

Case study: liver perfusion in transplantation

The challenge

- Chronic liver disease is rising annually in the UK – due to obesity and alcohol misuse – causing around 8,500 deaths per year
- Around 450-500 people currently* need a liver transplant, with 1,112 livers transplanted in 2019/2020
- Demand for donor livers far outstrips supply: up to 20% of people awaiting a transplant die or are removed from waiting lists due to ill health
- A third of donated livers don't meet desired transplant criteria and so cannot be used
- Globally, more than 37,000 liver transplants were performed in 2022 – an increase of 8% on 2021

* 2024

Our impact

- Birmingham's VITTAL trial confirmed that 4-6 hours of normothermic machine perfusion improved the function of donor livers that would otherwise have been rejected, making 7 in 10 of them suitable for transplant
- Patients who received a perfused liver were followed up 12 months after surgery – 100% remained well and 96% of the livers were working fully
- As a result of this technique, an additional 250 lifesaving liver transplants have been carried out in the UK to date
- UK and US clinical guidelines have been updated to recommend the use of liver machine perfusion
- The trial has changed the practice of liver transplantation worldwide with up to 70% of suboptimal livers now able to be transplanted
- VITTAL has also contributed to an increase in annual UK transplants by 14% since 2014