

First donation after circulatory death heart transplant performed in the U.S.

December 4 2019, by Bob Yirka



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A team of doctors at Duke University has carried out the first donation after circulatory (or cardiac) death (DCD) heart transplant in the U.S. Members of the surgical team have spoken with the press giving some

details of the procedure.

Over the past several decades, [heart transplants](#) have become routine—saving the lives of thousands of people. But in recent years, the [waiting list](#) for a new heart has grown so long that new transplantation techniques have been explored. DCD is one such technique, it involves carrying out restorative techniques on a heart removed from a patient after cardiac/circulatory death. Traditionally, hearts used in transplants have come from people who have been involved in accidents or strokes, where they are brain dead but the rest of their body continues to function. Removing a heart from such a patient and chilling it right away preserves heart tissue making the heart viable for use in another person whose heart is failing.

In the new technique, called warm perfusion, a heart is removed from a person who has died—their heart stopped beating and their blood circulating. In such cases, heart tissue has typically begun to deteriorate before the person dies, making the heart unusable for anyone else. The new method involves keeping the heart at normal body temperature and immediately hooking up tubes to the heart of the dead patient to restore [blood flow](#) immediately. Doing so allows blood to flow not only through it but to the arteries and veins in it that feed its own muscle tissue. That allows the heart to begin receiving oxygen and electrolytes which allows the doctors to restart the [heart](#) beating before it is transferred to wherever the recipient is located. With the new methods, [travel times](#) of up to ten hours are possible.

The DCD technique has been carried out in the U.K. and Australia multiple times proving its viability—the new effort was the first time that it had been performed on a patient in the U.S. Doctors participating in the procedure reported that the [transplant](#) was successful. The doctors on the team also suggested that their effort will likely be followed by many others in the U.S., hopefully reducing wait times for those who

need a [new heart](#).

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