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 has been a significant improvement in one-year survival over the time periods shown, ($p<0.05$). **Table 11.2** shows the patient survival estimates and confidence intervals for one, two, five and ten years post-transplant. There has been a significant reduction in 5 year patient survival over time ($p<0.01$).

Figure 11.1 Long-term graft survival after first adult kidney only transplant from donors after brain death, 1 January 2011 – 31 December 2023

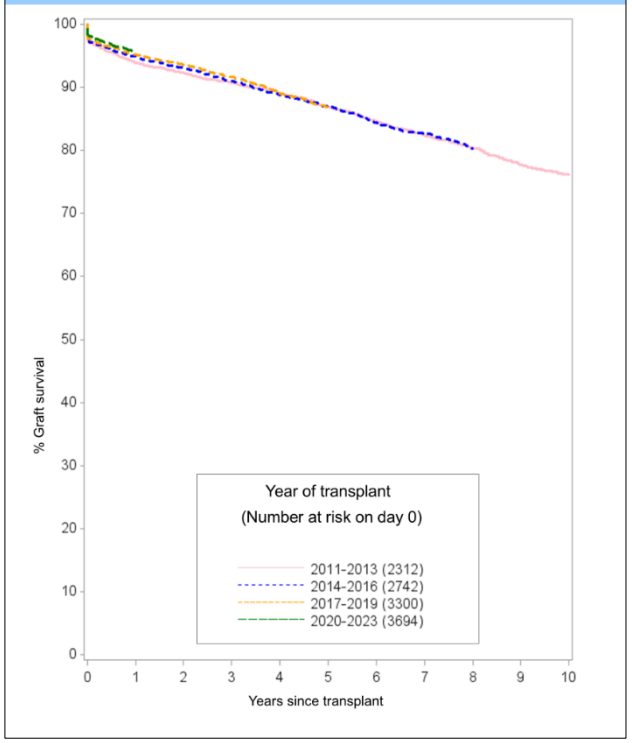

Table 11.1 Graft survival after first adult kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	2312	94	(93-95)	92	(91-93)	87	(85-88)	76	(74-78)
2014-2016	2742	95	(94-96)	93	(92-94)	87	(86-88)		
2017-2019	3300	95	(94-96)	94	(93-94)	87	(85-88)		
2020-2023	3694	96	(95-96)						

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	
2011-2013	2313	96	(96-97)	94	(93-95)	88	(87-90)	73	(71-75)
2014-2016	2743	97	(96-98)	95	(94-96)	88	(87-90)		
2017-2019	3302	97	(96-97)	94	(93-95)	85	(84-87)		
2020-2023	3694	96	(95-97)						

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 were no statistically significant changes in graft survival over time (p>0.17). **Table 11.4** shows the patient survival estimates and confidence intervals for each time period analysed. There was a statistically significant difference in patient survival over time at one- and five-year post-transplant (p<0.01).

Figure 11.2 Long-term graft survival after first adult kidney only transplant from donors after circulatory death, 1 January 2011 – 31 December 2023

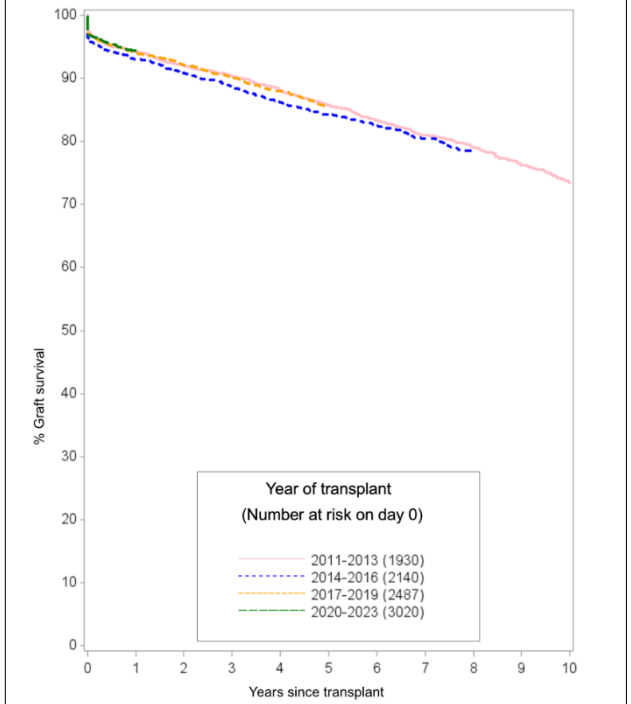

Table 11.3 Graft survival after first adult kidney only transplant from a DCD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	1930	94	(93-95)	92	(91-93)	86	(84-87)	73	(71-76)
2014-2016	2140	93	(92-94)	91	(90-92)	84	(83-86)		
2017-2019	2487	94	(93-95)	92	(91-93)	86	(84-87)		
2020-2023	3020	94	(94-95)						

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	
2011-2013	1930	96	(95-96)	94	(92-95)	86	(84-87)	66	(64-69)
2014-2016	2141	97	(96-98)	95	(94-96)	86	(85-88)		
2017-2019	2489	97	(96-98)	94	(93-95)	83	(81-84)		
2020-2023	3020	96	(95-96)						

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-, two-, and five-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>0.2).

Figure 11.3 Long-term graft survival after first adult living donor kidney only transplant in the UK, 1 January 2011 – 31 December 2023

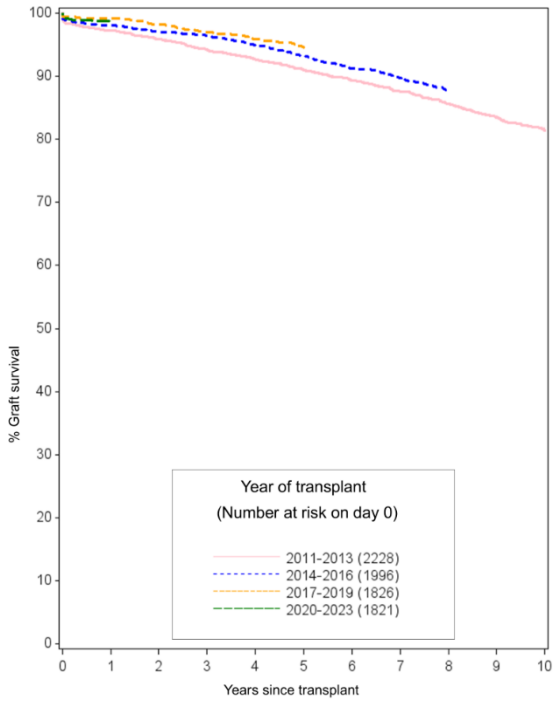

Table 11.5 Graft survival after first adult living donor kidney transplant

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	2228	97	(96-98)	96	(95-97)	91	(90-92)	81	(80-83)
2014-2016	1996	98	(97-99)	97	(96-98)	93	(92-94)		
2017-2019	1826	99	(99-99)	98	(97-99)	95	(93-96)		
2020-2023	1821	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	
2011-2013	2229	99	(99-99)	98	(97-99)	95	(94-96)	85	(83-86)
2014-2016	1996	99	(98-99)	98	(97-99)	95	(94-96)		
2017-2019	1829	99	(99-100)	98	(97-99)	94	(93-95)		
2020-2023	1821	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>0.1). **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>0.3). 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 2011 – 31 December 2023

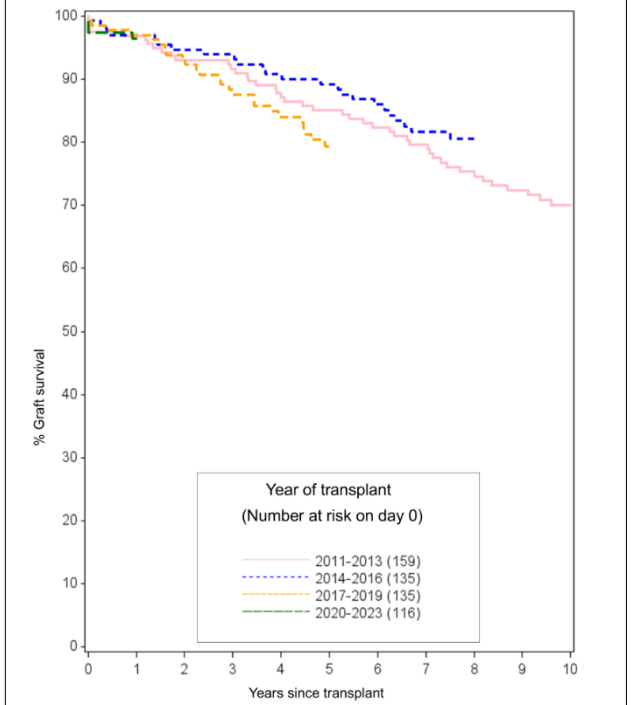

Table 11.7 Graft survival after first paediatric kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	159	97	(93-99)	93	(88-96)	85	(78-90)	70	(62-77)
2014-2016	135	97	(92-99)	95	(89-97)	89	(82-93)		
2017-2019	135	97	(92-99)	93	(87-96)	79	(71-86)		
2020-2023	116	96	(91-99)						

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	
2011-2013	159	99	(96-100)	99	(95-100)	97	(92-99)	94	(89-97)
2014-2016	135	99	(95-100)	99	(95-100)	99	(95-100)		
2017-2019	135	99	(95-100)	99	(95-100)	98	(94-100)		
2020-2023	116	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 were no statistically significant changes in graft survival over time (p>0.2). **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>0.7).

Figure 11.5 Long-term graft survival after first paediatric living donor kidney only transplant in the UK, 1 January 2011 – 31 December 2023

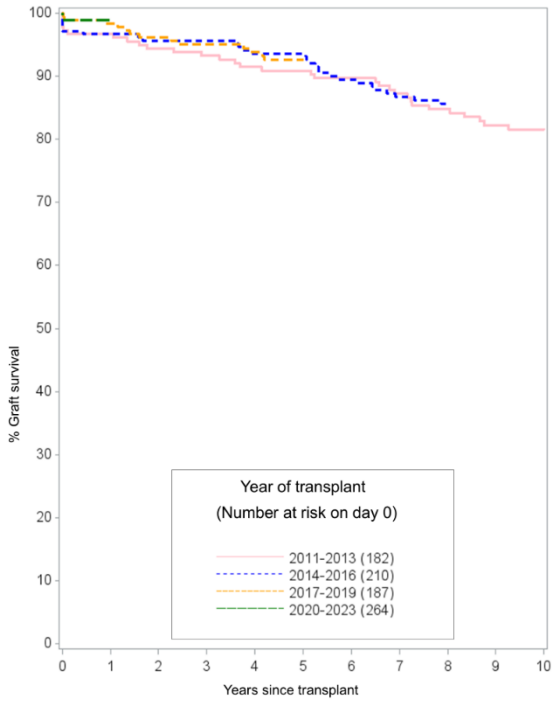

Table 11.9 Graft survival after first paediatric living donor kidney transplant

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	182	97	(93-99)	94	(90-97)	91	(86-94)	82	(75-87)
2014-2016	210	97	(93-98)	96	(92-98)	94	(89-96)		
2017-2019	187	98	(95-99)	96	(92-98)	93	(88-96)		
2020-2023	264	99	(97-100)						

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	
2011-2013	182	99	(96-100)	99	(96-100)	99	(96-100)	98	(94-99)
2014-2016	210	99	(96-100)	99	(96-100)	98	(95-99)		
2017-2019	187	99	(96-100)	99	(96-100)	98	(94-99)		
2020-2023	264	99	(96-100)						

11.2 Pancreas graft and patient survival

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

Figure 11.6 shows long-term pancreas graft survival in recipients receiving their first simultaneous pancreas/kidney (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 was a significant difference in graft survival at two years (p=0.03). There was a significant difference in patient survival at one year (p=0.05).

Figure 11.6 Long-term graft survival after first SPK transplant from donors after brain death, 1 January 2011 – 31 December 2023

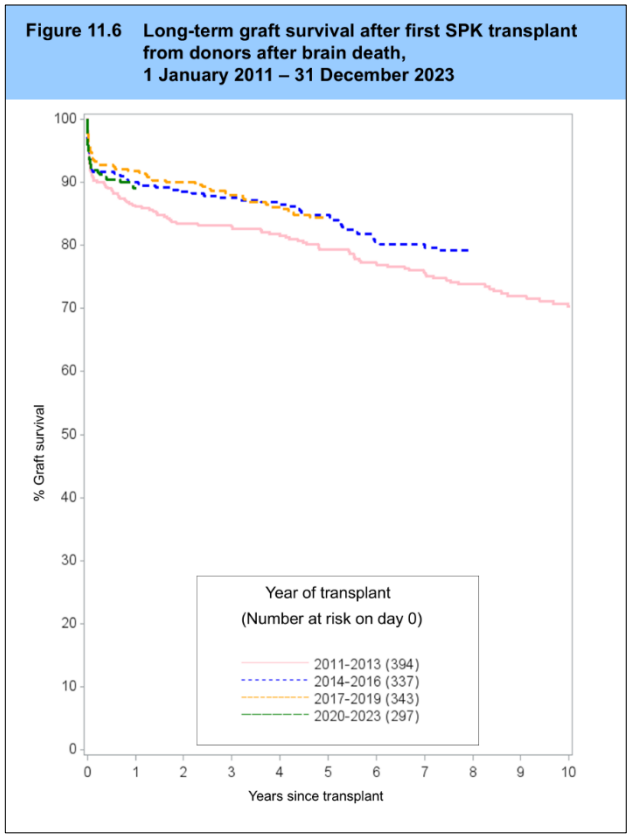

Table 11.11 Pancreas graft survival after first SPK transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	394	86	(82-89)	84	(79-87)	79	(75-83)	70	(65-75)
2014-2016	337	90	(86-93)	89	(85-91)	85	(80-88)		
2017-2019	343	92	(88-94)	90	(86-93)	84	(80-88)		
2020-2023	297	89	(85-92)						

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	
2011-2013	394	96	(94-98)	94	(92-96)	88	(84-91)	73	(67-77)
2014-2016	339	97	(94-98)	96	(94-98)	89	(85-92)		
2017-2019	344	99	(97-100)	98	(95-99)	92	(88-95)		
2020-2023	299	95	(92-97)						

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

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, five and ten years in **Table 11.13** and **Table 11.14** respectively. Results are for adult patients only. There has been a significant improvement in two- and five-year graft survival over the time periods shown, $p<0.05$. Differences in patient survival are not significant over time ($p>0.1$).

Figure 11.7 Pancreas graft survival after first SPK transplant from donors after circulatory death, 1 January 2011 – 31 December 2023

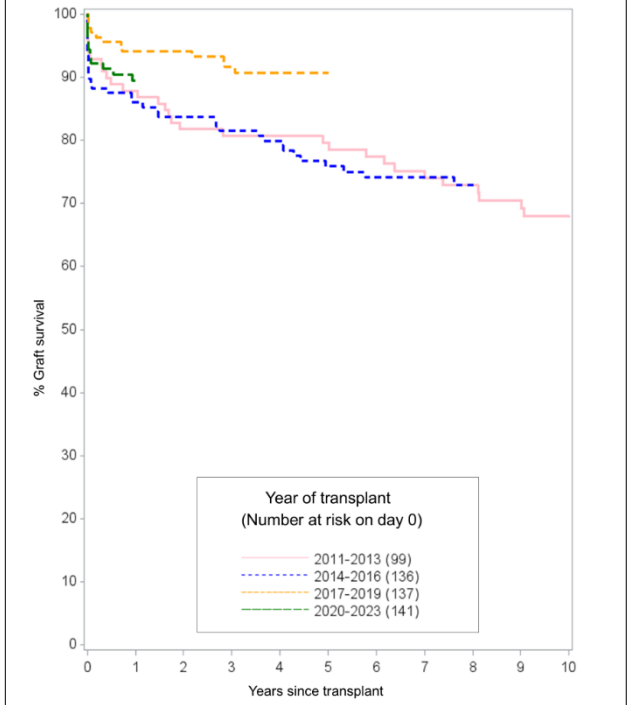

Table 11.13 Pancreas graft survival after first SPK transplant from a DCD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	99	88	(80-93)	82	(73-88)	80	(70-86)	68	(57-76)
2014-2016	136	86	(79-91)	84	(76-89)	76	(68-82)		
2017-2019	137	94	(89-97)	94	(89-97)	91	(84-95)		
2020-2023	141	89	(83-94)						

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		Five year		Ten year	
2011-2013	100	99	(93-100)	98	(92-99)	94	(86-97)	82	(72-89)
2014-2016	136	99	(95-100)	98	(93-99)	92	(86-96)		
2017-2019	137	99	(95-100)	98	(94-100)	94	(87-97)		
2020-2023	142	96	(91-98)						

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 were significant differences in graft survival at two and five years (p=0.03 and p=0.01 respectively). There were no statistically significant changes in patient survival over time (p>0.4).

Figure 11.8 Long-term graft survival after pancreas only transplant from donors after brain death, 1 January 2011 – 31 December 2023

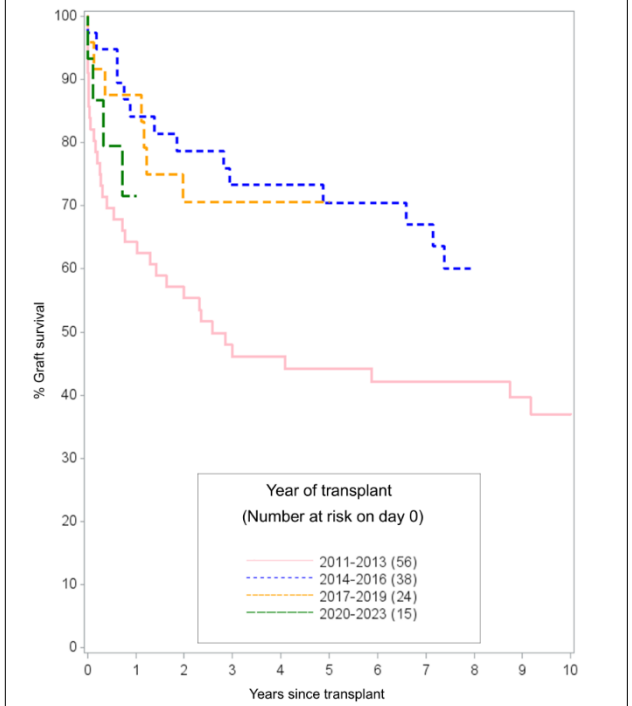

Table 11.15 Graft survival after first pancreas only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	56	64	(50-75)	55	(41-67)	44	(31-57)	37	(24-50)
2014-2016	38	84	(68-93)	79	(62-89)	70	(53-82)		
2017-2019	24	88	(66-96)	71	(48-85)	71	(48-85)		
2020-2023	15	72	(40-88)						

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	
2011-2013	56	98	(87-100)	98	(87-100)	77	(61-88)	57	(39-71)
2014-2016	38	97	(83-100)	95	(80-99)	89	(73-96)		
2017-2019	24	96	(73-99)	91	(68-98)	86	(62-95)		
2020-2023	15	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, five and ten years in **Table 11.17** and **Table 11.18** respectively. Results are for adult patients only and are based on small numbers so should be interpreted with caution.

Figure 11.9 Pancreas graft survival after pancreas only transplant from donors after circulatory death, 1 January 2011 – 31 December 2023

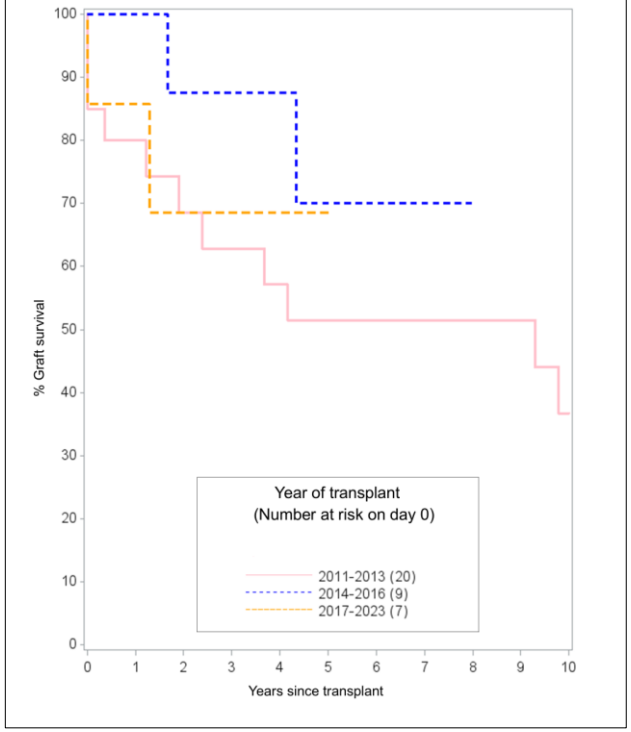

Table 11.17 Graft survival after first pancreas only transplant from a DCD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	20	80	(55-92)	69	(43-85)	51	(27-71)	37	(15-59)
2014-2016	9	100	-	88	(39-98)	70	(22-92)		
2017-2023	7	86	(33-98)	69	(21-91)	69	(21-91)		

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		Five year		Ten year	
2011-2013	20	95	(68-99)	95	(68-99)	95	(68-99)	87	(56-97)
2014-2016	9	100	-	100	-	67	(28-88)		
2017-2023	7	100	-	100	-	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 was a statistically significant difference in patient survival at one-year (p=0.01).

Figure 11.10 Long-term patient survival after first adult heart only transplant from donors after brain death, 1 January 2011 – 31 December 2023

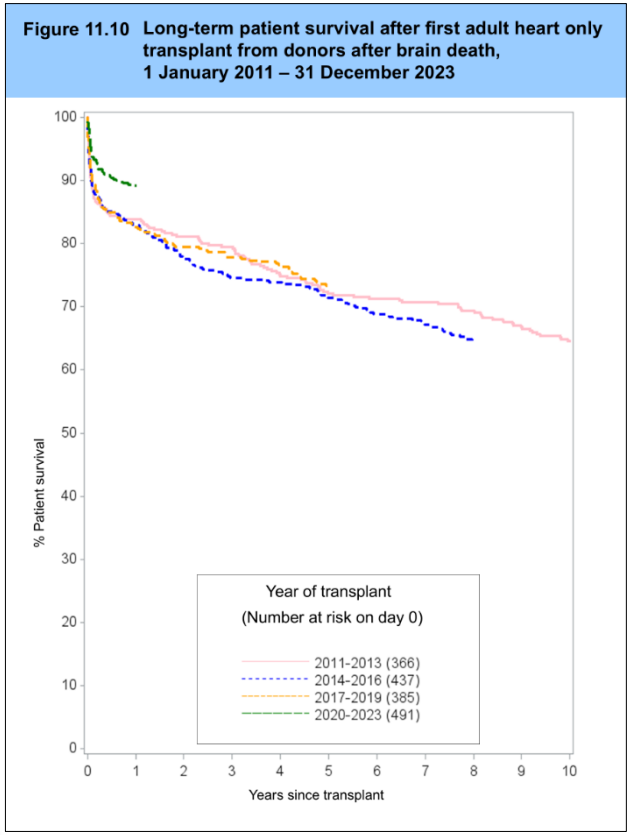

Table 11.19 Patient survival after first adult heart only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	366	84	(80-87)	81	(77-85)	72	(67-76)	65	(59-69)
2014-2016	437	83	(79-86)	78	(74-81)	71	(67-75)		
2017-2019	385	83	(78-86)	79	(75-83)	73	(69-78)		
2020-2023	491	89	(86-92)						

11.3.2 Adult heart recipients – donors after circulatory death (DCD)

Long-term patient survival for adult (≥16 years) recipients after first heart only transplant performed from donors after circulatory death is shown in **Figure 11.11**. Super-urgent, urgent, and non-urgent patients are included. **Table 11.20** shows the patient survival estimates and confidence intervals for one, two, and three years post-transplant for each transplant era.

Figure 11.11 Long-term patient survival after first adult heart only transplant from donors after circulatory death, 1 January 2017 – 31 December 2023

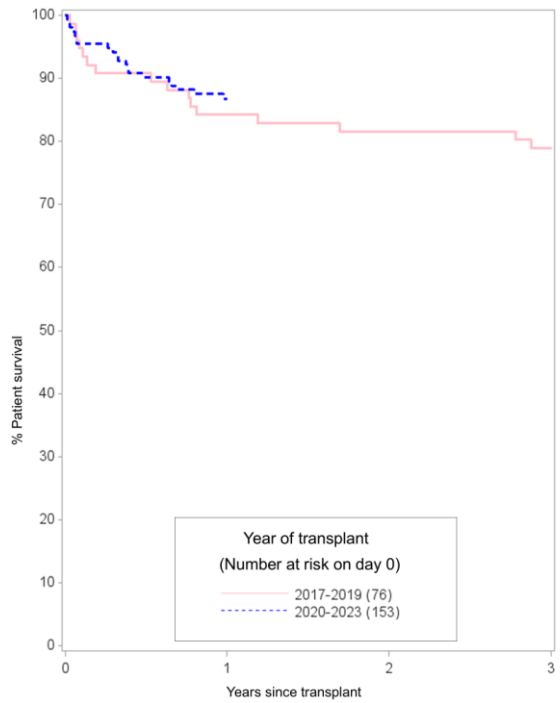

Table 11.20 Patient survival after first adult heart only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Three year	
2017-2019	76	84	(74-91)	82	(71-89)	79	(68-87)
2020-2023	153	87	(80-91)				

11.3.3 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 11.12**. Patient survival estimates and confidence intervals for each time period analysed are shown in **Table 11.21**. The number of transplants is small and thus confidence intervals for survival estimates are wide and overlap between eras indicating no statistically significant difference (p>0.1).

Figure 11.12 Long-term patient survival after first adult heart-lung block transplant from donors after brain death, 1 January 2011 – 31 December 2023

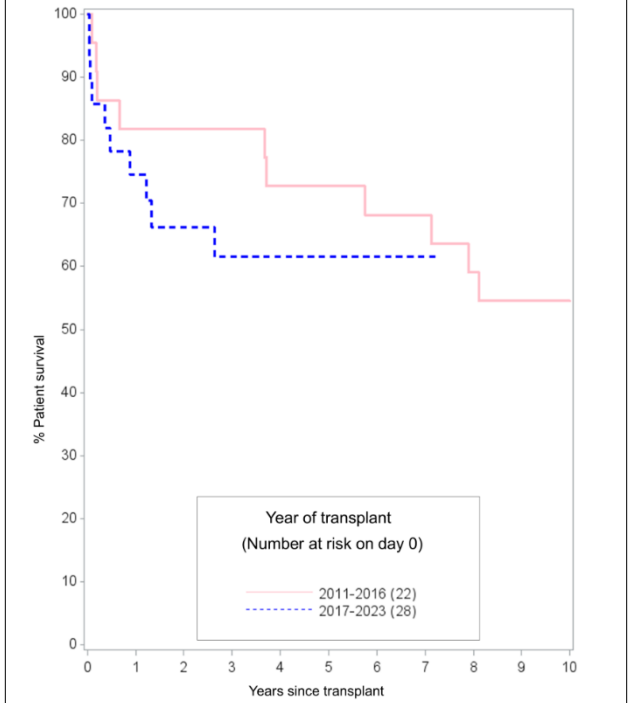

Table 11.21 Patient survival after first adult heart-lung block transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2016	22	82	(59-93)	82	(59-93)	73	(49-87)	55	(32-72)
2017-2023	28	75	(54-87)	66	(45-81)	62	(40-77)		

11.3.4 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 11.13**, with survival estimates and confidence intervals shown in **Table 11.22**. Super-urgent, urgent and non-urgent patients are included. There were no statistically significant differences in patient survival across eras (p>0.4).

Figure 11.13 Long-term patient survival after first adult lung only transplant from donors after brain death, 1 January 2011 – 31 December 2023

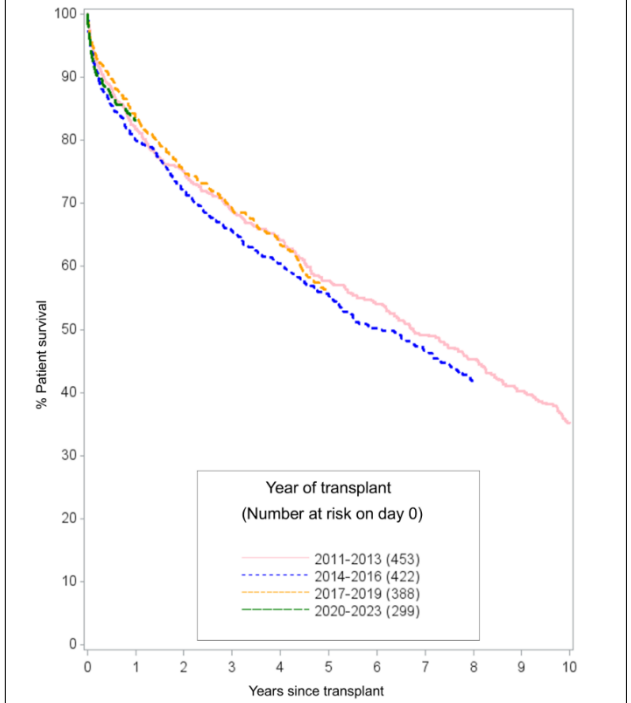

Table 11.22 Patient survival after first adult lung only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	453	82	(78-85)	75	(71-79)	58	(53-62)	35	(31-40)
2014-2016	422	80	(76-84)	72	(67-76)	55	(50-60)		
2017-2019	388	84	(80-87)	75	(71-79)	56	(51-61)		
2020-2023	299	83	(78-87)						

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

Patient survival for adult recipients after first lung only transplant from donors after circulatory death is shown in **Figure 11.14**, by era, with survival estimates and confidence intervals shown in **Table 11.23**. Super-urgent, urgent and non-urgent patients are included. There were no statistically significant differences in patient survival across eras (p>0.7).

Figure 11.14 Patient survival after first adult lung only transplant from donors after circulatory death, 1 January 2011 – 31 December 2023

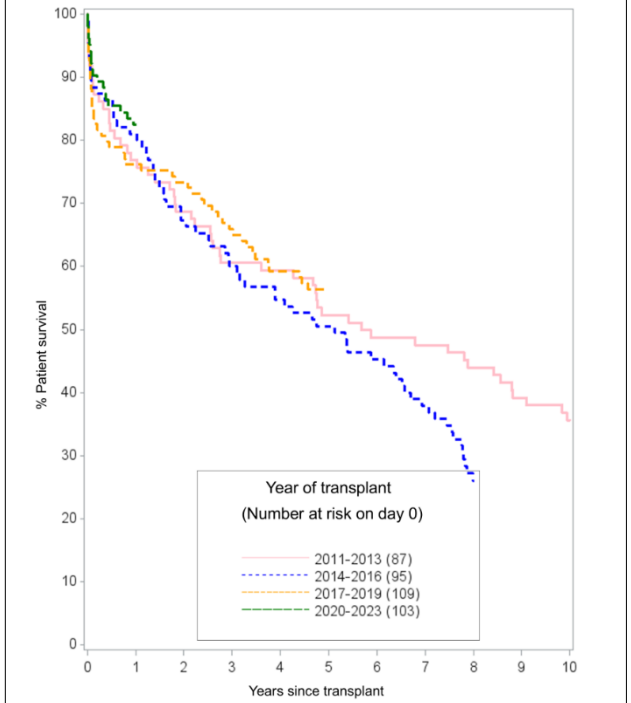

Table 11.23 Patient survival after first adult lung only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	87	77	(66-84)	69	(58-77)	52	(41-62)	36	(26-46)
2014-2016	95	81	(72-88)	67	(57-76)	51	(40-60)		
2017-2019	109	76	(67-83)	73	(64-81)	56	(46-65)		
2020-2023	103	82	(74-89)						

11.3.6 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 11.15**. Super-urgent, 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 across eras (p>0.7). The number of heart-lung transplant recipients was too small to analyse.

Figure 11.15 Long-term patient survival after first paediatric heart only transplant from donors after brain death, 1 January 2011 – 31 December 2023

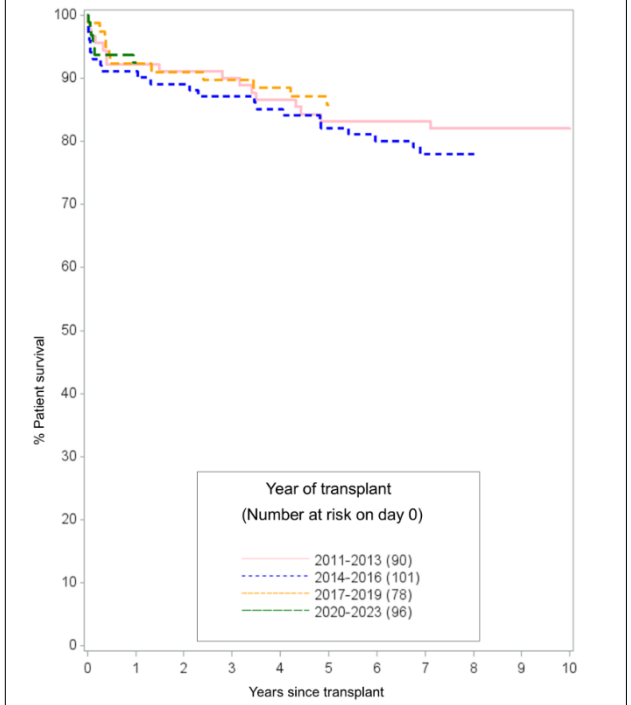

Table 11.24 Patient survival after first paediatric heart only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	90	92	(84-96)	91	(83-95)	83	(74-90)	82	(72-89)
2014-2016	101	91	(84-95)	89	(81-94)	82	(73-88)		
2017-2019	78	92	(84-96)	91	(82-96)	86	(76-92)		
2020-2023	96	93	(85-96)						

11.3.7 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 11.16**. Super-urgent, urgent and non-urgent patients are included. **Table 11.25** 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 across eras (p>0.05).

Figure 11.16 Long-term patient survival after first paediatric lung only transplant from donors after brain death, 1 January 2011 – 31 December 2023

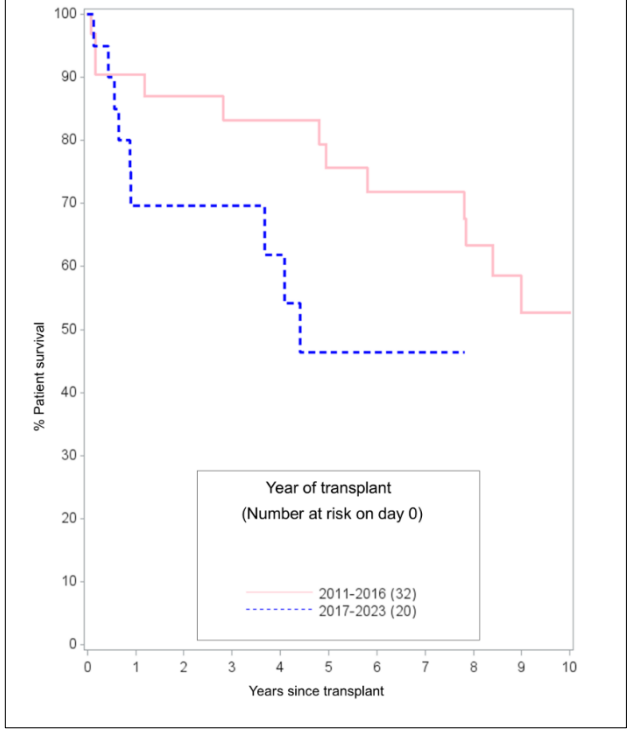

Table 11.25 Patient survival after first paediatric lung only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2016	32	90	(73-97)	87	(69-95)	76	(55-88)	53	(31-70)
2017-2023	20	70	(44-85)	70	(44-85)	46	(21-69)		

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 11.17**. **Table 11.26** shows patient survival estimates at one, two, five, and ten years post-transplant. There were no statistically significant differences in patient survival across eras (p>0.09). Whole liver transplants are included as well as reduced and split liver transplants.

Figure 11.17 Long-term patient survival after first elective adult liver only transplant from donors after brain death, 1 January 2011 – 31 December 2023

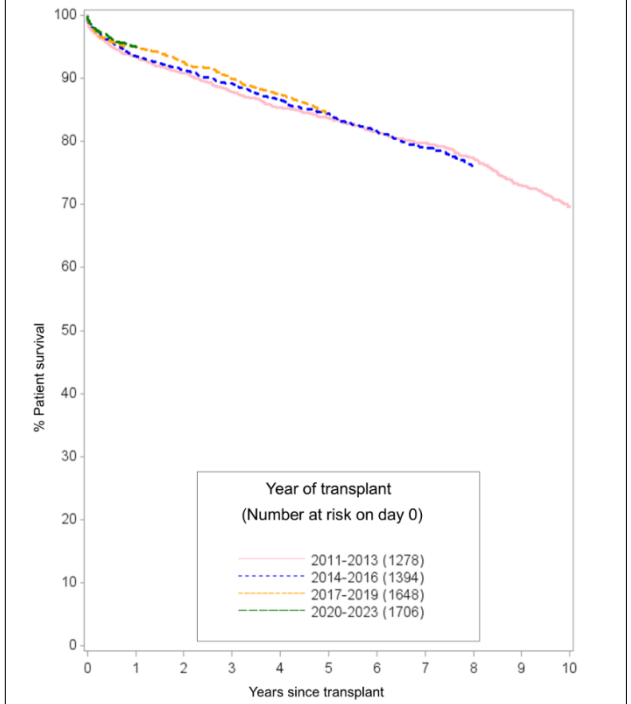

Table 11.26 Patient survival after first elective adult NHS Group 1 liver only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	1278	93	(92-95)	91	(89-92)	84	(82-86)	70	(67-72)
2014-2016	1394	93	(92-95)	91	(90-93)	84	(82-86)		
2017-2019	1648	95	(94-96)	93	(91-94)	84	(82-86)		
2020-2023	1706	95	(94-96)						

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 11.18**. **Table 11.27** shows patient survival estimates at one, two and five years post-transplant. There is evidence of a change in one- and two-year patient survival over time (p<0.001).

Figure 11.18 Long-term patient survival after first elective adult liver only transplant from donors after circulatory death, 1 January 2011 – 31 December 2023

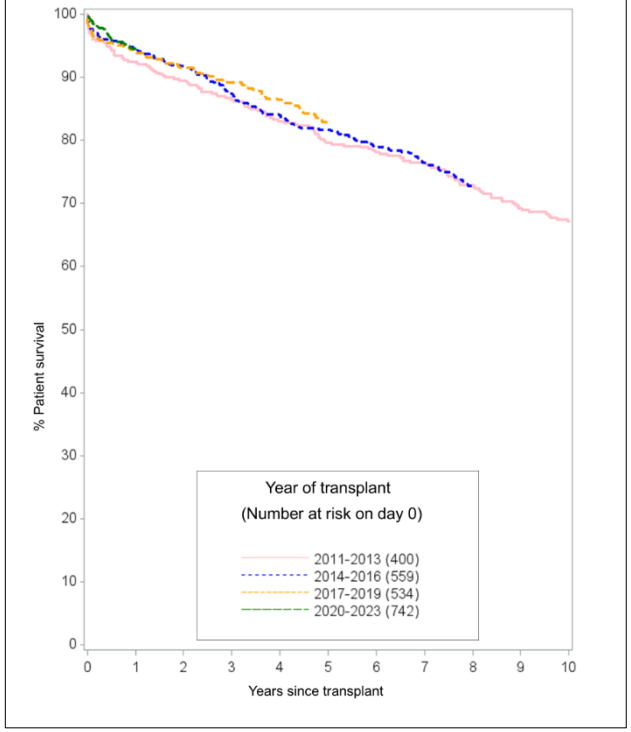

Table 11.27 Patient survival after first elective adult NHS Group 1 liver only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	400	93	(89-95)	89	(86-92)	80	(75-83)	67	(62-72)
2014-2016	559	94	(92-96)	92	(89-94)	82	(78-85)		
2017-2019	534	94	(92-96)	91	(89-94)	83	(79-86)		
2020-2023	742	94	(93-96)						

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

Figure 11.19 and **Table 11.28** show long-term patient survival estimates for first elective liver only transplants from donors after brain death in paediatric (<17 years) recipients. There has been statistically significant changes in two- and five-year patient survival over the time period analysed (p<0.02). The number of paediatric transplants from donors after circulatory death was too small to estimate meaningful patient survival.

Figure 11.19 Long-term patient survival after first elective paediatric liver only transplant from donors after brain death, 1 January 2011 – 31 December 2023

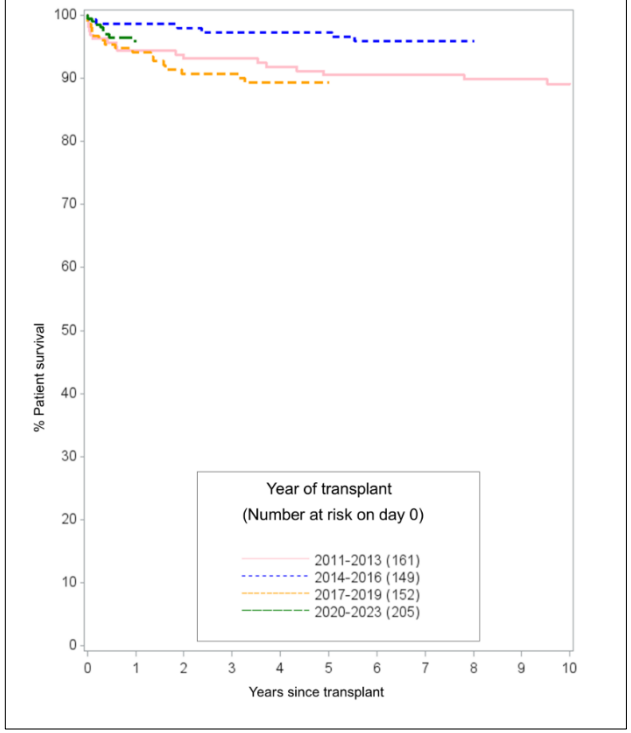

Table 11.28 Patient survival after first elective paediatric liver only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Five year		Ten year	
2011-2013	161	94	(90-97)	93	(88-96)	90	(85-94)	89	(83-93)
2014-2016	149	99	(95-100)	98	(94-99)	97	(93-99)		
2017-2019	152	94	(89-97)	91	(85-94)	89	(83-93)		
2020-2023	205	96	(92-98)						

11.5 Intestinal patient survival

Figure 11.20 and **Table 11.29** show patient survival estimates for recipients receiving their first intestinal transplant, by recipient age group (adults aged ≥ 18 years) and transplant era. Results should be interpreted cautiously due to the small cohort and the heterogeneity of transplant types (both transplants that involve and do not involve the liver are included).

Figure 11.20 Patient survival after first intestinal graft in the UK, 1 January 2016 – 31 December 2023

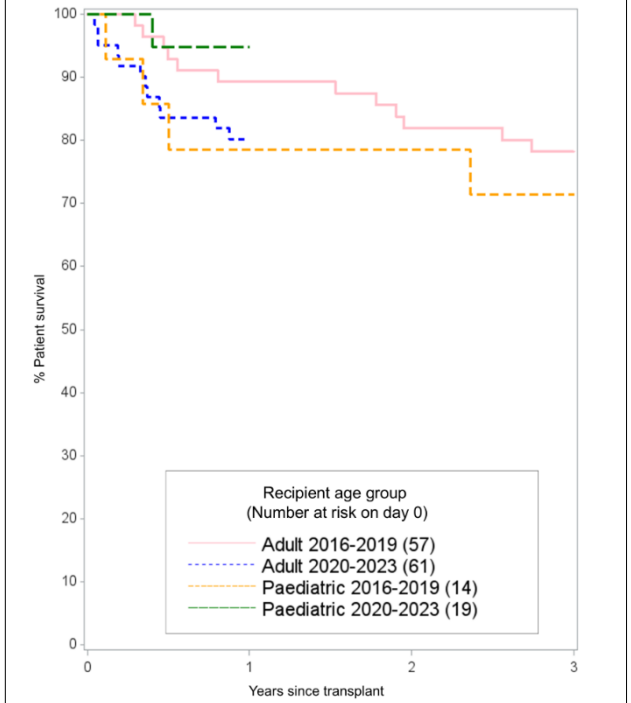

Table 11.29 Patient survival after first intestinal transplant

Recipient age group	No. at risk on day 0	% Patient survival (95% confidence interval) One year		Two year		Three year	
Adult							
2016-2019	57	89	(78-95)	82	(69-90)	78	(65-87)
2020-2023	61	80	(68-88)				
Paediatric							
2016-2019	14	79	(47-93)	79	(47-93)	71	(41-88)
2020-2023	19	95	(68-99)				

11.6 Corneal graft survival

11.6.1 Cornea grafts for keratoconus

Figure 11.21 shows graft survival estimates for first corneal transplant for keratoconus (KC). 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 KC in the UK, 1 January 2011 – 31 December 2023

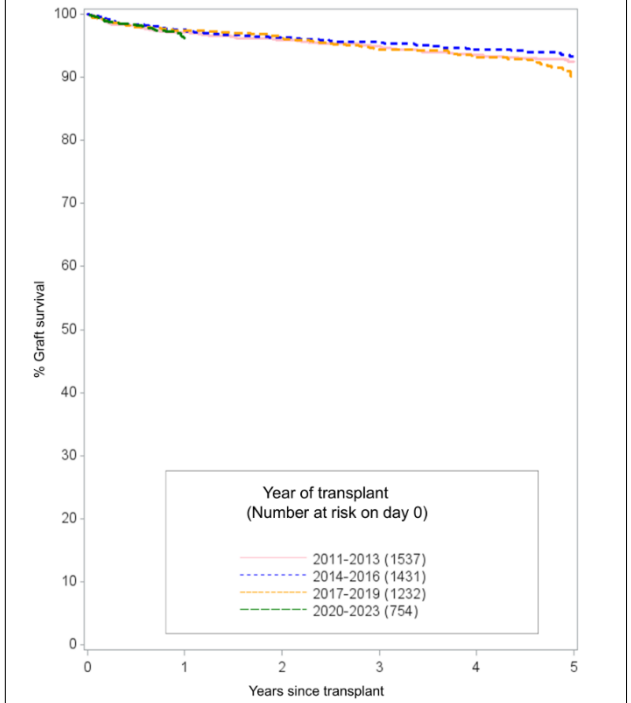

Table 11.30 Graft survival after first corneal graft for KC

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year	
2011-2013	1537	97	(96-98)	96	(95-97)	93	(91-94)
2014-2016	1431	98	(97-98)	96	(95-97)	93	(91-95)
2017-2019	1232	97	(96-98)	96	(95-97)	90	(87-92)
2020-2023	754	96	(94-97)				

11.6.2 Cornea grafts for Fuchs endothelial dystrophy

Figure 11.22 shows graft survival estimates for first corneal transplant for Fuchs endothelial dystrophy (FED). 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 FED in the UK, 1 January 2011 – 31 December 2023

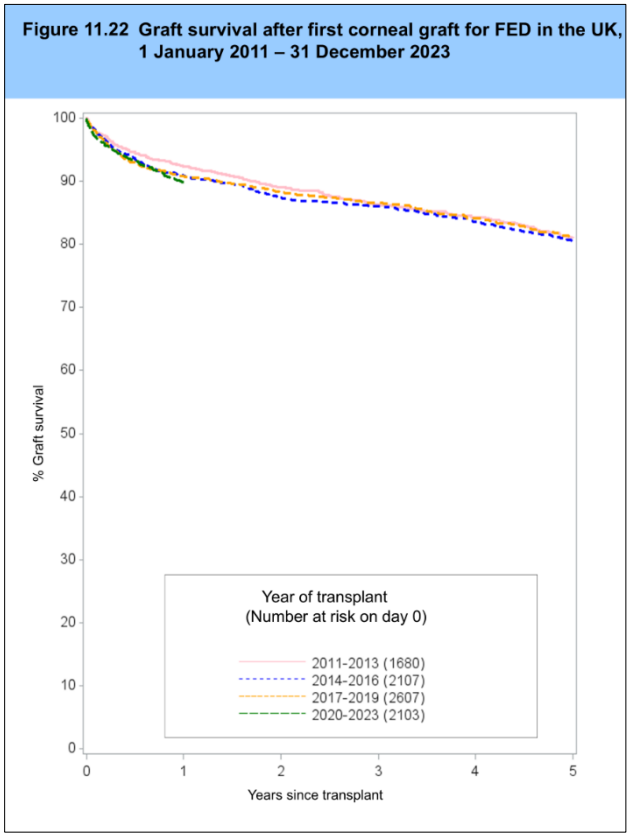

Table 11.31 Graft survival after first corneal graft for FED

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year	
2011-2013	1680	92	(91-94)	89	(87-90)	81	(79-83)
2014-2016	2107	91	(90-92)	87	(86-89)	81	(78-83)
2017-2019	2607	91	(90-92)	88	(87-89)	81	(79-83)
2020-2023	2103	90	(88-91)				

11.6.3 Cornea grafts for pseudophakic bullous keratopathy

Figure 11.23 shows graft survival estimates for first corneal transplant for pseudophakic bullous keratopathy (PBK). Graft survival estimates and confidence intervals are shown by transplant year at one, two and five years in **Table 11.32**.

Figure 11.23 Graft survival after first corneal graft for PBK in the UK, 1 January 2011 – 31 December 2023

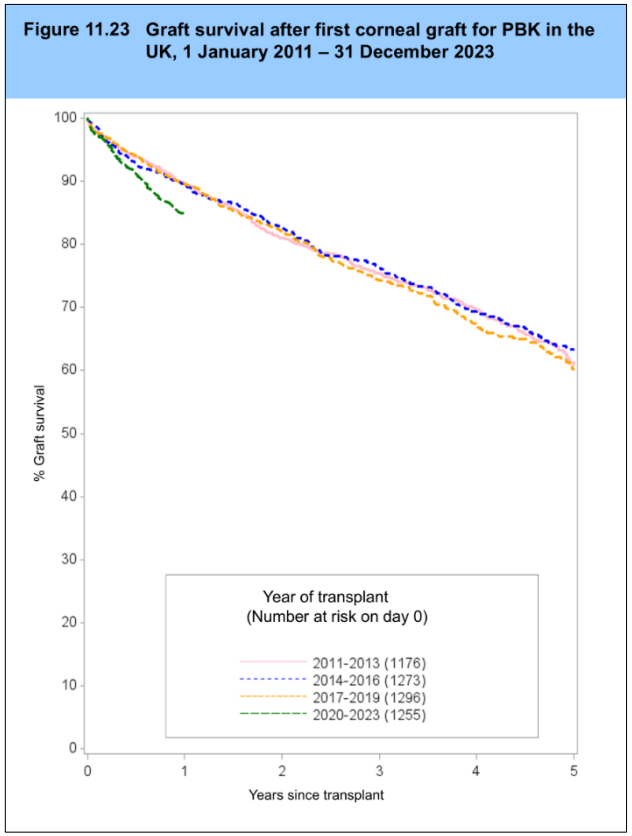

Table 11.32 Graft survival after first corneal graft for PBK

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval) One year		Two year		Five year	
2011-2013	1176	90	(88-91)	81	(78-83)	61	(57-65)
2014-2016	1273	89	(87-91)	82	(80-85)	63	(60-67)
2017-2019	1296	90	(88-91)	82	(79-84)	60	(56-64)
2020-2023	1255	85	(83-87)				