

NHS BLOOD AND TRANSPLANT ORGAN AND TISSUE DONATION AND TRANSPLANTATION DIRECTORATE

HCV positive donors

BACKGROUND

- 1 Since March 2019 solid organ transplant programs in Scotland and Wales have been able to seek approval to apply for funding for HCV treatments for transplant recipients of HCV positive organs, thereby allowing transplant of HCV positive organs to negative recipients. From October 2019, this was also in place for programs in England and Northern Ireland.
- 2 Each UK transplant centre must apply for this funding and meet the preconditions before being entered into the program. A list of approved centres is in the Appendix.
- 3 This paper provides a summary of HCV positive donors offered in the UK since the introduction of the program.

DATA

- 4 Donors identified as HCV positive or had an indeterminate result on the UKTR and had organs offered for transplant between 1 March 2019 and 30 September 2021, were investigated. Some of these donors may have been offered as HCV positive or indeterminate and subsequently found to be HCV RNA negative.

RESULTS

- 5 There were 85 patients identified as HCV positive or had an indeterminate result, who had at least one solid organ offered for donation. Of those 85, 35 (41.2%) became solid organ donors, having at least one solid organ retrieved with the intention to transplant.
- 6 **Table 1** shows the number of each organ offered from these 85 donors and the outcome. Overall, 405 organs were offered, 96 (24%) were accepted, 68 were retrieved and 49 organs (72% of those retrieved) were transplanted. This resulted in 47 transplants as one was a simultaneous pancreas and kidney and one was a double lung transplant.
- 7 **Table 2** shows the reasons given for not retrieving or retrieving and not transplanting the organs. The main reason given was “donor unsuitable – virology” but for livers was “donor unsuitable – past history”. The majority of organs were not retrieved and only 14 kidneys, four livers and one pancreas were accepted and retrieved but subsequently not transplanted.
- 8 The 47 transplants came from 28 donors, 15 (50%) were confirmed as HCV RNA positive and 13 (43%) were negative, shown in **Table 3**. The 15 donors confirmed as HCV RNA positive resulted in 17 kidney and five liver transplants.

- 9 Of the 17 kidney transplants, 13 were performed in Cardiff, two in Edinburgh and two in Belfast and all recipients were HCV negative pre-transplant. One graft failed within 30 days and 13 are known to be functioning: four at less than one year and nine at greater than one year post-transplant.
- 10 The five liver transplants were performed at Birmingham, Royal Free, Edinburgh (2) and Cambridge. Two recipients were HCV RNA positive pre-transplant and three were HCV antibody negative. Of the two HCV positive recipients one transplant failed and the recipient died and one was known to be functioning at three months post-transplant. Of the three HCV negative recipients all were functioning at three months post-transplant.

Claire Counter
Statistics and Clinical Studies

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Organ	Organs Offered	Accepted	% of offered	Retrieved	% of accepted	Transplanted	% of retrieved
Kidney	161	62	38.5	49	79.0	35	71.4
Livers	72	24	33.3	14	58.3	10	71.4
Pancreas	59	3	5.1	2	66.7	1	50.0
Heart	35	1	2.9	1	100.0	1	100.0
Lung	66	6	9.1	2	33.3	2	100.0
Small bowel	12	0	0.0	0	.	0	.
Total	405	96	23.7	68	70.8	49	72.1

Table 2 Primary reason recorded for organ not retrieved or retrieved and not used when offered from 69 HCV antibody positive or indeterminate result donors, 1 March 2019 to 30 September 2021

Primary overall reason recorded	Kidneys		Livers		Pancreases		Small bowels		Hearts		Lungs ¹	
	N	%	N	%	N	%	N	%	N	%	N	%
Donor unsuitable - virology	60	47.6	16	25.8	31	53.4	9	75.0	24	70.6	16	50.0
Donor unsuitable - past history	31	24.6	25	40.3	15	25.9	.	.	3	8.8	5	15.6
No suitable recipients	14	11.1	8	12.9	6	10.3	2	16.7	4	11.8	6	18.8
Poor perfusion	3	2.4	.	.	.	.	.	.	.	.	.	.
Family permission refused	2	1.6	.	.	.	.	.	.	.	.	.	.
Permission refused by coroner	2	1.6	2	3.2	.	.	.	.	.	.	.	.
Poor function	2	1.6	.	.	.	.	.	.	2	5.9	1	3.1
Infection	2	1.6	.	.	.	.	.	.	.	.	.	.
Medication	1	0.8	.	.	.	.	.	.	.	.	.	.
Organ damaged	1	0.8	.	.	.	.	.	.	.	.	.	.
Donor unsuitable - age	.	.	2	3.2	2	3.4	.	.	.	.	.	.
Donor unsuitable - size	.	.	.	.	2	3.4	.	.	.	.	.	.
Centre criteria not achieved	.	.	.	.	.	.	.	.	.	.	1	3.1
Ischaemia time too long - warm	.	.	1	1.6	.	.	.	.	.	.	.	.
No response to fast track offer	.	.	1	1.6	1	1.7	1	8.3	1	2.9	2	6.3
Used for research after declined by centres	.	.	1	1.6	.	.	.	.	.	.	.	.
Fatty organ	.	.	1	1.6	.	.	.	.	.	.	.	.
Donor unsuitable - medical reason	.	.	.	.	.	.	.	.	.	.	1	3.1
Other	8	6.3	5	8.1	1	1.7	.	.	.	.	.	.
Total	126	100.0	62	100.0	58	100.0	12	100.0	34	100.0	32	100.0

¹ One reason per pair of lungs

Table 3 Transplants performed by donor HCV RNA status, 1 March 2019 to 30 September 2021

Donor HCV RNA status	Transplants					Total	Donors
	Kidney	Liver	Pancreas	Heart	Lung		
Positive	17	5	0	0	0	22	15
Negative	18 ¹	5	1 ¹	1	2 ²	25	13
Total	35¹	10	1¹	1	2²	47	28

¹ One SPK transplant

¹ One double lung transplant

Appendix

List of approved centres

Cardiac	Liver	Kidney	Pancreas	IFALD
Birmingham Papworth	Birmingham Edinburgh Royal Free Newcastle Leeds Cambridge	Belfast Edinburgh Cardiff Leeds Royal Free Oxford Cambridge		