



Blood and Transplant

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

**REPORT FOR
1 MARCH 2020 – 9 MARCH 2022**

PUBLISHED 16 MARCH 2022



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

All figures quoted in this report are as reported to NHS Blood and Transplant by 9 March 2022.

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.

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 are now nearing normal figures, with 71 transplants performed in the week commencing 7 March 2022.
- 13,586 of the 61,571 (22.1%) recipients with a functioning graft are reported as testing positive for SARS-CoV-2. Of these, 7% (n=955) are reported as died as at 9 March 2022.
- The infection rate across England ranges from 21.5% in the South West to 29.5% in the North West in recipients with a functioning graft.
- 2,634 of the 14,582 (18.1%) 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, 3% (n=80) are reported as died as at 9 March 2022.
- The infection rate across England ranges from 11.8% in the South west to 29.6% in London for patients on the active waiting list.
- Of the 8,316 transplants performed so far in 2020, 2021 and 2022, 1682 (20.2%) recipients have tested positive for SARS-CoV-2 with 74 (0.9%) reported as died.

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

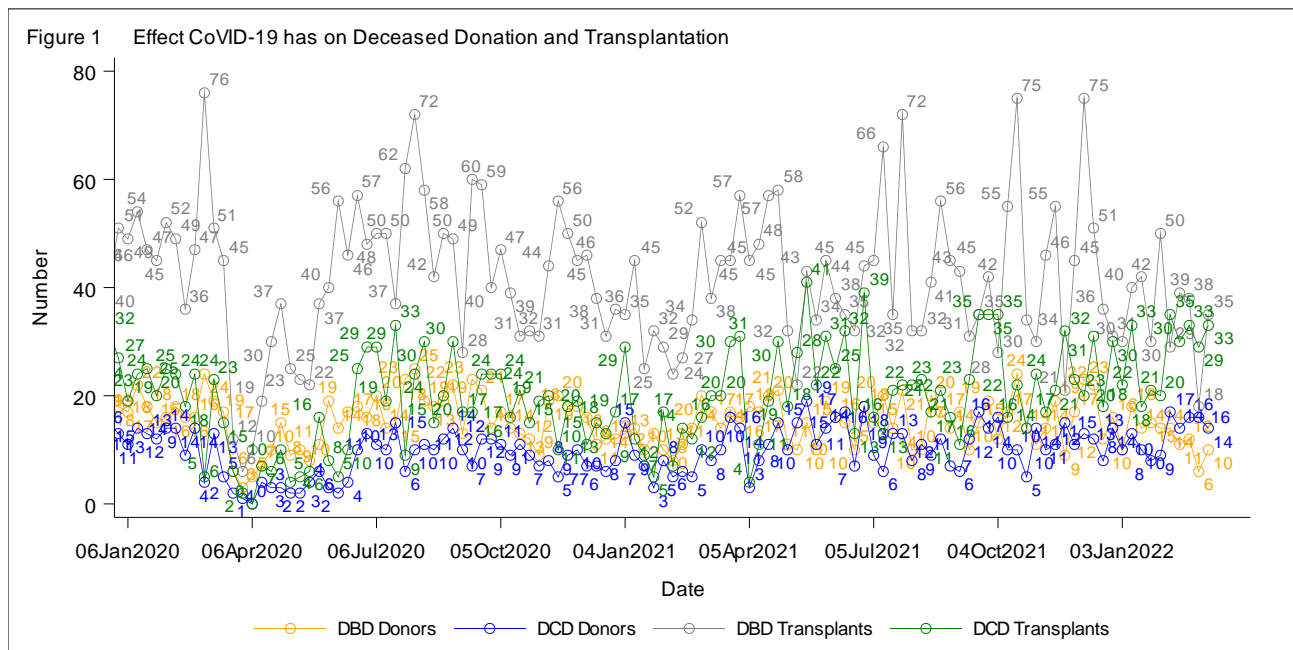


Figure 2 shows the cumulative incidence of SARS-CoV-2 positive patients and the cumulative deaths by week separately for transplanted recipients and active wait listed patients since Monday 3 February 2020.

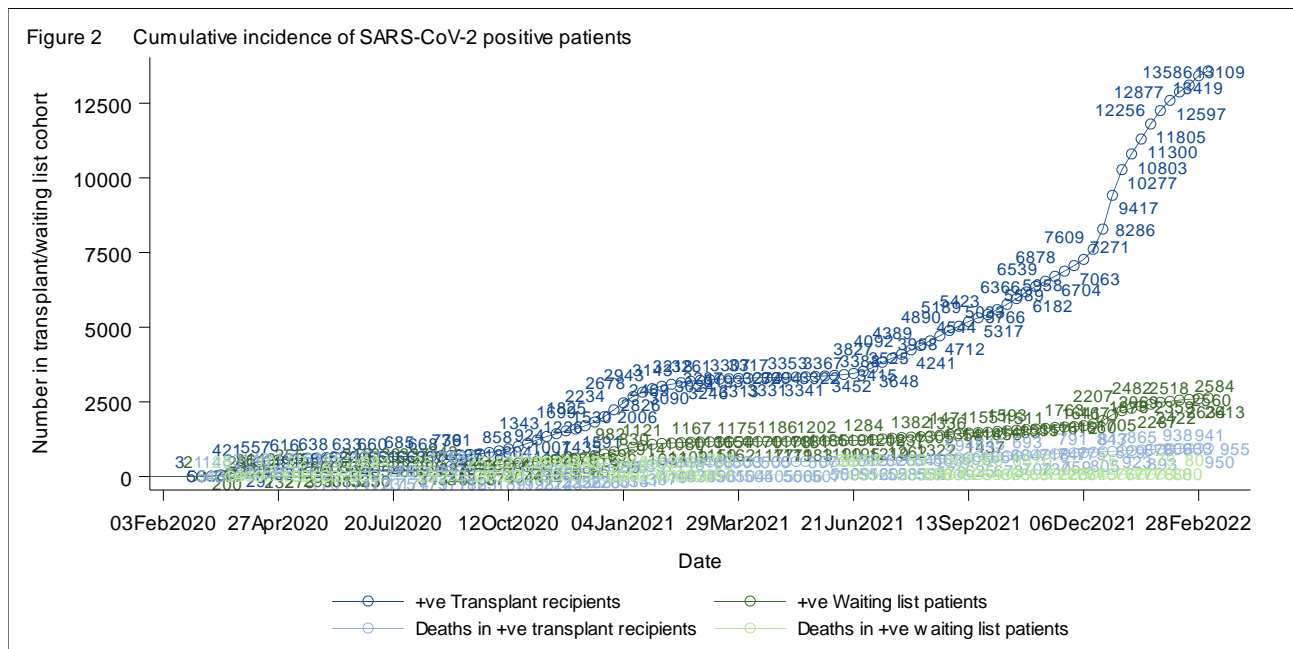


Figure 3 shows the incidence and deaths of SARS-CoV-2 positive patients by organ for transplanted recipients and active wait listed patients.

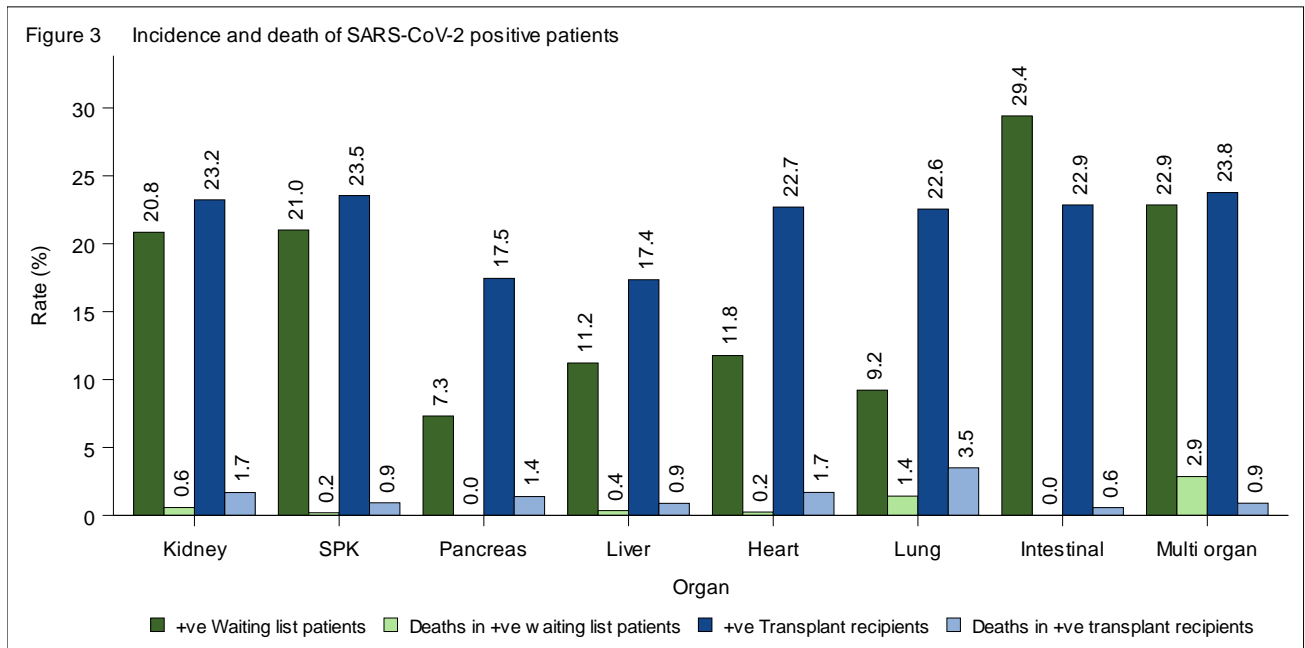


Table 2 shows the number of organ transplant recipients that were alive with a functioning graft at 1 February 2020 by type of organ transplant and NHS Region.

| 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 | 5590 | 165 | 47 | 1452 | 463 | 240 | 19 | 25 | 8003 |
| North West | 4353 | 152 | 30 | 1124 | 281 | 169 | 23 | 22 | 6156 |
| Midlands | 6150 | 344 | 52 | 1804 | 451 | 265 | 26 | 35 | 9127 |
| East of England | 3963 | 250 | 16 | 1204 | 315 | 228 | 28 | 29 | 6036 |
| London | 6889 | 229 | 27 | 1710 | 308 | 162 | 21 | 41 | 9389 |
| South East | 5248 | 325 | 29 | 1330 | 349 | 245 | 22 | 32 | 7581 |
| South West | 3443 | 151 | 62 | 908 | 229 | 135 | 10 | 20 | 4958 |
| Northern Ireland | 1529 | 27 | 6 | 373 | 74 | 46 | 10 | 2 | 2067 |
| Scotland | 3666 | 185 | 63 | 1182 | 251 | 121 | 13 | 13 | 5496 |
| Wales | 2003 | 113 | 29 | 416 | 116 | 74 | 3 | 4 | 2758 |
| TOTAL | 42834 | 1941 | 361 | 11503 | 2837 | 1685 | 175 | 223 | 61571 |

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, 13,586 organ transplant recipients have been reported to NHSBT as testing positive for SARS-CoV-2. Of these, 955 (7%) have died.

| Table 3 Number of recipients testing positive for SARS-CoV-2 by transplant type and NHS Region, data up to 9 March 2022 | | | | | | | | | | | |
|--|-------------|------------|-----------|-------------|------------|------------|------------|-------------|--------------|------------|--|
| | Kidney | SPK | Pancreas | Liver | Heart | Lung | Intestinal | Multi organ | Total | Died | |
| North East and Yorkshire | 1565 | 41 | 11 | 307 | 125 | 66 | 3 | 8 | 2126 | 136 | |
| North West | 1330 | 52 | 11 | 262 | 87 | 56 | 9 | 8 | 1815 | 148 | |
| Midlands | 1808 | 103 | 10 | 423 | 137 | 81 | 5 | 9 | 2576 | 207 | |
| East of England | 1040 | 56 | 2 | 218 | 78 | 40 | 8 | 6 | 1448 | 96 | |
| London | 2057 | 75 | 9 | 360 | 85 | 44 | 7 | 9 | 2646 | 178 | |
| South East | 1269 | 95 | 8 | 249 | 81 | 61 | 4 | 9 | 1776 | 102 | |
| South West | 768 | 32 | 11 | 176 | 49 | 23 | 4 | 5 | 1068 | 73 | |
| Northern Ireland | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 2 | |
| Scotland | 33 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 37 | 4 | |
| Wales | 73 | 2 | 0 | 1 | 2 | 7 | 0 | 0 | 85 | 9 | |
| TOTAL | 9952 | 457 | 63 | 1996 | 644 | 380 | 40 | 54 | 13586 | 955 | |

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 | 1202 | 58 | 10 | 298 | 150 | 107 | 3 | 7 | 1835 |
| North West | 1048 | 56 | 7 | 272 | 73 | 83 | 2 | 4 | 1545 |
| Midlands | 1602 | 95 | 9 | 434 | 125 | 129 | 3 | 4 | 2401 |
| East of England | 786 | 50 | 1 | 248 | 81 | 62 | 2 | 4 | 1234 |
| London | 2113 | 63 | 1 | 330 | 96 | 71 | 3 | 6 | 2683 |
| South East | 1019 | 62 | 4 | 312 | 100 | 77 | 3 | 7 | 1584 |
| South West | 698 | 37 | 3 | 227 | 49 | 57 | 1 | 2 | 1074 |
| Northern Ireland | 273 | 4 | 0 | 92 | 37 | 34 | 0 | 0 | 440 |
| Scotland | 804 | 60 | 6 | 235 | 80 | 56 | 0 | 1 | 1242 |
| Wales | 342 | 29 | 0 | 119 | 25 | 29 | 0 | 0 | 544 |
| TOTAL | 9887 | 514 | 41 | 2567 | 816 | 705 | 17 | 35 | 14582 |

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, 2,634 patients have been reported to NHSBT as testing positive for SARS-CoV-2. Of these, 80 (3%) have died.

| Table 5 Number of patients testing positive for SARS-CoV-2 by organ awaited and NHS Region, data up to 9 March 2022 | | | | | | | | | | |
|--|-------------|------------|----------|------------|-----------|-----------|------------|-------------|-------------|-----------|
| | Kidney | SPK | Pancreas | Liver | Heart | Lung | Intestinal | Multi-organ | Total | Died |
| North East and Yorkshire | 230 | 8 | 0 | 43 | 21 | 7 | 2 | 1 | 312 | 12 |
| North West | 273 | 20 | 0 | 54 | 15 | 11 | 0 | 2 | 375 | 13 |
| Midlands | 380 | 18 | 2 | 55 | 17 | 17 | 1 | 2 | 492 | 17 |
| East of England | 175 | 15 | 0 | 33 | 6 | 6 | 1 | 0 | 236 | 3 |
| London | 697 | 23 | 0 | 48 | 14 | 11 | 0 | 1 | 794 | 24 |
| South East | 202 | 16 | 1 | 37 | 14 | 8 | 0 | 2 | 280 | 7 |
| South West | 90 | 7 | 0 | 17 | 8 | 4 | 1 | 0 | 127 | 3 |
| Scotland | 8 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 11 | 0 |
| Wales | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 1 |
| TOTAL | 2061 | 108 | 3 | 288 | 96 | 65 | 5 | 8 | 2634 | 80 |

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 9 March 2022 | | | | | | | | | |
|--|----------------------|-------------------|------|----------------------|------|------------------------|-----------------------|------------|------------------------|
| 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 | 37365 | 60.7 | 8115 | 59.7 | 21.7 | 640 | 7.9 | 1.7 |
| | Female | 24177 | 39.3 | 5469 | 40.3 | 22.6 | 314 | 5.7 | 1.3 |
| | Unknown | 29 | 0.0 | 2 | 0.0 | 6.9 | 1 | 50.0 | 3.4 |
| Blood Group | O | 26512 | 43.1 | 5573 | 41.0 | 21.0 | 387 | 6.9 | 1.5 |
| | A | 24713 | 40.2 | 5584 | 41.1 | 22.6 | 372 | 6.7 | 1.5 |
| | B | 7609 | 12.4 | 1796 | 13.2 | 23.6 | 133 | 7.4 | 1.7 |
| | AB | 2712 | 4.4 | 630 | 4.6 | 23.2 | 63 | 10.0 | 2.3 |
| Ethnicity | White | 47218 | 76.7 | 9740 | 71.7 | 20.6 | 613 | 6.3 | 1.3 |
| | Asian | 6503 | 10.6 | 1988 | 14.6 | 30.6 | 187 | 9.4 | 2.9 |
| | Black | 3117 | 5.1 | 907 | 6.7 | 29.1 | 93 | 10.3 | 3.0 |
| | Other | 1598 | 2.6 | 405 | 3.0 | 25.3 | 22 | 5.4 | 1.4 |
| | Unknown | 3135 | 5.1 | 546 | 4.0 | 17.4 | 40 | 7.3 | 1.3 |
| Age group | 0-17 | 2392 | 3.9 | 562 | 4.1 | 23.5 | - | - | - |
| | 18-29 | 3972 | 6.5 | 1015 | 7.5 | 25.6 | 4 | 0.4 | 0.1 |
| | 30-39 | 6374 | 10.4 | 1686 | 12.4 | 26.5 | 20 | 1.2 | 0.3 |
| | 40-49 | 9764 | 15.9 | 2410 | 17.7 | 24.7 | 76 | 3.2 | 0.8 |
| | 50-59 | 15790 | 25.7 | 3482 | 25.6 | 22.1 | 207 | 5.9 | 1.3 |
| | 60-69 | 14758 | 24.0 | 2949 | 21.7 | 20.0 | 349 | 11.8 | 2.4 |
| | >70 | 8491 | 13.8 | 1480 | 10.9 | 17.4 | 299 | 20.2 | 3.5 |
| Organ | Kidney | 42834 | 69.6 | 9952 | 73.3 | 23.2 | 720 | 7.2 | 1.7 |
| | SPK | 1941 | 3.2 | 457 | 3.4 | 23.5 | 18 | 3.9 | 0.9 |
| | Pancreas | 361 | 0.6 | 63 | 0.5 | 17.5 | 5 | 7.9 | 1.4 |
| | Liver | 11503 | 18.7 | 1996 | 14.7 | 17.4 | 102 | 5.1 | 0.9 |
| | Heart | 2837 | 4.6 | 644 | 4.7 | 22.7 | 48 | 7.5 | 1.7 |
| | Lung | 1685 | 2.7 | 380 | 2.8 | 22.6 | 59 | 15.5 | 3.5 |
| | Intestinal | 175 | 0.3 | 40 | 0.3 | 22.9 | 1 | 2.5 | 0.6 |
| | Multi organ | 223 | 0.4 | 53 | 0.4 | 23.8 | 2 | 3.8 | 0.9 |
| | 140 | - | - | 1 | 0.0 | - | - | - | - |
| NHS Region | North East and Yorks | 8003 | 13.0 | 2126 | 15.6 | 26.6 | 136 | 6.4 | 1.7 |
| | North West | 6156 | 10.0 | 1815 | 13.4 | 29.5 | 148 | 8.2 | 2.4 |
| | Midlands | 9127 | 14.8 | 2576 | 19.0 | 28.2 | 207 | 8.0 | 2.3 |
| | East of England | 6036 | 9.8 | 1448 | 10.7 | 24.0 | 96 | 6.6 | 1.6 |
| | London | 9389 | 15.2 | 2646 | 19.5 | 28.2 | 178 | 6.7 | 1.9 |
| | South East | 7581 | 12.3 | 1776 | 13.1 | 23.4 | 102 | 5.7 | 1.3 |
| | South West | 4958 | 8.1 | 1068 | 7.9 | 21.5 | 73 | 6.8 | 1.5 |
| | Northern Ireland | 2067 | 3.4 | 9 | 0.1 | 0.4 | 2 | 22.2 | 0.1 |
| | Scotland | 5496 | 8.9 | 37 | 0.3 | 0.7 | 4 | 10.8 | 0.1 |
| | Wales | 2758 | 4.5 | 85 | 0.6 | 3.1 | 9 | 10.6 | 0.3 |

Table 6 Demographic characteristics of transplant patients testing positive for SARS-CoV-2, data up to 9 March 2022

| 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 | 36200 | 58.8 | 7553 | 55.6 | 20.9 | 604 | 8.0 | 1.7 |
| | 2016 | 3818 | 6.2 | 959 | 7.1 | 25.1 | 64 | 6.7 | 1.7 |
| | 2017 | 4133 | 6.7 | 1040 | 7.7 | 25.2 | 71 | 6.8 | 1.7 |
| | 2018 | 4485 | 7.3 | 1106 | 8.1 | 24.7 | 71 | 6.4 | 1.6 |
| | 2019 | 4619 | 7.5 | 1246 | 9.2 | 27.0 | 71 | 5.7 | 1.5 |
| | 2020 | 3601 | 5.8 | 964 | 7.1 | 26.8 | 60 | 6.2 | 1.7 |
| | 2021 | 3989 | 6.5 | 695 | 5.1 | 17.4 | 14 | 2.0 | 0.4 |
| | 2022 | 726 | 1.2 | 23 | 0.2 | 3.2 | - | - | - |
| Time from transplant | 0-3 months | - | - | 305 | 2.2 | - | 25 | 8.2 | - |
| | 3-6 months | - | - | 314 | 2.3 | - | 16 | 5.1 | - |
| | 6-12 months | - | - | 508 | 3.7 | - | 27 | 5.3 | - |
| | 12+ months | - | - | 12459 | 91.7 | - | 887 | 7.1 | - |

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 9 March 2022 | | | | | | | | | |
|--|----------------------|------------------------|------|----------------------|------|-------------------|-----------------------|------------|-------------------|
| 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 | 8883 | 60.9 | 1586 | 60.2 | 17.9 | 49 | 3.1 | 0.6 |
| | Female | 5675 | 38.9 | 1047 | 39.7 | 18.4 | 31 | 3.0 | 0.5 |
| | Unknown | 24 | 0.2 | 1 | 0.0 | 4.2 | - | - | - |
| Blood Group | O | 7079 | 48.5 | 1321 | 50.2 | 18.7 | 45 | 3.4 | 0.6 |
| | A | 4750 | 32.6 | 687 | 26.1 | 14.5 | 18 | 2.6 | 0.4 |
| | B | 2255 | 15.5 | 542 | 20.6 | 24.0 | 17 | 3.1 | 0.8 |
| | AB | 498 | 3.4 | 84 | 3.2 | 16.9 | - | - | - |
| Ethnicity | White | 10228 | 70.1 | 1380 | 52.4 | 13.5 | 44 | 3.2 | 0.4 |
| | Asian | 2233 | 15.3 | 666 | 25.3 | 29.8 | 19 | 2.9 | 0.9 |
| | Black | 1259 | 8.6 | 386 | 14.7 | 30.7 | 10 | 2.6 | 0.8 |
| | Other | 554 | 3.8 | 132 | 5.0 | 23.8 | 5 | 3.8 | 0.9 |
| | Unknown | 308 | 2.1 | 70 | 2.7 | 22.7 | 2 | 2.9 | 0.6 |
| Age group | 0-17 | 625 | 4.3 | 95 | 3.6 | 15.2 | 1 | 1.1 | 0.2 |
| | 18-29 | 1019 | 7.0 | 198 | 7.5 | 19.4 | 2 | 1.0 | 0.2 |
| | 30-39 | 1791 | 12.3 | 361 | 13.7 | 20.2 | 4 | 1.1 | 0.2 |
| | 40-49 | 2720 | 18.7 | 555 | 21.1 | 20.4 | 12 | 2.2 | 0.4 |
| | 50-59 | 4148 | 28.4 | 758 | 28.8 | 18.3 | 17 | 2.2 | 0.4 |
| | 60-69 | 3373 | 23.1 | 542 | 20.6 | 16.1 | 40 | 7.4 | 1.2 |
| | >70 | 906 | 6.2 | 125 | 4.7 | 13.8 | 4 | 3.2 | 0.4 |
| Organ | Kidney | 9887 | 67.8 | 2061 | 78.2 | 20.8 | 57 | 2.8 | 0.6 |
| | SPK | 514 | 3.5 | 108 | 4.1 | 21.0 | 1 | 0.9 | 0.2 |
| | Pancreas | 41 | 0.3 | 3 | 0.1 | 7.3 | - | - | - |
| | Liver | 2567 | 17.6 | 288 | 10.9 | 11.2 | 9 | 3.1 | 0.4 |
| | Heart | 816 | 5.6 | 96 | 3.6 | 11.8 | 2 | 2.1 | 0.2 |
| | Lung | 705 | 4.8 | 65 | 2.5 | 9.2 | 10 | 15.4 | 1.4 |
| | Intestinal | 17 | 0.1 | 5 | 0.2 | 29.4 | - | - | - |
| | Multi organ | 35 | 0.2 | 8 | 0.3 | 22.9 | 1 | 12.5 | 2.9 |
| | 140 | - | - | - | - | - | - | - | - |
| NHS Region | North East and Yorks | 1835 | 12.6 | 312 | 11.8 | 17.0 | 12 | 3.8 | 0.7 |
| | North West | 1545 | 10.6 | 375 | 14.2 | 24.3 | 13 | 3.5 | 0.8 |
| | Midlands | 2401 | 16.5 | 492 | 18.7 | 20.5 | 17 | 3.5 | 0.7 |
| | East of England | 1234 | 8.5 | 236 | 9.0 | 19.1 | 3 | 1.3 | 0.2 |
| | London | 2683 | 18.4 | 794 | 30.1 | 29.6 | 24 | 3.0 | 0.9 |
| | South East | 1584 | 10.9 | 280 | 10.6 | 17.7 | 7 | 2.5 | 0.4 |
| | South West | 1074 | 7.4 | 127 | 4.8 | 11.8 | 3 | 2.4 | 0.3 |
| | Northern Ireland | 440 | 3.0 | - | - | - | - | - | - |
| | Scotland | 1242 | 8.5 | 11 | 0.4 | 0.9 | - | - | - |
| | Wales | 544 | 3.7 | 7 | 0.3 | 1.3 | 1 | 14.3 | 0.2 |

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 9 March 2022 | | | | | | | | | |
|---|----------------------|-------------------|-------|----------------------|-------|------------------------|-----------------------|------------|------------------------|
| 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 | 26275 | 61.3 | 6065 | 60.9 | 23.1 | 474 | 7.8 | 1.8 |
| | Female | 16532 | 38.6 | 3886 | 39.0 | 23.5 | 245 | 6.3 | 1.5 |
| | Unknown | 27 | 0.1 | 1 | 0.0 | 3.7 | 1 | 100.0 | 3.7 |
| Blood Group | O | 18577 | 43.4 | 4089 | 41.1 | 22.0 | 296 | 7.2 | 1.6 |
| | A | 16884 | 39.4 | 4054 | 40.7 | 24.0 | 273 | 6.7 | 1.6 |
| | B | 5445 | 12.7 | 1366 | 13.7 | 25.1 | 107 | 7.8 | 2.0 |
| | AB | 1912 | 4.5 | 440 | 4.4 | 23.0 | 44 | 10.0 | 2.3 |
| Ethnicity | White | 31391 | 73.3 | 6780 | 68.1 | 21.6 | 415 | 6.1 | 1.3 |
| | Asian | 5053 | 11.8 | 1607 | 16.1 | 31.8 | 167 | 10.4 | 3.3 |
| | Black | 2567 | 6.0 | 768 | 7.7 | 29.9 | 81 | 10.5 | 3.2 |
| | Other | 1235 | 2.9 | 339 | 3.4 | 27.4 | 20 | 5.9 | 1.6 |
| | Unknown | 2588 | 6.0 | 458 | 4.6 | 17.7 | 37 | 8.1 | 1.4 |
| Age group | 0-17 | 1048 | 2.4 | 245 | 2.5 | 23.4 | - | - | - |
| | 18-29 | 2584 | 6.0 | 665 | 6.7 | 25.7 | 4 | 0.6 | 0.2 |
| | 30-39 | 4571 | 10.7 | 1258 | 12.6 | 27.5 | 13 | 1.0 | 0.3 |
| | 40-49 | 7111 | 16.6 | 1831 | 18.4 | 25.7 | 58 | 3.2 | 0.8 |
| | 50-59 | 11339 | 26.5 | 2652 | 26.7 | 23.4 | 153 | 5.8 | 1.3 |
| | 60-69 | 9945 | 23.2 | 2157 | 21.7 | 21.7 | 256 | 11.9 | 2.6 |
| | >70 | 6236 | 14.6 | 1143 | 11.5 | 18.3 | 236 | 20.6 | 3.8 |
| Organ | Kidney | 42834 | 100.0 | 9952 | 100.0 | 23.2 | 720 | 7.2 | 1.7 |
| NHS Region | North East and Yorks | 5590 | 13.1 | 1565 | 15.7 | 28.0 | 106 | 6.8 | 1.9 |
| | North West | 4353 | 10.2 | 1330 | 13.4 | 30.6 | 101 | 7.6 | 2.3 |
| | Midlands | 6150 | 14.4 | 1808 | 18.2 | 29.4 | 138 | 7.6 | 2.2 |
| | East of England | 3963 | 9.3 | 1040 | 10.5 | 26.2 | 76 | 7.3 | 1.9 |
| | London | 6889 | 16.1 | 2057 | 20.7 | 29.9 | 157 | 7.6 | 2.3 |
| | South East | 5248 | 12.3 | 1269 | 12.8 | 24.2 | 74 | 5.8 | 1.4 |
| | South West | 3443 | 8.0 | 768 | 7.7 | 22.3 | 55 | 7.2 | 1.6 |
| | Northern Ireland | 1529 | 3.6 | 9 | 0.1 | 0.6 | 2 | 22.2 | 0.1 |
| | Scotland | 3666 | 8.6 | 33 | 0.3 | 0.9 | 4 | 12.1 | 0.1 |
| | Wales | 2003 | 4.7 | 73 | 0.7 | 3.6 | 7 | 9.6 | 0.3 |
| Year of transplant | <=2015 | 25137 | 58.7 | 5548 | 55.7 | 22.1 | 432 | 7.8 | 1.7 |
| | 2016 | 2656 | 6.2 | 717 | 7.2 | 27.0 | 55 | 7.7 | 2.1 |
| | 2017 | 2890 | 6.7 | 783 | 7.9 | 27.1 | 57 | 7.3 | 2.0 |
| | 2018 | 3127 | 7.3 | 799 | 8.0 | 25.6 | 55 | 6.9 | 1.8 |
| | 2019 | 3290 | 7.7 | 889 | 8.9 | 27.0 | 58 | 6.5 | 1.8 |
| | 2020 | 2448 | 5.7 | 695 | 7.0 | 28.4 | 50 | 7.2 | 2.0 |
| | 2021 | 2803 | 6.5 | 502 | 5.0 | 17.9 | 13 | 2.6 | 0.5 |
| | 2022 | 483 | 1.1 | 19 | 0.2 | 3.9 | - | - | - |

Table 8 Demographic characteristics of kidney transplant patients testing positive for SARS-CoV-2, data up to 9 March 2022

| 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 | - | - | 233 | 2.3 | - | 23 | 9.9 | - |
| | 3-6 months | - | - | 234 | 2.4 | - | 15 | 6.4 | - |
| | 6-12 months | - | - | 367 | 3.7 | - | 24 | 6.5 | - |
| | 12+ months | - | - | 9118 | 91.6 | - | 658 | 7.2 | - |

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 9 March 2022 | | | | | | | | | |
|---|----------------------|------------------------|-------|----------------------|-------|-------------------|-----------------------|------------|-------------------|
| 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 | 6015 | 60.8 | 1249 | 60.6 | 20.8 | 37 | 3.0 | 0.6 |
| | Female | 3853 | 39.0 | 811 | 39.3 | 21.0 | 20 | 2.5 | 0.5 |
| | Unknown | 19 | 0.2 | 1 | 0.0 | 5.3 | - | - | - |
| Blood Group | O | 4875 | 49.3 | 1033 | 50.1 | 21.2 | 30 | 2.9 | 0.6 |
| | A | 2983 | 30.2 | 494 | 24.0 | 16.6 | 12 | 2.4 | 0.4 |
| | B | 1686 | 17.1 | 465 | 22.6 | 27.6 | 15 | 3.2 | 0.9 |
| | AB | 343 | 3.5 | 69 | 3.3 | 20.1 | - | - | - |
| Ethnicity | White | 6318 | 63.9 | 945 | 45.9 | 15.0 | 28 | 3.0 | 0.4 |
| | Asian | 1801 | 18.2 | 583 | 28.3 | 32.4 | 16 | 2.7 | 0.9 |
| | Black | 1096 | 11.1 | 361 | 17.5 | 32.9 | 7 | 1.9 | 0.6 |
| | Other | 465 | 4.7 | 119 | 5.8 | 25.6 | 4 | 3.4 | 0.9 |
| | Unknown | 207 | 2.1 | 53 | 2.6 | 25.6 | 2 | 3.8 | 1.0 |
| Age group | 0-17 | 237 | 2.4 | 53 | 2.6 | 22.4 | - | - | - |
| | 18-29 | 668 | 6.8 | 154 | 7.5 | 23.1 | 1 | 0.6 | 0.1 |
| | 30-39 | 1172 | 11.9 | 255 | 12.4 | 21.8 | 2 | 0.8 | 0.2 |
| | 40-49 | 1845 | 18.7 | 450 | 21.8 | 24.4 | 7 | 1.6 | 0.4 |
| | 50-59 | 2758 | 27.9 | 576 | 27.9 | 20.9 | 11 | 1.9 | 0.4 |
| | 60-69 | 2355 | 23.8 | 452 | 21.9 | 19.2 | 32 | 7.1 | 1.4 |
| | >70 | 852 | 8.6 | 121 | 5.9 | 14.2 | 4 | 3.3 | 0.5 |
| Organ | Kidney | 9887 | 100.0 | 2061 | 100.0 | 20.8 | 57 | 2.8 | 0.6 |
| NHS Region | North East and Yorks | 1202 | 12.2 | 230 | 11.2 | 19.1 | 7 | 3.0 | 0.6 |
| | North West | 1048 | 10.6 | 273 | 13.2 | 26.0 | 9 | 3.3 | 0.9 |
| | Midlands | 1602 | 16.2 | 380 | 18.4 | 23.7 | 12 | 3.2 | 0.7 |
| | East of England | 786 | 7.9 | 175 | 8.5 | 22.3 | 3 | 1.7 | 0.4 |
| | London | 2113 | 21.4 | 697 | 33.8 | 33.0 | 18 | 2.6 | 0.9 |
| | South East | 1019 | 10.3 | 202 | 9.8 | 19.8 | 5 | 2.5 | 0.5 |
| | South West | 698 | 7.1 | 90 | 4.4 | 12.9 | 2 | 2.2 | 0.3 |
| | Northern Ireland | 273 | 2.8 | - | - | - | - | - | - |
| | Scotland | 804 | 8.1 | 8 | 0.4 | 1.0 | - | - | - |
| | Wales | 342 | 3.5 | 6 | 0.3 | 1.8 | 1 | 16.7 | 0.3 |

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 9 March 2022 | | | | | | | | | |
|---|----------------------|-------------------|-------|----------------------|-------|------------------------|-----------------------|------------|------------------------|
| 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 | 1125 | 58.0 | 259 | 56.7 | 23.0 | 12 | 4.6 | 1.1 |
| | Female | 816 | 42.0 | 198 | 43.3 | 24.3 | 6 | 3.0 | 0.7 |
| | Unknown | - | - | - | - | - | - | - | - |
| Blood Group | O | 839 | 43.2 | 188 | 41.1 | 22.4 | 9 | 4.8 | 1.1 |
| | A | 801 | 41.3 | 192 | 42.0 | 24.0 | 4 | 2.1 | 0.5 |
| | B | 215 | 11.1 | 49 | 10.7 | 22.8 | 2 | 4.1 | 0.9 |
| | AB | 86 | 4.4 | 28 | 6.1 | 32.6 | 3 | 10.7 | 3.5 |
| Ethnicity | White | 1700 | 87.6 | 374 | 81.8 | 22.0 | 12 | 3.2 | 0.7 |
| | Asian | 112 | 5.8 | 40 | 8.8 | 35.7 | 2 | 5.0 | 1.8 |
| | Black | 86 | 4.4 | 30 | 6.6 | 34.9 | 4 | 13.3 | 4.7 |
| | Other | 24 | 1.2 | 4 | 0.9 | 16.7 | - | - | - |
| | Unknown | 19 | 1.0 | 9 | 2.0 | 47.4 | - | - | - |
| Age group | 0-17 | 1 | 0.1 | - | - | - | - | - | - |
| | 18-29 | 50 | 2.6 | 9 | 2.0 | 18.0 | - | - | - |
| | 30-39 | 345 | 17.8 | 70 | 15.3 | 20.3 | 1 | 1.4 | 0.3 |
| | 40-49 | 637 | 32.8 | 160 | 35.0 | 25.1 | 4 | 2.5 | 0.6 |
| | 50-59 | 677 | 34.9 | 165 | 36.1 | 24.4 | 8 | 4.8 | 1.2 |
| | 60-69 | 216 | 11.1 | 45 | 9.8 | 20.8 | 3 | 6.7 | 1.4 |
| | >70 | 15 | 0.8 | 8 | 1.8 | 53.3 | 2 | 25.0 | 13.3 |
| Organ | SPK | 1941 | 100.0 | 457 | 100.0 | 23.5 | 18 | 3.9 | 0.9 |
| NHS Region | North East and Yorks | 165 | 8.5 | 41 | 9.0 | 24.8 | - | - | - |
| | North West | 152 | 7.8 | 52 | 11.4 | 34.2 | 5 | 9.6 | 3.3 |
| | Midlands | 344 | 17.7 | 103 | 22.5 | 29.9 | 7 | 6.8 | 2.0 |
| | East of England | 250 | 12.9 | 56 | 12.3 | 22.4 | 2 | 3.6 | 0.8 |
| | London | 229 | 11.8 | 75 | 16.4 | 32.8 | 2 | 2.7 | 0.9 |
| | South East | 325 | 16.7 | 95 | 20.8 | 29.2 | 1 | 1.1 | 0.3 |
| | South West | 151 | 7.8 | 32 | 7.0 | 21.2 | 1 | 3.1 | 0.7 |
| | Northern Ireland | 27 | 1.4 | - | - | - | - | - | - |
| | Scotland | 185 | 9.5 | 1 | 0.2 | 0.5 | - | - | - |
| | Wales | 113 | 5.8 | 2 | 0.4 | 1.8 | - | - | - |
| Year of transplant | <=2015 | 1128 | 58.1 | 253 | 55.4 | 22.4 | 14 | 5.5 | 1.2 |
| | 2016 | 123 | 6.3 | 31 | 6.8 | 25.2 | 1 | 3.2 | 0.8 |
| | 2017 | 146 | 7.5 | 28 | 6.1 | 19.2 | - | - | - |
| | 2018 | 157 | 8.1 | 47 | 10.3 | 29.9 | 1 | 2.1 | 0.6 |
| | 2019 | 150 | 7.7 | 50 | 10.9 | 33.3 | 1 | 2.0 | 0.7 |
| | 2020 | 98 | 5.0 | 25 | 5.5 | 25.5 | 1 | 4.0 | 1.0 |
| | 2021 | 115 | 5.9 | 22 | 4.8 | 19.1 | - | - | - |
| | 2022 | 24 | 1.2 | 1 | 0.2 | 4.2 | - | - | - |

Table 10 Demographic characteristics of SPK transplant patients testing positive for SARS-CoV-2, data up to 9 March 2022

| 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 | - | - | 11 | 2.4 | - | - | - | - |
| | 3-6 months | - | - | 6 | 1.3 | - | - | - | - |
| | 6-12 months | - | - | 18 | 3.9 | - | 1 | 5.6 | - |
| | 12+ months | - | - | 422 | 92.3 | - | 17 | 4.0 | - |

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 9 March 2022 | | | | | | | | | |
|---|----------------------|------------------------|-------|----------------------|-------|-------------------|-----------------------|------------|-------------------|
| 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 | 289 | 56.2 | 57 | 52.8 | 19.7 | - | - | - |
| | Female | 223 | 43.4 | 51 | 47.2 | 22.9 | - | - | - |
| | Unknown | 2 | 0.4 | - | - | - | - | - | - |
| Blood Group | O | 237 | 46.1 | 56 | 51.9 | 23.6 | - | - | - |
| | A | 186 | 36.2 | 29 | 26.9 | 15.6 | - | - | - |
| | B | 74 | 14.4 | 19 | 17.6 | 25.7 | - | - | - |
| | AB | 17 | 3.3 | 4 | 3.7 | 23.5 | - | - | - |
| Ethnicity | White | 442 | 86.0 | 85 | 78.7 | 19.2 | - | - | - |
| | Asian | 34 | 6.6 | 11 | 10.2 | 32.4 | - | - | - |
| | Black | 25 | 4.9 | 7 | 6.5 | 28.0 | - | - | - |
| | Other | 10 | 1.9 | 4 | 3.7 | 40.0 | - | - | - |
| | Unknown | 3 | 0.6 | 1 | 0.9 | 33.3 | - | - | - |
| Age group | 0-17 | 1 | 0.2 | 1 | 0.9 | 100.0 | - | - | - |
| | 18-29 | 42 | 8.2 | 6 | 5.6 | 14.3 | - | - | - |
| | 30-39 | 184 | 35.8 | 50 | 46.3 | 27.2 | - | - | - |
| | 40-49 | 171 | 33.3 | 19 | 17.6 | 11.1 | - | - | - |
| | 50-59 | 110 | 21.4 | 31 | 28.7 | 28.2 | - | - | - |
| | 60-69 | 6 | 1.2 | 1 | 0.9 | 16.7 | - | - | - |
| | >70 | - | - | - | - | - | - | - | - |
| Organ | SPK | 514 | 100.0 | 108 | 100.0 | 21.0 | 1 | 0.9 | 0.2 |
| NHS Region | North East and Yorks | 58 | 11.3 | 8 | 7.4 | 13.8 | - | - | - |
| | North West | 56 | 10.9 | 20 | 18.5 | 35.7 | - | - | - |
| | Midlands | 95 | 18.5 | 18 | 16.7 | 18.9 | - | - | - |
| | East of England | 50 | 9.7 | 15 | 13.9 | 30.0 | - | - | - |
| | London | 63 | 12.3 | 23 | 21.3 | 36.5 | - | - | - |
| | South East | 62 | 12.1 | 16 | 14.8 | 25.8 | - | - | - |
| | South West | 37 | 7.2 | 7 | 6.5 | 18.9 | - | - | - |
| | Northern Ireland | 4 | 0.8 | - | - | - | - | - | - |
| | Scotland | 60 | 11.7 | 1 | 0.9 | 1.7 | - | - | - |
| | Wales | 29 | 5.6 | - | - | - | - | - | - |

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 9 March 2022 | | | | | | | | | |
|---|----------------------|-------------------|-------|----------------------|-------|------------------------|-----------------------|------------|------------------------|
| 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 | 6701 | 58.3 | 1081 | 54.2 | 16.1 | 64 | 5.9 | 1.0 |
| | Female | 4801 | 41.7 | 915 | 45.8 | 19.1 | 38 | 4.2 | 0.8 |
| | Unknown | 1 | 0.0 | - | - | - | - | - | - |
| Blood Group | O | 4959 | 43.1 | 851 | 42.6 | 17.2 | 43 | 5.1 | 0.9 |
| | A | 4665 | 40.6 | 789 | 39.5 | 16.9 | 44 | 5.6 | 0.9 |
| | B | 1383 | 12.0 | 252 | 12.6 | 18.2 | 7 | 2.8 | 0.5 |
| | AB | 496 | 4.3 | 104 | 5.2 | 21.0 | 8 | 7.7 | 1.6 |
| Ethnicity | White | 9570 | 83.2 | 1596 | 80.0 | 16.7 | 84 | 5.3 | 0.9 |
| | Asian | 1018 | 8.8 | 238 | 11.9 | 23.4 | 11 | 4.6 | 1.1 |
| | Black | 355 | 3.1 | 74 | 3.7 | 20.8 | 4 | 5.4 | 1.1 |
| | Other | 266 | 2.3 | 40 | 2.0 | 15.0 | - | - | - |
| | Unknown | 294 | 2.6 | 48 | 2.4 | 16.3 | 3 | 6.3 | 1.0 |
| Age group | 0-17 | 931 | 8.1 | 200 | 10.0 | 21.5 | - | - | - |
| | 18-29 | 843 | 7.3 | 206 | 10.3 | 24.4 | - | - | - |
| | 30-39 | 824 | 7.2 | 197 | 9.9 | 23.9 | 1 | 0.5 | 0.1 |
| | 40-49 | 1226 | 10.7 | 256 | 12.8 | 20.9 | 3 | 1.2 | 0.2 |
| | 50-59 | 2565 | 22.4 | 402 | 20.2 | 15.7 | 20 | 5.0 | 0.8 |
| | 60-69 | 3389 | 29.5 | 498 | 25.0 | 14.7 | 33 | 6.6 | 1.0 |
| | >70 | 1698 | 14.8 | 236 | 11.8 | 13.9 | 45 | 19.1 | 2.7 |
| Organ | Liver | 11503 | 100.0 | 1996 | 100.0 | 17.4 | 102 | 5.1 | 0.9 |
| NHS Region | North East and Yorks | 1452 | 12.6 | 307 | 15.4 | 21.1 | 17 | 5.5 | 1.2 |
| | North West | 1124 | 9.8 | 262 | 13.1 | 23.3 | 16 | 6.1 | 1.4 |
| | Midlands | 1804 | 15.7 | 423 | 21.2 | 23.4 | 26 | 6.1 | 1.4 |
| | East of England | 1204 | 10.5 | 218 | 10.9 | 18.1 | 8 | 3.7 | 0.7 |
| | London | 1710 | 14.9 | 360 | 18.0 | 21.1 | 14 | 3.9 | 0.8 |
| | South East | 1330 | 11.6 | 249 | 12.5 | 18.7 | 13 | 5.2 | 1.0 |
| | South West | 908 | 7.9 | 176 | 8.8 | 19.4 | 7 | 4.0 | 0.8 |
| | Northern Ireland | 373 | 3.2 | - | - | - | - | - | - |
| | Scotland | 1182 | 10.3 | - | - | - | - | - | - |
| | Wales | 416 | 3.6 | 1 | 0.1 | 0.2 | 1 | 100.0 | 0.2 |
| Year of transplant | <=2015 | 6670 | 58.0 | 1084 | 54.3 | 16.3 | 73 | 6.7 | 1.1 |
| | 2016 | 728 | 6.3 | 124 | 6.2 | 17.0 | 3 | 2.4 | 0.4 |
| | 2017 | 775 | 6.7 | 143 | 7.2 | 18.5 | 6 | 4.2 | 0.8 |
| | 2018 | 850 | 7.4 | 166 | 8.3 | 19.5 | 8 | 4.8 | 0.9 |
| | 2019 | 824 | 7.2 | 192 | 9.6 | 23.3 | 7 | 3.6 | 0.8 |
| | 2020 | 752 | 6.5 | 172 | 8.6 | 22.9 | 5 | 2.9 | 0.7 |
| | 2021 | 747 | 6.5 | 112 | 5.6 | 15.0 | - | - | - |
| | 2022 | 157 | 1.4 | 3 | 0.2 | 1.9 | - | - | - |

Table 12 Demographic characteristics of liver transplant patients testing positive for SARS-CoV-2, data up to 9 March 2022

| 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 | - | - | 46 | 2.3 | - | 1 | 2.2 | - |
| | 3-6 months | - | - | 49 | 2.5 | - | 1 | 2.0 | - |
| | 6-12 months | - | - | 78 | 3.9 | - | 1 | 1.3 | - |
| | 12+ months | - | - | 1823 | 91.3 | - | 99 | 5.4 | - |

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 9 March 2022 | | | | | | | | | |
|---|----------------------|------------------------|-------|----------------------|-------|-------------------|-----------------------|------------|-------------------|
| 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 | 1582 | 61.6 | 169 | 58.7 | 10.7 | 4 | 2.4 | 0.3 |
| | Female | 985 | 38.4 | 119 | 41.3 | 12.1 | 5 | 4.2 | 0.5 |
| | Unknown | - | - | - | - | - | - | - | - |
| Blood Group | O | 1170 | 45.6 | 147 | 51.0 | 12.6 | 5 | 3.4 | 0.4 |
| | A | 995 | 38.8 | 96 | 33.3 | 9.6 | 3 | 3.1 | 0.3 |
| | B | 315 | 12.3 | 37 | 12.8 | 11.7 | 1 | 2.7 | 0.3 |
| | AB | 87 | 3.4 | 8 | 2.8 | 9.2 | - | - | - |
| Ethnicity | White | 2108 | 82.1 | 208 | 72.2 | 9.9 | 6 | 2.9 | 0.3 |
| | Asian | 256 | 10.0 | 52 | 18.1 | 20.3 | - | - | - |
| | Black | 75 | 2.9 | 11 | 3.8 | 14.7 | 2 | 18.2 | 2.7 |
| | Other | 55 | 2.1 | 6 | 2.1 | 10.9 | 1 | 16.7 | 1.8 |
| | Unknown | 73 | 2.8 | 11 | 3.8 | 15.1 | - | - | - |
| Age group | 0-17 | 223 | 8.7 | 27 | 9.4 | 12.1 | 1 | 3.7 | 0.4 |
| | 18-29 | 192 | 7.5 | 22 | 7.6 | 11.5 | 1 | 4.5 | 0.5 |
| | 30-39 | 248 | 9.7 | 32 | 11.1 | 12.9 | 1 | 3.1 | 0.4 |
| | 40-49 | 443 | 17.3 | 59 | 20.5 | 13.3 | 3 | 5.1 | 0.7 |
| | 50-59 | 763 | 29.7 | 93 | 32.3 | 12.2 | 2 | 2.2 | 0.3 |
| | 60-69 | 652 | 25.4 | 52 | 18.1 | 8.0 | 1 | 1.9 | 0.2 |
| | >70 | 46 | 1.8 | 3 | 1.0 | 6.5 | - | - | - |
| Organ | Liver | 2567 | 100.0 | 288 | 100.0 | 11.2 | 9 | 3.1 | 0.4 |
| NHS Region | North East and Yorks | 298 | 11.6 | 43 | 14.9 | 14.4 | 2 | 4.7 | 0.7 |
| | North West | 272 | 10.6 | 54 | 18.8 | 19.9 | 1 | 1.9 | 0.4 |
| | Midlands | 434 | 16.9 | 55 | 19.1 | 12.7 | 1 | 1.8 | 0.2 |
| | East of England | 248 | 9.7 | 33 | 11.5 | 13.3 | - | - | - |
| | London | 330 | 12.9 | 48 | 16.7 | 14.5 | 2 | 4.2 | 0.6 |
| | South East | 312 | 12.2 | 37 | 12.8 | 11.9 | 2 | 5.4 | 0.6 |
| | South West | 227 | 8.8 | 17 | 5.9 | 7.5 | 1 | 5.9 | 0.4 |
| | Northern Ireland | 92 | 3.6 | - | - | - | - | - | - |
| | Scotland | 235 | 9.2 | 1 | 0.3 | 0.4 | - | - | - |
| | Wales | 119 | 4.6 | - | - | - | - | - | - |

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 9 March 2022 | | | | | | | | | |
|---|----------------------|-------------------|-------|----------------------|-------|------------------------|-----------------------|------------|------------------------|
| 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 | 1960 | 69.1 | 432 | 67.1 | 22.0 | 41 | 9.5 | 2.1 |
| | Female | 876 | 30.9 | 212 | 32.9 | 24.2 | 7 | 3.3 | 0.8 |
| | Unknown | 1 | 0.0 | - | - | - | - | - | - |
| Blood Group | O | 1094 | 38.6 | 229 | 35.6 | 20.9 | 16 | 7.0 | 1.5 |
| | A | 1275 | 45.0 | 311 | 48.3 | 24.4 | 21 | 6.8 | 1.6 |
| | B | 344 | 12.1 | 71 | 11.0 | 20.6 | 7 | 9.9 | 2.0 |
| | AB | 122 | 4.3 | 33 | 5.1 | 27.0 | 4 | 12.1 | 3.3 |
| Ethnicity | White | 2300 | 81.1 | 513 | 79.7 | 22.3 | 39 | 7.6 | 1.7 |
| | Asian | 219 | 7.7 | 65 | 10.1 | 29.7 | 6 | 9.2 | 2.7 |
| | Black | 83 | 2.9 | 25 | 3.9 | 30.1 | 2 | 8.0 | 2.4 |
| | Other | 52 | 1.8 | 16 | 2.5 | 30.8 | 1 | 6.3 | 1.9 |
| | Unknown | 183 | 6.5 | 25 | 3.9 | 13.7 | - | - | - |
| Age group | 0-17 | 300 | 10.6 | 83 | 12.9 | 27.7 | - | - | - |
| | 18-29 | 311 | 11.0 | 87 | 13.5 | 28.0 | - | - | - |
| | 30-39 | 329 | 11.6 | 85 | 13.2 | 25.8 | 4 | 4.7 | 1.2 |
| | 40-49 | 374 | 13.2 | 87 | 13.5 | 23.3 | 2 | 2.3 | 0.5 |
| | 50-59 | 541 | 19.1 | 118 | 18.3 | 21.8 | 9 | 7.6 | 1.7 |
| | 60-69 | 569 | 20.1 | 121 | 18.8 | 21.3 | 22 | 18.2 | 3.9 |
| | >70 | 410 | 14.5 | 63 | 9.8 | 15.4 | 11 | 17.5 | 2.7 |
| Organ | Heart | 2837 | 100.0 | 644 | 100.0 | 22.7 | 48 | 7.5 | 1.7 |
| NHS Region | North East and Yorks | 463 | 16.3 | 125 | 19.4 | 27.0 | 4 | 3.2 | 0.9 |
| | North West | 281 | 9.9 | 87 | 13.5 | 31.0 | 13 | 14.9 | 4.6 |
| | Midlands | 451 | 15.9 | 137 | 21.3 | 30.4 | 15 | 10.9 | 3.3 |
| | East of England | 315 | 11.1 | 78 | 12.1 | 24.8 | 3 | 3.8 | 1.0 |
| | London | 308 | 10.9 | 85 | 13.2 | 27.6 | 2 | 2.4 | 0.6 |
| | South East | 349 | 12.3 | 81 | 12.6 | 23.2 | 4 | 4.9 | 1.1 |
| | South West | 229 | 8.1 | 49 | 7.6 | 21.4 | 7 | 14.3 | 3.1 |
| | Northern Ireland | 74 | 2.6 | - | - | - | - | - | - |
| | Scotland | 251 | 8.8 | - | - | - | - | - | - |
| | Wales | 116 | 4.1 | 2 | 0.3 | 1.7 | - | - | - |
| Year of transplant | <=2015 | 1873 | 66.0 | 379 | 58.9 | 20.2 | 36 | 9.5 | 1.9 |
| | 2016 | 161 | 5.7 | 51 | 7.9 | 31.7 | 1 | 2.0 | 0.6 |
| | 2017 | 145 | 5.1 | 43 | 6.7 | 29.7 | 5 | 11.6 | 3.4 |
| | 2018 | 144 | 5.1 | 40 | 6.2 | 27.8 | 1 | 2.5 | 0.7 |
| | 2019 | 153 | 5.4 | 56 | 8.7 | 36.6 | 3 | 5.4 | 2.0 |
| | 2020 | 168 | 5.9 | 40 | 6.2 | 23.8 | 2 | 5.0 | 1.2 |
| | 2021 | 161 | 5.7 | 35 | 5.4 | 21.7 | - | - | - |
| | 2022 | 32 | 1.1 | - | - | - | - | - | - |

Table 14 Demographic characteristics of heart transplant patients testing positive for SARS-CoV-2, data up to 9 March 2022

| 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 | - | - | 10 | 1.6 | - | 1 | 10.0 | - |
| | 3-6 months | - | - | 14 | 2.2 | - | - | - | - |
| | 6-12 months | - | - | 24 | 3.7 | - | - | - | - |
| | 12+ months | - | - | 596 | 92.5 | - | 47 | 7.9 | - |

Table 15 shows the demographic characteristics of patients waiting for a heart 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 15 Demographic characteristics of active heart patients on the waiting list testing positive for SARS-CoV-2, data up to 9 March 2022 | | | | | | | | | |
|---|----------------------|------------------------|-------|----------------------|-------|-------------------|-----------------------|------------|-------------------|
| 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 | 575 | 70.5 | 72 | 75.0 | 12.5 | - | - | - |
| | Female | 239 | 29.3 | 24 | 25.0 | 10.0 | - | - | - |
| | Unknown | 2 | 0.2 | - | - | - | - | - | - |
| Blood Group | O | 378 | 46.3 | 42 | 43.8 | 11.1 | - | - | - |
| | A | 307 | 37.6 | 39 | 40.6 | 12.7 | - | - | - |
| | B | 99 | 12.1 | 12 | 12.5 | 12.1 | - | - | - |
| | AB | 32 | 3.9 | 3 | 3.1 | 9.4 | - | - | - |
| Ethnicity | White | 657 | 80.5 | 73 | 76.0 | 11.1 | - | - | - |
| | Asian | 88 | 10.8 | 14 | 14.6 | 15.9 | - | - | - |
| | Black | 36 | 4.4 | 4 | 4.2 | 11.1 | - | - | - |
| | Other | 15 | 1.8 | - | - | - | - | - | - |
| | Unknown | 20 | 2.5 | 5 | 5.2 | 25.0 | - | - | - |
| Age group | 0-17 | 131 | 16.1 | 9 | 9.4 | 6.9 | - | - | - |
| | 18-29 | 59 | 7.2 | 9 | 9.4 | 15.3 | - | - | - |
| | 30-39 | 93 | 11.4 | 14 | 14.6 | 15.1 | - | - | - |
| | 40-49 | 141 | 17.3 | 12 | 12.5 | 8.5 | - | - | - |
| | 50-59 | 245 | 30.0 | 36 | 37.5 | 14.7 | - | - | - |
| | 60-69 | 140 | 17.2 | 15 | 15.6 | 10.7 | - | - | - |
| | >70 | 7 | 0.9 | 1 | 1.0 | 14.3 | - | - | - |
| Organ | Heart | 816 | 100.0 | 96 | 100.0 | 11.8 | 2 | 2.1 | 0.2 |
| NHS Region | North East and Yorks | 150 | 18.4 | 21 | 21.9 | 14.0 | - | - | - |
| | North West | 73 | 8.9 | 15 | 15.6 | 20.5 | - | - | - |
| | Midlands | 125 | 15.3 | 17 | 17.7 | 13.6 | - | - | - |
| | East of England | 81 | 9.9 | 6 | 6.3 | 7.4 | - | - | - |
| | London | 96 | 11.8 | 14 | 14.6 | 14.6 | - | - | - |
| | South East | 100 | 12.3 | 14 | 14.6 | 14.0 | - | - | - |
| | South West | 49 | 6.0 | 8 | 8.3 | 16.3 | - | - | - |
| | Northern Ireland | 37 | 4.5 | - | - | - | - | - | - |
| | Scotland | 80 | 9.8 | - | - | - | - | - | - |
| | Wales | 25 | 3.1 | 1 | 1.0 | 4.0 | - | - | - |

Lung



Table 16 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 16 Demographic characteristics of lung transplant patients testing positive for SARS-CoV-2, data up to 9 March 2022 | | | | | | | | | |
|--|----------------------|-------------------|-------|----------------------|-------|------------------------|-----------------------|------------|------------------------|
| 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 | 934 | 55.4 | 205 | 53.9 | 21.9 | 44 | 21.5 | 4.7 |
| | Female | 751 | 44.6 | 174 | 45.8 | 23.2 | 15 | 8.6 | 2.0 |
| | Unknown | - | - | 1 | 0.3 | - | - | - | - |
| Blood Group | O | 718 | 42.6 | 158 | 41.6 | 22.0 | 20 | 12.7 | 2.8 |
| | A | 763 | 45.3 | 166 | 43.7 | 21.8 | 27 | 16.3 | 3.5 |
| | B | 136 | 8.1 | 37 | 9.7 | 27.2 | 8 | 21.6 | 5.9 |
| | AB | 68 | 4.0 | 19 | 5.0 | 27.9 | 4 | 21.1 | 5.9 |
| Ethnicity | White | 1577 | 93.6 | 344 | 90.5 | 21.8 | 55 | 16.0 | 3.5 |
| | Asian | 48 | 2.8 | 22 | 5.8 | 45.8 | 1 | 4.5 | 2.1 |
| | Black | 13 | 0.8 | 6 | 1.6 | 46.2 | 2 | 33.3 | 15.4 |
| | Other | 12 | 0.7 | 4 | 1.1 | 33.3 | 1 | 25.0 | 8.3 |
| | Unknown | 35 | 2.1 | 4 | 1.1 | 11.4 | - | - | - |
| Age group | 0-17 | 34 | 2.0 | 11 | 2.9 | 32.4 | - | - | - |
| | 18-29 | 133 | 7.9 | 32 | 8.4 | 24.1 | - | - | - |
| | 30-39 | 226 | 13.4 | 62 | 16.3 | 27.4 | 1 | 1.6 | 0.4 |
| | 40-49 | 268 | 15.9 | 58 | 15.3 | 21.6 | 9 | 15.5 | 3.4 |
| | 50-59 | 438 | 26.0 | 96 | 25.3 | 21.9 | 15 | 15.6 | 3.4 |
| | 60-69 | 487 | 28.9 | 100 | 26.3 | 20.5 | 31 | 31.0 | 6.4 |
| | >70 | 99 | 5.9 | 21 | 5.5 | 21.2 | 3 | 14.3 | 3.0 |
| Organ | Lung | 1685 | 100.0 | 380 | 100.0 | 22.6 | 59 | 15.5 | 3.5 |
| NHS Region | North East and Yorks | 240 | 14.2 | 66 | 17.4 | 27.5 | 7 | 10.6 | 2.9 |
| | North West | 169 | 10.0 | 56 | 14.7 | 33.1 | 12 | 21.4 | 7.1 |
| | Midlands | 265 | 15.7 | 81 | 21.3 | 30.6 | 18 | 22.2 | 6.8 |
| | East of England | 228 | 13.5 | 40 | 10.5 | 17.5 | 7 | 17.5 | 3.1 |
| | London | 162 | 9.6 | 44 | 11.6 | 27.2 | 3 | 6.8 | 1.9 |
| | South East | 245 | 14.5 | 61 | 16.1 | 24.9 | 10 | 16.4 | 4.1 |
| | South West | 135 | 8.0 | 23 | 6.1 | 17.0 | 1 | 4.3 | 0.7 |
| | Northern Ireland | 46 | 2.7 | - | - | - | - | - | - |
| | Scotland | 121 | 7.2 | 2 | 0.5 | 1.7 | - | - | - |
| | Wales | 74 | 4.4 | 7 | 1.8 | 9.5 | 1 | 14.3 | 1.4 |
| Year of transplant | <=2015 | 949 | 56.3 | 197 | 51.8 | 20.8 | 44 | 22.3 | 4.6 |
| | 2016 | 97 | 5.8 | 26 | 6.8 | 26.8 | 4 | 15.4 | 4.1 |
| | 2017 | 133 | 7.9 | 35 | 9.2 | 26.3 | 3 | 8.6 | 2.3 |
| | 2018 | 144 | 8.5 | 35 | 9.2 | 24.3 | 3 | 8.6 | 2.1 |
| | 2019 | 138 | 8.2 | 42 | 11.1 | 30.4 | 2 | 4.8 | 1.4 |
| | 2020 | 97 | 5.8 | 26 | 6.8 | 26.8 | 2 | 7.7 | 2.1 |
| | 2021 | 103 | 6.1 | 19 | 5.0 | 18.4 | 1 | 5.3 | 1.0 |
| | 2022 | 24 | 1.4 | - | - | - | - | - | - |

Table 16 Demographic characteristics of lung transplant patients testing positive for SARS-CoV-2, data up to 9 March 2022

| 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 | - | - | 5 | 1.3 | - | - | - | - |
| | 3-6 months | - | - | 8 | 2.1 | - | - | - | - |
| | 6-12 months | - | - | 16 | 4.2 | - | 1 | 6.3 | - |
| | 12+ months | - | - | 351 | 92.4 | - | 58 | 16.5 | - |

Table 17 shows the demographic characteristics of patients waiting for a lung 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 17 Demographic characteristics of active lung patients on the waiting list testing positive for SARS-CoV-2, data up to 9 March 2022 | | | | | | | | | |
|--|----------------------|------------------------|-------|----------------------|-------|-------------------|-----------------------|------------|-------------------|
| 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 | 386 | 54.8 | 30 | 46.2 | 7.8 | 5 | 16.7 | 1.3 |
| | Female | 318 | 45.1 | 35 | 53.8 | 11.0 | 5 | 14.3 | 1.6 |
| | Unknown | 1 | 0.1 | - | - | - | - | - | - |
| Blood Group | O | 368 | 52.2 | 36 | 55.4 | 9.8 | 6 | 16.7 | 1.6 |
| | A | 254 | 36.0 | 21 | 32.3 | 8.3 | 3 | 14.3 | 1.2 |
| | B | 67 | 9.5 | 8 | 12.3 | 11.9 | 1 | 12.5 | 1.5 |
| | AB | 16 | 2.3 | - | - | - | - | - | - |
| Ethnicity | White | 624 | 88.5 | 55 | 84.6 | 8.8 | 7 | 12.7 | 1.1 |
| | Asian | 46 | 6.5 | 6 | 9.2 | 13.0 | 2 | 33.3 | 4.3 |
| | Black | 24 | 3.4 | 3 | 4.6 | 12.5 | 1 | 33.3 | 4.2 |
| | Other | 6 | 0.9 | 1 | 1.5 | 16.7 | - | - | - |
| | Unknown | 5 | 0.7 | - | - | - | - | - | - |
| Age group | 0-17 | 24 | 3.4 | 3 | 4.6 | 12.5 | - | - | - |
| | 18-29 | 51 | 7.2 | 6 | 9.2 | 11.8 | - | - | - |
| | 30-39 | 74 | 10.5 | 10 | 15.4 | 13.5 | - | - | - |
| | 40-49 | 98 | 13.9 | 12 | 18.5 | 12.2 | 2 | 16.7 | 2.0 |
| | 50-59 | 244 | 34.6 | 17 | 26.2 | 7.0 | 3 | 17.6 | 1.2 |
| | 60-69 | 213 | 30.2 | 17 | 26.2 | 8.0 | 5 | 29.4 | 2.3 |
| | >70 | 1 | 0.1 | - | - | - | - | - | - |
| Organ | Lung | 705 | 100.0 | 65 | 100.0 | 9.2 | 10 | 15.4 | 1.4 |
| NHS Region | North East and Yorks | 107 | 15.2 | 7 | 10.8 | 6.5 | 2 | 28.6 | 1.9 |
| | North West | 83 | 11.8 | 11 | 16.9 | 13.3 | 2 | 18.2 | 2.4 |
| | Midlands | 129 | 18.3 | 17 | 26.2 | 13.2 | 4 | 23.5 | 3.1 |
| | East of England | 62 | 8.8 | 6 | 9.2 | 9.7 | - | - | - |
| | London | 71 | 10.1 | 11 | 16.9 | 15.5 | 2 | 18.2 | 2.8 |
| | South East | 77 | 10.9 | 8 | 12.3 | 10.4 | - | - | - |
| | South West | 57 | 8.1 | 4 | 6.2 | 7.0 | - | - | - |
| | Northern Ireland | 34 | 4.8 | - | - | - | - | - | - |
| | Scotland | 56 | 7.9 | 1 | 1.5 | 1.8 | - | - | - |
| | Wales | 29 | 4.1 | - | - | - | - | - | - |

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