

First robotic liver transplant in U.S. performed by Washington University surgeons at Barnes-Jewish Hospital

In May 2023, a surgical team from Washington University School of Medicine in St. Louis performed the first robotic liver transplant in the U.S. The successful transplant extends to liver transplants the advantages of minimally invasive robotic surgery: a smaller incision resulting in less pain and faster recoveries, plus the precision needed to perform one of the most challenging abdominal procedures.

The patient, a man in his 60s who needed a transplant because of liver cancer and cirrhosis caused by hepatitis C virus, is doing well and has resumed normal, daily activities. Typically, liver transplant recipients require at least six weeks before they can walk without any discomfort. The patient was walking easily six weeks after surgery and cleared to resume golfing and swimming seven weeks after the surgery.

“The transplant was a success: The operation went smoothly, the new liver started working right away, and the patient recovered without any surgical complications,” says transplant surgeon Adeel Khan, MD, the leader of the team that conducted the trailblazing surgery. Khan is an associate professor of surgery at the School of Medicine. “Liver transplantation is one of the most complex abdominal operations and heavily relies on a specialized team for good outcomes. Here at Washington University and Barnes-Jewish Hospital, we are very fortunate to have the support needed to develop a world-class robotic-transplant team that allows us to safely perform complex operations. This team is a big part of our success.”

A liver transplant traditionally is performed as an “open” procedure, with a surgeon making a 3- to 4-inch vertical and 12- to 16-inch horizontal incision just below the rib cage to remove a patient’s diseased liver and place the healthy donated liver. There has been a push by transplant surgeons to shift the procedure to one that is minimally invasive – with smaller incisions that typically result in less pain and faster recoveries.

Robotic surgeries are a kind of minimally invasive surgery. Surgeons maintain complete control of the robot’s tools and perform the operations remotely — usually just a few feet away from the patient — using joystick-like controls. High-resolution cameras provide a magnified, 3D view of the surgical site viewable via a large monitor. The high-tech instrumentation allows for very precise, fine manipulations that would be impossible using traditional techniques. Read the full article [here](#).



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~ Adeel Khan, MD



Transplant surgeon Adeel Khan, MD, controls a surgical robot. A surgical team from Washington University School of Medicine in St. Louis led by Khan performed the first robotic liver transplant in the U.S. in May at Barnes-Jewish Hospital.