UW Medical Center
Cardiac Surgery
EXPERIENCED SURGEONS | OUTSTANDING OUTCOMES
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Cardiovascular Surgery at UWMC

The UW Medical Center Cardiac Surgery Program provides comprehensive cardiothoracic surgical treatments, including cardiac transplantation, coronary artery bypass grafting, valvular heart disease, surgery of the aorta, surgical treatment of atrial arrhythmias, and minimally invasive approaches to cardiac disease.

Risk-adjusted outcomes are reported as a ratio of observed incidence of a complication to the calculated expected incidence, based on risk parameters set by the Society of Thoracic Surgeons national database. Outcomes are calculated for the following procedures: AVR, MVR, isolated CABG, CABG+AVR and CABG+MVR.

A ratio of 1.0 represents the stated national norms. Our five-year observed-to-expected (O/E) ratios for cardiac surgical procedures, adjusted for the acuity of our patients, is 0.58 – nearly two times better than the national average.

Our patient outcomes reflect the experience of our cardiothoracic team and our partnerships with referring physicians.
Coronary Artery Bypass Grafting (CABG)

- More than 93% of our patients have received at least one arterial graft for first-time CABGs.
- **Off-pump, robotic-assisted and non-sterontomy CABG procedures are available to selected patients.**
- Bio-compatible, heparin-bonded circuits and techniques are routinely used in all patients to minimize cardiopulmonary bypass morbidity.
- All saphenous vein graft-harvest procedures are minimally invasive to minimize morbidity and enhance post-operative recovery.
- Bypass remains the standard of care for the left main and three-vessel disease with DM per the American Heart Association/American College of Cardiology guidelines.

UWMC’s 2004-08 ratio of observed-to-expected mortality for patients undergoing first-time, isolated CABG (national basis = 1.0).
Aortic Valve Surgery

- UWMC performed more than 430 aortic valve replacements (AVR) in the past five years.
- 60% of patients have AVR performed with other cardiac procedures.
- UWMC is nationally recognized as a leader for its clinical excellence and research in valve surgery. It is one of the elite national sites selected for:
  - Percutaneous aortic valve implantation (Edwards SAPIEN valve)
  - Stentless valve implantation (St. Jude, ATS, Medtronic, 3F)

UWMC’s 2004-08 ratio of observed-to-expected mortality for patients undergoing isolated aortic-valve replacement (national basis is 1.0).
Mitral Valve Surgery

- UWMC’s O/E risk-adjusted mortality for isolated mitral valve (MV) replacement surgery was 0.9 for 2004-2008.
- UWMC has performed more than 260 MV surgical procedures in the past five years.
- For 70% of patients, MV repair is performed with concomitant procedures.
- UWMC cardiac surgeons are committed to repair MV whenever possible.
- Mitral-valve replacements and repairs can be done as minimally invasive procedures.

Atrial Fibrillation (AF) Ablation

- UWMC is a recognized national leader in surgical and catheter-based atrial fibrillation (AF) ablation, having performed approximately 100 procedures in the past three years.
- UWMC routinely performs surgical ablation in all patients with paroxysmal or permanent AF and undergoing other cardiac surgical intervention.
- UWMC has considerable experience in “stand alone” AF surgical ablation.
- All patients are screened and followed by a dedicated group of cardiothoracic surgeons and electrophysiologists.
Aortic Surgery Center

Patients with aortic disease, dissection, bicuspid valve and Marfan’s Syndrome, among other illnesses, can expect outstanding diagnosis and care at the Aortic Surgery Center, a specialized program staffed by UW Medicine Regional Heart Center physicians.

Current therapy includes aortic root surgery, endovascular repair of the thoracic aorta and hybrid approaches to complex lesions. Diagnostics such as 64-slice CT scanners and transesophageal echocardiography (TEE) help our doctors make the most accurate diagnoses and monitor patients’ progress.

Aortic pathology
- UWMC is one of the highest volume centers in the Northwest.
- UWMC performed 51 aortic-root procedures in 2008.
- Mortality for emergent ascending/aortic arch dissections was 18% from 2004-2008 – significantly better than that of the International Registry for Acute Aortic Dissection, which reported a 27% patient-mortality rate in that same span.

Endovascular experience
- Since 2006, UWMC has developed an experienced interdisciplinary endovascular aortic-surgery program, in collaboration with vascular surgery. It is a regional referral center for aortic pathology.
- **UWMC surgeons performed 150 endografts (TEVARs) in treating thoracic aortic disease in 2006-2008, and 88 in 2008 alone.**

Thoracic stent graft.
Advanced Cardiac Disease

Ventricular assist devices (VADs) and VAD-assisted interventions

- UWMC is one of the nationally elite programs that has offered the HeartMate II and Ventracor VentrAssist VADs as a bridge to transplantation and as destination therapy as part of a multi-center trial.
- We offer a variety of patient-specific shorter and intermediate VAD support options. (These include Abiomed AB5000 and Impella, and TandemHeart).
- UWMC has received Disease Specific Certification for VAD therapy from The Joint Commission.
- UWMC is a Destination Therapy (permanent VAD) center for transplant-ineligible patients.
- UWMC has performed 15 TandemHeart Supported, High-Risk PCIs collaboratively between cardiology and cardiac surgery.

Heart transplantation

- The Cardiac Transplant Program was established in 1985.
- 25 to 30 cardiac transplants are performed per year.
- The first adult heart-lung transplant in Western Washington was performed at UWMC in 2007.
- UWMC’s 1-, 5- and 10-year survival rates for heart transplantation are among the best in the United States in the course of nearly 500 transplants over 20 years.

UWMC Heart-Transplant Patient-Survival Rate, 1985-2008

ANALYSIS COURTESY OF DR. WAYNE LEVY

Survival to transplant or six months, among more than 160 patients implanted with a VAD as a bridge to transplant.
Adult Congenital Heart Surgery

- In collaboration with UW Medicine Regional Heart Center, UWMC Cardiology and Seattle Children’s, we are leaders in the Northwest in adult complex re-operative surgery.
- Expertise includes valve and root pathology, RVOT/LVOT reconstructions, Fontan revisions and completions, AF ablation and transplantation.
- A multi-disciplinary team of surgeons, cardiologists, anesthesiologists and others collaboratively determine treatment strategies.

Cardiac Surgery Clinical Trials

UW Medical Center cardiothoracic surgeons are participating in clinical trials that cross the spectrum of their patients’ care. Below is a sampling of notable active clinical trials.

- PARTNER (Percutaneous Aortic Valves)
- HeartMate II LVAD
- VentrAssist LVAD
- Immunomodulation following Transfusion (SSCOR)
- Relay Thoracic Stent-Graft
- INTERMACS
- Stem Cell Injection at LVAD Insertion

UWMC’s total adult congenital heart procedures, 2004-2008
How to Refer a Patient

URGENT

To refer an urgent patient, contact the transfer center at 1.866.UWHEART and ask for the cardiac surgery attending physician on-call. Alternatively, contact the cardiac surgery attending via the UW page operator at 206.598.6190.

NON-URGENT

To refer a non-urgent patient, call our Patient Care Coordinator at 206.598.3636.

We offer consultations and continuing education. Call our physician liaison directly at 206.598.3473 for these services:

- Scheduling an in-depth review of the UWMC Cardiac Surgery program outcomes
- Touring our Cardiac Surgery facility and UW Medicine Regional Heart Center
- Arranging a continuing medical education event for your institution or group
Our Surgeons

Our team’s collaborative, interdisciplinary approach emphasizes long-term outcomes, careful follow-up and leading-edge technologies and procedures. This ensures the best potential outcomes for your patient.

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