NHS
Blood and Transplant

Introduction of Organ Assessment and Recovery Centres

for Lung, Kidney and Liver Transplantation in the UK

What is an Assessment and Recovery Centre?

An Assessment and Recovery Centre. ARC for short, is a place where donor organs not felt suitable to be immediately transplanted can be further assessed using a machine designed to support the organ outside the body.

How the technology works

This technology, called ex situ machine perfusion, allows oxygen-rich fluid to be gently pumped around the organ whilst warming the organ to a normal body temperature. This allows testing of how the organ is working over several hours giving the organ a chance to improve or "recover". If the organ passes tests of its quality, it may be able to be safely used for a suitable person on the transplant waiting list.

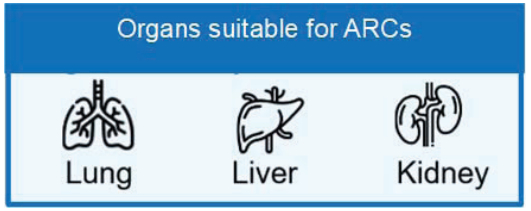
Why are ARCs being introduced?

Many donated organs are not currently used because of concern about how well they might work after transplant. The use of an ARC should:

- Allow more donor organs to be suitable for transplant.
- Reduce waiting times for people waiting for a transplant.

In an ARC, donor organs sent from hospitals across the UK can be assessed and recovered using perfusion. If they pass quality tests, they can be sent to any NHS transplant centre that has a patient matched for that organ waiting for transplant.

The organ assessment is carried out by NHS transplant centre staff to help better understand organ viability (the ability to work successfully) as well as improving clinical decision-making.



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Why are we piloting ARCs in the UK?

Machine perfusion is already being used by some transplant centres in the UK to assess some donor lungs, livers and kidneys, but it is not available at all centres. This means some patients waiting for transplant currently don't have the chance to benefit from access to donor organs that have been assessed and recovered in this way.

Successful examples from around the world

There is a lot of clinical experience from USA, Canada and some countries in Europe that shows the impact machine perfusion of donor organs can have in increasing transplant numbers with good results.

Our aim

By introducing a network of ARCs in the UK, it is hoped that many more donor organs will be suitable to be transplanted. Importantly all patients across the UK waiting for a transplant will have an equal chance to benefit from the services of the ARC.

The transplant community is working together to test how an ARC service might work in the UK. Some transplant centres, with expertise in organ perfusion, will act as pilot (or test ARC) and receive donor organs from across the UK that require further assessment. The pilot will allow us to show if ARCs can increase the availability of suitable organs for transplant across the UK and make a case to the Department of Health and Social Care for long-term funding to benefit future patients.

The long-term hope is to have 2 or 3 ARCs across the UK, which can deliver up to 750 more transplants every year, with equal access to all UK patients.

Machine perfusion of donor organs has impacted transplant activity around the world by increasing numbers of organs available, improving use of donated organs and improving outcomes after transplant

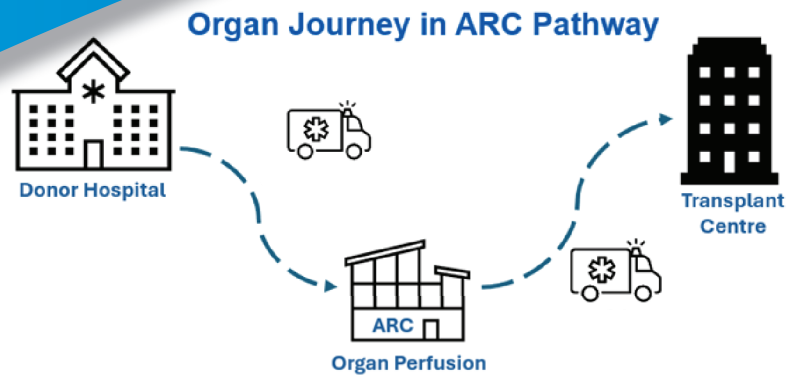
What does this mean for transplant patients?

The introduction of ARCs should increase the availability of suitable donor organs for transplant. It does mean that in some cases, the donor organ will have travelled from the donor hospital to another transplant centre that is acting as the ARC for assessment before being sent to the centre doing the transplant. This process would take a matter of hours, depending on the location of the donor hospital. An example organ journey is below, based on the lung pathway. The liver and kidney journeys will be very similar, with variation in the assessment times.

Giving your consent

As part of this process, your transplant team will ask you for your consent specifically in relation to machine-perfused organs, including a two-way discussion about the benefits and any risks involved.

Your transplant team will discuss this pilot further with you and will try to answer any further questions you may have.



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