



Blood and Transplant

**WEEKLY REPORT ON SARS-CoV-2 POSITIVE
PATIENTS IN TRANSPLANTATION**

**REPORT FOR
1 MARCH 2020 – 6 JANUARY 2021**

PUBLISHED 8 JANUARY 2021



This report has been produced by Statistics and Clinical Studies, NHS Blood and Transplant.

All figures quoted in this report are as reported to NHS Blood and Transplant by 6 January 2021.

This report contains information on all patients registered with NHS Blood and Transplant active on the waiting list for an organ transplant or in follow-up after receiving an organ transplant that have tested positive for SARS-CoV-2.

The data collected are deliberately limited so as not to add significantly to the burden of work in transplant centres.

Information on the vital status of a patient has been supplemented from the NHS Digital Tracing Service for patients who reside in England and Wales. Only deaths reported within 28 days of a positive test result are included.

All English patients on the UK Transplant Registry on the waiting list and post-transplant have been linked with Public Health England to obtain whether a patient has tested positive for SARS-CoV-2. This data is updated on a weekly basis.

All Scottish patients on the UK Transplant Registry on the waiting list and post-transplant have been linked with Public Health Scotland to obtain whether a patient has tested positive for SARS-CoV-2. This data is updated on a monthly basis.

Detailed breakdown by organ is possible for kidney, SPK, liver, heart and lung transplants only due to small numbers. A breakdown of waiting list characteristics is not possible for heart and lung patients due to small numbers.

Further analysis is planned in future reports to include univariate and multi-variable analysis.

Caveats

Data are only reported for patients that have tested positive for SARS-CoV-2, patients that may have COVID-19 but were not tested are not available for analysis. During the period in question, SARS-CoV-2 swab testing was in the main restricted to patients presenting to hospital and as such there is a selection bias towards symptomatic, sicker patients. Cause of death information is not available at this time and therefore recent deaths should not be assumed secondary to COVID-19.

Data linkage has only been possible so far for English and Scottish patients, we are working with other UK nations to get a data linkage in place as soon as possible.

Supplemented death data is only reported for English and Welsh patients and includes all causes of death. For other UK nations we are reliant on the return of centre reported follow-up information.

Acknowledgements

NHS Blood and Transplant would like to thank all those responsible for providing data to the NHSBT COVID-19 Registry, without whom this report would not be possible.

We would also like to thank Richard Little at NHSBT who has largely contributed to obtaining the death information from the NHS Digital Tracing Service.

We would also like to thank Ines Ushiro-Lumb (NHSBT), Rommel Ramanan (Kidney Advisory Group Chair) and James Thomas (PHE) who have largely contributed to obtaining information on positive test results for SARS-CoV-2 from Public Health England.

We would also like to thank Hester Ward (National Services Scotland) and Alison Smith-Palmer (PHS) who have largely contributed to obtaining information on positive test results for SARS-CoV-2 from Public Health Scotland.

Publications

<https://onlinelibrary.wiley.com/doi/abs/10.1111/ajt.16247?af=R>

Executive Summary



Key Findings

- The number of deceased donor transplants fell from 80 transplants performed in one week at the beginning of March to just 8 at the end of March. Deceased donor transplants have since been steady, with 53 transplants performed in the week commencing 28 December 2020.
- 2,239 of the 57,634 (3.9%) recipients with a functioning graft are reported as testing positive for SARS-CoV-2. Of these, 17% (n=371) are reported as died as at 6 January 2020.
- The infection rate across England ranges from 2.1% in the South West to 6.0% in North West in recipients with a functioning graft.
- 590 of the 9,344 (6.3%) patients on the active waiting list at 1 February 2020 and new registrations since 1 February 2020 are reported as testing positive for SARS-CoV-2. Of these, 8% (n=49) are reported as died as at 6 January 2020.
- The infection rate across England ranges from 1.9% in the South west to 12.4% in London for patients on the active waiting list.
- Of the 3,614 transplants performed so far in 2020 and 2021, 146 (4.0%) recipients have tested positive for SARS-CoV-2 with 24 (0.7%) reported as died.

Figure 1 shows the number of donors and transplants by week and donor type since Monday 6th January 2020.

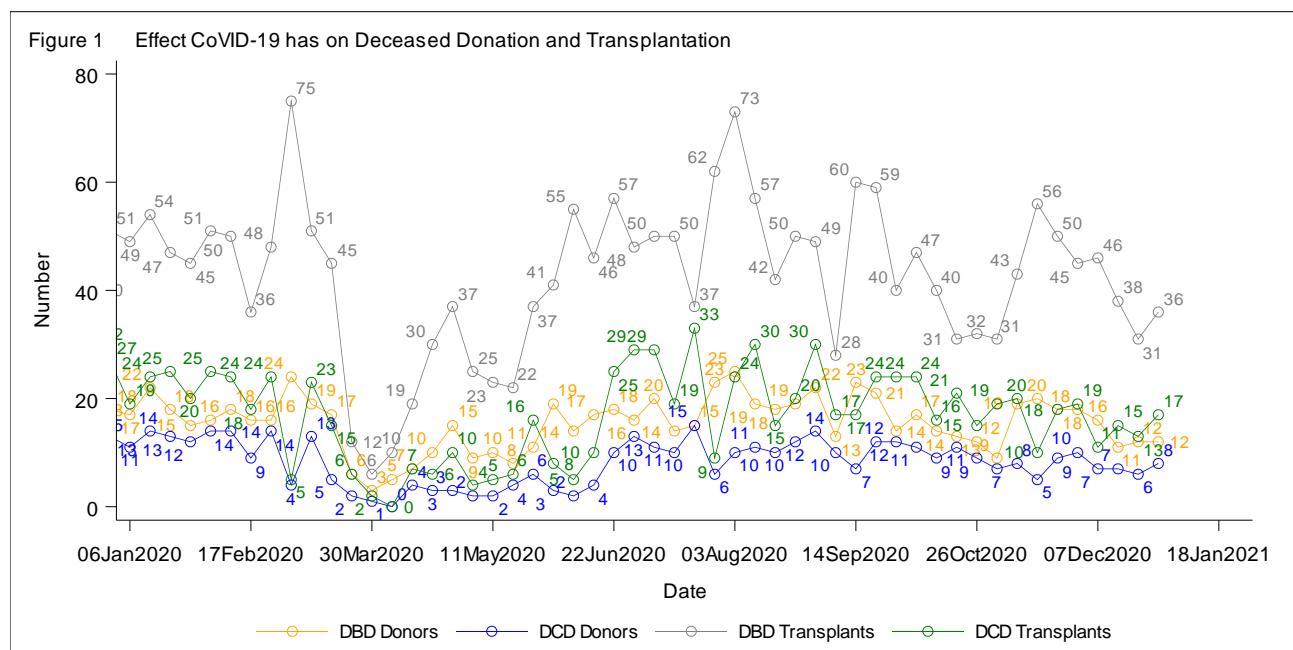


Figure 2 shows the cumulative incidence of SARS-CoV-2 positive patients and the cumulative deaths by week separately for transplanted recipients and active wait listed patients since Monday 3rd February 2020.

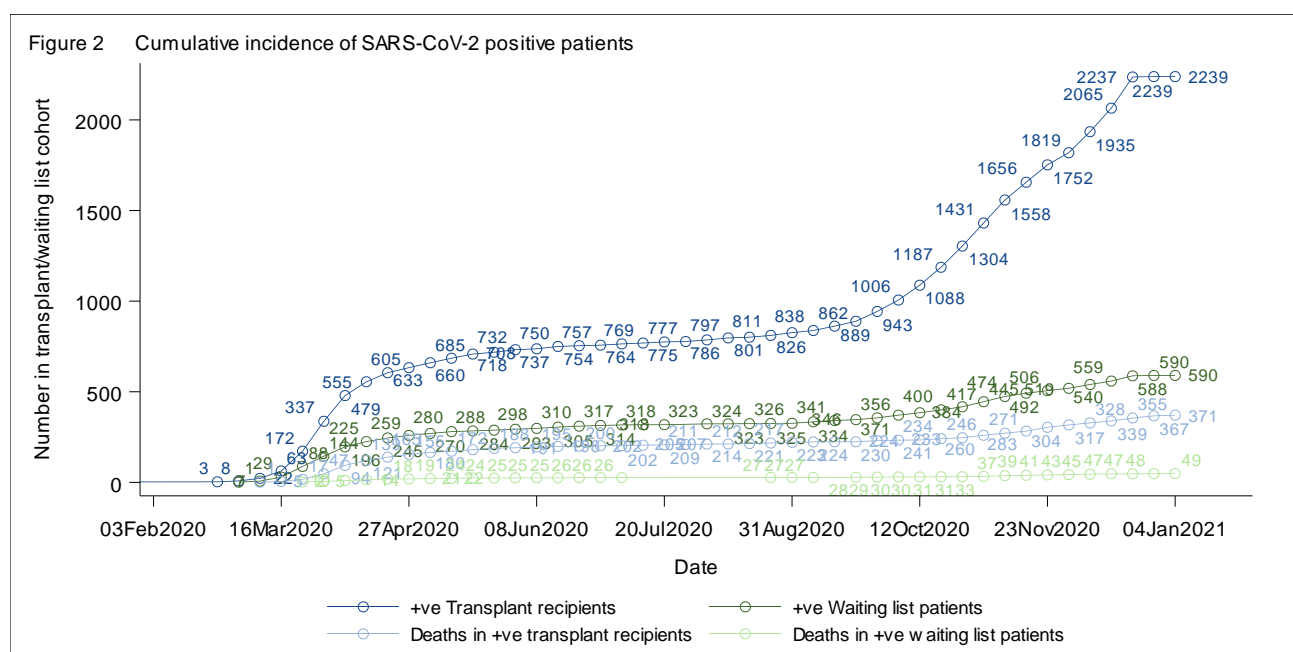


Figure 3 shows the incidence and deaths of SARS-CoV-2 positive patients by organ for transplanted recipients and active wait listed patients.

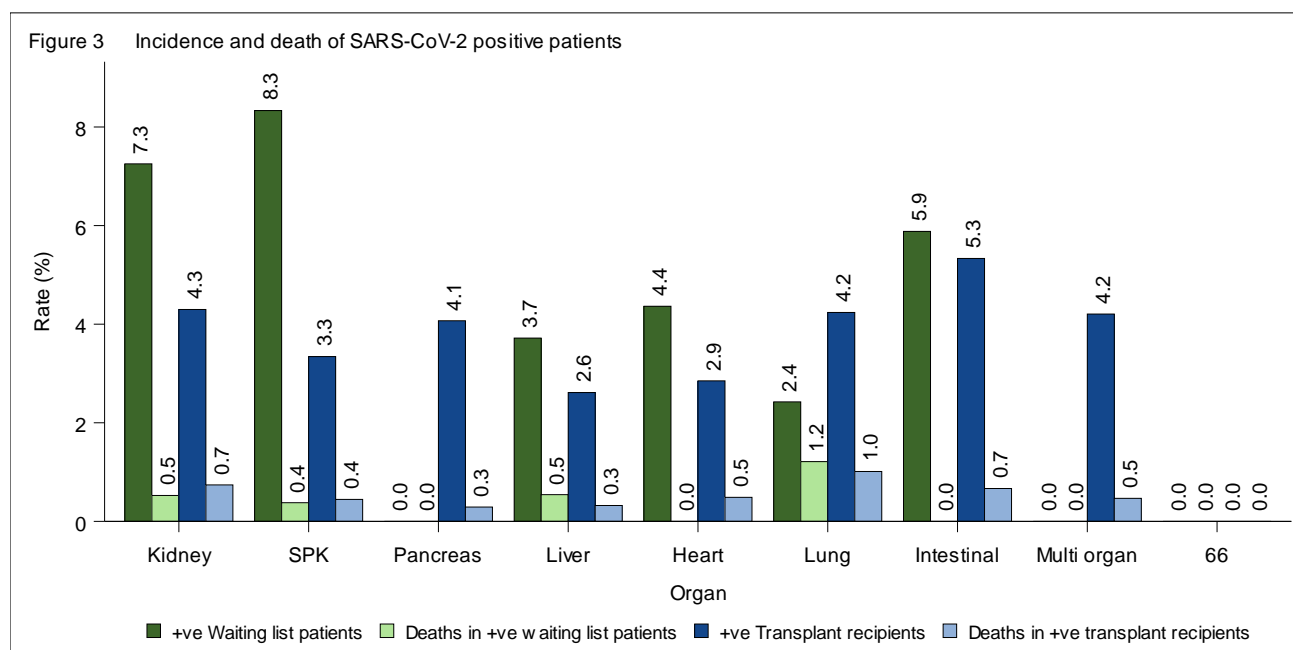


Table 1 shows the number of NHSBT CoVID-19 initial presentation forms returned and the number of NHSBT CoVID-19 follow-up forms returned for transplant recipients and wait listed patients by organ. Total cases include the number of positive SARS-CoV-2 patients in England that have been collected through the PHE data link. Please note that for patients residing in England and Wales the vital status of a patient is checked using the NHS Digital Tracing Service.

Table 1 Form return rates for Initial and Follow-up as at 2 December 2020						
	Transplant Recipients			Waiting list patients		
	Total +ve cases known to NHSBT ¹	Initial forms returned	Follow-up forms returned	Total +ve cases known to NHSBT ¹	Initial forms returned	Follow-up forms returned
Kidney	1340	473	183	383	86	28
SPK	45	21	10	18	4	1
Pancreas / Islet	13	3	1	0	0	0
Liver	214	44	22	40	7	5
Heart	57	30	13	16	1	0
Lung	56	36	6	9	3	1
Intestinal	6	1	0	1	0	0
Multi-organ	6	1	0	0	0	0
Total	1737	609	235	467	101	35
¹ Total positive cases include those reported by Public Heath England						

Table 2 shows the number of organ transplant recipients that were alive with a functioning graft at 1 February 2020 by type of organ transplant and NHS Region.

Table 2 Number of recipients with a functioning graft by transplant type and NHS Region, as at 1 February 2020 including transplants after 1 February 2020									
	Kidney	SPK	Pancreas	Liver	Heart	Lung	Intestinal	Multi organ	Total
North East and Yorkshire	5247	149	43	1389	434	230	19	24	7535
North West	4050	138	25	1069	265	156	19	21	5743
Midlands	5789	319	51	1668	437	250	23	33	8570
East of England	3707	228	16	1131	292	204	24	27	5629
London	6317	214	29	1625	291	147	20	42	8685
South East	4920	305	29	1262	322	231	16	29	7114
South West	3272	143	61	852	220	128	9	20	4705
Northern Ireland	1436	23	5	346	68	43	8	2	1931
Scotland	3412	172	58	1128	223	122	9	13	5137
Wales	1866	104	27	398	114	70	3	3	2585
TOTAL	40016	1795	344	10868	2666	1581	150	214	57634

Table 3 shows the number of organ transplant recipients that have tested positive for SARS-CoV-2 by type of organ transplant and NHS Region. In total, 2,239 organ transplant recipients have been reported to NHSBT as testing positive for SARS-CoV-2. Of these, 371 (17%) have died.

Table 3 Number of recipients testing positive for SARS-CoV-2 by transplant type and NHS Region, data up to 16 December 2020										
	Kidney	SPK	Pancreas	Liver	Heart	Lung	Intestinal	Multi organ	Total	Died
North East and Yorkshire	268	5	3	42	23	13	0	0	354	49
North West	256	7	1	52	10	17	1	2	346	71
Midlands	323	7	2	53	14	15	1	1	416	55
East of England	148	7	0	23	3	3	1	1	186	36
London	403	14	3	64	10	8	3	2	507	82
South East	167	16	1	34	8	7	0	2	236	38
South West	76	2	3	12	6	0	1	1	101	20
Northern Ireland	9	0	0	0	0	0	0	0	9	2
Scotland	34	1	1	3	0	2	1	0	42	10
Wales	36	1	0	1	2	2	0	0	42	8
TOTAL	1720	60	14	284	76	67	8	9	2239	371

Table 4 shows the number of recipients on the active waiting list at 1 February 2020 by type of organ transplant and NHS Region.

Table 4 Number of patients on the active waiting list by organ awaited and NHS Region, as at 1 February 2020 including new registrations since 1 February 2020									
	Kidney	SPK	Pancreas	Liver	Heart	Lung	Intestinal	Multi organ	Total
North East and Yorkshire	821	31	8	145	111	78	3	7	1204
North West	720	30	3	145	49	54	2	4	1007
Midlands	1117	45	7	216	91	91	3	4	1574
East of England	502	20	1	118	50	36	2	4	733
London	1405	36	1	165	65	55	3	6	1736
South East	593	33	4	153	62	55	3	7	910
South West	482	13	2	107	37	38	1	2	682
Northern Ireland	208	2	0	47	24	26	0	0	307
Scotland	577	38	6	124	45	40	0	1	831
Wales	235	16	0	71	16	22	0	0	360
TOTAL	6660	264	32	1291	550	495	17	35	9344

Table 5 shows the number of active wait listed patients that have tested positive for SARS-CoV-2 by type or organ awaited and NHS Region. In total, 590 patients have been reported to NHSBT as testing positive for SARS-CoV-2. Of these, 49 (8%) have died.

Table 5 Number of patients testing positive for SARS-CoV-2 by organ awaited and NHS Region, data up to 14 October 2020								
	Kidney	SPK	Liver	Heart	Lung	Intestinal	Total	Died
North East and Yorkshire	47	2	10	4	3	0	66	5
North West	61	1	6	7	0	0	75	8
Midlands	78	5	11	5	3	0	102	10
East of England	44	3	1	1	1	1	51	1
London	191	8	10	4	3	0	216	19
South East	42	1	8	1	2	0	54	5
South West	9	1	1	2	0	0	13	0
Scotland	7	1	1	0	0	0	9	0
Wales	4	0	0	0	0	0	4	1
TOTAL	483	22	48	24	12	1	590	49

Table 6 shows the demographic characteristics of organ transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 6 Demographic characteristics of transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	34919	60.6	1372	61.3	3.9	237	17.3	0.7
	Female	22687	39.4	867	38.7	3.8	134	15.5	0.6
	Unknown	28	0.0	-	-	-	-	-	-
Blood Group	O	24835	43.1	858	38.3	3.5	133	15.5	0.5
	A	23174	40.2	913	40.8	3.9	153	16.8	0.7
	B	7095	12.3	354	15.8	5.0	63	17.8	0.9
	AB	2510	4.4	114	5.1	4.5	22	19.3	0.9
Ethnicity	White	44344	76.9	1405	62.8	3.2	223	15.9	0.5
	Asian	5940	10.3	502	22.4	8.5	86	17.1	1.4
	Black	2799	4.9	184	8.2	6.6	39	21.2	1.4
	Other	1445	2.5	56	2.5	3.9	10	17.9	0.7
	Unknown	3106	5.4	92	4.1	3.0	13	14.1	0.4
Age group	0-17	2117	3.7	42	1.9	2.0	-	-	-
	18-29	3606	6.3	156	7.0	4.3	-	-	-
	30-39	5861	10.2	224	10.0	3.8	9	4.0	0.2
	40-49	9060	15.7	354	15.8	3.9	28	7.9	0.3
	50-59	14641	25.4	615	27.5	4.2	72	11.7	0.5
	60-69	13939	24.2	547	24.5	3.9	142	26.0	1.0
	>70	8406	14.6	299	13.4	3.6	120	40.1	1.4
Organ	Kidney	40016	69.4	1720	76.8	4.3	296	17.2	0.7
	SPK	1795	3.1	60	2.7	3.3	8	13.3	0.4
	Pancreas	344	0.6	14	0.6	4.1	1	7.1	0.3
	Liver	10868	18.9	284	12.7	2.6	35	12.3	0.3
	Heart	2666	4.6	76	3.4	2.9	13	17.1	0.5
	Lung	1581	2.7	67	3.0	4.2	16	23.9	1.0
	Intestinal	150	0.3	8	0.4	5.3	1	12.5	0.7
	Multi organ	214	0.4	9	0.4	4.2	1	11.1	0.5
	66	-	-	1	0.0	-	-	-	-
NHS Region	North East and Yorks	7535	13.1	354	15.8	4.7	49	13.8	0.7
	North West	5743	10.0	346	15.5	6.0	71	20.5	1.2
	Midlands	8570	14.9	416	18.6	4.9	55	13.2	0.6
	East of England	5629	9.8	186	8.3	3.3	36	19.4	0.6
	London	8685	15.1	507	22.6	5.8	82	16.2	0.9
	South East	7114	12.3	236	10.5	3.3	38	16.1	0.5
	South West	4705	8.2	101	4.5	2.1	20	19.8	0.4
	Northern Ireland	1931	3.4	9	0.4	0.5	2	22.2	0.1
	Scotland	5137	8.9	42	1.9	0.8	10	23.8	0.2
	Wales	2585	4.5	42	1.9	1.6	8	19.0	0.3

Table 6 **Demographic characteristics of transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021**

Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Year of transplant	<=2015	36806	63.9	1368	61.1	3.7	242	17.7	0.7
	2016	3848	6.7	146	6.5	3.8	26	17.8	0.7
	2017	4174	7.2	158	7.1	3.8	20	12.7	0.5
	2018	4537	7.9	189	8.4	4.2	30	15.9	0.7
	2019	4655	8.1	232	10.4	5.0	29	12.5	0.6
	2020	3568	6.2	146	6.5	4.1	24	16.4	0.7
	2021	46	0.1	-	-	-	-	-	-
Time from transplant	0-3 months	-	-	94	4.2	-	19	20.2	-
	3-6 months	-	-	52	2.3	-	14	26.9	-
	6-12 months	-	-	91	4.1	-	10	11.0	-
	12+ months	-	-	2002	89.4	-	328	16.4	-

Table 7 shows the demographic characteristics of patients waiting for an organ transplant. The information reported are those active on the waiting list at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 7 Demographic characteristics of active patients on the waiting list testing positive for SARS-CoV-2, data up to 6 January 2021									
Factor	Level	Active on waiting list		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of waiting list	N	% of cases	% of waiting list
Sex	Male	5614	60.1	371	62.9	6.6	32	8.6	0.6
	Female	3716	39.8	219	37.1	5.9	17	7.8	0.5
	Unknown	14	0.1	-	-	-	-	-	-
Blood Group	O	4779	51.1	287	48.6	6.0	25	8.7	0.5
	A	2752	29.5	146	24.7	5.3	13	8.9	0.5
	B	1525	16.3	136	23.1	8.9	11	8.1	0.7
	AB	288	3.1	21	3.6	7.3	-	-	-
Ethnicity	White	6515	69.7	252	42.7	3.9	20	7.9	0.3
	Asian	1462	15.6	195	33.1	13.3	17	8.7	1.2
	Black	830	8.9	98	16.6	11.8	8	8.2	1.0
	Other	361	3.9	32	5.4	8.9	2	6.3	0.6
	Unknown	176	1.9	13	2.2	7.4	2	15.4	1.1
Age group	0-17	373	4.0	16	2.7	4.3	1	6.3	0.3
	18-29	660	7.1	28	4.7	4.2	2	7.1	0.3
	30-39	1177	12.6	75	12.7	6.4	3	4.0	0.3
	40-49	1735	18.6	123	20.8	7.1	6	4.9	0.3
	50-59	2695	28.8	179	30.3	6.6	13	7.3	0.5
	60-69	2142	22.9	140	23.7	6.5	22	15.7	1.0
	>70	562	6.0	29	4.9	5.2	2	6.9	0.4
Organ	Kidney	6660	71.3	483	81.9	7.3	35	7.2	0.5
	SPK	264	2.8	22	3.7	8.3	1	4.5	0.4
	Pancreas	32	0.3	-	-	-	-	-	-
	Liver	1291	13.8	48	8.1	3.7	7	14.6	0.5
	Heart	550	5.9	24	4.1	4.4	-	-	-
	Lung	495	5.3	12	2.0	2.4	6	50.0	1.2
	Intestinal	17	0.2	1	0.2	5.9	-	-	-
	Multi organ	35	0.4	-	-	-	-	-	-
	66	-	-	-	-	-	-	-	-
NHS Region	North East and Yorks	1204	12.9	66	11.2	5.5	5	7.6	0.4
	North West	1007	10.8	75	12.7	7.4	8	10.7	0.8
	Midlands	1574	16.8	102	17.3	6.5	10	9.8	0.6
	East of England	733	7.8	51	8.6	7.0	1	2.0	0.1
	London	1736	18.6	216	36.6	12.4	19	8.8	1.1
	South East	910	9.7	54	9.2	5.9	5	9.3	0.5
	South West	682	7.3	13	2.2	1.9	-	-	-
	Northern Ireland	307	3.3	-	-	-	-	-	-
	Scotland	831	8.9	9	1.5	1.1	-	-	-
	Wales	360	3.9	4	0.7	1.1	1	25.0	0.3

Kidney



Table 8 shows the demographic characteristics of kidney only transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 8 Demographic characteristics of kidney transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	24547	61.3	1062	61.7	4.3	187	17.6	0.8
	Female	15444	38.6	658	38.3	4.3	109	16.6	0.7
	Unknown	25	0.1	-	-	-	-	-	-
Blood Group	O	17350	43.4	666	38.7	3.8	109	16.4	0.6
	A	15811	39.5	687	39.9	4.3	117	17.0	0.7
	B	5077	12.7	276	16.0	5.4	53	19.2	1.0
	AB	1761	4.4	91	5.3	5.2	17	18.7	1.0
Ethnicity	White	29436	73.6	1023	59.5	3.5	168	16.4	0.6
	Asian	4605	11.5	414	24.1	9.0	74	17.9	1.6
	Black	2296	5.7	153	8.9	6.7	35	22.9	1.5
	Other	1102	2.8	49	2.8	4.4	7	14.3	0.6
	Unknown	2577	6.4	81	4.7	3.1	12	14.8	0.5
Age group	0-17	883	2.2	22	1.3	2.5	-	-	-
	18-29	2296	5.7	105	6.1	4.6	-	-	-
	30-39	4202	10.5	177	10.3	4.2	6	3.4	0.1
	40-49	6650	16.6	288	16.8	4.3	23	8.0	0.3
	50-59	10582	26.4	486	28.3	4.6	57	11.7	0.5
	60-69	9306	23.3	401	23.3	4.3	109	27.2	1.2
	>70	6097	15.2	240	14.0	3.9	101	42.1	1.7
Organ	Kidney	40016	100.0	1720	100.0	4.3	296	17.2	0.7
NHS Region	North East and Yorks	5247	13.1	268	15.6	5.1	38	14.2	0.7
	North West	4050	10.1	256	14.9	6.3	51	19.9	1.3
	Midlands	5789	14.5	323	18.8	5.6	39	12.1	0.7
	East of England	3707	9.3	148	8.6	4.0	32	21.6	0.9
	London	6317	15.8	403	23.4	6.4	71	17.6	1.1
	South East	4920	12.3	167	9.7	3.4	29	17.4	0.6
	South West	3272	8.2	76	4.4	2.3	18	23.7	0.6
	Northern Ireland	1436	3.6	9	0.5	0.6	2	22.2	0.1
	Scotland	3412	8.5	34	2.0	1.0	9	26.5	0.3
	Wales	1866	4.7	36	2.1	1.9	7	19.4	0.4
Year of transplant	<=2015	25515	63.8	1059	61.6	4.2	189	17.8	0.7
	2016	2678	6.7	111	6.5	4.1	19	17.1	0.7
	2017	2915	7.3	121	7.0	4.2	16	13.2	0.5
	2018	3152	7.9	142	8.3	4.5	25	17.6	0.8
	2019	3314	8.3	172	10.0	5.2	26	15.1	0.8
	2020	2406	6.0	115	6.7	4.8	21	18.3	0.9
	2021	36	0.1	-	-	-	-	-	-

Table 8 **Demographic characteristics of kidney transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021**

Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Time from transplant	0-3 months	-	-	76	4.4	-	18	23.7	-
	3-6 months	-	-	40	2.3	-	12	30.0	-
	6-12 months	-	-	70	4.1	-	7	10.0	-
	12+ months	-	-	1534	89.2	-	259	16.9	-

Table 9 shows the demographic characteristics of patients waiting for a kidney transplant. The information reported are those active on the waiting list at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 9 Demographic characteristics of active kidney patients on the waiting list testing positive for SARS-CoV-2, data up to 6 January 2021									
Factor	Level	Active on waiting list		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of waiting list	N	% of cases	% of waiting list
Sex	Male	4009	60.2	300	62.1	7.5	24	8.0	0.6
	Female	2638	39.6	183	37.9	6.9	11	6.0	0.4
	Unknown	13	0.2	-	-	-	-	-	-
Blood Group	O	3478	52.2	234	48.4	6.7	19	8.1	0.5
	A	1781	26.7	110	22.8	6.2	8	7.3	0.4
	B	1205	18.1	120	24.8	10.0	8	6.7	0.7
	AB	196	2.9	19	3.9	9.7	-	-	-
Ethnicity	White	4271	64.1	181	37.5	4.2	11	6.1	0.3
	Asian	1224	18.4	176	36.4	14.4	14	8.0	1.1
	Black	735	11.0	89	18.4	12.1	6	6.7	0.8
	Other	307	4.6	27	5.6	8.8	2	7.4	0.7
	Unknown	123	1.8	10	2.1	8.1	2	20.0	1.6
Age group	0-17	165	2.5	6	1.2	3.6	-	-	-
	18-29	445	6.7	20	4.1	4.5	1	5.0	0.2
	30-39	814	12.2	52	10.8	6.4	2	3.8	0.2
	40-49	1260	18.9	103	21.3	8.2	3	2.9	0.2
	50-59	1880	28.2	147	30.4	7.8	7	4.8	0.4
	60-69	1562	23.5	127	26.3	8.1	20	15.7	1.3
	>70	534	8.0	28	5.8	5.2	2	7.1	0.4
Organ	Kidney	6660	100.0	483	100.0	7.3	35	7.2	0.5
NHS Region	North East and Yorks	821	12.3	47	9.7	5.7	3	6.4	0.4
	North West	720	10.8	61	12.6	8.5	6	9.8	0.8
	Midlands	1117	16.8	78	16.1	7.0	6	7.7	0.5
	East of England	502	7.5	44	9.1	8.8	1	2.3	0.2
	London	1405	21.1	191	39.5	13.6	15	7.9	1.1
	South East	593	8.9	42	8.7	7.1	3	7.1	0.5
	South West	482	7.2	9	1.9	1.9	-	-	-
	Northern Ireland	208	3.1	-	-	-	-	-	-
	Scotland	577	8.7	7	1.4	1.2	-	-	-
	Wales	235	3.5	4	0.8	1.7	1	25.0	0.4

SPK



Table 10 shows the demographic characteristics of SPK transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 10 Demographic characteristics of SPK transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	1044	58.2	39	65.0	3.7	6	15.4	0.6
	Female	751	41.8	21	35.0	2.8	2	9.5	0.3
Blood Group	O	783	43.6	28	46.7	3.6	2	7.1	0.3
	A	741	41.3	21	35.0	2.8	2	9.5	0.3
	B	190	10.6	7	11.7	3.7	1	14.3	0.5
	AB	81	4.5	4	6.7	4.9	3	75.0	3.7
Ethnicity	White	1576	87.8	41	68.3	2.6	4	9.8	0.3
	Asian	102	5.7	9	15.0	8.8	3	33.3	2.9
	Black	78	4.3	9	15.0	11.5	1	11.1	1.3
	Other	21	1.2	-	-	-	-	-	-
	Unknown	18	1.0	1	1.7	5.6	-	-	-
Age group	0-17	-	-	-	-	-	-	-	-
	18-29	33	1.8	-	-	-	-	-	-
	30-39	292	16.3	9	15.0	3.1	1	11.1	0.3
	40-49	602	33.5	14	23.3	2.3	2	14.3	0.3
	50-59	640	35.7	26	43.3	4.1	3	11.5	0.5
	60-69	213	11.9	9	15.0	4.2	-	-	-
	>70	15	0.8	2	3.3	13.3	2	100.0	13.3
Organ	SPK	1795	100.0	60	100.0	3.3	8	13.3	0.4
NHS Region	North East and Yorks	149	8.3	5	8.3	3.4	-	-	-
	North West	138	7.7	7	11.7	5.1	2	28.6	1.4
	Midlands	319	17.8	7	11.7	2.2	-	-	-
	East of England	228	12.7	7	11.7	3.1	1	14.3	0.4
	London	214	11.9	14	23.3	6.5	3	21.4	1.4
	South East	305	17.0	16	26.7	5.2	2	12.5	0.7
	South West	143	8.0	2	3.3	1.4	-	-	-
	Northern Ireland	23	1.3	-	-	-	-	-	-
	Scotland	172	9.6	1	1.7	0.6	-	-	-
	Wales	104	5.8	1	1.7	1.0	-	-	-
Year of transplant	<=2015	1117	62.2	33	55.0	3.0	5	15.2	0.4
	2016	122	6.8	3	5.0	2.5	1	33.3	0.8
	2017	148	8.2	8	13.3	5.4	-	-	-
	2018	159	8.9	4	6.7	2.5	1	25.0	0.6
	2019	151	8.4	8	13.3	5.3	-	-	-
	2020	98	5.5	4	6.7	4.1	1	25.0	1.0

Table 10 **Demographic characteristics of SPK transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021**

Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Time from transplant	0-3 months	-	-	1	1.7	-	-	-	-
	3-6 months	-	-	2	3.3	-	-	-	-
	6-12 months	-	-	4	6.7	-	1	25.0	-
	12+ months	-	-	53	88.3	-	7	13.2	-

Table 11 shows the demographic characteristics of patients waiting for an SPK transplant. The information reported are those active on the waiting list at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 11 Demographic characteristics of active SPK patients on the waiting list testing positive for SARS-CoV-2, data up to 6 January 2021									
Factor	Level	Active on waiting list		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of waiting list	N	% of cases	% of waiting list
Sex	Male	149	56.4	14	63.6	9.4	1	7.1	0.7
	Female	115	43.6	8	36.4	7.0	-	-	-
Blood Group	O	126	47.7	14	63.6	11.1	1	7.1	0.8
	A	87	33.0	5	22.7	5.7	-	-	-
	B	41	15.5	3	13.6	7.3	-	-	-
	AB	10	3.8	-	-	-	-	-	-
Ethnicity	White	220	83.3	12	54.5	5.5	1	8.3	0.5
	Asian	23	8.7	3	13.6	13.0	-	-	-
	Black	12	4.5	3	13.6	25.0	-	-	-
	Other	7	2.7	3	13.6	42.9	-	-	-
	Unknown	2	0.8	1	4.5	50.0	-	-	-
Age group	0-17	1	0.4	1	4.5	100.0	-	-	-
	18-29	21	8.0	1	4.5	4.8	-	-	-
	30-39	91	34.5	10	45.5	11.0	-	-	-
	40-49	88	33.3	4	18.2	4.5	-	-	-
	50-59	59	22.3	6	27.3	10.2	1	16.7	1.7
	60-69	4	1.5	-	-	-	-	-	-
	>70	-	-	-	-	-	-	-	-
Organ	SPK	264	100.0	22	100.0	8.3	1	4.5	0.4
NHS Region	North East and Yorks	31	11.7	2	9.1	6.5	-	-	-
	North West	30	11.4	1	4.5	3.3	-	-	-
	Midlands	45	17.0	5	22.7	11.1	1	20.0	2.2
	East of England	20	7.6	3	13.6	15.0	-	-	-
	London	36	13.6	8	36.4	22.2	-	-	-
	South East	33	12.5	1	4.5	3.0	-	-	-
	South West	13	4.9	1	4.5	7.7	-	-	-
	Northern Ireland	2	0.8	-	-	-	-	-	-
	Scotland	38	14.4	1	4.5	2.6	-	-	-
	Wales	16	6.1	-	-	-	-	-	-

Liver



Table 12 shows the demographic characteristics of liver transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 12 Demographic characteristics of liver transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	6278	57.8	161	56.7	2.6	20	12.4	0.3
	Female	4589	42.2	123	43.3	2.7	15	12.2	0.3
	Unknown	1	0.0	-	-	-	-	-	-
Blood Group	O	4695	43.2	106	37.3	2.3	13	12.3	0.3
	A	4403	40.5	117	41.2	2.7	18	15.4	0.4
	B	1307	12.0	50	17.6	3.8	4	8.0	0.3
	AB	463	4.3	11	3.9	2.4	-	-	-
Ethnicity	White	9061	83.4	200	70.4	2.2	25	12.5	0.3
	Asian	943	8.7	62	21.8	6.6	7	11.3	0.7
	Black	326	3.0	14	4.9	4.3	2	14.3	0.6
	Other	255	2.3	3	1.1	1.2	-	-	-
	Unknown	283	2.6	5	1.8	1.8	1	20.0	0.4
Age group	0-17	865	8.0	13	4.6	1.5	-	-	-
	18-29	808	7.4	34	12.0	4.2	-	-	-
	30-39	767	7.1	18	6.4	2.3	-	-	-
	40-49	1097	10.1	26	9.2	2.4	3	11.5	0.3
	50-59	2332	21.5	60	21.2	2.6	5	8.3	0.2
	60-69	3249	29.9	89	31.4	2.7	14	15.7	0.4
	>70	1746	16.1	43	15.2	2.5	13	30.2	0.7
Organ	Liver	10868	100.0	284	100.0	2.6	35	12.3	0.3
NHS Region	North East and Yorks	1389	12.8	42	14.8	3.0	7	16.7	0.5
	North West	1069	9.8	52	18.3	4.9	6	11.5	0.6
	Midlands	1668	15.3	53	18.7	3.2	7	13.2	0.4
	East of England	1131	10.4	23	8.1	2.0	1	4.3	0.1
	London	1625	15.0	64	22.5	3.9	6	9.4	0.4
	South East	1262	11.6	34	12.0	2.7	6	17.6	0.5
	South West	852	7.8	12	4.2	1.4	-	-	-
	Northern Ireland	346	3.2	-	-	-	-	-	-
	Scotland	1128	10.4	3	1.1	0.3	1	33.3	0.1
	Wales	398	3.7	1	0.4	0.3	1	100.0	0.3
Year of transplant	<=2015	6868	63.2	176	62.0	2.6	27	15.3	0.4
	2016	735	6.8	16	5.6	2.2	2	12.5	0.3
	2017	790	7.3	19	6.7	2.4	2	10.5	0.3
	2018	872	8.0	27	9.5	3.1	1	3.7	0.1
	2019	833	7.7	27	9.5	3.2	2	7.4	0.2
	2020	762	7.0	19	6.7	2.5	1	5.3	0.1
	2021	8	0.1	-	-	-	-	-	-

Table 12 **Demographic characteristics of liver transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021**

Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Time from transplant	0-3 months	-	-	14	4.9	-	1	7.1	-
	3-6 months	-	-	5	1.8	-	1	20.0	-
	6-12 months	-	-	7	2.5	-	1	14.3	-
	12+ months	-	-	258	90.8	-	32	12.4	-

Table 13 shows the demographic characteristics of patients waiting for a liver transplant. The information reported are those active on the waiting list at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 13 Demographic characteristics of active liver patients on the waiting list testing positive for SARS-CoV-2, data up to 6 January 2021									
Factor	Level	Active on waiting list		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of waiting list	N	% of cases	% of waiting list
Sex	Male	770	59.6	32	66.7	4.2	3	9.4	0.4
	Female	521	40.4	16	33.3	3.1	4	25.0	0.8
	Unknown	-	-	-	-	-	-	-	-
Blood Group	O	609	47.2	23	47.9	3.8	2	8.7	0.3
	A	475	36.8	17	35.4	3.6	3	17.6	0.6
	B	160	12.4	8	16.7	5.0	2	25.0	1.3
	AB	47	3.6	-	-	-	-	-	-
Ethnicity	White	1062	82.3	33	68.8	3.1	5	15.2	0.5
	Asian	119	9.2	9	18.8	7.6	1	11.1	0.8
	Black	35	2.7	3	6.3	8.6	1	33.3	2.9
	Other	32	2.5	1	2.1	3.1	-	-	-
	Unknown	43	3.3	2	4.2	4.7	-	-	-
Age group	0-17	110	8.5	5	10.4	4.5	1	20.0	0.9
	18-29	103	8.0	4	8.3	3.9	1	25.0	1.0
	30-39	128	9.9	5	10.4	3.9	1	20.0	0.8
	40-49	222	17.2	8	16.7	3.6	2	25.0	0.9
	50-59	382	29.6	19	39.6	5.0	2	10.5	0.5
	60-69	326	25.3	6	12.5	1.8	-	-	-
	>70	20	1.5	1	2.1	5.0	-	-	-
Organ	Liver	1291	100.0	48	100.0	3.7	7	14.6	0.5
NHS Region	North East and Yorks	145	11.2	10	20.8	6.9	1	10.0	0.7
	North West	145	11.2	6	12.5	4.1	2	33.3	1.4
	Midlands	216	16.7	11	22.9	5.1	1	9.1	0.5
	East of England	118	9.1	1	2.1	0.8	-	-	-
	London	165	12.8	10	20.8	6.1	2	20.0	1.2
	South East	153	11.9	8	16.7	5.2	1	12.5	0.7
	South West	107	8.3	1	2.1	0.9	-	-	-
	Northern Ireland	47	3.6	-	-	-	-	-	-
	Scotland	124	9.6	1	2.1	0.8	-	-	-
	Wales	71	5.5	-	-	-	-	-	-

Heart



Table 14 shows the demographic characteristics of heart transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 14 Demographic characteristics of heart transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	1850	69.4	51	67.1	2.8	10	19.6	0.5
	Female	815	30.6	25	32.9	3.1	3	12.0	0.4
	Unknown	1	0.0	-	-	-	-	-	-
Blood Group	O	1032	38.7	25	32.9	2.4	4	16.0	0.4
	A	1191	44.7	39	51.3	3.3	6	15.4	0.5
	B	326	12.2	9	11.8	2.8	3	33.3	0.9
	AB	115	4.3	3	3.9	2.6	-	-	-
Ethnicity	White	2149	80.6	57	75.0	2.7	9	15.8	0.4
	Asian	203	7.6	9	11.8	4.4	2	22.2	1.0
	Black	78	2.9	5	6.6	6.4	1	20.0	1.3
	Other	50	1.9	1	1.3	2.0	1	100.0	2.0
	Unknown	186	7.0	4	5.3	2.2	-	-	-
Age group	0-17	270	10.1	3	3.9	1.1	-	-	-
	18-29	297	11.1	9	11.8	3.0	-	-	-
	30-39	311	11.7	9	11.8	2.9	2	22.2	0.6
	40-49	334	12.5	12	15.8	3.6	-	-	-
	50-59	488	18.3	16	21.1	3.3	1	6.3	0.2
	60-69	553	20.7	15	19.7	2.7	6	40.0	1.1
	>70	413	15.5	12	15.8	2.9	4	33.3	1.0
Organ	Heart	2666	100.0	76	100.0	2.9	13	17.1	0.5
NHS Region	North East and Yorks	434	16.3	23	30.3	5.3	2	8.7	0.5
	North West	265	9.9	10	13.2	3.8	5	50.0	1.9
	Midlands	437	16.4	14	18.4	3.2	2	14.3	0.5
	East of England	292	11.0	3	3.9	1.0	1	33.3	0.3
	London	291	10.9	10	13.2	3.4	1	10.0	0.3
	South East	322	12.1	8	10.5	2.5	-	-	-
	South West	220	8.3	6	7.9	2.7	2	33.3	0.9
	Northern Ireland	68	2.6	-	-	-	-	-	-
	Scotland	223	8.4	-	-	-	-	-	-
	Wales	114	4.3	2	2.6	1.8	-	-	-
Year of transplant	<=2015	1893	71.0	49	64.5	2.6	9	18.4	0.5
	2016	162	6.1	6	7.9	3.7	1	16.7	0.6
	2017	144	5.4	5	6.6	3.5	2	40.0	1.4
	2018	145	5.4	5	6.6	3.4	-	-	-
	2019	154	5.8	10	13.2	6.5	-	-	-
	2020	167	6.3	1	1.3	0.6	1	100.0	0.6
	2021	1	0.0	-	-	-	-	-	-

Table 14 Demographic characteristics of heart transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Time from transplant	3-6 months	-	-	3	3.9	-	1	33.3	-
	6-12 months	-	-	4	5.3	-	-	-	-
	12+ months	-	-	69	90.8	-	12	17.4	-

Lung



Table 15 shows the demographic characteristics of lung transplant recipients. The information reported are those with a functioning transplant at 1 February 2020, those testing positive for SARS-CoV-2 and of those testing positive, the number that have died.

Table 15 Demographic characteristics of lung transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021									
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Sex	Male	860	54.4	41	61.2	4.8	13	31.7	1.5
	Female	720	45.5	26	38.8	3.6	3	11.5	0.4
	Unknown	1	0.1	-	-	-	-	-	-
Blood Group	O	676	42.8	22	32.8	3.3	3	13.6	0.4
	A	717	45.4	34	50.7	4.7	10	29.4	1.4
	B	124	7.8	6	9.0	4.8	1	16.7	0.8
	AB	64	4.0	5	7.5	7.8	2	40.0	3.1
Ethnicity	White	1487	94.1	60	89.6	4.0	14	23.3	0.9
	Asian	40	2.5	3	4.5	7.5	-	-	-
	Black	10	0.6	1	1.5	10.0	-	-	-
	Other	10	0.6	3	4.5	30.0	2	66.7	20.0
	Unknown	34	2.2	-	-	-	-	-	-
Age group	0-17	30	1.9	1	1.5	3.3	-	-	-
	18-29	126	8.0	7	10.4	5.6	-	-	-
	30-39	220	13.9	10	14.9	4.5	-	-	-
	40-49	245	15.5	7	10.4	2.9	-	-	-
	50-59	386	24.4	19	28.4	4.9	5	26.3	1.3
	60-69	470	29.7	22	32.8	4.7	11	50.0	2.3
	>70	104	6.6	1	1.5	1.0	-	-	-
Organ	Lung	1581	100.0	67	100.0	4.2	16	23.9	1.0
NHS Region	North East and Yorks	230	14.5	13	19.4	5.7	1	7.7	0.4
	North West	156	9.9	17	25.4	10.9	7	41.2	4.5
	Midlands	250	15.8	15	22.4	6.0	5	33.3	2.0
	East of England	204	12.9	3	4.5	1.5	1	33.3	0.5
	London	147	9.3	8	11.9	5.4	1	12.5	0.7
	South East	231	14.6	7	10.4	3.0	1	14.3	0.4
	South West	128	8.1	-	-	-	-	-	-
	Northern Ireland	43	2.7	-	-	-	-	-	-
	Scotland	122	7.7	2	3.0	1.6	-	-	-
	Wales	70	4.4	2	3.0	2.9	-	-	-
Year of transplant	<=2015	964	61.0	33	49.3	3.4	10	30.3	1.0
	2016	98	6.2	8	11.9	8.2	3	37.5	3.1
	2017	134	8.5	3	4.5	2.2	-	-	-
	2018	147	9.3	8	11.9	5.4	2	25.0	1.4
	2019	139	8.8	10	14.9	7.2	1	10.0	0.7
	2020	98	6.2	5	7.5	5.1	-	-	-
	2021	1	0.1	-	-	-	-	-	-

Table 15		Demographic characteristics of lung transplant patients testing positive for SARS-CoV-2, data up to 6 January 2021							
Factor	Level	Functioning graft		SARS-CoV-2 +ve cases			SARS-CoV-2 +ve deaths		
		N	%	N	%	% of functioning graft	N	% of cases	% of functioning graft
Time from transplant	0-3 months	-	-	3	4.5	-	-	-	-
	6-12 months	-	-	4	6.0	-	1	25.0	-
	12+ months	-	-	60	89.6	-	15	25.0	-

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