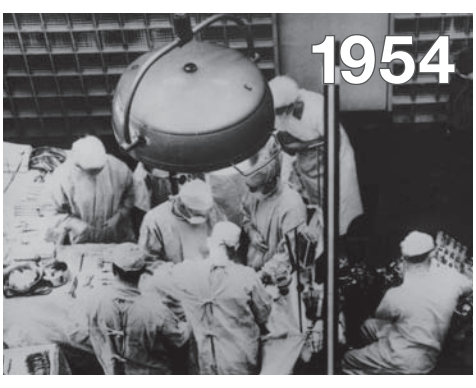
Transplantation

A History and Future of Firsts

BRIGHAM AND WOMEN'S HOSPITAL

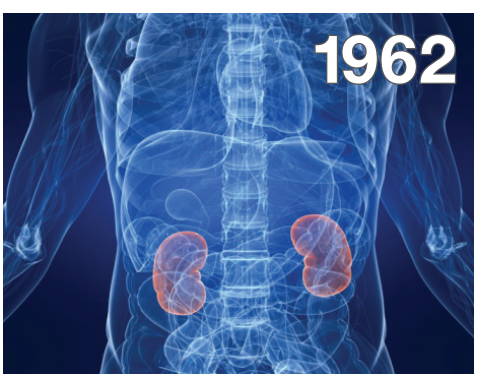


Human Organ Transplant
First in the World

» A surgical team led by Dr. Joseph Murray transplants a kidney from one identical twin to another. Dr. Murray receives the Nobel Prize in 1990 for this work and his subsequent development of immunosuppressive drugs to help prevent rejection of transplanted organs.

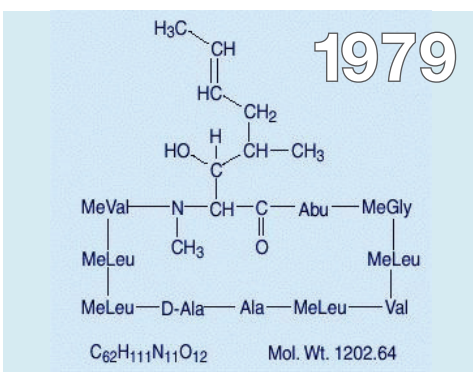
Non-Identical Twin Transplant
First in the World

» A surgical team led by Dr. Murray transplants a kidney from one fraternal (non-identical) twin to another. The recipient, John Riteris, continued to live for another 28 years.



Deceased Donor Transplant
First in the World

» A surgical team led by Dr. Murray transplants a kidney procured from a deceased donor. The procedure included the first clinical use of the immunosuppressive drug azathioprine.



Cyclosporin A
First in the World

» A research team led by Dr. Nicholas Tilney becomes the first to demonstrate the effectiveness of cyclosporin A as an immunosuppressant in kidney transplantation. To this day, this immunosuppressant and others with a similar mode of action continue to be used for all types of solid organ transplants.

Antibodies
First in the World

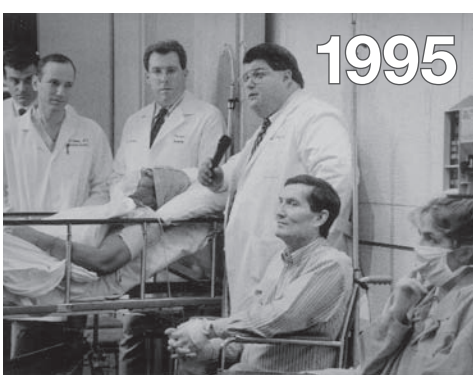
» A research team led by Dr. Tilney becomes the first to demonstrate than an antibody can be used to neutralize the rejection mechanism of the IL-2 receptor, a protein found on the surface of some immune cells. This antibody continues to play an important role in immunosuppression.

Heart Transplant
First in New England

» Less than ten days after a surgical team led by Dr. John Collins, Jr., performs the first heart transplant in New England, the same team replaces the heart of a second recipient, a sixteen-year-old boy.

Heart-Lung Transplant
First in New England

» Brigham and Women's Hospital (BWH) becomes the first hospital in Massachusetts to replace a patient's heart and lung in one operation.



Triple Transplant
First in the U.S.

» BWH performs the nation's first triple organ transplant, removing three organs from a single donor – two lungs and a heart – and transplanting them into three recipients.

Quadruple Transplant
First in the World

» BWH performs what is believed to be the world's first quadruple transplant. A team transplants four organs from a single donor – a kidney, two lungs, and a heart – to four recipients.

Quintuple Lung Transplant
First in the U.S.

» Hundreds of BWH medical professionals work together to transplant five lungs – from three donors to five recipients – within 36 hours.

Partial Face Transplant
First in New England

» The BWH face transplant team, led by Dr. Bohdan Pomahac, successfully performs the first partial face transplant in New England for Jim Maki – only the second such procedure to be accomplished in the United States and the seventh in the world.

Full Face Transplant
First in the U.S.

» A BWH surgical team performs the first full face transplant in the country, replacing the nose, lips, facial skin, and facial animation muscles and nerves of patient Dallas Wiens. The same face transplant team performs two additional full face transplants later that spring.

Hand Transplant
First in New England

» A team of more than 40 medical professionals works for more than 12 hours to perform a bilateral (double) hand transplant for Richard Mangino. The transplant involves a composite of multiple tissues, including skin, tendons, muscles, ligaments, bones, and blood vessels.