
| TOTAL | 46 (7%) | 104 (17%) | 199 (32%) | 164 (26%) | 114 (18%) | 627 | (100%) |
| Recipients | | | | | | | |
| Male | 44 | 126 | 254 | 171 | 115 | 710 | (61%) |
| Female | 32 | 74 | 164 | 96 | 89 | 455 | (39%) |
| TOTAL | 76 (7%) | 200 (17%) | 418 (36%) | 267 (23%) | 204 (18%) | 1165 | (100%) |
| Transplant list | | | | | | | |
| Male | 52 | 483 | 1068 | 804 | 696 | 3103 | (57%) |
| Female | 59 | 359 | 851 | 576 | 475 | 2320 | (43%) |
| TOTAL | 111 (2%) | 842 (16%) | 1919 (35%) | 1380 (25%) | 1171 (22%) | 5423 | (100%) |

4 PANCREAS ACTIVITY

4.1 Overview

A summary of activity for cadaveric heartbeating pancreas donor transplants and the transplant list for 1 April 1995 to 31 March 2005 is shown in **Figure 4.1**. The number of patients registered on the active transplant list at 31 March for a pancreas only or simultaneous kidney/pancreas (SPK) transplant has more than tripled over the ten-year period, from 37 patients in 1995 to 132 patients in 2005. The number of pancreas donors and transplants has increased steadily since 1998-1999 from 30 donors, resulting in 24 transplants, to 115 donors and 86 transplants in 2004-2005.

The proportion of pancreata retrieved that cannot be used for transplantation, is greater than in kidney, liver or heart transplantation. However, these pancreata are generally used in islet cell research for the benefit of diabetic patients.

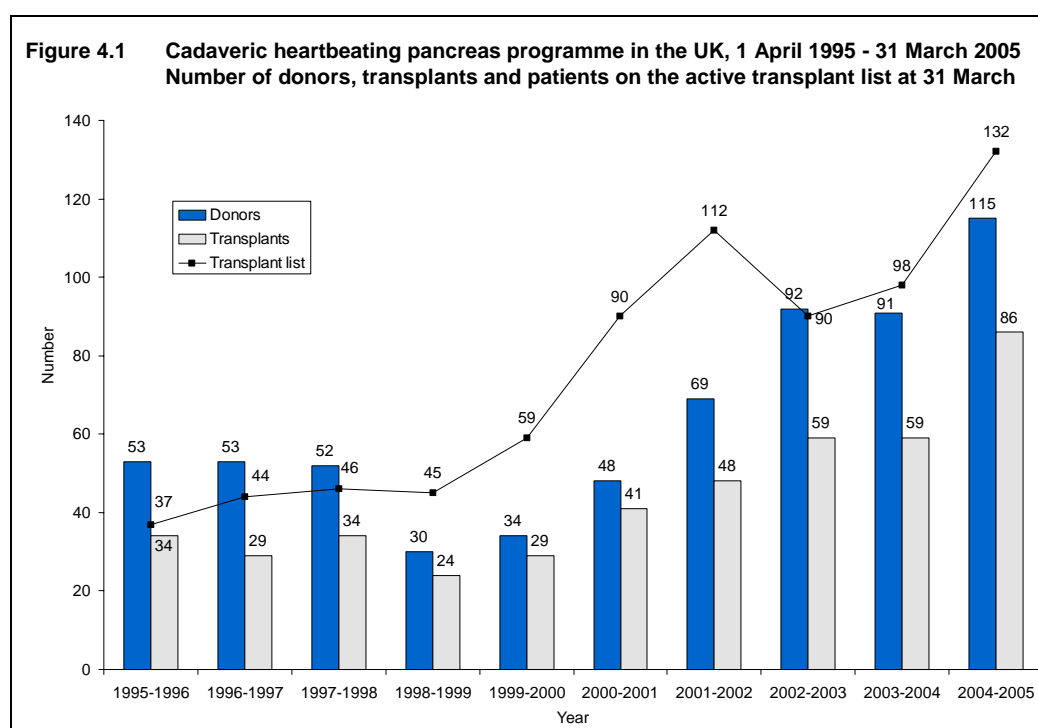


Table 4.1 shows the number of cadaveric heartbeating pancreas donors and the number of pancreas transplants carried out in 2004-2005 at each centre and by type of pancreas transplant. Compared with the previous financial year, the total number of cadaveric heartbeating pancreas donors increased to 115 in 2004-2005 from 91 in 2003-2004 and the number of transplants increased to 86 from 59.

Note that after ceasing to transplant pancreata in 1999, Cardiff recommenced transplanting pancreata in December 2004. On the 1 December 2004, a national pancreas zonal sharing scheme was introduced. Prior to this, hospitals within Northern Ireland, Birmingham, Coventry and the Trent kidney alliance area were not designated to a pancreas transplant centre and have for the purposes of this report been defined as donors from a 'non-designated' area.

Table 4.1 Pancreas donors and transplants, 1 April 2004 - 31 March 2005 (2003-2004) and transplant list at 31 March 2005 (2004) in the UK, by centre

| Centre | Cadaveric heartbeating donors ¹ | | | | | | Cadaveric transplants ² | | | | | | Active transplant list | |
|-----------------------------|--|------|---------------|-----|-------|------|------------------------------------|------|---------------|------|-------|------|------------------------|------|
| | SPK | | Pancreas only | | Total | | SPK | | Pancreas only | | Total | | | |
| Cambridge | 12 | (4) | 1 | (1) | 13 | (5) | 6 | (3) | 0 | (0) | 6 | (3) | 2 | (1) |
| Cardiff | 2 | (0) | 0 | (0) | 2 | (0) | 2 | (0) | 2 | (0) | 4 | (0) | 5 | (0) |
| Edinburgh | 16 | (6) | 0 | (0) | 16 | (6) | 16 | (9) | 0 | (2) | 16 | (11) | 12 | (9) |
| Liverpool | 3 | (5) | 0 | (0) | 3 | (5) | 4 | (5) | 1 | (0) | 5 | (5) | 17 | (17) |
| Manchester | 19 | (11) | 0 | (0) | 19 | (11) | 17 | (6) | 1 | (7) | 18 | (13) | 35 | (34) |
| N Thames (St. Mary's) | 10 | (14) | 1 | (0) | 11 | (14) | 6 | (7) | 2 | (2) | 8 | (9) | 27 | (12) |
| Newcastle | 8 | (7) | 0 | (0) | 8 | (7) | 3 | (3) | 0 | (1) | 3 | (4) | 6 | (3) |
| Oxford | 24 | (18) | 0 | (0) | 24 | (18) | 14 | (5) | 1 | (0) | 15 | (5) | 1 | (2) |
| S Thames (Guy's) | 12 | (11) | 0 | (0) | 12 | (11) | 11 | (9) | 0 | (0) | 11 | (9) | 27 | (20) |
| Non-designated ³ | 7 | (14) | 0 | (0) | 7 | (14) | 0 | (0) | 0 | (0) | 0 | (0) | - | (-) |
| TOTAL | 113 | (90) | 2 | (1) | 115 | (91) | 79 | (47) | 7 | (12) | 86 | (59) | 132 | (98) |

¹ Includes 11 (17) donors aged less than 12 or greater than 45 years in 2004-2005 (2003-2004)

² Includes 7 (10) transplants using organs from donors aged less than 12 or greater than 45 years in 2004-2005 (2003-2004)

³ Includes donors from hospitals in non-designated areas: Northern Ireland, Birmingham, Coventry or the kidney Trent Alliance area

4.2 Transplant list

The number of patients registered on the pancreas transplant list increased by 35% in the year: on 31 March 2005, 132 patients were registered active, compared with 98 at the end of March 2004.

Of the 132 patients on the active transplant list at 31 March 2005, 94 required a SPK transplant (85 at 31 March 2004). Additionally, 38 patients were actively registered for a pancreas only transplant (13 at 31 March 2004).

The outcome of patients registered on the UK pancreas transplant list at 1 April 2004, or subsequently registered during the financial year, is shown in **Table 4.2**. Overall, 34% of patients waiting for a SPK transplant and 4% waiting for a pancreas only transplant had received a transplant by 31 March 2005.

| Table 4.2 Transplant list and new registrations in the UK, 1 April 2004 - 31 March 2005 | | | | | | | |
|--|---|----|--|----|--------------|----|--|
| Outcome of patient at 31 March 2005 | Active and suspended patients at 1 April 2004 | | New registrations in 2004-2005 ¹ | | TOTAL | | |
| Pancreas transplant list | N | % | N | % | N | % | |
| Remained active/suspended | 75 | 91 | 25 | 83 | 100 | 89 | |
| Transplanted | 0 | 0 | 4 | 13 | 4 | 4 | |
| Removed | 6 | 7 | 1 | 3 | 7 | 6 | |
| Died | 1 | 1 | 0 | 0 | 1 | 1 | |
| TOTAL | 82 | | 30 | | 112 | | |
| Kidney/pancreas transplant list | | | | | | | |
| Remained active/suspended | 55 | 45 | 80 | 67 | 135 | 56 | |
| Transplanted | 49 | 41 | 33 | 28 | 82 | 34 | |
| Removed | 12 | 10 | 5 | 4 | 17 | 7 | |
| Died | 5 | 4 | 2 | 2 | 7 | 3 | |
| TOTAL | 121 | | 120 | | 241 | | |

¹ Includes re-registrations for second or subsequent transplants

4.3 Donor and organ supply

In 2004-2005, there were 104 cadaveric heartbeating pancreas donors aged between 12 and 45 years, the age range where donor organs are generally suitable for pancreas transplantation. This represents 35% of all cadaveric heartbeating solid organ donors aged between 12 and 45 years. Of 104 pancreata donated, 79 (76%) resulted in whole organ pancreas transplants. **Table 4.3** shows this activity by transplant centre.

Table 4.3 Pancreas donation and retrieval rates for heartbeating donors (aged 12 to 45 years) in the UK, 1 April 2004 - 31 March 2005, by centre

| Centre | HB donors | HB pancreas donors (% of HB donors) | | Pancreas used (% of retrieved) | |
|-----------------------------|------------|--|-------------|-----------------------------------|-------------|
| Cambridge | 18 | 11 | (61) | 7 | (64) |
| Cardiff | 7 | 2 | (29) | 1 | (50) |
| Edinburgh | 35 | 11 | (31) | 10 | (91) |
| Liverpool | 15 | 3 | (20) | 2 | (67) |
| Manchester | 47 | 18 | (38) | 16 | (89) |
| N Thames (St. Mary's) | 27 | 10 | (37) | 5 | (50) |
| Newcastle | 13 | 6 | (46) | 5 | (83) |
| Oxford | 57 | 24 | (42) | 21 | (88) |
| S Thames (Guy's) | 26 | 12 | (46) | 10 | (83) |
| Non-designated ³ | 51 | 7 | (14) | 2 | (29) |
| TOTAL | 296 | 104¹ | (35) | 79² | (76) |

¹ There were an additional 11 pancreas donors outside of the 12 – 45 age range

² There were an additional 7 pancreata transplanted from donors outside of the 12 – 45 age range

³ Includes donors from hospitals in non-designated areas: Northern Ireland, Birmingham, Coventry or the Kidney Trent Alliance area

4.4 Transplants

There were 86 pancreas transplants in 2004-2005 an increase of 46% on the 59 transplants performed in 2003-2004. Of these 86, 79 (92%) were SPK transplants. The number of transplants performed at each centre is shown in **Table 4.1**.

4.5 Demographic characteristics

The ethnicity of cadaveric heartbeating donors, transplant recipients and patients on the transplant list is shown in **Table 4.4**. Asian patients represented 5.1% and 3% of the active pancreas transplant list at 31 March 2004 and 2005, respectively, and 3.5% of pancreas transplant recipients in 2004-2005. During the last two financial years, there were no Asian pancreas donors.

Table 4.4 Ethnicity of cadaveric heartbeating pancreas donors and recipients, 1 April 2003 - 31 March 2005 and transplant list patients at 31 March in the UK

| Ethnicity | Donors | | | | Transplant recipients | | | | Active transplant list patients | | | |
|--------------|-----------|--------|------------|--------|-----------------------|--------|-----------|--------|---------------------------------|--------|------------|--------|
| | 2003-2004 | | 2004-2005 | | 2003-2004 | | 2004-2005 | | 2004 | | 2005 | |
| | N | (%) | N | (%) | N | (%) | N | (%) | N | (%) | N | (%) |
| White | 88 | (96.7) | 110 | (95.7) | 55 | (93.2) | 81 | (94.2) | 88 | (89.8) | 125 | (94.7) |
| Asian | 0 | (0) | 0 | (0) | 0 | (0) | 3 | (3.5) | 5 | (5.1) | 4 | (3) |
| Black | 2 | (2.2) | 1 | (0.9) | 4 | (6.8) | 1 | (1.2) | 4 | (4.1) | 2 | (1.5) |
| Chinese | 0 | (0) | 2 | (1.7) | 0 | (0) | 0 | (0) | 0 | (0) | 0 | (0) |
| Other | 1 | (1.1) | 2 | (1.7) | 0 | (0) | 1 | (1.2) | 1 | (1) | 1 | (0.8) |
| TOTAL | 91 | | 115 | | 59 | | 86 | | 98 | | 132 | |

Table 4.5 shows the age group and sex of cadaveric heartbeating pancreas donors, transplant recipients and patients waiting for a pancreas transplant. There was a greater proportion of male transplant recipients than female, 62% compared with 38%. There were 11 pancreas donors outside the preferred age range of 12 to 45 years, seven of which resulted in a transplant, and the age group 35-45 years had the highest proportion of pancreas recipients and patients on the transplant list.

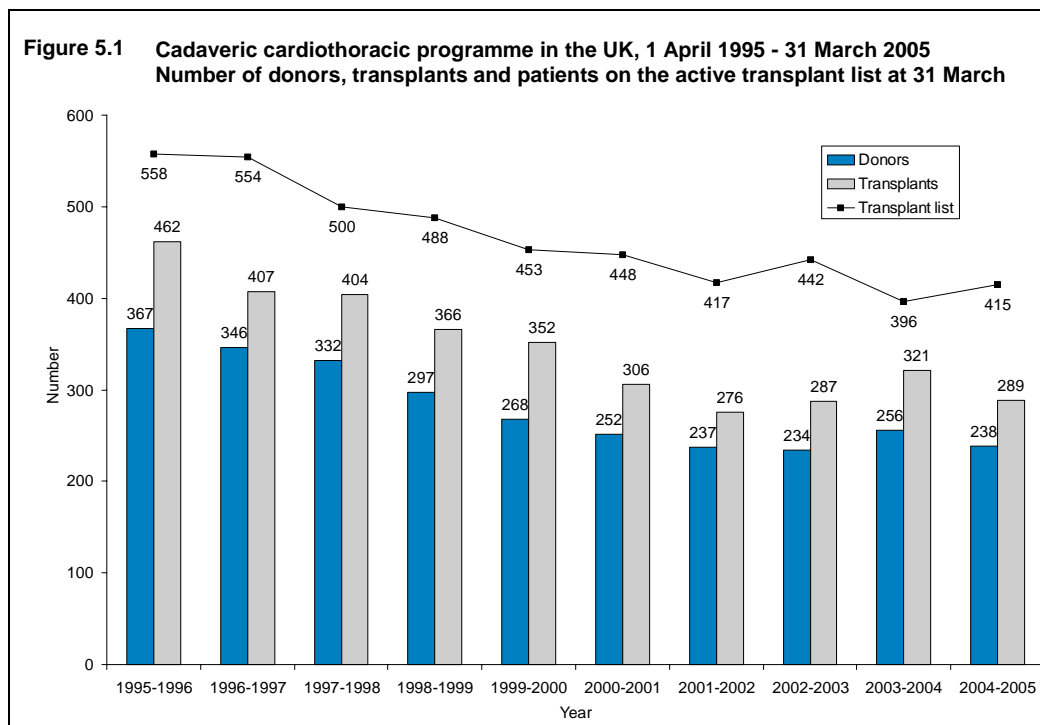
Table 4.5 Cadaveric heartbeating pancreas donors and transplant recipients, 1 April 2004 - 31 March 2005, and transplant list patients at 31 March 2005 by gender and age group

| | Age group (years) | | | | | | | | | | | | | |
|-----------------|-------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-----|------|-------|--------|
| | <12 | | 12-17 | | 18-34 | | 35-45 | | 46-54 | | 55+ | | TOTAL | |
| Donors | | | | | | | | | | | | | | |
| Male | 1 | | 5 | | 27 | | 23 | | 3 | | 0 | | 59 | (51%) |
| Female | 0 | | 6 | | 20 | | 23 | | 7 | | 0 | | 56 | (49%) |
| TOTAL | 1 | (1%) | 11 | (10%) | 47 | (41%) | 46 | (40%) | 10 | (9%) | 0 | (0%) | 115 | (100%) |
| | | | | | | | | | | | | | | |
| Recipients | | | | | | | | | | | | | | |
| Male | 0 | | 1 | | 14 | | 26 | | 12 | | 0 | | 53 | (62%) |
| Female | 0 | | 1 | | 11 | | 16 | | 5 | | 0 | | 33 | (38%) |
| TOTAL | 0 | (0%) | 2 | (2%) | 25 | (29%) | 42 | (49%) | 17 | (20%) | 0 | (0%) | 86 | (100%) |
| | | | | | | | | | | | | | | |
| Transplant list | | | | | | | | | | | | | | |
| Male | 0 | | 0 | | 11 | | 32 | | 18 | | 1 | | 62 | (47%) |
| Female | 0 | | 1 | | 19 | | 36 | | 13 | | 1 | | 70 | (53%) |
| TOTAL | 0 | (0%) | 1 | (1%) | 30 | (23%) | 68 | (52%) | 31 | (23%) | 2 | (2%) | 132 | (100%) |

5 CARDIOTHORACIC ACTIVITY

5.1 Overview

A summary of the cadaveric cardiothoracic activity from 1 April 1995 to 31 March 2005 is shown in **Figure 5.1**. The number of patients registered on the active transplant list at 31 March for a cardiothoracic transplant has decreased by 26% since 1995. In 2004-2005 the number of cadaveric transplants was 289, a 10% decrease from the previous financial year.



5.2 Transplant list

Table 5.1 shows the number of patients on the active and suspended transplant lists at 31 March 2005 by centre. The lung transplant list accounts for 63% of the patients waiting for a cardiothoracic transplant. Overall, Newcastle has the largest cardiothoracic list, with 158 patients waiting (adult and paediatric patients).

The outcome of patients registered at 1 April 2004 and throughout the subsequent year is shown in **Table 5.2**. Of the 832 patients on the transplant list for a cardiothoracic organ in 2004-2005, 427 (51%) were still waiting at the end of the year, 274 (33%) had received a transplant and 131 (16%) had either died or been removed from the transplant list.

Table 5.1 Patients on the cardiothoracic transplant lists at 31 March 2005 (2004) in the UK, by centre

| Centre | Active and suspended transplant lists | | | | | | TOTAL | |
|------------------------|---------------------------------------|-------|------------|------|------|-------|-------|-------|
| | Heart | | Heart/lung | | Lung | | | |
| Birmingham | 7 | (8) | 1 | (4) | 11 | (3) | 19 | (15) |
| Glasgow | 2 | (6) | 0 | (0) | 0 | (0) | 2 | (6) |
| Great Ormond Street | 10 | (11) | 5 | (1) | 0 | (0) | 15 | (12) |
| Harefield | 27 | (18) | 15 | (19) | 66 | (36) | 108 | (73) |
| Manchester | 9 | (4) | 8 | (5) | 49 | (47) | 66 | (56) |
| Newcastle ¹ | 36 | (48) | 6 | (11) | 116 | (139) | 158 | (198) |
| Papworth | 17 | (15) | 15 | (14) | 24 | (15) | 56 | (44) |
| TOTAL | 108 | (110) | 50 | (54) | 266 | (240) | 424 | (404) |

¹ Adult and paediatric patients on transplant list

Table 5.2 Cardiothoracic transplant lists and new registrations in the UK, 1 April 2004 - 31 March 2005

| Outcome of patient at 31 March 2005 | Active and suspended patients at 1 April 2004 | | New registrations in 2004-2005 ¹ | | TOTAL | |
|--|---|----|--|----|------------|----|
| | N | % | N | % | N | % |
| Heart transplant list | | | | | | |
| Remained active/suspended | 54 | 48 | 54 | 28 | 108 | 36 |
| Transplanted | 28 | 25 | 115 | 60 | 143 | 47 |
| Removed | 24 | 21 | 8 | 4 | 32 | 11 |
| Died | 6 | 5 | 15 | 8 | 21 | 7 |
| TOTAL | 112 | | 192 | | 304 | |
| Heart/lung transplant list | | | | | | |
| Remained active/suspended | 31 | 61 | 19 | 58 | 50 | 60 |
| Transplanted ² | 9 | 18 | 11 | 33 | 20 | 24 |
| Removed | 2 | 4 | 1 | 3 | 3 | 4 |
| Died | 9 | 18 | 2 | 6 | 11 | 13 |
| TOTAL | 51 | | 33 | | 84 | |
| Lung transplant list | | | | | | |
| Remained active/suspended | 151 | 66 | 118 | 55 | 269 | 61 |
| Transplanted | 43 | 19 | 68 | 31 | 111 | 25 |
| Removed | 6 | 3 | 2 | 1 | 8 | 2 |
| Died | 28 | 12 | 28 | 13 | 56 | 13 |
| TOTAL | 228 | | 216 | | 444 | |

¹ Includes re-registrations for second or subsequent transplants

² Heart, lung or heart/lung

Table 5.3 Cardiothoracic organ donors in the UK, 1 April 2004 - 31 March 2005 (2003-2004), by retrieval centre

| Retrieval centre | Type of cardiothoracic donor | | | | | | | | TOTAL | |
|--------------------------|------------------------------|-------------------|--------------|-----|--------------|------|-----------------|-------------------|------------------|--------------------|
| | Heart only | | Domino heart | | Heart & lung | | Lung(s) only | | | |
| Birmingham | 19 | (14) | 0 | (0) | 16 | (12) | 20 | (18) | 55 | (44) |
| Glasgow | 8 | (6) | 0 | (0) | 6 | (7) | 4 | (9) | 18 | (22) |
| Great Ormond Street | 0 | (3) | 2 | (0) | 2 | (2) | 0 | (0) | 4 | (5) |
| Harefield | 9 | (14) | 0 | (0) | 12 | (12) | 15 | (16) | 36 | (42) |
| Manchester | 9 | (16) | 0 | (0) | 9 | (9) | 7 | (3) | 25 | (28) |
| Newcastle ¹ | 13 | (14) | 0 | (0) | 14 | (16) | 20 | (10) | 47 | (40) |
| Papworth | 28 | (25) | 0 | (1) | 18 | (24) | 3 | (14) | 49 | (64) |
| Other European countries | 1 | (3) | 0 | (0) | 1 | (1) | 2 | (1) | 4 | (5) |
| TOTAL | 88 ² | (97) ² | 2 | (1) | 78 | (83) | 72 ² | (76) ² | 240 ² | (257) ² |

¹ Newcastle retrieve organs from paediatric donors from other centres

² Includes organs retrieved by other centres

5.3 Donor and organ supply

The number of cardiothoracic organ donors classified by retrieval centre, rather than geographical zone, is summarised in **Table 5.3**. Two of the 72 lung only donors were non-heartbeating donors. Of the 236 cadaveric heartbeating cardiothoracic donors, 37% donated only the heart, 33% heart and lung and 30% lung only. One of the domino hearts was transplanted overseas.

Table 5.4 shows the number of cadaveric heartbeating solid organ donors identified in each cardiothoracic zone, the number that donated cardiothoracic organs and the number of organs retrieved. The numbers in this table reflect the number of organs retrieved from within each zone (by any centre) rather than the number of retrievals made by that centre.

Of the 664 heartbeating solid organ donors, 36% donated cardiothoracic organs. Overall, 85% of the 442 organs retrieved were transplanted: 98% of hearts and 78% of lungs.

| Table 5.4 Cadaveric heartbeating cardiothoracic organ donation and retrieval rates in the UK, 1 April 2004 - 31 March 2005, by donation zone | | | | | | | | |
|--|--------------------------|----------------|-----------------------------------|-------|-------|-------|------------------------|-------|
| Donation zone | Number of donors | | Number of organs retrieved (used) | | | | TOTAL retrieved (used) | |
| | Heartbeating solid organ | Cardiothoracic | Hearts | | Lungs | | | |
| Birmingham | 116 | 52 | 34 | (34) | 63 | (51) | 97 | (85) |
| Glasgow | 59 | 19 | 15 | (15) | 20 | (19) | 35 | (34) |
| Harefield | 111 | 38 | 23 | (23) | 49 | (31) | 72 | (54) |
| Manchester | 109 | 28 | 19 | (18) | 33 | (23) | 52 | (41) |
| Newcastle ¹ | 120 | 47 | 28 | (27) | 61 | (49) | 89 | (76) |
| Papworth | 149 | 52 | 47 | (46) | 50 | (41) | 97 | (87) |
| TOTAL | 664 | 236 | 166 | (163) | 276 | (214) | 442 | (377) |
| ¹ Newcastle transplant adult and paediatric recipients | | | | | | | | |

Cadaveric heartbeating donation rates per million population are shown in **Table 5.5**. The overall cardiothoracic donor rate was 4.0 pmp in 2004-2005 and varied across the donation zones from 2.9 pmp to 5.5 pmp.

Table 5.5 Cadaveric heartbeating cardiothoracic organ donation rates per million population (pmp) in the UK, 1 April 2004 - 31 March 2005, by donation zone

| Donation zone | Heartbeating solid organ donors pmp | Cardiothoracic donors pmp | | |
|---------------|-------------------------------------|---------------------------|------------|------------|
| | | Heart | Lung | Total |
| Birmingham | 12.1 | 3.5 | 3.5 | 5.4 |
| Glasgow | 11.7 | 3.0 | 2.2 | 3.8 |
| Harefield | 8.5 | 1.8 | 2.1 | 2.9 |
| Manchester | 13.8 | 2.4 | 2.3 | 3.5 |
| Newcastle | 14.2 | 3.3 | 3.9 | 5.5 |
| Papworth | 10.0 | 3.2 | 1.7 | 3.5 |
| TOTAL | 11.3 | 2.8 | 2.5 | 4.0 |

5.4 Transplants

Table 5.6 shows cardiothoracic transplant activity for each centre. In 2004-2005, 290 transplants were carried out, a decrease of 10% on 2003-2004. Of these, 53% were cadaveric heart transplants. Newcastle performed two non-heartbeating lung transplants. There were no multi-organ cardiothoracic transplants in 2004-2005, but this table includes one heart and kidney transplant, shown in the 2003-2004 cadaveric heart column.

The overall cardiothoracic transplant rate was 4.9 per million population (pmp) in 2004-2005. However, the heart transplant rate was 2.6 pmp, below the *BTS Standard* of 4 pmp for cardiac transplantation in the UK.

Table 5.6 Cardiothoracic transplants, 1 April 2004 - 31 March 2005 (2003-2004), by centre

| Transplant centre | Transplant type | | | | TOTAL |
|------------------------|------------------|--------------|---------------|-------------------|------------------|
| | Cadaveric heart | Domino heart | Heart/lung | Cadaveric lung(s) | |
| Birmingham | 18 (19) | 0 (0) | 2 (1) | 13 (14) | 33 (34) |
| Glasgow | 9 (11) | 0 (0) | 0 (0) | 0 (0) | 9 (11) |
| Great Ormond Street | 16 (19) | 1 (0) | 5 (2) | 3 (5) | 25 (26) |
| Harefield | 26 (25) | 0 (0) | 1 (0) | 23 (29) | 50 (54) |
| Manchester | 14 (17) | 0 (0) | 0 (0) | 18 (14) | 32 (31) |
| Newcastle ¹ | 25 (32) | 0 (0) | 5 (2) | 42 (49) | 72 (83) |
| Papworth | 46 (42) | 0 (0) | 2 (4) | 21 (36) | 69 (82) |
| TOTAL | 154 (165) | 1 (0) | 15 (9) | 120 (147) | 290 (321) |

¹ Newcastle transplant adult and paediatric recipients

5.5 Demographic characteristics

The ethnicity of cardiothoracic donors, transplant recipients and patients on the transplant list is shown in **Table 5.7**. While 3.3% of donors in 2004-2005 were non-white, 6.6% of the transplant list at 31 March 2005 was non-white.

Table 5.7 Ethnicity of cardiothoracic donors and recipients, 1 April 2003 - 31 March 2005 and transplant list patients at 31 March in the UK

| Ethnicity | Donors | | | | Transplant recipients | | | | Active and suspended transplant list patients | | | |
|--------------|------------|--------|------------|--------|-----------------------|--------|------------|--------|---|--------|------------|--------|
| | 2003-2004 | | 2004-2005 | | 2003-2004 | | 2004-2005 | | 2004 | | 2005 | |
| | N | (%) | N | (%) | N | (%) | N | (%) | N | (%) | N | (%) |
| White | 245 | (95.3) | 232 | (96.7) | 299 | (93.1) | 264 | (91.0) | 372 | (92.1) | 396 | (93.4) |
| Asian | 7 | (2.7) | 0 | (0) | 16 | (5.0) | 17 | (5.9) | 26 | (6.4) | 22 | (5.2) |
| Black | 2 | (0.8) | 2 | (0.8) | 2 | (0.6) | 8 | (2.8) | 5 | (1.2) | 5 | (1.2) |
| Chinese | 0 | (0) | 2 | (0.8) | 0 | (0) | 0 | (0) | 0 | (0) | 0 | (0) |
| Other | 3 | (1.2) | 4 | (1.7) | 4 | (1.2) | 1 | (0.3) | 1 | (0.2) | 1 | (0.2) |
| TOTAL | 257 | | 240 | | 321 | | 290 | | 404 | | 424 | |

Of the 290 cardiothoracic recipients, 68% were male compared with 56% of donors and 54% of the transplant list; see **Table 5.8**. Of the 240 cardiothoracic donors, 39% were in the 35 to 49 years age group.

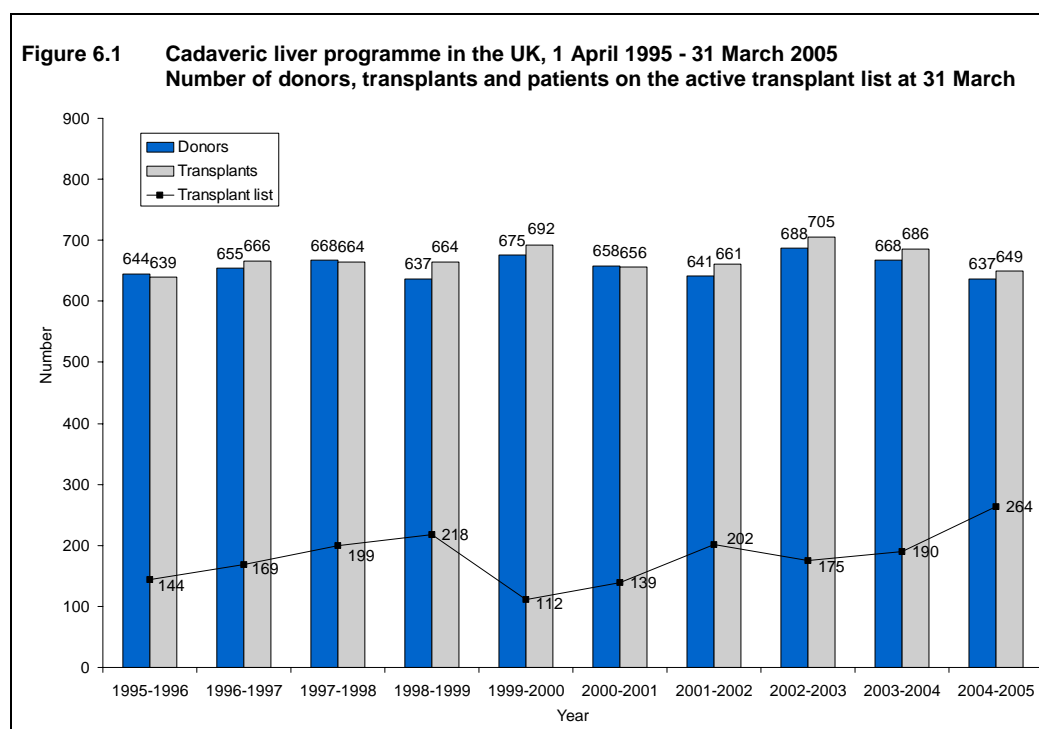
Table 5.8 Age and sex of cardiothoracic donors and transplant recipients, 1 April 2004 - 31 March 2005, and transplant list patients at 31 March 2005

| Age group (years) | | | | | | | | | | | | | |
|------------------------|--|-----------------|--|------------------|--|-----------------|--|------------------|--|-----------------|--|-------------------|--|
| | | 0-17 | | 18-34 | | 35-49 | | 50-59 | | 60+ | | TOTAL | |
| Donors | | | | | | | | | | | | | |
| Male | | 18 | | 44 | | 47 | | 20 | | 5 | | 134 (56%) | |
| Female | | 9 | | 19 | | 46 | | 29 | | 3 | | 106 (44%) | |
| TOTAL | | 27 (11%) | | 63 (26%) | | 93 (39%) | | 49 (20%) | | 8 (3%) | | 240 (100%) | |
| Recipients | | | | | | | | | | | | | |
| Male | | 18 | | 33 | | 45 | | 69 | | 32 | | 197 (68%) | |
| Female | | 11 | | 17 | | 24 | | 30 | | 11 | | 93 (32%) | |
| TOTAL | | 29 (10%) | | 50 (17%) | | 69 (24%) | | 99 (34%) | | 43 (15%) | | 290 (100%) | |
| Transplant list | | | | | | | | | | | | | |
| Male | | 14 | | 46 | | 42 | | 86 | | 40 | | 229 (54%) | |
| Female | | 15 | | 56 | | 43 | | 55 | | 25 | | 195 (46%) | |
| TOTAL | | 29 (7%) | | 102 (24%) | | 85 (20%) | | 141 (33%) | | 65 (15%) | | 424 (100%) | |

6 LIVER ACTIVITY

6.1 Overview

The number of cadaveric liver donors and transplants in the UK has remained relatively constant in the last ten years as shown in **Figure 6.1**. The number of patients actively waiting for a transplant at 31 March increased steadily until 1999, followed by a decrease in 2000. At 31 March 2005, the number on the active transplant list was 39% greater than the previous year.



The number of cadaveric donors, cadaveric and living donor transplants and patients on the active or suspended transplant list, by centre, is shown in **Table 6.1**. In 2004-2005, 637 solid organ donors donated their liver for transplant: 604 heartbeating and 33 non-heartbeating.

Overall, the number of heartbeating donor liver transplants, including 11 liver and small bowel transplants, fell by 6% to 627, but the number of non-heartbeating donor transplants was similar to the number in 2003-2004. Additionally, there were seven living liver lobe donor transplants in NHS Group 1 (four) and Group 2 (three) paediatric recipients, with one Group 1 transplant performed at Birmingham and the remaining transplants performed at King's College.

There were 271 patients, including five patients registered for a liver and small bowel transplant, on the active and suspended transplant list at 31 March 2005, an increase of 35% from 2004.

Table 6.1 Cadaveric and living liver donors and transplants, 1 April 2004 - 31 March 2005 (2003-2004) and transplant list patients at 31 March 2005 (2004) in the UK, by centre

| Retrieval/ transplant centre | Cadaveric donors | | | | | | Cadaveric transplants | | | | | | Living donor transplants | | Active and suspended transplant list | |
|------------------------------------|------------------|---------------------|-----|------|------------------|---------------------|-----------------------|-------|-----|------|-------|-------|-----------------------------|--------------------|--|-------|
| | HB | | NHB | | TOTAL | | HB | | NHB | | TOTAL | | | | | |
| Birmingham | 152 | (175) | 1 | (0) | 153 | (175) | 164 | (166) | 2 | (0) | 166 | (166) | 1 | (0) | 52 | (23) |
| Cambridge | 76 | (74) | 0 | (0) | 76 | (74) | 64 | (76) | 0 | (0) | 64 | (76) | 0 | (0) | 21 | (24) |
| Edinburgh | 53 | (42) | 0 | (0) | 53 | (42) | 52 | (47) | 0 | (0) | 52 | (47) | 0 | (0) | 22 | (24) |
| King’s College | 133 | (162) | 20 | (17) | 153 | (179) | 173 | (185) | 11 | (11) | 184 | (196) | 6 | (10) | 115 | (65) |
| Leeds | 95 | (91) | 8 | (10) | 103 | (101) | 91 | (98) | 6 | (8) | 97 | (106) | 0 | (0) | 24 | (32) |
| Newcastle | 39 | (33) | 4 | (1) | 43 | (34) | 36 | (29) | 3 | (2) | 39 | (31) | 0 | (0) | 16 | (11) |
| The Royal Free | 55 | (61) | 0 | (0) | 55 | (61) | 47 | (64) | 0 | (0) | 47 | (64) | 0 | (0) | 21 | (22) |
| TOTAL | 604 ¹ | (640 ¹) | 33 | (28) | 637 ¹ | (668 ¹) | 627 | (665) | 22 | (21) | 649 | (686) | 7 ² | (10 ³) | 271 | (201) |

¹ Includes donors whose livers were retrieved by other teams

² Includes 4 and 3 living liver lobe transplants in NHS group 1 and group 2 recipients, respectively

³ Includes 3 domino donor and 7 living liver lobe transplants all in NHS group 2 recipients

Note: Birmingham, King's College and Leeds retrieve from paediatric donors and transplant paediatric patients

6.2 Transplant list

The outcome of patients registered at 1 April 2004 and patients registered during the year is shown in **Table 6.2**. Of the 1,088 patients waiting on the list during 2004-2005, 59% were transplanted and 26% were still waiting at 31 March 2005.

Table 6.2 Liver transplant list and new registrations in the UK, 1 April 2004 - 31 March 2005

| Outcome of patient at 31 March 2005 | Active and suspended patients at 1 April 2004 | | New registrations in 2004-2005 ¹ | | TOTAL | |
|--|--|----|--|----|-------------|----|
| | N | % | N | % | N | % |
| Remained active/suspended | 22 | 10 | 266 | 30 | 288 | 26 |
| Transplanted | 145 | 69 | 492 | 56 | 637 | 59 |
| Removed | 27 | 13 | 65 | 7 | 92 | 8 |
| Died | 16 | 8 | 55 | 6 | 71 | 7 |
| TOTAL | 210 | | 878 | | 1088 | |

¹ Includes re-registrations for second or subsequent transplants

6.3 Donor and organ supply

Of 750 solid organ donors, 637 (85%) donated their liver and 591 (93%) of these donated livers were transplanted; see **Table 6.3**. Of livers retrieved from heartbeating and non-heartbeating donors, 94% and 67% were transplanted, respectively.

Table 6.3 Cadaveric liver retrieval rates in the UK, 1 April 2004 - 31 March 2005, by donation zone

| Donation zone | Number of donors | | | | | | Number of livers retrieved (used) | | | | | |
|------------------|------------------|-----------|------------|------------|-----------|------------|-----------------------------------|--------------|-----------|-------------|------------|--------------|
| | Solid organ | | | Liver | | | HB | | | NHB | | |
| | HB | NHB | TOTAL | HB | NHB | TOTAL | HB | | | NHB | | TOTAL |
| Birmingham | 170 | 3 | 173 | 153 | 1 | 154 | 153 | (145) | 1 | (1) | 154 | (146) |
| Cambridge | 86 | 11 | 97 | 79 | 1 | 80 | 79 | (75) | 1 | (1) | 80 | (76) |
| Edinburgh | 59 | 2 | 61 | 54 | 0 | 54 | 54 | (52) | 0 | (0) | 54 | (52) |
| King's College | 148 | 26 | 174 | 134 | 9 | 143 | 134 | (124) | 9 | (6) | 143 | (130) |
| Leeds | 99 | 19 | 118 | 93 | 8 | 101 | 93 | (87) | 8 | (7) | 101 | (94) |
| Newcastle | 41 | 14 | 55 | 38 | 4 | 42 | 38 | (36) | 4 | (4) | 42 | (40) |
| The Royal Free | 61 | 11 | 72 | 53 | 10 | 63 | 53 | (50) | 10 | (3) | 63 | (53) |
| TOTAL | 664 | 86 | 750 | 604 | 33 | 637 | 604 | (569) | 33 | (22) | 637 | (591) |

Table 6.4 shows the cadaveric solid organ and liver donor rates per million population for 2004-2005. Overall, the liver donor rate was 10.8 pmp and ranged from 9.7 to 16.5 pmp across the donation zones.

| Table 6.4 Cadaveric liver donation rates per million population (pmp), 1 April 2004 - 31 March 2005, by donation zone | | |
|---|------------------------------|------------------------|
| Donation zone | Solid organ donor pmp | Liver donor pmp |
| Birmingham | 11.6 | 10.3 |
| Cambridge | 11.8 | 9.8 |
| Edinburgh | 12.1 | 10.7 |
| King's College | 11.8 | 9.7 |
| Leeds | 15.4 | 13.2 |
| Newcastle | 21.7 | 16.5 |
| The Royal Free | 12.3 | 10.8 |
| TOTAL | 12.7 | 10.8 |

6.4 Transplants

The number of whole, split and reduced liver transplants in 2004-2005 is shown in **Table 6.5**. The term "reduced" is used when only one lobe of the liver is transplanted and the term "split" applies when both lobes of the liver are transplanted into two different recipients.

Overall, the number of liver transplants fell by 5% in 2004-2005. There were 649 cadaveric liver transplants performed in 2004-2005: 559 whole liver, including 9 liver and kidney, and 5 liver and small bowel; and 90 cadaveric liver lobe, including 3 liver and kidney, and 6 liver and small bowel. Split liver transplants accounted for 80% of liver lobe transplant activity. The transplant rate overall was 11.0 pmp and varied between centres from 7.8 to 15.4. The *BTS Standard* states that each centre should aim to achieve at least 12 liver transplants pmp per year.

Table 6.5 Cadaveric liver transplants performed in the UK, 1 April 2003 - 31 March 2005

| Transplant centre | 2003-2004 | | | | 2004-2005 | | | |
|--------------------------|------------------|---------------|-------------|--------------------|------------------|---------------|-------------|--------------------|
| | Whole liver | Reduced liver | Split liver | TOTAL (pmp) | Whole liver | Reduced liver | Split liver | TOTAL (pmp) |
| Birmingham | 139 | 10 | 17 | 166 (11.1) | 132 | 7 | 27 | 166 (11.1) |
| Cambridge | 73 | 0 | 3 | 76 (9.3) | 63 | 0 | 1 | 64 (7.8) |
| Edinburgh | 46 | 1 | 0 | 47 (9.3) | 50 | 0 | 2 | 52 (10.3) |
| King's College | 157 | 14 | 25 | 196 (13.3) | 142 | 7 | 35 | 184 (12.5) |
| Leeds | 100 | 1 | 5 | 106 (13.8) | 86 | 4 | 7 | 97 (12.7) |
| Newcastle | 31 | 0 | 0 | 31 (12.2) | 39 | 0 | 0 | 39 (15.4) |
| The Royal Free | 64 | 0 | 0 | 64 (10.9) | 47 | 0 | 0 | 47 (8.0) |
| TOTAL | 610 | 26 | 50 | 686 (11.6) | 559 | 18 | 72 | 649 (11.0) |

Note: Birmingham, King's College and Leeds transplant paediatric patients

6.5 Demographic characteristics

The ethnicity of liver donors, transplant recipients and transplant list patients is shown in **Table 6.6**. In 2004-2005, the proportion of Asian patients waiting on the transplant list was much greater than that of donors, 6.6% compared with 1.4%, respectively.

Table 6.6 Ethnicity of liver donors and recipients, 1 April 2003 - 31 March 2005 and transplant list patients at 31 March in the UK

| Ethnicity | Donors | | | | Transplant recipients | | | | Active and suspended transplant list patients | | | |
|--------------|------------|--------|------------|--------|-----------------------|--------|------------|--------|---|--------|------------|--------|
| | 2003-2004 | | 2004-2005 | | 2003-2004 | | 2004-2005 | | 2004 | | 2005 | |
| | N | (%) | N | (%) | N | (%) | N | (%) | N | (%) | N | (%) |
| White | 651 | (96.0) | 614 | (95.3) | 567 | (81.5) | 557 | (84.9) | 168 | (83.6) | 231 | (85.2) |
| Asian | 10 | (1.5) | 9 | (1.4) | 92 | (13.2) | 65 | (9.9) | 15 | (7.5) | 18 | (6.6) |
| Black | 6 | (0.9) | 5 | (0.8) | 15 | (2.2) | 15 | (2.3) | 4 | (2.0) | 6 | (2.2) |
| Chinese | 1 | (0.1) | 7 | (1.1) | 8 | (1.1) | 1 | (0.2) | 0 | (0.0) | 0 | (0.0) |
| Other | 10 | (1.5) | 9 | (1.4) | 14 | (2.0) | 18 | (2.7) | 14 | (7.0) | 16 | (5.9) |
| TOTAL | 678 | | 644 | | 696 | | 656 | | 201 | | 271 | |

The age and sex distribution of donors and recipients in 2004-2005, and patients on the transplant list at 31 March 2005, are shown in **Table 6.7**. The 35-49 year age group had the largest proportion of donors (31%), and the 50-59 year age group had the largest proportion of patients transplanted (29%) and patients on the transplant list (34%). Note that the total number of donors excludes one living liver donor whose age and sex were not reported.

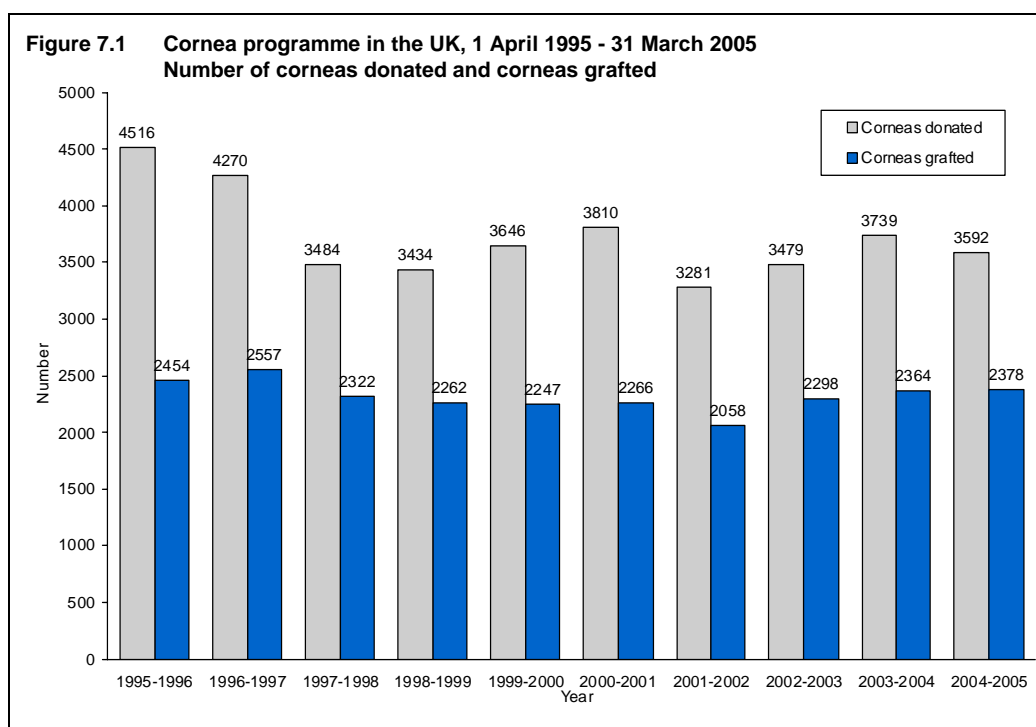
Table 6.7 Liver donors and transplant recipients, 1 April 2004 - 31 March 2005, and transplant list patients at 31 March 2005, by sex and age group

| | Age group (years) | | | | | TOTAL | |
|------------------------|-------------------|------------------|------------------|------------------|------------------|------------|---------------|
| | 0-17 | 18-34 | 35-49 | 50-59 | 60+ | | |
| Donors | | | | | | | |
| Male | 35 | 81 | 94 | 63 | 55 | 328 | (51%) |
| Female | 24 | 37 | 108 | 88 | 58 | 315 | (49%) |
| TOTAL | 59 (9%) | 118 (18%) | 202 (31%) | 151 (23%) | 113 (18%) | 643 | (100%) |
| Recipients | | | | | | | |
| Male | 45 | 33 | 98 | 118 | 65 | 359 | (55%) |
| Female | 62 | 36 | 74 | 69 | 56 | 297 | (45%) |
| TOTAL | 107 (16%) | 69 (11%) | 172 (26%) | 187 (29%) | 121 (18%) | 656 | (100%) |
| Transplant list | | | | | | | |
| Male | 8 | 15 | 47 | 64 | 31 | 165 | (61%) |
| Female | 19 | 12 | 24 | 29 | 22 | 106 | (39%) |
| TOTAL | 27 (10%) | 27 (10%) | 71 (26%) | 93 (34%) | 53 (20%) | 271 | (100%) |

7 CORNEA ACTIVITY

7.1 Overview

The number of corneas donated decreased in 2004-2005 by 4%, however the number of corneas grafted increased by 1%, as shown in **Figure 7.1**. Additionally, 224 sclera were issued and used.



In 2004-2005 there were 1,783 cornea donors, of whom 1,591 donated corneas only and 192 donated corneas and solid organs; see **Table 7.1**. Compared with 2003-2004, the number of cornea only donors decreased by 56 (3%) and the number of cornea and solid organ donors decreased by 36 (16%). In 2003-2004, corneas were retrieved from 30% of cadaveric heartbeating solid organ donors; this fell to 26% in 2004-2005. Of the 86 non-heartbeating solid organ donors in 2004-2005, 24 also donated corneas, 28% compared with 40% in 2003-2004.

Table 7.1 also shows the number and rate per million population (pmp) of donors in 2004-2005 by country and English Strategic Health Authority (StHA), with figures for 2003-2004 in parentheses. In both financial years, Wales had the highest cornea donor rate in the UK: 50 pmp in 2003-2004 and 41 pmp in 2004-2005. In 2004-2005, the cornea donor rate increased in Scotland, but fell in England, Wales and Northern Ireland. Across the StHAs the cornea donor rate ranged from 5.4 pmp to 78.7 pmp.

Table 7.1 Cornea donation rates per million population (pmp) in the UK, 1 April 2004 - 31 March 2005 (2003-2004), by country and English Strategic Health Authority

| Country/Strategic Health Authority | Cornea only | | Solid organ and cornea | | TOTAL | | TOTAL pmp | |
|--|-------------|---------------|------------------------|--------------|-------------|---------------|-------------|---------------|
| Avon, Gloucestershire and Wiltshire | 121 | (107) | 11 | (21) | 132 | (128) | 61.1 | (59.2) |
| Bedfordshire and Hertfordshire | 14 | (14) | 5 | (3) | 19 | (17) | 11.9 | (10.6) |
| Birmingham and The Black Country | 23 | (19) | 2 | (8) | 25 | (27) | 11.1 | (12.0) |
| Cheshire and Merseyside | 59 | (68) | 7 | (10) | 66 | (78) | 28.2 | (33.3) |
| County Durham and Tees Valley | 64 | (70) | 2 | (2) | 66 | (72) | 58.3 | (63.6) |
| Coventry, Warwickshire, Hereford and Worcs | 31 | (28) | 1 | (4) | 32 | (32) | 21.0 | (21.0) |
| Cumbria and Lancashire | 68 | (44) | 7 | (12) | 75 | (56) | 39.4 | (29.4) |
| Essex | 37 | (24) | 5 | (3) | 42 | (27) | 26.0 | (16.7) |
| Greater Manchester | 70 | (79) | 7 | (7) | 77 | (86) | 30.6 | (34.2) |
| Hampshire and Isle of Wight | 69 | (73) | 5 | (4) | 74 | (77) | 41.7 | (43.4) |
| Kent and Medway | 116 | (142) | 1 | (5) | 117 | (147) | 74.1 | (93.1) |
| Leicestershire, Northamptonshire and Rutland | 29 | (16) | 4 | (1) | 33 | (17) | 21.2 | (10.9) |
| Norfolk, Suffolk and Cambridgeshire | 156 | (176) | 9 | (13) | 165 | (189) | 75.9 | (86.9) |
| North and East Yorkshire and Northern Lincs | 26 | (29) | 4 | (6) | 30 | (35) | 18.5 | (21.6) |
| North Central London | 46 | (38) | 4 | (7) | 50 | (45) | 42.4 | (38.2) |
| North East London | 4 | (3) | 4 | (9) | 8 | (12) | 5.4 | (8.0) |
| North West London | 8 | (12) | 10 | (7) | 18 | (19) | 10.4 | (11.0) |
| Northumberland, Tyne and Wear | 51 | (76) | 6 | (10) | 57 | (86) | 41.2 | (62.2) |
| Shropshire and Staffordshire | 38 | (27) | 2 | (4) | 40 | (31) | 26.9 | (20.8) |
| Somerset and Dorset | 46 | (42) | 4 | (5) | 50 | (47) | 42.0 | (39.5) |
| South East London | 26 | (11) | 5 | (9) | 31 | (20) | 20.8 | (13.4) |
| South West London | 10 | (7) | 5 | (5) | 15 | (12) | 11.7 | (9.4) |
| South West Peninsula | 116 | (113) | 8 | (6) | 124 | (119) | 78.7 | (75.5) |
| South Yorkshire | 11 | (20) | 2 | (2) | 13 | (22) | 10.3 | (17.4) |
| Surrey and Sussex | 87 | (86) | 8 | (8) | 95 | (94) | 37.2 | (36.8) |
| Thames Valley | 33 | (41) | 6 | (6) | 39 | (47) | 18.7 | (22.5) |
| Trent | 33 | (62) | 6 | (9) | 39 | (71) | 15.1 | (27.4) |
| West Yorkshire | 37 | (39) | 8 | (12) | 45 | (51) | 21.6 | (24.5) |
| England | 1429 | (1466) | 148 | (198) | 1577 | (1664) | 32.1 | (33.9) |
| Isle of Man | 0 | (0) | 0 | (0) | 0 | (0) | 0.0 | (0.0) |
| Channel Islands | 0 | (1) | 0 | (0) | 0 | (1) | 0.0 | (7.1) |
| Wales | 99 | (134) | 19 | (10) | 118 | (144) | 40.7 | (49.7) |
| Scotland | 61 | (35) | 19 | (11) | 80 | (46) | 15.8 | (9.1) |
| Northern Ireland | 2 | (11) | 6 | (9) | 8 | (20) | 4.7 | (11.8) |
| TOTAL | 1591 | (1647) | 192 | (228) | 1783 | (1875) | 30.2 | (31.8) |

7.2 Donor and tissue supply

In 2004-2005, 98% (98% in 2003-2004) of retrieved corneas reported to the National Transplant Database were supplied to the Cornea Transplant Service (CTS) Eye Banks in Bristol and Manchester. **Table 7.2** shows the number of corneas supplied to and taken from the CTS Eye Banks for those centres that supplied more than 30 corneas in 2004-2005. The difference between the number supplied and number taken is also shown, together with the number of corneas that were deemed suitable for a penetrating keratoplasty (PKP) graft, that is where donor

and tissue selection criteria were met. Centres with a negative balance have taken more corneas than they supplied to the CTS Eye Banks. Of the 3,531 corneas supplied to the CTS Eye Banks, 2,497 (71%) were suitable for a PKP graft. This was an increase compared with 2003-2004, when 68% of corneas supplied to the CTS Eye Banks were suitable for a PKP graft.

Table 7.2 Corneas supplied to and taken from the CTS eye banks, 1 April 2004 - 31 March 2005

| Centre | Corneas supplied | Suitable for PKP (%) | Corneas taken | Balance |
|---|------------------|----------------------|---------------|-------------|
| East Grinstead, Queen Victoria Hospital | 393 | 260 (66) | 74 | 319 |
| London, Moorfields Eye Hospital | 244 | 177 (73) | 229 | 15 |
| Norwich, West Norwich Hospital | 213 | 180 (85) | 22 | 191 |
| Bristol, Eye Hospital | 168 | 114 (68) | 53 | 115 |
| Exeter, Royal Devon & Exeter Hospital | 110 | 62 (56) | 4 | 106 |
| Newport, Royal Gwent Hospital | 94 | 53 (56) | 7 | 87 |
| Middlesbrough, South Cleveland Hospital | 92 | 66 (72) | 10 | 82 |
| Royal Liverpool University Hospital | 84 | 46 (55) | 48 | 36 |
| Newcastle, Royal Victoria Infirmary | 80 | 60 (75) | 31 | 49 |
| Leeds, General Infirmary | 68 | 49 (72) | 81 | -13 |
| Plymouth, Royal Eye Infirmary | 68 | 39 (57) | 23 | 45 |
| Bolton, Royal Bolton Hospital | 67 | 47 (70) | 14 | 53 |
| Stoke, North Staffordshire Royal Infirmary | 62 | 40 (65) | 4 | 58 |
| Manchester, Royal Eye Hospital | 58 | 41 (71) | 86 | -28 |
| Preston, Royal Preston Hospital | 56 | 41 (73) | 0 | 56 |
| Peterborough, District Hospital | 52 | 33 (63) | 0 | 52 |
| Southend Hospital | 46 | 22 (48) | 22 | 24 |
| Yeovil District Hospital | 44 | 42 (95) | 0 | 44 |
| Edinburgh, Royal Infirmary | 44 | 36 (82) | 11 | 33 |
| Nottingham, University Hospital | 40 | 28 (70) | 71 | -31 |
| Southampton, University Hospitals | 40 | 30 (75) | 18 | 22 |
| Reading, Royal Berkshire Hospital | 37 | 20 (54) | 33 | 4 |
| Sunderland, Eye Infirmary | 36 | 31 (86) | 39 | -3 |
| Carlisle, Cumberland Infirmary | 32 | 26 (81) | 7 | 25 |
| Portsmouth, Queen Alexandra Hospital | 32 | 22 (69) | 9 | 23 |
| Cheltenham, General Hospital | 32 | 22 (69) | 31 | 1 |
| Birmingham & Midland Eye Centre | 30 | 17 (57) | 84 | -54 |
| Cardiff, University of Wales Hospital | 30 | 17 (57) | 0 | 30 |
| Ipswich Hospital | 28 | 20 (71) | 21 | 7 |
| Truro, Royal Cornwall Hospital (Treliske) | 28 | 20 (71) | 13 | 15 |
| Centres supplying more than 30 corneas | 2408 | 1661 (69) | 1045 | 1363 |
| All other centres | 1123 | 836 (74) | 1321 | -198 |
| TOTAL | 3531 | 2497 (71) | 2366 | 1165 |

Note: PKP - Penetrating keratoplasty

7.3 CTS Eye Bank activity

The activity levels for the Bristol and Manchester Eye Banks are shown in **Table 7.3**. Both the numbers of corneas received and issued by the CTS Eye Banks decreased in 2004-2005, by 4% and 1%, respectively. In 2004-2005, 3,531 corneas were received into the Eye Banks, of which

2,551 (72%) were subsequently issued for grafting. The balance equates to corneas unsuitable for transplantation.

Table 7.3 Corneas received into the Bristol and Manchester eye banks, 1 April 2004 - 31 March 2005 (2003-2004), by year

| | Total received | | Number issued ¹ | | % issued | | Balance ² | |
|--------------|----------------|---------------|----------------------------|---------------|-----------|-------------|----------------------|---------------|
| Bristol | 1866 | (2136) | 1291 | (1444) | 69 | (68) | 575 | (692) |
| Manchester | 1665 | (1537) | 1260 | (1128) | 76 | (73) | 405 | (409) |
| TOTAL | 3531 | (3673) | 2551 | (2572) | 72 | (70) | 980 | (1101) |

¹ Number issued of those received in each year

² Corneas unsuitable for transplantation

The outcome of the corneas received into the CTS Eye Banks is given in **Table 7.4**. Of the corneas supplied to the Eye Banks in 2004-2005, 65% were used for a penetrating graft, 1% were used for lamellar grafts and 6% were issued but not used. Of the corneas supplied to the Eye Banks, 11% were unsuitable for transplant because of medical contraindications, 10% had endothelial deficiencies or stromal opacity and 5% were discarded because of bacterial or fungal contamination. Less than 1% of corneas became outdated, that is, they exceeded 28 days storage. Corneas that were unsuitable for transplantation were, where possible, used for research where permission had been given by the relatives.

7.4 Transplants

Transplant activity by country of residence and Strategic Health Authority in England for the years 2003-2004 and 2004-2005 is detailed in **Table 7.5**. The overall transplant rate was 40.1 pmp in 2003-2004; this increased to 40.3 pmp in 2004-2005. The transplant rates increased in each of Wales, Scotland and Northern Ireland. Of the four countries, England had the highest transplant rate in the UK: 41.3 pmp and this ranged from 26 pmp to 65.8 pmp across the StHAs.

Table 7.4 Outcome of corneas received into the Bristol and Manchester eye banks, 1 April 2004 - 31 March 2005 (2003-2004), by year

| Outcome of cornea | Bristol | | | | Manchester | | | | TOTAL | | | |
|--|-------------|---------------|-----------|-------------|-------------|---------------|-----------|-------------|-------------|---------------|-----------|-------------|
| | N | | % | | N | | % | | N | | % | |
| Used | | | | | | | | | | | | |
| Penetrating keratoplasty | 1158 | (1285) | 62 | (60) | 1144 | (1034) | 69 | (67) | 2302 | (2319) | 65 | (63) |
| Lamellar keratoplasty | 24 | (40) | 1 | (2) | 18 | (15) | 1 | (1) | 42 | (55) | 1 | (1) |
| Lathed lamellar lenticule | 0 | (0) | 0 | (0) | 1 | (0) | < 1 | (0) | 1 | (0) | 1 | (0) |
| Other/not reported | 1 | (8) | < 1 | (< 1) | 3 | (5) | < 1 | (< 1) | 4 | (13) | < 1 | (< 1) |
| Total used | 1183 | (1333) | 63 | (62) | 1166 | (1054) | 70 | (69) | 2349 | (2387) | 67 | (65) |
| Not used | | | | | | | | | | | | |
| Issued, not used | 108 | (111) | 6 | (5) | 94 | (74) | 6 | (5) | 202 | (185) | 6 | (5) |
| Unsuitable - endothelium, stromal opacity, other | 214 | (337) | 11 | (16) | 156 | (190) | 9 | (12) | 370 | (527) | 10 | (14) |
| Medical reason - virology | 154 | (181) | 8 | (8) | 60 | (79) | 4 | (5) | 214 | (260) | 6 | (7) |
| Medical reason - other | 108 | (76) | 6 | (4) | 58 | (40) | 3 | (3) | 166 | (116) | 5 | (3) |
| Contaminated | 96 | (93) | 5 | (4) | 97 | (88) | 6 | (6) | 193 | (181) | 5 | (5) |
| Other/not reported | 3 | (5) | < 1 | (< 1) | 34 | (12) | 2 | (< 1) | 37 | (17) | 1 | (< 1) |
| Total not used | 683 | (803) | 37 | (38) | 499 | (483) | 30 | (31) | 1182 | (1286) | 33 | (35) |
| TOTAL | 1866 | (2136) | | | 1665 | (1537) | | | 3531 | (3673) | | |

Table 7.5 Cornea transplants performed per million population (pmp) in the UK, 1 April 2003 - 31 March 2005, by country of residence and English Strategic Health Authority

| Country of residence/Strategic Health Authority | Number of transplants (pmp) | | | |
|--|-----------------------------|---------------|-------------|---------------|
| | 2003-2004 | | 2004-2005 | |
| Avon, Gloucestershire and Wiltshire | 84 | (38.9) | 84 | (38.9) |
| Bedfordshire and Hertfordshire | 72 | (45.0) | 64 | (40.0) |
| Birmingham and The Black Country | 103 | (45.7) | 104 | (46.1) |
| Cheshire and Merseyside | 104 | (44.4) | 83 | (35.4) |
| County Durham and Tees Valley | 33 | (29.2) | 43 | (38.0) |
| Coventry, Warwickshire, Herefordshire and Worcestershire | 70 | (45.9) | 49 | (32.2) |
| Cumbria and Lancashire | 71 | (37.3) | 110 | (57.8) |
| Essex | 46 | (28.5) | 42 | (26.0) |
| Greater Manchester | 67 | (26.6) | 74 | (29.4) |
| Hampshire and Isle of Wight | 111 | (62.5) | 88 | (49.5) |
| Kent and Medway | 39 | (24.7) | 52 | (32.9) |
| Leicestershire, Northamptonshire and Rutland | 62 | (39.9) | 55 | (35.4) |
| Norfolk, Suffolk and Cambridgeshire | 75 | (34.5) | 87 | (40.0) |
| North and East Yorkshire and Northern Lincolnshire | 85 | (52.5) | 96 | (59.3) |
| North Central London | 95 | (80.6) | 68 | (57.7) |
| North East London | 40 | (26.8) | 39 | (26.1) |
| North West London | 55 | (31.8) | 46 | (26.6) |
| Northumberland, Tyne and Wear | 74 | (53.5) | 91 | (65.8) |
| Shropshire and Staffordshire | 58 | (39.0) | 43 | (28.9) |
| Somerset and Dorset | 69 | (57.9) | 39 | (32.7) |
| South East London | 42 | (28.2) | 55 | (37.0) |
| South West London | 50 | (39.1) | 54 | (42.2) |
| South West Peninsula | 55 | (34.9) | 62 | (39.3) |
| South Yorkshire | 60 | (47.4) | 47 | (37.1) |
| Surrey and Sussex | 93 | (36.4) | 104 | (40.7) |
| Thames Valley | 104 | (49.7) | 115 | (55.0) |
| Trent | 92 | (35.6) | 106 | (41.0) |
| West Yorkshire | 138 | (66.4) | 131 | (63.0) |
| England | 2047 | (41.7) | 2031 | (41.3) |
| Isle of Man | 5 | (71.4) | 1 | (14.3) |
| Channel Islands | 7 | (50.0) | 7 | (50.0) |
| Wales | 96 | (33.1) | 99 | (34.1) |
| Scotland | 137 | (27.1) | 155 | (30.6) |
| Northern Ireland | 40 | (23.7) | 53 | (31.4) |
| TOTAL ¹ | 2364 | (40.1) | 2379 | (40.3) |

¹ Includes UK recipients where the postcode was unspecified and non-UK recipients

8 TRANSPLANT SURVIVAL

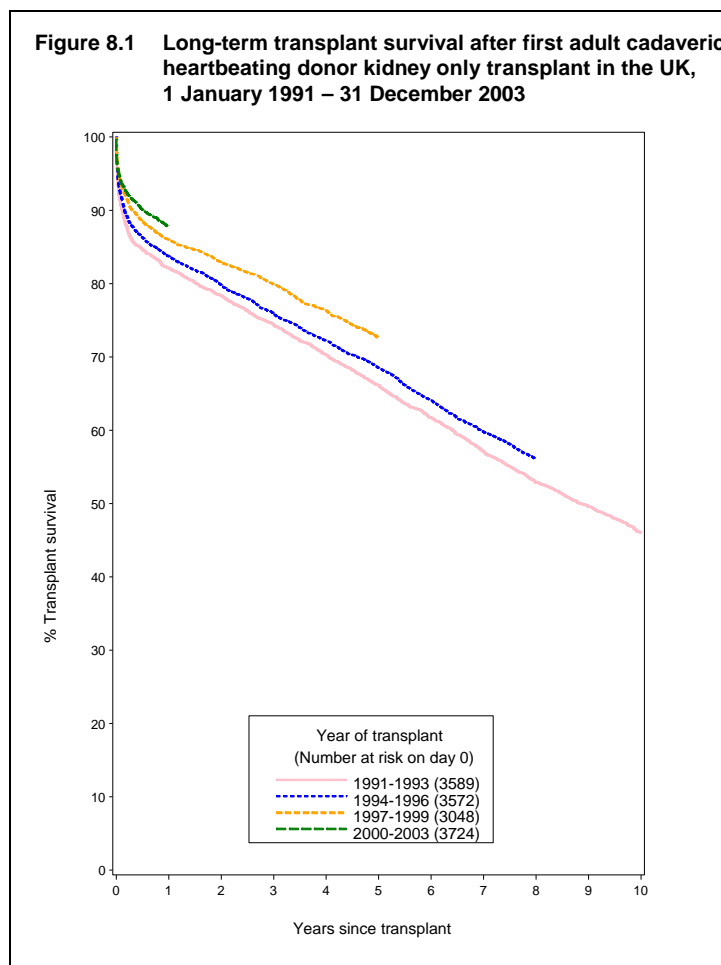
This chapter shows transplant survival estimates for solid organ and cornea transplants performed in the UK, by organ type and, where appropriate, by calendar year group. Separate estimates are presented for adult and paediatric patients, using organ specific age definitions where the data were available.

In all cases, the Kaplan-Meier estimate of the survivor function was used and groups were compared using the log-rank test. The analyses do not take account of risk factors, which may change over time. For transplant survival, the outcome event is the earlier of graft failure or death of the recipient and thus recipient death with a functioning graft is treated as transplant failure.

8.1 Kidney transplant survival

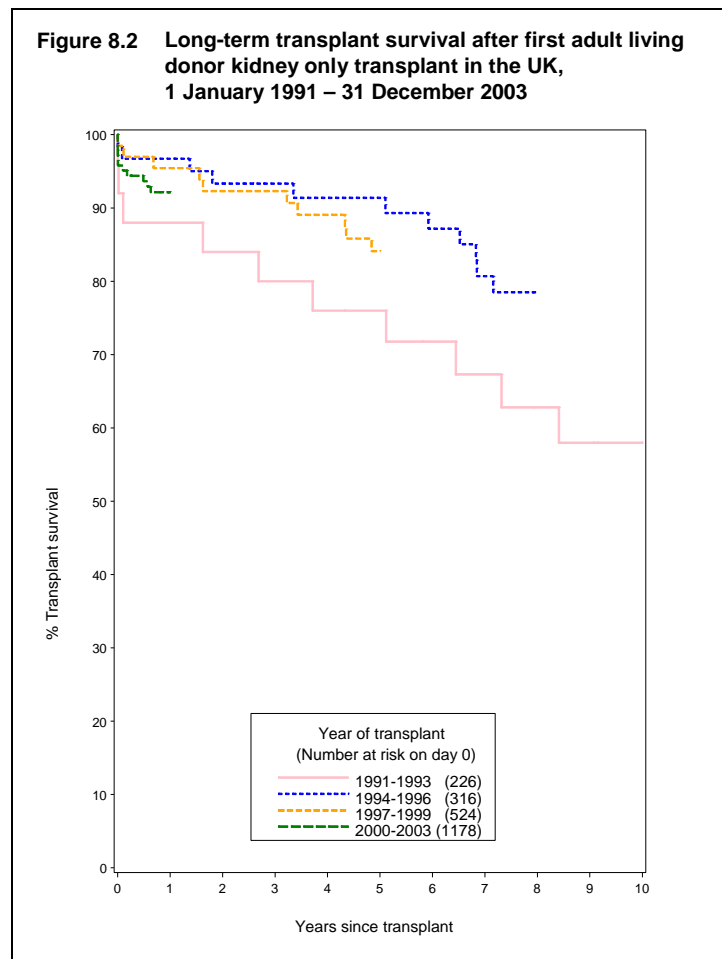
8.1.1 Adult recipients

Figure 8.1 shows long-term transplant survival in adult (≥ 18 years) recipients for first cadaveric heartbeating donor kidney only transplants in the UK. **Table 8.1** shows the survival estimates and confidence intervals for one, two, five and ten years post-transplant. There has been a significant improvement in one, two and five year survival over the year groups, with $p < 0.0001$ in each case.



| Table 8.1 Long-term transplant survival after first adult cadaveric heartbeating donor kidney only transplant in the UK, 1 January 1991 - 31 December 2003 | | | | | | |
|---|----------------------|---|------------|------------|------------|--|
| Year of transplant | No. at risk on day 0 | % Transplant survival (95% confidence interval) | | | | |
| | | One year | Two year | Five year | Ten year | |
| 1991-1993 | 3589 | 82 (81-83) | 78 (77-80) | 66 (65-68) | 46 (44-48) | |
| 1994-1996 | 3572 | 84 (82-85) | 80 (78-81) | 68 (67-70) | | |
| 1997-1999 | 3048 | 86 (85-87) | 83 (81-84) | 73 (71-74) | | |
| 2000-2003 | 3724 | 88 (87-89) | | | | |

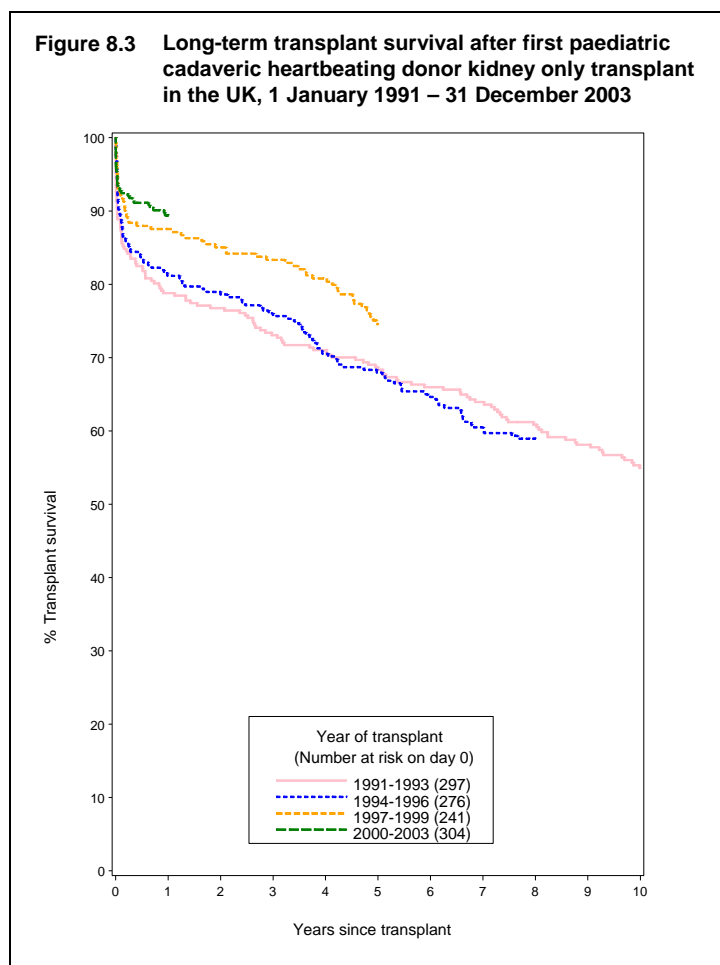
Long-term transplant survival in adult recipients for living donor kidney transplants in the UK is shown in **Figure 8.2**. **Table 8.2** shows transplant survival estimates and confidence intervals for each year group. There has been a significant improvement in two and five year survival over the year groups, $p < 0.005$ and $p < 0.02$, respectively.



| Table 8.2 Long-term transplant survival after first adult living donor kidney transplant in the UK, 1 January 1991 - 31 December 2003 | | | | | |
|--|-----------------------------|--|-----------------|------------------|-----------------|
| Year of transplant | No. at risk on day 0 | % Transplant survival (95% confidence interval) | | | |
| | | One year | Two year | Five year | Ten year |
| 1991-1993 | 226 | 89 (85-93) | 87 (81-90) | 77 (70-82) | 60 (53-66) |
| 1994-1996 | 316 | 93 (90-95) | 90 (86-93) | 80 (75-84) | |
| 1997-1999 | 524 | 94 (92-96) | 94 (91-95) | 85 (81-87) | |
| 2000-2003 | 1178 | 94 (92-95) | | | |

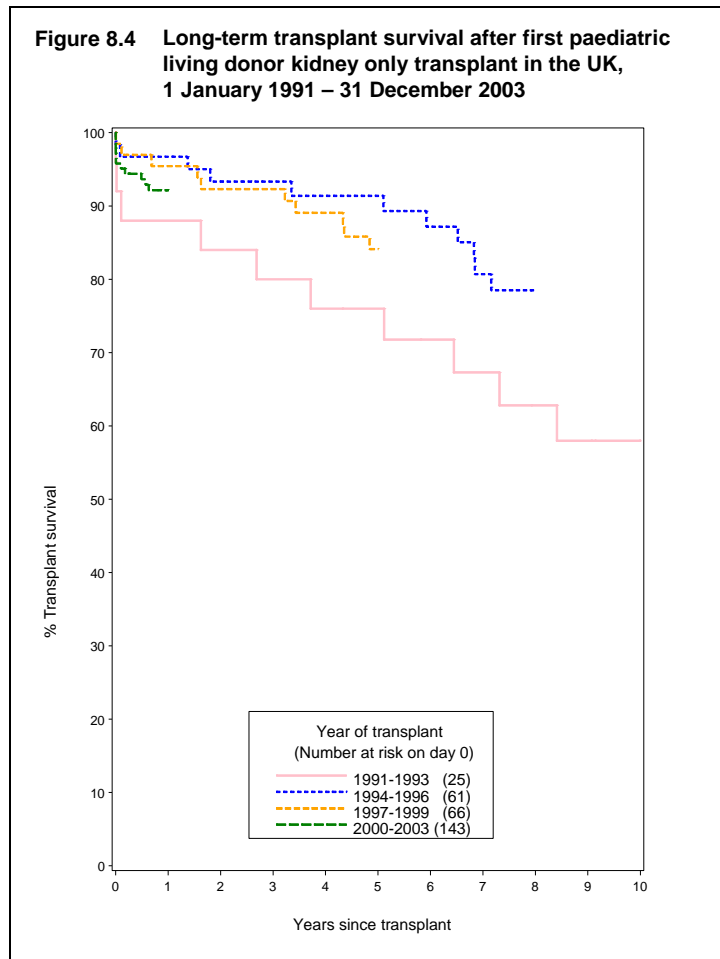
8.1.2 Paediatric recipients

Figure 8.3 shows long-term transplant survival in paediatric (<18 years) recipients for first cadaveric heartbeating donor kidney only transplants in the UK. Transplant survival estimates and confidence intervals are shown for each year group in **Table 8.3**. There has been a significant improvement in one and two year survival over the year groups, $p=0.001$ and $p<0.05$, respectively. Five year survival estimates do not differ significantly, ($p>0.1$).



| Table 8.3 Long-term transplant survival after first paediatric cadaveric heartbeating donor kidney only transplant in the UK, 1 January 1991 - 31 December 2003 | | | | | | |
|--|-----------------------------|--|-----------------|------------------|-----------------|--|
| Year of transplant | No. at risk on day 0 | % Transplant survival (95% confidence interval) | | | | |
| | | One year | Two year | Five year | Ten year | |
| 1991-1993 | 297 | 79 (74-83) | 77 (72-81) | 69 (63-74) | 55 (49-60) | |
| 1994-1996 | 276 | 81 (76-85) | 79 (73-83) | 68 (62-73) | | |
| 1997-1999 | 241 | 88 (83-91) | 85 (80-89) | 75 (68-80) | | |
| 2000-2003 | 304 | 89 (85-92) | | | | |

Long-term transplant survival in paediatric recipients for living donor kidney transplants in the UK is shown in **Figure 8.4**. **Table 8.4** shows transplant survival estimates and confidence intervals for each year group. There were no statistically significant differences in transplant survival across the year groups, ($p>0.1$).



| Table 8.4 Long-term transplant survival after first paediatric living donor kidney transplant in the UK, 1 January 1991 - 31 December 2003 | | | | | |
|---|-----------------------------|--|-----------------|------------------|-----------------|
| Year of transplant | No. at risk on day 0 | % Transplant survival (95% confidence interval) | | | |
| | | One year | Two year | Five year | Ten year |
| 1991-1993 | 25 | 88 (67-96) | 84 (63-94) | 76 (54-88) | 58 (36-75) |
| 1994-1996 | 61 | 97 (88-99) | 93 (83-97) | 91 (80-96) | |
| 1997-1999 | 66 | 95 (86-99) | 92 (82-97) | 84 (72-91) | |
| 2000-2003 | 143 | 92 (86-96) | | | |

8.2 Pancreas transplant survival

National pancreas follow-up data was only available for transplants performed since 1 January 2001. There is insufficient data available to analyse long-term survival effects. **Figure 8.5** shows pancreas transplant survival in recipients receiving their first cadaveric heartbeating donor pancreas transplant performed in the UK between 1 January 2001 and 31 December 2004, by type of transplant (simultaneous kidney/pancreas (SPK) and pancreas only). Transplant survival estimates and confidence intervals are shown by transplant type at 30-days, 90-days and one-year in **Table 8.5**.

Whilst there is statistical evidence to suggest that SPK pancreas transplant survival may be superior to that of pancreas only transplants, $p=0.09$, one-year patient survival estimates are similar: 95% (95% confidence interval (C.I.) 69% - 99%) for pancreas only transplants compared with 89% (95% C.I. 82% - 93%) for SPK transplants ($p=0.9$).

Figure 8.5 Pancreas transplant survival after first cadaveric heartbeating donor transplant in the UK, 1 January 2001 – 31 December 2004

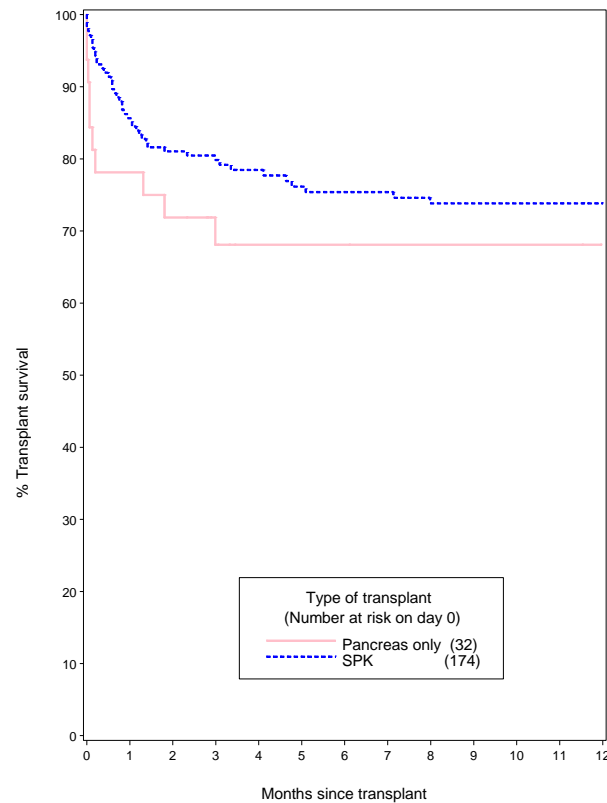


Table 8.5 Pancreas transplant survival after first heartbeating donor transplant in the UK, 1 January 2001 - 31 December 2004

| Transplant | No. at risk on day 0 | % Transplant survival (95% confidence interval) | | | |
|---------------|----------------------|---|------------|----------|---------|
| | | 30-day | 90-day | One year | |
| Pancreas only | 32 | 78 (59-89) | 72 (53-84) | 68 | (49-81) |
| SPK | 174 | 86 (79-90) | 80 (74-86) | 74 | (66-80) |

8.3 Cardiothoracic transplant survival

8.3.1 Adult recipients

Long-term heart transplant survival for adult (≥ 16 years) recipients after first heart only transplants is shown in **Figure 8.6**. Domino and cadaveric donor transplants are included as well as urgent and heterotopic transplants. **Table 8.6** shows the survival estimates and confidence intervals for one, two, five and ten years post-transplant. There was slight evidence of statistically significant differences in transplant survival across the year groups, ($p=0.07$).

Figure 8.6 Long-term transplant survival after first adult heart only transplant in the UK, 1 January 1991 – 31 December 2003

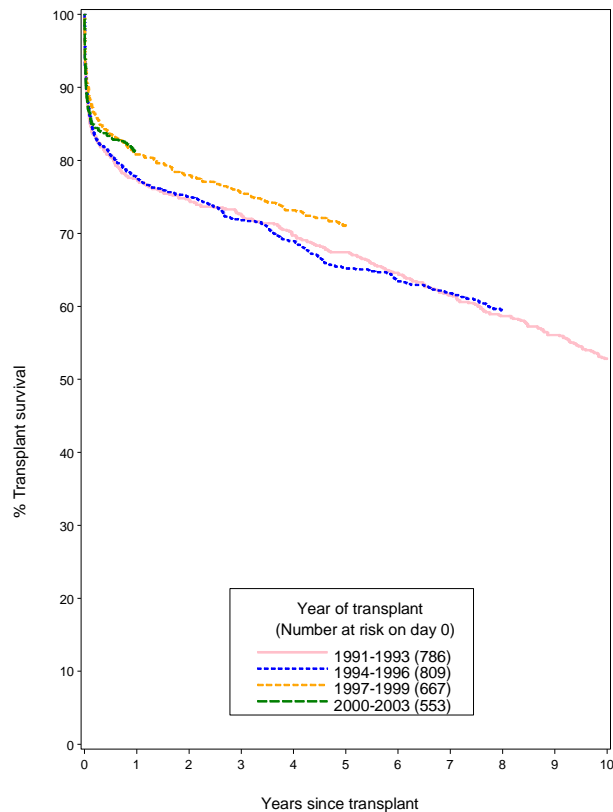


Table 8.6 Long-term transplant survival after first adult heart only transplant in the UK, 1 January 1991 - 31 December 2003

| Year of transplant | No. at risk on day 0 | % Transplant survival (95% confidence interval) | | | | | | | |
|--------------------|----------------------|---|---------|----------|---------|-----------|---------|----------|---------|
| | | One year | | Two year | | Five year | | Ten year | |
| 1991-1993 | 786 | 77 | (74-80) | 75 | (71-77) | 67 | (64-71) | 53 | (49-56) |
| 1994-1996 | 809 | 78 | (75-80) | 75 | (72-78) | 65 | (62-68) | | |
| 1997-1999 | 667 | 81 | (78-84) | 78 | (75-81) | 71 | (67-74) | | |
| 2000-2003 | 553 | 81 | (78-84) | | | | | | |

Figure 8.7 shows transplant survival for adult recipients after first heart/lung block transplants. Transplant survival estimates and confidence intervals for each year group are shown in **Table 8.7**. There were no statistically significant differences in transplant survival across the year groups, ($p>0.6$).

Figure 8.7 Long-term transplant survival after first adult heart/lung block transplant in the UK, 1 January 1991 – 31 December 2003

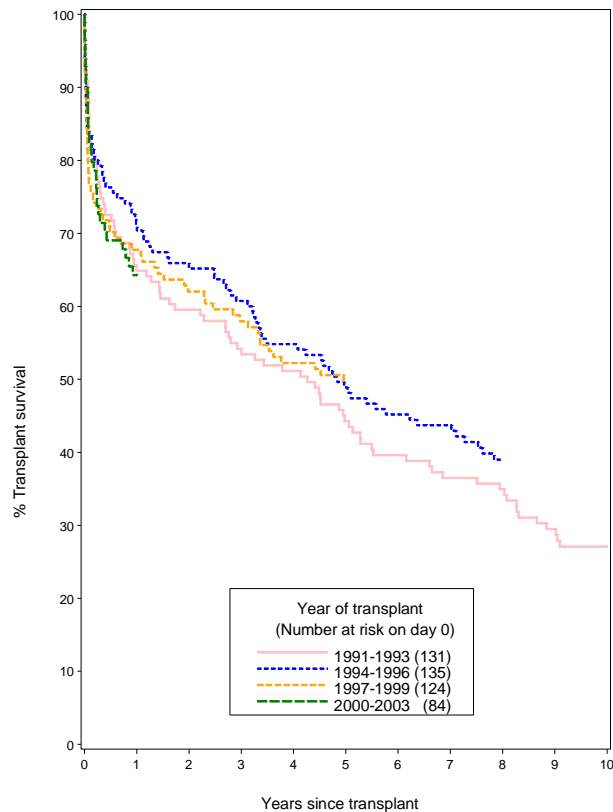


Table 8.7 Long-term transplant survival after first adult heart/lung block transplant in the UK, 1 January 1991 - 31 December 2003

| Year of transplant | No. at risk on day 0 | % Transplant survival (95% confidence interval) | | | |
|--------------------|----------------------|---|------------|------------|------------|
| | | One year | Two year | Five year | Ten year |
| 1991-1993 | 131 | 65 (56-72) | 60 (51-67) | 44 (36-53) | 27 (20-35) |
| 1994-1996 | 135 | 71 (63-78) | 65 (57-73) | 49 (40-57) | |
| 1997-1999 | 124 | 68 (59-75) | 62 (53-70) | 50 (40-58) | |
| 2000-2003 | 84 | 64 (53-73) | | | |

Transplant survival for first cadaveric heartbeating lung only transplants for adult recipients is shown in **Figure 8.8**, with survival estimates and confidence intervals shown in **Table 8.8**. One year transplant survival has significantly improved over the year groups, $p=0.02$, and there is some evidence that the two and five year estimates differ significantly, ($p=0.08$).

Figure 8.8 Long-term transplant survival after first adult cadaveric heartbeating donor lung only transplant in the UK, 1 January 1991 – 31 December 2003

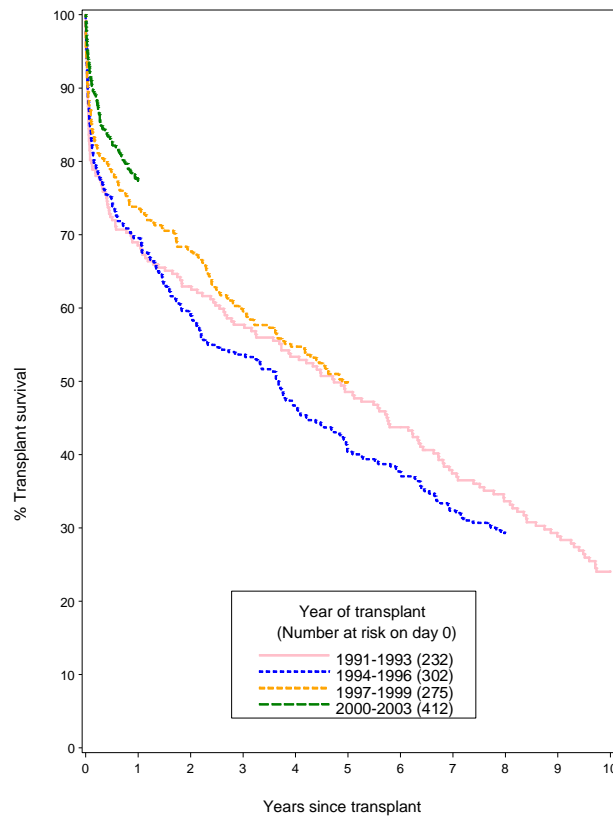


Table 8.8 Long-term transplant survival after first adult cadaveric heartbeating donor lung only transplant in the UK, 1 January 1991 - 31 December 2003

| Year of transplant | No. at risk on day 0 | % Transplant survival (95% confidence interval) | | | |
|--------------------|----------------------|---|------------|------------|------------|
| | | One year | Two year | Five year | Ten year |
| 1991-1993 | 232 | 69 (62-74) | 63 (56-69) | 49 (42-55) | 24 (19-30) |
| 1994-1996 | 302 | 70 (64-74) | 59 (53-64) | 40 (35-46) | |
| 1997-1999 | 275 | 74 (68-79) | 68 (62-73) | 50 (44-56) | |
| 2000-2003 | 412 | 77 (73-81) | | | |

8.3.2 Paediatric recipients

Long-term transplant survival for paediatric (<16 years) recipients after first heart only transplant is shown in **Figure 8.9**. Domino and cadaveric donor transplants are included as well as urgent and heterotopic transplants. **Table 8.9** shows the survival estimates and confidence intervals for one, two, five and ten years post-transplant. There has been a statistically significant improvement in one year survival over the year groups, $p < 0.001$, but two and five year estimates do not differ significantly, ($p > 0.3$).

Figure 8.9 Long-term transplant survival after first paediatric heart only transplant in the UK, 1 January 1991 – 31 December 2003

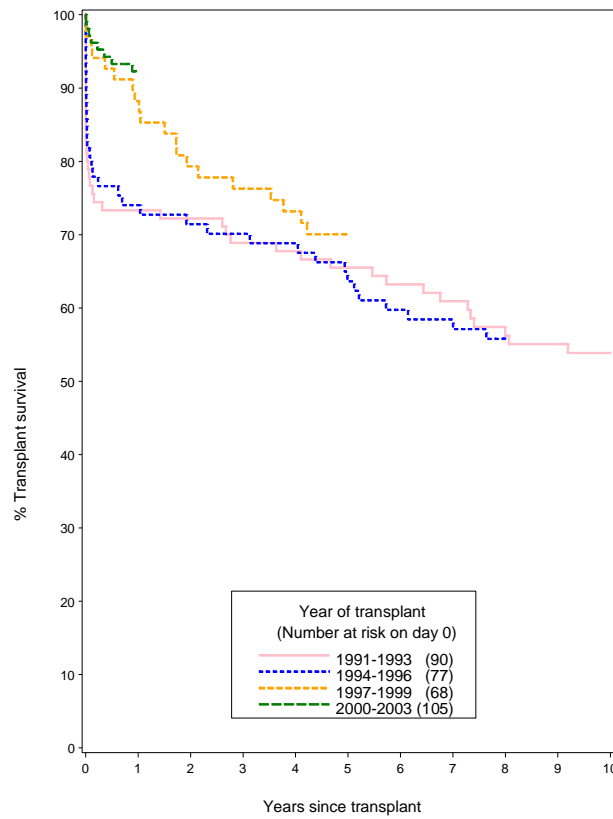


Table 8.9 Long-term transplant survival after first paediatric heart only transplant in the UK, 1 January 1991 - 31 December 2003

| Year of transplant | No. at risk on day 0 | % Transplant survival (95% confidence interval) | | | |
|--------------------|----------------------|---|------------|------------|------------|
| | | One year | Two year | Five year | Ten year |
| 1991-1993 | 90 | 73 (63-81) | 72 (62-80) | 66 (55-74) | 54 (43-64) |
| 1994-1996 | 77 | 74 (63-82) | 71 (60-80) | 64 (52-73) | |
| 1997-1999 | 68 | 88 (78-94) | 79 (68-87) | 70 (57-80) | |
| 2000-2003 | 105 | 92 (85-96) | | | |

The number of paediatric lung and heart/lung transplant recipients was too small to perform the analysis by year of transplant.

8.4 Liver transplant survival

8.4.1 Adult recipients

Figure 8.10 and **Table 8.10** show long-term transplant survival estimates for first elective cadaveric heartbeating donor liver only transplants in adult (≥ 17 years) recipients. There has been a significant improvement in one, two and five year transplant survival over the year groups, with $p < 0.001$ in each case. This improvement has mainly been due to fewer graft losses in the first year post-transplant.

Figure 8.10 Long-term transplant survival after first elective adult cadaveric heartbeating donor liver only transplant in the UK, 1 January 1991 – 31 December 2003

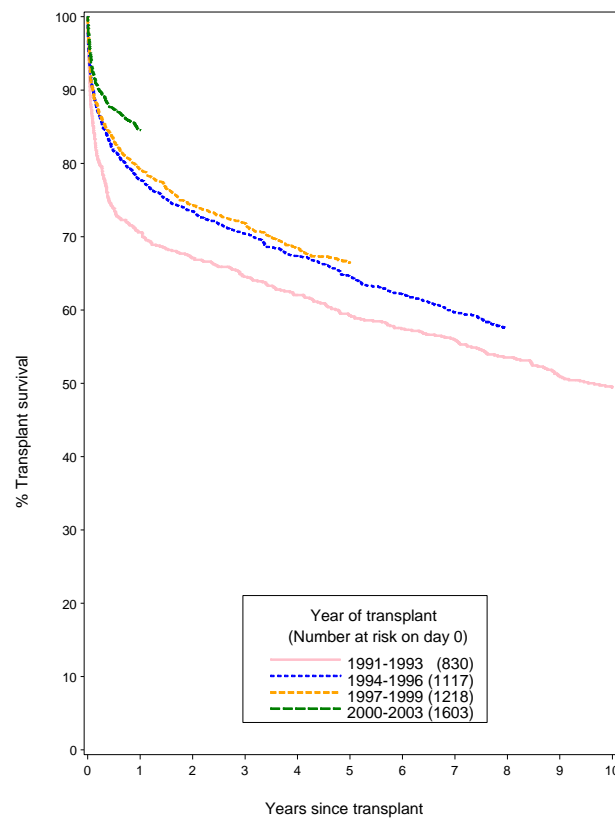


Table 8.10 Long-term transplant survival after first elective adult cadaveric heartbeating donor liver only transplant in the UK, 1 January 1991 - 31 December 2003

| Year of transplant | No. at risk on day 0 | % Transplant survival (95% confidence interval) | | | |
|--------------------|----------------------|---|------------|------------|------------|
| | | One year | Two year | Five year | Ten year |
| 1991-1993 | 830 | 71 (67-74) | 67 (64-70) | 59 (56-63) | 49 (46-53) |
| 1994-1996 | 1117 | 78 (75-80) | 73 (71-76) | 64 (62-67) | |
| 1997-1999 | 1218 | 79 (77-81) | 74 (72-77) | 66 (64-69) | |
| 2000-2003 | 1603 | 85 (83-86) | | | |

8.4.2 Paediatric recipients

Figure 8.11 and **Table 8.11** show long-term transplant survival estimates for first elective cadaveric heartbeating donor liver only transplants in paediatric (<17 years) recipients. One, two and five year transplant survival has improved over the year groups, with $p < 0.003$ in each case. This improvement has mainly been due to fewer graft losses in the first year post-transplant.

Figure 8.11 Long-term transplant survival after first elective paediatric cadaveric heartbeating donor liver only transplant in the UK, 1 January 1991 – 31 December 2003

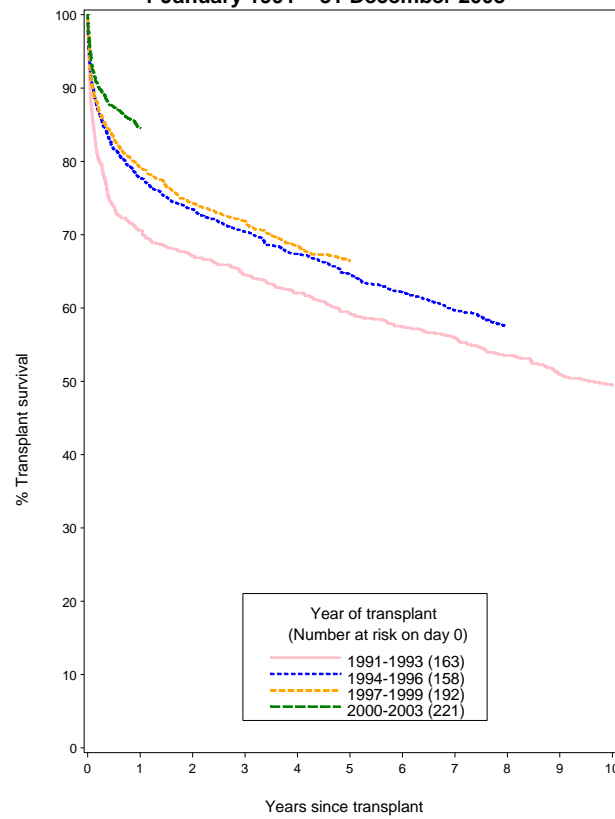


Table 8.11 Long-term transplant survival after first elective paediatric cadaveric heartbeating donor liver only transplant in the UK, 1 January 1991 – 31 December 2003

| Year of transplant | No. at risk on day 0 | % Transplant survival (95% confidence interval) | | | |
|--------------------|----------------------|---|------------|------------|------------|
| | | One year | Two year | Five year | Ten year |
| 1991-1993 | 163 | 67 (60-74) | 65 (57-72) | 61 (53-68) | 55 (47-63) |
| 1994-1996 | 158 | 78 (71-84) | 76 (68-82) | 73 (65-79) | |
| 1997-1999 | 192 | 84 (78-89) | 81 (75-86) | 77 (70-82) | |
| 2000-2003 | 221 | 88 (83-91) | | | |

8.5 Cornea transplant survival

Short-term transplant survival estimates for first penetrating keratoplasty (PKP) are presented in **Figure 8.12** and **Table 8.12**. The two year transplant survival estimate is 85% for grafts between 1 January 2000 and 31 December 2004. Good quality cornea follow-up data was only available for transplants performed since 1 April 1999, so there are insufficient data available to analyse long-term survival effects.

Figure 8.12 Cornea transplant survival after first PKP graft in the UK, 1 January 2000 – 31 December 2004

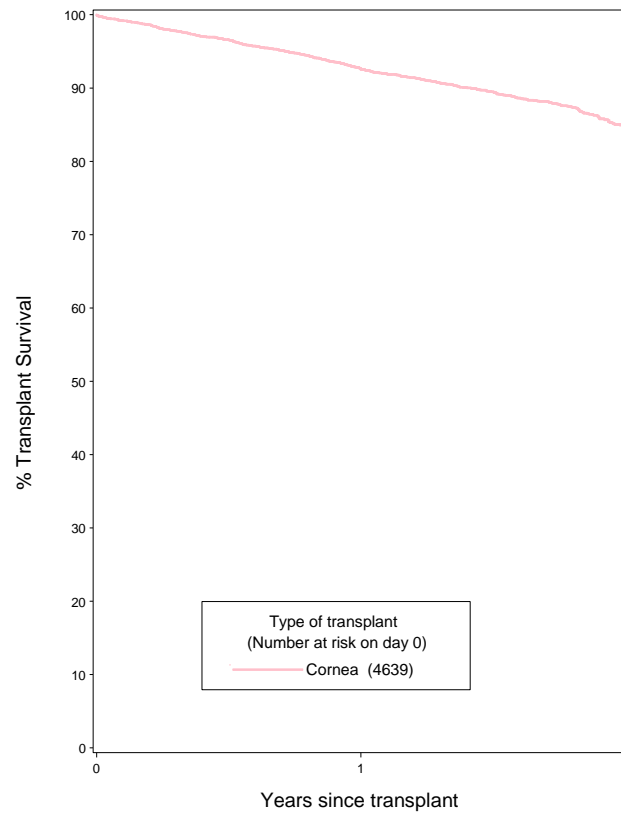


Table 8.12 Cornea transplant survival after first PKP graft in the UK, 1 January 2000 - 31 December 2004

| No. at risk on day 0 | % Transplant survival (95% confidence interval) | |
|-------------------------|--|------------|
| | One year | Two year |
| 4639 | 93 (92-93) | 85 (84-86) |

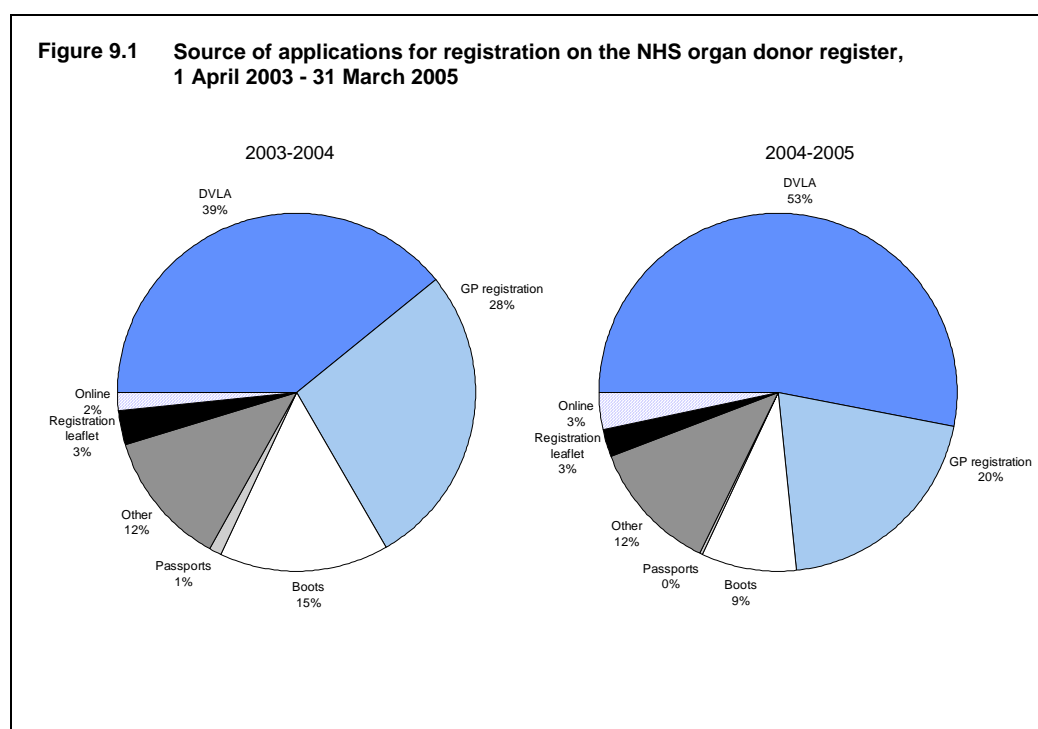
9 NHS ORGAN DONOR REGISTER

By the end of March 2005 the NHS Organ Donor Register (ODR) held 12,169,020 registrations. During the year data on the register were continually reviewed and validated.

Of the 750 cadaveric donors in 2004-2005, the ODR was checked in 746 (99%) cases and of these donors, 21% were registered on the ODR compared with 17% in 2003-2004.

There are a number of registration routes: Health Department registration leaflets readily available in the community; campaigns in both national and regional newspapers and by community groups; leaflets delivered to households (for example with local electoral roll registration); when registering as a patient with a General Practitioner (via the Family Health Services Authorities); with driving licence applications and reminders (via the Driver and Vehicle Licensing Agency (DVLA)); from the Passport Agency when applying for a new passport; when applying for a Boots Advantage Card, online registrations via the UK Transplant website and by telephone.

The source of applications for registration on the ODR is illustrated in **Figure 9.1**. This figure shows that 20% of registrations in 2004-2005 arrived by means of the Family Health Services Authorities, 53% from driving licence applications and reminders through the DVLA and 9% through the Boots Advantage Card route.



At the end of March 2005 90% of registrations, where the information was available, indicated a willingness to donate all organs and tissue (kidneys, pancreas, heart, lungs, liver and corneas). However, of those who were not willing to donate all organs, the majority (70%) did not wish to donate their corneas. Of the restricted registrations, only 8% (less than 1% of the total register) did not wish to donate their kidneys. Willingness to donate, by organ type, is shown in **Table 9.1**.

Table 9.1 Preparedness of those registered on the NHS Organ Donor Register at 31 March 2005 to donate different organs*

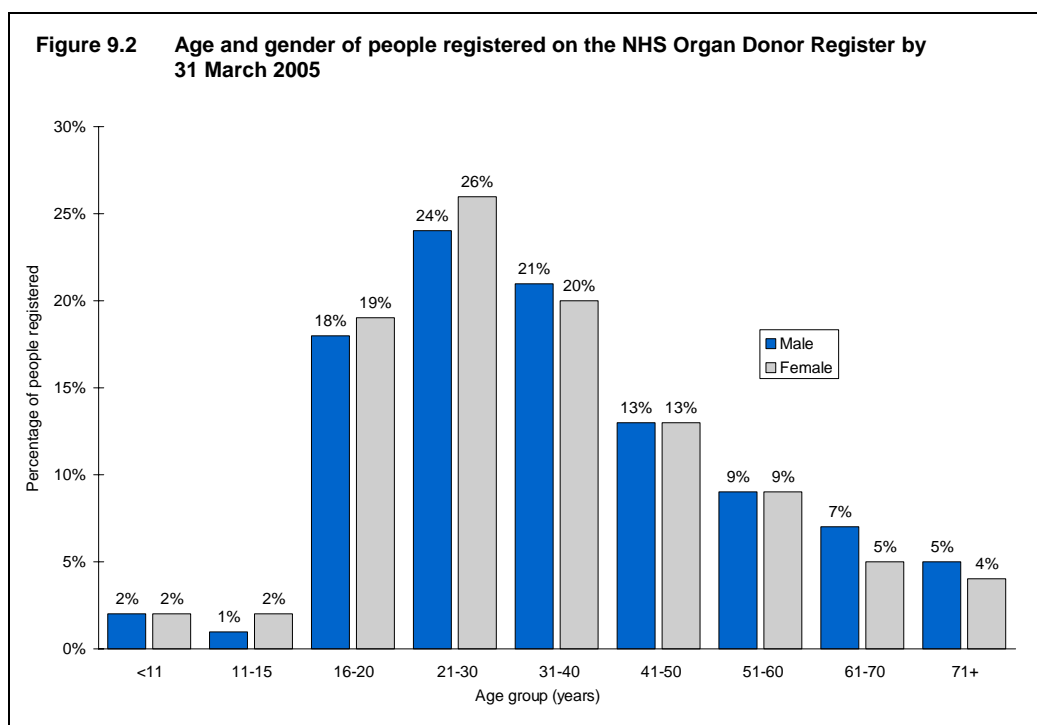
Registrants prepared to donate all organs 90%

Of those not prepared to donate all organs (“restricted donors”):

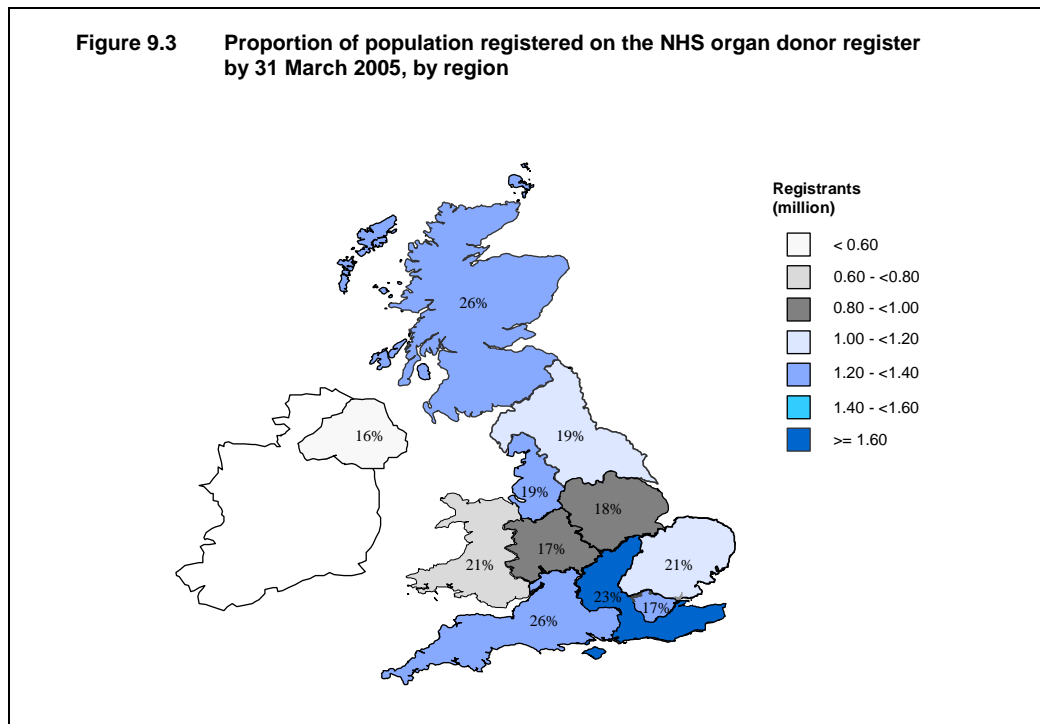
| Not prepared to donate: | “Restricted donors” | % of all Registrants |
|-------------------------|---------------------|----------------------|
| Kidneys | 8 | 0.8 |
| Pancreas | 30 | 3.1 |
| Heart | 39 | 4.0 |
| Lungs | 24 | 2.5 |
| Liver | 17 | 1.8 |
| Corneas | 70 | 7.2 |

* This information was not available for 6% of the total registered

People of all ages are eligible for organ donor registration: the distribution of age by sex at time of registration is shown in **Figure 9.2**. The highest proportion of males and females, representing 24% and 26%, respectively, of registrations, are registered in the 21-30 years age group. The lowest proportions are in the under 11 and 11-15 age groups. Of all the registrations on the NHS Organ Donor Register, 46% were male and 54% were female.



Those registered on the ODR come from all parts of the UK. **Figure 9.3** illustrates the percentage of the population registered in each region at 31 March 2005, and the number of registrations.



10.1 Introduction

In this chapter, summary data from the national Potential Donor Audit (PDA) covering the 21-month period from 1 April 2003 to 31 December 2004 are presented. The data comprise all audited patient deaths in UK Intensive Care Units (ICUs) in the time period, based on PDA forms received by UK Transplant on or before 9 May 2005, validated and input onto the National Transplant Database. A more detailed 21-month report is available on the website: <http://www.uktransplant.org.uk/ukt/statistics/statistics.jsp>

10.2 Definitions

Potential heartbeating (HB) donors are defined as patients for whom death was diagnosed following brain stem tests and who had no absolute medical contraindications to HB solid organ donation.

10.3 Breakdown of audited deaths in ICUs

In the 21-month period there were a total of 40,400 audited patient deaths in UK ICUs. **Table 10.1** summarises the key percentages and a detailed breakdown from the number of audited patient deaths to the number of HB solid organ donors is given in **Figure 10.1**. Overall, 46% of the 2,412 potential donors became HB solid organ donors.

Table 10.1 Summary of key percentages from ventilated patients to HB donors

| | N | % |
|---|--------|--|
| Patients on mechanical ventilation at some point during their stay in ICU | 36,930 | 91% of 40,400 audited patient deaths |
| Potential donors | 2,412 | 7% of 36,930 patients on mechanical ventilation |
| No record of discussion/approach regarding HB solid organ donation with the next of kin | 361 | 15% of 2,412 potential donor families |
| Consent given for HB solid organ donation | 1,230 | 60% of 2,051 families who were approached |
| Consent not given for HB solid organ donation | 821 | 40% of 2,051 families who were approached |
| Actual HB solid organ donors (based on data provided through the PDA) | 1,110 | 90% of 1,230 patients with family consent; 46% of 2,412 potential donors |

Figure 10.1 A breakdown from audited patient deaths to HB donors

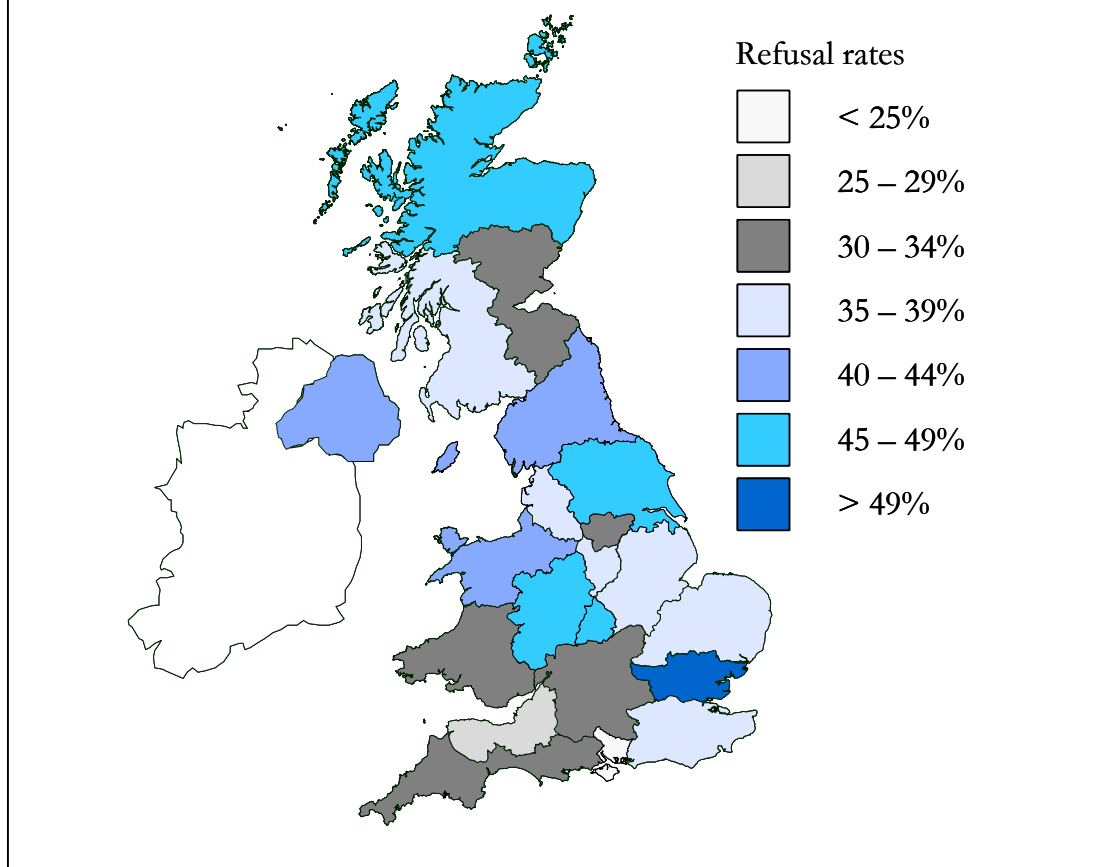


10.4 Refusal rates

The refusal rate is based on potential donors, for whom HB solid organ donation was considered and the next of kin were approached for permission or made the approach. The refusal rate is the proportion of these families who did not consent to HB solid organ donation. The overall refusal rate was 40% and the 95% confidence limits for this percentage range from 38% to 42%.

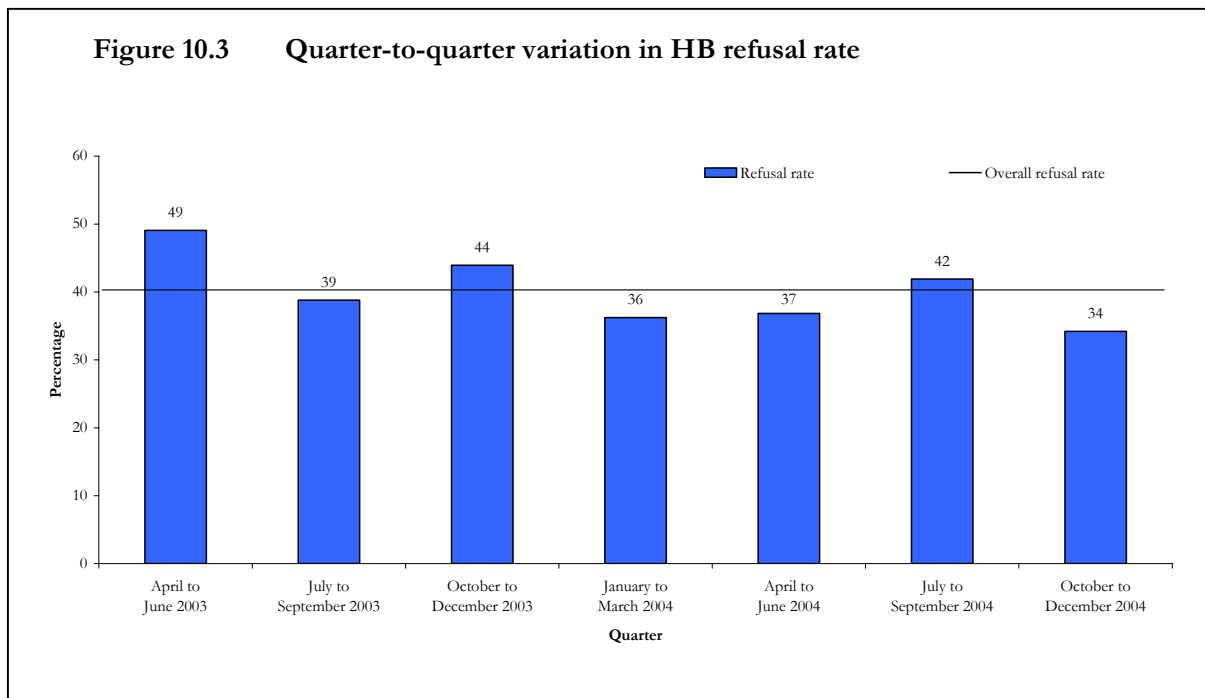
Refusal rates by donor transplant co-ordinator team are illustrated in **Figure 10.2** and range from 21% in Portsmouth to 51% in North Thames, but caution should be applied when interpreting these refusal rates as no adjustment has been made for the mix of patients in terms of age, sex, ethnicity and temporal effects. **Appendix IV** contains the precise refusal rate for each donor transplant co-ordinator team.

Figure 10.2 Unadjusted HB refusal rates by donor transplant co-ordinator team



The quarter-to-quarter variation in refusal rate is illustrated in **Figure 10.3**. The refusal rate was highest in April to June 2003, the first quarter of the audit (49%), and lowest in October to December 2004, the last quarter (34%).

Figure 10.3 Quarter-to-quarter variation in HB refusal rate



APPENDICES

Appendix IA provides details of the 664 cadaveric heartbeating solid organ donors reported in 2004-2005. Details are given for each donating hospital and the hospitals have been grouped by English Strategic Health Authority and country. This appendix does not reflect regional retrieval rates: for example, in Wales three of the donating hospitals reported are listed under Liverpool for kidney retrievals. **Appendix IB** gives similar information for the 86 cadaveric non-heartbeating solid organ donors.

The number of donors per kidney designated area is given in **Appendix II**; where the kidneys were not retrieved, donors and organs have been assigned to the designated area that would normally have retrieved the kidney.

The populations used for kidney, liver and cardiothoracic retrievals per million population are given in **Appendices IIIA** and **IIIB**; these populations are based on ONS *2001 Census* figures.

Appendix IV gives the refusal rate for each donor transplant co-ordinator team from the national Potential Donor Audit.

Appendix IA Cadaveric heartbeating solid organ donors and donated organs in the UK, 1 April 2004 - 31 March 2005 (2003-2004), by donating hospital

| Donating hospital | All donors | | Multi-organ donor | | Kidney | Heart | Lung | Liver | Pancreas |
|--|------------|------|-------------------|------|--------|-------|------|-------|----------|
| Avon, Gloucestershire and Wiltshire | | | | | | | | | |
| Bath, Royal United Hospital | 1 | (2) | 1 | (2) | 2 | 0 | 0 | 1 | 0 |
| Bristol, Bristol Royal Infirmary | 2 | (2) | 2 | (2) | 4 | 1 | 0 | 1 | 0 |
| Bristol, Frenchay Hospital | 13 | (9) | 11 | (9) | 25 | 3 | 5 | 11 | 1 |
| Bristol, Southmead Hospital | 0 | (3) | 0 | (3) | 0 | 0 | 0 | 0 | 0 |
| Cheltenham, Cheltenham General Hospital | 3 | (2) | 2 | (2) | 4 | 0 | 0 | 3 | 0 |
| Gloucester, Gloucestershire Royal Hospital | 4 | (2) | 4 | (2) | 8 | 2 | 2 | 4 | 2 |
| Salisbury, Salisbury District Hospital | 1 | (2) | 0 | (1) | 2 | 0 | 0 | 0 | 0 |
| Swindon, Great Western Hospital | 1 | (4) | 1 | (4) | 2 | 0 | 0 | 1 | 0 |
| Taunton, Taunton And Somerset Hospital (Musgrove Park) | 4 | (0) | 4 | (0) | 8 | 0 | 2 | 4 | 2 |
| Total | 29 | (26) | 25 | (25) | 55 | 6 | 9 | 25 | 5 |
| Bedfordshire and Hertfordshire | | | | | | | | | |
| Bedford, Bedford Hospital | 2 | (2) | 2 | (2) | 4 | 0 | 0 | 2 | 0 |
| Hemel Hempstead, Hemel Hempstead General Hospital | 3 | (2) | 3 | (2) | 6 | 2 | 0 | 3 | 1 |
| Luton, Luton And Dunstable Hospital | 3 | (2) | 3 | (2) | 6 | 1 | 2 | 3 | 1 |
| Stevenage, Lister Hospital | 1 | (1) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Watford, Watford General Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Welwyn Garden City, Queen Elizabeth Ii Hospital | 1 | (2) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Total | 10 | (10) | 10 | (9) | 20 | 3 | 2 | 10 | 2 |
| Birmingham and The Black Country | | | | | | | | | |
| Birmingham, Birmingham Heartlands Hospital | 2 | (2) | 2 | (2) | 4 | 1 | 2 | 2 | 0 |
| Birmingham, City Hospital | 2 | (6) | 2 | (6) | 4 | 1 | 2 | 2 | 0 |
| Birmingham, Diana Princess Of Wales Children Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| Birmingham, Queen Elizabeth Hospital | 6 | (5) | 5 | (5) | 12 | 0 | 4 | 5 | 0 |
| Birmingham, Selly Oak Hospital | 4 | (3) | 4 | (3) | 8 | 3 | 2 | 4 | 0 |
| Dudley, Russells Hall Hospital | 2 | (4) | 2 | (4) | 4 | 1 | 0 | 2 | 0 |
| Solihull, Solihull Hospital | 1 | (1) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Sutton Coldfield, Good Hope District General Hosp. | 0 | (3) | 0 | (3) | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | |
|---|-----------|-------------|-----------|-------------|-----------|----------|-----------|-----------|----------|
| Walsall, Manor Hospital | 3 | (1) | 2 | (1) | 4 | 0 | 3 | 3 | 0 |
| West Bromwich, Sandwell General Hospital | 1 | (3) | 1 | (3) | 2 | 1 | 0 | 1 | 0 |
| Wolverhampton, New Cross Hospital | 2 | (1) | 2 | (1) | 4 | 1 | 2 | 1 | 1 |
| Total | 24 | (29) | 22 | (29) | 46 | 8 | 15 | 22 | 1 |
| Cheshire and Merseyside | | | | | | | | | |
| Chester, Countess Of Chester Hospital | 6 | (3) | 6 | (1) | 12 | 1 | 4 | 6 | 1 |
| Crewe, Leighton Hospital | 4 | (3) | 3 | (3) | 8 | 0 | 2 | 3 | 0 |
| Liverpool, Alder Hey Children's Hospital | 2 | (1) | 1 | (1) | 2 | 0 | 0 | 2 | 0 |
| Liverpool, Royal Liverpool University Hospital | 1 | (7) | 1 | (5) | 2 | 0 | 0 | 1 | 0 |
| Liverpool, The Cardiothoracic Centre | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| Liverpool, University Hospital Aintree | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Liverpool, Walton Centre For Neurology And Neurosurgery | 7 | (6) | 6 | (6) | 14 | 0 | 0 | 6 | 0 |
| Liverpool, Walton Hospital | 0 | (4) | 0 | (3) | 0 | 0 | 0 | 0 | 0 |
| Macclesfield, Macclesfield District General Hospital | 3 | (1) | 3 | (1) | 6 | 0 | 0 | 3 | 0 |
| Prescot, Whiston Hospital | 2 | (6) | 2 | (6) | 4 | 0 | 0 | 2 | 0 |
| Southport, Southport District General Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| Warrington, Warrington Hospital | 3 | (5) | 2 | (5) | 6 | 0 | 0 | 2 | 0 |
| Wirral, Arrowe Park Hospital | 6 | (2) | 5 | (2) | 12 | 1 | 0 | 5 | 0 |
| Total | 36 | (40) | 31 | (35) | 70 | 2 | 6 | 32 | 1 |
| County Durham and Tees Valley | | | | | | | | | |
| Bishop Auckland, Bishop Auckland General Hospital | 1 | (2) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Darlington, Darlington Memorial Hospital | 2 | (0) | 2 | (0) | 4 | 0 | 2 | 2 | 0 |
| Durham, University Hospital Of North Durham | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Hartlepool, University Hospital Of Hartlepool | 3 | (1) | 2 | (0) | 6 | 0 | 2 | 2 | 1 |
| Middlesbrough, Middlesbrough General Hospital | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Middlesbrough, The James Cook University Hospital | 11 | (8) | 11 | (5) | 22 | 2 | 3 | 11 | 4 |
| Total | 17 | (14) | 16 | (9) | 34 | 2 | 7 | 16 | 5 |
| Coventry, Warwickshire, Herefordshire and Worcestershire | | | | | | | | | |
| Coventry, Coventry And Warwickshire Hospital | 0 | (2) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Coventry, Walsgrave Hospital | 9 | (3) | 9 | (3) | 16 | 3 | 12 | 9 | 0 |
| Nuneaton, George Eliot Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Redditch, The Alexandra Hospital | 2 | (0) | 2 | (0) | 4 | 2 | 4 | 2 | 0 |
| Warwick, Warwick Hospital | 2 | (3) | 2 | (3) | 4 | 0 | 2 | 2 | 0 |

| | | | | | | | | | |
|--|-----------|-------------|-----------|-------------|-----------|----------|-----------|-----------|----------|
| Worcester, Worcester Royal Hospital | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Worcestershire Royal Hospital | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Total | 13 | (13) | 13 | (12) | 24 | 5 | 18 | 13 | 0 |
| Cumbria and Lancashire | | | | | | | | | |
| Barrow-In-Furness, Furness General Hospital | 2 | (3) | 1 | (2) | 4 | 0 | 0 | 1 | 0 |
| Blackburn, Blackburn Royal Infirmary | 2 | (3) | 2 | (3) | 4 | 0 | 0 | 2 | 1 |
| Blackpool, Blackpool Victoria Hospital | 4 | (4) | 3 | (3) | 6 | 0 | 0 | 3 | 0 |
| Burnley, Burnley General Hospital | 2 | (0) | 2 | (0) | 4 | 0 | 1 | 2 | 0 |
| Carlisle, Cumberland Infirmary | 0 | (3) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Chorley, Chorley And South Ribble District General Hospital | 0 | (4) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Lancaster, Royal Lancaster Infirmary | 2 | (3) | 2 | (3) | 4 | 2 | 2 | 2 | 0 |
| Ormskirk, Ormskirk And District General Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Preston, Royal Preston Hospital | 10 | (8) | 6 | (7) | 14 | 1 | 2 | 9 | 2 |
| Whitehaven, West Cumberland Hospital | 1 | (2) | 1 | (1) | 2 | 0 | 2 | 1 | 0 |
| Total | 23 | (31) | 17 | (24) | 38 | 3 | 7 | 20 | 3 |
| Essex | | | | | | | | | |
| Basildon, Basildon Hospital | 1 | (4) | 1 | (4) | 2 | 1 | 0 | 1 | 0 |
| Chelmsford, Broomfield Hospital | 3 | (2) | 3 | (1) | 6 | 0 | 0 | 3 | 1 |
| Colchester, Colchester General Hospital | 1 | (0) | 1 | (0) | 2 | 1 | 0 | 1 | 1 |
| Harlow, Princess Alexandra Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Westcliff On Sea, Southend Hospital | 2 | (2) | 1 | (2) | 4 | 0 | 0 | 1 | 0 |
| Total | 7 | (9) | 6 | (8) | 14 | 2 | 0 | 6 | 2 |
| Greater Manchester | | | | | | | | | |
| Bolton, Royal Bolton Hospital | 3 | (1) | 2 | (1) | 6 | 0 | 0 | 2 | 1 |
| Bury, Bury General Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 | 0 | 0 |
| Bury, Fairfield General Hospital | 3 | (1) | 3 | (0) | 6 | 1 | 0 | 3 | 0 |
| Manchester, Manchester Royal Infirmary | 5 | (3) | 5 | (2) | 9 | 1 | 2 | 5 | 2 |
| Manchester, Royal Manchester Childrens Hospital (Pendlebury) | 3 | (2) | 3 | (2) | 6 | 1 | 4 | 3 | 2 |
| Manchester, Trafford General Hospital | 2 | (1) | 2 | (1) | 4 | 0 | 1 | 2 | 1 |
| Manchester, Wythenshawe Hospital | 2 | (2) | 2 | (1) | 4 | 1 | 0 | 2 | 1 |
| Oldham, Royal Oldham Hospital(Rochdale Road) | 1 | (3) | 1 | (3) | 2 | 0 | 0 | 1 | 0 |
| Rochdale, Rochdale Infirmary | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| Salford, Hope Hospital | 11 | (10) | 11 | (10) | 19 | 4 | 8 | 11 | 2 |

| | | | | | | | | | |
|---|-----------|-------------|-----------|-------------|-----------|----------|-----------|-----------|----------|
| Stockport, Stepping Hill Hospital | 1 | (3) | 0 | (3) | 2 | 0 | 0 | 0 | 0 |
| Wigan, Royal Albert Edward Infirmary | 0 | (4) | 0 | (3) | 0 | 0 | 0 | 0 | 0 |
| Total | 32 | (31) | 30 | (26) | 60 | 8 | 15 | 30 | 9 |
| Hampshire and Isle of Wight | | | | | | | | | |
| Basingstoke, North Hampshire Hospital | 4 | (4) | 3 | (4) | 6 | 1 | 0 | 4 | 0 |
| Newport, St Mary's Hospital | 1 | (2) | 1 | (2) | 2 | 0 | 0 | 1 | 0 |
| Portsmouth, Queen Alexandra Hospital | 2 | (5) | 2 | (5) | 4 | 0 | 0 | 2 | 0 |
| Portsmouth, St Mary's Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 | 0 | 0 |
| Southampton, Southampton University Hospitals | 11 | (9) | 8 | (6) | 20 | 4 | 10 | 9 | 4 |
| Southampton, Wessex Neurological Unit | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Winchester, Royal Hampshire County Hospital | 1 | (2) | 1 | (2) | 2 | 0 | 0 | 1 | 0 |
| Total | 19 | (24) | 15 | (20) | 34 | 5 | 10 | 17 | 4 |
| Kent and Medway | | | | | | | | | |
| Ashford, William Harvey Hospital | 5 | (3) | 5 | (3) | 10 | 0 | 0 | 5 | 0 |
| Canterbury, Kent And Canterbury Hospital | 1 | (0) | 1 | (0) | 2 | 1 | 0 | 1 | 1 |
| Dartford, Darent Valley Hospital | 2 | (7) | 2 | (7) | 4 | 0 | 0 | 2 | 0 |
| Gillingham, Medway Hospital | 1 | (1) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Maidstone, Maidstone District General Hospital | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Margate, Queen Elizabeth The Queen Mother Hospital | 4 | (1) | 3 | (1) | 8 | 1 | 2 | 3 | 3 |
| Tunbridge Wells, Kent And Sussex Hospital | 2 | (4) | 2 | (4) | 4 | 2 | 2 | 2 | 1 |
| Total | 15 | (18) | 14 | (18) | 30 | 4 | 4 | 14 | 5 |
| Leicestershire, Northamptonshire and Rutland | | | | | | | | | |
| Kettering, Kettering General Hospital | 4 | (3) | 2 | (2) | 6 | 1 | 0 | 3 | 2 |
| Leicester, Leicester General Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 | 0 | 0 |
| Leicester, Leicester Royal Infirmary | 4 | (2) | 4 | (2) | 8 | 1 | 0 | 4 | 0 |
| Northampton, Northampton General Hospital | 3 | (2) | 2 | (2) | 4 | 2 | 2 | 2 | 0 |
| Total | 11 | (8) | 8 | (6) | 18 | 4 | 2 | 9 | 2 |
| Norfolk, Suffolk and Cambridgeshire | | | | | | | | | |
| Bury St Edmunds, West Suffolk Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Cambridge, Addenbrooke's Hospital | 17 | (11) | 16 | (8) | 32 | 8 | 8 | 16 | 8 |
| Great Yarmouth, James Paget Hospital | 0 | (3) | 0 | (3) | 0 | 0 | 0 | 0 | 0 |
| Ipswich, Ipswich Hospital | 5 | (4) | 4 | (4) | 10 | 1 | 2 | 4 | 2 |

| | | | | | | | | | |
|---|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
| Kings Lynn, The Queen Elizabeth Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Norwich, Norfolk And Norwich University Hospital | 2 | (5) | 2 | (5) | 4 | 0 | 0 | 2 | 0 |
| Peterborough, Peterborough District Hospital | 4 | (0) | 3 | (0) | 8 | 1 | 2 | 3 | 0 |
| Total | 28 | (25) | 25 | (22) | 54 | 10 | 12 | 25 | 10 |
| North Central London | | | | | | | | | |
| Barnet, Barnet General Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Enfield, Chase Farm Hospital | 2 | (2) | 1 | (1) | 2 | 0 | 0 | 2 | 0 |
| London, Great Ormond Street Hospital For Children | 1 | (4) | 1 | (4) | 2 | 0 | 0 | 1 | 0 |
| London, Middlesex Hospital | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| London, Nat. Hosp. For Neurology And Neurosurgery | 3 | (6) | 2 | (4) | 6 | 0 | 2 | 2 | 0 |
| London, North Middlesex Hospital | 1 | (1) | 0 | (1) | 2 | 0 | 0 | 0 | 0 |
| London, Royal Free Hospital | 7 | (5) | 7 | (5) | 13 | 4 | 2 | 7 | 2 |
| London, The Whittington Hospital | 2 | (0) | 0 | (0) | 0 | 0 | 0 | 1 | 1 |
| London, University College Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Total | 16 | (22) | 11 | (19) | 25 | 4 | 4 | 13 | 3 |
| North East London | | | | | | | | | |
| Ilford, King George Hospital | 2 | (0) | 2 | (0) | 4 | 0 | 0 | 2 | 0 |
| London, Newham General Hospital | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| London, The London Chest Hospital | 1 | (0) | 1 | (0) | 2 | 1 | 0 | 1 | 0 |
| London, The Royal London Hospital (Whitechapel) | 7 | (8) | 7 | (5) | 14 | 4 | 2 | 7 | 3 |
| Romford, Oldchurch Hospital | 9 | (14) | 7 | (12) | 18 | 2 | 2 | 7 | 1 |
| Total | 19 | (24) | 17 | (19) | 38 | 7 | 4 | 17 | 4 |
| North and East Yorkshire and Northern Lincolnshire | | | | | | | | | |
| Cottingham, Castle Hill Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 2 | 1 | 0 |
| Grimsby, Diana Princess Of Wales Hospital | 3 | (5) | 2 | (4) | 6 | 0 | 0 | 2 | 0 |
| Harrogate, Harrogate District Hospital | 0 | (3) | 0 | (3) | 0 | 0 | 0 | 0 | 0 |
| Hull, Hull Royal Infirmary | 7 | (5) | 7 | (4) | 14 | 3 | 4 | 7 | 2 |
| Scarborough, Scarborough General Hospital | 0 | (3) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Scunthorpe, Scunthorpe General Hospital | 5 | (2) | 4 | (2) | 10 | 2 | 4 | 4 | 0 |
| York, York District Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Total | 16 | (19) | 14 | (16) | 32 | 5 | 10 | 14 | 2 |

| | | | | | | | | | |
|---|----|------|----|------|----|---|----|----|---|
| Northumberland, Tyne and Wear | | | | | | | | | |
| Ashington, Wansbeck General Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Gateshead, Queen Elizabeth Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 2 | 1 | 0 |
| Newcastle, Freeman Hospital | 2 | (1) | 2 | (0) | 4 | 0 | 2 | 2 | 0 |
| Newcastle, Newcastle General Hospital | 19 | (20) | 17 | (17) | 34 | 2 | 13 | 18 | 3 |
| North Shields, North Tyneside General Hospital | 1 | (0) | 1 | (0) | 2 | 1 | 2 | 1 | 0 |
| South Shields, South Tyneside Dist. Gen. Hospital | 1 | (1) | 0 | (1) | 2 | 0 | 0 | 0 | 0 |
| Total | 24 | (23) | 21 | (19) | 44 | 3 | 19 | 22 | 3 |
| North West London | | | | | | | | | |
| Ashford, Ashford Hospital (Middlesex) | 1 | (0) | 1 | (0) | 2 | 0 | 2 | 1 | 0 |
| Chelsea, Chelsea And Westminster Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Harefield, Harefield Hospital | 1 | (1) | 0 | (1) | 2 | 0 | 0 | 0 | 0 |
| Harrow, Northwick Park Hospital | 4 | (0) | 3 | (0) | 8 | 2 | 2 | 3 | 1 |
| Isleworth, West Middlesex University Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| London, Central Middlesex Hospital | 3 | (1) | 3 | (1) | 5 | 0 | 2 | 2 | 1 |
| London, Charing Cross Hospital | 5 | (11) | 4 | (9) | 10 | 1 | 0 | 4 | 0 |
| London, Hammersmith Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| London, Royal Brompton Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 | 0 | 0 |
| London, St Mary's Hospital | 3 | (1) | 2 | (1) | 6 | 0 | 0 | 2 | 0 |
| Southall, Ealing Hospital | 2 | (0) | 2 | (0) | 4 | 0 | 0 | 2 | 0 |
| Uxbridge, Hillingdon Hospital | 1 | (2) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Total | 21 | (19) | 17 | (15) | 41 | 3 | 6 | 16 | 2 |
| Shropshire and Staffordshire | | | | | | | | | |
| Burton-On-Trent, Queen's Hospital | 2 | (0) | 2 | (0) | 4 | 0 | 3 | 1 | 0 |
| Shrewsbury, Royal Shrewsbury Hospital | 4 | (4) | 3 | (4) | 6 | 0 | 2 | 4 | 0 |
| Stafford, Stafford District General Hospital | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Stoke On Trent, Stoke City General Hospital | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Stoke, North Staffordshire Royal Infirmary | 3 | (6) | 3 | (6) | 6 | 0 | 4 | 3 | 1 |
| Telford, The Princess Royal Hospital | 0 | (5) | 0 | (5) | 0 | 0 | 0 | 0 | 0 |
| Total | 9 | (19) | 8 | (19) | 16 | 0 | 9 | 8 | 1 |
| Somerset and Dorset | | | | | | | | | |
| Bournemouth, Royal Bournemouth General Hospital | 0 | (6) | 0 | (5) | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | |
|---|-----------|-------------|-----------|-------------|-----------|----------|-----------|-----------|----------|
| Dorchester, Dorset County Hospital | 1 | (3) | 1 | (3) | 2 | 1 | 0 | 1 | 1 |
| Poole, Poole General Hospital | 4 | (3) | 4 | (3) | 8 | 2 | 3 | 4 | 1 |
| Yeovil, Yeovil District Hospital | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | (14) | 5 | (13) | 10 | 3 | 3 | 5 | 2 |
| South East London | | | | | | | | | |
| London, Guy's Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| London, King's College Hospital | 13 | (10) | 12 | (10) | 20 | 3 | 8 | 13 | 1 |
| London, Queen Elizabeth Hospital | 3 | (4) | 3 | (4) | 6 | 2 | 2 | 3 | 1 |
| London, St Thomas' Hospital | 2 | (2) | 2 | (1) | 4 | 0 | 0 | 2 | 0 |
| London, University Hospital Lewisham | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| Orpington, Princess Royal University Hospital | 2 | (0) | 1 | (0) | 4 | 0 | 0 | 1 | 0 |
| Sidcup, Queen Mary's Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| Total | 22 | (17) | 20 | (16) | 38 | 5 | 10 | 21 | 2 |
| South West London | | | | | | | | | |
| Croydon, Mayday University Hospital | 2 | (1) | 0 | (1) | 2 | 0 | 0 | 1 | 0 |
| Kingston, Kingston Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| London, Atkinson Morleys Hospital | 0 | (6) | 0 | (6) | 0 | 0 | 0 | 0 | 0 |
| London, St George's Hospital | 10 | (10) | 8 | (10) | 16 | 1 | 2 | 10 | 1 |
| Total | 12 | (18) | 8 | (18) | 18 | 1 | 2 | 11 | 1 |
| South West Peninsula | | | | | | | | | |
| Barnstaple, North Devon District Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| Exeter, Royal Devon And Exeter Hospital (Wonford) | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Plymouth, Derriford Hospital | 3 | (11) | 3 | (10) | 6 | 1 | 0 | 3 | 0 |
| Truro, Royal Cornwall Hospital (Treliske) | 6 | (5) | 6 | (5) | 11 | 0 | 4 | 6 | 1 |
| Total | 10 | (18) | 10 | (17) | 19 | 1 | 4 | 10 | 1 |
| South Yorkshire | | | | | | | | | |
| Barnsley, Barnsley District General Hospital | 4 | (2) | 4 | (2) | 8 | 2 | 1 | 4 | 2 |
| Doncaster, Doncaster Royal Infirmary | 1 | (2) | 1 | (2) | 2 | 0 | 0 | 1 | 0 |
| Rotherham, Rotherham District General Hospital | 5 | (0) | 5 | (0) | 10 | 0 | 2 | 5 | 0 |
| Sheffield, Northern General Hospital | 3 | (6) | 3 | (4) | 6 | 0 | 0 | 3 | 0 |
| Sheffield, Royal Hallamshire Hospital | 4 | (3) | 4 | (3) | 8 | 0 | 0 | 4 | 1 |

| | | | | | | | | | |
|--|-----------|-------------|-----------|-------------|-----------|----------|-----------|-----------|----------|
| Sheffield, Sheffield Children's Hospital | 3 | (0) | 2 | (0) | 4 | 1 | 2 | 3 | 0 |
| Total | 20 | (13) | 19 | (11) | 38 | 3 | 5 | 20 | 3 |
| Surrey and Sussex | | | | | | | | | |
| Brighton, Royal Alexandra Hospital For Sick Childr | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| Brighton, Royal Sussex County Hospital | 3 | (0) | 3 | (0) | 6 | 0 | 0 | 3 | 1 |
| Camberley, Frimley Park Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Chertsey, St Peter's Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 | 0 | 0 |
| Chichester, St Richard's Hospital | 1 | (1) | 1 | (1) | 2 | 1 | 1 | 1 | 1 |
| Crawley, Crawley Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Eastbourne, Eastbourne District General Hospital | 1 | (0) | 0 | (0) | 0 | 0 | 0 | 1 | 0 |
| Guildford, Royal Surrey County Hospital | 5 | (0) | 4 | (0) | 10 | 2 | 5 | 3 | 1 |
| Hastings, Conquest Hospital | 1 | (4) | 0 | (4) | 0 | 0 | 0 | 1 | 0 |
| Haywards Heath, Hurstwood Park Hospital | 3 | (7) | 3 | (6) | 6 | 2 | 2 | 3 | 1 |
| Haywards Heath, Princess Royal Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| Haywards Heath, Princess Royal Hospital (West Wing) | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Redhill, East Surrey Hospital | 4 | (2) | 3 | (2) | 8 | 1 | 1 | 3 | 1 |
| Worthing, Worthing Hospital | 3 | (1) | 3 | (1) | 6 | 0 | 2 | 3 | 0 |
| Total | 23 | (19) | 19 | (17) | 42 | 6 | 11 | 20 | 5 |
| Trent | | | | | | | | | |
| Boston, Pilgrim Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| Chesterfield, Chesterfield And N Derbyshire Royal Hospital | 2 | (2) | 2 | (2) | 4 | 2 | 2 | 2 | 1 |
| Derby, Derby Royal Infirmary | 3 | (3) | 3 | (3) | 6 | 1 | 0 | 3 | 0 |
| Lincoln, Lincoln County Hospital | 2 | (2) | 2 | (2) | 4 | 1 | 0 | 2 | 1 |
| Nottingham, Nottingham University Hospital | 7 | (14) | 7 | (14) | 13 | 5 | 8 | 7 | 0 |
| Sutton-In-Ashfield, King's Mill Hospital | 0 | (3) | 0 | (3) | 0 | 0 | 0 | 0 | 0 |
| Worksop, Bassetlaw District General Hospital | 3 | (1) | 3 | (1) | 6 | 0 | 0 | 3 | 0 |
| Total | 18 | (25) | 18 | (25) | 35 | 9 | 10 | 18 | 2 |
| Thames Valley | | | | | | | | | |
| Aylesbury, Stoke Mandeville Hospital | 1 | (1) | 1 | (1) | 2 | 0 | 2 | 1 | 0 |
| Banbury, Horton General Hospital | 2 | (1) | 2 | (0) | 4 | 0 | 4 | 2 | 1 |
| Milton Keynes, Milton Keynes General Hospital | 2 | (1) | 2 | (1) | 4 | 2 | 2 | 2 | 1 |
| Oxford, John Radcliffe Hospital | 1 | (3) | 1 | (3) | 2 | 0 | 0 | 1 | 1 |
| Oxford, Radcliffe Infirmary | 9 | (8) | 9 | (8) | 18 | 4 | 7 | 9 | 3 |

| | | | | | | | | | |
|---|------------|--------------|------------|--------------|------------|------------|------------|------------|-----------|
| Reading, Royal Berkshire Hospital | 3 | (7) | 3 | (7) | 6 | 0 | 0 | 3 | 1 |
| Slough, Wexham Park Hospital | 2 | (2) | 2 | (1) | 4 | 0 | 0 | 2 | 0 |
| Wycombe, Wycombe General Hospital | 1 | (1) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Total | 21 | (24) | 21 | (22) | 42 | 6 | 15 | 21 | 7 |
| West Yorkshire | | | | | | | | | |
| Bradford, Bradford Royal Infirmary | 0 | (5) | 0 | (4) | 0 | 0 | 0 | 0 | 0 |
| Dewsbury, Dewsbury And District Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 0 |
| Halifax, Calderdale Royal Hospital | 2 | (0) | 2 | (0) | 4 | 1 | 0 | 2 | 1 |
| Huddersfield, Huddersfield Royal Infirmary | 2 | (3) | 2 | (2) | 4 | 1 | 0 | 2 | 1 |
| Leeds, Leeds General Infirmary | 14 | (10) | 14 | (9) | 27 | 3 | 10 | 14 | 2 |
| Leeds, St James's University Hospital | 4 | (4) | 3 | (3) | 5 | 0 | 0 | 4 | 0 |
| Pontefract, Pontefract General Infirmary | 2 | (0) | 2 | (0) | 4 | 0 | 0 | 2 | 0 |
| Wakefield, Pinderfields General Hospital | 2 | (3) | 1 | (3) | 2 | 1 | 2 | 2 | 0 |
| Total | 27 | (25) | 25 | (21) | 48 | 6 | 12 | 27 | 4 |
| Guernsey | | | | | | | | | |
| St Martins, Princess Elizabeth Hospital | 0 | (0) | 0 | (0) | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | (0) | 0 | (0) | 0 | 0 | 0 | 0 | 0 |
| Isle of Man | | | | | | | | | |
| Douglas, Nobles I-O-M Hospital | 2 | (0) | 2 | (0) | 4 | 2 | 0 | 2 | 0 |
| Total | 2 | (0) | 2 | (0) | 4 | 2 | 0 | 2 | 0 |
| Jersey | | | | | | | | | |
| St Helier, Jersey General Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| England | 529 | (578) | 467 | (511) | 987 | 126 | 231 | 484 | 91 |
| Wales | | | | | | | | | |
| Abergavenny, Nevill Hall Hospital | 2 | (2) | 1 | (2) | 4 | 0 | 0 | 1 | 0 |
| Aberystwyth, Bronglais Hospital | 1 | (1) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Bangor, Ysbyty Gwynedd District General Hospital | 1 | (2) | 1 | (2) | 2 | 1 | 2 | 1 | 1 |
| Bodelwyddan, Glan Clwyd District General Hospital | 2 | (5) | 2 | (5) | 4 | 1 | 2 | 2 | 0 |
| Bridgend, Princess Of Wales Hospital | 5 | (4) | 3 | (4) | 10 | 0 | 0 | 3 | 0 |

| | | | | | | | | | |
|---|-----------|-------------|-----------|-------------|------------|-----------|-----------|-----------|-----------|
| Cardiff, University Of Wales Hospital | 14 | (10) | 10 | (10) | 26 | 4 | 2 | 11 | 5 |
| Carmarthen, West Wales General Hospital | 1 | (2) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Llanelli, Prince Philips Hospital | 2 | (1) | 2 | (1) | 4 | 0 | 2 | 2 | 0 |
| Merthyr Tydfil, Prince Charles Hospital | 1 | (1) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Neath, Neath And Port Talbot Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Newport, Royal Gwent Hospital | 2 | (2) | 2 | (2) | 4 | 1 | 2 | 2 | 0 |
| Penarth, Llandough Hospital | 1 | (1) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Pontypridd, Royal Glamorgan Hospital | 2 | (3) | 2 | (3) | 4 | 0 | 2 | 2 | 0 |
| Swansea, Morriston Hospital | 10 | (6) | 9 | (6) | 20 | 6 | 2 | 8 | 1 |
| Wrexham, Maelor General Hospital | 2 | (3) | 1 | (3) | 4 | 1 | 2 | 1 | 1 |
| Total | 46 | (44) | 37 | (43) | 90 | 14 | 16 | 37 | 8 |
| Scotland | | | | | | | | | |
| Aberdeen, Aberdeen Royal Infirmary | 5 | (4) | 5 | (3) | 10 | 2 | 2 | 5 | 2 |
| Airdrie, Monklands District General Hospital | 1 | (1) | 0 | (1) | 0 | 0 | 0 | 1 | 0 |
| Dumfries, Dumfries And Galloway Royal Infirmary | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Dundee, Ninewells Hospital | 3 | (1) | 3 | (1) | 6 | 1 | 3 | 3 | 0 |
| Dunfermline, Queen Margaret Hospital | 2 | (1) | 2 | (1) | 3 | 0 | 0 | 2 | 1 |
| East Kilbride, Hairmyres Hospital | 1 | (2) | 1 | (2) | 2 | 0 | 0 | 1 | 1 |
| Edinburgh, Royal Infirmary Of Edinburgh | 4 | (1) | 3 | (1) | 6 | 0 | 2 | 4 | 2 |
| Edinburgh, Western General Hospital | 18 | (4) | 18 | (4) | 34 | 6 | 1 | 18 | 3 |
| Fort William, Belford Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Glasgow, Victoria Infirmary | 3 | (3) | 2 | (3) | 6 | 0 | 0 | 2 | 0 |
| Glasgow, Glasgow Royal Infirmary | 0 | (3) | 0 | (3) | 0 | 0 | 0 | 0 | 0 |
| Glasgow, Southern General Hospital | 8 | (12) | 6 | (12) | 16 | 3 | 8 | 6 | 4 |
| Glasgow, Western Infirmary | 2 | (1) | 1 | (1) | 4 | 0 | 0 | 1 | 0 |
| Greenock, Inverclyde Royal Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Inverness, Raigmore Hospital | 1 | (2) | 1 | (2) | 2 | 0 | 0 | 1 | 0 |
| Kilmarnock, Crosshouse Hospital | 2 | (2) | 2 | (2) | 4 | 0 | 2 | 2 | 1 |
| Kirkcaldy, Victoria Hospital | 0 | (3) | 0 | (3) | 0 | 0 | 0 | 0 | 0 |
| Livingston, St John's Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 0 | 1 | 1 |
| Paisley, The Royal Alexandra Infirmary | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Paisley, Royal Alexandra Hospital | 2 | (1) | 2 | (1) | 4 | 1 | 0 | 2 | 0 |
| Stirling, Stirling Royal Infirmary | 3 | (0) | 2 | (0) | 6 | 1 | 0 | 2 | 1 |
| Wishaw, Wishaw General Hospital | 3 | (2) | 3 | (2) | 6 | 1 | 2 | 3 | 0 |
| Total | 59 | (48) | 52 | (47) | 111 | 15 | 20 | 54 | 16 |

| | | | | | | | | | |
|---|-----------|-------------|-----------|-------------|-----------|-----------|----------|-----------|----------|
| Northern Ireland | | | | | | | | | |
| Belfast, Antrim Hospital | 4 | (4) | 4 | (4) | 8 | 1 | 0 | 4 | 0 |
| Belfast, Belfast City Hospital | 5 | (1) | 5 | (1) | 10 | 0 | 0 | 5 | 0 |
| Belfast, Mater Infirmorum Hospital | 1 | (2) | 1 | (1) | 2 | 0 | 0 | 1 | 0 |
| Belfast, Royal Belfast Hospital For Sick Children | 0 | (2) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Belfast, Royal Victoria Hospital | 15 | (12) | 13 | (9) | 24 | 8 | 9 | 14 | 0 |
| Belfast, The Ulster Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Coleraine, Causeway Hospital | 0 | (3) | 0 | (2) | 0 | 0 | 0 | 0 | 0 |
| Enniskillen, Erne Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 | 0 | 0 |
| Londonderry, Altnagelvin Area Hospital | 4 | (2) | 4 | (2) | 8 | 2 | 0 | 4 | 0 |
| Portadown, Craigavon Area Hospital | 1 | (2) | 1 | (2) | 2 | 0 | 0 | 1 | 0 |
| Total | 30 | (30) | 28 | (25) | 54 | 11 | 9 | 29 | 0 |

Appendix IB Cadaveric non-heartbeating solid organ donors and donated organs in the UK, 1 April 2003 - 31 March 2004 (2002-2003), by donating hospital

| Donating hospital | All donors | | Multi-organ donor | | Kidney | Lung | Liver |
|---|------------|-------------|-------------------|------------|-----------|----------|----------|
| Avon, Gloucestershire and Wiltshire | | | | | | | |
| Bath, Royal United Hospital | 2 | (1) | 0 | (0) | 4 | 0 | 0 |
| Bristol, Frenchay Hospital | 7 | (6) | 0 | (0) | 12 | 0 | 0 |
| Cheltenham, Cheltenham General Hospital | 1 | (2) | 0 | (0) | 2 | 0 | 0 |
| Gloucester, Gloucestershire Royal Hospital | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Swindon, Great Western Hospital | 1 | (1) | 0 | (0) | 2 | 0 | 0 |
| Total | 12 | (10) | 0 | (0) | 22 | 0 | 0 |
| Bedfordshire and Hertfordshire | | | | | | | |
| Bedford, Bedford Hospital | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Hemel Hempstead, Hemel Hempstead General Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 |
| Stevenage, Lister Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 1 |
| Welwyn Garden City, Queen Elizabeth II Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 1 |
| Total | 3 | (1) | 2 | (1) | 6 | 0 | 2 |
| Birmingham and the Black Country | | | | | | | |
| Birmingham, Queen Elizabeth Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 1 |
| Total | 1 | (0) | 1 | (0) | 2 | 0 | 1 |
| County Durham and Tees Valley | | | | | | | |
| Hartlepool, University Hospital Of Hartlepool | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Middlesbrough, The James Cook University Hospital | 3 | (2) | 3 | (1) | 6 | 2 | 3 |
| Stockton-On-Tees, University Hospital Of North Tees | 2 | (0) | 0 | (0) | 4 | 0 | 0 |
| Total | 6 | (2) | 3 | (1) | 12 | 2 | 3 |
| Cumbria and Lancashire | | | | | | | |
| Preston, Royal Preston Hospital | 3 | (1) | 2 | (0) | 6 | 0 | 2 |
| Total | 3 | (1) | 2 | (0) | 6 | 0 | 2 |

| | | | | | | | |
|---|----------|------------|----------|------------|----------|----------|----------|
| Essex | | | | | | | |
| Colchester, Colchester General Hospital | 1 | (0) | 0 | (0) | 0 | 0 | 1 |
| Total | 1 | (0) | 0 | (0) | 0 | 0 | 1 |
| Greater Manchester | | | | | | | |
| Bury, Fairfield General Hospital | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Manchester, Manchester Royal Infirmary | 1 | (1) | 1 | (1) | 2 | 0 | 1 |
| Salford, Hope Hospital | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Wigan, Royal Albert Edward Infirmary | 1 | (0) | 0 | (0) | 1 | 0 | 0 |
| Total | 4 | (1) | 1 | (1) | 7 | 0 | 1 |
| Hampshire and Isle of Wight | | | | | | | |
| Basingstoke, North Hampshire Hospital | 1 | (0) | 0 | (0) | 1 | 0 | 0 |
| Southampton, Southampton University Hospitals | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Total | 2 | (0) | 0 | (0) | 3 | 0 | 0 |
| Kent and Medway | | | | | | | |
| Canterbury, Kent And Canterbury Hospital | 1 | (1) | 0 | (1) | 0 | 0 | 1 |
| Dartford, Darent Valley Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 |
| Gillingham, Medway Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 |
| Total | 1 | (3) | 0 | (2) | 0 | 0 | 1 |
| Leicestershire, Northamptonshire and Rutland | | | | | | | |
| Leicester, Leicester Royal Infirmary | 0 | (2) | 0 | (0) | 0 | 0 | 0 |
| Northampton, Northampton General Hospital | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Total | 1 | (2) | 0 | (0) | 2 | 0 | 0 |
| North Central London | | | | | | | |
| London, Nat. Hosp. For Neurology And Neurosurgery | 1 | (1) | 1 | (1) | 2 | 0 | 1 |
| London, Royal Free Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 1 |
| London, The Whittington Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 1 |
| Total | 3 | (1) | 3 | (1) | 6 | 0 | 3 |
| North East London | | | | | | | |
| London, The Royal London Hospital (Whitechapel) | 4 | (3) | 4 | (2) | 8 | 0 | 4 |

| | | | | | | | |
|---|----------|-------------|----------|------------|-----------|----------|----------|
| London, Whipps Cross Hospital | 0 | (3) | 0 | (3) | 0 | 0 | 0 |
| Total | 4 | (6) | 4 | (5) | 8 | 0 | 4 |
| North and East Yorkshire and Northern Lincolnshire | | | | | | | |
| Cottingham, Castle Hill Hospital | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Grimsby, Diana Princess Of Wales Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 1 |
| Hull, Hull Royal Infirmary | 3 | (3) | 1 | (2) | 6 | 0 | 1 |
| Total | 5 | (3) | 2 | (2) | 10 | 0 | 2 |
| Norfolk, Suffolk and Cambridgeshire | | | | | | | |
| Bury St Edmunds, West Suffolk Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 |
| Cambridge, Addenbrooke's Hospital | 4 | (9) | 0 | (0) | 8 | 0 | 0 |
| Huntingdon, Hinchingbrooke Hospital | 1 | (0) | 0 | (0) | 1 | 0 | 0 |
| Norwich, Norfolk And Norwich University Hospital | 3 | (0) | 0 | (0) | 6 | 0 | 0 |
| Total | 8 | (10) | 0 | (0) | 15 | 0 | 0 |
| Northumberland, Tyne and Wear | | | | | | | |
| Ashington, Wansbeck General Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 |
| Gateshead, Queen Elizabeth Hospital | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Newcastle, Freeman Hospital | 1 | (1) | 0 | (1) | 2 | 0 | 0 |
| Newcastle, Newcastle General Hospital | 4 | (8) | 2 | (0) | 8 | 2 | 1 |
| Sunderland, Sunderland Royal Hospital | 3 | (0) | 0 | (0) | 6 | 0 | 0 |
| Total | 9 | (10) | 2 | (1) | 18 | 2 | 1 |
| North West London | | | | | | | |
| London, Charing Cross Hospital | 1 | (1) | 1 | (0) | 2 | 0 | 1 |
| Total | 1 | (1) | 1 | (0) | 2 | 0 | 1 |
| South East London | | | | | | | |
| London, Guy's Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 |
| London, King's College Hospital | 2 | (4) | 1 | (2) | 4 | 0 | 1 |
| London, St Thomas' Hospital | 1 | (1) | 1 | (0) | 2 | 0 | 1 |
| Sidcup, Queen Mary's Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 |
| Total | 3 | (7) | 2 | (3) | 6 | 0 | 2 |

| | | | | | | | |
|--|-----------|-------------|-----------|-------------|------------|----------|-----------|
| South East London | | | | | | | |
| London, Guy's Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 |
| London, King's College Hospital | 2 | (4) | 1 | (2) | 4 | 0 | 1 |
| London, St Thomas' Hospital | 1 | (1) | 1 | (0) | 2 | 0 | 1 |
| Sidcup, Queen Mary's Hospital | 0 | (1) | 0 | (1) | 0 | 0 | 0 |
| Total | 3 | (7) | 2 | (3) | 6 | 0 | 2 |
| South West London | | | | | | | |
| Croydon, Mayday University Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 1 |
| Kingston, Kingston Hospital | 1 | (0) | 1 | (0) | 2 | 0 | 1 |
| London, St George's Hospital | 5 | (4) | 4 | (3) | 10 | 0 | 4 |
| Total | 7 | (4) | 6 | (3) | 14 | 0 | 6 |
| South West Peninsula | | | | | | | |
| Plymouth, Derriford Hospital | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Total | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Thames Valley | | | | | | | |
| Banbury, Horton General Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 |
| Oxford, Radcliffe Infirmary | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Reading, Royal Berkshire Hospital | 1 | (2) | 0 | (0) | 2 | 0 | 0 |
| Wycombe, Wycombe General Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 |
| Total | 2 | (4) | 0 | (0) | 4 | 0 | 0 |
| West Yorkshire | | | | | | | |
| Dewsbury, Dewsbury And District Hospital | 0 | (1) | 0 | (0) | 0 | 0 | 0 |
| Leeds, Leeds General Infirmary | 6 | (6) | 3 | (6) | 12 | 0 | 3 |
| Total | 6 | (7) | 3 | (6) | 12 | 0 | 3 |
| England | 83 | (73) | 32 | (26) | 157 | 4 | 33 |
| Scotland | | | | | | | |
| Edinburgh, Western General Hospital | 1 | (0) | 0 | (0) | 1 | 0 | 0 |
| Glasgow, Southern General Hospital | 1 | (0) | 0 | (0) | 2 | 0 | 0 |
| Total | 2 | (0) | 0 | (0) | 3 | 0 | 0 |

| | | | | | | | | |
|---------------------------------------|----------|------------|----------|------------|----------|----------|----------|--|
| Wales | | | | | | | | |
| Cardiff, University Of Wales Hospital | 1 | (0) | 0 | (0) | 2 | 0 | 0 | |
| Total | 1 | (0) | 0 | (0) | 2 | 0 | 0 | |

| Appendix II Numbers of heartbeating donors and organs retrieved in the UK, 1 April 2004 - 31 March 2005, by kidney designated area | | | | | | | | | |
|--|-------------------|-----------------------|---------------------------|------------|---------------|--------------|------------------------|--------------|-----------------|
| Kidney designated area | All donors | Donors pmp | Multi-organ donors | pmp | Kidney | Heart | Organs Lung | Liver | Pancreas |
| Belfast | 30 | 17.8 | 28 | 16.6 | 54 | 11 | 9 | 29 | 0 |
| Birmingham | 35 | 7.8 | 32 | 7.2 | 66 | 10 | 28 | 32 | 2 |
| Bristol | 21 | 10.7 | 19 | 9.6 | 41 | 4 | 7 | 18 | 3 |
| Cambridge | 29 | 11.6 | 27 | 10.8 | 56 | 10 | 12 | 27 | 11 |
| Cardiff | 41 | 18.3 | 33 | 14.7 | 80 | 11 | 10 | 33 | 6 |
| Coventry | 11 | 13.6 | 11 | 13.6 | 20 | 3 | 14 | 11 | 0 |
| Edinburgh | 34 | 14.2 | 33 | 13.8 | 63 | 9 | 8 | 34 | 9 |
| Glasgow | 25 | 9.4 | 19 | 7.1 | 48 | 6 | 12 | 20 | 7 |
| Leeds | 42 | 11.4 | 38 | 10.3 | 78 | 10 | 20 | 40 | 5 |
| Leicester | 15 | 7.1 | 12 | 5.7 | 28 | 4 | 2 | 13 | 3 |
| Liverpool | 43 | 13.3 | 37 | 11.4 | 84 | 7 | 12 | 38 | 3 |
| Manchester | 55 | 13.9 | 47 | 11.9 | 98 | 12 | 22 | 50 | 13 |
| Newcastle | 42 | 14.8 | 38 | 13.4 | 80 | 5 | 28 | 39 | 8 |
| North Thames | 69 | 9.4 | 57 | 7.8 | 130 | 18 | 12 | 58 | 12 |
| Nottingham | 10 | 7.2 | 10 | 7.2 | 19 | 6 | 8 | 10 | 0 |
| Oxford | 31 | 10.3 | 29 | 9.7 | 58 | 11 | 21 | 30 | 10 |
| Plymouth | 14 | 7.9 | 14 | 7.9 | 27 | 4 | 7 | 14 | 3 |
| Portsmouth | 20 | 8.4 | 15 | 6.3 | 36 | 5 | 9 | 17 | 4 |
| Sheffield | 25 | 13.7 | 24 | 13.1 | 48 | 5 | 7 | 25 | 4 |
| South Thames | 72 | 10.7 | 61 | 9.1 | 128 | 15 | 28 | 66 | 12 |
| Total | 664 | 11.3 | 584 | 9.9 | 1242 | 166 | 276 | 604 | 115 |

| Appendix IIIA Retrieval populations for kidney centres, 2004-2005 (based on ONS <i>2001 census</i> figures) | |
|--|--------------------------------|
| Kidney centre | Retrieval population (million) |
| Birmingham | 4.46 |
| Bristol | 1.97 |
| Cambridge | 2.50 |
| Coventry | 0.81 |
| Leeds | 3.70 |
| Leicester | 2.12 |
| Liverpool | 3.24 |
| Manchester | 3.95 |
| Newcastle | 2.83 |
| North Thames | 7.32 |
| Nottingham | 1.38 |
| Oxford | 3.00 |
| Plymouth | 1.78 |
| Portsmouth | 2.39 |
| Sheffield | 1.83 |
| South Thames | 6.73 |
| Total (England) | 50.01 |
| Cardiff | 2.24 |
| Total (Wales) | 2.24 |
| Edinburgh | 2.40 |
| Glasgow | 2.66 |
| Total (Scotland) | 5.06 |
| Belfast | 1.69 |
| Total (Northern Ireland) | 1.69 |
| TOTAL (UK) | 59.00 |

Appendix IIIB Retrieval population for liver and cardiothoracic zones 2004-2005 (based on *ONS 2001 Census* figures)

| Liver Zone | Retrieval population (million) |
|----------------------------|---------------------------------------|
| Birmingham | 14.95 |
| Cambridge | 8.19 |
| Edinburgh | 5.06 |
| King's College | 14.73 |
| Leeds | 7.66 |
| Newcastle | 2.54 |
| The Royal Free | 5.86 |
| Cardiothoracic Zone | Retrieval population (million) |
| Birmingham | 9.59 |
| Glasgow | 5.06 |
| Harefield | 13.13 |
| Manchester | 7.91 |
| Newcastle | 8.47 |
| Papworth | 14.85 |

Appendix IV Unadjusted refusal rates by donor transplant co-ordinator team

| Donor transplant co-ordinator team | Unadjusted refusal rate (%) |
|---|------------------------------------|
| Aberdeen | 47 |
| Belfast | 42 |
| Birmingham | 45 |
| Bristol | 27 |
| Cambridge | 36 |
| Cardiff | 30 |
| Coventry | 48 |
| Edinburgh | 34 |
| Glasgow | 35 |
| Leeds | 48 |
| Leicester | 35 |
| Liverpool | 40 |
| Manchester | 39 |
| Newcastle | 43 |
| North Thames | 51 |
| Nottingham | 36 |
| Oxford | 33 |
| Plymouth | 33 |
| Portsmouth | 21 |
| Sheffield | 32 |
| South Thames | 39 |



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