Survival Rates Following Transplantation

This chapter shows graft survival rates over time for kidney, pancreas, and corneal transplants, and patient survival estimates for kidney, pancreas, cardiothoracic, liver, and intestinal transplants, performed in the UK. Separate estimates are presented for adult and paediatric patients (using organ specific age definitions) and for transplants from donors after brain death and donors after circulatory death.

In all cases, the Kaplan-Meier estimate of the survivor function was used to provide the survival rate and groups (years) were compared using the log-rank test. The analyses do not take account of risk factors which may change over time. Graft survival is defined as time from transplant to graft failure, censoring for death with a functioning graft and grafts still functioning at time of analysis. Patient survival is defined as time from transplant to patient death, censoring for patients still alive at time of analysis. Both analyses consider only first transplants.

11.1 Kidney graft and patient survival

11.1.1 Adult kidney recipients - donor after brain death (DBD)

Figure 11.1 shows long-term graft survival in adult (≥18 years) recipients for first kidney only transplant from donors after brain death. **Table 11.1** shows the graft survival estimates and confidence intervals for one, two, five and ten years post-transplant. There have been significant improvements in one and two years survival over the time periods shown, (p=0.01 and p=0.03, respectively). **Table 11.2** shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There were no statistically significant changes in patient survival over time (p>0.2).

Figure 11.1 Long-term graft survival after first adult kidney only transplant from donors after brain death, 1 January 2006 – 31 December 2018

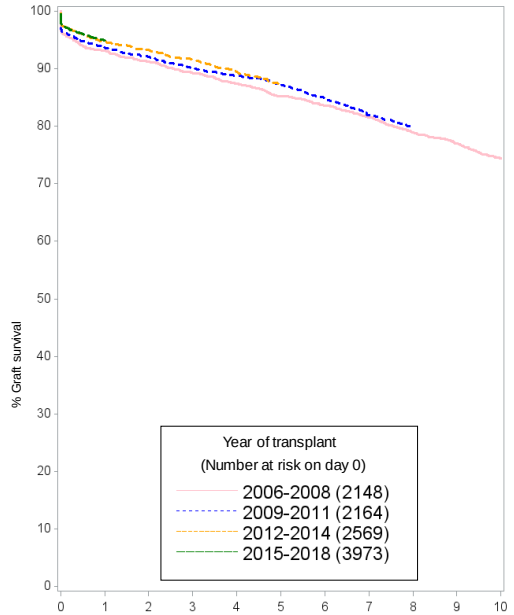

Table 11.1 Graft survival after first adult kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	2148	93	(92-94)	91	(90-92)	85	(84-87)	74	(72-76)
2009-2011	2164	94	(93-95)	92	(91-93)	87	(86-89)		
2012-2014	2569	95	(94-96)	93	(92-94)	87	(86-89)		
2015-2018	3973	95	(94-96)						

Table 11.2 Patient survival after first adult kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	2149	97	(96-97)	95	(94-96)	89	(88-91)	78	(76-80)
2009-2011	2165	96	(95-97)	95	(94-95)	90	(88-91)		
2012-2014	2571	96	(95-97)	94	(93-95)	88	(87-90)		
2015-2018	3974	97	(96-98)						

11.1.2 Adult kidney recipients - donor after circulatory death (DCD)

Long-term graft survival in adult recipients for kidney transplants from donors after circulatory death is shown in **Figure 11.2**. **Table 11.3** shows the graft survival estimates and confidence intervals for one, two, five and ten years post-transplant. There has been significant variation in one year survival over the time periods shown, p=0.005. **Table 11.4** shows the patient survival estimates and confidence intervals for each time period analysed. There was a statistically significant increase in patient survival over time at one year post-transplant (p=0.005).

Figure 11.2 Long-term graft survival after first adult kidney only transplant from donors after circulatory death, 1 January 2006 – 31 December 2018

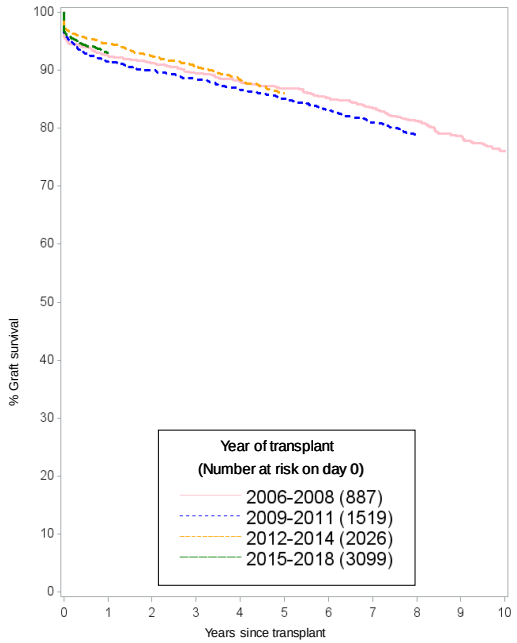

Table 11.3 Graft survival after first adult kidney only transplant from a DCD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	887	93	(91-94)	91	(89-93)	87	(84-89)	76	(73-79)
2009-2011	1519	91	(90-93)	90	(88-91)	85	(83-87)		
2012-2014	2026	95	(93-95)	92	(91-94)	86	(84-88)		
2015-2018	3099	93	(92-94)						

Table 11.4 Patient survival after first adult kidney only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	888	96	(95-97)	95	(93-96)	88	(86-90)	76	(73-79)
2009-2011	1519	95	(94-96)	93	(92-94)	86	(84-87)		
2012-2014	2027	96	(95-97)	94	(93-95)	86	(84-88)		
2015-2018	3101	97	(96-98)						

11.1.3 Adult kidney recipients - living donor

Long-term graft survival in adult recipients for living donor kidney transplants in the UK is shown in **Figure 11.3**. **Table 11.5** shows graft survival estimates and confidence intervals for each time period analysed. There has been a significant improvement in one year survival over the time periods shown, p<0.0001. **Table 11.6** shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There were no statistically significant changes in patient survival over time (p>0.3).

Figure 11.3 Long-term graft survival after first adult living donor kidney only transplant in the UK, 1 January 2006 – 31 December 2018

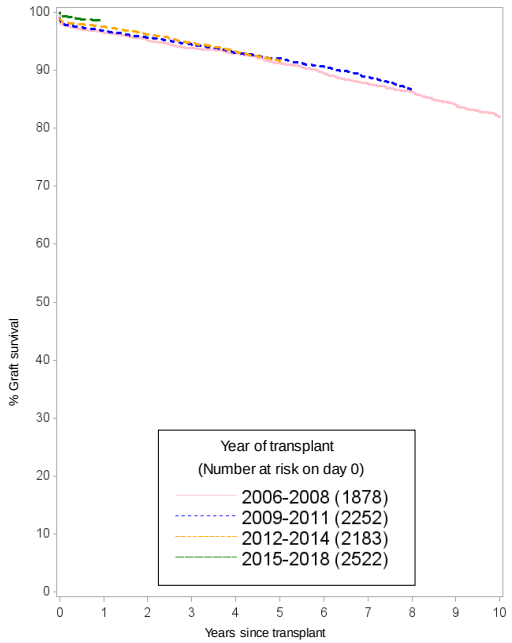

Table 11.5 Graft survival after first adult living donor kidney transplant

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	1878	96	(96-97)	95	(94-96)	91	(90-92)	82	(80-84)
2009-2011	2252	97	(96-97)	96	(95-96)	92	(91-93)		
2012-2014	2183	98	(97-98)	96	(95-97)	92	(90-93)		
2015-2018	2522	99	(98-99)						

Table 11.6 Patient survival after first adult living donor kidney transplant

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	1878	99	(98-99)	98	(97-99)	95	(94-96)	89	(87-90)
2009-2011	2253	99	(98-99)	98	(97-99)	94	(93-95)		
2012-2014	2182	99	(98-99)	98	(97-99)	95	(94-96)		
2015-2018	2524	99	(99-100)						

11.1.4 Paediatric kidney recipients - donor after brain death (DBD)

Figure 11.4 shows long-term graft survival in paediatric (<18 years) recipients for first kidney only transplants from donors after brain death. Graft survival estimates and confidence intervals are shown for each time period analysed in **Table 11.7**. There were no statistically significant changes in graft survival over time (p>0.4). **Table 11.8** shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There were no statistically significant changes in patient survival over time (p>0.4). There were insufficient paediatric recipients of first kidney only transplants from donors after circulatory death to permit reliable analysis.

Figure 11.4 Long-term graft survival after first paediatric kidney only transplant from donors after brain death, 1 January 2006 – 31 December 2018

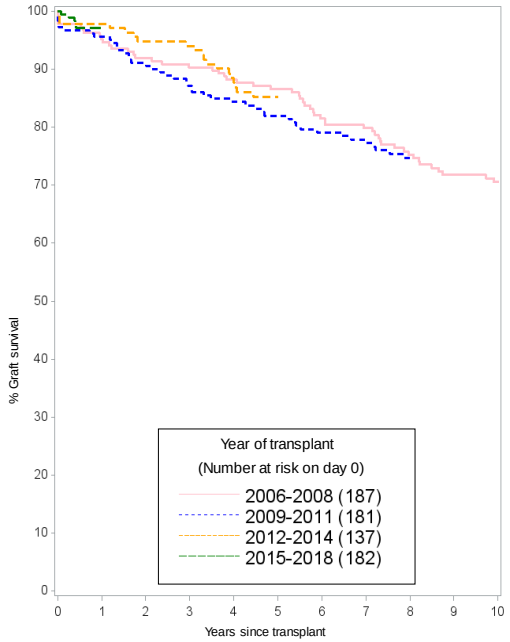

Table 11.7 Graft survival after first paediatric kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	187	95	(91-97)	92	(87-95)	87	(81-91)	71	(63-77)
2009-2011	181	96	(91-98)	91	(86-94)	82	(76-87)		
2012-2014	137	98	(93-99)	95	(89-97)	85	(78-90)		
2015-2018	182	97	(93-99)						

Table 11.8 Patient survival after first paediatric kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	188	100	(-)	99	(96-100)	99	(96-100)	98	(94-99)
2009-2011	181	99	(96-100)	99	(96-100)	97	(93-99)		
2012-2014	137	99	(95-100)	99	(95-100)	98	(92-99)		
2015-2018	182	99	(96-100)						

11.1.5 Paediatric kidney recipients - living donor

Long-term graft survival in paediatric recipients for living donor kidney transplants in the UK is shown in **Figure 11.5**. **Table 11.9** shows graft survival estimates and confidence intervals for each time period analysed. There has been a significant change in five year survival over the time periods shown, p=0.004. **Table 11.10** shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There were no statistically significant changes in patient survival over time (p>0.6).

Figure 11.5 Long-term graft survival after first paediatric living donor kidney only transplant in the UK, 1 January 2006 – 31 December 2018

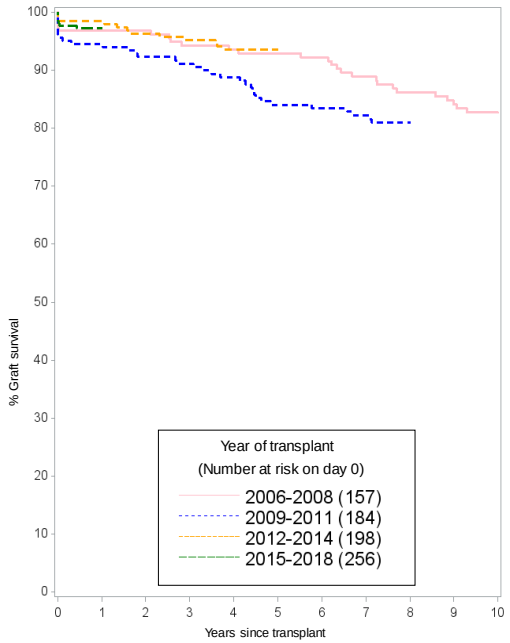

Table 11.9 Graft survival after first paediatric living donor kidney transplant

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	157	97	(93-99)	97	(93-99)	93	(88-96)	83	(76-88)
2009-2011	184	95	(90-97)	92	(87-95)	84	(78-89)		
2012-2014	198	98	(95-100)	96	(92-98)	94	(89-96)		
2015-2018	256	97	(94-99)						

Table 11.10 Patient survival after first paediatric living donor kidney transplant

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	157	99	(96-100)	99	(96-100)	99	(95-100)	97	(93-99)
2009-2011	185	99	(96-100)	99	(96-100)	98	(94-99)		
2012-2014	198	99	(96-100)	99	(96-100)	99	(96-100)		
2015-2018	256	99	(96-100)						

11.2 Pancreas graft and patient survival

11.2.1 Simultaneous kidney/pancreas transplants - donor after brain death (DBD)

Figure 11.6 shows long-term graft survival in recipients receiving their first simultaneous kidney/pancreas (SPK) transplant performed from donors after brain death. Graft and patient survival estimates and confidence intervals are shown at one, two, five and ten years post-transplant in **Table 11.11** and **Table 11.12** respectively. Results relate to adults only as there are no paediatric pancreas transplant recipients. There has been a borderline significant change in two year survival over the time periods shown, p=0.09. Differences in patient survival are not significant over time (p>0.2).

Figure 11.6 Long-term graft survival after first SPK transplant from donors after brain death, 1 January 2006 – 31 December 2018

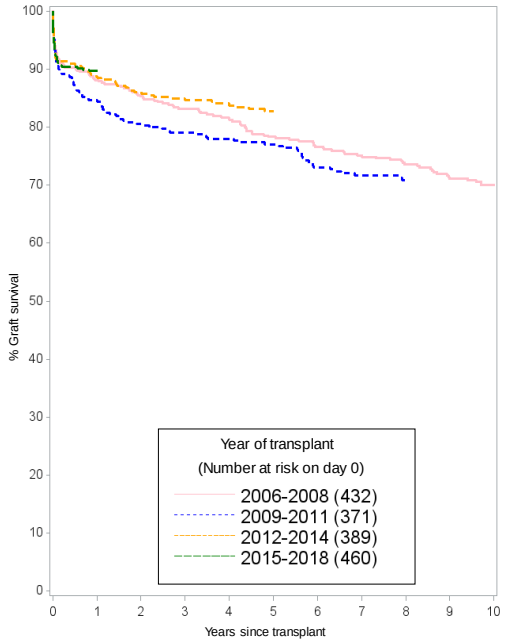

Table 11.11 Graft survival after first SPK transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	432	88	(85-91)	85	(82-88)	78	(74-82)	70	(65-74)
2009-2011	371	85	(81-88)	81	(76-84)	77	(72-81)		
2012-2014	389	89	(85-91)	86	(82-89)	83	(79-86)		
2015-2018	460	90	(87-92)						

Table 11.12 Patient survival after first SPK transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	433	96	(93-97)	94	(92-96)	90	(87-93)	75	(70-79)
2009-2011	371	96	(94-98)	93	(90-95)	87	(83-90)		
2012-2014	390	97	(94-98)	96	(93-97)	88	(84-91)		
2015-2018	460	98	(96-99)						

11.2.2 Simultaneous kidney/pancreas transplants - donor after circulatory death (DCD)

The majority of simultaneous kidney/pancreas (SPK) transplants from a DCD have been performed since 1 January 2007, so there are insufficient data available to analyse long-term survival. **Figure 11.7** shows pancreas graft survival in recipients receiving their first SPK transplant performed from donors after circulatory death. Graft and patient survival estimates and confidence intervals are shown at one, two and three years in **Table 11.13** and **Table 11.14** respectively. Results are for adult patients only.

Figure 11.7 Pancreas graft survival after first SPK transplant from donors after circulatory death, 1 January 2012 – 31 December 2018

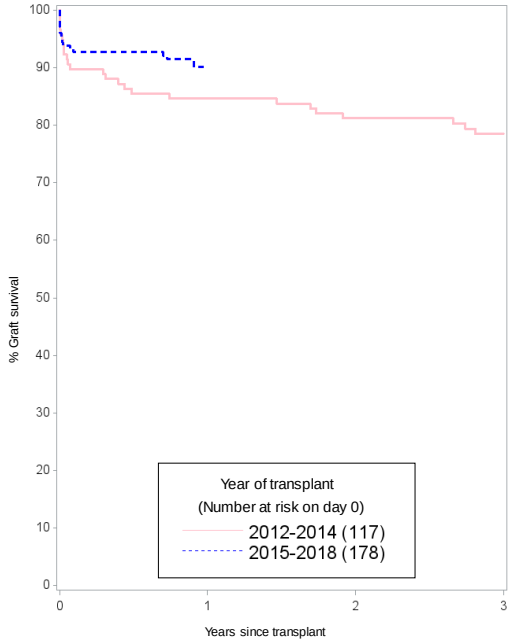

Table 11.13 Graft survival after first SPK transplant from a DCD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Three year	
2012-2014	117	85	(77-90)	81	(73-87)	79	(70-85)
2015-2018	178	90	(85-94)				

Table 11.14 Patient survival after first SPK transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Three year	
2012-2014	117	99	(94-100)	98	(93-100)	96	(90-99)
2015-2018	178	99	(95-100)				

11.2.3 Pancreas only transplants - donor after brain death (DBD)

Figure 11.8 shows long-term graft survival in recipients receiving their first pancreas only transplant performed from donors after brain death. Graft and patient survival estimates and confidence intervals are shown at one, two, five and ten years in **Table 11.15** and **Table 11.16** respectively. Results are for adult patients only. There have been no significant changes in graft survival over time (p>0.6). There were no statistically significant changes in patient survival over time (p>0.3).

Figure 11.8 Long-term graft survival after pancreas only transplant from donors after brain death, 1 January 2006 – 31 December 2018

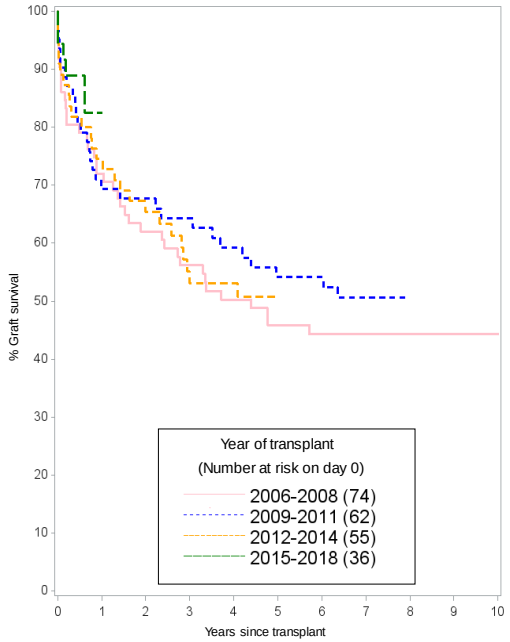

Table 11.15 Graft survival after first pancreas only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	74	72	(60-81)	62	(50-72)	46	(34-57)	44	(32-56)
2009-2011	62	69	(56-79)	68	(54-78)	54	(41-66)		
2012-2014	55	75	(61-84)	65	(51-76)	51	(36-63)		
2015-2018	36	83	(65-92)						

Table 11.16 Patient survival after first pancreas only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	74	95	(86-98)	92	(82-96)	87	(76-93)	70	(56-80)
2009-2011	63	96	(86-99)	94	(84-98)	82	(68-90)		
2012-2014	55	98	(86-100)	98	(86-100)	79	(61-90)		
2015-2018	36	97	(79-100)						

11.2.4 Pancreas only transplants - donor after circulatory death (DCD)

Figure 11.9 shows pancreas graft survival in recipients receiving their first pancreas only transplant performed from donors after circulatory death. Graft and patient survival estimates and confidence intervals are shown at one, two and three years in **Table 11.17** and **Table 11.18** respectively. Results are for adult patients only.

Figure 11.9 Pancreas graft survival after pancreas only transplant from donors after circulatory death, 1 January 2012 – 31 December 2018

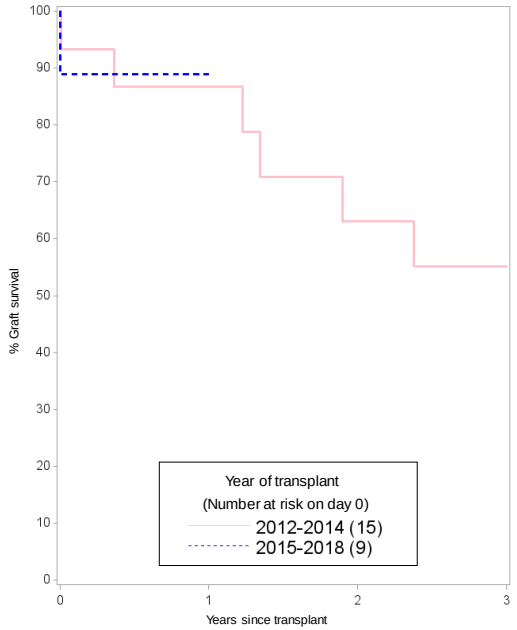

Table 11.17 Graft survival after first pancreas only transplant from a DCD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Three year	
2012-2014	15	87	(56-96)	63	(32-83)	55	(26-77)
2015-2018	9	89	(43-98)				

Table 11.18 Patient survival after first pancreas only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Three year	
2012-2014	15	93	(61-99)	93	(61-99)	78	(46-92)
2015-2018	9	100	(-)				

11.3 Cardiothoracic patient survival

11.3.1 Adult heart recipients – donors after brain death (DBD)

Long-term patient survival for adult (≥16 years) recipients after first heart only transplant performed from donors after brain death is shown in **Figure 11.10**. Super-urgent, urgent, and non-urgent patients are included. **Table 11.19** shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant for each transplant era. There were no statistically significant differences in patient survival over time (p>0.1).

Figure 11.10 Long-term patient survival after first adult heart only transplant from donors after brain death, 1 January 2006 – 31 December 2018

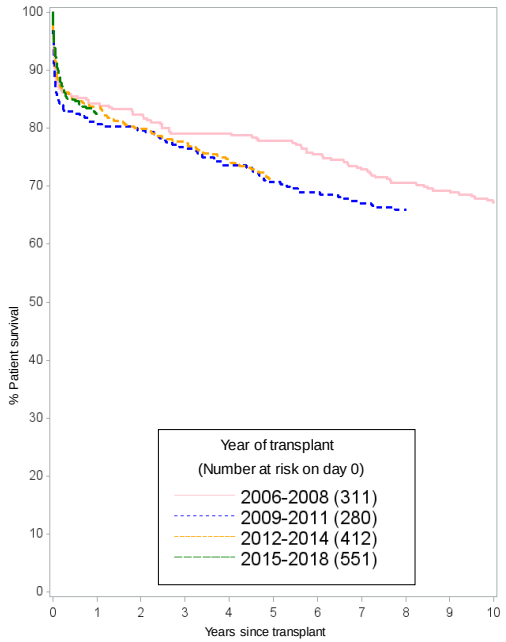

Table 11.19 Patient survival after first adult heart only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	311	84	(80-88)	82	(78-86)	78	(73-82)	67	(62-72)
2009-2011	280	81	(76-85)	80	(74-84)	71	(65-76)		
2012-2014	412	84	(80-87)	80	(76-84)	71	(66-75)		
2015-2018	551	83	(79-85)						

11.3.2 Adult heart-lung block recipients – donors after brain death (DBD)

Patient survival for adult recipients after first heart-lung block transplant from donors after brain death is shown in **Figure 11.11**. Patient survival estimates and confidence intervals for each time period analysed are shown in **Table 11.20**. There is some variation between survival rates across transplant eras, however these statistics are based on small numbers and are not statistically significantly different (p>0.2).

Figure 11.11 Long-term patient survival after first adult heart-lung block transplant from donors after brain death, 1 January 2006 – 31 December 2018

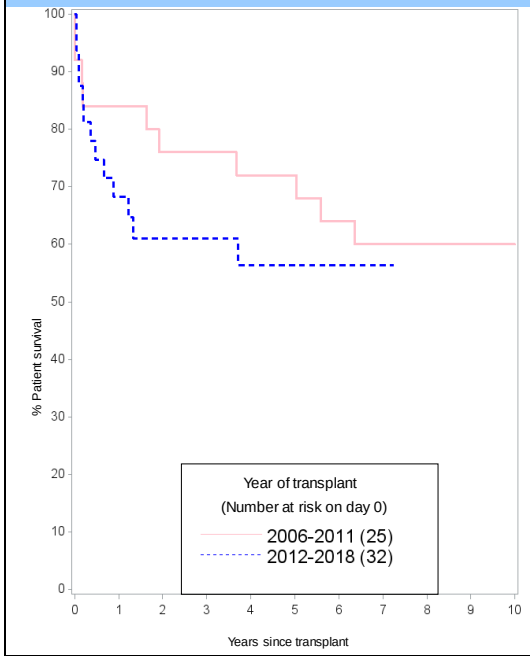

Table 11.20 Patient survival after first adult heart-lung block transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2011	25	84	(63-94)	76	(54-88)	72	(50-86)	60	(38-76)
2012-2018	32	68	(49-82)	61	(42-76)	56	(36-72)		

11.3.3 Adult lung recipients - donors after brain death (DBD)

Patient survival for adult recipients after first lung only transplant from donors after brain death is shown in **Figure 11.12**, with survival estimates and confidence intervals shown in **Table 11.21**. Super-urgent, urgent, and non-urgent patients are included. There were no statistically significant differences in patient survival over time (p>0.5).

Figure 11.12 Long-term patient survival after first adult lung only transplant from donors after brain death, 1 January 2006 – 31 December 2018

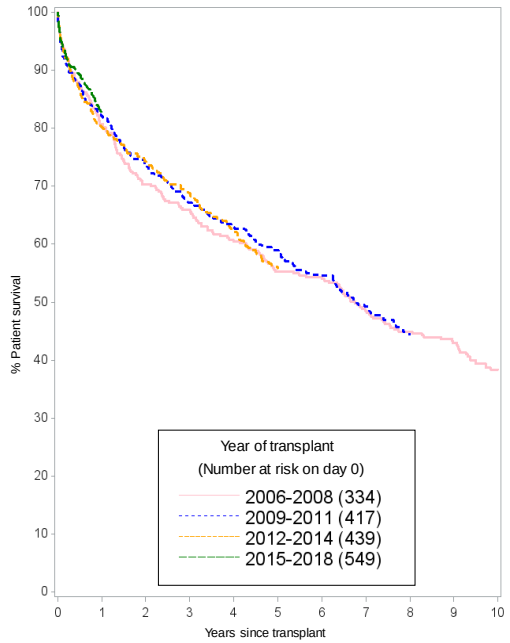

Table 11.21 Patient survival after first adult lung only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	334	81	(76-85)	70	(65-75)	55	(50-61)	38	(33-44)
2009-2011	417	82	(78-85)	74	(69-78)	59	(54-64)		
2012-2014	439	80	(76-84)	74	(70-78)	56	(51-60)		
2015-2018	549	83	(79-86)						

11.3.4 Adult lung recipients - donors after circulatory death (DCD)

The majority of lung transplants from a DCD have been performed since 1 January 2007, so there are insufficient data available to analyse long-term patient survival. Patient survival for adult recipients after first lung only transplant from donors after circulatory death is shown in **Figure 11.13**, with survival estimates and confidence intervals shown in **Table 11.22**. Super-urgent, urgent, and non-urgent patients are included.

Figure 11.13 Patient survival after first adult lung only transplant from donors after circulatory death, 1 January 2012 – 31 December 2018

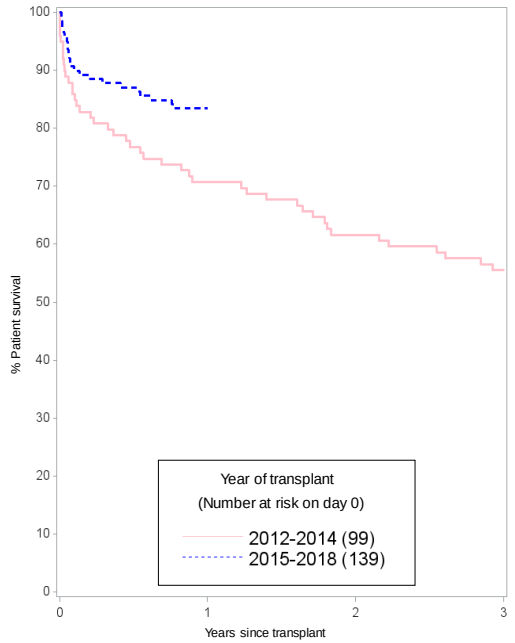

Table 11.22 Patient survival after first adult lung only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Three year	
2012-2014	99	71	(61-79)	62	(51-70)	56	(45-65)
2015-2018	139	83	(76-89)				

11.3.5 Paediatric heart recipients – donors after brain death (DBD)

Long-term patient survival for paediatric recipients after first heart only transplant from donors after brain death is shown in **Figure 11.14**. Both urgent and non-urgent patients are included. **Table 11.23** shows the patient survival estimates and confidence intervals for one, two, five, and ten years post-transplant. There have been statistically significant variations in one, two, and five year survival over the time period (p=0.03, p=0.02, and p=0.05 respectively). The number of heart-lung transplant recipients was too small for analysis.

Figure 11.14 Long-term patient survival after first paediatric heart only transplant from donors after brain death, 1 January 2006 – 31 December 2018

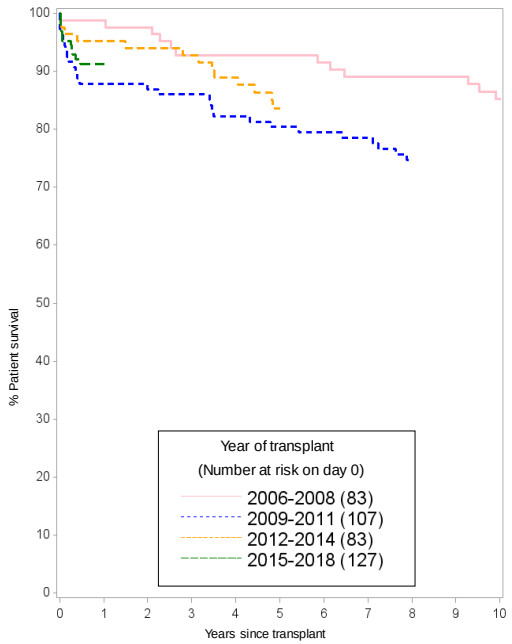

Table 11.23 Patient survival after first paediatric heart only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	83	99	(92-100)	98	(91-99)	93	(85-97)	85	(75-91)
2009-2011	107	88	(80-93)	87	(79-92)	80	(72-87)		
2012-2014	83	95	(88-98)	94	(86-97)	84	(73-90)		
2015-2018	127	91	(85-95)						

11.3.6 Paediatric lung recipients - donors after brain death (DBD)

Long-term patient survival for paediatric recipients after first lung only transplant from donors after brain death is shown in **Figure 11.15**. Urgent and non-urgent patients are included. **Table 11.24** shows the patient survival estimates and confidence intervals for one, two, five, and ten years post-transplant. There were no statistically significant differences in patient survival over time (p>0.2).

Figure 11.15 Long-term patient survival after first paediatric lung only transplant from donors after brain death, 1 January 2006 – 31 December 2018

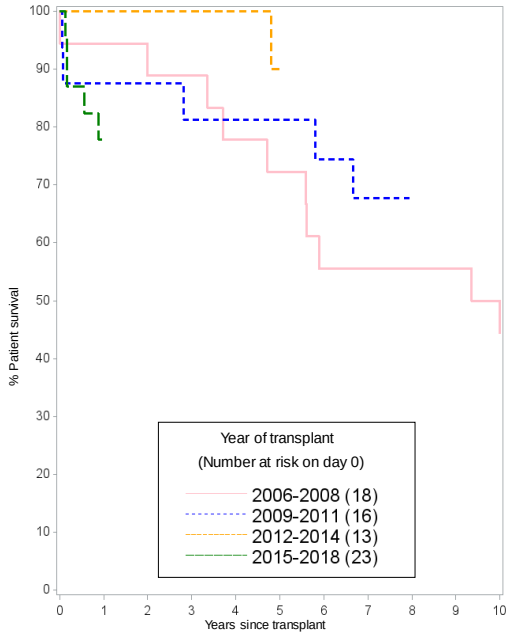

Table 11.24 Patient survival after first paediatric lung only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	18	94	(67-99)	89	(62-97)	72	(46-87)	44	(22-65)
2009-2011	16	88	(59-97)	88	(59-97)	81	(52-94)		
2012-2014	13	100	(-)	100	(-)	90	(47-99)		
2015-2018	23	78	(55-90)						

11.4 Liver patient survival

11.4.1 Adult liver recipients - donor after brain death (DBD)

Long-term patient survival for adult (≥17 years) recipients after first elective NHS Group 1 liver only transplants from donors after brain death is shown in **Figure 11.16**. **Table 11.25** shows patient survival estimates at one, two, five, and ten years post-transplant. There have been significant improvements in one, two and five year patient survival, p<0.05 in each case, over the time periods analysed. Whole liver transplants are included as well as reduced and split liver transplants.

Figure 11.16 Long-term patient survival after first elective adult liver only transplant from donors after brain death, 1 January 2006 – 31 December 2018

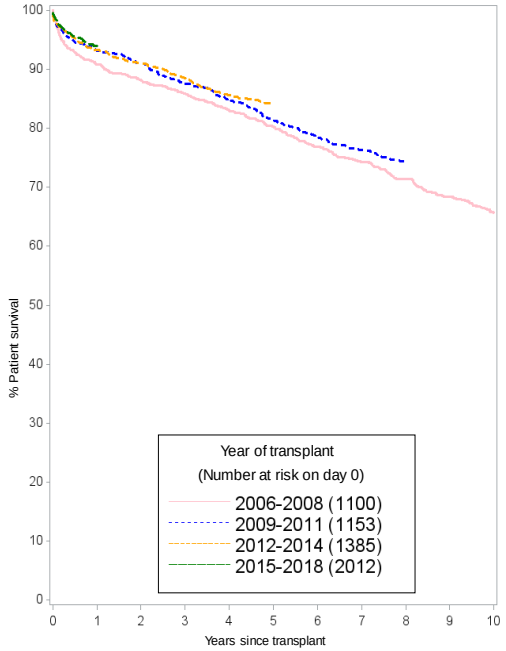

Table 11.25 Patient survival after first elective adult NHS Group 1 liver only transplant from donors after brain death, 1 January 2006 to 31 December 2018

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	1100	91	(89-92)	88	(86-90)	80	(78-83)	66	(63-69)
2009-2011	1153	93	(92-95)	91	(89-93)	81	(79-84)		
2012-2014	1385	93	(92-95)	91	(89-92)	84	(82-86)		
2015-2018	2012	94	(93-95)						

11.4.2 Adult liver recipients - donor after circulatory death (DCD)

Patient survival for adult (≥17 years) recipients after first elective NHS Group 1 liver only transplants from donors after circulatory death is shown in **Figure 11.17**. Due to small numbers prior to 2006 it is not possible to estimate long term patient survival. **Table 11.26** shows patient survival estimates at one, two and five years post-transplant.

Figure 11.17 Long-term patient survival after first elective adult liver only transplant from donors after circulatory death, 1 January 2009 – 31 December 2018

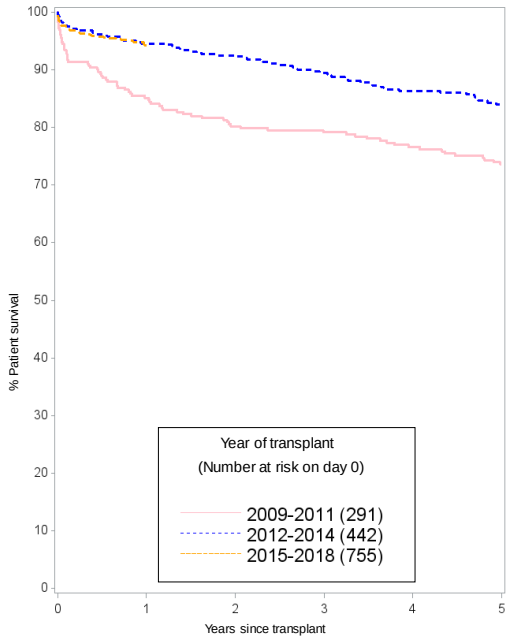

Table 11.26 Patient survival after first elective adult NHS Group 1 liver only transplant from donors after circulatory death, 1 January 2006 to 31 December 2018

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year	
2009-2011	291	85	(81-89)	80	(75-84)	74	(68-78)
2012-2014	442	95	(92-96)	93	(90-95)	84	(80-87)
2015-2018	755	94	(92-96)				

11.4.3 Paediatric liver recipients - donor after brain death (DBD)

Figure 11.18 and **Table 11.27** show long-term patient survival estimates for first elective liver only transplants from donors after brain death in paediatric (<17 years) recipients. There have been no statistically significant changes in one, two or five year patient survival over the time period analysed (p>0.2). The number of paediatric transplants from donors after circulatory death was too small to estimate meaningful patient survival.

Figure 11.18 Long-term patient survival after first elective paediatric liver only transplant from donors after brain death, 1 January 2006 – 31 December 2018

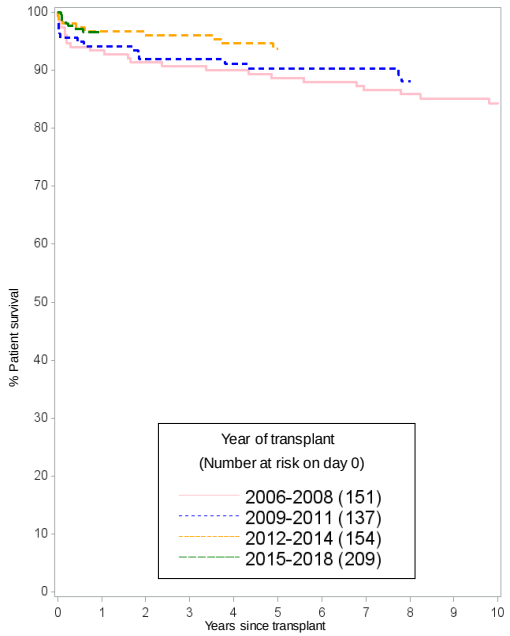

Table 11.27 Patient survival after first elective paediatric liver only transplant from donors after brain death, 1 January 2006 to 31 December 2018

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2006-2008	151	93	(88-96)	91	(86-95)	89	(82-93)	84	(77-89)
2009-2011	137	94	(89-97)	92	(86-95)	90	(84-94)		
2012-2014	154	97	(92-99)	96	(91-98)	94	(88-97)		
2015-2018	209	97	(93-98)						

11.5 Intestinal patient survival

Figure 11.19 and **Table 11.28** show patient survival estimates for recipients receiving their first intestinal transplant, by recipient age group (adults aged ≥ 18 years) and transplant era.

Figure 11.19 Patient survival after first intestinal graft in the UK, 1 January 2011 – 31 December 2018

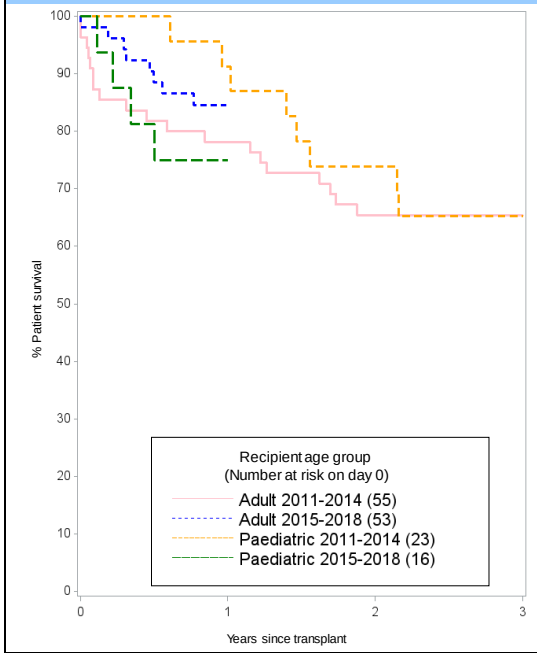

Table 11.28 Patient survival after first intestinal transplant in the UK, 1 January 2011 - 31 December 2018

Recipient age group	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Three year	
Adult							
2011-2014	55	78	(65-87)	65	(51-76)	65	(51-76)
2015-2018	53	85	(72-92)				
Paediatric							
2011-2014	23	91	(69-98)	74	(51-87)	65	(42-81)
2015-2018	16	75	(46-90)				

11.6 Corneal graft survival

11.6.1 Cornea grafts for keratoconus

Figure 11.20 shows graft survival estimates for first corneal transplant for keratoconus (KC) for grafts in 2006-2008, 2009-2011, 2012-2014 and 2015-2018. Graft survival estimates and confidence intervals are shown by transplant year at one, two and five years in **Table 11.29**.

Figure 11.20 Graft survival after first corneal graft for KC in the UK, 1 January 2006 – 31 December 2018

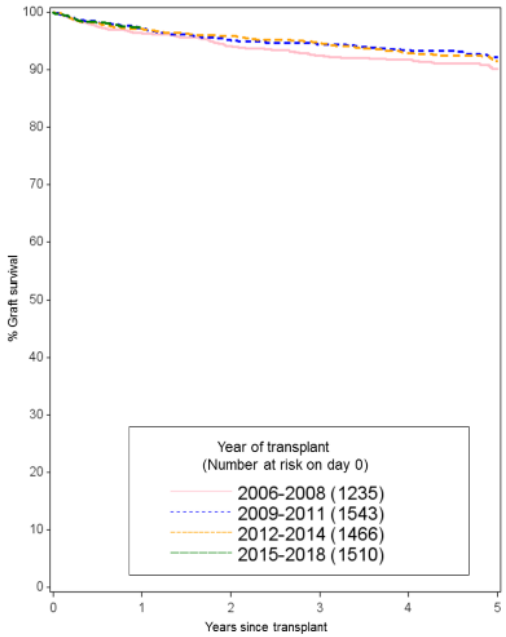

Table 11.29 Graft survival after first corneal graft for KC in the UK

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year	
2006-2008	1235	96	(95-97)	94	(93-95)	90	(88-92)
2009-2011	1543	97	(96-98)	95	(94-96)	92	(90-94)
2012-2014	1466	97	(96-98)	96	(95-97)	91	(89-93)
2015-2018	1510	97	(96-98)				

11.6.2 Cornea grafts for Fuchs endothelial dystrophy

Figure 11.21 shows graft survival estimates for first corneal transplant for Fuchs endothelial dystrophy (FED) for grafts in 2006-2008, 2009-2011, 2012-2014 and 2015-2018. Graft survival estimates and confidence intervals are shown by transplant year at one, two and five years in **Table 11.30**.

Figure 11.21 Graft survival after first corneal graft for FED in the UK, 1 January 2006 – 31 December 2018

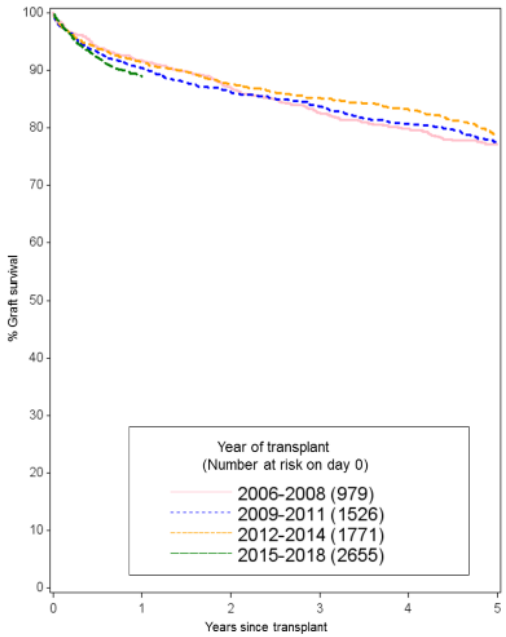

Table 11.30 Graft survival after first corneal graft for FED in the UK

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year	
2006-2008	979	92	(90-93)	87	(85-89)	77	(74-80)
2009-2011	1526	90	(89-92)	86	(84-88)	78	(75-80)
2012-2014	1771	91	(90-93)	88	(86-89)	79	(76-81)
2015-2018	2655	89	(88-90)				

11.6.3 Cornea grafts for pseudophakic bullous keratopathy

Figure 11.22 shows graft survival estimates for first corneal transplant for pseudophakic bullous keratopathy (PBK) for grafts in 2006-2008, 2009-2011, 2012-2014 and 2015-2018. Graft survival estimates and confidence intervals are shown by transplant year at one, two and five years in **Table 11.31**.

Figure 11.22 Graft survival after first corneal graft for PBK in the UK, 1 January 2006 – 31 December 2018

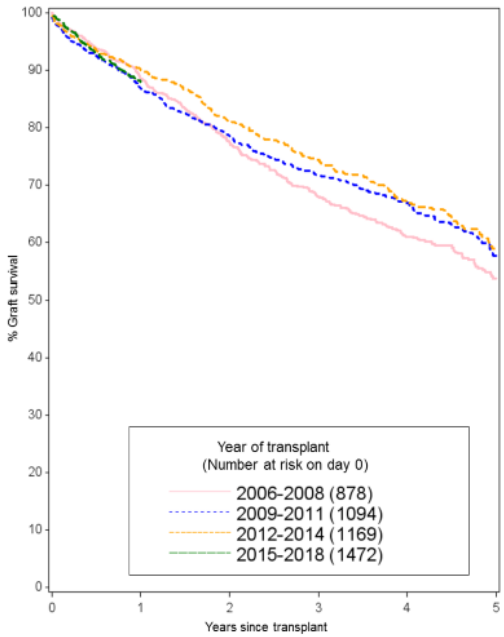

Table 11.31 Graft survival after first corneal graft for PBK in the UK

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year	
2006-2008	878	88	(86-90)	78	(75-80)	54	(49-58)
2009-2011	1094	87	(85-89)	79	(76-81)	57	(53-61)
2012-2014	1169	90	(88-92)	81	(79-83)	59	(55-63)
2015-2018	1472	88	(86-90)				