'It's life-creating, life-enabling': Uterus transplants are now a reality for the lucky few, with a wider rollout soon possible

The idea of uterus transplantation to treat infertility caused by the lack of a functional uterus is less than 25 years old. Clinical trials testing the procedure in humans all started within the past decade, primarily for... Mayer-Rokitansky-Küster-Hauser syndrome (MRKH), in which XX-carrying individuals are born with ovaries but no uterus. Despite its short history, uterus transplant is now becoming clinically available.

This past April, Baylor surgeons performed the country's, and possibly the world's, first uterus transplant outside the context of a clinical trial.

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[M]ore than 600,000 people undergo hysterectomies each year in the US alone, and many of them are still of reproductive age. Uterus transplant could provide a way for those people to carry their own children even after having their own wombs removed. Some in the uterus transplant field even envision a future in which transgender women will be able to carry their own children.

"It's going to be a transformative transplant," says surgeon Cristiano Quintini, who runs the Cleveland Clinic's uterus transplant trial, the first of three clinical studies to be launched in the US. "It's a life-creating, life-enabling type of transplant."

## The Uterus Transplantation Process



### **CREATE EMBRYOS**

Prior to the transplant surgery, recipients undergo in vitro fertilization (IVF) procedures to create embryos for future implantation.



### TRANSPLANT

Recipients undergo a lengthy surgery to receive a uterus from a living or deceased donor. The organ, which comes with a cervix and a small piece of vagina, is connected to the recipient's vagina, and its blood vessels are hooked up to the recipient's circulatory system. Following surgery, recipients take a regimen of immunosuppressant drugs to help ensure the organ's acceptance.

six-month wait





# EMBRYO TRANSFER/PREGNANCY/DELIVERY

Six months after transplant surgery, recipients are ready to start the next part of IVF—the implantation of an embryo into the donated organ. Successful pregnancies end with a delivery by Cesarean section.



#### Option for a second child

After the first child, recipients can opt to try for a second—again, via embryo implantation—starting six months postpartum.



#### Hysterectomy

After a recipient is done having one or two children, the uterus is removed so she can discontinue immunosuppressant drugs, which carry the risk of infection, among other side effects.

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