

NHS BLOOD AND TRANSPLANT
RESEARCH, INNOVATION AND NOVEL TECHNOLOGIES ADVISORY GROUP
AVAILABILITY OF ORGANS FOR RESEARCH

SUMMARY

BACKGROUND

- 1 This paper investigates the pathway of untransplantable organs that were offered to and received by research studies between 1 January and 31 July 2022. This includes organs that were retrieved for transplantation, deemed unsuitable and then offered for research, as well as organs that were deemed untransplantable before removal and offered through the INOAR process.

DATA AND METHODS

- 2 Untransplantable organs were obtained from the UK Transplant Registry for UK deceased donors between January 2012 and July 2022. Research outcome was split into three categories: no generic research consent, used for research (under generic or specific consent) and organ disposed of with generic research consent.

CONCLUSION

- 3 Overall, the total number of untransplantable organs has steadily increased over time. In addition, the proportion of these organs that have consent/authorisation for research was 93% for 2022 so far.
- 4 The number of organs used for research fell in 2020 due to the coronavirus pandemic. The numbers have increased again in 2022 so far; 208 organs that were retrieved for transplantation then deemed unsuitable have been used for research and this is in line with the years prior to 2020.
- 5 The proportion of discarded organs where generic research consent/authorisation was ascertained is substantially higher than in previous years; 13% in 2015 compared to 48% for the period January to July 2022.

Lisa Mumford
Statistics and Clinical Research

October 2022

NHS BLOOD & TRANSPLANT

RESEARCH, INNOVATION AND NOVEL TECHNOLOGIES ADVISORY GROUP

AVAILABILITY OF ORGANS FOR RESEARCH

BACKGROUND

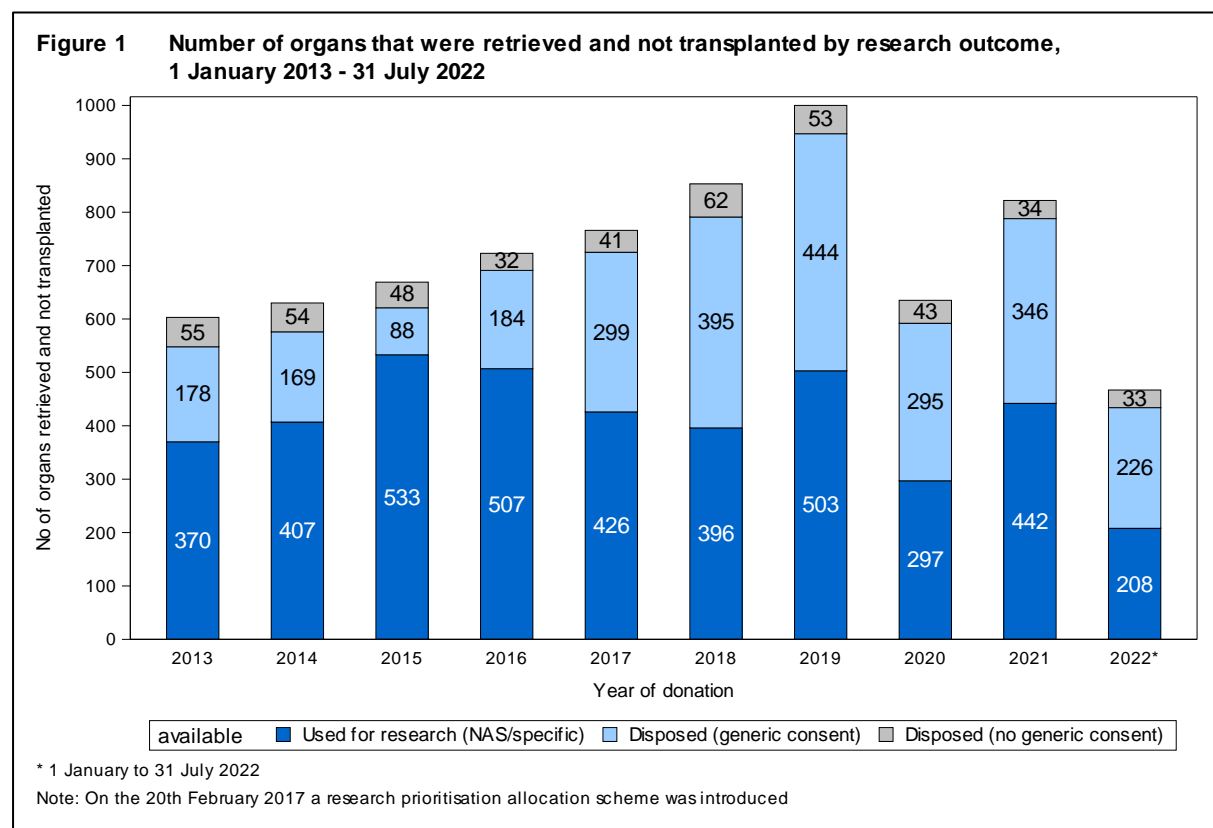
- 1 This paper investigates the pathway of organs that were untransplantable; these organs have the potential to be available for research purposes. However, such organs cannot be used for research through the National Allocation Scheme (NAS) if there is no suitable generic consent/authorisation. In some cases, these organs can be used for research if there is specific consent/authorisation.
- 2 In addition, some of these organs are discarded for a wide range of other reasons (e.g., out-of-hours, not suitable for particular trials, logistical reasons). Within this paper we assess the availability of untransplantable organs.

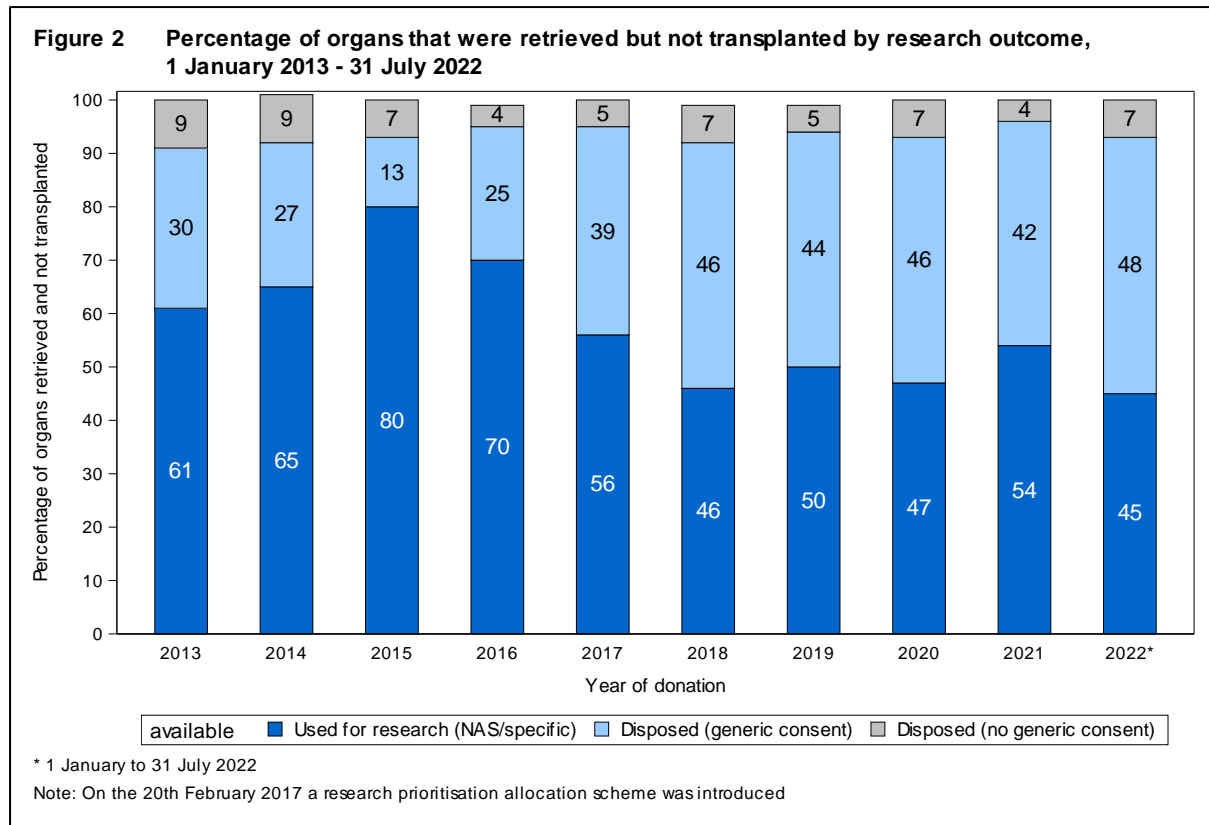
DATA AND METHODS

- 3 Organs that were untransplantable were obtained from the UK Transplant Registry for UK deceased donors between 1 January 2013 and 31 July 2023. Research outcome was split into three categories: no generic research consent, used for research (under generic or specific consent) and organ disposed of with generic research consent.
- 4 Livers isolated for hepatocytes (transplanted or not transplanted) have been excluded from this analysis.

RESULTS

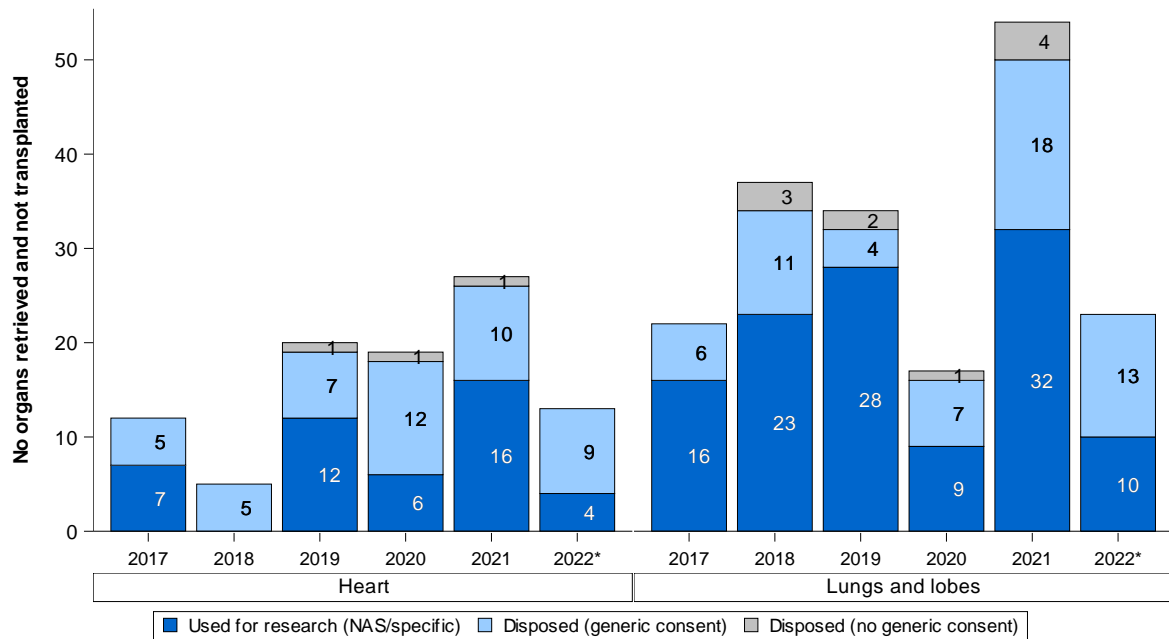
- 5 **Figure 1** shows the research outcome of UK donor organs that were untransplantable between 1 January 2013 and 31 July 2022. Overall, the total number of untransplantable organs has steadily increased since 2013. The availability of organs for research was at an all-time high in 2019. There was a decrease in the number of organs used for research in 2020 and 2021 due to the coronavirus pandemic. In 2022 so far; 208 organs have been used for research and this is in line with the years prior to 2020. Please note that this paper marks the fourth year that ODT Research Team data have been merged with UK Transplant Registry data. Data from 2019 onwards has been modified to reconcile both sets of data. Hence the accuracy of the results may be higher from 2019 onwards than in previous years.
- 6 The proportion of untransplantable potential organs available for research are shown in **Figure 2**, by research outcome from 1 January 2013 to 31 July 2022. Consent/authorisation for research has been fairly constant in the last seven years ranging from 93% to 97% in 2022 so far and so the proportion of organs discarded due to a lack of research consent/ authorisation is relatively small.





- 7 In 2015, the number of retrieved but untransplanted organs used for research (under generic or specific consent) was at its highest at 533, after which point the number decreased each year to 396 in 2018 before increasing to 503 in 2019. In 2020, the numbers were lower due to the coronavirus pandemic and 297 organs were used for research. The number of organs used for research is 208 in 2022 so far.
- 8 Discard rates for organs with generic research consent/authorisation have remained fairly high in recent years, at 42% for the 2021 calendar year. However, the discard rate has increased to 48% for 2022 so far.
- 9 The same information from **Figure 1** (number of untransplantable organs) is broken down by organ and illustrated in terms of cardiothoracic organs in **Figure 3** and abdominal organs in **Figure 4**.
- 10 The number of cardiothoracic organs available for research is small, as seen in **Figure 3**. The number of cardiothoracic organs used for research in the first seven months of 2022 is in line with the previous five full years for hearts (n=4) and also for lungs (n=10).
- 11 **Figure 4** shows that the number of abdominal organs available for research has generally remained stable, except for pancreas where numbers decreased following the pandemic.

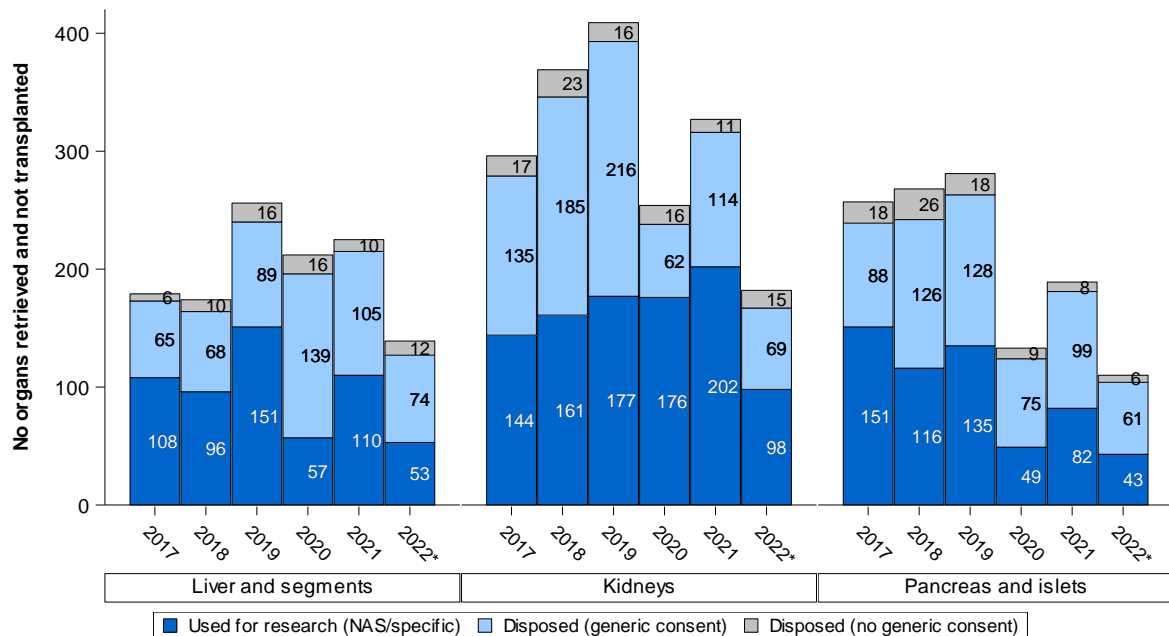
Figure 3 Number of cardiothoracic organs that were retrieved but not transplanted by research outcome and organ from 2017 to 2022



* 1 January to 31 July 2022

Note: On the 20th February 2017 a research prioritisation allocation scheme was introduced

Figure 4 Number of abdominal organs that were retrieved and not transplanted by research outcome and organ from 2017 to 2022



* 1 January to 31 July 2022

Note: On the 20th February 2017 a research prioritisation allocation scheme was introduced

CONCLUSION

- 12 Overall, the total number of untransplantable organs has steadily increased over time. In addition, the proportion of these organs that have consent/authorisation for research has fallen to 93% for 2022 so far.
- 13 Since 2015, the number of untransplantable organs used for research has been decreasing each year to 396 in 2018 before an increase to 503 in 2019. In 2020, 297 organs were used for research, which was lower than usual due to the coronavirus pandemic. The number of organs used for research has increased again to 208 organs in 2022 so far.
- 14 The proportion of discarded organs where generic research consent/authorisation was ascertained is substantially higher than in previous years; 13% in 2015 compared to 48% for the period January to July 2022.

Lisa Mumford
Statistics and Clinical Research

October 2022