



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-year survival over the time periods shown, ($p < 0.01$). **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 ($p > 0.07$).

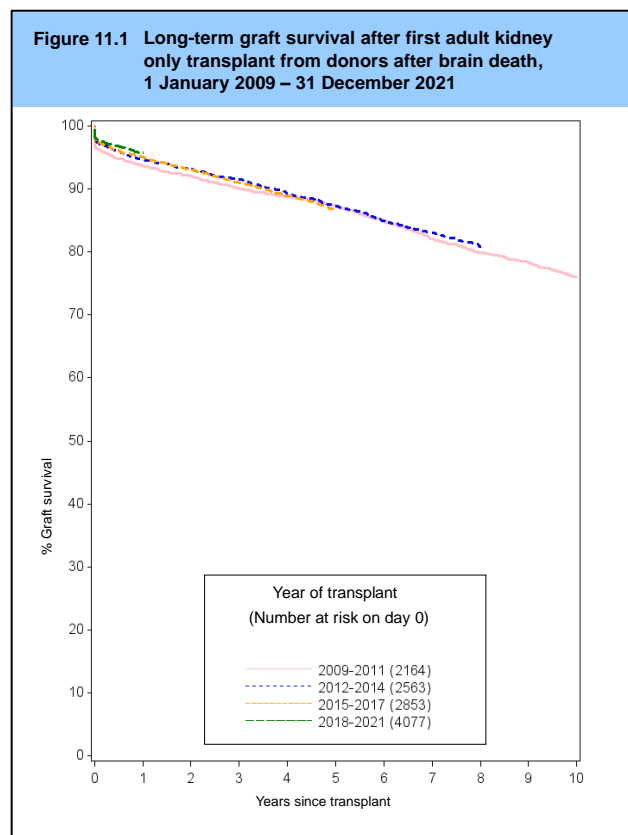


Table 11.1 Graft survival after first adult kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)				
		One year	Two year	Five year	Ten year	
2009-2011	2164	94 (93-95)	92 (91-93)	87 (86-89)	76 (74-78)	
2012-2014	2563	95 (94-96)	93 (92-94)	87 (86-89)		
2015-2017	2853	95 (94-96)	93 (92-94)	87 (85-88)		
2018-2021	4077	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	
2009-2011	2165	96 (95-97)	95 (94-96)	90 (88-91)	75 (73-77)	
2012-2014	2565	96 (95-97)	94 (93-95)	89 (87-90)		
2015-2017	2853	97 (97-98)	95 (95-96)	88 (86-89)		
2018-2021	4078	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 has been significant variation in one- and two-year survival over the time periods shown, $p=0.0001$ and $p=0.02$, respectively. **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- and two-year post-transplant ($p=0.003$ and $p=0.02$, respectively).

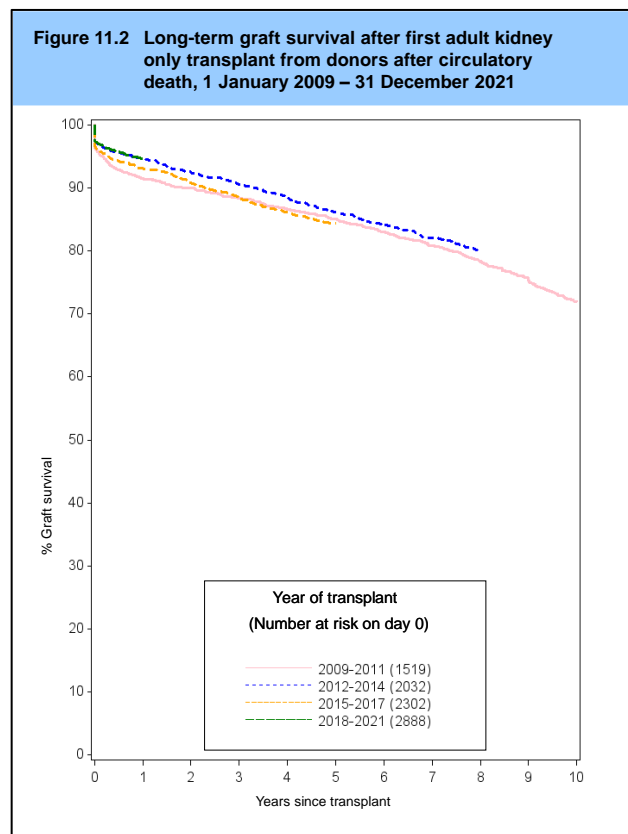


Table 11.3 Graft survival after first adult kidney only transplant from a DCD					
Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)			
		One year	Two year	Five year	Ten year
2009-2011	1519	91 (90-93)	90 (88-91)	85 (83-87)	72 (69-74)
2012-2014	2032	95 (94-95)	93 (91-94)	86 (84-88)	
2015-2017	2302	93 (92-94)	91 (90-92)	84 (83-86)	
2018-2021	2888	95 (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
2009-2011	1519	95 (94-96)	93 (92-94)	86 (84-87)	69 (66-71)
2012-2014	2033	96 (95-97)	94 (93-95)	86 (85-88)	
2015-2017	2303	97 (96-98)	95 (94-96)	85 (83-86)	
2018-2021	2892	97 (96-97)			

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 ($p < 0.0001$, $p = 0.003$ and $p = 0.005$, respectively). **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 ($p > 0.4$).

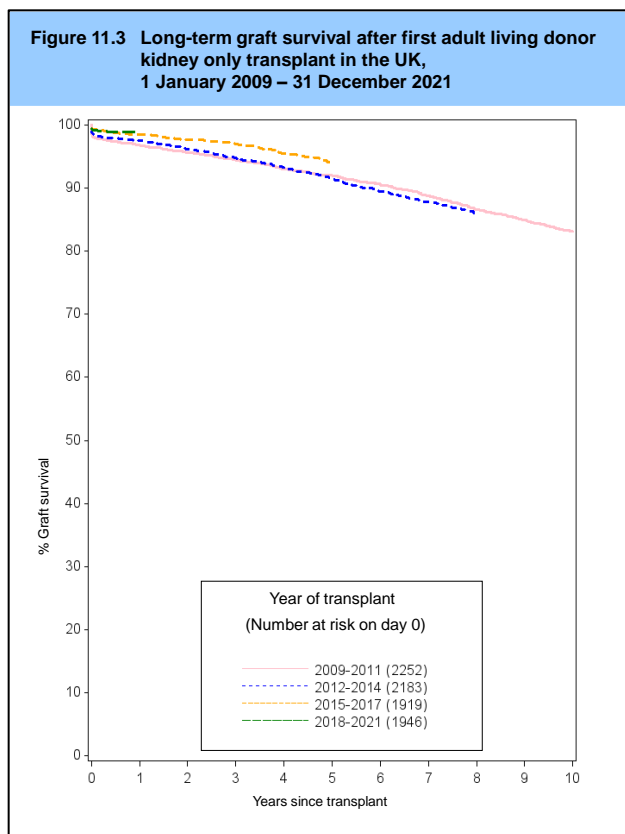


Table 11.5 Graft survival after first adult living donor kidney transplant

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)			
		One year	Two year	Five year	Ten year
2009-2011	2252	97 (96-97)	96 (95-96)	92 (91-93)	83 (81-85)
2012-2014	2183	98 (97-98)	96 (95-97)	92 (90-93)	
2015-2017	1919	98 (98-99)	98 (97-98)	94 (93-95)	
2018-2021	1946	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
2009-2011	2253	99 (98-99)	98 (97-99)	94 (93-95)	86 (84-87)
2012-2014	2182	99 (98-99)	98 (97-99)	95 (94-96)	
2015-2017	1919	99 (98-99)	98 (98-99)	94 (93-95)	
2018-2021	1949	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 ($p>0.3$). **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.

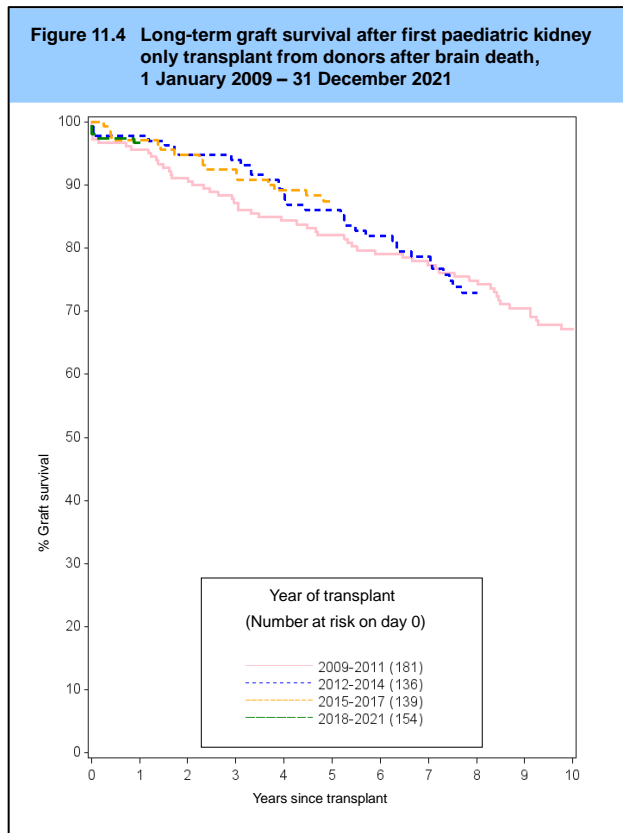


Table 11.7 Graft survival after first paediatric kidney only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)				
		One year	Two year	Five year	Ten year	
2009-2011	181	96 (91-98)	91 (86-94)	82 (76-87)	67 (60-74)	
2012-2014	136	98 (93-99)	95 (89-97)	86 (79-91)		
2015-2017	139	97 (92-99)	95 (89-97)	87 (80-92)		
2018-2021	154	97 (92-99)				

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	
2009-2011	181	99 (96-100)	99 (96-100)	97 (93-99)	95 (90-97)	
2012-2014	136	99 (95-100)	99 (95-100)	98 (93-99)		
2015-2017	139	99 (95-100)	99 (95-100)	99 (95-100)		
2018-2021	154	99 (95-100)				

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 improvement in one- and five-year survival over the time periods shown ($p=0.04$ and $p=0.001$, respectively). **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 ($p>0.5$).

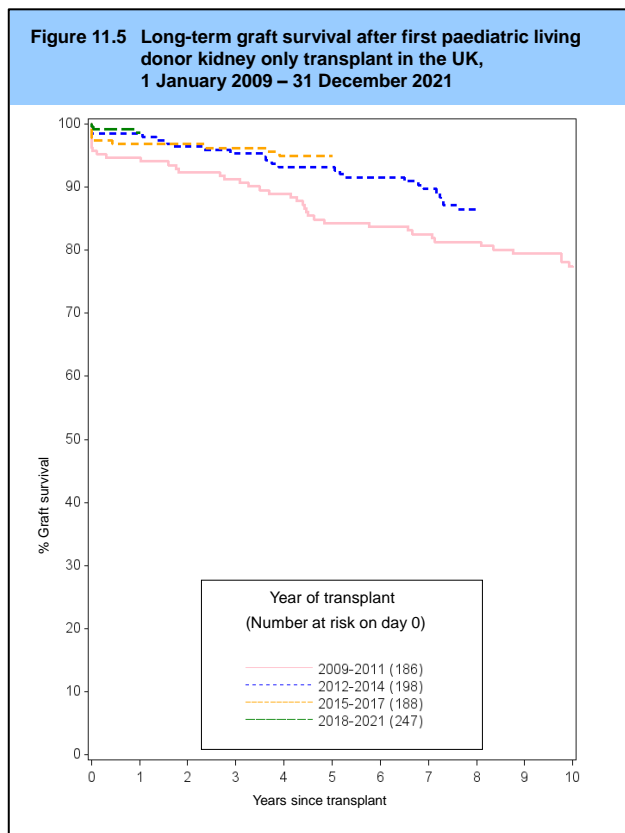


Table 11.9 Graft survival after first paediatric living donor kidney transplant									
Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
2009-2011	186	95	(90-97)	92	(87-95)	84	(78-89)	77	(70-83)
2012-2014	198	98	(95-100)	96	(93-98)	93	(89-96)		
2015-2017	188	97	(93-99)	97	(93-99)	95	(90-97)		
2018-2021	247	99	(96-100)						

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	
2009-2011	187	99	(96-100)	99	(96-100)	98	(94-99)	96	(92-98)
2012-2014	198	99	(96-100)	99	(96-100)	99	(96-100)		
2015-2017	188	99	(96-100)	98	(95-99)	98	(94-99)		
2018-2021	247	98	(95-100)						

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 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 has been a significant improvement in one-, two- and five-year graft survival over the time periods shown, ($p=0.008$, $p=0.05$, $p=0.04$, respectively). Differences in patient survival are not significant over time ($p>0.06$).

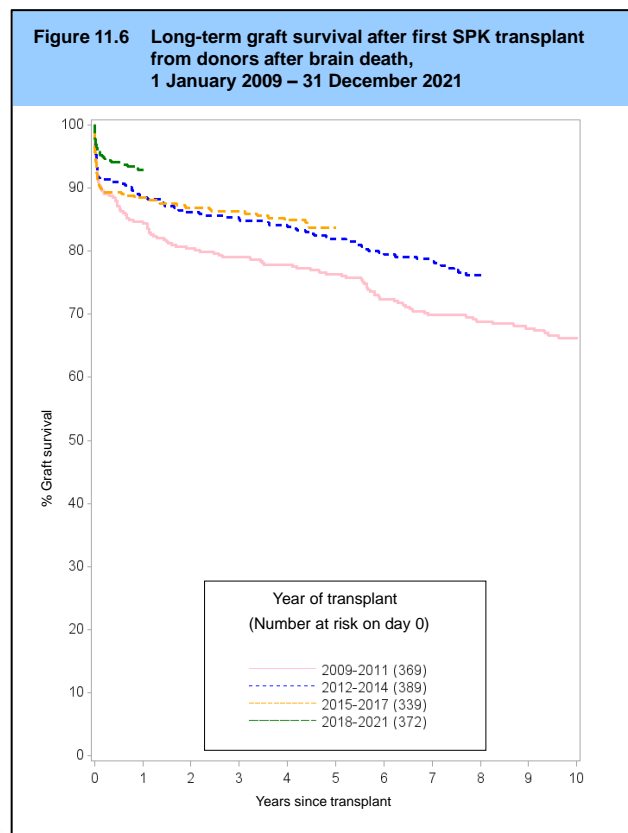


Table 11.11 Graft survival after first SPK transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)			
		One year	Two year	Five year	Ten year
2009-2011	369	85 (81-88)	80 (76-84)	76 (72-80)	66 (61-71)
2012-2014	389	89 (85-91)	86 (82-89)	82 (78-85)	66 (61-71)
2015-2017	339	88 (85-91)	87 (83-90)	84 (79-87)	66 (61-71)
2018-2021	372	93 (90-95)	87 (83-90)	84 (79-87)	66 (61-71)

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
2009-2011	371	96 (94-98)	93 (90-96)	87 (83-90)	73 (68-78)
2012-2014	389	97 (94-98)	96 (94-98)	89 (85-92)	73 (68-78)
2015-2017	340	97 (95-99)	97 (94-98)	93 (89-95)	73 (68-78)
2018-2021	375	98 (96-99)	97 (94-98)	93 (89-95)	73 (68-78)

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 one-year graft survival over the time periods shown, $p=0.03$. Differences in patient survival are not significant over time ($p>0.5$).

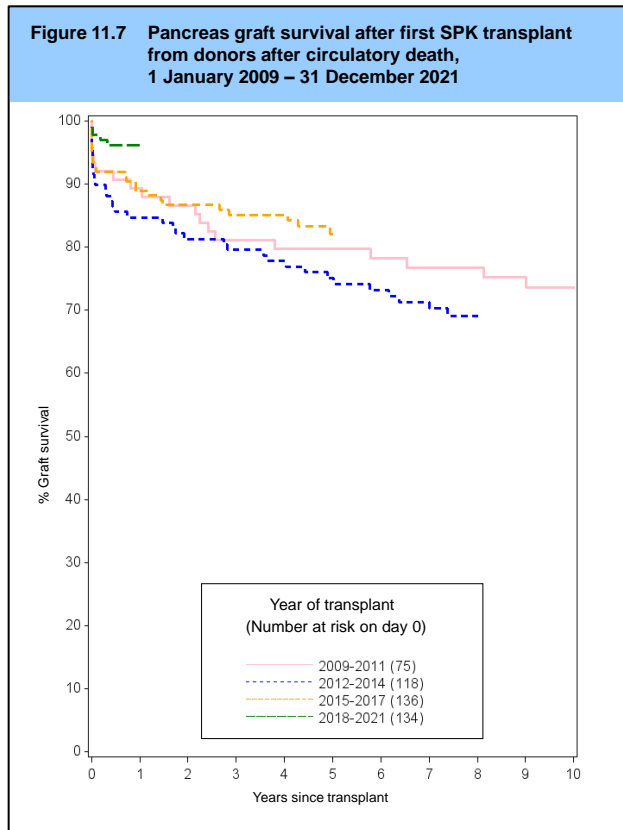


Table 11.13 Graft survival after first SPK transplant from a DCD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)					
		One year	Two year	Five year	Ten year		
2009-2011	75	89 (80-95)	87 (77-93)	80 (69-87)	74 (62-82)		
2012-2014	118	85 (77-90)	81 (73-87)	75 (66-82)			
2015-2017	136	89 (82-93)	87 (80-91)	82 (74-88)			
2018-2021	134	96 (91-98)					

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
2009-2011	75	99 (91-100)	94 (86-98)	92 (82-96)	82 (71-90)
2012-2014	119	99 (94-100)	97 (92-99)	91 (84-95)	
2015-2017	136	98 (94-100)	97 (92-99)	92 (86-96)	
2018-2021	136	98 (93-99)			

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 no statistically significant changes in graft or patient survival over time ($p>0.2$).

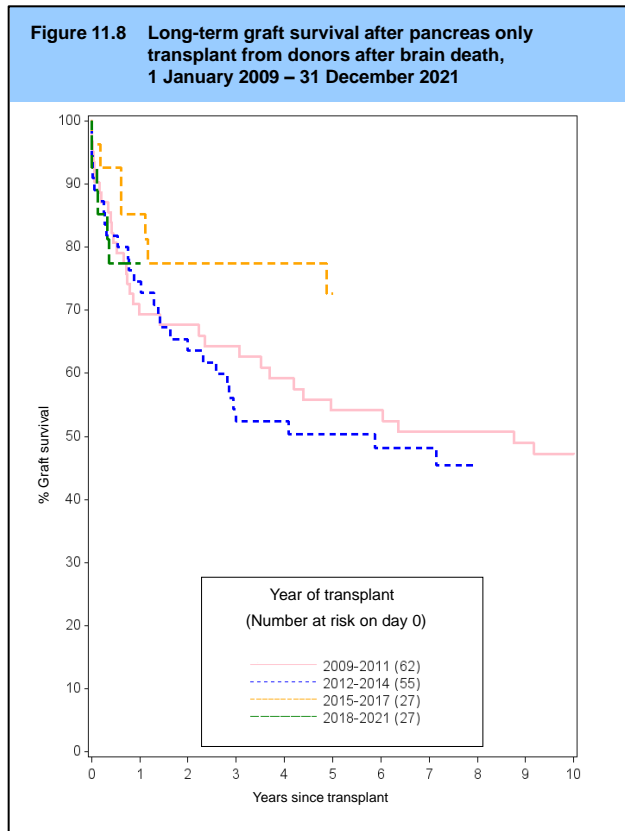


Table 11.15 Graft survival after first pancreas only transplant from a DBD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)			
		One year	Two year	Five year	Ten year
2009-2011	62	69 (56-79)	68 (54-78)	54 (41-66)	47 (34-59)
2012-2014	55	75 (61-84)	64 (49-75)	50 (36-63)	
2015-2017	27	85 (65-94)	77 (56-89)	73 (51-86)	
2018-2021	27	77 (56-89)			

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
2009-2011	63	96 (86-99)	95 (84-98)	83 (69-91)	75 (60-85)
2012-2014	55	98 (87-100)	98 (87-100)	83 (67-91)	
2015-2017	27	96 (76-99)	92 (72-98)	88 (66-96)	
2018-2021	27	95 (71-99)			

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.

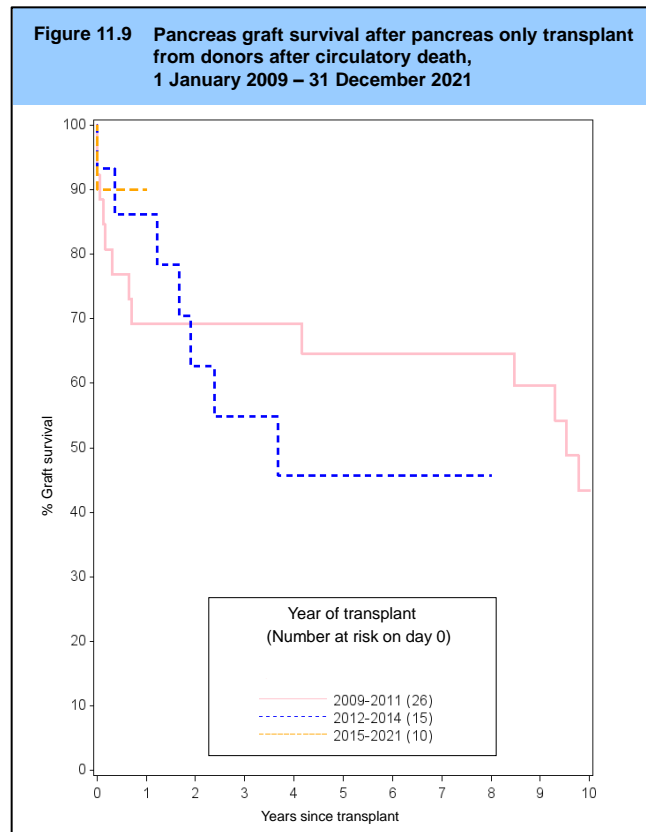


Table 11.17 Graft survival after first pancreas only transplant from a DCD

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)			
		One year	Two year	Five year	Ten year
2009-2011	26	69 (48-83)	69 (48-83)	65 (43-80)	43 (22-63)
2012-2014	15	86 (55-96)	63 (32-83)	46 (18-70)	-
2015-2021	10	90 (47-99)	-	-	-

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
2009-2011	26	100	100	86 (62-95)	75 (50-89)
2012-2014	15	93 (61-99)	93 (61-99)	78 (46-92)	-
2015-2021	10	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 across eras ($p > 0.4$).

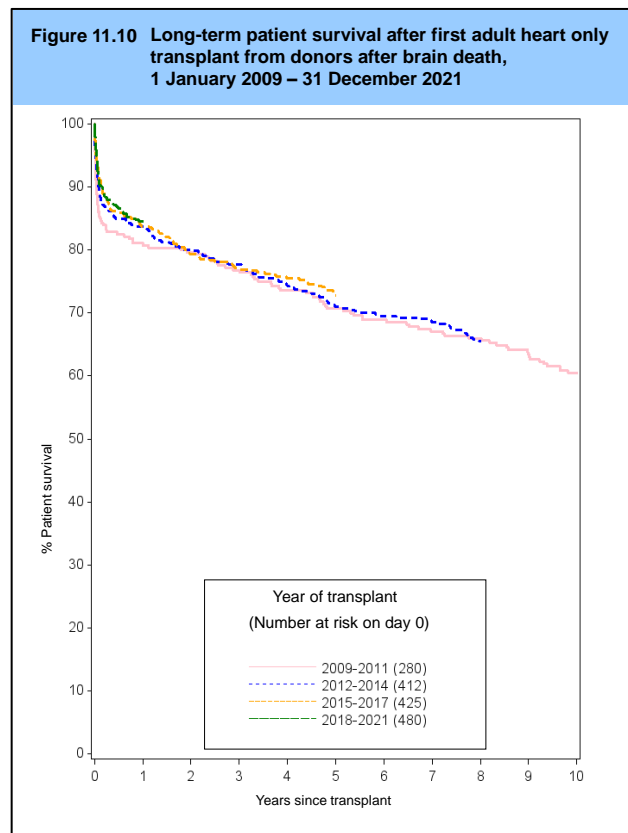


Table 11.19 Patient survival after first adult heart only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)			
		One year	Two year	Five year	Ten year
2009-2011	280	81 (76-85)	80 (74-84)	71 (65-76)	60 (54-66)
2012-2014	412	84 (80-87)	80 (76-84)	71 (66-75)	60 (54-66)
2015-2017	425	84 (80-87)	79 (75-83)	73 (68-77)	60 (54-66)
2018-2021	480	85 (81-87)	85 (81-87)	73 (68-77)	60 (54-66)

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.

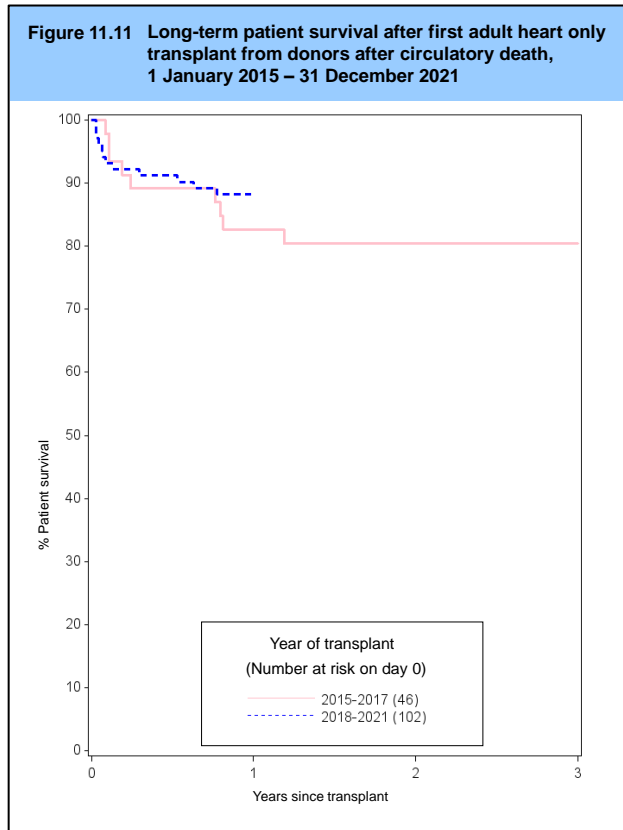


Table 11.20 Patient survival after first adult heart only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)			
		One year	Two year	Three year	
2015-2017	46	83 (68-91)	80 (66-89)	80 (66-89)	
2018-2021	102	88 (80-93)	80 (66-89)	80 (66-89)	

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**. Numbers of transplants is small and thus confidence intervals for survival estimates are wide and the differences in patient survival rates across eras were not statistically significant ($p>0.1$).

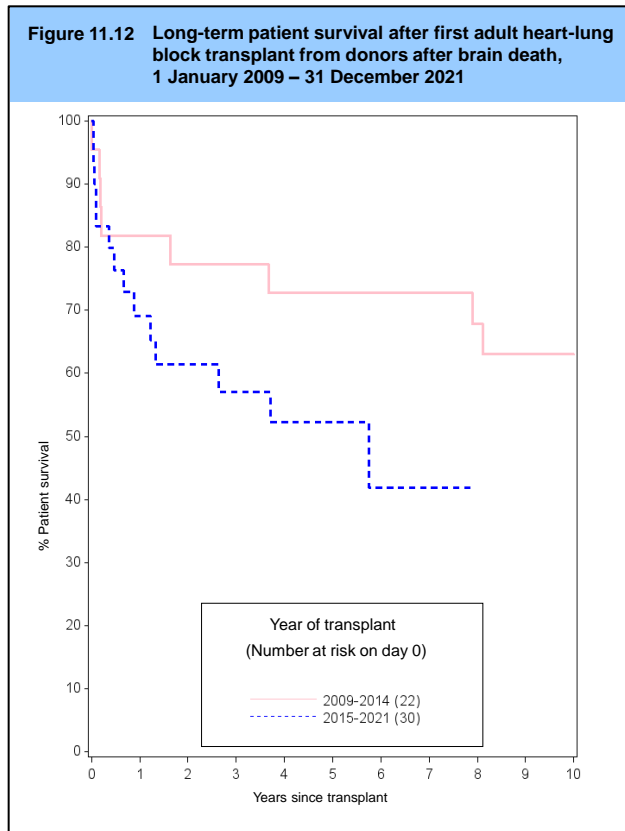


Table 11.21 Patient survival after first adult heart-lung block transplant from a DBD						
Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)				
		One year	Two year	Five year	Ten year	
2009-2014	22	82 (59-93)	77 (54-90)	73 (49-87)	63 (39-80)	
2015-2021	30	69 (49-83)	61 (41-77)	52 (32-69)		

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 ($p>0.7$).

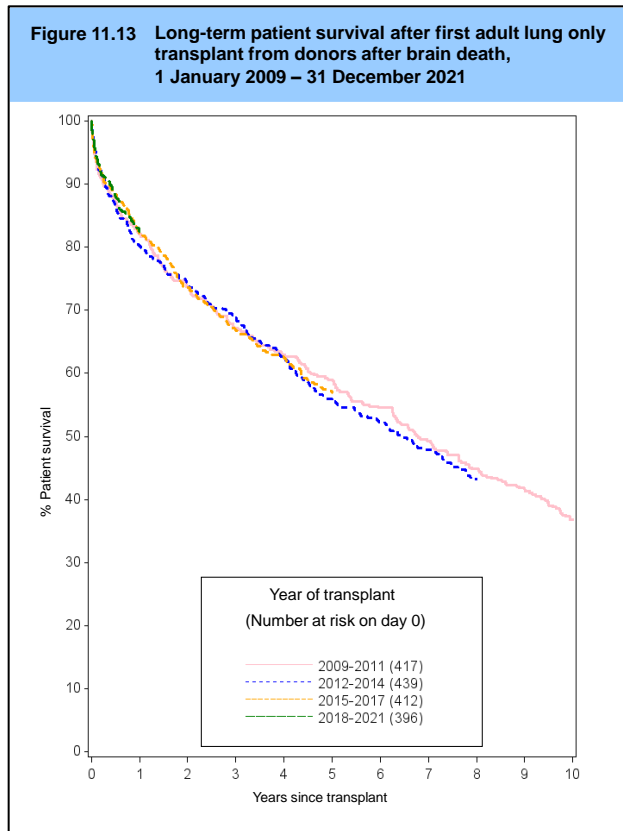


Table 11.22 Patient survival after first adult lung only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)			
		One year	Two year	Five year	Ten year
2009-2011	417	82 (78-85)	74 (69-78)	59 (54-64)	37 (32-41)
2012-2014	439	80 (76-84)	74 (70-78)	56 (51-60)	
2015-2017	412	82 (78-86)	74 (69-78)	57 (52-62)	
2018-2021	396	82 (78-86)			

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.

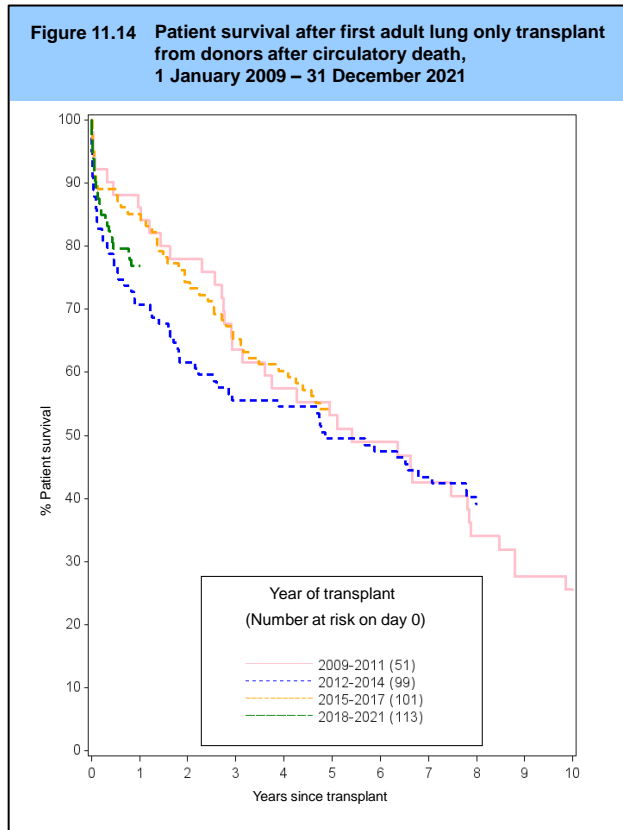


Table 11.23 Patient survival after first adult lung only transplant from a DCD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)			
		One year	Two year	Three year	
2009-2011	51	86 (73-93)	78 (64-87)	53 (38-66)	
2012-2014	99	71 (61-79)	62 (51-70)	49 (39-59)	
2015-2017	101	85 (77-91)	74 (65-82)	54 (44-63)	
2018-2021	113	77 (68-84)			

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 ($p>0.2$). The number of heart-lung transplant recipients was too small to analyse.

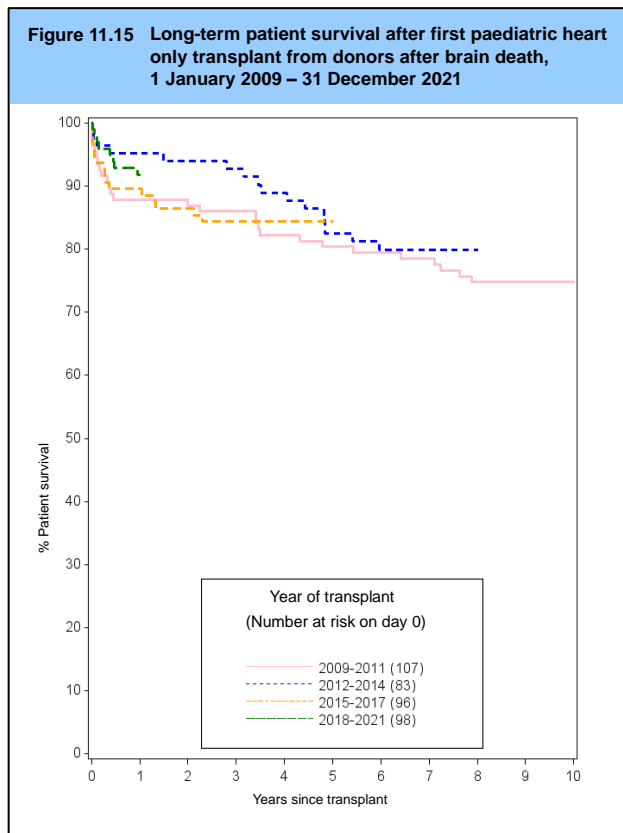


Table 11.24 Patient survival after first paediatric heart only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)				
		One year	Two year	Five year	Ten year	
2009-2011	107	88 (80-93)	87 (79-92)	80 (72-87)	75 (65-82)	
2012-2014	83	95 (88-98)	94 (86-97)	83 (72-89)		
2015-2017	96	90 (82-94)	86 (78-92)	84 (75-90)		
2018-2021	98	92 (84-96)				

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 has been a significant reduction in two and five-year patient survival over the time periods shown, $p=0.05$ and $p=0.03$, respectively.

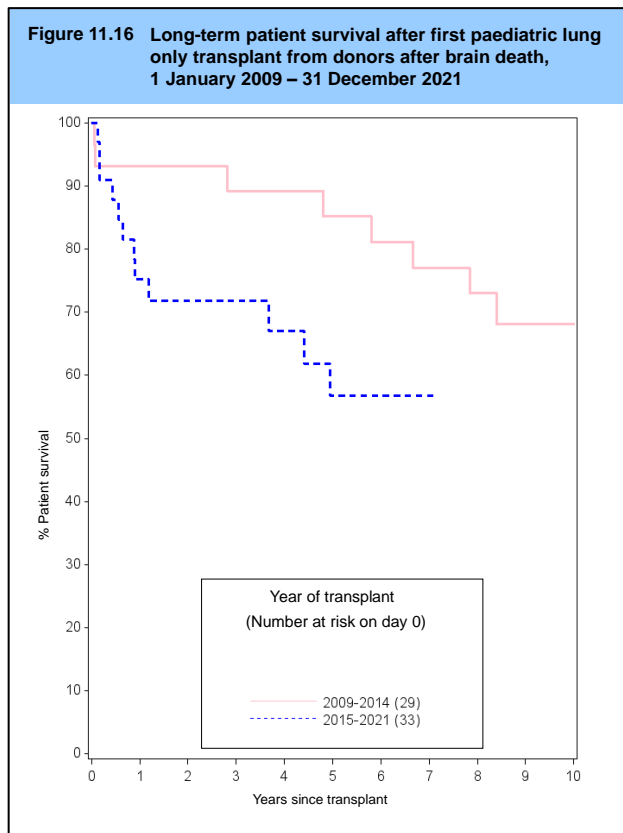


Table 11.25 Patient survival after first paediatric lung only transplant from a DBD

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)			
		One year	Two year	Five year	Ten year
2009-2014	29	93 (75-98)	93 (75-98)	85 (65-94)	68 (46-83)
2015-2021	33	75 (57-87)	72 (53-84)	57 (35-73)	

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 is evidence of a change in one-year patient survival over time ($p=0.02$) but no evidence of a change in two- and five-year patient survival ($p\geq 0.2$). Whole liver transplants are included as well as reduced and split liver transplants.

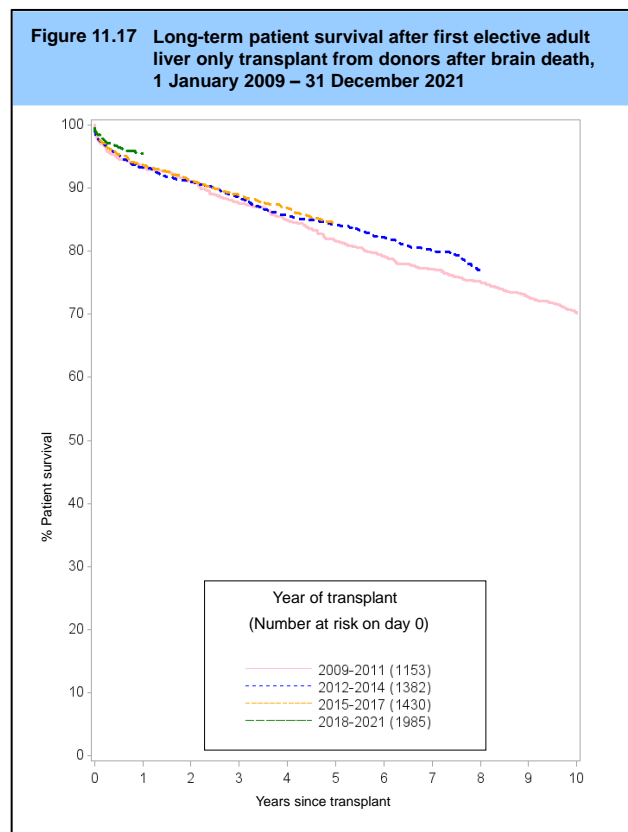


Table 11.26 Patient survival after first elective adult NHS Group 1 liver only transplant from donors after brain death

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)			
		One year	Two year	Five year	Ten year
2009-2011	1153	93 (92-95)	91 (89-93)	82 (79-84)	70 (67-73)
2012-2014	1382	93 (92-95)	91 (89-92)	84 (82-86)	
2015-2017	1430	94 (92-95)	91 (90-93)	84 (82-86)	
2018-2021	1985	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-, two- and five-year patient survival over time ($p < 0.001$, $p < 0.001$, and $p = 0.0001$, respectively).

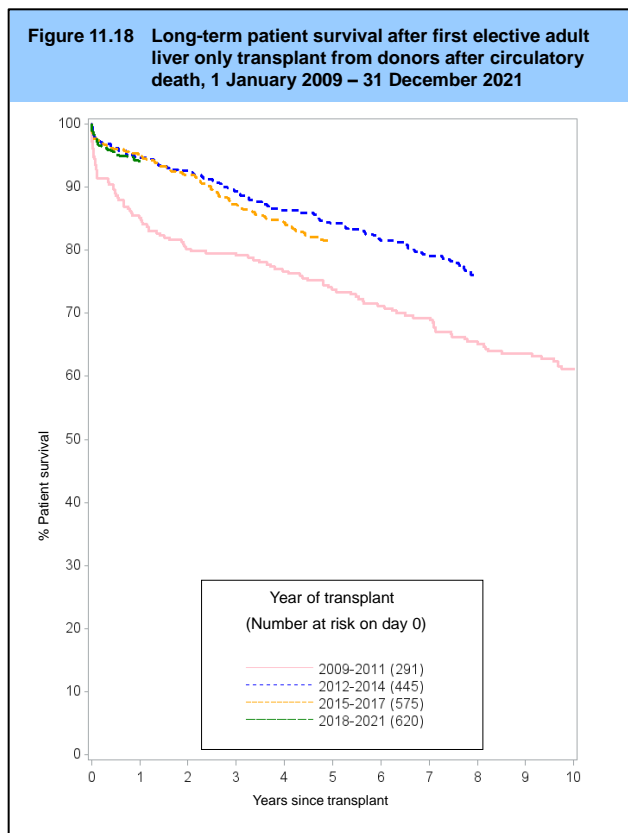


Table 11.27 Patient survival after first elective adult NHS Group 1 liver only transplant from donors after circulatory death

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)				
		One year	Two year	Five year	Ten year	
2009-2011	291	85 (81-89)	80 (75-84)	74 (68-78)	61 (55-67)	
2012-2014	445	95 (92-96)	93 (90-95)	84 (80-87)	67 (61-73)	
2015-2017	575	95 (93-96)	92 (89-94)	81 (78-84)	75 (70-80)	
2018-2021	620	94 (92-96)	92 (89-94)	81 (78-84)	75 (70-80)	

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 have been no statistically significant changes in one-, two- or five-year patient survival over the time period analysed ($p>0.1$). The number of paediatric transplants from donors after circulatory death was too small to estimate meaningful patient survival.

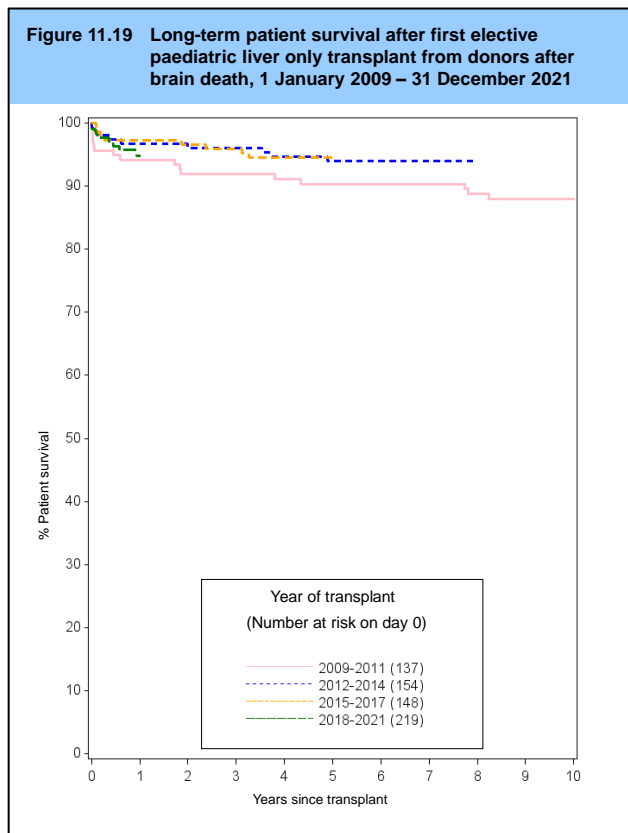


Table 11.28 Patient survival after first elective paediatric liver only transplant from donors after brain death

Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)			
		One year	Two year	Five year	Ten year
2009-2011	137	94 (89-97)	92 (86-95)	90 (84-94)	88 (81-92)
2012-2014	154	97 (92-99)	96 (91-98)	94 (89-97)	92 (86-95)
2015-2017	148	97 (93-99)	97 (92-99)	95 (89-97)	94 (88-92)
2018-2021	219	95 (91-97)	95 (91-97)	95 (91-97)	95 (91-97)

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).

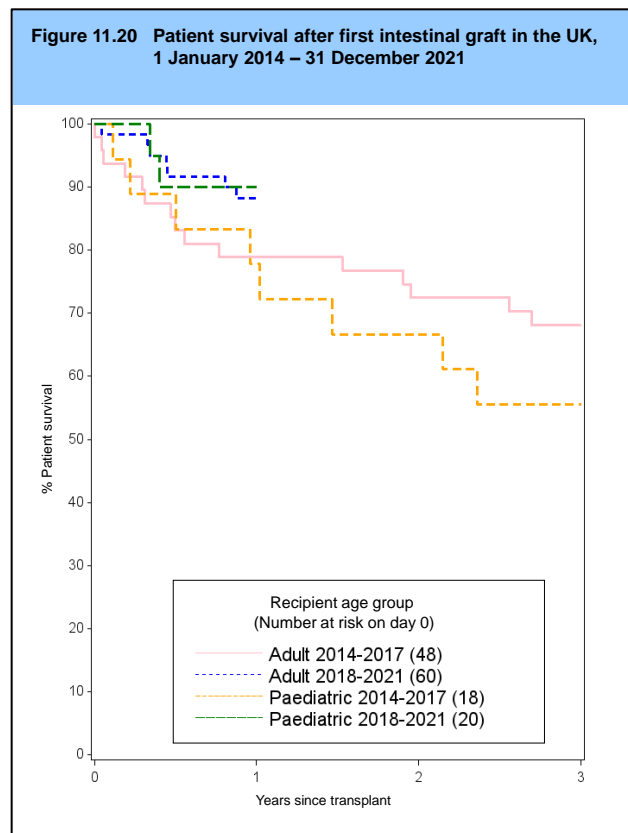


Table 11.29 Patient survival after first intestinal transplant in the UK

Recipient age group	No. at risk on day 0	% Patient survival (95% confidence interval)			
		One year	Two year	Three year	
Adult					
2013-2016	48	79 (64-88)	72 (57-83)	68 (53-79)	
2017-2020	60	88 (77-94)			
Paediatric					
2013-2016	18	78 (51-91)	67 (40-83)	56 (31-75)	
2017-2020	20	90 (66-97)			

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) for grafts in 2009-2011, 2012-2014, 2015-2017 and 2018-2021. Graft survival estimates and confidence intervals are shown by transplant year at one, two and five years in **Table 11.30**.

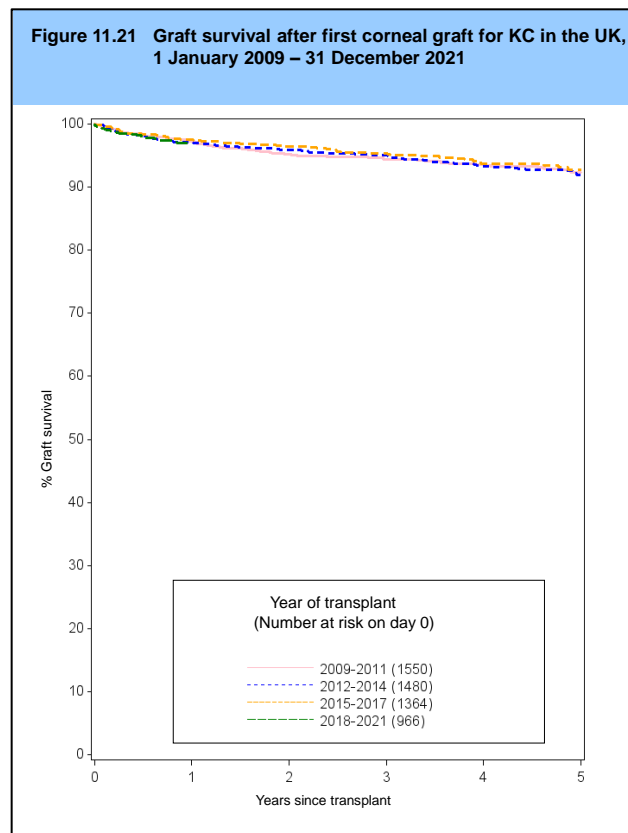


Table 11.30 Graft survival after first corneal graft for KC in the UK

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)					
		One year		Two year		Five year	
2009-2011	1550	97	(96-98)	95	(94-96)	92	(91-94)
2012-2014	1480	97	(96-98)	96	(95-97)	92	(90-93)
2015-2017	1364	98	(97-98)	96	(95-97)	93	(90-94)
2018-2021	966	97	(96-98)				

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) for grafts in 2009-2011, 2012-2014, 2015-2017 and 2018-2021. Graft survival estimates and confidence intervals are shown by transplant year at one, two and five years in **Table 11.31**.

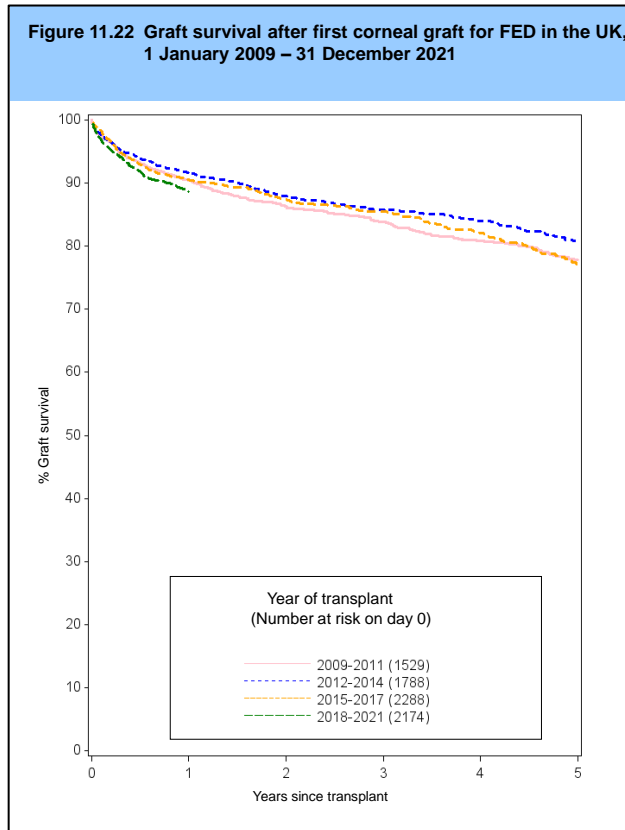


Table 11.31 Graft survival after first corneal graft for FED in the UK

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)					
		One year		Two year		Five year	
2009-2011	1529	90	(89-92)	86	(84-88)	78	(75-80)
2012-2014	1788	92	(90-93)	88	(86-89)	81	(78-83)
2015-2017	2288	91	(89-92)	87	(86-89)	77	(74-80)
2018-2021	2174	89	(87-90)				

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) for in 2009-2011, 2012-2014, 2015-2017 and 2018-2021. Graft survival estimates and confidence intervals are shown by transplant year at one, two and five years in **Table 11.32**.

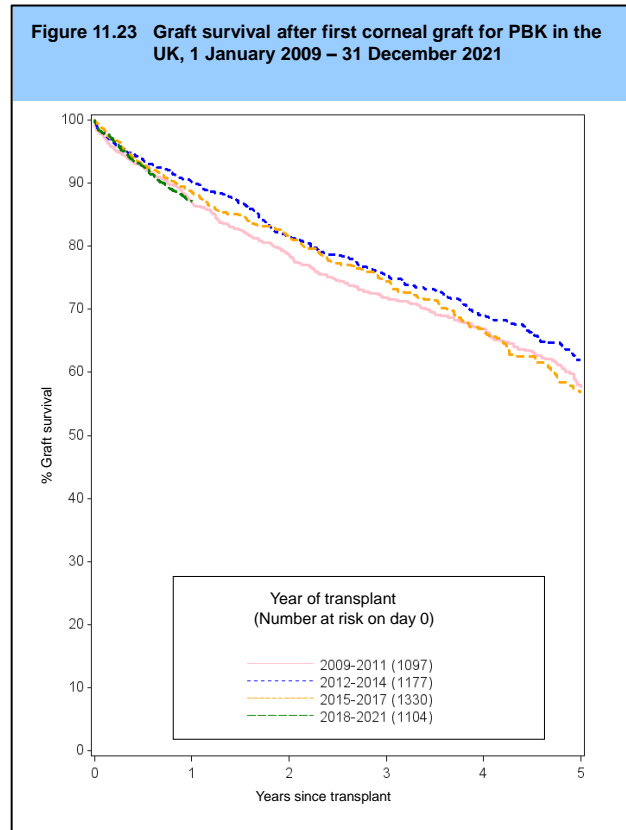


Table 11.32 Graft survival after first corneal graft for PBK in the UK

Year of transplant	No. at risk on day 0	% Graft survival (95% confidence interval)			
		One year	Two year	Five year	
2009-2011	1097	87 (85-89)	79 (76-81)	58 (54-61)	
2012-2014	1177	90 (88-92)	81 (79-84)	62 (58-66)	
2015-2017	1330	89 (87-90)	81 (79-83)	57 (52-61)	
2018-2021	1104	87 (85-89)	81 (79-83)	57 (52-61)	