

March 23-24, 2024

First pig kidney transplant a success

BOSTON — A 62-year-old man with end-stage renal disease has become the first human to receive a new kidney from a genetically modified pig, doctors from Massachusetts General Hospital in Boston announced on Thursday.

The four-hour surgery, performed on March 16, marked a major milestone in the quest to provide more readily available organs to patients, the hospital said in a statement.

The patient, Richard Slayman of Weymouth, Massachusetts, is recovering well and expected to be discharged soon, the hospital said.

Experts are keenly interested in long-term results of the groundbreaking animal-to-human transplant, said Jim Kim, director of kidney and pancreas transplantation with USC Transplant Institute in Los Angeles.

Slayman had received a transplant of a human kidney at the same hospital in 2018 after seven years on dialysis, but the organ failed after

five years and he had resumed dialysis treatments.

The kidney was provided by eGenesis of Cambridge, Massachusetts, from a pig that had been genetically edited to remove genes harmful to a human recipient and add certain human genes to improve compatibility. The company also inactivated viruses inherent to pigs that have the potential to infect humans.

Kidneys from similarly edited pigs raised by eGenesis had successfully been transplanted into monkeys that were kept alive for an average of 176 days, and in one case for more than two years, researchers reported in October in the journal Nature.

Drugs used to help prevent rejection of the pig organ by the patient's immune system included an experimental antibody called tegoprobart, developed by Eledon Pharmaceuticals.

The surgery marked progress in xenotransplantation, the transplant-

ing of organs or tissues from one species to another, said Robert Montgomery, director of the NYU Langone Transplant Institute, who was not involved in the case.

The field "is marching closer to becoming an alternative source of organs for the many hundreds of thousands suffering from kidney failure", he said in an e-mail.

More than 100,000 people in the United States are on the waiting list for a transplant, most of them kidney patients, and 17 people die each day waiting for an organ, according to the United Network for Organ Sharing.

NYU surgeons had previously transplanted pig kidneys into brain-dead people.

A University of Maryland team in January 2022 transplanted a genetically modified pig heart into a 57-year-old man with terminal heart disease, but he died two months later.

AGENCIES—XINHUA

First Pig Kidney Transplant A Success

People Involved: Richard Slayman, Jim Kim, Robert Montgomery

Summary: 62-year-old man from Weymouth, Massachusetts has become the first person in the world to successfully receive a transplant of a genetically edited pig kidney. Richard Slayman underwent the procedure that lasted 4 hours on Saturday at Massachusetts General Hospital.

Personal Thoughts: I think this was a massive and delightful discovery—to be able to successfully use a pig's kidney to replace our own. Based on this news article, the average amount of people that die each day while waiting for an organ transplant is 17. I think if we can keep using pigs' kidneys, it would be good for us, so I fully support this motion.

