

From the University of Mississippi Medical Center Division of Public Affairs

## UMMC MARKS 50<sup>th</sup> ANNIVERSARY OF WORLD'S FIRST LUNG TRANSPLANT

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JACKSON, Miss. – When Dr. James D. Hardy and his surgical team became the first to successfully transplant a lung from one human to another on June 11, 1963, the remarkable achievement was overshadowed by what also occurred in Jackson on that fateful day – the murder of Civil Rights activist Medgar Evers.

But the shockwaves of what Hardy achieved still resonate 50 years later.

To this day, those who perhaps knew Hardy best – his former trainees and residents – can't stop talking about the man who proved to the world that lung transplantation could provide effective therapy for otherwise fatal pulmonary insufficiency.

"He (Hardy) expected excellence of himself and he demanded excellence of those around him," said Dr. Jerry Holleman, a former resident of Hardy's. "He had relatively no tolerance for less-than-complete effort."

"He was an excellent technician and could get things done," said Dr. Richard Yelverton, a resident of Hardy's from 1960-65, "and he took the step forward and did it."

"Even today, 50 years after he did the first lung transplant and a decade after he passed away, I can't go to a national meeting without somebody asking me about Dr. Hardy," said Dr. Marc Mitchell, James D. Hardy Professor and chairman of the Department of Surgery at UMMC. Mitchell calls the lung transplant one of the "seminal events" in surgery.

"The world's first lung transplant . . . was a major, major feat," Mitchell said. "It's actually more difficult to do a lung transplant than a heart transplant, so it is interesting that he did the first lung transplant before he did the first heart transplant."

"That the lung transplant was done less than eight years after the doors to the hospital opened . . . to accomplish that in such a short period of time in such a young medical center makes the feat even more fascinating."

Hardy was an up-and-coming director of surgical research at the University of Tennessee at Memphis when Dr. David Pankratz, dean of the School of Medicine at the still-under-construction University of Mississippi Medical Center, recruited him to become chairman of surgery in 1953. Within a year, Hardy began to concentrate on what would become the next leap in surgical evolution: organ transplantation.

"Transplantation was just coming into its own," Yelverton recalled. "Dr. Hardy was just a pioneer."

Over the years, with each successful experiment, Hardy began to unravel the intricacies of transplantation and became convinced that human-to-human organ transplants were not only possible, but entirely ethical.

"Many of the fundamental documents that govern human subject research had not been written," said Dr. Ralph Didlake, professor of surgery, director of the Center for Bioethics and Medical Humanities and a former resident of Hardy's. "At the time, Dr. Hardy was asking the right questions about the morality of these transplants.

"These questions helped establish the boundaries of what could be done."

Those boundaries were pushed to their limits on April 15, 1963, when 58-year-old John Russell, a prisoner at the Mississippi State Penitentiary at Parchman, was admitted to University Hospital with a history of repeated bouts of pneumonia that antibiotics had failed to improve. Squamous cell carcinoma in his left lung had rendered it all but useless, and his right lung had been weakened by advanced emphysema. Russell also suffered from kidney disease.

Dr. Robert Marston, then-dean of the School of Medicine, had granted Hardy permission to do a human lung transplant under certain agreed-upon conditions. After further tests, Hardy offered Russell the option of a transplant of his diseased left lung.

Russell accepted, and on June 11, when a donor left lung became available, the transplant took place. But what attention came with the surgery was extremely short-lived.

Before the operation had concluded, Hardy received an urgent call from the emergency room. He asked Dr. Martin Dalton, a senior thoracic surgery resident and member of his surgical team, to report to the ER.

When Dalton arrived, he found an African-American man who had suffered a gunshot wound at close range. Dalton attempted to stop the man's bleeding and revive him, to no avail. Dalton pronounced the time of death and went to notify the man's family. It was then that he learned the man he had been trying to save was Medgar Evers.

Russell, the lung transplant recipient, died 19 days after the history-making surgery. It was his kidney disease – not the newly transplanted lung – that led to his death.

While preparing for the University of Mississippi Medical Center's recognition of the 50th anniversary of Hardy's pioneering lung transplant, Connie Machado, associate professor of academic information services, discovered many of the surviving 16 mm films of Hardy's procedures acquired by the university's library in 2003 had been in various states of deterioration.

The one of immediate concern was canister No. 97, marked "Transplantation of Organs (Heart Out)." Last fall, Machado obtained a National Film Preservation Foundation grant to restore the 10-minute film at a cost of \$5,200.

To the delight of medical historians, the restored film includes the coveted footage of Hardy's initial lung transplant – in vivid color.

"We wouldn't be doing transplants today if people like Dr. Hardy hadn't had the courage to perform these procedures," said Machado. "In the 1960s, health care wasn't where it is now. They were trying to make a difference to improve people's lives.

"Dr. Hardy was willing as a surgeon to take that risk, to take that responsibility."

Much of the restored footage is included in an associated video news release from the Division of Public Affairs, which can be found [here](#).

Within a year of his groundbreaking lung transplant, Hardy made even bigger news when he and his surgical team became the first to successfully transplant a donor heart – taken from a chimpanzee – into a human. The attention paid to that first heart transplant – a controversial decision in its day – quickly surpassed that of the first lung transplant. Yet it was clear, according to Didlake, that Hardy’s work had a profound impact on medical ethics.

“We can look back and say there is still a place for individuals who are willing to do bold things, who are willing to take risks and to advocate for treatments and theories in which they believe very strongly,” Didlake said.

Dr. Martin McMullan, professor of surgery, special advisor to the vice chancellor and former Hardy resident, put it succinctly.

“No matter what operation or what sentinel event occurs, somebody has to be the first to do it,” McMullan said. “The value of Dr. Hardy’s first transplant was to show the world that transplants were likely doable.”

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The University of Mississippi Medical Center, located in Jackson, is the state’s only academic medical center. UMMC encompasses five health science schools, including medicine, nursing, health related professions, dentistry and graduate studies, as well as the site where University of Mississippi pharmacy students do their clinical training. The Medical Center’s health-care enterprise includes five hospitals and University Physicians, the faculty group practice. The Medical Center’s threefold mission is to educate tomorrow’s health-care professionals, conduct innovative research to improve human health, and to provide the highest quality care available to the state’s population. A major goal of the Medical Center is the improvement of the health of Mississippians and the elimination of health disparities. For more information, contact the Division of Public Affairs at (601) 984-1100 or [umc.edu/publicaffairs](http://umc.edu/publicaffairs)