

Clinical Activity Report

2015

Year in Review

VOLUME AND SURGICAL OUTCOMES DATA

This report uses data compiled by The Society of Thoracic Surgeons (STS), which collects cardiac surgery outcomes from more than 1,000 medical centers in the United States. The data is risk-adjusted, reflecting the complexity of cases seen at each center. Included is the data for the more common cardiac surgery procedures. Often there is a relationship between higher volumes and favorable outcomes.

TRANSPARENCY

We are transparent in our outcomes. The ratings produced by The Society of Thoracic Surgeons (STS) attest to both the breadth and the quality of care our patients receive. These ratings incorporate the full range of factors that influence outcomes and are risk-adjusted, reflecting the severity of patients' illnesses. UVA is one of only 27 hospitals — of more than 1,000 reporting to the STS — to achieve the highest, three-star rating for both coronary artery bypass grafting and aortic valve replacement.

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JOHN A. KERN, MD

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On behalf of the Divisions of Cardiothoracic and Vascular Surgery at the University of Virginia Heart and Vascular Center, we are pleased to share our latest Activity Report, outlining another year of achievements and milestones. We hope this information will help our partnering physicians and their patients accurately evaluate the quality of care we provide.

We are grateful for the partnerships we have been forming across Virginia. The increasing challenges and demands of healthcare delivery require us to collaborate in ways unimaginable even a decade ago. We are proud of what has been accomplished by our divisions and by the University of Virginia Medical Center. However, we are keenly aware that these advances would not be possible without the trust of our referring physicians and our patients.

The expertise of our care providers, our determination to offer the latest advances in treatment and our focus on quality are some of the reasons for the continued success of our programs. We have built upon a strong foundation of innovation, groundbreaking research and a tradition of excellence. We have strengthened our culture of collaboration, expanding our relationships within our multidisciplinary teams and with our referring physicians. This collaboration and teamwork have created an environment that enables the development of innovative treatments, the introduction of state-of-the art technology and our participation in game-changing clinical trials.

The Division of Cardiothoracic Surgery was again recognized as achieving an overall three-star rating from the Society of Thoracic Surgeons for coronary artery bypass grafting and aortic valve replacement. We are also proud to report that the University of Virginia Medical Center received Magnet recognition from the American Nurses Credentialing Center for quality patient care, excellence in nursing care and innovative nursing practices. Approximately 7% of U.S. hospitals have earned Magnet recognition. This award reflects the level of dedication and expertise of our nurses and the support of the medical center leadership.

We would like to thank you for continuing to consider UVA Heart and Vascular Center for the care of your patients. Your confidence in us and our devotion to the treatment of each individual patient have enabled us to achieve these outcomes. We are grateful for and honored by the opportunity to care for your patients. We will do our best to uphold our commitment to patient safety and to the highest standards of patient care.

Sincerely,

A handwritten signature in black ink that reads "John Kern".

John A. Kern, MD

A handwritten signature in black ink that reads "Gilbert R. Upchurch Jr.".

Gilbert R. Upchurch Jr., MD



Our Commitment to Quality

As cardiovascular and thoracic surgeons, our services are aligned around UVA Health System's six goals:

- To become the safest place to receive care
- To be the healthiest work environment
- To provide exceptional clinical care
- To generate biomedical discovery that better the human condition
- To train the healthcare workforce of the future in teams
- To ensure value-driven and efficient stewardship of resources

To achieve these goals, we:

- Participate in daily, unit-based leadership huddles and activities, which focus on safety and improving the patient care experience, outcomes and clinical care
- Remain actively involved in the Virginia Cardiac Surgery Quality Initiative, the West Virginia and Virginia Vascular Quality Initiative and the Virginias Vascular Study Group
- Integrate clinical research programs into practice, which allows us to bring novel therapies to patients

- Participate in 14 registries, including The Society of Thoracic Surgeons Data Registries and the Society of Vascular Surgery's Vascular Quality Initiative
- Dedicate our Quality Support Teams (OSTs) to continuously evaluating registry outcome data and focusing on evidence-based improvements for our patients
- Ensure our clinical teams meet regularly to formulate individual care plans for each patient – interdisciplinary partnerships that strengthen collaboration to define and improve the care each patient receives



UVA was recognized among the top 3% of hospitals nationally that achieved an overall prestigious three-star rating – the highest available – from The Society of Thoracic Surgeons (STS) for both isolated coronary artery bypass grafting (CABG) and aortic valve replacement (AVR) surgeries. The rating is awarded to hospitals that demonstrate the highest quality in cardiac surgery.

Source: 2014 STS National Adult Cardiac Surgery Database Report



Adult Cardiovascular Surgery team (left-right): Curtis Tribble, MD; Gorav Ailawadi, MD; John Kern, MD; Irving Kron, MD; Ravi Ghanta, MD; and Leora Yarboro, MD.

Our Commitment to Quality *(continued)*

COMPLEX PATIENTS, COMPLEX CARE

We offer our patients:

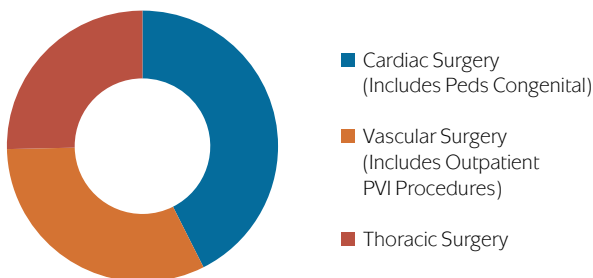
- Access to the latest clinical trials
- Resources of regional and national leaders in reoperative and complex surgery
- Full-spectrum care, including minimally invasive surgeries, catheter-based techniques, hybrid procedures and robotics
- Recognized clinical expertise in percutaneous heart valve and hybrid vascular procedures, as well as advanced heart failure therapies such as left ventricular assist devices (LVADs)
- Dedicated multidisciplinary teams

DEDICATED TEAMS

Our Cardiac Anesthesiology and Intensivist teams staff the Thoracic Cardio Vascular Intensive Care Unit and manage cardiovascular and thoracic operating rooms and hybrid ORs. These experts have:

- Advanced fellowship training in cardiothoracic anesthesiology and critical care
- Specialized training in intraoperative transesophageal echocardiogram, single-lung ventilation, advanced hemodynamic monitoring and invasive monitoring techniques

Volume Distribution | 2014



Source: UVA Heart and Vascular Center Quality Office

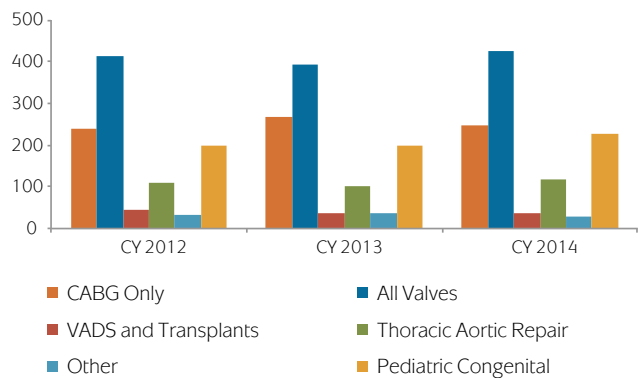
STRONG RELATIONSHIPS

UVA is one of the original three founding hospitals of the Virginia Cardiac Surgery Quality Initiative (VCSQI), a voluntary consortium of 18 hospitals and 14 cardiac surgical practices in Virginia, founded in 1996. VCSQI members:

- Exchange information to improve the quality of care
- Develop and implement protocols to reduce complications
- Adopted quality measures in cardiac surgery for the National Quality Forum (NQF)
- Formulated policies on pay-for-performance programs

Cardiac Surgery Procedures | 2012–2014

(n = 3,009)



Source: Heart and Vascular Center Quality Office

EXPRESSION OF GRATITUDE

“From the time I first contacted the Heart & Vascular Center, I felt as though I was dealing with people who cared about me as a person – not just [as] another patient.”

THE O/E MORTALITY RATIO

The observed to expected (O/E) risk-adjusted mortality (death) rate measures how we are performing in relation to what is expected given our patient population. The O/E takes into account how sick the patients are before surgery.

- A low O/E ratio indicates a better-than-expected outcome and a high O/E ratio indicates a poorer-than-expected outcome.
- A ratio of less than 1.0 means that fewer patients died than expected based on the performance of other hospitals, as adjusted for patients with the same types and severity of medical problems.

The Cardiac Surgery STS report provides reports on “Like Group” and the STS national average. “Like Group” refers to hospitals similar to UVA in respect to annual case volume and presence or absence of a surgical residency program.

QUALITY OUTCOMES

Our team is committed to continuing to improve our outcomes. Our dedication is reflected in achieving three-star ratings from the STS for two years in a row for isolated CABG and isolated AVR.

UVA exceeds NOF benchmarks for three-year outcomes associated with the following:

- AVR and CABG operative mortality
- Mitral valve repair (MVR) operative mortality

MAJOR PROCEDURES

STS defines major procedures to include isolated CABG, valve, and combined valve and CABG procedures.

Major Procedures Operative Mortality

Comparison of UVA's Risk-Adjusted Operative Mortality to STS Mean*



* Comparison of STS mean is all STS Hospitals
Source: 2014 STS National Adult Cardiac Surgery Database Report

Risk-Adjusted O/E | 2014

	UVA	LIKE GROUP	STS
Operative Mortality	0.64	0.79	1.0
In-Hospital Mortality	0.55	0.81	1.0

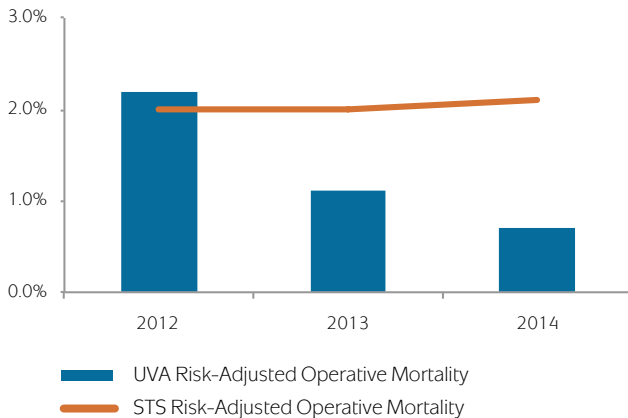
Source: 2014 STS National Adult Cardiac Surgery Database Report

Coronary Artery Bypass Grafting

UVA surgeons performed 756 isolated coronary artery bypass grafting (CABG) procedures over the past three years.

Isolated CABG Operative Mortality

Comparison of UVA's Risk-Adjusted Operative Mortality to STS Mean*



Source: 2014 STS National Adult Cardiac Surgery Database Report

OBSERVED/EXPECTED (O/E)

In-hospital and operative mortality risk-adjusted rates remain below the national benchmark set by the STS.

Isolated CABG Risk-Adjusted O/E | 2014

	UVA	LIKE GROUP	STS
Operative Mortality	0.34	0.85	1.0
In-Hospital Mortality	0.42	0.92	1.0
Major Complications or Op Mortality	0.83	0.95	1.0

Source: 2014 STS National Adult Cardiac Surgery Database Report

EXCEEDING STANDARDS

UVA Heart and Vascular Center exceeds National Quality Forum (NQF) standards for isolated CABG. These standards include:

- Preoperative beta-blockers
- Use of internal mammary arteries
- Postoperative medications
- Operative mortality

Our patients have a higher-than-average incidence of co-morbidities such as diabetes, congestive heart failure, arrhythmia, prior myocardial infarction, low ejection fraction of <40%, chronic lung disease, cerebral vascular disease and peripheral artery disease. Despite our high-risk patient populations, our risk-adjusted mortality is less than expected, with a **rate of 0.7%** for both in-hospital and operative mortality in 2014.

Based on data comparisons from January 2014 through December 2014. National comparison 1.7%. Source: STS National Reports

UVA exceeds national standards for major complications in isolated CABG patients.

Isolated CABG Risk-Adjusted Complications | 2014

	UVA	STS
Prolonged Ventilation	6.5%	8.2%
Renal Failure	1.6%	2.0%
Permanent Stroke	1.2%	1.3%
Any Reoperations	2.6%	3.5%
Deep Sternal Wounds	0.3%	0.3%

Source: 2014 STS National Adult Cardiac Surgery Database Report



John Kern, MD, Cardiothoracic and Vascular and Adult Cardiac Transplant Surgeon.



UVA is among the 9.4% of hospitals nationally that achieved an overall three-star rating — the highest possible — from The Society of Thoracic Surgeons (STS) for isolated coronary artery bypass grafting surgery.

Based on data comparisons from January 2014 through December 2014.
Source: 2014 STS National Adult Cardiac Surgery Database Report

CLINICAL TRIAL HIGHLIGHTS

- **FAME 3**, a multicenter, worldwide, prospective randomized trial designed evaluate FFR-guided PCI with the second-generation Resolute™ DES vs. CABG in patients with multivessel coronary artery disease
- **HYBRID REVASCULARIZATION**, a completed observational study in hybrid coronary revascularization using minimally invasive CABG avoiding stenting and cardiopulmonary bypass



Gorav Ailawadi, MD, Adult Cardiovascular and Cardiac Transplant Surgeon.

EXPRESSION OF GRATITUDE

“Meeting the UVA team is what sealed the deal. They were very human, they were very kind, they listened and — best of all — they explained. You are truly treated as an individual, with your particular needs being considered.”

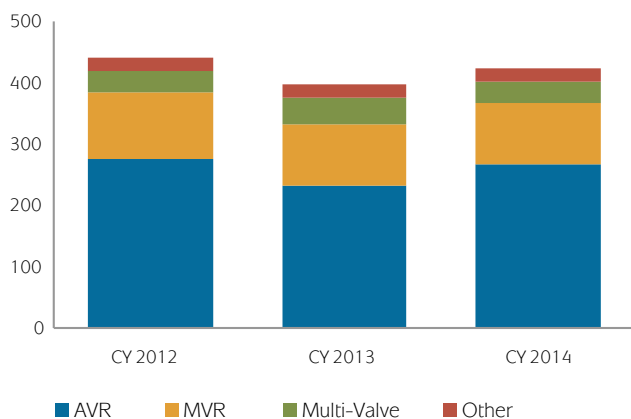
Heart Valve Repair and Replacement

In 2014, UVA surgeons performed 427 total valve surgeries. UVA offers a full range of treatment options for valve patients, including:

- Traditional open repair and replacement procedures for all valves
- Minimally invasive surgical repair and replacement program for aortic, mitral and tricuspid valves
- High proportion of complex reoperations
- Percutaneous options, including transcatheter aortic valve replacements (TAVR) through clinical trials and FDA-approved devices
- Percutaneous mitral repair (MitraClip®) and pulmonary valve implantation
- Upcoming: Transcatheter valve replacement and tricuspid valve repair

Valve Procedures | 2012–2014

(n=1263)



Source: UVA Heart and Vascular Center Quality Office

PRIOR CARDIAC SURGERY

UVA performs complex and reoperative surgery, which contributes to the complexity of our patient cases.

Patients Who Have Undergone Previous Cardiac Surgery | 2014

	UVA	STS
Isolated AVR	23.6%	14.6%
AVR/CABG	11.4%	8.0%
MV Replacement	37.9%	30.8%
MV Replacement/CABG	20.0%	12.0%
MVR Repair	8.9%	7.3%

Source: 2014 STS National Adult Cardiac Surgery Database Report

CLINICAL TRIAL HIGHLIGHTS

We are active in clinical research for valve disease. We are participating in multiple trials for traditional valve replacement, transcatheter valve and neuroprotection.

Open valve replacement trials:

- **Sorin Mitroflow™ Aortic Valve** trial
John Kern, MD, National Principal Investigator
- **Sorin Perceval™** trial – Sutureless aortic valve

Transcatheter valve trials:

- Continued access to **Partner II™ TAVR** trial
- **Sapien 3™ TAVR** trial for intermediate risk patients
Gorav Ailawadi, MD, National Steering Committee
- **Direct Flow™ TAVR** trial
D. Scott Lim, MD, National Principal Investigator
- **Mitralign™** trial for percutaneous tricuspid repair

Stroke prevention trials:

- **Cardiothoracic Surgical Trials Network**
neuroprotection trial for aortic valve surgery patients
- **Sentinel** trial for TAVR patients

Aortic Valve Surgery

UVA has been instrumental in the development of various open surgical, minimally invasive and percutaneous techniques for the treatment of valve disease.

Over the past three years, UVA surgeons performed **777** aortic valve surgeries, including **373** isolated AVR surgeries, with exceptionally low mortality rates.



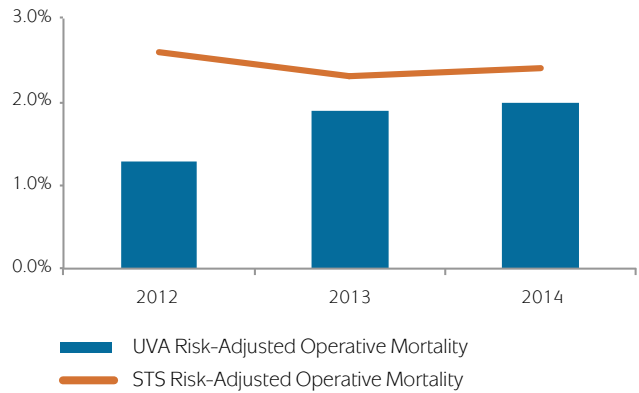
UVA is among the top 8% of hospital nationally that achieved an overall three-star rating – the highest possible – from The Society of Thoracic Surgeons (STS) for aortic valve replacement surgery.*

*There is no comparable rating system for mitral valve replacement or tricuspid valve surgery.

Based on data comparisons from January 2012 through December 2014.
Source: 2014 STS National Adult Cardiac Surgery Database Report

Isolated AVR Operative Mortality

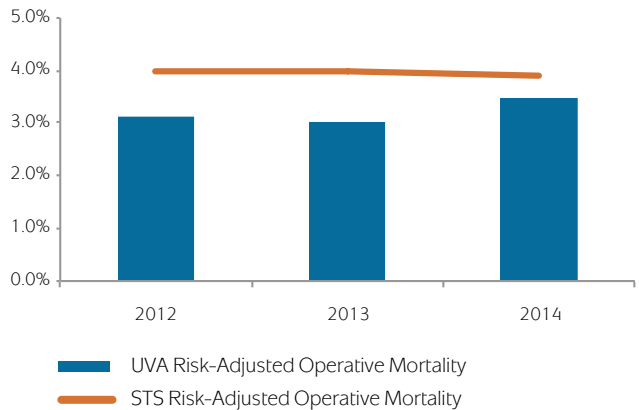
Comparison of UVA's Risk-Adjusted Operative Mortality to STS Mean*



*STS mean is all STS Hospitals
Source: 2014 STS National Adult Cardiac Surgery Database Report

AVR/CABG Operative Mortality

Comparison of UVA's Risk-Adjusted Operative Mortality to STS Mean*



*STS mean is all STS Hospitals
Source: 2014 STS National Adult Cardiac Surgery Database Report

In-Hospital Mortality: Risk-Adjusted O/E | 2014

	UVA	STS
Isolated AVR	0.34	1.0
AVR/CABG	0.73	1.0

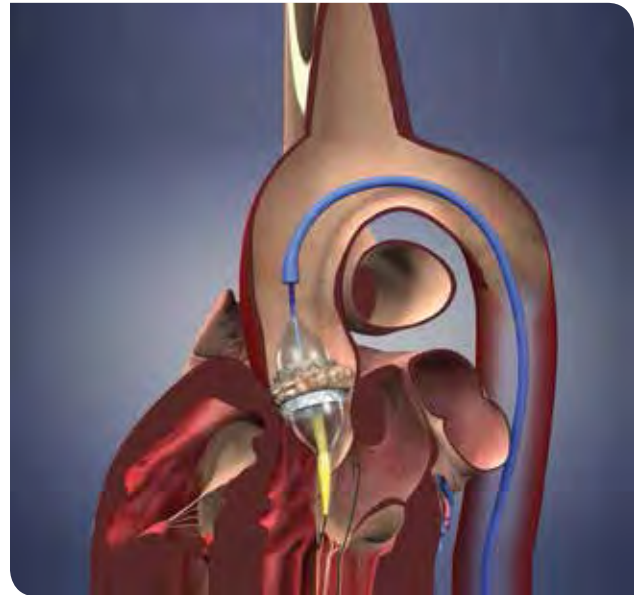
Source: 2014 STS National Adult Cardiac Surgery Database Report

TRANSCATHETER AORTIC VALVE REPLACEMENT

UVA was the first transcatheter aortic valve replacement (TAVR) center in Virginia. Our team has performed over **300 TAVR** procedures. UVA's Advanced Cardiac Valve Center is a national leader in the latest TAVR trials.

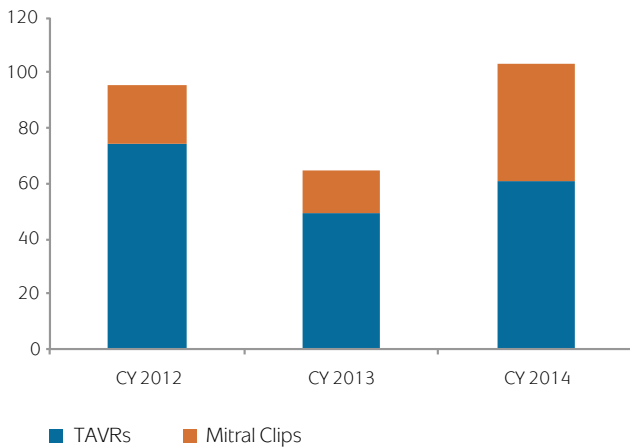
Patients referred for TAVR are complex. UVA offers TAVR to three groups of patients: inoperable, high risk and intermediate risk.

- Inoperable – Clinical trials and FDA-approved options available
- High risk – Clinical trials and FDA-approved options available
- Intermediate risk – Clinical trial available



TAVR is a minimally invasive procedure that requires a catheter to be inserted through an artery. A surgeon positions the replacement valve, then opens it with a balloon device.

TAVR/Mitral Clips | 2012–2014



Source: UVA Heart and Vascular Center Quality Office

Mitral Valve Surgery

Our surgeons have a long history of expertise in mitral valve surgery and have developed techniques now used across the country. While UVA cares for extremely high-risk patients, our risk-adjusted, in-hospital and operative mortality is less than national average.

UVA surgeons performed **262** mitral valve surgeries over the past three years, with exceptionally low mortality rates.

In 2014, despite operating on many complex patients, UVA had **zero** mortalities in patients undergoing isolated mitral valve surgery.

In-Hospital Mortality: Risk-Adjusted O/E | 2014

	UVA	STS
Isolated MV Repair	0.00	1.0
Isolated MV Replacement	0.00	1.0

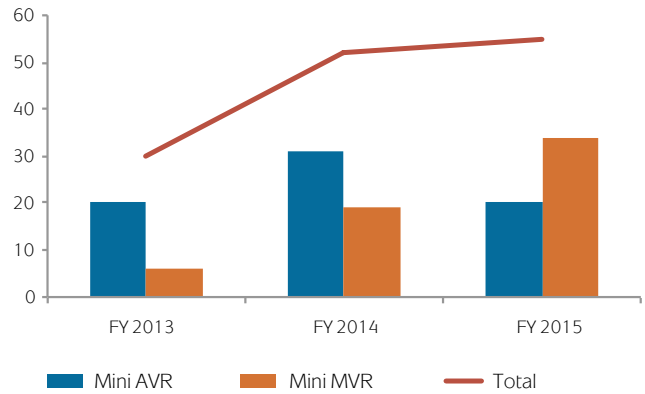
Source: 2014 STS National Adult Cardiac Surgery Database Report

MINIMALLY INVASIVE SURGERY

UVA has performed over 130 minimally invasive surgeries for aortic valve, mitral valve and tricuspid valve repairs and replacements.

Our minimally invasive program is known throughout the region with excellent repair rates and low mortality. Our dedicated team has worked together closely since the program's inception in 2012.

Minimally Invasive Valve Surgery

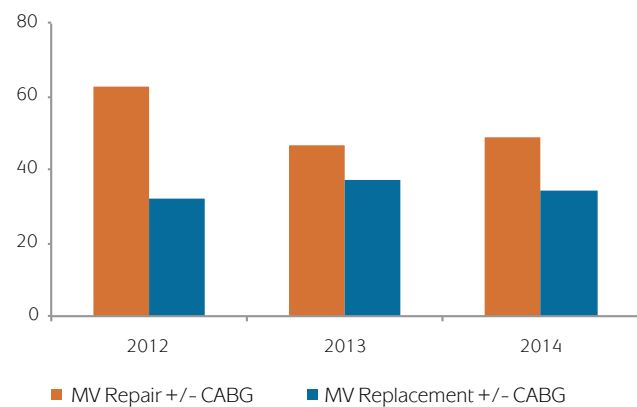


Source: UVA Heart and Vascular Center Quality Office

REPAIR VS. REPLACEMENT

UVA surgeons have a wealth of experience repairing and replacing the mitral valve. Repair is often associated with better survival and improved lifestyle, as well as preserved heart function. There are fewer complications associated with a mitral repair. However, our surgeons are also experts in the latest techniques in mitral replacement.

Mitral Valve Repair and Replacements | 2012–2014



Source: UVA Heart and Vascular Center Quality Office



UVA Advanced Cardiac Valve Center Surgical Director Gorav Ailawadi, MD, and Medical Director D. Scott Lim, MD.

EXPERIENCE COUNTS

Our surgeons have significant experience with complex and reoperative valve surgery, including extensive experience in mitral valve repair.

- **Gorav Ailawadi, MD**, of our team was the first cardiac surgeon in the U.S. to perform MitraClip® repair.
- UVA has performed the second-highest number of MitraClip procedures in the nation during clinical trial.

CLINICAL TRIAL HIGHLIGHTS

- **National Institutes of Health-sponsored clinical trial** to determine how best to treat patients with severe or moderate ischemic mitral regurgitation, addressing the question of “repair vs. replacement.” **Irving Kron, MD**, served as the national principal investigator for the severe mitral regurgitation arm of the trial.
- **Clinical Outcomes Assessment of the MitraClip Percutaneous Therapy** trial comparing medical therapy to MitraClip in patients with functional mitral regurgitation who are not candidates for surgery

Extracorporeal Membrane Oxygenation

In 2014, the UVA Extracorporeal Life Support Program was honored by the Extracorporeal Life Support Organization (ELSO) with the Award of Excellence and was designated an ELSO Center of Excellence.

Extracorporeal Membrane Oxygenation (ECMO) uses a modified heart-lung machine to support patients with the severest form of lung and/or heart failure. Support can range from a few days to several weeks in length depending on the severity of the disease process.

- Venovenous (VV) ECMO for pulmonary support
- Venoarterial (VA) ECMO for cardiac and pulmonary support

ADULT ECMO PROGRAM

- Dedicated team on call 24/7 to respond to ECMO emergencies in hospital
- Transport team available for adult ECMO patient transfers

Adult Support Survival Data

SUPPORT TYPE	FY 2015	FY 2014	ELSO NATIONAL REGISTRY
VV	100% (2)	86% (6)	65%
VA	64% (11)	40% (8)	40%
ECPR	43% (7)	25% (6)	29%

Source: ELSO National Registry

Adult Survival to Discharge

SUPPORT TYPE	FY 2015	FY 2014	ELSO NATIONAL REGISTRY
VV	50% (2)	86% (6)	56%
VA	55% (11)	0% (8)	40%
ECPR	14% (7)	13% (6)	29%

Source: ELSO National Registry



Grayson Kirby, who was placed on ECMO following a serious car crash, talking with his care team, including Thoracic Surgeon James Isbell, MD.

PEDIATRIC ECMO TEAM

- Urgent support for patients to help them recover or to bridge to other therapy
- Emergent support for patients in cardiac or respiratory arrest or near-arrest
- Support for patients recovering from heart/lung failure or heart surgery
- VV ECMO for pulmonary support
- VA ECMO for cardiac and pulmonary support

PEDIATRIC ECMO PROGRAM GROWTH

The Pediatric ECMO Team is a dedicated group of ECMO specialist and perfusionists, available in-house for any emergency that could require ECMO support, 24 hours a day, seven days a week.

During FY 2015, our UVA Children’s Hospital ECMO team made the first interfacility ECMO transport with the Pegasus ground team. The team was called to assist a hospital 145 miles away. The ECMO team has since developed official interfacility transport guidelines and has begun education initiatives with the Pegasus and the Newborn Emergency Transport System as we continue to develop a full-service ECMO transport team.

Pediatric Support Survival Data

SUPPORT TYPE	FY 2015	FY 2014	ELSO NATIONAL REGISTRY
VV	77% (9)	100% (8)	75%
VA	72% (11)	81% (11)	64%
ECPR	33% (3)	66% (3)	59%

Source: ELSO National Registry

Pediatric Survival to Discharge

SUPPORT TYPE	FY 2015	FY 2014	ELSO NATIONAL REGISTRY
VV	77% (9)	88% (8)	74%
VA	27% (11)	45% (11)	41%
ECPR	33% (3)	33% (3)	41%

Source: ELSO National Registry

Mechanical Circulatory Support for Patients with Advanced Heart Failure

The field of heart failure medicine has advanced tremendously over the past two decades.

Mechanical support devices, in particular, have proven to be a safe and durable solution for patients with end-stage heart failure. At the University of Virginia, we continue to offer the latest in heart failure technologies.

- Our heart failure team continues to grow with the addition of two cardiologists who specialize in the treatment of advanced heart failure.
- We also expanded our Advanced Heart Failure Nurse Practitioner service.
- UVA is a national leader in ventricular assist device (VAD) technologies, providing therapy for both adults and children.
- UVA is the only center in Virginia with a pediatric and adult mechanical circulatory support (MCS) and transplant program.

COLLABORATION

UVA is committed to helping our VAD patients return home. We partner closely with referring physicians, providing consultation as necessary to ensure successful follow-up care. We also work closely with emergency rooms at local hospitals, rescue squads, home health and cardiac rehab centers, providing the training needed to care for patients with left-ventricular assist devices (LVADs).

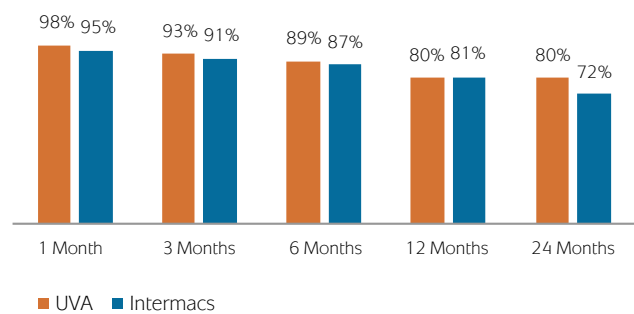
NEW TECHNOLOGY

UVA now offers the SynCardia® total artificial heart (TAH) as an option for mechanical circulatory support for patients with advanced biventricular heart failure.

- The TAH replaces both heart ventricles, improving the symptoms of end-stage biventricular failure.
- The SynCardia TAH is now available with the Freedom Driver console. This console allows patients to transition to home as they await heart transplantation.

Post-implant survival includes long-term, FDA-approved mechanical circulatory support devices for patients on the heart transplant list, as well as individuals that desire extended survival and are not heart transplant candidates.

Post-Implant Survival: Primary LVAD | 2012–2014



Source: 2014 Intermacs Report

JOINT COMMISSION CERTIFICATION

UVA is one of the few facilities in the region with Advanced Certification from the Joint Commission for Heart Failure and Ventricular Assist Devices.



Heart Failure Specialist Sula Mazimba, MD, MPH (center) and Jennifer Christy, RN (right).

CLINICAL TRIAL HIGHLIGHTS

- As one of 60 centers participating in the **MOMENTUM 3** clinical trial, the UVA heart failure team will evaluate the safety and efficacy of the latest generation of LVAD, the HeartMate 3™. This device is completely magnetically levitated, removing the need for mechanical bearings. This device should result in improved hemocompatibility and minimize late thrombotic and bleeding complications.
- UVA was the first to enroll nationally in the **Cardiothoracic Surgical Trials Network VAD Stem Cell** trial evaluating the efficacy of stem cell injection at the time of LVAD implant. The study determines the impact of stem cells on the recovery of heart function.

Transplantation

One of the pioneers in heart and lung transplant in the state, UVA performed its first heart transplant in 1989 and its first lung transplant in 1990. With over 45 years of experience in organ transplant our medical teams are some of the most experienced in the country. As part of the only Comprehensive Transplant Center Virginia, our lung and heart programs have achieved the highest survival rates in the country.

LUNG TRANSPLANTATION

First in the state, our Lung Transplant Program is in its 25th year and has performed more than **400 successful transplants**. The goal of our expert, multidisciplinary team is to improve the quality of life of our patients and to extend their lives either through transplant or other innovative surgical and/or medical therapies.

- UVA performs 15 to 20 lung transplants annually.
- In 2014, our lung transplant program achieved a **100% one-year survival rate** and is continuing that track record in 2015.
- This year we added **ex-vivo lung perfusion technology**, which will increase the number of suitable organs.

Ex-vivo technology is only offered by a handful of centers in the world and is part of the solution to the donor shortage problem. Ex-vivo lung perfusion allows for the rehabilitation of lungs that would otherwise be unsuitable for transplant.

CLINICAL TRIAL HIGHLIGHTS

- **Fibrocyte and lung transplantation study** that looks at the level of fibrocytes in transplant recipients to see if it correlates with the development of chronic lung rejection.
- A true **bench-to-bedside study** utilizing novel compounds developed at UVA that show great promise to decrease acute lung transplant injury.

Scientific Registry of Transplant Recipients 1-Year Patient Survival

SRTR JUNE 2015 RELEASE	UVA	NATION
Lung Transplant	100%	87.47%
Adult Heart Transplant	100%	90.39%
Pediatric Heart Transplant	100%	92.87%

Source: Scientific Registry of Transplant Recipients

HEART TRANSPLANTATION

UVA Heart Transplant program is the top heart transplant center in Virginia, having performed over **450 transplants**. It is this experience that has allowed us to transplant patients as young as 6 days old to our oldest patient of 73 years. Our experience is also reflected in our heart transplant survival statistics, which exceed national averages, achieving 100% one-year survival in the 2015 SRTR Release.

ADULT HEART TRANSPLANTATION

We are the most experienced heart transplant program in the state.

- According to the 2015 Scientific Registry of Transplant Recipients (SRTR) Report:
 - Performed 26 adult grafts within the report's time period.
 - Waitlist mortality rate below the regional average – 5.8 vs. 16.2.
- UVA offers both VAD and TAH as bridge to transplant or as an option for patients who do not qualify for transplant.

PEDIATRIC HEART TRANSPLANTATION

UVA is Virginia's **only** comprehensive pediatric heart transplant and pediatric mechanical circulatory support program in the state.

- UVA performed its first pediatric heart transplant in 1991 and performed 11 transplants in 2014.
- In the last 36 months, UVA performed 23 pediatric heart transplants with a **30-day mortality rate of 0%**.
- UVA is a pioneer in the use of VAD in children who are awaiting transplant.
- UVA has the most comprehensive congenital heart center in Virginia and the largest fetal heart program.



“Heart transplantation is the ultimate example of teamwork. Over the past 36 months, we have seen a significant increase in our pediatric heart transplantation program, performing 23 pediatric heart transplants. This increase is a result of putting together a group of people who are dedicated to the field of pediatric heart failure and transplantation. The dedication, work ethic, enthusiasm and collaboration of our team ensure the best quality of care and outcomes for the patients. At the same time, it makes the experience for the patient and their families as smooth and pleasant as possible. It gives all members of the program a tremendous satisfaction and pride to be part of something so special.”

— JAMES GANGEMI, MD

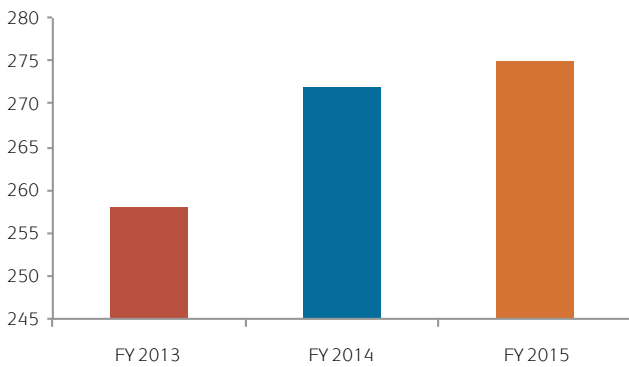
Left: James Gangemi, MD, with friend and mentor John Kern, MD, during a pediatric heart transplant.

Congenital Heart Surgery

UVA is the largest and most comprehensive congenital heart center in Virginia.

- Over the past three years, UVA Pediatric Congenital Heart Surgery Program performed over 800 surgeries.
- Our program growth is reflected in a 16% increase in operations submitted to the STS from 2013 to 2014.

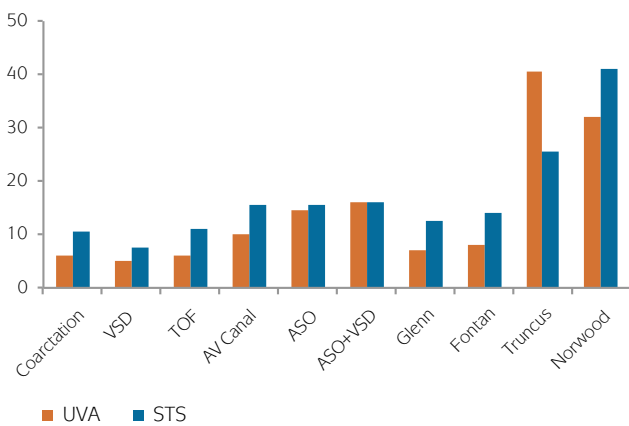
UVA Congenital Heart Surgery Volume



Source: UVA Division of Thoracic and Cardiovascular Surgery, Congenital Heart Surgery

Postoperative Median Length of Stay

January 2011 - December 2014

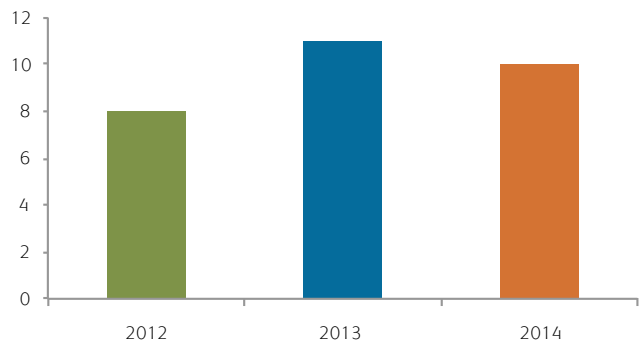


Source: 2014 STS Congenital Database Report

At UVA, we have experience in the diagnosis and treatment of the full range of congenital heart and vascular defects. Surgeries we perform include:

- Single-ventricle palliation surgeries, including the Norwood procedure
- Arterial switches
- Truncus arteriosus repairs
- Total anomalous pulmonary venous return repairs
- Interrupted aortic arch repairs
- Complex aortic arch reconstructions
- Complex valve repairs, among a host of complicated procedures
- Heterotaxy syndrome
- Adult congenital

Norwood Procedure Volume



Source: UVA Division of Thoracic and Cardiovascular Surgery, Congenital Heart Surgery

86.4% – One-year survival rate for Norwood surgery compared to the national average of 74%, according to the Pediatric Heart Network Single Ventricle Trial.



UVA Children's Hospital Heart Center team members (left-right): Pediatric Cardiologist Thomas L'Ecuyer, MD; Adult and Pediatric Congenital Heart Surgeon James Gangemi, MD; and Pediatric Cardiologist William Harmon, MD.

UVA CHILDREN'S HOSPITAL HEART CENTER

Our pediatric heart center offers:

- The most comprehensive congenital heart center in Virginia
- The largest fetal heart program in Virginia treating high-risk infants
- The largest pediatric pulmonary hypertension clinic and the only Hypertrophic Cardiomyopathy Association Center of Excellence in Virginia
- The Cardiovascular Genetics Clinic, which tests for risks of inherited heart or vascular disease

EXPRESSIONS OF GRATITUDE

"We want to thank you and your entire team for everything you have done for our grandson.... We feel that you have given him a wonderful brand new start to life"

"We will never be able to thank you enough for all that you did for our little girl! You cared for her as a person and not just a patient."

"You saved my life and I am forever grateful... I have more self confidence than ever. I feel better than ever, too. You are an amazing surgeon and if I ever do need another open heart surgery, I would gladly choose you."

Congenital Heart Surgery *(continued)*

DEDICATED TEAMS

An integrated team of experts in all aspects of congenital heart surgery is the key to our low operative mortality and quality outcomes. Our dedicated pediatric congenital team includes:

- Pediatric Cardiac Intensive Care Unit (PICU) staffed with nurses and intensivists, which includes two intensivists who are double board-certified in pediatric cardiology and pediatric intensive care. The team focuses on the postoperative care of babies and children undergoing congenital heart surgery.
- Pediatric cardiac step-down unit with specialized nursing and therapists, in an effort to improve care and provide earlier discharges
- Pediatric operating room team, staffed by pediatric specialists, including pediatric cardiac anesthesiologists and cardiac perfusionists
- Pediatric ECMO Team for 24/7 care with neonatal and pediatric transport teams capable of pre-ECMO and ECMO transport

CLINICAL TRIAL HIGHLIGHTS

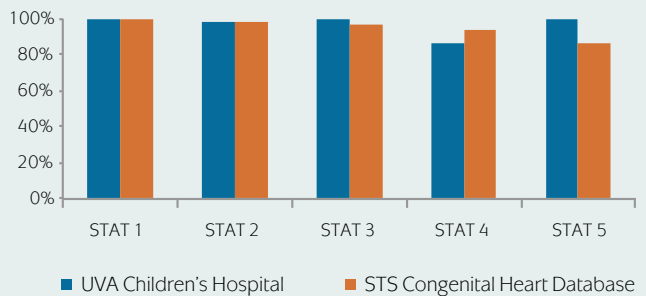
- **On-X 17mm Aortic Prosthetic Heart Valve and 23mm Mitral Prosthetic Heart Valve** – Investigating safety and efficacy of a smaller-sized prosthetic valve. UVA is one of 15 centers in the world investigating the On-X valves.
- **St. Jude’s HALO valve trial** – A 15mm, rotatable mechanical heart valve, the world’s smallest pediatric mechanical heart valve

STAT MORTALITY CATEGORY

The STS and European Association for Cardiothoracic Surgery (EACTS) Congenital Heart Surgery Mortality Categories (STS-EACTS STAT Mortality Category) system is an objective, empirically based index that can be used to estimate the risk of in-hospital mortality by procedure and measure the complexity of patients. The greater the risk category, the more complex the case and the risk of mortality.

In 2014, our overall mortality for STS-eligible procedures was less than the national average.

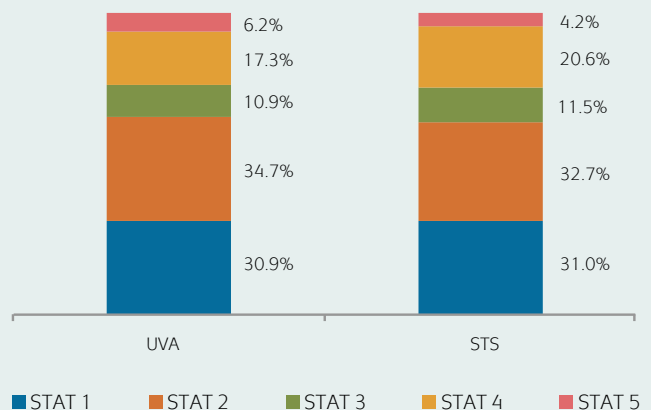
Pediatric Heart Surgery Survival
STS-EACTS STAT Mortality Category | 2014



Source: 2014 STS Congenital Database Report

Comparing Complexity

UVA to STS Congenital Database 2011–2014



Source: 2014 STS Congenital Database Report

Complex Aortic Disease

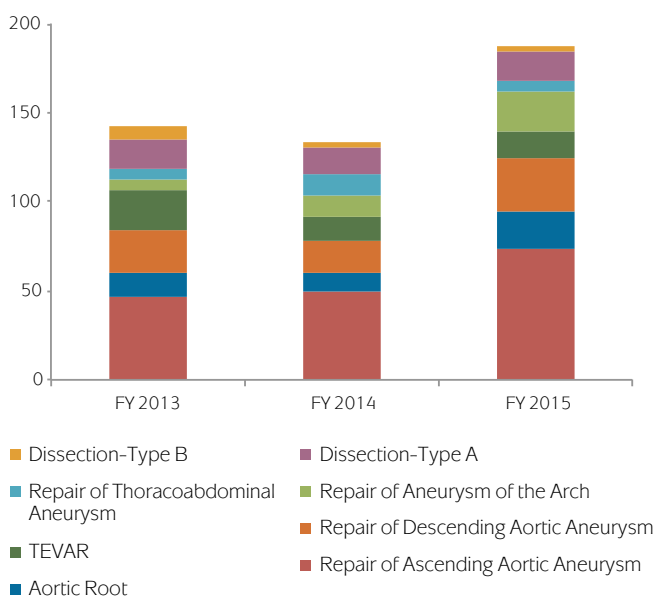
UVA is a regional referral center for all aspects of aortic and vascular diseases, with more than four decades of experience. Our cardiac and vascular surgeons performed 2,486 major vascular procedures and 464 complex aortic procedures over the past three years.

- Treatment options include participation in clinical trials and genetic screening.
- Surgical options range from minimally invasive or percutaneous endovascular aneurysm repair to complex staged hybrid total aortic replacement of the ascending aorta, aortic arch, descending thoracic aorta and abdominal aorta.
- Our team has extensive experience in treating aortic dissection, thoracoabdominal aneurysms and connective tissue disorders.



Aortic OR team (left-right): John Angle, MD; John Kern, MD; Kenneth Cherry, MD; Ravi Ghanta, MD; and Saher Sabri, MD.

Aortic Procedures | FY 2013–2015



Source: UVA Heart and Vascular Center Quality Office

AORTIC ALERT

Prompt, accessible care for aortic emergencies

UVA has established an aortic alert process, enabling emergency rooms and referring physicians to rapidly effect a transfer for anyone with acute aortic disaster.

- System puts referring physicians in touch with a UVA attending cardiac or vascular surgeon any time, day or night.
- Operator connects both the cardiac and vascular attending triage officers on the call in order to decide the best treatment option for the patient.
- If determined to be an emergency, teams are alerted and ready for the arrival of the patients. This ensures the right team is available for the right patient at the right time with the right equipment, resources and expertise.

For a consult on aortic emergencies, please call the Aortic Alert line: 844.933.7882

Complex Aortic Disease *(continued)*

HYBRID OPERATING SUITE

The hybrid OR is used for a multidisciplinary approach, allowing for real-time collaboration, combining medical and surgical expertise with the most advanced technology available. UVA is fortunate to offer technically advanced facilities, including four state-of-the-art hybrid operating rooms, allowing for less invasive procedures.

- Equipped with the most advanced imaging technology
- Enables simultaneous performance of percutaneous and open procedures
- Reduces the risk of complications and length of stay associated with multiple procedures
- Teams work closely together to offer complex treatments and surgeries for patients requiring more in-depth procedures
- Increases efficacy and success of complex procedures

VASCULAR QUALITY INITIATIVE

The Society for Vascular Surgery's Vascular Quality Initiative (SVS VQI) is designed to improve the quality, safety, effectiveness and cost of vascular healthcare by collecting and exchanging information. UVA is an active member of the Vascular Quality Initiative (VQI).

Gilbert R. Upchurch Jr., MD, is the medical director of the Virginias Vascular Study Group — a group of hospitals and vascular specialists committed to collecting, sharing and analyzing data related to vascular interventions and outcomes in Virginia and West Virginia.



Vascular and Endovascular Surgeon Gilbert R. Upchurch Jr., MD.

Rate of Major Complications After Infrainguinal Bypass, January 2014–May 2015

	UVA	SVS VQI
Complication Rate	0%	4%

Source: 2015 SVS VQI Regional Report

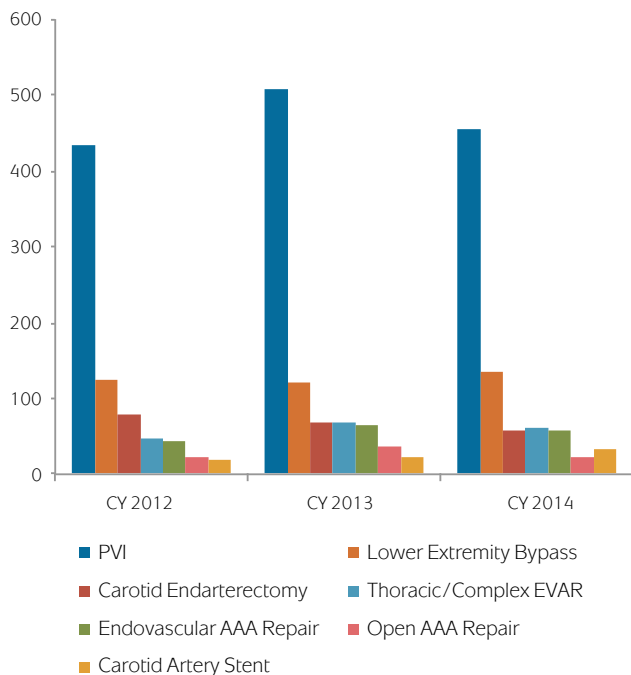
Nonruptured Open AAA In-Hospital Mortality January 2014–May 2015

	UVA	SVS VQI
Observed Rate	0.0%	3.5%
Expected Rate	2.3%	

Source: 2015 SVS VQI Regional Report

Vascular Volumes | 2012–2014

(n = 2486)



Source: UVA Heart and Vascular Center Quality Office

PARTNERS IN CARE

Complex aortic disease care at UVA features a multidisciplinary team of experts, including:

- An outstanding genetics program to evaluate patients with aortic pathologies and connective tissue disorders, such as bicuspid aortic valve, Marfan syndrome and Loeys Dietz syndrome. The program also offers the ability to screen at-risk family members.
- An anesthesia team dedicated to the use of techniques designed to minimize complications of aneurysm repairs
- Endovascular specialists dedicated and skilled in angioplasty, atherectomy, stenting, thrombectomy and thrombolysis techniques

QUALITY IMPROVEMENT

Our complex aortic disease program provides comprehensive care, including:

- Smoking cessation
- Optimizing glucose control to reduce risk of wound infection
- Physical therapy consulted on every post-op lower extremity surgical revascularization
- Discharged vascular patients on antiplatelet and statin
- Follow-up visits greater than SVS VQI average

CLINICAL TRIAL HIGHLIGHTS

The Aortic Aneurysm Research Laboratory, led by **Gilbert R. Upchurch Jr., MD**, and **Gorav Ailawadi, MD**, is dedicated to pioneering research and discovering the mechanisms of aneurysm formation and prevention.

- Research funding totaling **\$6.2 million**
- **3 NIH R01 grants** to study aneurysms
- 12 ongoing **IRB-approved** clinical trials involving abdominal aortic aneurysm/thoracic aortic aneurysm disease

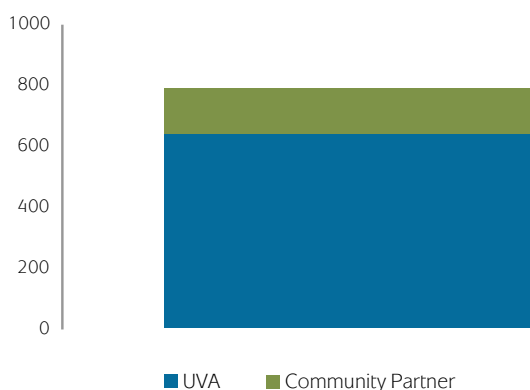
Thoracic Surgery

The University of Virginia’s thoracic surgery program provides care to patients with lung and esophageal disease. We offer a comprehensive assessment and provide close collaboration with multiple subspecialists in order to decide on the best treatment option for the patient.

We have established ourselves as leaders in the Southeast and nationally. We provide care here at UVA and have partnered with other facilities in the area in order to provide care to patients closer to their homes.

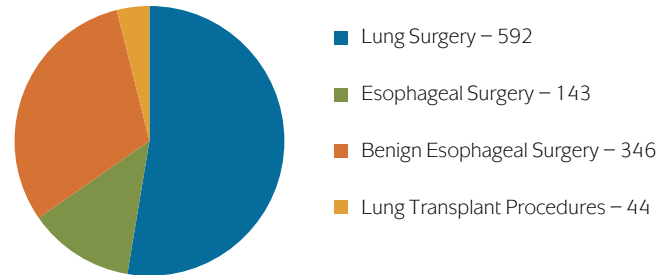
- Patients considered inoperable or too high risk for a thoracic surgical procedure are often referred to UVA for a second opinion.
- The thoracic surgery programs provide state-of-the-art treatment options, advanced technology and multidisciplinary treatment strategies.
- Thoracic surgeons are a part of a growing thoracic oncology team at UVA Cancer Center.
- UVA has partnered with nearby facilities in order to bring our surgical skills closer to the patients and the community in which they live.

Thoracic Surgery Volume | 2014



Source: UVA Heart and Vascular Center Quality Office

UVA Thoracic Surgery | 2012–2014



Source: UVA Heart and Vascular Center Quality Office

AREAS OF EXPERTISE

UVA thoracic surgeons provide consultation and care for patients with:

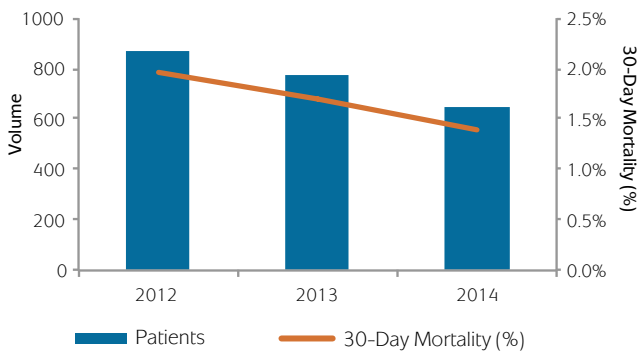
- Lung cancer
- Esophageal cancer
- Benign esophageal diseases (e.g., hiatal hernias and gastroesophageal reflux disease)
- Malignant mesothelioma
- Lung volume reduction surgery (emphysema surgery)
- Pulmonary metastases
- Mediastinal adenopathy (enlarged lymph nodes)
- Pleural effusions (fluid around the lungs)
- Achalasia, and other motor disorders of the esophagus
- Small, indeterminate lung nodules
- Chest wall tumors
- Chest wall deformities (i.e., pectus excavatum)
- Mediastinal tumors (e.g., thymomas and myasthenia gravis)
- Tracheal tumors and strictures
- Photodynamic therapy for lung and esophageal cancers

THORACIC SURGERY OUTCOMES

UVA is committed to advancing the database and improving the reporting process that drives quality improvement and patient safety strategies.

- Our efforts have produced remarkable results in the improvement of care and are reflected in our discharge mortality and 30-day mortality results.
- **Benjamin Kozower, MD**, was appointed chair of the STS General Thoracic Surgery Database Task Force in January 2015.

Thoracic: All Surgeries | 2012–2014 Volumes and 30-Day Mortality (%)



Source: UVA Heart and Vascular Center Quality Office

ALL PATIENTS	2014	JAN 2012– DEC 2014	JAN 2002– DEC 2014
UVA Discharge Mortality	0.5%	0.8%	1.6%
STS Discharge Mortality	1.7%	1.7%	2.3%
UVA 30-Day Mortality	1.3%	1.2%	2.2%
STS 30-Day Mortality	2.1%	2.1%	3.2%

Source: 2014 STS General Thoracic Report

EXPRESSION OF GRATITUDE

“I truly believe you saved my life, and for that I am eternally grateful. You not only took me on as a patient but you looked at me as a person. That means a lot, especially to someone that believes they are not going to live through health problems. Thank you and your team for being so nice and patient, for not giving up on me.”



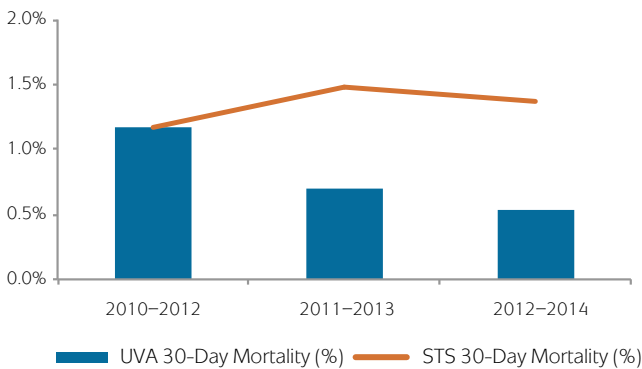
Thoracic Surgeon Benjamin Kozower, MD, and Christine Baker, RN.

Thoracic Surgery *(continued)*

LUNG SURGERY

For the treatment of stage I lung cancer, minimally invasive surgery is utilized in 61.2% of the cases. Our 30-day operative mortality is below national benchmarks, despite the complexity of the patients.

Lung Surgery UVA 30-Day Mortality (%)



Note: Year represents "end year" of STS's rolling 3 years.
Source: UVA Heart and Vascular Center Quality Office

CLINICAL TRIAL HIGHLIGHTS

- **Lobectomy vs. sublobar resection** for small peripheral non-small cell lung cancer (CALGB14503) – Ongoing trial at multiple sites looking at early lung cancers in comparing outcomes with lobectomies verses lesser resections
- **Tissue procurement** for protocol for development therapeutics – Multi-institutional trial, of which UVA is a participant, collecting lung cancer specimens from patients in the hope of providing future benefits and improvement in lung cancer survival
- **Empress lung ablation** study – New study looking at comparing utilization novel technology to ablate small lung cancers
- **Adenosine lung transplant** trial – Study looking at patients who undergo lung transplantation to see if the use of adenosine derivatives decrease inflammation and prevent ischemia reperfusion injury in lung transplantation



Thoracic Surgeons (left-right): Benjamin Kozower, MD; Christine Lau, MD; and James Isbell, MD.

EXPRESSIONS OF GRATITUDE

"Thanks to your diligence, I now have the answer. Not only that, I now have a prognosis. Please accept my thanks for going that extra mile. [Referring doctor] says my disease is 'one in a million.' I would say the same about you."

"We were routinely visited by literally teams of doctors who addressed every medical issue and concern in the detail. We would like to identify them as leaders and role models in their field."

ESOPHAGEAL SURGERY

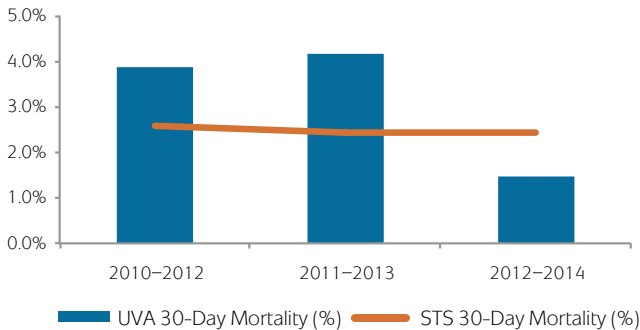
Esophageal surgery at UVA involves the treatment of complex paraesophageal hernias, esophageal cancer and esophageal reconstruction. UVA surgeons provide a variety of open and minimally invasive approaches to optimize outcomes.

Esophagectomy Median Length of Stay

	UVA	STS
2012–2014	8 days	10 days

Source: Heart and Vascular Center Quality Office

Esophageal Surgery UVA 30-Day Mortality (%)



Note: Year represents 'end year' of STS's rolling 3 years.
Source: UVA Heart and Vascular Center Quality Office

CLINICAL TRIAL HIGHLIGHTS

- **Benign esophageal study** – Study at UVA that looks at outcomes following benign esophageal surgery
- **Patient-reported outcomes** for with lung and esophageal cancer – Study funded by the Patient-Centered Outcomes Research Institute (PCORI) that evaluates the impact of surgery on patient-reported outcomes and their relationship to procedure type

BENIGN ESOPHAGEAL DISEASE

In addition to procedures for esophageal cancers, our thoracic surgeons perform a large number of operations for benign (noncancerous) diseases of the esophagus, including hiatal hernias, gastroesophageal reflux disease (GERD), achalasia and esophageal diverticuli.

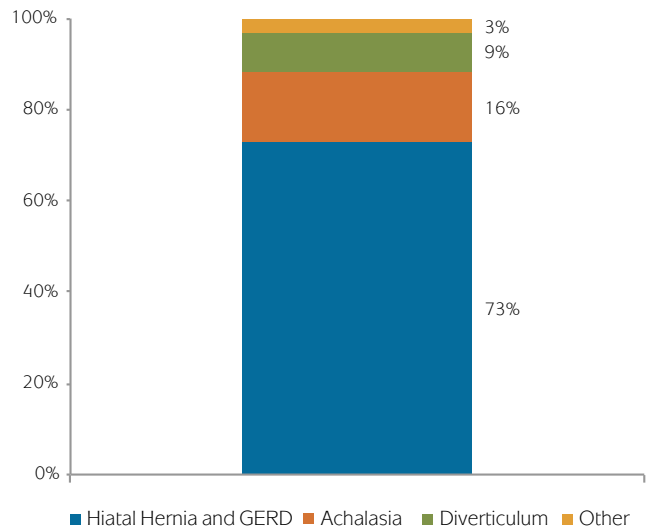
- The majority of the benign esophageal surgeries at UVA are performed laparoscopically or robotically (minimally invasive approach).
- Minimally invasive approach reduces pain, the length of stay and time away from work.
- UVA's median length of stay for benign esophageal disease surgery is two days.

Benign Esophageal Surgery 30-Day Mortality

	2012	2013	2014
UVA	0.78%	0.92%	0.97%

Source: Heart and Vascular Center Quality Office

Benign Esophageal Surgery | 2014 Contribution to Total Procedures (%)



Source: UVA Heart and Vascular Center Quality Office

Arrhythmia Surgery

UVA offers comprehensive and aggressive treatment strategies for patients with refractory atrial fibrillation.

- Leader in developing surgical approaches for atrial fibrillation and ventricular tachycardia
- 250 surgical procedures performed for arrhythmia management over the past three years, including minimally invasive, sternal sparing off-pump (thoroscopic) and concomitant MAZE procedures
- The first in the nation to perform dual endocardial and epicardial hybrid ablation for atrial fibrillation (2008)
- One of the national leaders in a clinical trial for concomitant MAZE during valve surgery

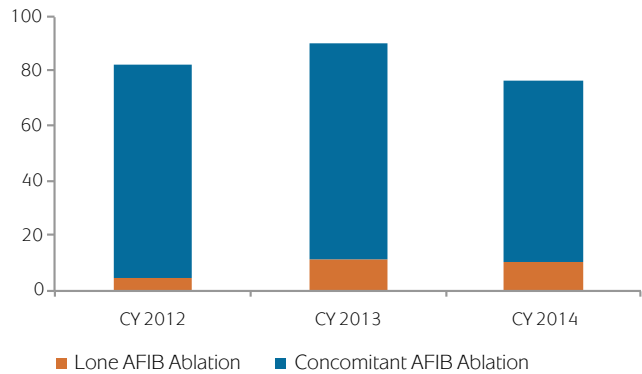
LEAD EXTRACTION

- Regional center for complex laser lead extractions
- Hybrid procedure with cardiac surgeons and electrophysiologists working in tandem to maximize patient safety, while minimizing risk of complications

CLINICAL TRIAL HIGHLIGHTS

- Cardiothoracic Surgical Trials Network **Afib rate vs. rhythm trial** for atrial fibrillation or flutter after cardiac surgery
- **PREVAIL** trial, a continued-access protocol study of the Watchman™ device, now FDA approved
- Participated in the **AtriClip®/stroke** trial for left atrial appendage occlusion and was the lead enrolling site

Atrial Fibrillation Correction Surgery | 2012–2014
(n = 250)



Source: UVA Heart and Vascular Center Quality Office

MINIMALLY INVASIVE OPTIONS TO REDUCE STROKE RISKS

UVA is one of the only medical centers in Virginia offering three minimally invasive options for occluding the left atrial appendage (LAA).

- The LAA is the source of clots that can cause the majority of strokes in atrial fibrillation patients after heart surgery.
- By occluding the LAA, physicians could eliminate the need for patient to take blood thinners.

“With expertise with each of these procedures, our left atrial appendage team decides together the optimal approach for each individual patient.”

– **Gorav Ailawadi, MD**, UVA Cardiothoracic Surgeon

For more information:

uvaphysicianresource.com/watchmans-fdaapproval-gives-atrial-fibrillation-patients-further-protection-from-stroke/

Advancing Knowledge

Leaders in research, dedicated to defining the future.

As a member of the Cardiothoracic Surgical Trials Network, UVA has taken a lead role in improving the surgical treatment for cardiovascular disease.

- Designated as 1 of 10 core clinical center for Cardiothoracic Clinical trials by the National Institutes of Health.
- Clinical trials enable us to offer patients options not yet available at other centers.

35	IRB protocols underway for retrospective medical records reviews
14	Actively recruiting prospective interventional clinical trials
4	Trials within start-up phase
5	Trials with patients in follow-up

Source: Surgical Therapeutic Advancement Center Office

RESEARCH HIGHLIGHTS

National principal investigator (PI) for multicenter, industry-sponsored clinical trials

- **Gilbert R. Upchurch Jr., MD** – Endurant EVO AAA stent trial (Medtronic)
- **John Kern, MD** – Mitroflow Aortic Valve trial (Sorin)

National Institute of Health (NIH) CT Surgery Network – **Irving Kron, MD**

- First site with IRB approval
 - LVAD stem cell trial: First center to enroll
 - Neuroprotection trial

ACADEMIC PUBLICATIONS AND NATIONAL PROMINENCE:

Cardiac Surgery, Cardiovascular Medicine & Vascular Surgery

175	Articles in peer-reviewed journal listed in authorship
19	Books or book chapters listed in authorship
73	Study sections or national committees
65	Memberships on editorial boards, past and present

Source: UVA Department of Surgery

PUBLICATION HIGHLIGHTS

- **Gorav Ailawadi, MD, and Sandra Burks, RN:** “Costs Associated with Health-Care Associated Infections in Cardiac Surgery” – *Journal of the American College of Cardiology*
- **Irving Kron, MD, and Gorav Ailawadi, MD:** “Predicting Recurrent Mitral Regurgitation After Mitral Valve Repair for Severe Ischemic Mitral Regurgitation” – *The Journal of Thoracic and Cardiovascular Surgery*
- **Irving Kron, MD, and Gorav Ailawadi, MD:** “Surgical Treatment of Moderate Ischemic Mitral Regurgitation” – *New England Journal of Medicine*
- **Gorav Ailawadi, MD:** “Surgical Ablation of Atrial Fibrillation During Mitral Valve Surgery” – *New England Journal of Medicine*

Recognition & Leadership

*Nationally recognized
for innovation and
dedication to advancing
cardiovascular care*

2015 AWARD RECIPIENTS

Irving Kron, MD

Earl Bakken Scientific Achievement Award
Society of Thoracic Surgeons Annual Meeting
*Recognizes outstanding scientific contribution
in cardiothoracic surgery*

Benjamin Kozower, MD

Richard E. Clark Award
Society of Thoracic Surgeons Annual Meeting
Outstanding STS database paper

Damien LaPar, MD

Benson R. Wilcox Award
Thoracic Surgery Directors Association Award
Society of Thoracic Surgeons Annual Meeting
Faculty mentor: Gorav Ailawadi, MD
*Best scientific abstract submitted by a
cardiothoracic surgery resident*

David Strider, ACNP

Excellence in Clinical Practice Award
Society of Vascular Nursing

Kenan Yount, MD

President's Award
Society of Thoracic Surgeons Annual Meeting
Faculty mentor: Gorav Ailawadi, MD
*Best scientific abstract by resident
or young investigator*

2014 AWARD RECIPIENTS

James Gangemi, MD

Dean's Award for Clinical Excellence

John Kern, MD

Socrates Award
Society of Thoracic Surgeons Annual Meeting
*For outstanding commitment to resident education
and mentorship*

Curtis Tribble, MD

Inspiration Award
Southern Thoracic Surgical Association Annual Meeting
*In recognition of exceptional efforts in motivating, inspiring
and cultivating the clinical and research talents of upcoming
generations of cardiothoracic surgeons*

NATIONAL AND REGIONAL LEADERS

Gorav Ailawadi, MD

Cardiac Chair, Society of Thoracic Surgeons
Tech-Con Annual Meeting

Research Chair, Virginia Cardiac Surgery
Quality Initiative

James Gangemi, MD

Program Committee, Society of Thoracic Surgeons
Faculty Instructor, TRSA Boot Camp

John Kern, MD

Deputy Editor, Annals of Thoracic Surgery
Associate Editor, Operation Technique in
Thoracic and Cardiovascular Surgery

Damien LaPar, MD

Society of Thoracic Surgeons Board of Directors,
Resident Director

Immediate Past President, TSRA

Research and Writing Committee Member,
Virginia Cardiac Surgery Quality Initiative

Benjamin Kozower, MD

Chair, Society of Thoracic Surgeons General
Thoracic Database Task Force

Associate Editor, Operation Technique in
Thoracic and Cardiovascular Surgery

Christine Lau, MD

Research Scholarship Committee,
American Association for Thoracic Surgery

Scientific Affairs and Government Relations
Committee, American Association for
Thoracic Surgery

Centennial Committee, American Association
for Thoracic Surgery

Curriculum Editor, Joint Council on Thoracic
Surgery Education, Cardiothoracic

Counselor, Southern Thoracic Surgical Association

Past President, Virginia Surgical Society

William Robinson, MD

Co-Chair, "Top Gun" Residents and Fellows
Simulation Program, Society of Clinical Vascular
Surgery Annual Meeting

Society of Vascular Surgery Quality and
Performance Measures Committee

Margaret Tracci, MD

Reviewer: Journal of Vascular Surgery,
Annals of Vascular Surgery, CardioVascular and
Interventional Radiology

President-Elect, Virginia Vascular Society

Chapter Delegate, Medical Society of Virginia

Curtis Tribble, MD

Committee on Resident Education, American
College of Surgeons

Membership Committee, Southern Thoracic
Surgical Association

Gilbert R. Upchurch Jr., MD

Secretary/Treasurer, Virginia Vascular Society

Advisory Council for Vascular Surgery,
American College of Surgeons

Chair, Publications Committee, Society for
Vascular Surgery

Editorial Board: Annals of Vascular Surgery,
Journal of the American College of Surgeons,
Journal of Endovascular Therapy, AORTA, JAMA
Surgery

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Physician Resource

UVA Health System news and information for our referring physicians

uvaphysicianresource.com

MyChart[®]

Provides patients with secure online access to their information, enabling interaction and communication with our surgeons and staff

mychartuva.com

EpicCare Link

Online portal that allows providers secure access to view their patients' charts at UVA.

To sign up, contact :

Amy Cash

Physician Relations

434.465.7996

alc8mv@virginia.edu

Request Visit

Our physicians are available to visit you in your office and provide more indepth information on our procedures and services.

To request a visit, contact :

Amy Cash

Physician Relations

434.465.7996

alc8mv@virginia.edu

Refer a Patient

800.552.3723

Transfer a Patient

844.933.7882

Refer a patient: **800.552.3723**

Transfer a patient: **844.933.7882**

heart.uvahealth.com



Heart & Vascular Center