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# At the Heart of Innovation: Jefferson's Heart Transplant Program

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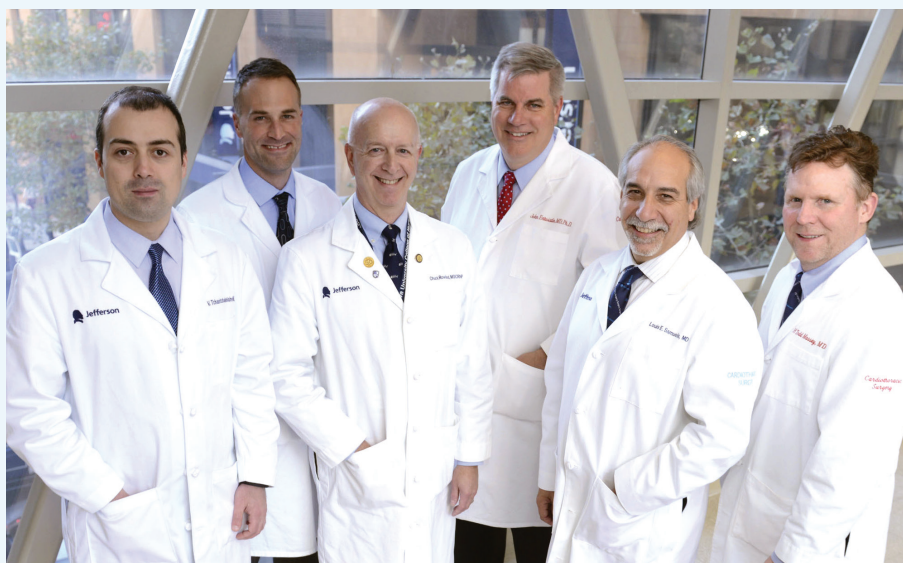
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# Surgical Solutions

## At the Heart of Innovation: Jefferson's Heart Transplant Program



At Thomas Jefferson University Hospital in Center City, H. Todd Massey, MD (right), leads the Cardiac Transplantation and Mechanical Circulatory Support component of the Heart Transplant Program. Pictured are Vakhtang Tchanchalashvili, MD; Joshua Park, PA-C; Chuck Rowland, MSN, CRNP; John Entwistle, MD, PhD, and Louis Samuels, MD.

Jefferson's Heart Transplant Program reactivated this year with a new, system-wide approach to heart failure that makes innovative, evidence-based, comprehensive care more accessible to patients throughout the Delaware Valley. The program is led by surgeon H. Todd Massey, MD, as Surgical Director of Cardiac Transplantation and Mechanical Circulatory Support and cardiologist Andrew Boyle, MD, as Medical Director of Advanced Heart Failure.

"By implementing consistent standards at all Jefferson Health locations, patients with end-stage heart failure can receive the same care whether they come to Center City, see physicians at Abington or Aria or interact with us through our JeffConnect telehealth platform," Dr. Massey explains. "Our approach helps ensure that patients with early-stage heart failure are taking the right medications while giving all patients access to the latest clinical trials."

Joining Dr. Massey in Center City are Drs. John Entwistle, Louis Samuels, and Vakhtang Tchanchalashvili, Physician Assistant Joshua Park, and Nurse Practitioners Dannett Durphy and Chuck Rowland. The Director of the Division of Cardiothoracic Surgery, Rohinton Morris, MD, sees patients in both Center City and Abington. Dr. Massey says it's a team whose experience is unparalleled.

"Our surgeons have extensive experience in transplant, mechanical circulatory support and artificial heart," Dr. Massey notes. "Few, if any, programs can match the patient volume that we collectively have been involved in over the course of our careers."

Jefferson's Heart Transplant Program offers all of the latest technologies, including the HeartMate 3™ Left Ventricular Assist System as well as SynCardia, the only FDA approved temporary total artificial heart system. As Dr. Massey explains, helping develop and evaluate further

refinements and innovations remains a priority. He cites the example of Left Ventricular Assist Devices (LVADs), which early on had some issues in terms of durability and adverse events.

"Since then, we have been able to support much better, and generate much more enduring outcomes for patients," he notes. "As the technology continues to evolve, we are excited about opportunities to improve energy delivery to these systems, which must perform 24/7/365."

Another area primed for innovation: preservation and transport of donor hearts. Since the 1960s, static preservation has been the approach – with clinicians using chemical solutions to put hearts to "sleep" before placing them on ice in coolers for transport.

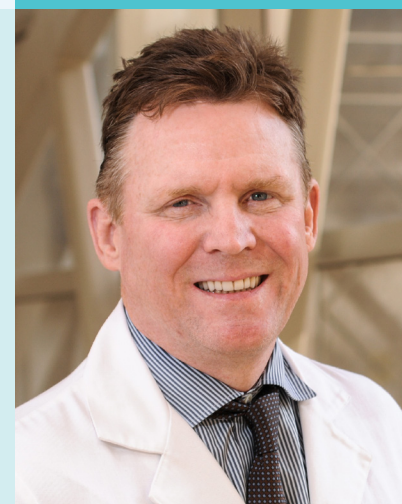
"Today, there are systems being developed and tested that either perfuse a donor heart with warm blood during transport or that replenish the heart with crystalloid-based solutions," he says. "These hold the promise of two important advantages: being able to extend the time and distance that a donor heart can travel and making it possible to resuscitate a heart that historically would have proven unusable."

As innovations continue to take shape, Jefferson Health will be at the forefront of treating heart failure with proven, system-wide protocols – whether managing early-stage heart failure with medication or addressing later-stage disease by implanting increasingly sophisticated devices or performing cardiac transplants.

"We are truly combining international expertise with local care and convenience," Dr. Massey says.

For more information, go to [JeffersonHealth.org/Heart](http://JeffersonHealth.org/Heart)

### Surgeon Speaks



Like every surgeon, I started my residency training in General Surgery. Then I specialized in Thoracic and Cardiovascular Surgery and finally sub-specialized with a Fellowship in Heart and Lung Transplantation and Adult Cardiac Surgery at Duke University Medical Center. At the time I went through training, we didn't have a lot of good options to help patients with advanced heart failure. I was working with very sick patients, many of whom died.

Back then, many of my colleagues questioned why I would choose this as my focus. They were right that the treatments weren't great at the time. But over the past 25 years or so, I have not only witnessed but also been part of incredible innovations.

Today, we have some excellent solutions and we've made a huge impact. It's incredible both to look back at our progress and to look ahead and imagine how much more we can achieve.

**H. Todd Massey, MD**  
Surgical Director, Cardiac Transplantation and Mechanical Circulatory Support  
Professor, Cardiothoracic Surgery

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