

In Memoriam:

George J. Magovern, Sr.

(1923–2013)

On 4 November 2013, cardiothoracic surgery lost a renowned innovator with the death of George J. Magovern, Sr., MD, at age 89 years. During his long, productive career, he helped establish the city of Pittsburgh as a major center for medical treatment and research.

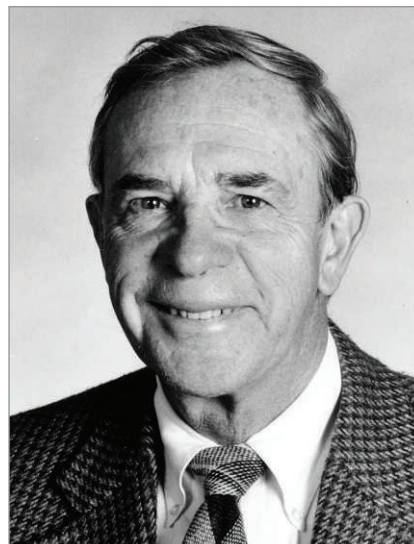
George Jerome Magovern was born on 17 November 1923 in New York City. His father worked in the insurance business. The medical profession attracted George at a young age, largely because his grandfather and 2 uncles were physicians. George was educated at Manhattan College and Union University in New York City. When World War II began, he joined the Navy and was sent to Marquette University to earn his medical degree. After the war, he trained at King's County Hospital in Brooklyn.

When the Korean War broke out in 1950, Dr. Magovern served his country a second time, joining the Army and being stationed at Fort Sam Houston in San Antonio. After this second round of service, he moved to Washington, DC, where he completed his cardiothoracic training at George Washington University in 1958.

Dr. Magovern was immediately recruited to Allegheny General Hospital (AGH) in Pittsburgh. He meant to stay there for only a short time, but the position became his life's work, and he quickly began to leave his mark on cardiothoracic surgery. In 1959, he created a heart program with Dr. Edward Kent, the hospital's first director of cardiothoracic surgery. At that time, patients undergoing artificial heart valve implantation had an extremely high mortality rate. This dismal result was due to the prolonged cardiopulmonary bypass times necessary for suturing the caged-ball valves of that era. Working with Harry Cromie, a local engineer, Dr. Magovern developed a sutureless heart valve that could be clamped into place quickly. Because the implantation time was so short, survival rates improved from less than 50% to 90%. The Magovern-Cromie heart valve was widely used from 1962 into the 1970s. Its durability was exceptional. In 2008, a team of Israeli surgeons encountered a perfectly functioning Magovern-Cromie aortic valve that had been in place for 42 years and was believed to be the longest-functioning prosthetic valve ever documented.¹

The sutureless heart valve alone would have earned Dr. Magovern an important place in surgical history. As his career progressed, he made other breakthroughs in a wide variety of areas. He performed the world's second clinical lung transplant (1963) and Pennsylvania's second heart transplant (1969). In 1970, he became chairman of AGH's Department of Surgery, a position he held for 25 years. Under his direction, the hospital's open-heart program became the largest in Pennsylvania and the 10th-largest in the United States.

In 1976, with Gerald R. McGinnis, Dr. Magovern co-founded Respironics, Inc., a medical supply company that specializes in respiratory devices and is now owned by Philips Healthcare. Beginning in the mid-1980s, Dr. Magovern helped pioneer



George J. Magovern, Sr., MD

dynamic cardiomyoplasty, a procedure in which the left latissimus dorsi muscle was converted into a pedicled flap and wrapped around the failing heart; when stimulated to contract by a pacemaker, the muscle served as an autologous cardiac-assist pump. Although the concept was ingenious, it has now largely been abandoned. A more enduring contribution was the Bio-Pump[®], a short-term, extracorporeal biventricular assist device that Dr. Magovern pioneered in the mid-1980s. Later, he helped develop the TandemHeart[™], a short-term, external, continuous-flow assist device that is widely used today. He is also known for his research involving nuclear-powered pacemakers.

Dr. Magovern was an outstanding educator and had numerous academic appointments. He was a professor of surgery at the Drexel University College of Medicine and was the program director for AGH's thoracic surgery residency program. He lectured widely and published more than 200 scientific works. He was also active in many professional organizations, serving as president of the Society of Thoracic Surgeons (1984–85) and as director of the American Board of Thoracic Surgery of the American Medical Association (1984–90). *Pittsburgh Magazine* named him one of the "100 Most Influential Pittsburghers of the Century" (1999), and the American Heart Association awarded him the Pulse of Pittsburgh Award (2003).

George Magovern will be remembered not only for his medical and surgical breakthroughs, but also for his warmth, compassion, and generosity. He and I became friends early in our careers, and I have many fond memories of him, both surgical and social. Both of us were avid golfers. In 1991, he co-founded the Senior Cardiovascu-

lar Surgical Society,^{2,3} a 12-member group of respected pioneers over 60 years of age. I was privileged to belong to this group, whose annual scientific meetings took place at various resort areas with well-known attached golf courses. Those meetings are no longer held, but they are among my fondest recollections. I also cherish having been an invited guest, along with Dr. John Ochsner, at George's retirement celebration in Pittsburgh.

Dr. Magovern's 2 sons, George, Jr., and James, followed in their father's professional footsteps and became cardiothoracic surgeons at AGH. James died in 2007. George, Jr., is now chairman of the Department of Thoracic and Cardiovascular Surgery at AGH, which is part of the Allegheny Health Network.

Dr. Magovern was also preceded in death by his wife, Margaret Ann. In addition to George, Jr., survivors include 4 daughters, 14 grandchildren, and 1 great-grandchild.

*Denton A. Cooley, MD,
Founder, Surgeon-in-Chief,
and President Emeritus,
Texas Heart Institute,
Houston*

References

1. Zlotnick AY, Shiran A, Lewis BS, Aravot D. Images in cardiovascular medicine. A perfectly functioning Magovern-Cromie sutureless prosthetic aortic valve 42 years after implantation. *Circulation* 2008;117(1):e1-2.
2. Cooley DA. The Senior Cardiovascular Surgical Society [letter]. *Ann Thorac Surg* 2013;95(6):2216.
3. Cooley DA. The Senior Cardiovascular Surgical Society [letter]. *J Thorac Cardiovasc Surg* 2013;145(6):1678.