

# Living donor kidney transplantation is the best option for all patients with ESRD

Living Kidney Donation Network

Birmingham

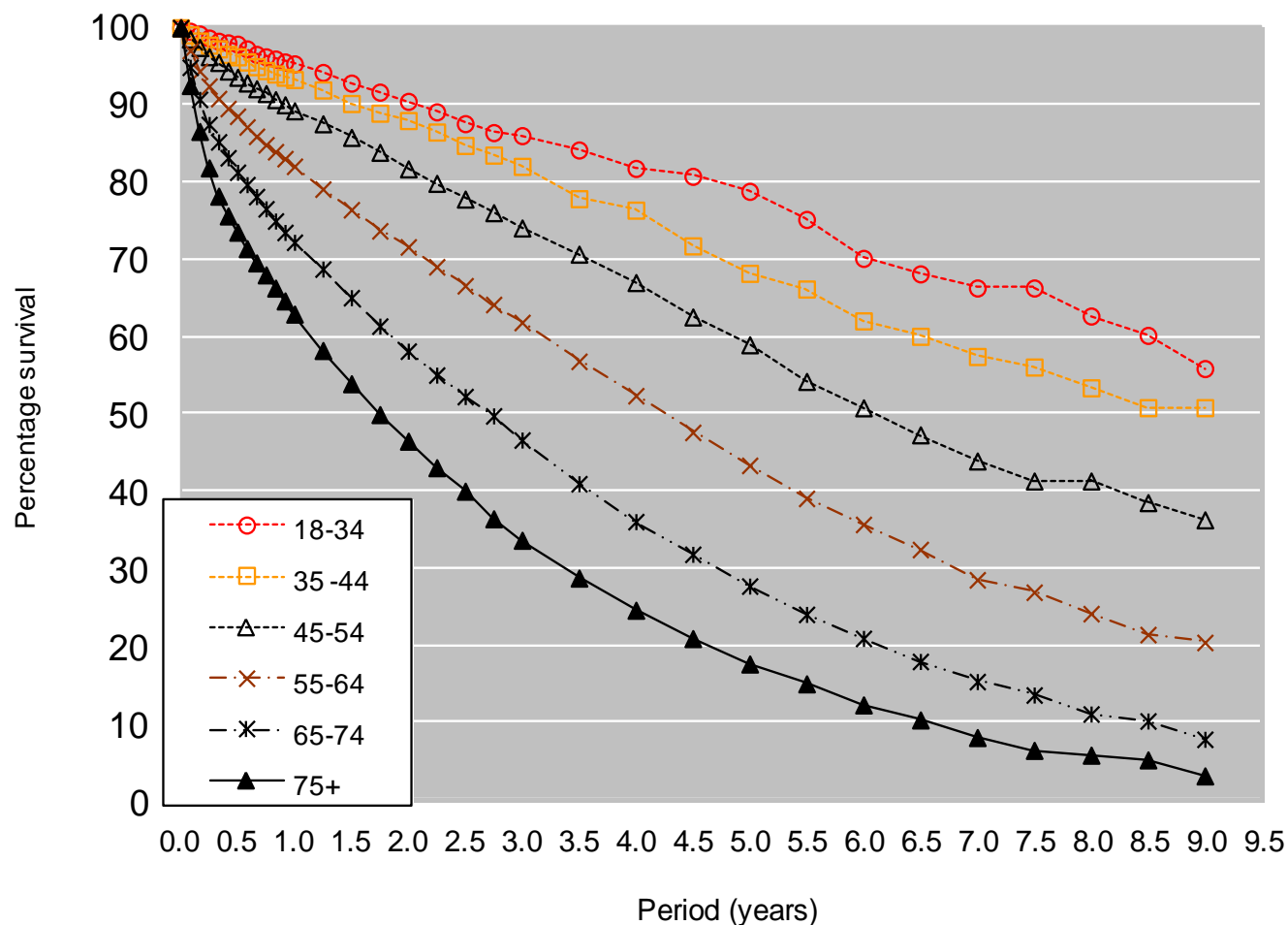
13 Feb 2020

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Nephrologist  
Belfast

# Q 1

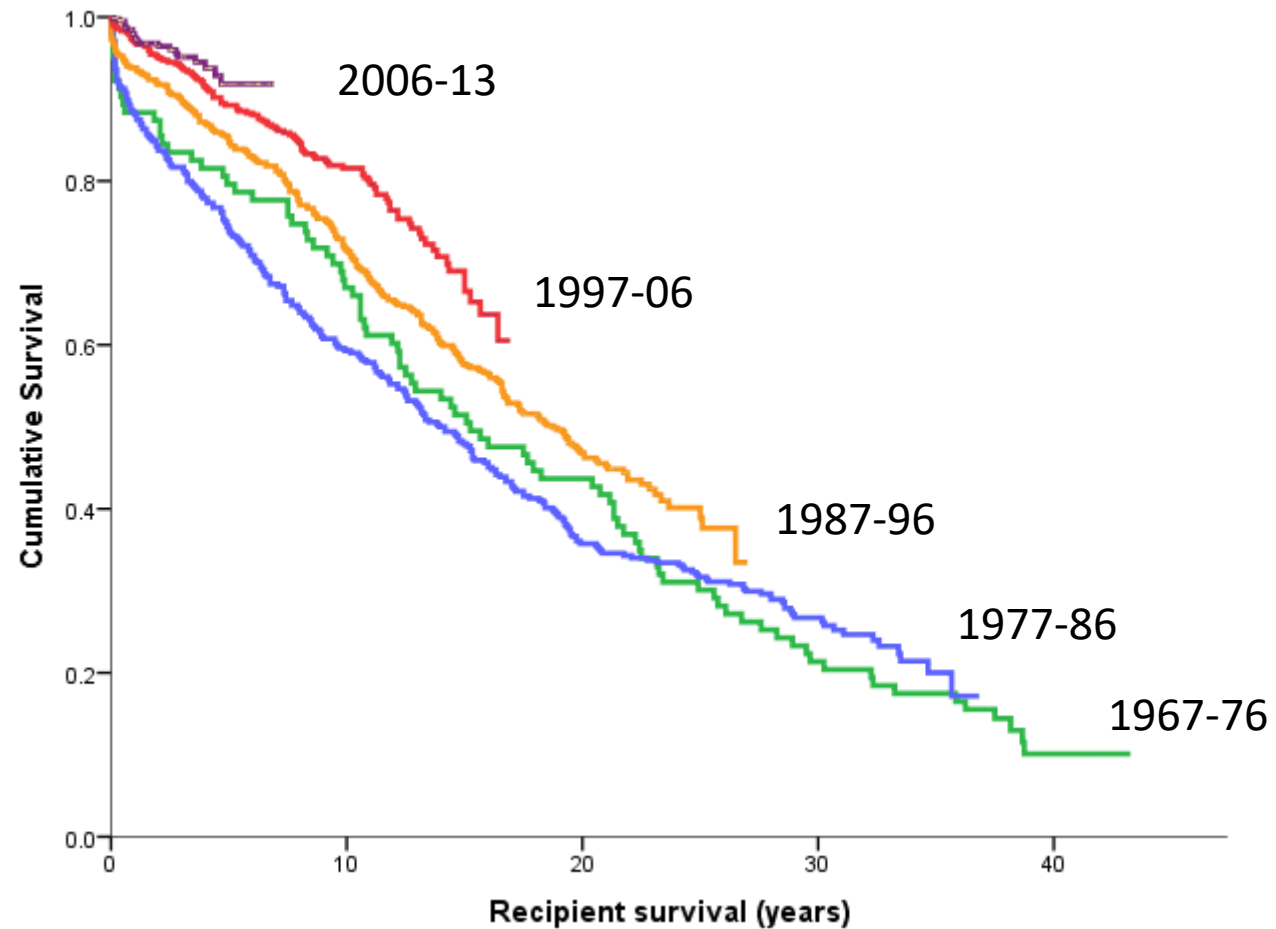
- If you commence dialysis aged 40 yr., what chance is there that you'll reach your 50<sup>th</sup> birthday?
  - 25%
  - 50%
  - 66%
  - 75%
  - 90%

# Kaplan–Meier survival of incident patients starting dialysis in the UK: 1997–2009 cohort



# How long can you live with a transplant?

All Belfast recipients



What would you want?

**Stay on dialysis or get a transplant?**

## Q 2

- On average how much longer than a deceased donor transplant does a live donor kidney transplant last?
  - 2 years
  - 4 years
  - 6 years
  - 8 years
  - 10 years

So the kidney lasts longer...

...what about the person?

# Patient survival

<b>Table 11.6</b>		<b>Patient survival after first adult <u>living donor</u> kidney transplant</b>							
Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
<u>2005-2007</u>	1579	99	(98-99)	98	(97-99)	96	(95-97)	<b>90</b>	(88-91)
2008-2010	2230	99	(98-99)	98	(97-98)	94	(93-95)		
2011-2013	2228	99	(99-99)	98	(97-99)	95	(94-96)		
2014-2017	2609	99	(99-99)						

<b>Table 11.2</b>		<b>Patient survival after first adult kidney only transplant from a <u>DBD</u></b>							
Year of transplant	No. at risk on day 0	% Patient survival (95% confidence interval)							
		One year		Two year		Five year		Ten year	
<u>2005-2007</u>	2210	97	(96-98)	95	(94-96)	89	(88-91)	<b>77</b>	(75-79)
2008-2010	2185	96	(95-97)	95	(94-95)	90	(88-91)		
2011-2013	2319	96	(95-97)	94	(93-95)	88	(87-89)		
2014-2017	3773	97	(96-98)						



# What makes the difference?

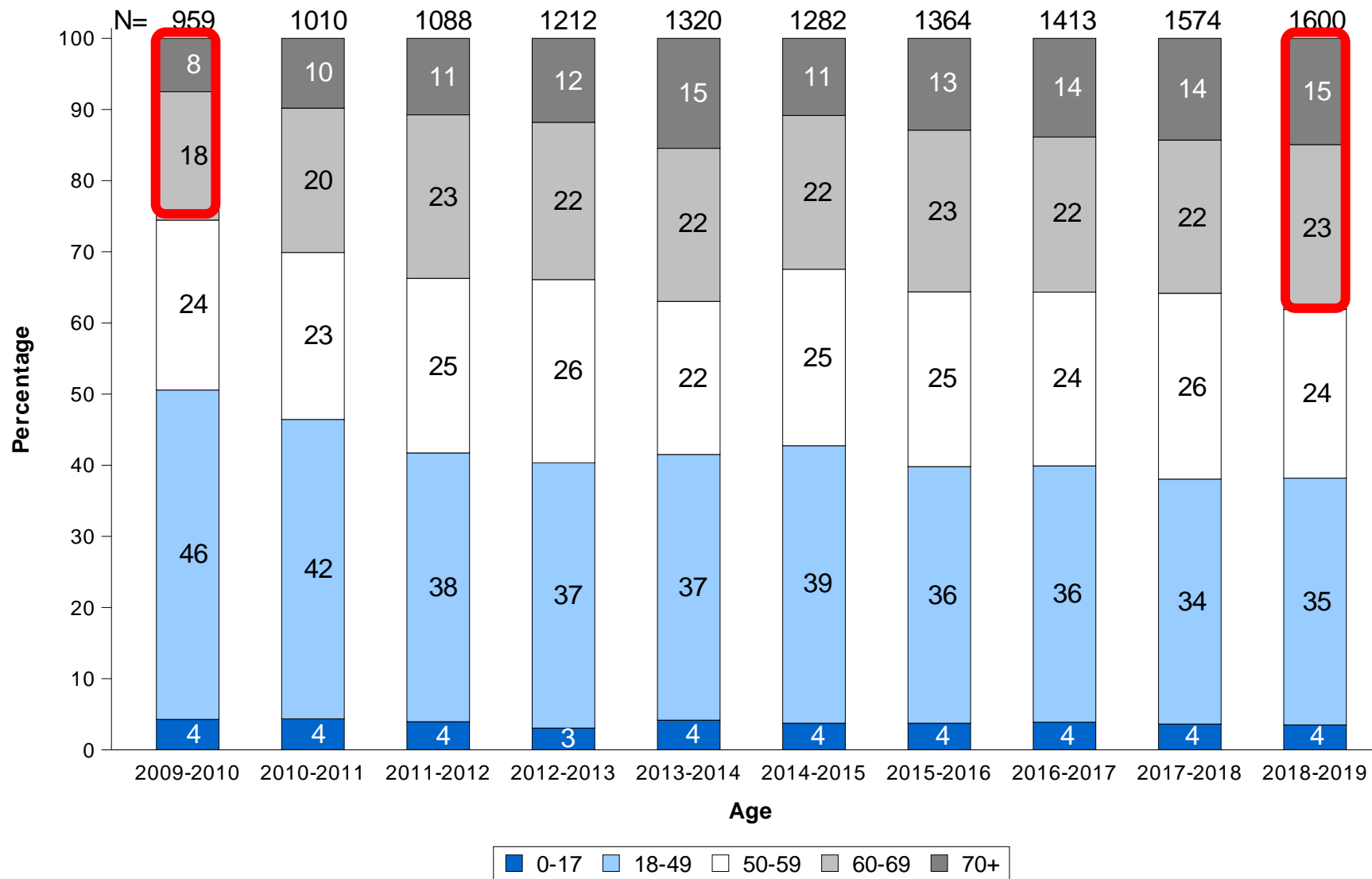
## **Quality of the kidney**

- Pre-mortal
- Peri-mortal
- Post-mortal

## **Quality of the recipient**

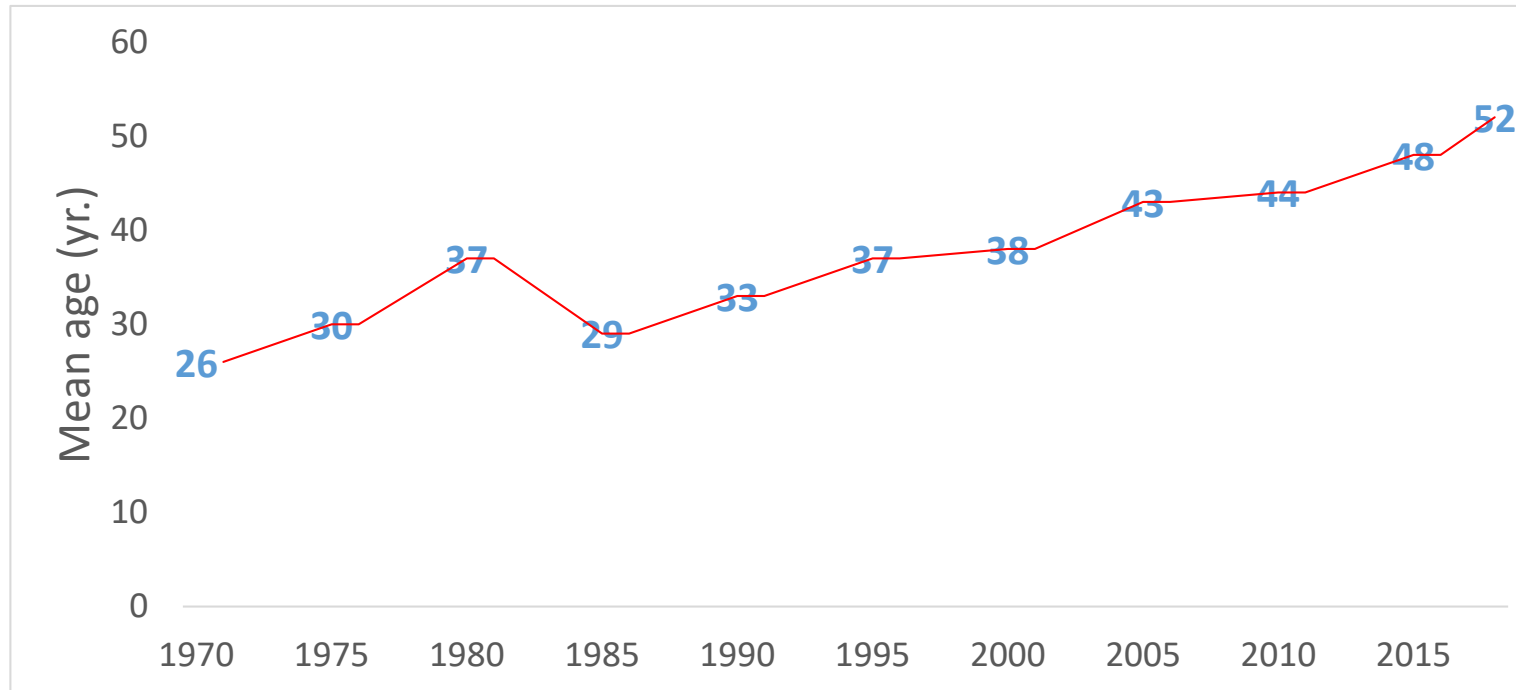
- Timing of the transplant

### Age of deceased donors in the UK, 1 April 2009 - 31 March 2019



Source: Transplant activity in the UK, 2018-2019, NHS Blood and Transplant

# Donor age



Boy racers!



And now...



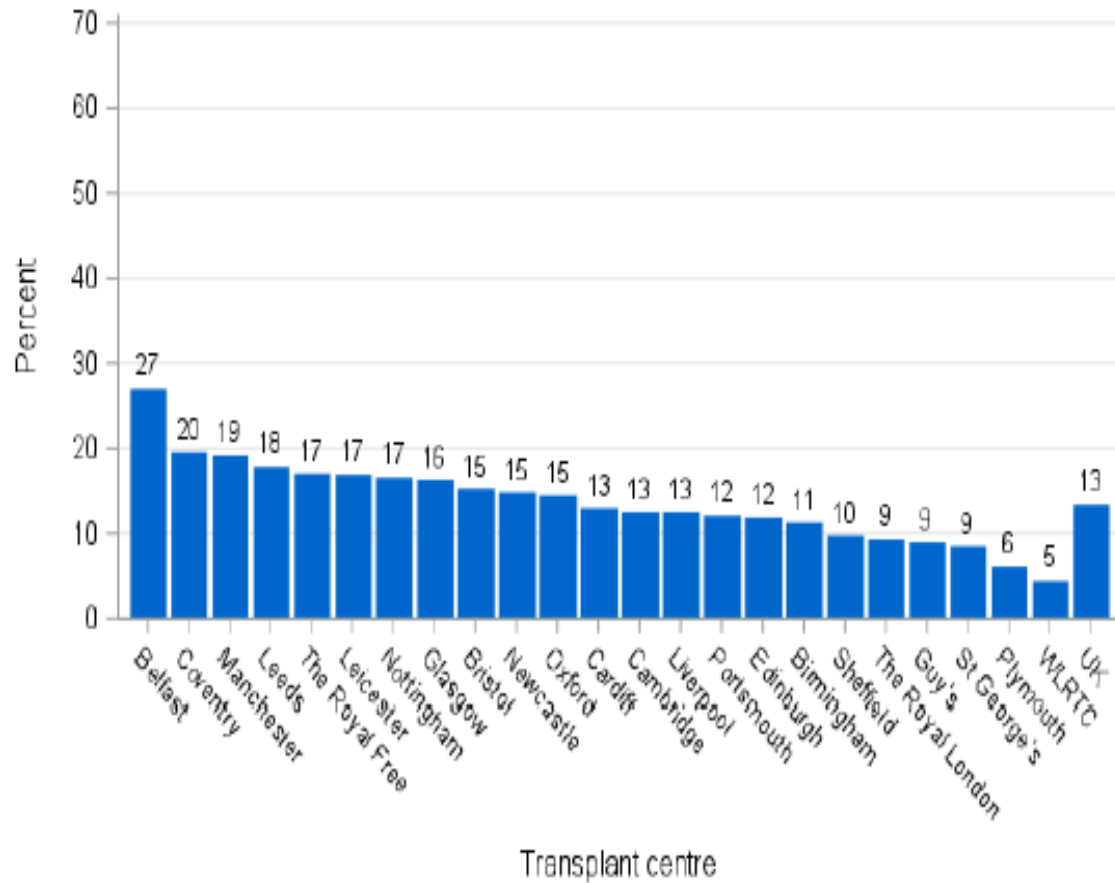
# Impact of waiting

Dialysis time is arguably the strongest independent modifiable risk factor for renal transplant outcome

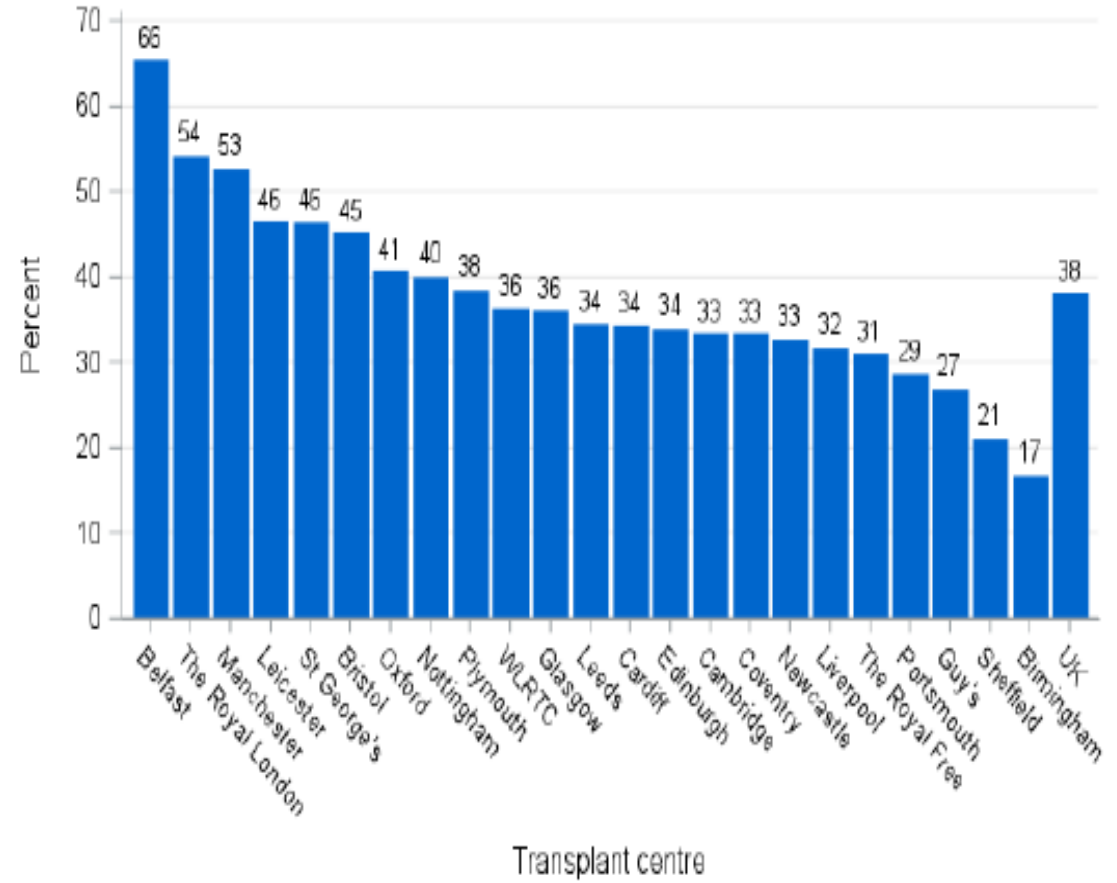
The longer you wait on dialysis  
the worse you will do after transplantation

# Pre-emptive transplantation

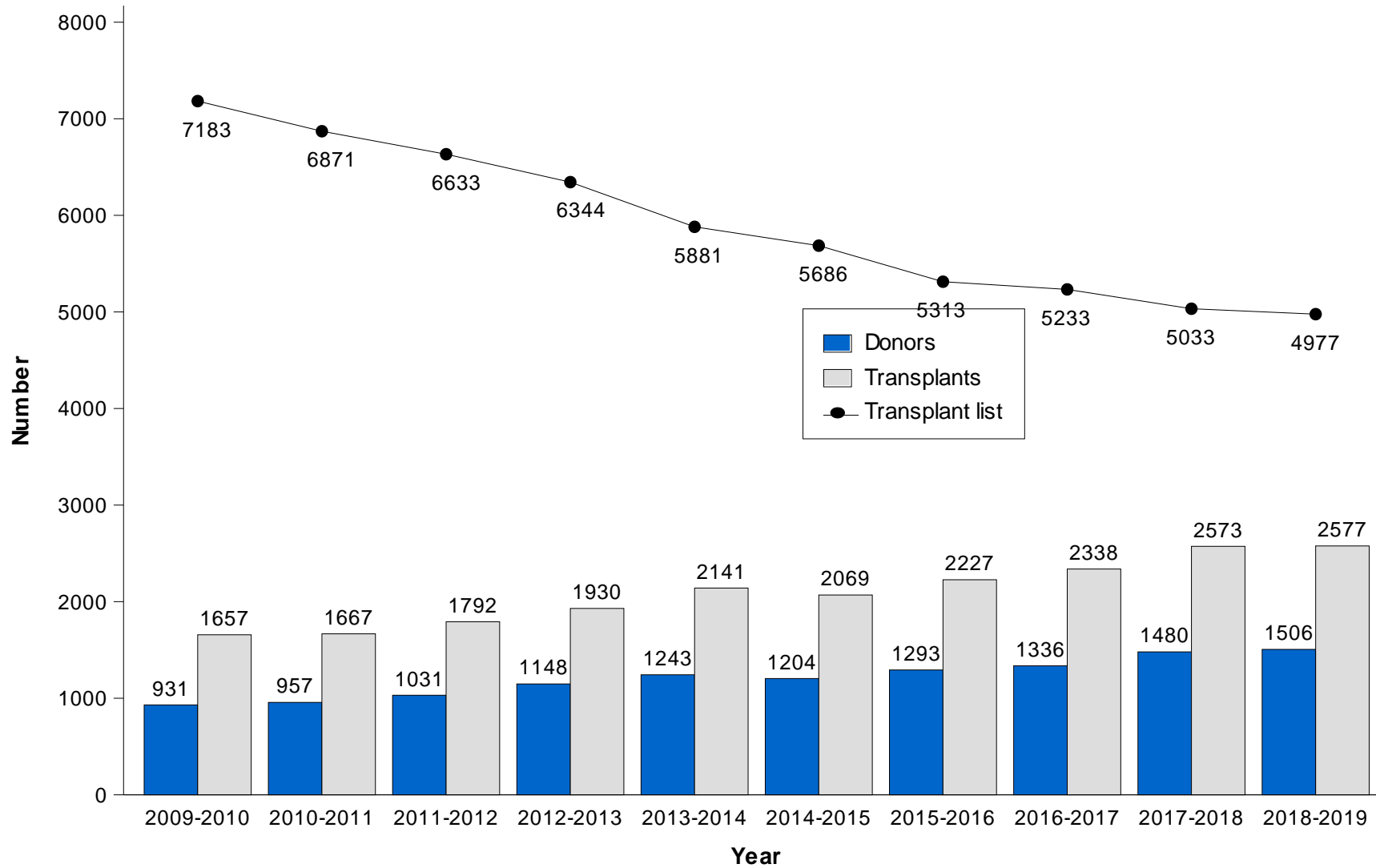
**Figure 5.8** Adult deceased donor pre-emptive transplant rates by centre, 1 April 2018 - 31 March 2019



**Figure 5.9** Adult living donor pre-emptive transplant rates by centre, 1 April 2018 - 31 March 2019

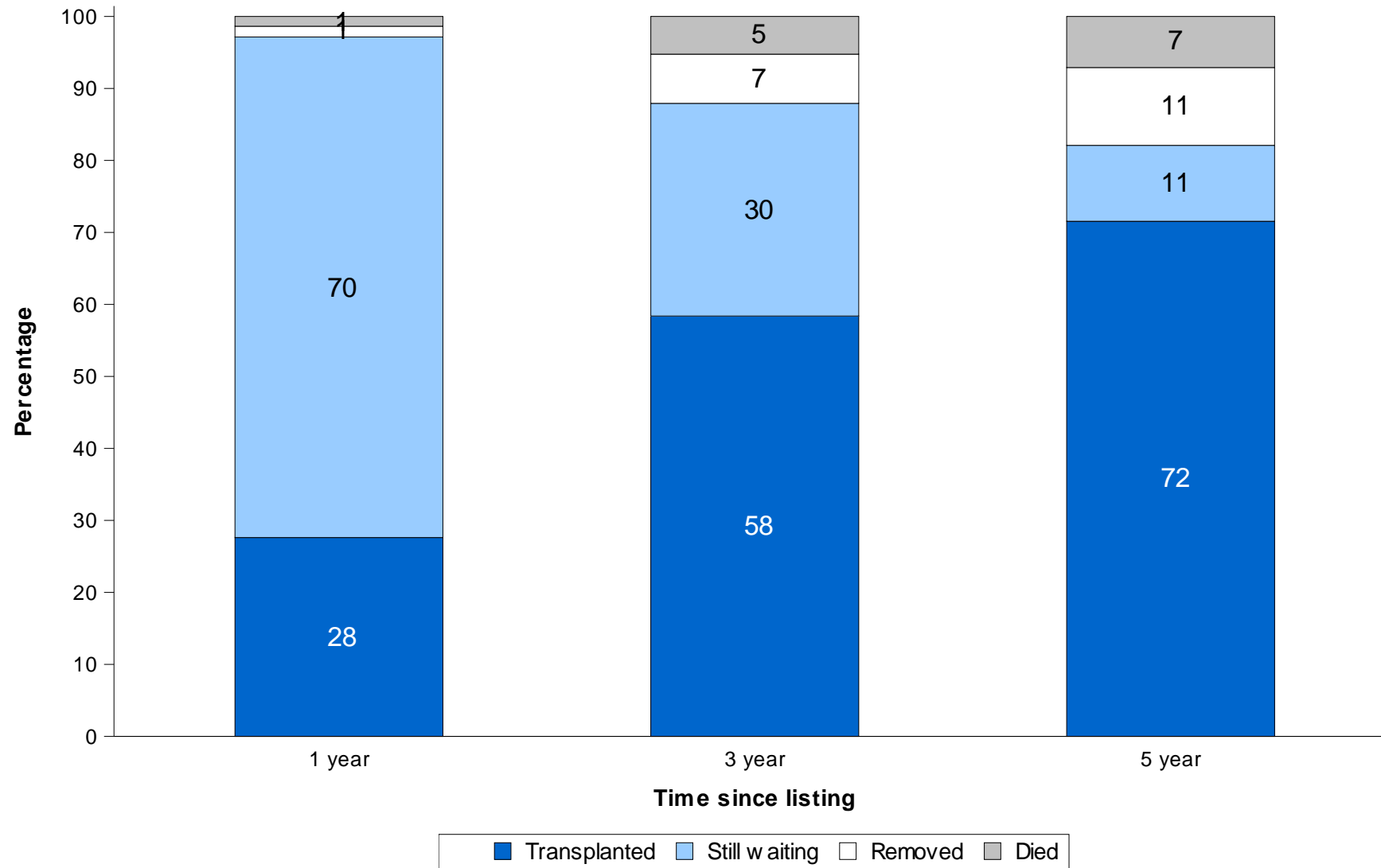


**Deceased donor kidney programme in the UK, 1 April 2009 - 31 March 2019,  
Number of donors, transplants and patients on the active transplant list at 31 March**





Post-registration outcome for 3016 new adult kidney only registrations made in the UK,  
1 April 2013 - 31 March 2014



## Factors associated with living donor kidney transplantation: Multivariate analysis

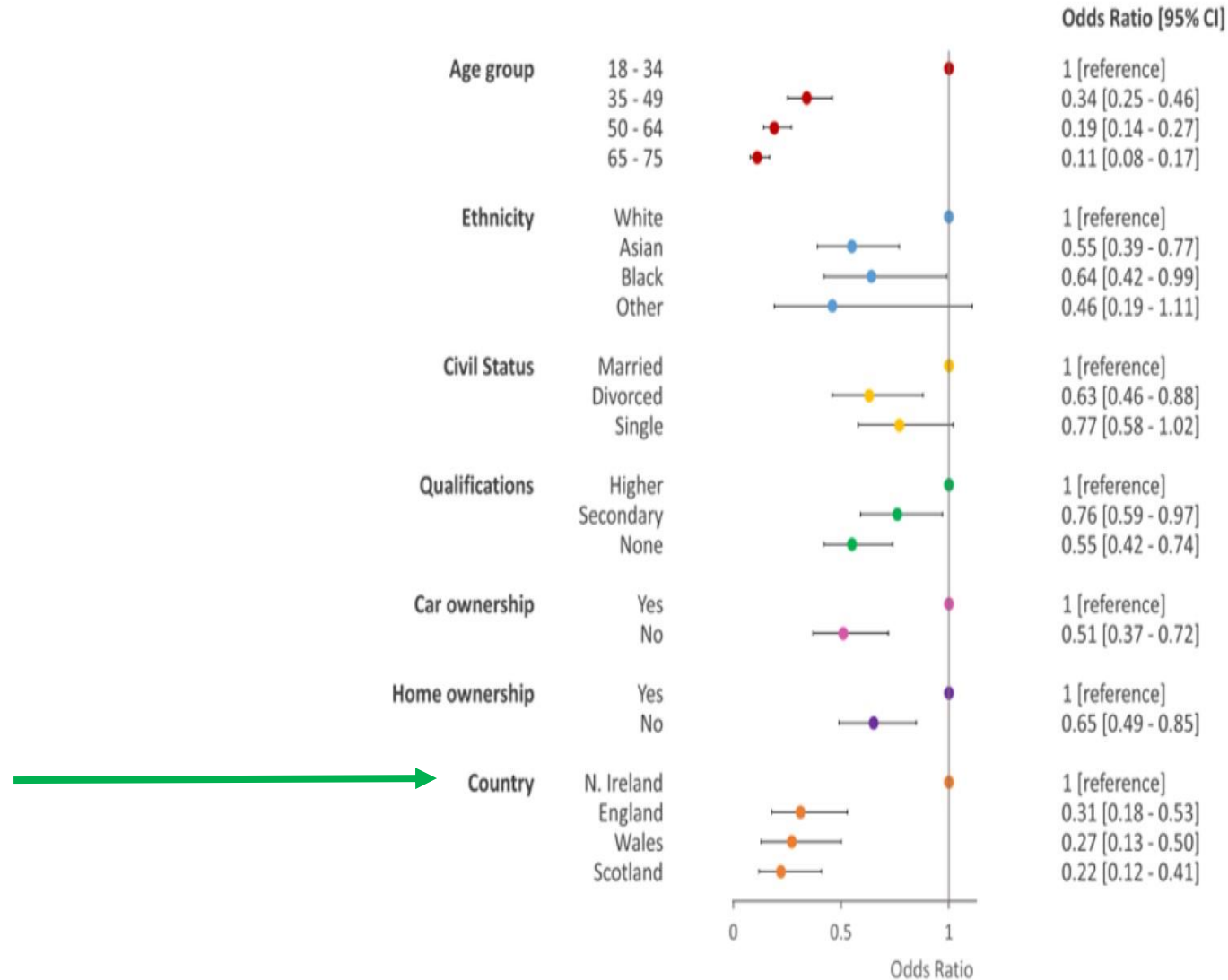
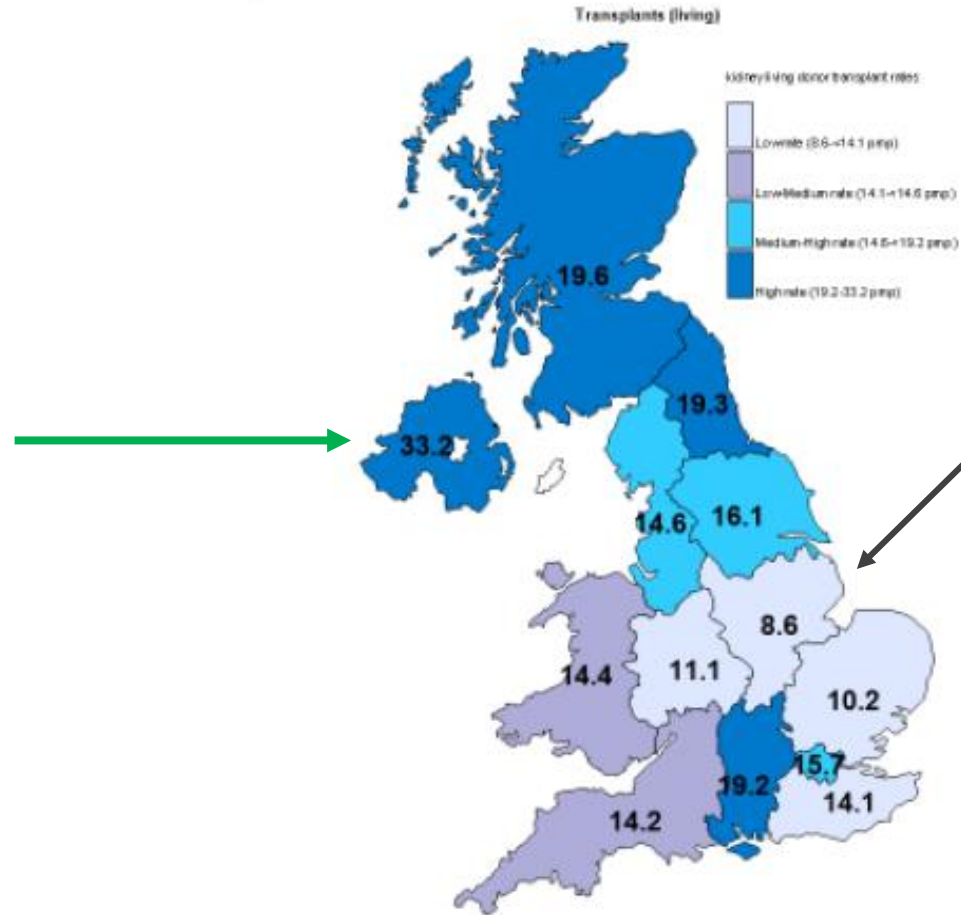


Figure 2.8 Living donor kidney transplant rates (pmp) by recipient country/Strategic Health Authority  
Authority of residence



**Table 2.1 Kidney registration and transplant rates per million population (pmp) in the UK, 1 April 2018 - 31 March 2019, by Country/Strategic Health Authority**

Country/ Strategic Health Authority	Registrations (pmp)		Deceased Donor Transplants (pmp)		Living Donor Transplants (pmp)	
North East	143	(54.2)	65	(24.6)	51	(19.3)
North West	324	(44.6)	248	(34.2)	106	(14.6)
Yorkshire and The Humber	259	(47.5)	194	(35.6)	88	(16.1)
<b>North of England</b>	<b>726</b>	<b>(47.3)</b>	<b>507</b>	<b>(33)</b>	<b>245</b>	<b>(16)</b>
East Midlands	261	(54.7)	195	(40.9)	41	(8.6)
West Midlands	281	(48)	193	(32.9)	65	(11.1)
East of England	272	(44.1)	217	(35.2)	63	(10.2)
<b>Midlands and East</b>	<b>814</b>	<b>(48.5)</b>	<b>605</b>	<b>(36)</b>	<b>169</b>	<b>(10.1)</b>
<b>London</b>	<b>697</b>	<b>(78.9)</b>	<b>456</b>	<b>(51.6)</b>	<b>139</b>	<b>(15.7)</b>
South East Coast	143	(30.5)	128	(27.3)	66	(14.1)
South Central	200	(45.8)	157	(35.9)	84	(19.2)
South West	238	(42.8)	205	(36.9)	79	(14.2)
<b>South of England</b>	<b>581</b>	<b>(39.7)</b>	<b>490</b>	<b>(33.5)</b>	<b>229</b>	<b>(15.7)</b>
<b>England</b>	<b>2818</b>	<b>(50.7)</b>	<b>2058</b>	<b>(37)</b>	<b>782</b>	<b>(14.1)</b>
<u>Isle of Man</u>	0		2	(25)	2	(25)
Channel Islands	4	(25)	9	(56.3)	2	(12.5)
<u>Wales</u>	138	(44.1)	109	(34.8)	45	(14.4)
<u>Scotland</u>	300	(55.4)	171	(31.5)	106	(19.6)
Northern Ireland	81	(43.3)	48	(25.7)	62	(33.2)
<b>TOTAL</b>	<b>3345<sup>1</sup></b>	<b>(50.7)</b>	<b>2399<sup>2</sup></b>	<b>(36.3)</b>	<b>1000<sup>3</sup></b>	<b>(15.1)</b>

*“I don't care where the kidney comes from  
as long as my patient gets transplanted”*

# Belief determines behaviour

## Recipient

Living donor transplantation is *not* significantly better than deceased donor transplantation

## Donor

Living donation *is* associated with substantial risks

Figure 6.4 Risk-adjusted five year patient survival rates for first deceased donor kidney transplants in adult patients, between 1 April 2010 and 31 March 2014

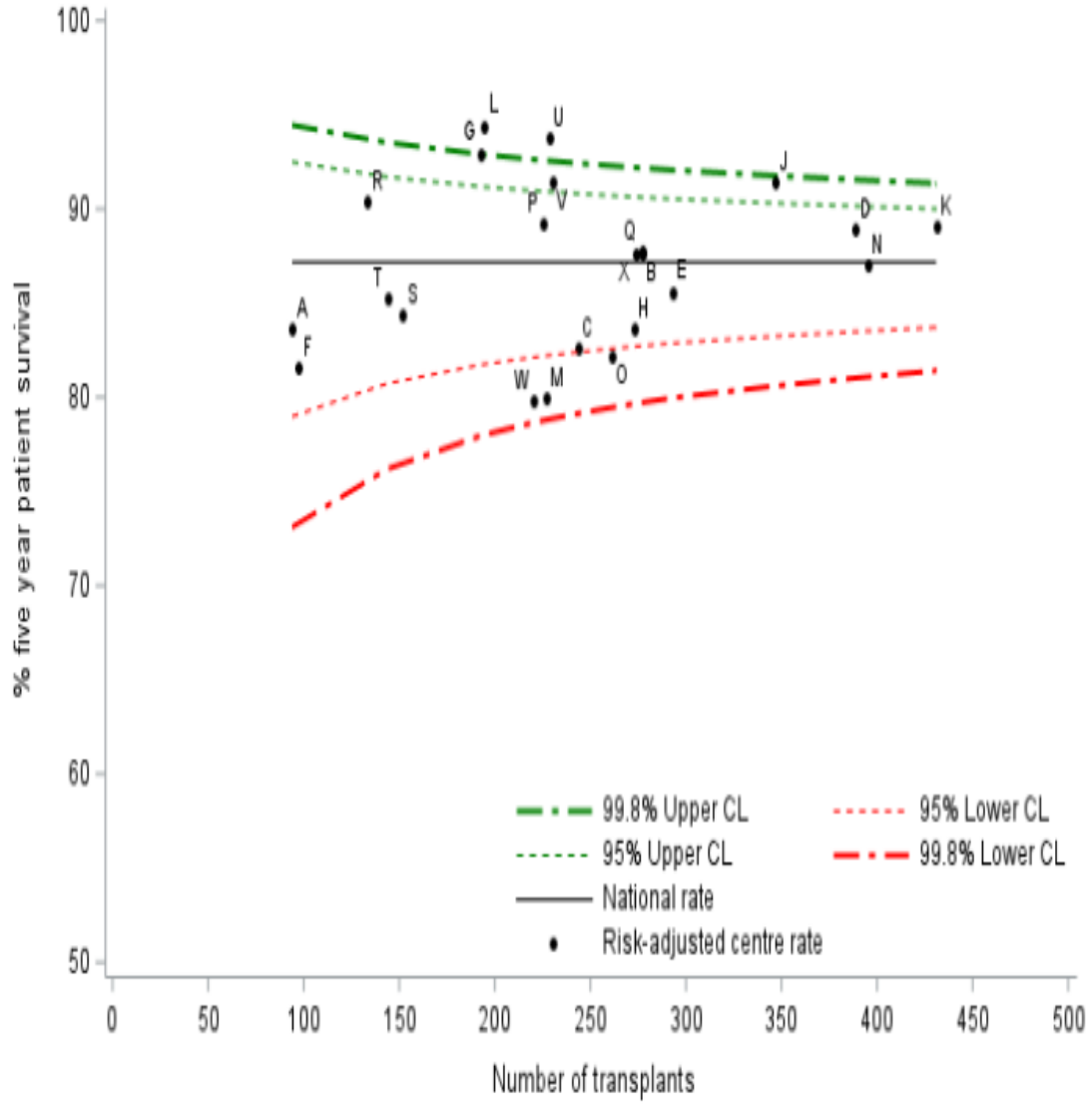
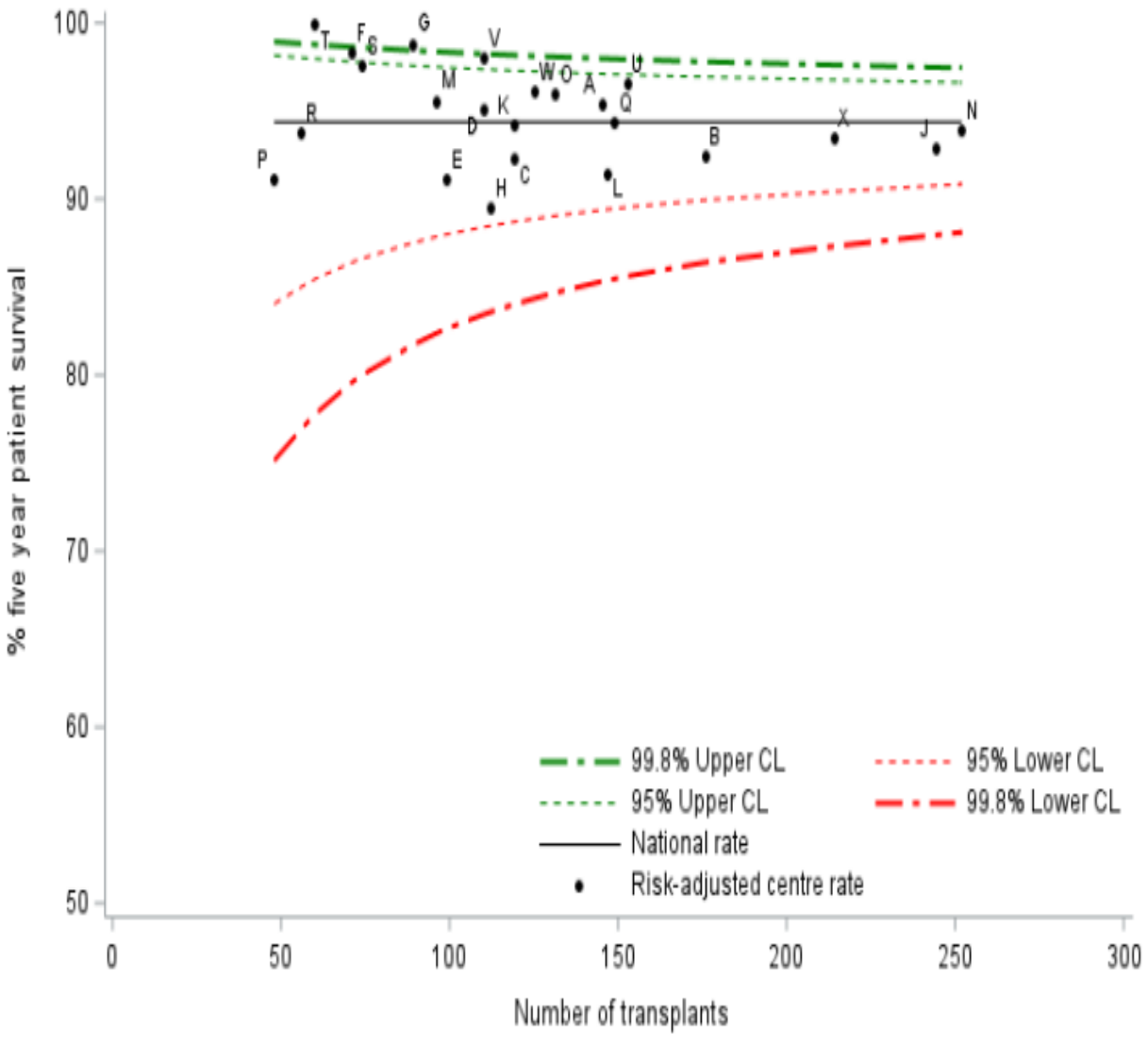


Figure 6.8 Risk-adjusted five year patient survival rates for first live donor kidney transplants in adult patients, between 1 April 2010 and 31 March 2014



UK outcomes                      1 April 2010-31 March 2014

Patient survival after first kidney transplant

Deceased donor                      87%

Living donor                              94%

Twice as likely to be dead within 5-years with a deceased donor transplant  
compared to a living donor transplant

OC1 Results Enquiry 14/01/2016

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Dept. : BS BHSCT Blood Sciences Spm: 14 Jan 2016 06:00

Spm No: \_\_\_\_\_

Pat No: **Laboratory alert – 12 hour post-transplant specimen**

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14. Tests	Result	Units	Flags and Ref. Ranges	Status
Amy	LabCentre - LABORATORY COMMENTS			P
Cal	Laboratory Comment			P
Pho	1. PLEASE NOTE: Significant changes have occurred for some results. Patient details on specimen have been checked.			P
ALP	Suggest repeat specimen if no clinical explanation for change.			P
Alb				P
Adj				P
C R				P
Glu				P
T.B				P
AST				P
GGT				P
ALT				P
Magnesium	0.91	mmol/L	(0.7 - 1)	P
vSodium	140	mmol/L	(135 - 145)	P

Accept Cancel A\_